



Memorandum

Date: August 22, 2023
To: Richard Norris, SummerHill Apartment Communities
From: Ollie Zhou, Shikha Jain
Subject: Transportation Study for the Proposed 11 El Camino Real Project in San Carlos, California

Hexagon Transportation Consultants, Inc. has completed a transportation study for the proposed multifamily development located at 11 El Camino Real in San Carlos, California (see Figure 1). The project would demolish approximately 28,000 square feet (s.f.) of existing CVS on-site and construct a six-story plus basement building with 242 dwelling units over two levels of parking garage. The building includes dwelling units on the first floor (see Figure 2). Vehicular access to the project site would be provided via a driveway on El Camino Real. The project would also have a secondary driveway on El Camino Real, which would provide emergency vehicle access (EVA), access to a loading/move-in/trash area, and access to the adjacent San Carlos Plaza.

The CEQA Guidelines state that automobile delay, as measured by level of service (LOS), no longer constitutes a significant environmental impact under CEQA, and that vehicle miles traveled (VMT) is the most appropriate metric to evaluate a project's transportation impacts. The City of San Carlos has adopted a VMT policy to determine VMT impacts for new development projects. This study provides a VMT analysis satisfying the City of San Carlos requirements. In addition, this study includes a level of service (LOS) analysis at select study intersections and reviews site access and circulation.

VMT Analysis

Pursuant to Senate Bill (SB) 743, the California Environmental Quality Act (CEQA) 2019 Update Guidelines Section 15064.3, subdivision (b) states that VMT will be the metric in analyzing transportation impacts for land use projects for CEQA purposes. VMT is the total miles of travel by personal motorized vehicles a project is expected to generate in a day. VMT measures the full distance of personal motorized vehicle-trips with one end within the project.

The San Carlos VMT policy includes screening criteria for evaluating a project's VMT impact. Based on the San Carlos VMT policy, the following types of projects may be presumed to have a less than significant VMT impact:

- Small projects (i.e., fewer than 100 trips per day)
- Projects in low VMT areas
- Projects near transit (i.e., within ½ mile walkshed of the San Carlos Caltrain Station or El Camino Real)

Based on the San Carlos VMT policy, the project site is within one-half mile of El Camino Real and thus, the project is presumed to have a less than significant VMT impact. The VMT evaluation

summary report generated by the City/County Association of Governments (C/CAG) VMT Estimation Tool is attached to this memorandum (Appendix A).

Study Intersections and Data Collection

This transportation study includes an analysis of weekday AM and PM peak-hour traffic conditions for seven intersections in the vicinity of the project site. The study intersections were selected due to their proximity to the project site. The study intersections are the intersections in the surrounding area that are most likely to be affected by the project traffic.

Note that the City/County Association of Governments of San Mateo County (C/CAG) administers the Congestion Management Program (CMP). A C/CAG CMP freeway analysis is required when a project is expected to add traffic demand equal to 1 percent of the capacity. A C/CAG CMP arterial analysis is required when a jurisdiction proposes to reduce the capacity of a CMP designated arterial. The proposed project does not meet the criteria for a C/CAG CMP arterial analysis.

The study intersections are listed below and shown on Figure 1.

1. El Camino Real and Ralston Avenue (City of Belmont) (CMP)
2. El Camino Real and Harbor Boulevard (north) (City of Belmont)
3. El Camino Real and Harbor Boulevard (south) (City of Belmont)
4. El Camino Real and 5th Avenue (unsignalized) (City of Belmont)
5. El Camino Real and Spring Street (unsignalized) (City of San Carlos)
6. El Camino Real and Hull Drive (City of San Carlos)
7. El Camino Real and Holly Street (City of San Carlos) (CMP)

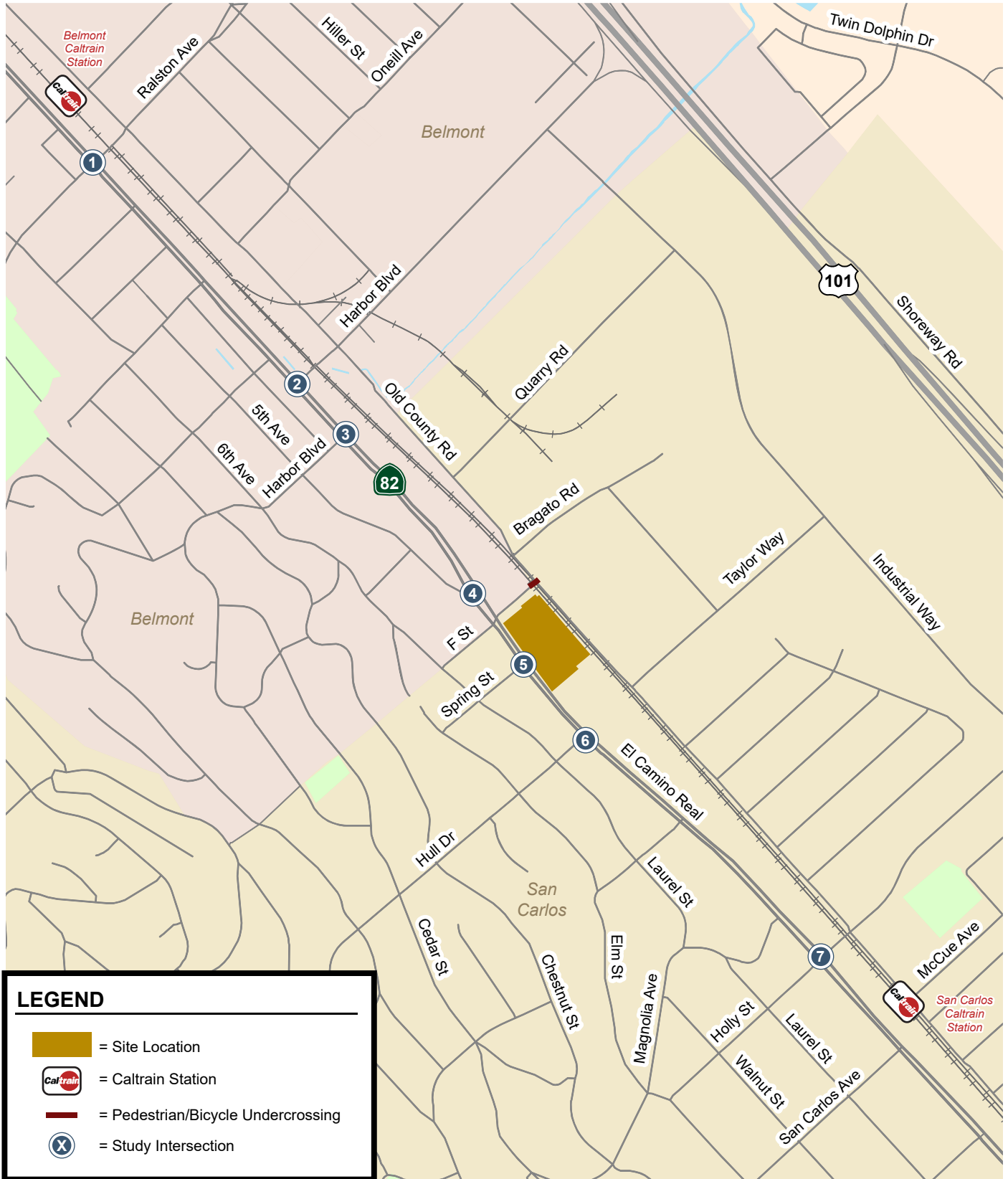


Figure 1
Project Site Location and Study Intersections



Figure 2
Site Plan

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 typically occurs between 4:00 PM and 6:00 PM on a regular weekday. These are the peak commute hours during which most weekday traffic congestion occurs on the roadways in the study area.

This transportation study includes an analysis of the scenarios listed below.

- Scenario 1:** *Existing Conditions.* Existing conditions are based on traffic counts from previous studies and new counts. For traffic counts that were older than two years, a 1% growth factor per year was applied until 2023.
- Scenario 2:** *Existing Plus Project Conditions.* Existing plus project conditions were estimated by adding the additional traffic generated by the project to existing traffic volumes. Existing plus project conditions were evaluated relative to existing conditions in order to determine potential traffic operational issues that could occur as a result of the project.
- Scenario 3:** *Background Conditions.* Background conditions were estimated by adding the projected volumes from approved but not yet completed and occupied developments in the study area to existing peak-hour volumes.
- Scenario 4:** *Background Plus Project Conditions.* Background plus project conditions were estimated by adding the additional traffic generated by the project to background traffic volumes. Background plus project conditions were evaluated relative to background conditions in order to determine potential traffic operational issues that could occur as a result of the project.
- Scenario 5:** *Cumulative Conditions.* Cumulative traffic conditions were estimated by adding the projected volumes from pending but not yet approved developments in the study area to background peak-hour volumes.
- Scenario 6:** *Cumulative Plus Project Conditions.* Cumulative plus project conditions were estimated by adding the additional traffic generated by the project to cumulative traffic volumes. Cumulative plus project conditions were evaluated relative to cumulative conditions in order to determine potential traffic operational issues that could occur as a result of the project.

Project Trip Generation, Distribution, and Assignment

The magnitude of traffic produced by a new development and the locations where that traffic would appear are estimated using a three-step process: (1) trip generation, (2) trip distribution, and (3) trip assignment.

Trip Generation

Through empirical research, data have been collected that quantify the amount of traffic produced by many types of land uses. The research is compiled in the Institute of Transportation Engineers' (ITE) *Trip Generation Manual, 11th Edition* (2021). The standard trip generation rates can be applied to help predict the future traffic increases that would result from a new development. The project applicant has proposed a multifamily residential building with 242 dwelling units. The rates published for "Multi-Family (Mid-Rise) Housing" (ITE Land Use 221) were used to estimate the trips generated by the proposed project. The ITE rates for Multi-Family (Mid-Rise) Housing are typically used for multifamily residential development sites that would have between 3 to 10 stories.

After applying the applicable ITE trip rates it is estimated that the project would generate 90 vehicle trips during the AM peak hour (21 inbound and 69 outbound) and 94 new vehicle trips during the PM peak hour (57 inbound and 37 outbound) (see Table 1).

The proposed project would replace 28,000 square feet of an existing CVS on the site. The trips generated by the existing CVS on the site were obtained from driveway counts completed on Thursday March 2nd, 2023. The existing driveway is shared with San Carlos Plaza and only those trips generated by the CVS property were counted. Based on the driveway counts, the existing buildings generate 19 trips during the AM peak hour (12 inbound and 7 outbound), and 72 trips during the PM peak hour (27 inbound and 45 outbound).

A pass-by trip reduction of 53 percent was applied to the existing driveway trips during the PM peak hour. Trip reduction percentages were obtained from the ITE 11th Edition. Pass-by trips are trips that would already drive by the site on El Camino Real (and are therefore already counted in the existing traffic) but would turn into the site while passing by. Pass-by trips result in a reduction in through traffic on El Camino Real and an equivalent increase in trips turning in and out of the project driveway. The justification for applying the pass-by trip reduction is founded on the observation that such traffic is not primarily generated by the proposed development but is already part of the ambient traffic levels.

After crediting the existing use trips and deducting the associated pass-by trips for this use, the project would generate 71 net new AM peak hour trips (9 inbound and 62 outbound) and 60 net new PM peak hour trips (44 inbound and 16 outbound).

Table 1
Trip Generation Summary

Land Use	Size	Unit	AM Peak Hour			PM Peak Hour					
			Peak Rate	Trips In	Trips Out	Total Trips	Peak Rate	Trips In	Trips Out	Total Trips	
<i>Proposed Project</i>											
Multi-Family Housing ¹	242	DU	0.37	21	69	90	0.39	57	37	94	
<i>Existing Uses Reduction</i>											
Existing Uses ²	28	KSF	--	12	7	19	--	27	45	72	
Pharmacy Pass-By Reduction (53%) ³				0	0	0		(14)	(24)	(38)	
Net Project Total				9	62	71		44	16	60	
Notes:											
All rates are from: Institute of Transportation Engineers, <i>Trip Generation, 11th Edition</i> (2021)											
1. Land Use Code 221: Multifamily Housing (Mid-Rise) Not Close to Rail Transit (average rates, expressed in trips per dwelling unit (DU)).											
2. Peak-hour trips from driveway counts conducted on Thursday, March 2nd, 2023.											
3. Pass-by trip reduction is based on the average pass-by trip reduction rate published in the ITE Trip Generation, 11th Edition (2021). Hexagon assumes no pass-by trip reduction during the AM peak hour.											

Trip Distribution and Assignment

The trip distribution pattern was developed for the proposed project as well as the existing use since they have different travel patterns. The distributions were estimated based on existing travel patterns on the surrounding roadway network that reflect typical weekday AM and PM peak commute patterns, the location of the site driveways, the locations of complementary land uses, and freeway access points (see Figure 3). The net peak-hour trips generated by the project were assigned to the roadway network in accordance with the trip distribution pattern (see Figure 4).

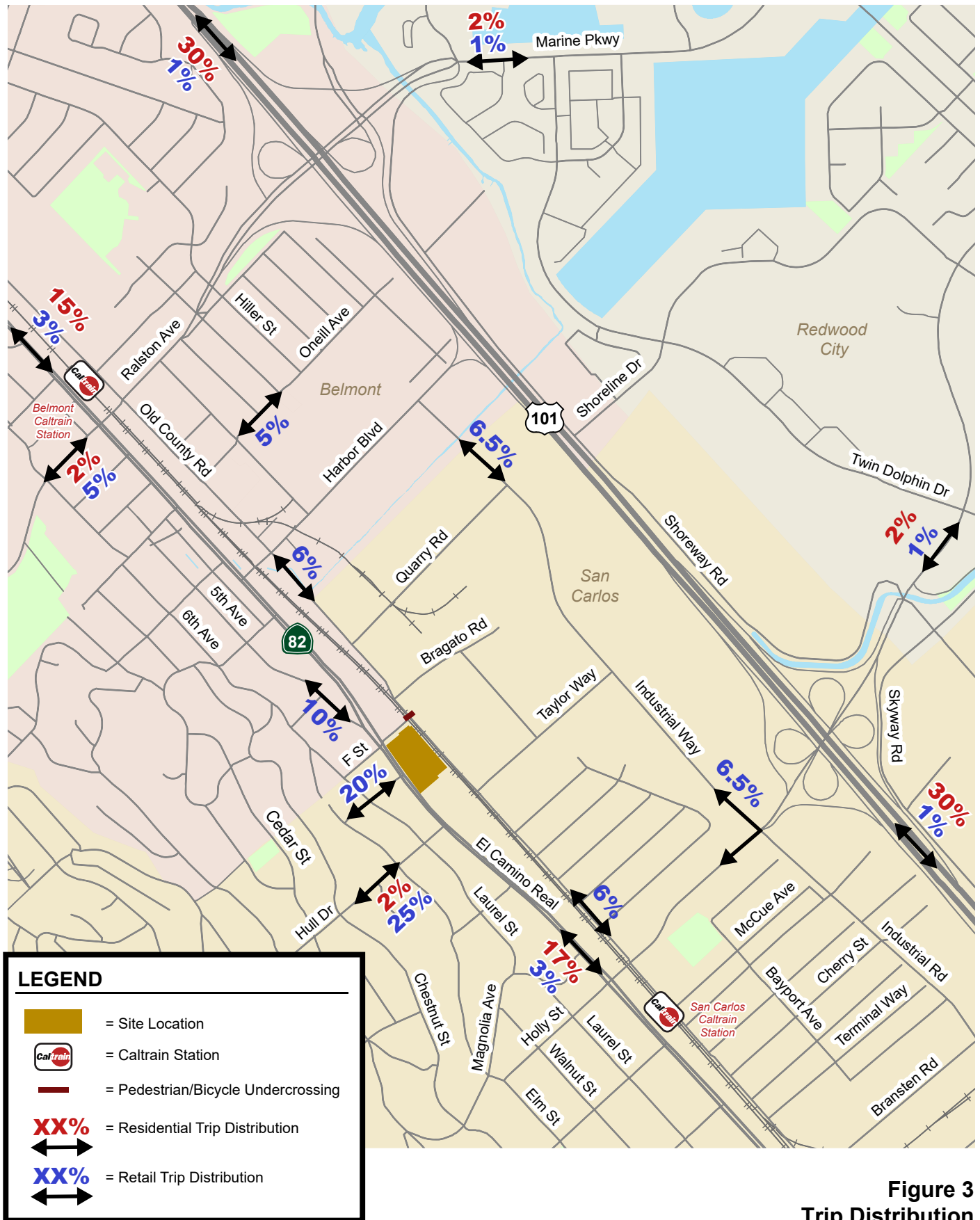
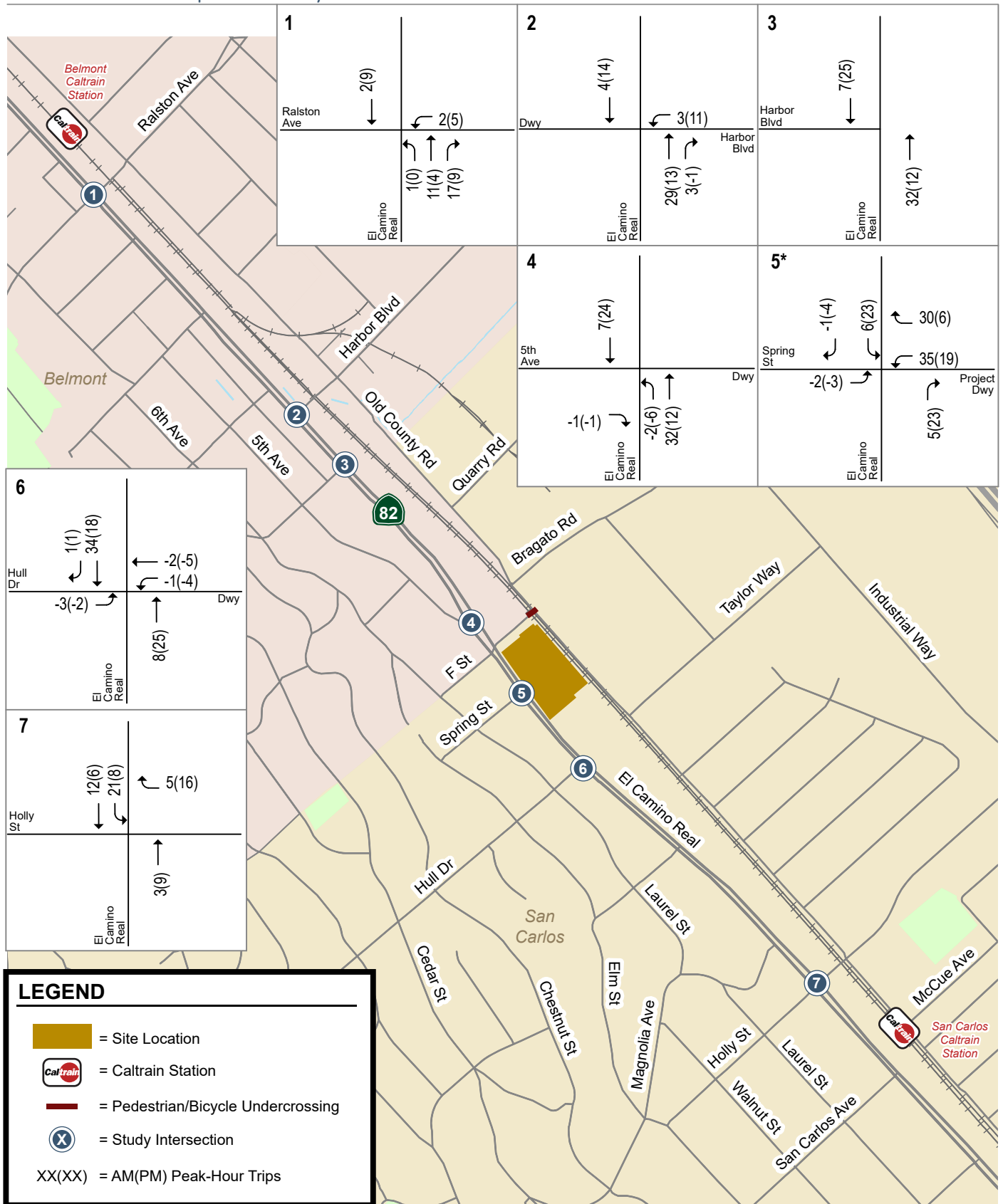


Figure 3
Trip Distribution

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*Under existing conditions, Spring Street and the existing driveway are offset. With the buildout of the project, the project driveway and Spring Street will be aligned.

Figure 4
Trip Assignment

Intersection Operations Analysis

The intersection operations analysis is intended to be a performance measure that quantifies the operations of the study intersections and identifies potential adverse effects due to the addition of project traffic. The intersection operations analysis methodology, standards, and results are discussed below.

Level of Service Methodology and Standards

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 analysis methodology is described in further detail below.

Intersection Analysis

The study intersections were evaluated according to the City of San Carlos and City of Belmont methodologies and standards. This study utilized the Synchro software developed by Trafficware to analyze the level of service at the study intersections. This software evaluates intersection operations based on the *Highway Capacity Manual* (HCM) 2000 methodology. The City of San Carlos defines LOS at a signalized intersection based on the volume-to-capacity (v/c) ratio and the LOS at an unsignalized intersection based on average delay. The City of Belmont defines LOS at a signalized intersection based on average delay.

City of San Carlos Signalized Intersection Standard

The City of San Carlos level of service standard for signalized intersections is mid-level LOS D (v/c = 0.85) or better. Thus, a project is said to have an adverse effect if either of the following occurs: 1) the level of service at a signalized intersection degrades from an acceptable level (mid-level D or better) to an unacceptable level (high LOS D, LOS E, or LOS F) under project conditions, or 2) the level of service at a signalized intersection is unacceptable (worse than mid-level D) without the project and the addition of the project traffic causes the v/c ratio to increase by more than 0.01 (1%). The HCM methodology calculates the v/c ratio by summing the divisions of critical lane group volumes by the respective saturation flow rates, then multiplied by the effective green time divided by the cycle length. The correlation between v/c ratio and level of service for signalized intersections is shown in Table 2.

City of San Carlos Unsignalized Intersection Analysis

The stop-controlled study intersections were analyzed for potential operational issues. For unsignalized intersections, the level of service depends on the average delay experienced by vehicles that must stop or yield to on-coming traffic. Thus, for two-way or T-intersections, operations are defined by the average delay experienced by vehicles entering the intersection from the stop-controlled approaches on minor streets or from left-turn movements on major streets. The correlation between average delay and level of service for unsignalized intersections is shown in Table 3. The City of San Carlos does not have an adopted level of service standard for unsignalized intersections. Therefore, as part of the evaluation, traffic volumes, delays, and traffic signal warrants were evaluated to determine if the existing intersection control is appropriate. The unsignalized study intersection was analyzed on the basis of the Peak-Hour Volume Signal Warrant, (Warrant #3 – Part B) described in the California Manual on Uniform Traffic Control Devices (MUTCD), 2014 Edition.

Table 2
Signalized Intersection Level of Service Definitions Based on v/c Ratio

Level of Service	Description	v/c Ratio
A	Uncongested operations; all queues clear in a single signal cycle.	< 0.60
B	Very light congestion; an occasional approach phase is fully utilized.	0.60-0.69
C	Light congestion; occasional backups on critical approaches.	0.70-0.79
D	Significant congestion on critical approaches, but intersection functional. Cars required to wait through more than one cycle during short peaks. No long-standing queues formed.	0.80-0.89
E	Severe congestion with some long-standing queues on critical approaches. Blockage of intersection may occur if traffic signal does not provide for protected turning movements. Traffic queue may block nearby intersection(s) upstream of critical approach(es).	0.90-0.99
F	Total breakdown, stop-and-go operation.	≥ 1.00

Source: City/County Association of Governments (C/CAG) of San Mateo County, Final San Mateo County Congestion Management Program, 2019.

Table 3
Unsignalized Intersection Level of Service Definitions Based on Average Delay

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

Source: Transportation Research Board, *2000 Highway Capacity Manual* (Washington, D.C., 2000) p17-2.

City of Belmont Signalized Intersection Standard

The City of Belmont level of service methodology for signalized intersections is the HCM 2000 method. The HCM 2000 methodology estimates the average control delay per vehicle in seconds. *Control delay* is the amount of delay that is attributed to the particular traffic control device at the intersection, and includes initial deceleration delay, queue move-up time, stopped delay, and final acceleration delay. The average control delay can then be correlated to a level of service. The correlation between average control delay and level of service for signalized intersections is shown in Table 4.

For the purpose of this study, the project is said to create an adverse effect on traffic conditions at a signalized, all-way stop-controlled, or side-street stop-controlled intersection in the City of Belmont if for either peak hour the project meets the corresponding criteria shown in Table 5 or 6. For criteria pertinent to side-street stop-controlled intersections, the City guidelines state that the criteria do not apply to low volume roadways but do not define what constitutes a “low volume roadway”. The study intersection of El Camino Real (SR 82) and Ralston Avenue (study intersection #1) is a CMP intersection. The CMP level of service standard for CMP intersections within the City of Belmont is LOS E or better.

**Table 4
Signalized Intersection Level of Service Definition Based on Average Control Delay**

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

Source: Transportation Research Board, *2000 Highway Capacity Manual* (Washington, D.C., 2000) p10-16.

**Table 5
City of Belmont Signalized Intersection Level of Service Adverse Effect Conditions**

If the base case (without project) LOS is:	Then the corresponding average control delay is:	The project is considered to have a potentially adverse effect if the increase in delay due to the project is:	And the critical volume-to-capacity ratio increases by more than:
A	10.0 or less	10.0 seconds	0.02
B	10.1 to 20.0	10.0 seconds	0.02
C	20.1 to 35.0	7.5 seconds	0.02
D	35.1 to 55.0	4.0 seconds	0.01
E	55.1 to 80.0	4.0 seconds ¹	0.01
F	greater than 80.0	4.0 seconds ¹	0.01

Notes:
¹ If the addition of project traffic results in a reduction in average control delay, then the adverse effect caused by the project is considered potential adverse if 35 or more project vehicle trips are added to an intersection operating at LOS E, or 20 or more project vehicle trips are added to an intersection operating at LOS F.

**Table 6
City of Belmont Unsignalized Intersection Level of Service Adverse Effect Conditions**

If the base case (without project) LOS is:	Then the existing average control delay experienced by all drivers entering the intersection is:	The adverse effect caused by the project is potential if the increase in average control delay due to the project is:
A	10.0 or less	10.0 seconds
B	10.1 to 15.0	5.0 seconds
C	15.1 to 25.0	5.0 seconds
D	25.1 to 35.0	4.0 seconds
E	35.1 to 50.0	4.0 seconds ¹
F	greater than 50.0	4.0 seconds ¹

Notes:
 1. If the addition of project traffic results in a reduction in intersection control delay, then the adverse effect caused by the project is considered potential if 25 or more project vehicle trips are added to an intersection operating at LOS E, or 15 or more project vehicle trips are added to an intersection operating at LOS F.

Intersection Land Configurations and Traffic Volumes Under All Scenarios

Existing Lane Configurations and Traffic Volumes

The existing lane configurations at the study intersections are shown on Figure 5.

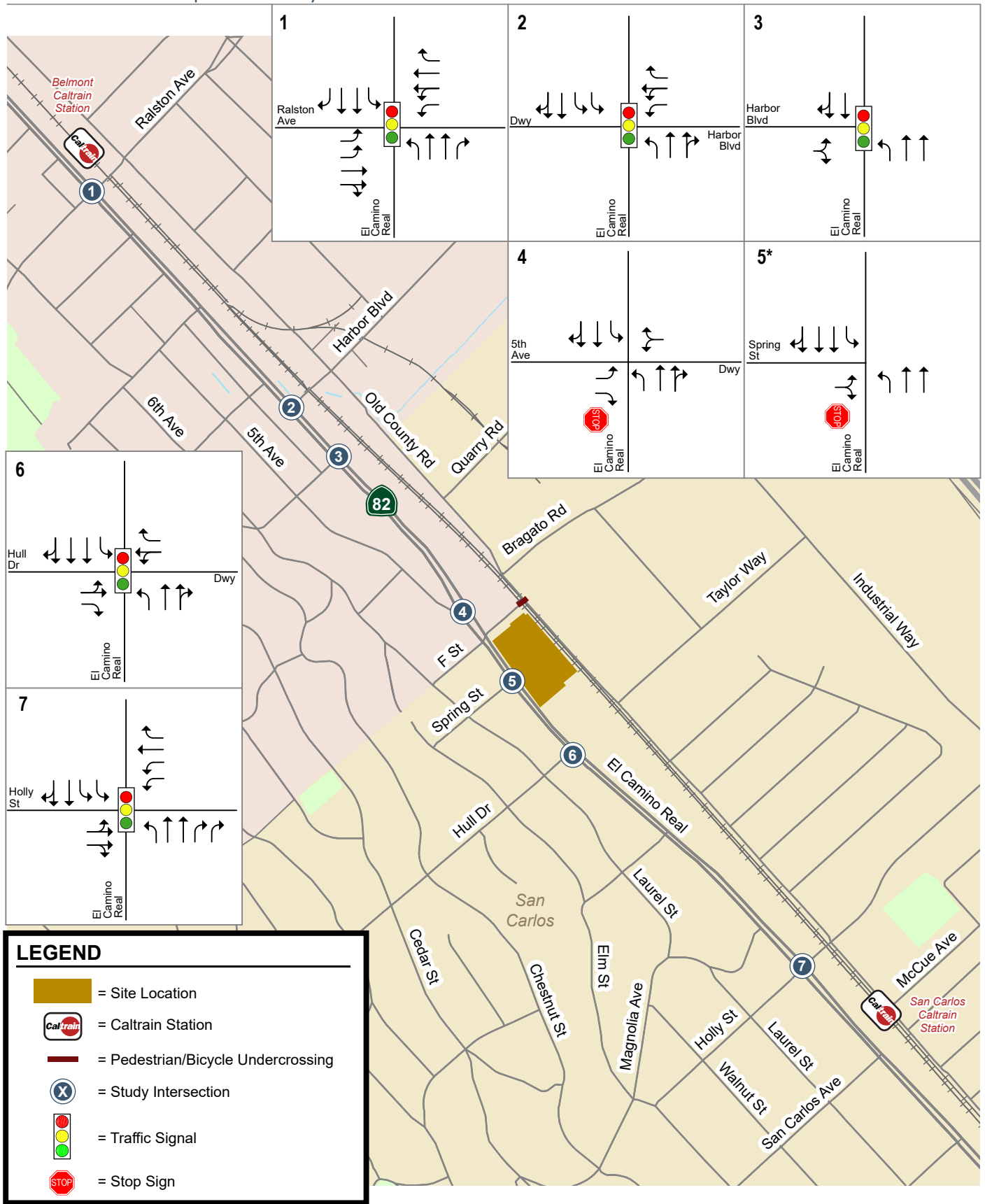
The existing conditions peak-hour traffic volumes at the study intersections are shown on Figure 6. The existing conditions analysis was based on pre-pandemic traffic counts from previous studies and new 2023 counts where older counts were not available. For traffic counts that were older than two years, a 1% growth factor per year was applied until 2023. For the intersection of El Camino Real and Ralston Avenue, existing volumes referenced the *Island Parkway Life Sciences Campus Local Transportation Analysis*, dated April 6, 2023.

Per San Carlos city staff, the 2023 traffic counts do not represent typical traffic conditions. These counts were factored by comparing new counts to available pre-pandemic counts. The factor was derived based on pre-pandemic counts grown to 2023 at two intersections (El Camino Real/Harbor Avenue (north) and El Camino Real/Spring Street) and new counts conducted at these intersections. Compared to the adjusted pre-pandemic counts, the new 2023 counts were 29 percent lower during the peak hours. This percentage was used to adjust the 2023 intersection counts at El Camino Real and 5th Avenue and El Camino Real and Harbor Avenue (south) to reflect pre-COVID conditions. The adjusted existing peak-hour intersection volumes are shown on Figure 6. The new intersection counts conducted in 2023 are included in Appendix B and volume summary sheets with the adjusted existing counts are presented in Appendix C.

Existing Plus Project Lane Configurations and Traffic Volumes

The intersection lane configurations under existing plus project conditions for most intersections were assumed to be the same as under existing conditions. There is currently an existing driveway to CVS, but it is not aligned with Spring Street. The project would modify the intersection of El Camino Real and Spring Street to align the driveway with Spring Street and provide access to the project site. The driveway would operate with a shared left-through-right lane configuration. Project trips were added to existing traffic volumes to obtain existing plus project traffic volumes (see Figure 7).

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*Under existing conditions, Spring Street and the existing driveway are offset. With the buildout of the project, the project driveway and Spring Street will be aligned.

Figure 5
Existing Lane Configurations

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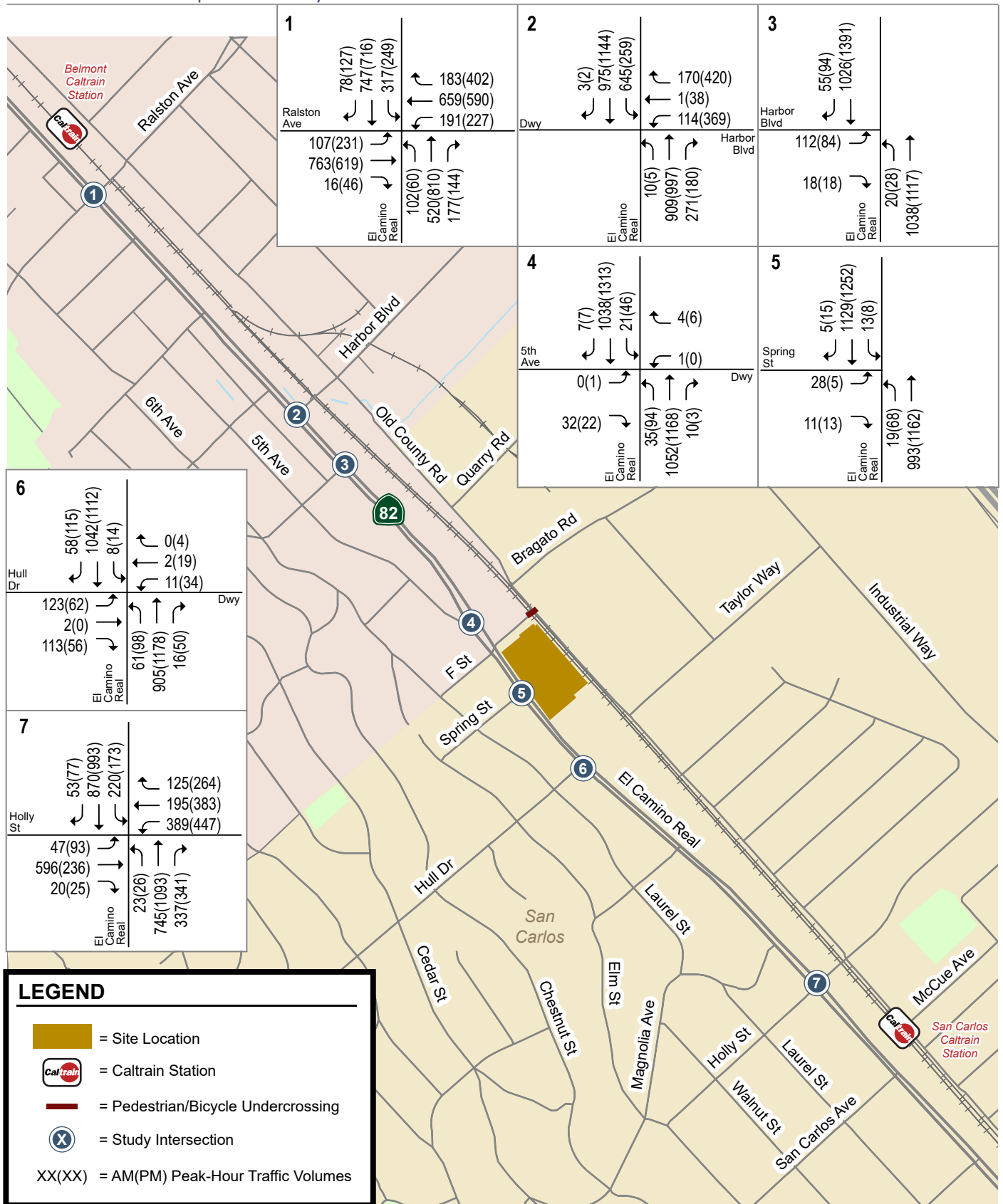
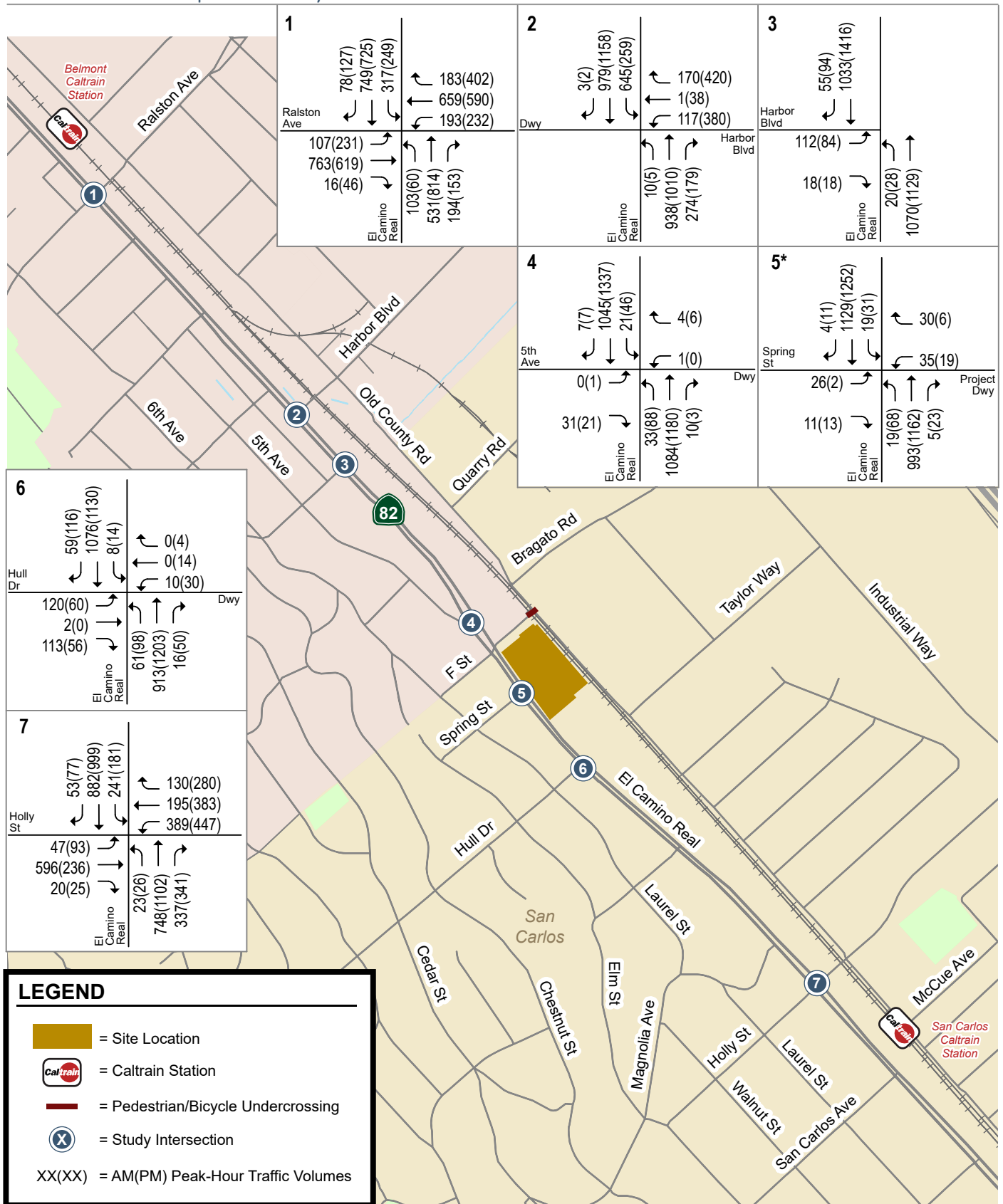


Figure 6
Existing Traffic Volumes

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*Under existing conditions, Spring Street and the existing driveway are offset. With the buildout of the project, the project driveway and Spring Street will be aligned.

Figure 7
Existing Plus Project Traffic Volumes

Background Conditions

The intersection lane configurations under background conditions for all intersections are assumed to be the same as under existing conditions.

Background peak-hour traffic volumes were estimated by adding to existing traffic volumes the volumes from approved but not yet completed developments in the study area. A list of approved but not yet constructed and occupied developments near the proposed project site were obtained from the cities of San Carlos and Belmont. The projects included in the background analysis are listed below.

San Carlos Background Projects

- 1091 Industrial Road – 139,000 s.f. life science
- 1030 Brittan Avenue – 96,000 s.f. life science
- 777 Industrial Road – 120,000 s.f. life science
- 26 El Camino Real – 104 room hotel
- 888 Branston Road - 105,000 s.f. life science
- 1021 Howard Avenue - 191,000 s.f. life science
- 405 Industrial Road - 205,000 s.f. life science

Belmont Background Projects

- 800-803 Belmont Avenue – 125 residential units
- 815 Old County Road – 177 residential units
- 800 Laurel Avenue – 16 residential units
- 1325 Old County Road – mixed-use, 250 residential units

The background conditions peak-hour traffic volumes are shown on Figure 8. The background peak-hour traffic volumes at each study intersection for each project listed above were estimated based on previously completed traffic studies. For projects where previous traffic study information was not available, the trip generation, distribution, and assignment were estimated following a similar process as described for the proposed project trips. The peak-hour traffic volumes for each background project at each study intersection are provided in Appendix C.

Background Plus Project Conditions

The intersection lane configurations under background plus project conditions for all intersections are assumed to be the same as under background conditions.

Project trips were added to background trips to obtain background plus project traffic volumes (see Figure 9).

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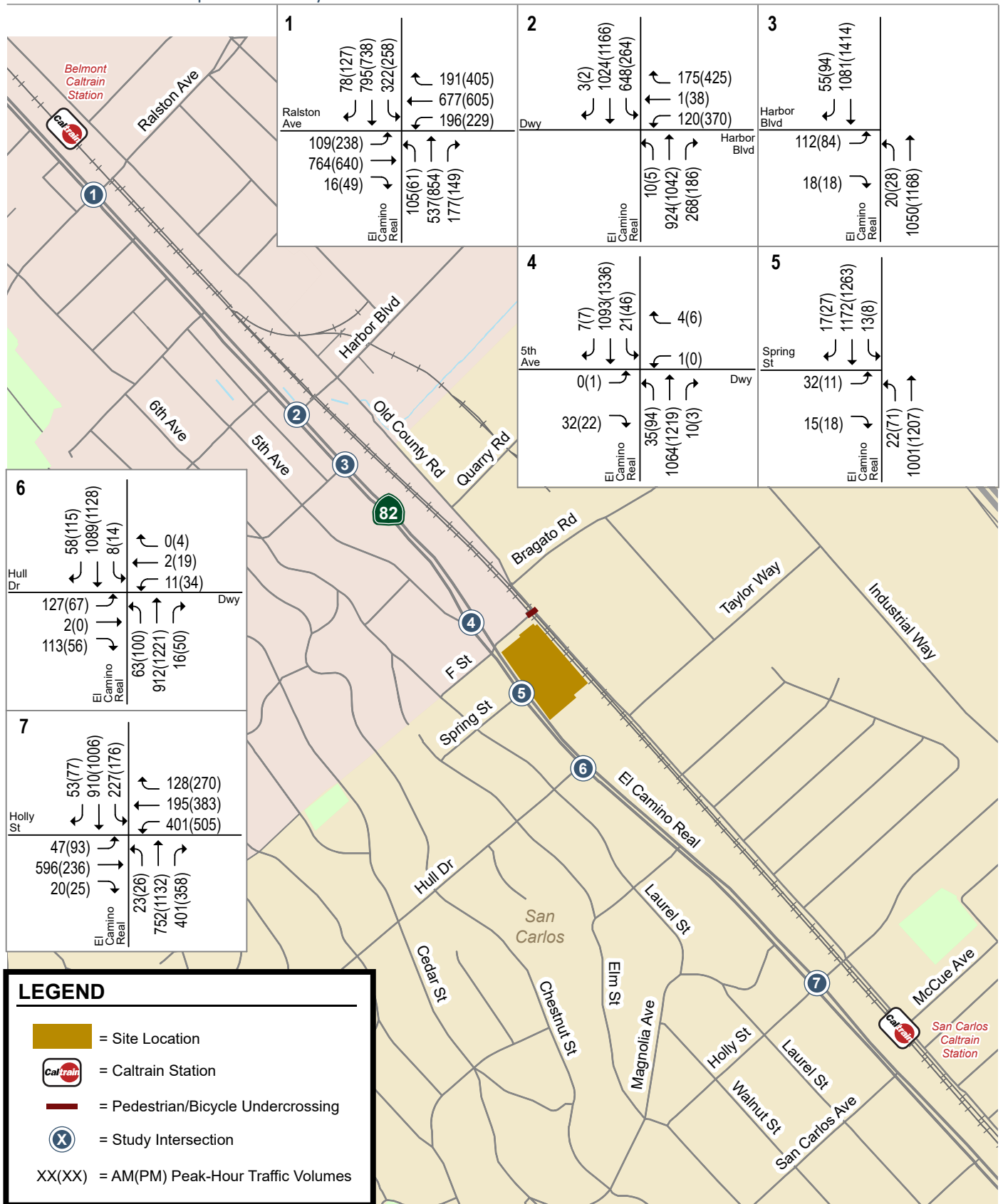


Figure 8
Background Traffic Volumes

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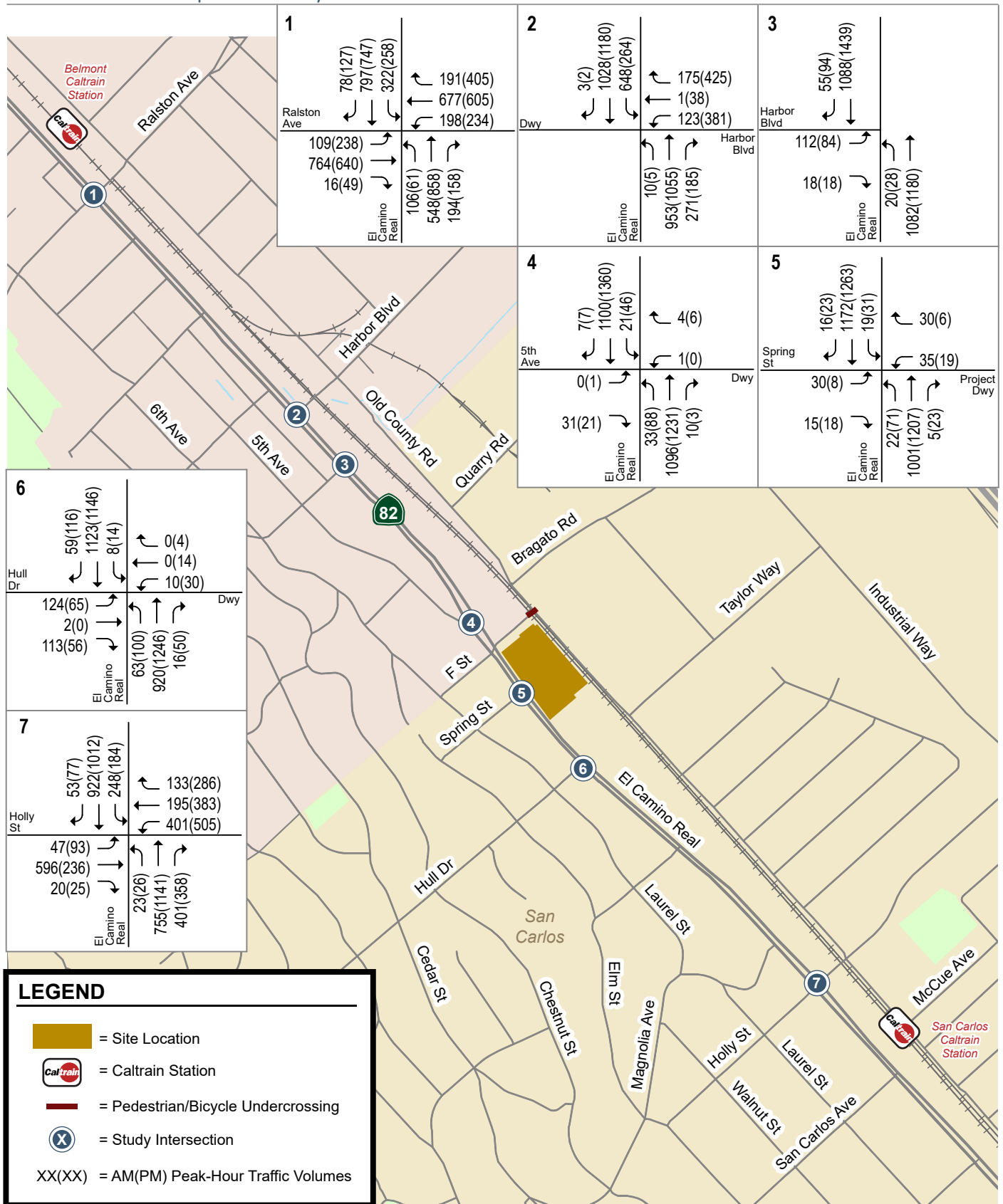


Figure 9
Background Plus Project Traffic Volumes

Cumulative Conditions

It is assumed that the roadway network under cumulative conditions would include the improvement at El Camino Real and Ralston Avenue as identified in the City of Belmont General Plan mitigation measures to be completed in the study area. The improvement includes the conversion of two exclusive left turn lanes on eastbound Ralston Avenue into one left turn lane and one shared through and left turn lane and conversion of the shared through and right turn lane into a through lane and addition of an exclusive right turn lane (see Figure 10). For all other intersections, the intersection lane configurations under cumulative conditions are assumed to be the same as under existing conditions. Cumulative peak-hour traffic volumes are estimated by adding to background traffic volumes the volumes from pending but not yet approved developments in the study area. A list of pending but not yet approved developments near the proposed project site were obtained from the cities of San Carlos and Belmont. The projects included in the cumulative analysis are listed below.

San Carlos Cumulative Projects

- 987 Commercial Street – 1,620,000 s.f. life science
- 803 Old County Road – 325,000 s.f. life science
- 501 Industrial Road – 188 room hotel
- 642 Quarry Road – 41,000 s.f. life science

Belmont Cumulative Projects

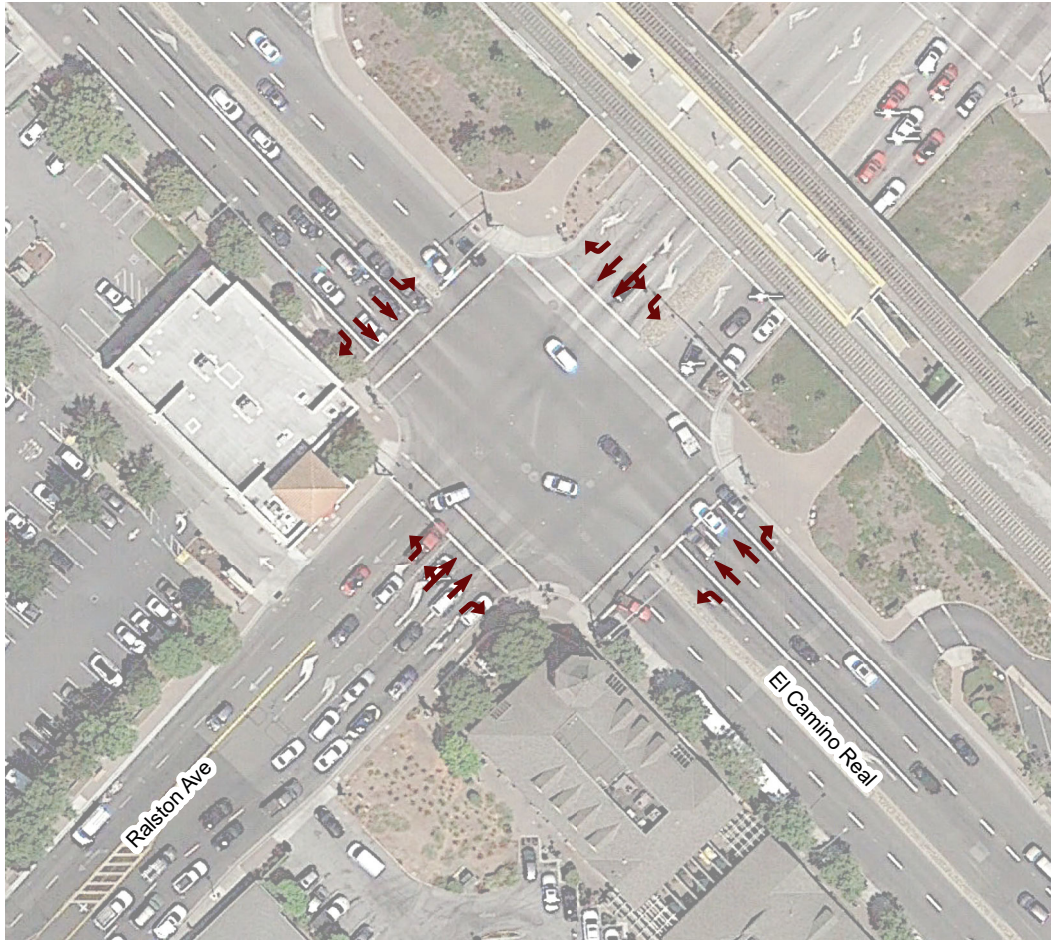
- 580 Masonic Way – 139 residential units
- 2 Davis Drive – 78,000 s.f. office/R&D
- 900 El Camino Real – 37 residential units
- 608 Harbor Boulevard – 103 residential units
- 601 Harbor Boulevard – 757,000 s.f. life science
- 1301 Shorewood Road Development – 542,035 s.f. office
- Island Parkway Life Sciences - 861,090 s.f. life science
- Stanford NDNU Campus

The cumulative conditions peak-hour traffic volumes are shown on Figure 11. The cumulative peak-hour traffic volumes at each study intersection for each project listed above was estimated based on previously completed traffic studies. For projects where previous traffic study information was not available, the trip generation, distribution, and assignment were estimated following a similar process as described for the proposed project trips. The trip estimates for the Stanford NDNU campus were developed in discussion with City staff. The peak-hour traffic volumes for each cumulative project at each study intersection are provided in Appendix C.

Cumulative Plus Project Conditions

The intersection lane configurations under cumulative plus project conditions for all intersections are assumed to be the same as under cumulative conditions.

Project trips were added to cumulative trips to obtain cumulative plus project traffic volumes (see Figure 12).



LEGEND

← = Year 2035 Lane Configuration

Figure 10
Lane Configuraitons in Year 2035

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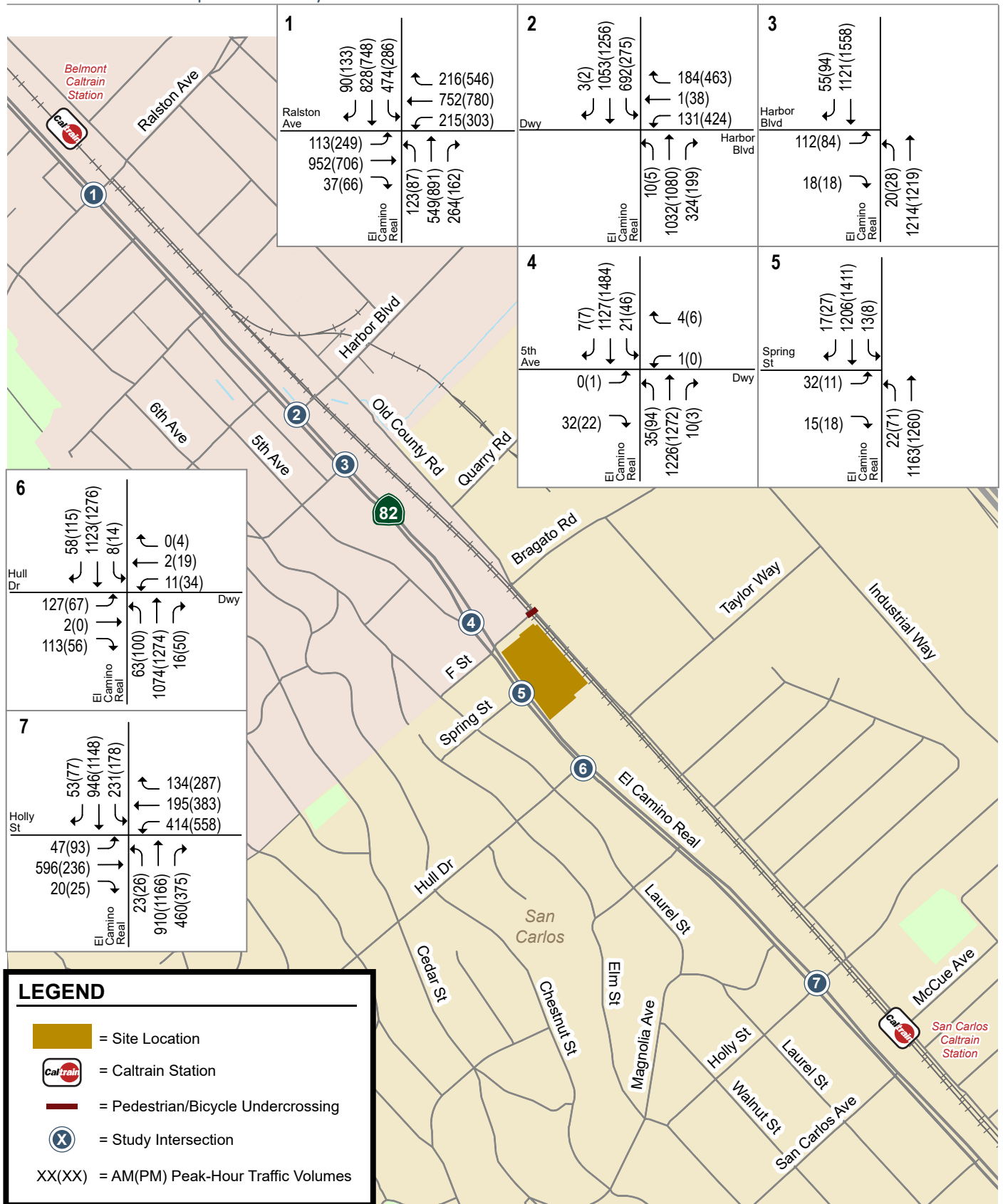


Figure 11
Cumulative Traffic Volumes

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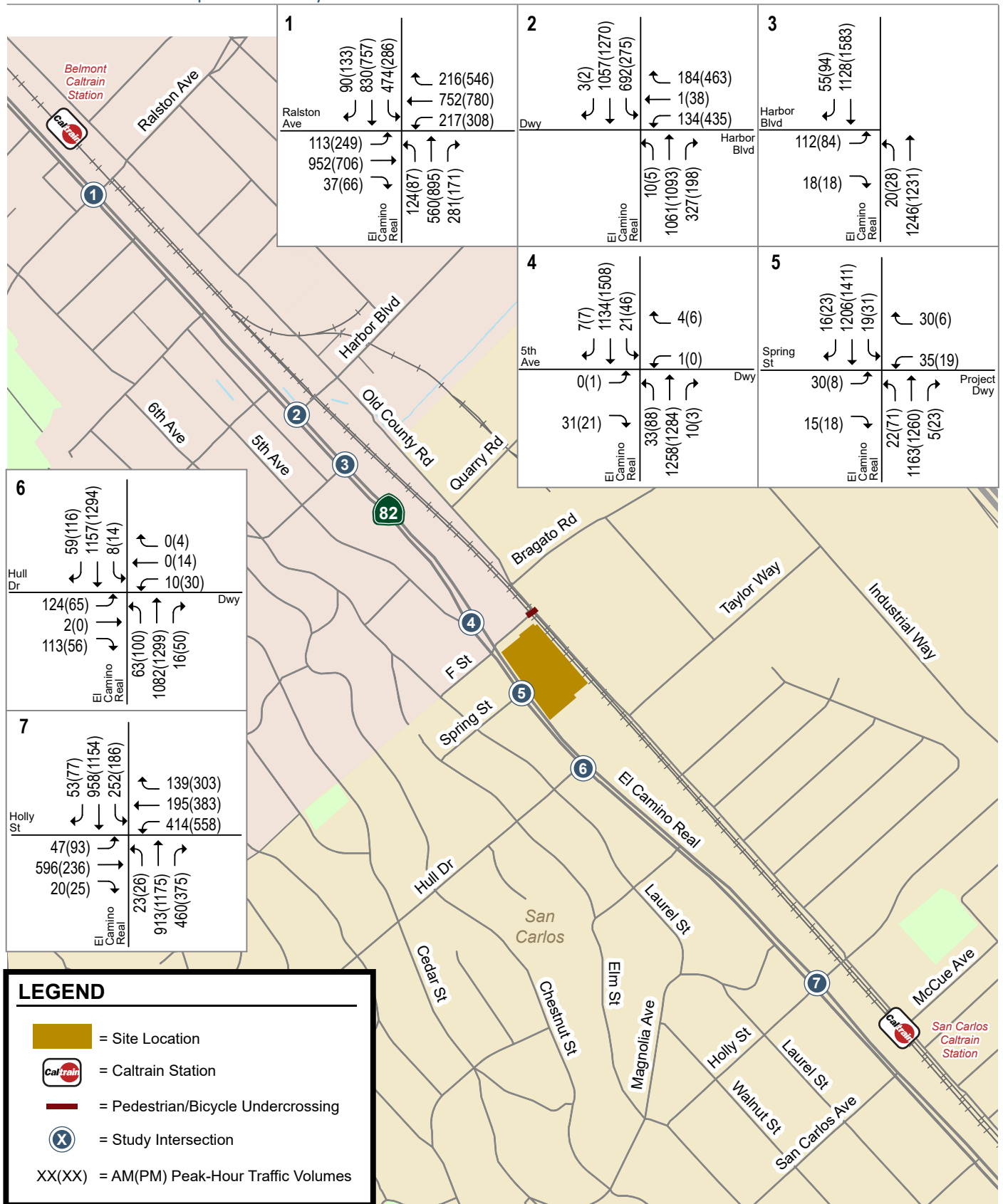


Figure 12
Cumulative Plus Project Traffic Volumes

Level of Service Analysis

The level of service analysis for each scenario is presented below. The level of service calculations for each scenario are provided in Appendix D.

Existing Conditions

The results of the existing conditions level of service analysis show that with the existing traffic volumes, all the signalized study intersections operate at an acceptable level of service during the AM and PM peak hours (see Table 7). With the addition of project trips, the signalized intersections would continue to operate at an acceptable level of service during both peak hours.

The intersection of El Camino Real and Spring Street is stop controlled on Spring Street. Spring Street experiences long delay equivalent to LOS F during the AM peak hour and LOS E during the PM peak hour under existing conditions. With the development of the project and the addition of the project driveway to the east leg of the intersection, the intersection would be modified from a one way stop controlled intersection to a two way stop controlled intersection. The stop-controlled legs would continue to experience long delays equivalent to LOS F during both peak hours. The City of San Carlos does not have an adopted level of service standard for unsignalized intersections. Therefore, a peak-hour volume signal warrant analysis was conducted to determine whether a signal is warranted at this intersection. The peak-hour volume signal warrant analysis indicates that peak-hour volumes at the intersection would not meet the peak-hour volume warrant under existing or existing plus project conditions.

Background Conditions

All signalized study intersections would operate at an acceptable level of service during the AM and PM peak hours under background conditions (see Table 8). With the addition of project trips, the signalized intersections would continue to operate at an acceptable level of service during both peak hours.

The v/c ratio at the intersection of El Camino Real and Ralston Avenue would be higher under background conditions compared to existing conditions but the average delay would be lower under background conditions compared to existing conditions. This is because background projects would add trips to existing low-delay movements, which would result in a decrease in overall average delay.

Spring Street at El Camino Real would experience long delays equivalent to LOS F during both peak hours under background conditions. With the addition of project trips, Spring Street and the project driveway would continue to experience long delays equivalent to LOS F during both peak hours. The peak-hour volume signal warrant analysis indicates that peak-hour volumes at the intersection would not meet the peak-hour volume warrant under background or background plus project conditions.

Cumulative Conditions

Most signalized study intersections would operate at an acceptable level of service during the AM and PM peak hours under cumulative conditions (see Table 9). The intersection of El Camino Real and Ralston Avenue would operate at an unacceptable LOS F during the AM peak hour under cumulative conditions. The addition of project trips would not result in an adverse effect at the signalized study intersections.

Spring Street at El Camino Real would experience long delays equivalent to LOS F during both peak hours under cumulative conditions. With the addition of project trips, Spring Street and the project driveway would continue to experience long delays equivalent to LOS F during both peak hours. The peak-hour volume signal warrant analysis indicates that peak-hour volumes at the intersection would not meet the peak-hour volume warrant under cumulative or cumulative plus project conditions. Left turning vehicles at Spring Street facing lengthy delays could turn right on El Camino Real and use the left turn at Hull Drive to perform a U-turn, which is controlled by a signal and operates well under all study scenarios. Similarly, left turning vehicles at the project driveway could turn right on El Camino Real and use the left turn at 5th Avenue to perform a U-turn, which is uncontrolled. This would provide an alternative route for left-turning vehicles and help reduce congestion at the intersection of Spring Street/Project Driveway and El Camino Real.

**Table 7
Existing and Existing Plus Project Level of Service Summary**

ID #	Intersection	Jurisdiction	Control	Peak Hour	Count Date	Existing Conditions							
						No Project			Existing Plus Project				
						avg. delay (sec/veh) ¹	critical v/c	LOS	avg. delay (sec/veh) ¹	critical v/c	LOS	Increase	
							in avg. delay	Increase in Crit. V/C					
1	El Camino Real and Ralston Avenue*	Belmont	Signal	AM	1/14/2020	54.9	0.87	D	55.0	0.88	D	0.1	0.01
				PM	1/14/2020	52.3	0.84	D	52.3	0.84	D	0.0	0.00
2	El Camino Real and Harbor Boulevard (N)	Belmont	Signal	AM	5/19/2016	29.9	0.63	C	30.6	0.65	C	0.7	0.02
				PM	5/19/2016	39.1	0.68	D	39.3	0.69	D	0.2	0.01
3	El Camino Real and Harbor Boulevard (S)	Belmont	Signal	AM	4/11/2023	8.2	0.55	A	8.1	0.55	A	-0.1	0.00
				PM	4/11/2023	7.0	0.63	A	7.0	0.64	A	0.0	0.01
2	El Camino Real and 5th Avenue	Belmont	Side-Street Stop	AM	3/8/2023	21.4	--	C	22.2	--	C	0.8	--
				PM	3/8/2023	10.5	--	B	10.6	--	B	0.1	--
3	El Camino Real and Spring <i>El Camino Real Northbound</i> <i>El Camino Real Southbound</i> <i>Spring Street Eastbound</i> <i>Project Driveway Westbound</i>	San Carlos	Side-Street Stop	AM	5/4/2017	60.3	--	F	67.7	--	F	7.4	--
						0.2	--	A	0.2	--	A	0.0	--
						0.1	--	A	0.2	--	A	0.1	--
						60.3	--	F	67.7	--	F	7.4	--
						--	--	--	30.4	--	D	--	--
				PM	5/4/2017	38.6	--	E	72.5	--	F	33.9	--
						0.7	--	A	0.7	--	A	0.0	--
						0.1	--	A	0.2	--	A	0.1	--
						38.6	--	E	25.3	--	D	-13.3	--
						--	--	--	72.5	--	F	--	--
4	El Camino Real and Hull Drive	San Carlos	Signal	AM	5/4/2017	--	0.49	A	--	0.48	A	--	-0.01
				PM	5/4/2017	--	0.55	A	--	0.55	A	--	0.00
5	El Camino Real and Holly Street*	San Carlos	Signal	AM	5/8/2016	--	0.71	C	--	0.71	C	--	0.00
				PM	5/8/2016	--	0.83	D	--	0.84	D	--	0.01

*CMP Intersection

¹ For City of San Carlos signalized intersections, level of service (LOS) is based on the intersection volume-to-capacity (v/c) ratio. For the side-street stop controlled intersections and for City of Belmont signalized intersections, LOS is based on the average delay.

² Under project conditions, during the PM peak hour, the project driveway would have higher delay than Spring Street.

**Table 8
Background and Background Plus Project Level of Service Summary**

ID #	Intersection	Jurisdiction	Control	Peak Hour	Background Conditions							
					No Project			Background Plus Project				
					avg. delay (sec/veh) ¹	critical v/c	LOS	avg. delay (sec/veh) ¹	critical v/c	LOS	increase in avg. delay	Increase in Crit. V/C
1	El Camino Real and Ralston Avenue*	Belmont	Signal	AM	53.8	0.90	D	53.9	0.90	D	0.1	0.00
				PM	51.2	0.87	D	51.3	0.87	D	0.1	0.00
2	El Camino Real and Harbor Boulevard (N)	Belmont	Signal	AM	29.9	0.64	C	30.6	0.65	C	0.7	0.01
				PM	39.3	0.69	D	39.5	0.70	D	0.2	0.01
3	El Camino Real and Harbor Boulevard (S)	Belmont	Signal	AM	7.8	0.55	A	7.7	0.55	A	-0.1	0.00
				PM	7.0	0.64	A	7.1	0.65	A	0.1	0.01
2	El Camino Real and 5th Avenue	Belmont	Side-Street Stop	AM	22.4	--	C	23.2	--	C	0.8	--
				PM	10.6	--	B	10.6	--	B	0.0	--
3	El Camino Real and Spring <i>El Camino Real Northbound</i> <i>El Camino Real Southbound</i> <i>Spring Street Eastbound</i> <i>Project Driveway Westbound</i>	San Carlos	Side-Street Stop	AM	77.6	--	F	89.2	--	F	11.6	--
					0.2	--	A	0.2	--	A	0.0	--
					0.1	--	A	0.1	--	A	0.0	--
					77.6	--	F	89.2	--	F	11.6	--
					--	--	--	33.3	--	D	--	--
					64.5	--	F	86.1	--	F	21.6	--
					0.7	--	A	0.7	--	A	0.0	--
					0.1	--	A	0.2	--	A	0.1	--
					64.5	--	F	57.5	--	F	-7.0	--
					--	--	--	86.1	--	F	--	--
4	El Camino Real and Hull Drive	San Carlos	Signal	AM	--	0.49	A	--	0.49	A	--	0.00
				PM	--	0.57	A	--	0.57	A	--	0.00
5	El Camino Real and Holly Street*	San Carlos	Signal	AM	--	0.73	C	--	0.73	C	--	0.00
				PM	--	0.85	D	--	0.85	D	--	0.00

*CMP Intersection

¹ For City of San Carlos signalized intersections, level of service (LOS) is based on the intersection volume-to-capacity (v/c) ratio. For the side-street stop controlled intersections and for City of Belmont signalized intersections, LOS is based on the average delay.

² Under project conditions, during the PM peak hour, the project driveway would have higher delay than Spring Street.

**Table 9
Cumulative and Cumulative Plus Project Level of Service Summary**

ID #	Intersection	Jurisdiction	Control	Peak Hour	Cumulative Conditions							
					No Project			Cumulative Plus Project				
					avg. delay	critical v/c	LOS	avg. delay	critical v/c	LOS	Increase in avg. delay	Increase in Crit. V/C
1	El Camino Real and Ralston Avenue*	Belmont	Signal	AM	84.1	1.07	F	84.5	1.08	F	0.4	0.01
				PM	62.4	0.97	E	62.6	0.97	E	0.2	0.00
2	El Camino Real and Harbor Boulevard (N)	Belmont	Signal	AM	36.1	0.71	D	36.9	0.73	D	0.8	0.02
				PM	40.7	0.73	D	41.0	0.74	D	0.3	0.01
3	El Camino Real and Harbor Boulevard (S)	Belmont	Signal	AM	7.6	0.55	A	7.5	0.55	A	-0.1	0.00
				PM	7.6	0.70	A	7.7	0.71	A	0.1	0.01
2	El Camino Real and 5th Avenue	Belmont	Side-Street Stop	AM	28.6	--	D	29.9	--	D	1.3	--
				PM	11	--	B	11.2	--	B	0.2	--
3	El Camino Real and Spring <i>El Camino Real Northbound</i> <i>El Camino Real Southbound</i> <i>Spring Street Eastbound</i> <i>Project Driveway Westbound</i>	San Carlos	Side-Street Stop	AM	104.2	--	F	123.8	--	F	19.6	--
					0.2	--	A	0.2	--	A	0.0	--
					0.1	--	A	0.2	--	A	0.1	--
					104.2	--	F	123.8	--	F	19.6	--
					--	--	--	46.6	--	E	--	--
				PM	111.8	--	F	123.2	--	F	11.4	--
					0.8	--	A	0.7	--	A	-0.1	--
					0.1	--	A	0.2	--	A	0.1	--
					111.8	--	F	96.8	--	F	-15.0	--
					--	--	--	123.2	--	F	--	--
4	El Camino Real and Hull Drive	San Carlos	Signal	AM	--	0.54	A	--	0.54	A	--	0.00
				PM	--	0.58	A	--	0.58	A	--	0.00
5	El Camino Real and Holly Street*	San Carlos	Signal	AM	--	0.75	C	--	0.76	C	--	0.01
				PM	--	0.87	D	--	0.88	D	--	0.01

*CMP Intersection
Bold indicates a substandard level of service
¹ For City of San Carlos signalized intersections, level of service (LOS) is based on the intersection volume-to-capacity (v/c) ratio. For the side-street stop controlled intersections and for City of Belmont signalized intersections, LOS is based on the average delay.
² Under project conditions, during the PM peak hour, the project driveway would have higher delay than Spring Street.

Queuing Analysis at the Study Intersections

For selected high-demand movements at the study intersections, the estimated maximum vehicle queues were compared to the existing or planned storage capacity. The queuing analysis is used to determine the appropriate storage lengths for the high-demand turn lanes where the proposed project would add a substantial number of trips to these movements. Vehicle queues were estimated using Synchro for signalized intersections and a Poisson probability distribution for intersections for unsignalized intersections. Poisson probability distribution estimates the probability of “n” vehicles for a vehicle movement using the following formula:

$$\text{Probability (X=n)} = \frac{\lambda^n e^{-\lambda}}{n!}$$

Where:

Probability (X=n) = probability of “n” vehicles in queue per lane

n = number of vehicles in the queue per lane

λ = Average number of vehicles in queue per lane (vehicles per hour per lane/signal cycles per hour)

The basis of the analysis is as follows: (1) the Poisson probability distribution or Synchro is used to estimate the 95th percentile maximum number of queued vehicles per signal cycle for a particular movement; (2) the estimated maximum number of vehicles in the queue is translated into a queue length, assuming 25 feet per vehicle; and (3) the estimated maximum queue length is compared to the existing or planned available storage capacity for the movement.

The queuing analysis included the movements listed below to which the project would add a notable number of trips.

- Southbound left-turn at El Camino Real and Spring Street
- Southbound left-turn at El Camino Real and Holly Street

The results of the queuing analysis are discussed below and shown in Table 10. The Synchro queuing reports are provided in Appendix E.

Table 10
Queuing Analysis Summary

Movement Peak Hour Period	El Camino Real & Holly Street ¹		El Camino Real & Spring Street/dwy ²	
	SBL		SBL	
	AM	PM	AM	PM
Existing				
Delay (Sec)	--	--	--	--
Volume (vphpl)	110	87	--	--
95th % . Queue (ft/ln) ³	150	125	--	--
95th % . Queue (veh/ln) ³	6	5	--	--
Storage (ft./ln)	230	230	--	--
Adequate (Y/N)	Y	Y	--	--
Existing Plus Project				
Delay (Sec)	--	--	9.5	10.2
Volume (vphpl)	121	91	19	31
95th % . Queue (ft/ln) ³	175	150	25	25
95th % . Queue (veh/ln) ³	7	6	1	1
Storage (ft./ln)	230	230	160	160
Adequate (Y/N)	Y	Y	Y	Y
Background				
Delay (Sec)	--	--	--	--
Volume (vphpl)	114	88	--	--
95th % . Queue (ft/ln) ³	175	150	--	--
95th % . Queue (veh/ln) ³	7	6	--	--
Storage (ft./ln)	230	230	--	--
Adequate (Y/N)	Y	Y	--	--
Background Plus Project				
Delay (Sec)	--	--	9.5	10.4
Volume (vphpl)	124	92	19	31
95th % . Queue (ft/ln) ³	175	150	25	25
95th % . Queue (veh/ln) ³	7	6	1	1
Storage (ft./ln)	230	230	160	160
Adequate (Y/N)	Y	Y	Y	Y
Cumulative				
Delay (Sec)	--	--	--	--
Volume (vphpl)	116	89	--	--
95th % . Queue (ft/ln) ³	175	150	--	--
95th % . Queue (veh/ln) ³	7	6	--	--
Storage (ft./ln)	230	230	--	--
Adequate (Y/N)	Y	Y	--	--
Cumulative Plus Project				
Delay (Sec)	--	--	10.1	10.7
Volume (vphpl)	126	93	19	31
95th % . Queue (ft/ln) ³	175	150	25	25
95th % . Queue (veh/ln) ³	7	6	1	1
Storage (ft./ln)	230	230	160	160
Adequate (Y/N)	Y	Y	Y	Y
Notes:				
SBL = southbound left-turn; WBR = westbound right-turn				
¹ 95th percentile queue length used from Synchro software.				
² 95th percentile queue length developed using Poisson Distribution				
³ Vehicle queues taken from Synchro outputs are rounded up to the next whole number. Assumes 1 vehicle equals 25 feet of queue.				

Traffic Signal Warrant Analysis

Traffic conditions at the unsignalized intersection of El Camino Real and Spring Street were assessed to determine whether a traffic signal would be warranted based on the peak-hour volume signal warrant (Warrant #3) described in the 2014 California Manual on Uniform Traffic Control Devices (CA MUTCD). This method provides an indication of whether traffic conditions and peak-hour traffic levels are, or would be, sufficient to justify installation of a traffic signal. Note that this is just one tool used to evaluate whether installation of a traffic signal would be justified. The analysis showed that the AM and PM peak-hour traffic volumes at the intersection do not satisfy the signal warrant under any of the scenarios. The peak-hour signal warrant calculations are provided in Appendix F.

Site Access and On-Site Circulation

The site access and on-site circulation evaluations are based on the site plan prepared by KTG Architecture + Planning dated for May 17, 2023 (see Figure 2 and Figure 13). Site access was evaluated to determine the adequacy of the site's driveways with regard to the following: traffic volume, vehicle queues, geometric design, and stopping sight distance. On-site vehicular circulation and parking layout were reviewed in accordance with generally accepted traffic engineering standards and transportation planning principles.

Project Driveway Design

Vehicular access to the project site would be provided via one full access driveway on El Camino Real. The driveway would be 20 feet wide with one inbound lane and one outbound lane and would provide access to the main project drive aisle. The main project drive aisle would provide access to the parking garage. The project would also have a secondary driveway on El Camino Real, which would provide emergency vehicle access, access to a loading/move-in/trash area, and access to the adjacent San Carlos Plaza. This driveway would be 26 feet wide. Per the City of San Carlos municipal code (Section 18.20.100), the minimum driveway width for a multifamily development should be 20 feet. The proposed project driveways meet the City's requirements.

The project driveways must provide adequate access and stacking space for vehicles entering the site to avoid backups onto the sidewalks and streets. The project driveway should provide enough stacking space for approximately two inbound vehicles. Typically, a minimum distance of 50 feet, the equivalent of two vehicles, measured from the face of the curb provides adequate stacking space at driveways. The site plan shows a gate internal to the garage with approximately 170 feet of queuing space before vehicles queue onto the sidewalk. Therefore, the project driveway design is adequate.

Sight Distance at the Project Driveways

Driveway locations were evaluated to determine if the sight distance at the driveways would be adequate. Driveways should be free and clear of any obstructions to optimize sight distance, thereby ensuring that exiting vehicles can see pedestrians on the sidewalk and other vehicles traveling on adjacent roadways. Any landscaping and signage should be located in such a way as to ensure an unobstructed view for drivers entering and exiting the site. Adequate sight distance reduces the likelihood of a collision at driveways and provides drivers with the ability to locate sufficient gaps in traffic to exit a driveway. Sight distance of a driveway is evaluated based on the stopping sight distance recommended by Caltrans for a given design speed. El Camino Real has a posted speed limit of 35 mph for which the Caltrans stopping sight distance is 250 feet. As shown on the site plan, the project does not propose tall vegetation or objects that would block a driver's

ability to see 250 feet north and south on El Camino Real from either driveway. Parking is also prohibited along this portion of El Camino Real. Therefore, sight distance at the driveways is adequate.

Driveway Operations

The primary project driveway would be a full access driveway and would be aligned with Spring Street. As shown in Tables 7, 8, and 9, the driveway would operate with long delays equivalent to LOS F. Based on the peak-hour volume signal warrant analysis described in the previous section, a signal would not be warranted at this intersection under project conditions.

During the AM peak hour, it is estimated that there would be 69 outbound trips at the driveway. Any outbound queues would remain on-site while the vehicles wait for a gap in the El Camino Real traffic to exit the driveway. There would be sufficient space on site for the outbound queues, and the outbound queues are not expected to have an adverse effect on the site operations and circulation.

Inbound trips would be the highest during PM peak hour. During the PM peak hour, it is estimated that there would be 57 inbound trips at the driveway, with 23 trips estimated to make a southbound left turn into the driveway. As shown in Table 10, the 95th percentile queue for vehicles waiting for a gap in traffic to turn southbound left-turn into the driveway would be one vehicle, which can be accommodated by the available southbound left-turn storage on El Camino Real.

Vehicle Parking Requirements

The parking requirements for the proposed project are based on the City of San Carlos Zoning Code (Chapter 18.20, 18.20.040-A(3)). Based on the zoning code, residential developments in mixed-use districts are required to provide one parking space per studio and one-bedroom units and 1.5 parking spaces per two and three-bedroom units. The project proposes 7 studio units, 159 one-bedroom units, 65 two-bedroom units, and 11 three-bedroom units. Per the City's requirements, the project is required to provide 280 resident parking spaces. The project proposes to implement a Transportation Demand Management (TDM) plan, which would allow up to a 20% reduction in the required number of parking spaces (Appendix G). Therefore, with the City's zoning code requirements and the TDM reduction, the project would be required to provide a minimum of 224 parking spaces for the residential development. The project proposes 280 parking spaces, meeting the City's requirements.

Proposed Parking and Circulation

Parking for the proposed project would be located in an on-site parking garage with two levels of parking, one level below ground and one level at surface level connected by a ramp. The slope of the parking garage ramp would be 5 percent with 90-degree parking spaces on the ramp. The project proposes 283 resident parking spaces and 14 visitor parking spaces for a total of 297 parking spaces. The parking structure would include 32 standard parking spaces, 145 electric vehicle (EV) ready-LV1 parking spaces (including two accessible spaces), 97 LV2 EV charging stations (including three accessible spaces), 17 tandem parking spaces, two accessible spaces, and 4 loading spaces meeting the City's requirements. **It is recommended that the tandem parking spaces be assigned to the same unit.**

The parking areas would be directly accessible from the primary project driveway and main project drive aisle. The parking garage drive aisles and ramps would be approximately 24 feet wide and would meet the City's requirements of aisle width for 90-degree parking spaces. This would be adequate to allow for two-way traffic and would be sufficient for maneuvering in and out of parking spaces for compact cars (e.g., Toyota Prius) and mid-size cars (e.g., Jeep Cherokee). However, if

two large vehicles (e.g., one Chevrolet Suburban in each direction) arrived at the corner at the same time, these vehicles would not be able to turn at the same time. **It is recommended that a parabolic mirror be installed at each turning corner of the parking garage to increase visibility for drivers making turns.**

Parking Stall Dimensions

The City of San Carlos requires that standard and EV 90-degree parking stalls be a minimum of 8.5 feet wide by 18 feet long and that EVCS stalls be a minimum of 9 feet wide by 18 feet long. The site plan shows the standard and EV parking stalls would meet the City's requirements. The site plan shows 80 LV 2 EVCS stalls have been designed to be 8.5 feet wide by 18 feet long. Per City requirements (Section 4.106.4.3.2), all LV 2 EVCS stalls should be designed to be 9 feet wide by 18 feet long. The City code allows exception to the EVCS stall dimensions, subject to City discretion. The applicant is proposing to apply for the exception. **It is recommended that the applicant confirm with City staff on parking dimensions for EVCS stalls as proposed.**

Bicycle Parking

The project proposes both short-term and long-term bicycle parking. The City's municipal code (section 18.20.080B) states that for residential uses, long-term bicycle parking shall be provided for every five units for multi-unit residential and group resident projects. This calculates to 49 long-term bicycle parking spaces. The project will provide 60 long-term bicycle parking spaces in the bike storage room located at the southeast corner of the site. Based on the City's municipal code (Section 18.20.080A), short-term bicycle parking shall be at least ten percent of the number of required automobile parking spaces for multi-unit residential, group residential, and single room occupancy with five or more units. This calculates to 23 short-term bicycle parking spaces. The project proposes to provide 24 short-term bicycle parking spaces near the main entrance of the building.

Loading and Emergency Vehicle Access

The project would include a trash/loading/move-in area on the southeast side of the building as well as a loading space in the garage. The loading area would be accessed from a 26 feet wide secondary driveway off El Camino Real. This driveway would also operate as the emergency vehicle access to the project site and the driveway width would meet the City's requirements of 20 feet width. The loading area and the emergency vehicle access to the project site would be adequate.

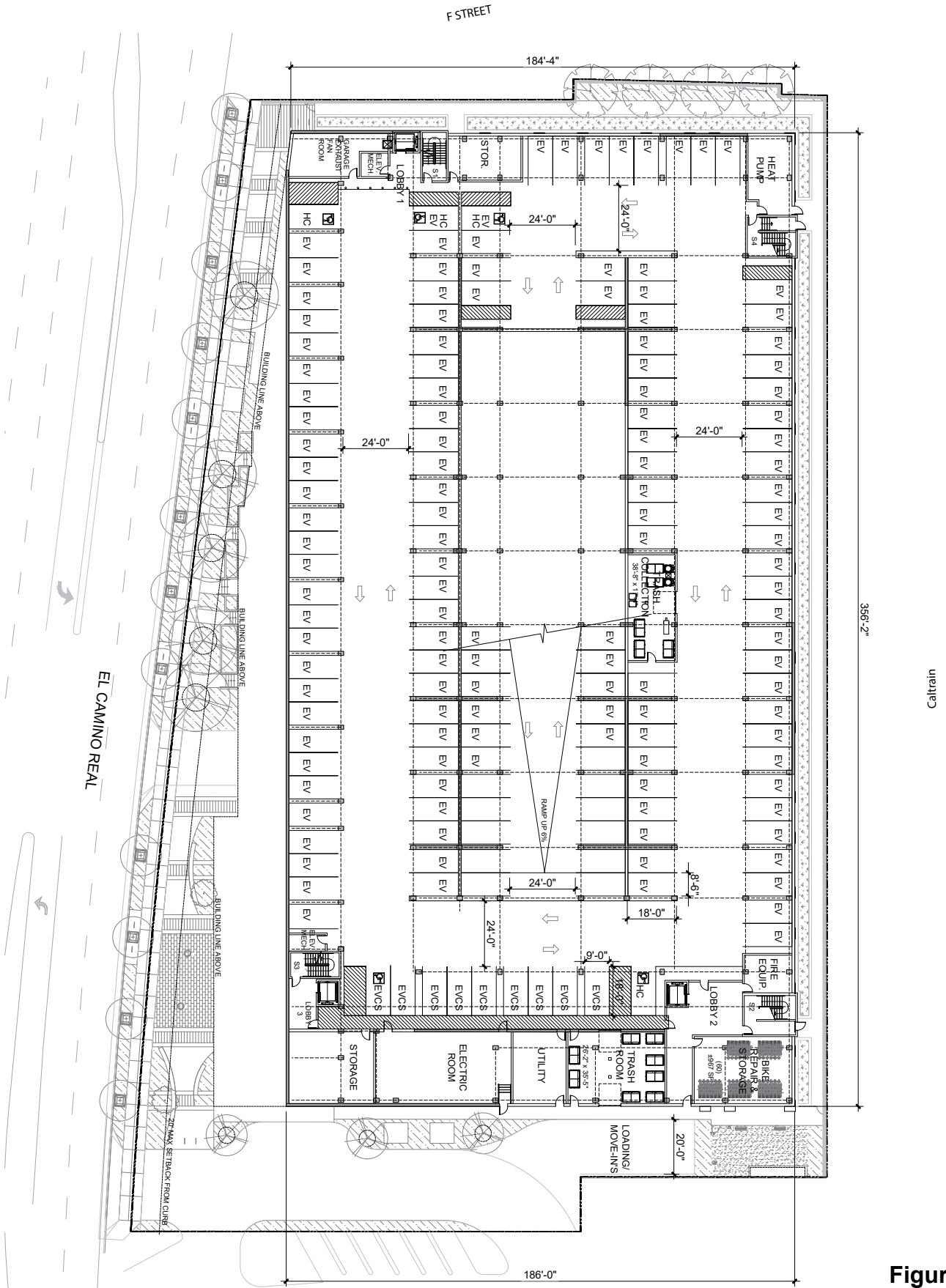


Figure 13
Garage Layout (Lower Floor)

Impacts to Pedestrian, Bicycle, and Transit Facilities

Existing pedestrian, bicycle, transit facilities in the vicinity of the project site are described in detail in the project TDM Plan (Appendix G). Project improvements and impacts to these facilities is described below.

Pedestrian Access and Circulation

At the project site along El Camino Real, a continuous sidewalk is present along both sides of the street. There is a walkway along the south side of F Street to access an underpass for pedestrian and bicycle users. These sidewalks can be used to access the San Carlos Caltrain station as well as other amenities adjacent to the project site include a dry-cleaning store, restaurants, a market, and vision care.

Crosswalks with pedestrian signal heads and push buttons are found on one or more approaches at all the nearby signalized intersections. The intersection at El Camino Real/Hull Drive has crosswalks on the west and south approaches. The intersections at El Camino Real/Holly Street and El Camino Real/San Carlos Avenue have crosswalks on all approaches. Marked crosswalks with yield to pedestrian signage also exist on the south approach at the intersection of El Camino Real and Oak Street and on the north approach at the intersection of El Camino Real and 5th Avenue.

The project proposes to replace the existing 5 feet wide sidewalk with an 8 feet wide buffered sidewalk, which provides a greater separation for pedestrians on the sidewalk from vehicles. The project would also build a small plaza area along the northside and southside of the project and a larger plaza along the building frontage with pedestrian paths connecting the building entrances to El Camino Real. Within the project site, pedestrian paths will connect the proposed building, parking garages, and other amenities on-site. A fitness area and lounge/mail area would be provided at the southwest corner on the ground floor, an amenity room with work from home spaces would be provided at the northwest corner on the ground floor, a clubroom and pool would be provided on the 2nd floor, a Wi-Fi lounge would be provided on the 3rd floor, and roof decks would be provided. The project also proposes to provide a drop-off area in an unsecured portion of the garage.

Bicycle Access and Circulation

Bicycle facilities in the study area include Class II bike lanes and Class III bike routes. Class II bicycle lanes are lanes on roadways designated for use by bicycles with special lane markings, pavement legends, and signage. Class III bike routes are existing streets that accommodate bicycles but are not separate from the existing travel lanes.

In the vicinity of the project site, existing Class II bicycle lanes are located on Industrial Road between Harbor Boulevard and Middlefield Road. Existing Class III bicycle routes are located on Old County Road from Ralston Avenue to Terminal Way, along Cedar Street from Hull Drive to Eaton Avenue, and along San Carlos Avenue from Elm Street to Old County Road. A bicycle boulevard exists along San Carlos Avenue, from Old County Road to Industrial Road. There is also an underpass available for bicycle and pedestrian users to cross under the Caltrain tracks at F Street/Old County Road, which is adjacent to the site.

The site plan indicates that the project would provide bicycle parking. The project would not remove any existing bicycle facilities, nor would it conflict with any adopted plans or policies for new bicycle facilities. The San Carlos Bicycle and Pedestrian Master Plan recommends Class IV bike lanes on El Camino Real.

Transit Services in the Project Vicinity

Existing transit service to the study area is provided by the San Mateo County Transit District (SamTrans) and Caltrain. The project site is served by SamTrans Routes ECR, 397 and 398. The closest bus stop is located 300 feet away from the project site at the intersection of El Camino Real and 5th Avenue. Many other bus routes serve the San Carlos Caltrain Station, which is about 0.55 miles from the project site. The project is expected to generate a small increase in transit demand, which could be accommodated by the available capacity of the SamTrans bus service as well as Caltrain.

Conclusions

The results of the transportation study for the 11 El Camino Real project are summarized below.

- It is estimated that the project would generate 71 net new AM peak hour trips (9 inbound and 62 outbound) and 60 net new PM peak hour trips (44 inbound and 16 outbound).
- The level of service analysis shows that all signalized study intersections operate at an acceptable level of service during the AM and PM peak hours under existing and background conditions. The intersection of El Camino Real and Ralston Avenue would operate at an unacceptable LOS F during the AM peak hour under cumulative no project conditions.
- The level of service analysis shows that the proposed project would not have an adverse effect on operations at the study intersections under any of the study scenarios.
- The peak-hour signal warrant analysis shows that the AM and PM peak-hour traffic volumes at the Spring Street at El Camino Real intersection would not satisfy the signal warrant under any of the study scenarios.
- The proposed site plan shows adequate site access and acceptable connectivity and maneuvering space within the proposed parking structure and main project driveway aisle. However, Hexagon provides the recommendation to help improve on-site circulation.
 - It is recommended that the tandem parking spaces be assigned to the same unit.
 - It is recommended that parabolic mirrors be installed at the turning corners of the parking garage to increase visibility for drivers making turns.
 - It is recommended that the applicant confirm with City staff on parking dimensions for EVCS stalls as proposed.
- The loading area and the emergency vehicle access to the project site would be adequate.
- The project would not result in impacts to pedestrian, bicycle, or transit facilities.

Appendix A
VMT Analysis

Project Details

Timestamp of Analysis: May 22, 2023, 09:51:13 AM

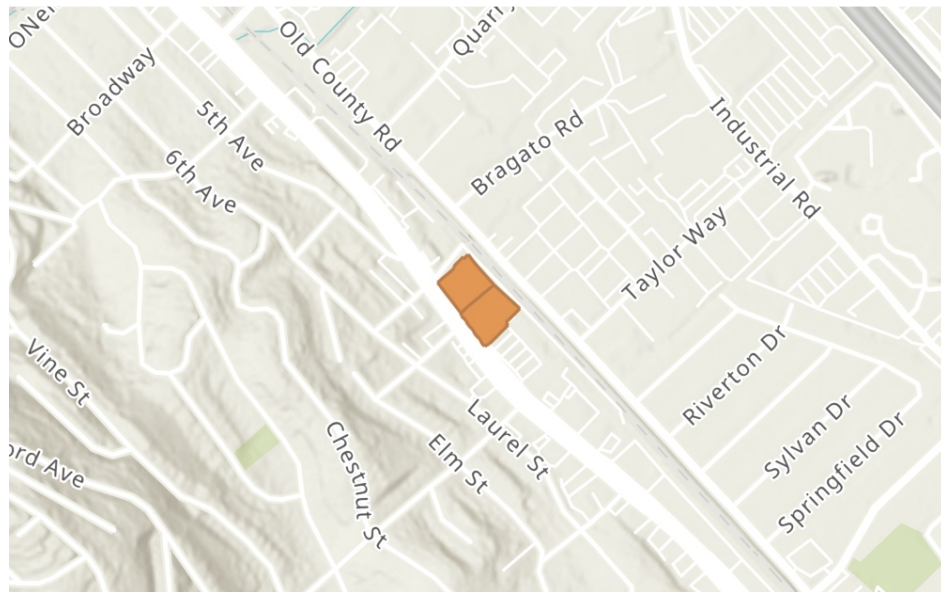
Project Name: 11 El Camino Real

Project Description: Multifamily

Project Location

jurisdiction:	apn	TAZ
San Carlos	045320170	1623
	045320220	1623

Inside a TPA?
Yes (Pass)



Analysis Details

Data Version: C/CAG Travel Model

Analysis Methodology: TAZ

Baseline Year: 2015

Project Land Use

Residential:

Single Family DU:

Multifamily DU: 242

Total DUs: 242

Non-Residential:

Office KSF:

Local Serving Retail KSF:

Industrial KSF:

Residential Affordability (percent of all units):

Extremely Low Income: 0 %

Very Low Income: 10 %

Low Income: 5 %

Parking:

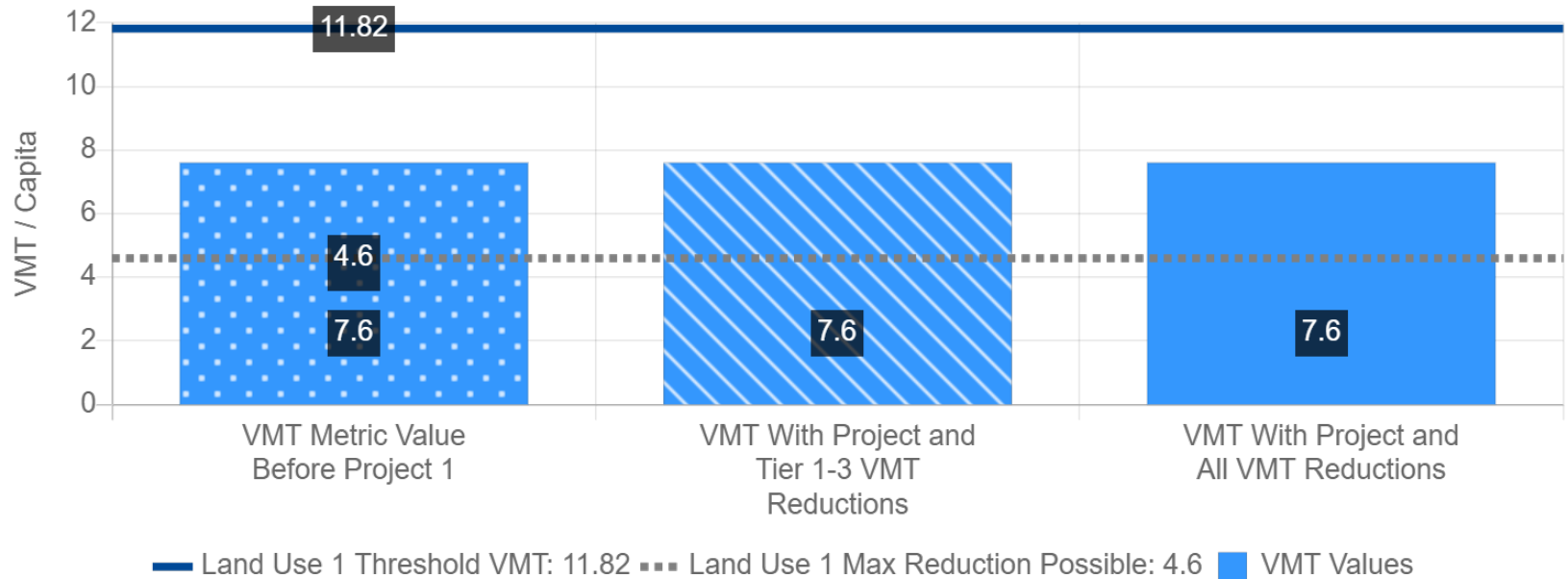
Motor Vehicle Parking:

Bicycle Parking:

Residential Vehicle Miles Traveled (VMT) Screening Results

Land Use Type 1:	Residential
VMT Without Project 1:	Home-Based VMT per Resident
VMT Baseline Description 1:	City Average
VMT Baseline Value 1:	13.9
VMT Threshold Description 1:	-15%
Land Use 1 has been Pre-Screened by the Local Jurisdiction:	N/A

	Without Project	With Project & Tier 1-3 VMT Reductions	With Project & All VMT Reductions
Project Generated Vehicle Miles Traveled (VMT) Rate	7.6	7.6	7.6
Low VMT Screening Analysis	Yes (Pass)	Yes (Pass)	Yes (Pass)



Appendix B
2023 Counts

Location: 1 EL CAMINO REAL & HARBOR BLVD AM

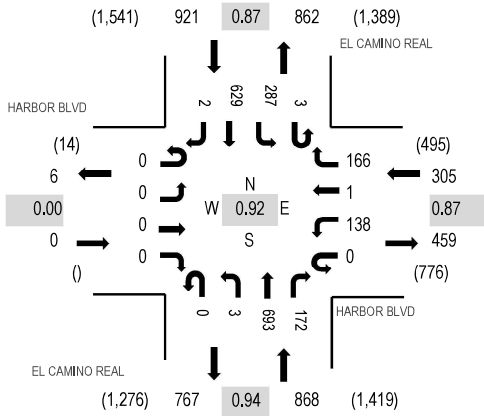
Date: Wednesday, March 8, 2023

Peak Hour: 07:45 AM - 08:45 AM

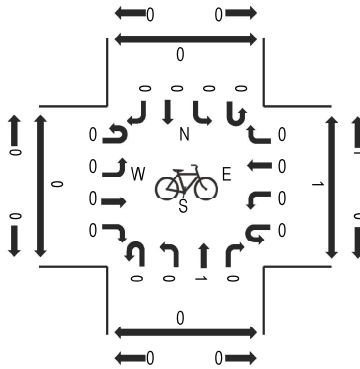
Peak 15-Minutes: 08:30 AM - 08:45 AM

Count used only for generating adjustment factors for other locations without pre-Covid counts

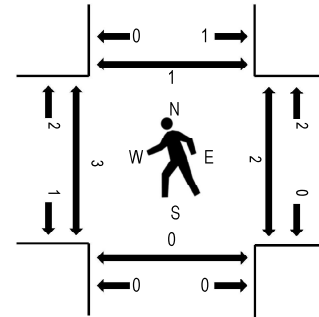
Peak Hour - Motorized Vehicles



Peak Hour - Bicycles



Peak Hour - Pedestrians



Note: Total study counts contained in parentheses.

Traffic Counts - Motorized Vehicles

Interval Start Time	HARBOR BLVD Eastbound				HARBOR BLVD Westbound				EL CAMINO REAL Northbound				EL CAMINO REAL Southbound				Total	Rolling Hour	Pedestrian Crossings			
	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right			West	East	South	North
7:00 AM	0	0	0	0	0	24	0	20	0	0	59	19	0	25	59	0	206	1,398	1	0	0	1
7:15 AM	0	0	0	0	0	17	1	12	0	0	114	37	0	51	85	0	317	1,660	6	4	0	6
7:30 AM	0	0	0	0	0	20	1	22	0	0	110	31	0	64	122	0	370	1,896	2	1	0	0
7:45 AM	0	0	0	0	0	33	1	45	0	1	176	40	2	50	157	0	505	2,094	0	1	0	0
8:00 AM	0	0	0	0	0	22	0	45	0	1	159	43	0	68	130	0	468	2,057	1	0	0	1
8:15 AM	0	0	0	0	0	49	0	39	0	1	176	39	0	77	170	2	553		1	0	0	0
8:30 AM	0	0	0	0	0	34	0	37	0	0	182	50	1	92	172	0	568		1	1	0	0
8:45 AM	0	0	0	0	0	35	1	37	0	0	153	28	0	62	147	5	468		3	0	0	2

Peak Rolling Hour Flow Rates

Vehicle Type	Eastbound				Westbound				Northbound				Southbound				Total
	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	
Articulated Trucks	0	0	0	0	0	1	0	0	0	0	2	0	0	0	4	0	7
Lights	0	0	0	0	0	130	1	163	0	3	678	171	3	285	609	2	2,045
Mediums	0	0	0	0	0	7	0	3	0	0	13	1	0	2	16	0	42
Total	0	0	0	0	0	138	1	166	0	3	693	172	3	287	629	2	2,094

Location: 1 EL CAMINO REAL & HARBOR BLVD PM

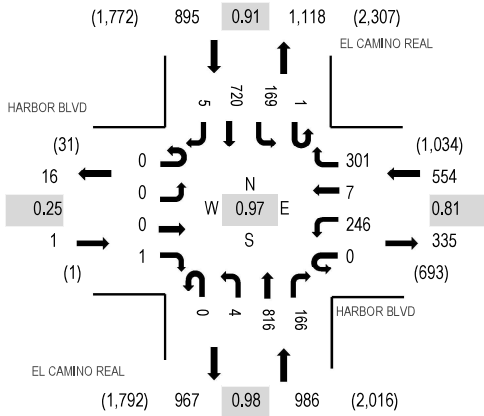
Date: Wednesday, March 8, 2023

Peak Hour: 05:00 PM - 06:00 PM

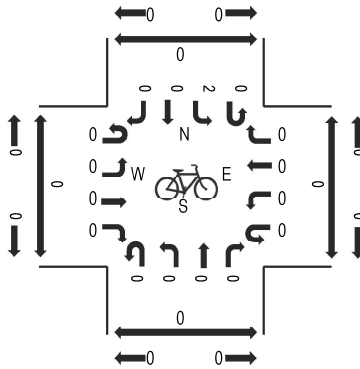
Peak 15-Minutes: 05:30 PM - 05:45 PM

Count used only for generating adjustment factors for other locations without pre-Covid counts

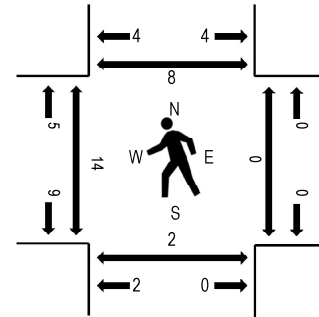
Peak Hour - Motorized Vehicles



Peak Hour - Bicycles



Peak Hour - Pedestrians



Note: Total study counts contained in parentheses.

Traffic Counts - Motorized Vehicles

Interval Start Time	HARBOR BLVD Eastbound				HARBOR BLVD Westbound				EL CAMINO REAL Northbound				EL CAMINO REAL Southbound				Total	Rolling Hour	Pedestrian Crossings			
	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right			West	East	South	North
4:00 PM	0	0	0	0	0	45	0	70	0	0	214	33	0	71	178	2	613	2,387	3	2	0	2
4:15 PM	0	0	0	0	0	45	0	82	0	1	224	39	0	56	146	3	596	2,401	1	0	0	1
4:30 PM	0	0	0	0	0	45	0	70	0	0	227	30	0	49	184	3	608	2,406	1	1	0	2
4:45 PM	0	0	0	0	0	53	3	67	0	0	234	28	1	52	129	3	570	2,427	3	0	0	0
5:00 PM	0	0	0	0	0	64	0	64	0	2	205	46	0	48	197	1	627	2,436	1	0	2	4
5:15 PM	0	0	0	0	0	56	3	67	0	1	191	51	0	38	192	2	601		5	0	0	0
5:30 PM	0	0	0	1	0	75	3	92	0	0	207	36	0	39	175	1	629		3	0	0	2
5:45 PM	0	0	0	0	0	51	1	78	0	1	213	33	1	44	156	1	579		5	0	0	2

Peak Rolling Hour Flow Rates

Vehicle Type	Eastbound				Westbound				Northbound				Southbound				Total
	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	
Articulated Trucks	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0	2
Lights	0	0	0	1	0	246	7	300	0	4	809	165	1	165	714	5	2,417
Mediums	0	0	0	0	0	0	0	1	0	0	7	1	0	4	4	0	17
Total	0	0	0	1	0	246	7	301	0	4	816	166	1	169	720	5	2,436

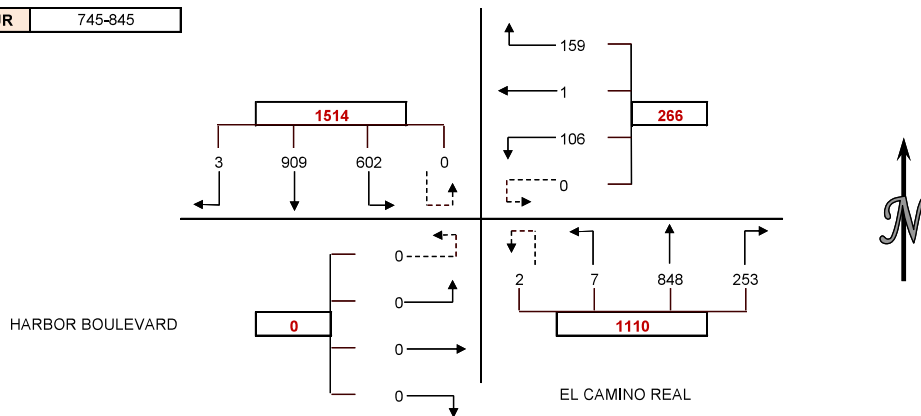
INTERSECTION CAR/PED/BIKE TRAFFIC COUNT RESULTS SUMMARY

CLIENT: W-TRANS
 PROJECT: SAN CARLOS CITYWIDE INTERSECTION COUNTS
 DATE: THURSDAY MAY 19, 2016
 PERIOD: 7:00 AM TO 9:00 AM
 INTERSECTION: N/S EL CAMINO REAL
 E/W HARBOR BOULEVARD
 CITY: SAN CARLOS

Count, after factoring up by 1% per year, is used for LOS analysis

VEHICLE COUNTS																	
15 MIN COUNTS	1	2	3	3U	4	5	6	6U	7	8	9	9U	10	11	12	12U	TOTAL
PERIOD	SBRT	SBTH	SBLT	SBUT	WBRT	WBTH	WBLT	WBUT	NBRT	NBTH	NBLT	NBUT	EBRT	EBTH	EBLT	EBUT	
700-715	0	124	74	1	24	0	20	0	37	109	1	1	0	0	0	0	391
715-730	0	145	102	0	26	1	19	0	38	137	0	0	0	0	0	0	468
730-745	0	203	133	1	73	0	26	0	45	205	1	0	0	0	0	0	687
745-800	3	246	155	0	48	0	48	0	88	233	6	0	0	0	0	0	827
800-815	0	224	132	0	35	1	19	0	44	218	1	2	0	0	0	0	676
815-830	0	211	150	0	44	0	19	0	66	200	0	0	0	0	0	0	690
830-845	0	228	165	0	32	0	20	0	55	197	0	0	0	0	0	0	697
845-900	0	220	135	1	25	0	29	0	46	208	0	0	0	0	0	0	664
HOURLY TOTALS	1	2	3	3U	4	5	6	6U	7	8	9	9U	10	11	12	12U	TOTAL
PERIOD	SBRT	SBTH	SBLT	SBUT	WBRT	WBTH	WBLT	WBUT	NBRT	NBTH	NBLT	NBUT	EBRT	EBTH	EBLT	EBUT	
700-800	3	718	464	2	171	1	113	0	208	684	8	1	0	0	0	0	2373
715-815	3	818	522	1	182	2	112	0	215	793	8	2	0	0	0	0	2658
730-830	3	884	570	1	200	1	112	0	243	856	8	2	0	0	0	0	2880
745-845	3	909	602	0	159	1	106	0	253	848	7	2	0	0	0	0	2890
800-900	0	883	582	1	136	1	87	0	211	823	1	2	0	0	0	0	2727

PEAK HOUR: 745-845



PEDESTRIAN COUNTS					
15 MIN COUNTS	NORTH LEG	EAST LEG	SOUTH LEG	WEST LEG	TOTAL
700-715	0	0	0	0	0
715-730	4	4	4	0	12
730-745	3	3	2	0	8
745-800	2	2	0	0	4
800-815	3	3	0	0	6
815-830	4	4	1	0	9
830-845	0	0	0	0	0
845-900	5	5	3	0	13
HOURLY TOTALS	NORTH LEG	EAST LEG	SOUTH LEG	WEST LEG	TOTAL
700-800	9	9	6	0	24
715-815	12	12	6	0	30
730-830	12	12	3	0	27
745-845	9	9	1	0	19
800-900	12	12	4	0	28

BICYCLE COUNTS					
15 MIN COUNTS	NORTH LEG	EAST LEG	SOUTH LEG	WEST LEG	TOTAL
700-715	0	2	1	0	3
715-730	0	0	0	0	0
730-745	0	1	0	0	1
745-800	1	2	0	0	3
800-815	0	1	0	0	1
815-830	0	0	0	0	0
830-845	0	0	0	0	0
845-900	0	0	0	0	0
HOURLY TOTALS	NORTH LEG	EAST LEG	SOUTH LEG	WEST LEG	TOTAL
700-800	1	5	1	0	7
715-815	1	4	0	0	5
730-830	1	4	0	0	5
745-845	1	3	0	0	4
800-900	0	1	0	0	1

APPROACH SUMMARIES									
	NORTH APRCH		EAST APRCH		SOUTH APRCH		WEST APRCH		
	APRCH	EXIT	APRCH	EXIT	APRCH	EXIT	APRCH	EXIT	
700-800	1187	857	285	672	901	832	0	0	12
715-815	1344	976	296	737	1018	932	0	0	13
730-830	1458	1057	313	813	1109	998	0	0	12
745-845	1514	1007	266	855	1110	1017	0	0	11
800-900	1466	960	224	793	1037	972	0	0	2

INTERSECTION CAR/PED/BIKE TRAFFIC COUNT RESULTS SUMMARY

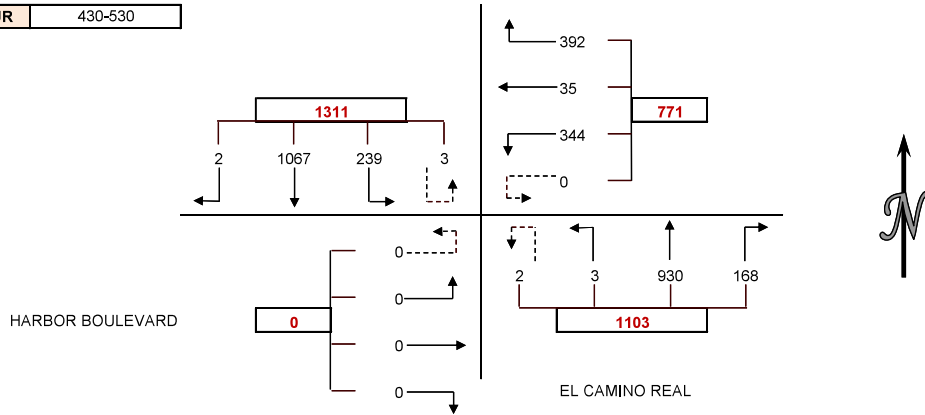
CLIENT: W-TRANS
 PROJECT: SAN CARLOS CITYWIDE INTERSECTION COUNTS
 DATE: THURSDAY MAY 19, 2016
 PERIOD: 7:00 AM TO 9:00 AM
 INTERSECTION: N/S EL CAMINO REAL
 E/W HARBOR BOULEVARD
 CITY: SAN CARLOS

Count, after factoring up by 1% per year, is used for LOS analysis

VEHICLE COUNTS

15 MIN COUNTS	1	2	3	3U	4	5	6	6U	7	8	9	9U	10	11	12	12U	TOTAL
PERIOD	SBRT	SBTH	SBLT	SBUT	WBRT	WBTH	WBLT	WBUT	NBRT	NBTH	NBLT	NBUT	EBRT	EBTH	EBLT	EBUT	TOTAL
400-415	0	210	65	0	97	2	62	0	28	282	1	2	0	0	0	0	749
415-430	0	242	66	3	92	2	63	0	37	238	0	1	0	0	0	0	744
430-445	0	266	64	1	92	7	88	0	44	249	1	0	0	0	0	0	812
445-500	0	285	62	0	95	8	87	0	44	253	1	1	0	0	0	0	836
500-515	1	276	61	2	97	17	72	0	39	224	0	1	0	0	0	0	790
515-530	1	240	52	0	108	3	97	0	41	204	1	0	0	0	0	0	747
530-545	1	263	66	2	92	7	92	0	30	197	2	0	0	0	0	0	752
545-600	2	252	53	0	101	5	79	0	32	224	0	1	0	0	0	0	749
HOUR TOTALS	1	2	3	3U	4	5	6	6U	7	8	9	9U	10	11	12	12U	TOTAL
PERIOD	SBRT	SBTH	SBLT	SBUT	WBRT	WBTH	WBLT	WBUT	NBRT	NBTH	NBLT	NBUT	EBRT	EBTH	EBLT	EBUT	TOTAL
400-500	0	1003	257	4	376	19	300	0	153	1022	3	4	0	0	0	0	3141
415-515	1	1069	253	6	376	34	310	0	164	964	2	3	0	0	0	0	3182
430-530	2	1067	239	3	392	35	344	0	168	930	3	2	0	0	0	0	3185
445-545	3	1064	241	4	392	35	348	0	154	878	4	2	0	0	0	0	3125
500-600	5	1031	232	4	398	32	340	0	142	849	3	2	0	0	0	0	3038

PEAK HOUR 430-530



PEDESTRIAN COUNTS

15 MIN COUNTS	NORTH LEG	EAST LEG	SOUTH LEG	WEST LEG	TOTAL
400-415	2	2	0	0	4
415-430	1	1	1	0	3
430-445	1	1	0	0	2
445-500	1	1	0	0	2
500-515	1	1	0	0	2
515-530	1	1	1	0	3
530-545	3	3	1	0	7
545-600	0	0	0	0	0
HOUR TOTALS	NORTH LEG	EAST LEG	SOUTH LEG	WEST LEG	TOTAL
PERIOD	LEG	LEG	LEG	LEG	TOTAL
400-500	5	5	1	0	11
415-515	4	4	1	0	9
430-530	4	4	1	0	9
445-545	6	6	2	0	14
500-600	5	5	2	0	12

BICYCLE COUNTS

15 MIN COUNTS	NORTH LEG	EAST LEG	SOUTH LEG	WEST LEG	TOTAL
400-415	0	0	0	0	0
415-430	2	0	0	0	2
430-445	3	0	0	0	3
445-500	1	1	0	0	2
500-515	1	1	0	0	2
515-530	0	0	0	0	0
530-545	0	0	0	0	0
545-600	1	0	0	0	1
HOUR TOTALS	NORTH LEG	EAST LEG	SOUTH LEG	WEST LEG	TOTAL
PERIOD	LEG	LEG	LEG	LEG	TOTAL
400-500	6	1	0	0	7
415-515	7	2	0	0	9
430-530	5	2	0	0	7
445-545	2	2	0	0	4
500-600	2	1	0	0	3

APPROACH SUMMARIES

	NORTH APRCH		EAST APRCH		SOUTH APRCH		WEST APRCH	
	APRCH	EXIT	APRCH	EXIT	APRCH	EXIT	APRCH	EXIT
400-500	1264	1402	695	410	1182	1307	0	22
415-515	1329	1346	720	417	1133	1382	0	37
430-530	1311	1325	771	407	1103	1413	0	40
445-545	1312	1274	775	395	1038	1414	0	42
500-600	1272	1251	770	374	996	1373	0	40

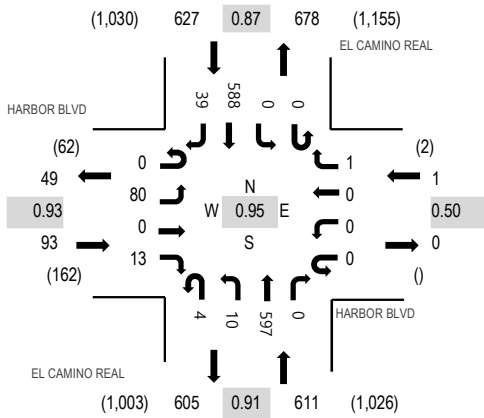
Location: 1 EL CAMINO REAL & HARBOR BLVD AM

Date: Tuesday, April 11, 2023

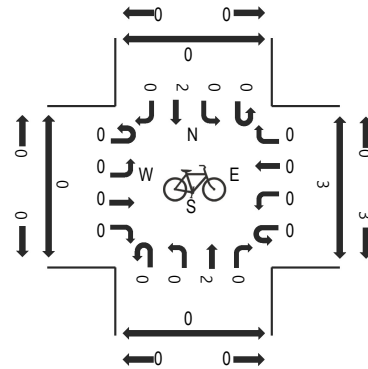
Peak Hour: 08:00 AM - 09:00 AM

Peak 15-Minutes: 08:30 AM - 08:45 AM

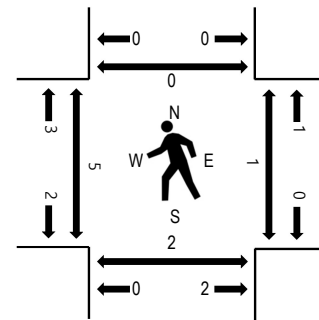
Peak Hour - Motorized Vehicles



Peak Hour - Bicycles



Peak Hour - Pedestrians



Note: Total study counts contained in parentheses.

Traffic Counts - Motorized Vehicles

Interval Start Time	HARBOR BLVD Eastbound				HARBOR BLVD Westbound				EL CAMINO REAL Northbound				EL CAMINO REAL Southbound				Total	Rolling Hour	Pedestrian Crossings			
	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right			West	East	South	North
7:00 AM	0	7	0	1	0	0	0	1	0	0	57	0	0	0	76	3	145	892	0	5	2	0
7:15 AM	0	17	0	1	0	0	0	1	0	1	98	0	0	0	88	0	206	1,041	0	1	0	0
7:30 AM	0	19	0	1	0	0	0	0	0	1	135	0	0	0	99	3	258	1,186	0	0	0	0
7:45 AM	0	23	0	1	0	0	0	0	3	0	121	0	0	0	128	7	283	1,279	0	0	0	0
8:00 AM	0	15	0	3	0	0	0	0	0	3	142	0	0	0	124	7	294	1,332	2	0	0	0
8:15 AM	0	25	0	0	0	0	0	0	1	3	164	0	0	0	144	12	349		1	0	0	0
8:30 AM	0	21	0	4	0	0	0	0	1	2	141	0	0	0	172	9	350		2	1	0	0
8:45 AM	0	18	0	6	0	0	0	0	2	1	150	0	0	0	148	10	335		0	0	0	0

Peak Rolling Hour Flow Rates

Vehicle Type	Eastbound				Westbound				Northbound				Southbound				Total
	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	
Articulated Trucks	0	1	0	0	0	0	0	0	0	0	2	0	0	0	3	0	6
Lights	0	78	0	13	0	0	0	1	4	8	579	0	0	0	568	37	1,288
Mediums	0	1	0	0	0	0	0	0	0	2	16	0	0	0	17	2	38
Total	0	80	0	13	0	0	0	1	4	10	597	0	0	0	588	39	1,332

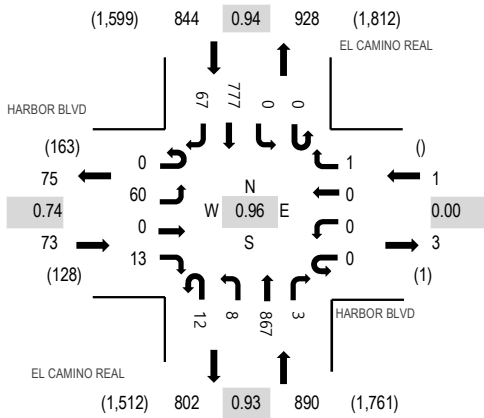
Location: 1 EL CAMINO REAL & HARBOR BLVD PM

Date: Tuesday, April 11, 2023

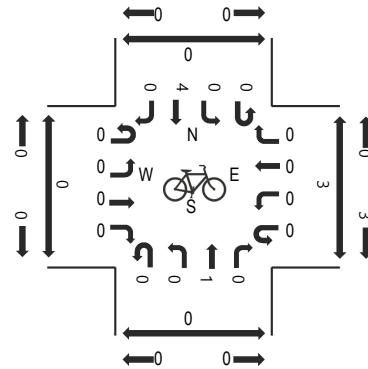
Peak Hour: 04:15 PM - 05:15 PM

Peak 15-Minutes: 04:15 PM - 04:30 PM

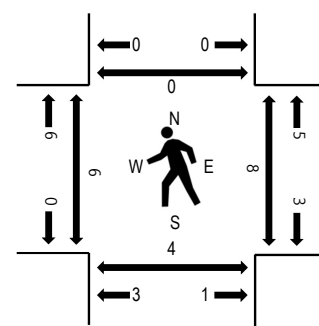
Peak Hour - Motorized Vehicles



Peak Hour - Bicycles



Peak Hour - Pedestrians



Note: Total study counts contained in parentheses.

Traffic Counts - Motorized Vehicles

Interval Start Time	HARBOR BLVD Eastbound				HARBOR BLVD Westbound				EL CAMINO REAL Northbound				EL CAMINO REAL Southbound				Total	Rolling Hour	Pedestrian Crossings				
	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right			West	East	South	North	
4:00 PM	0	8	0	3	0	0	0	0	6	3	211	0	0	0	0	162	14	407	1,753	1	1	1	0
4:15 PM	0	13	0	2	0	0	0	0	4	3	232	0	0	0	0	204	13	471	1,808	2	7	0	0
4:30 PM	0	17	0	2	0	0	0	0	1	1	233	1	0	0	0	182	16	453	1,775	1	0	1	0
4:45 PM	0	20	0	7	0	0	0	0	4	3	180	0	0	0	0	184	18	416	1,780	1	0	0	0
5:00 PM	0	8	0	2	0	0	0	0	3	0	220	0	0	0	0	207	18	458	1,750	2	1	3	0
5:15 PM	0	17	0	5	0	0	0	0	5	3	207	0	0	0	0	173	30	440		2	1	0	0
5:30 PM	0	10	0	3	0	0	0	0	4	5	225	0	0	0	0	193	17	457		2	0	0	0
5:45 PM	0	8	0	3	0	0	0	0	2	2	203	0	0	0	0	151	17	386		1	0	0	0

Peak Rolling Hour Flow Rates

Vehicle Type	Eastbound				Westbound				Northbound				Southbound				Total
	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	
Articulated Trucks	0	1	0	0	0	0	0	0	0	0	2	0	0	0	0	0	3
Lights	0	58	0	13	0	0	0	1	12	7	855	3	0	0	771	65	1,785
Mediums	0	1	0	0	0	0	0	0	0	1	10	0	0	0	6	2	20
Total	0	60	0	13	0	0	0	1	12	8	867	3	0	0	777	67	1,808

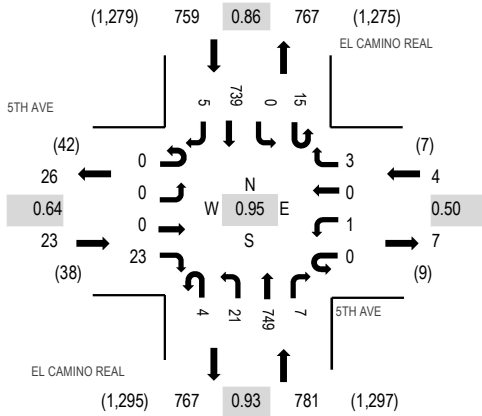
Location: 2 EL CAMINO REAL & 5TH AVE AM

Date: Wednesday, March 8, 2023

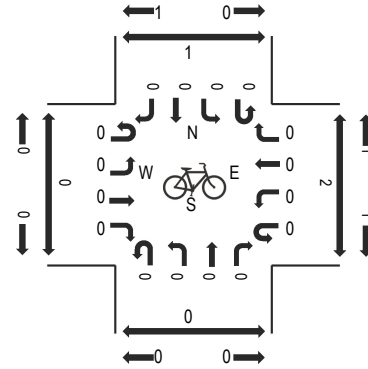
Peak Hour: 07:45 AM - 08:45 AM

Peak 15-Minutes: 08:30 AM - 08:45 AM

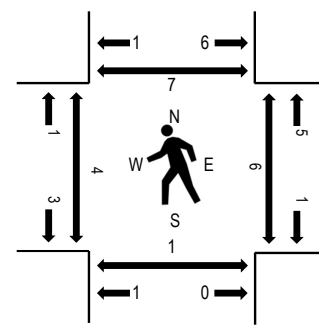
Peak Hour - Motorized Vehicles



Peak Hour - Bicycles



Peak Hour - Pedestrians



Note: Total study counts contained in parentheses.

Traffic Counts - Motorized Vehicles

Interval Start Time	5TH AVE Eastbound				5TH AVE Westbound				EL CAMINO REAL Northbound				EL CAMINO REAL Southbound				Total	Rolling Hour	Pedestrian Crossings				
	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right			West	East	South	North	
7:00 AM	0	1	0	1	0	1	0	1	3	1	71	0	0	0	1	83	0	163	1,087	1	2	0	1
7:15 AM	0	1	0	2	0	0	0	0	1	3	127	0	2	1	93	0	230	1,258	0	1	0	1	
7:30 AM	0	0	0	4	0	0	0	0	0	5	129	0	0	0	143	2	283	1,438	0	0	1	0	
7:45 AM	0	0	0	7	0	1	0	0	1	1	205	2	4	0	190	0	411	1,567	1	2	0	3	
8:00 AM	0	0	0	2	0	0	0	2	1	9	169	3	2	0	145	1	334	1,534	0	1	0	1	
8:15 AM	0	0	0	9	0	0	0	0	0	4	175	2	1	0	217	2	410		2	1	1	1	
8:30 AM	0	0	0	5	0	0	0	1	2	7	200	0	8	0	187	2	412		1	2	0	2	
8:45 AM	0	1	0	5	0	0	0	1	2	5	169	0	5	0	190	0	378		0	0	0	0	

Peak Rolling Hour Flow Rates

Vehicle Type	Eastbound				Westbound				Northbound				Southbound				Total
	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	
Articulated Trucks	0	0	0	0	0	0	0	0	0	0	3	0	0	0	6	0	9
Lights	0	0	0	22	0	1	0	3	4	21	727	7	15	0	713	5	1,518
Mediums	0	0	0	1	0	0	0	0	0	0	19	0	0	0	20	0	40
Total	0	0	0	23	0	1	0	3	4	21	749	7	15	0	739	5	1,567

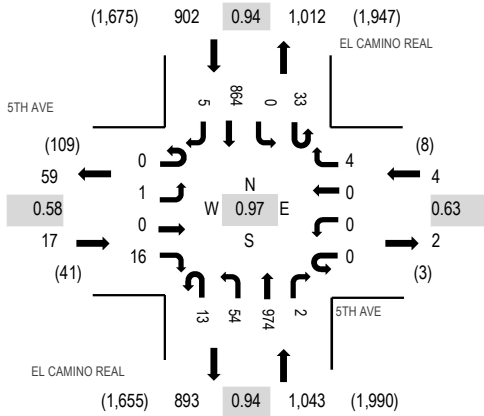
Location: 2 EL CAMINO REAL & 5TH AVE PM

Date: Wednesday, March 8, 2023

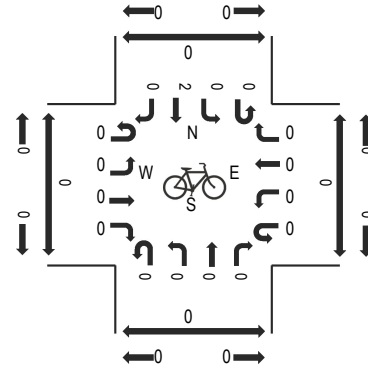
Peak Hour: 04:45 PM - 05:45 PM

Peak 15-Minutes: 05:15 PM - 05:30 PM

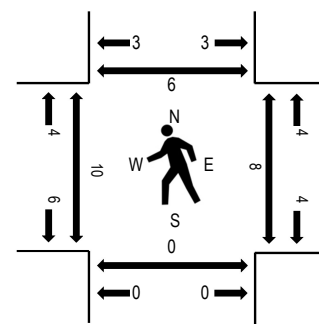
Peak Hour - Motorized Vehicles



Peak Hour - Bicycles



Peak Hour - Pedestrians



Note: Total study counts contained in parentheses.

Traffic Counts - Motorized Vehicles

Interval Start Time	5TH AVE Eastbound				5TH AVE Westbound				EL CAMINO REAL Northbound				EL CAMINO REAL Southbound				Total	Rolling Hour	Pedestrian Crossings			
	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right			West	East	South	North
4:00 PM	0	0	0	4	0	0	0	0	0	8	229	1	6	0	143	4	395	1,760	3	4	1	4
4:15 PM	0	0	0	7	0	1	0	1	2	10	226	0	6	0	176	1	430	1,868	1	1	0	1
4:30 PM	0	2	0	5	0	0	0	0	4	11	220	0	9	0	206	1	458	1,945	0	1	0	0
4:45 PM	0	1	0	2	0	0	0	2	2	10	264	2	10	0	182	2	477	1,966	0	1	0	0
5:00 PM	0	0	0	2	0	0	0	1	2	12	244	0	5	0	236	1	503	1,954	1	0	0	0
5:15 PM	0	0	0	9	0	0	0	1	4	16	230	0	5	0	241	1	507		4	6	0	5
5:30 PM	0	0	0	3	0	0	0	0	5	16	236	0	13	0	205	1	479		5	1	0	1
5:45 PM	0	1	0	5	0	0	0	2	2	11	223	0	10	0	207	4	465		1	5	0	2

Peak Rolling Hour Flow Rates

Vehicle Type	Eastbound				Westbound				Northbound				Southbound				Total
	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	
Articulated Trucks	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Lights	0	1	0	16	0	0	0	4	13	54	957	2	33	0	855	5	1,940
Mediums	0	0	0	0	0	0	0	0	0	0	17	0	0	0	9	0	26
Total	0	1	0	16	0	0	0	4	13	54	974	2	33	0	864	5	1,966

Location: 3 EL CAMINO REAL & SPRING ST AM

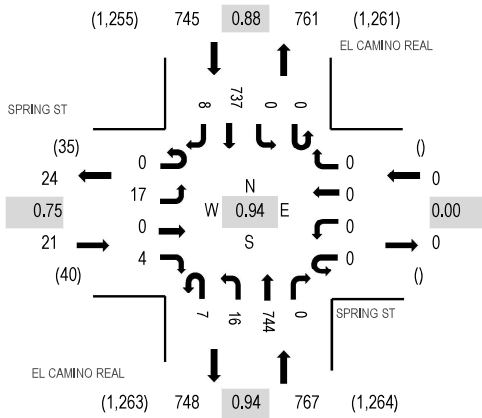
Date: Wednesday, March 8, 2023

Peak Hour: 07:45 AM - 08:45 AM

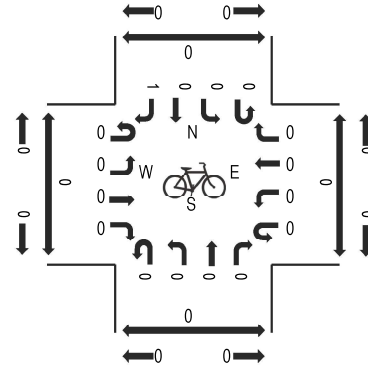
Peak 15-Minutes: 07:45 AM - 08:00 AM

Count used only for generating adjustment factors for other locations without pre-Covid counts

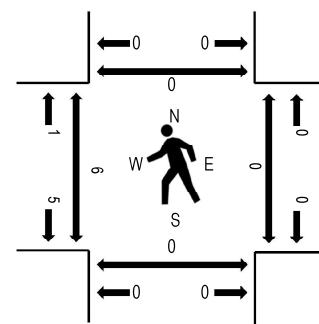
Peak Hour - Motorized Vehicles



Peak Hour - Bicycles



Peak Hour - Pedestrians



Note: Total study counts contained in parentheses.

Traffic Counts - Motorized Vehicles

Interval Start Time	SPRING ST Eastbound				SPRING ST Westbound				EL CAMINO REAL Northbound				EL CAMINO REAL Southbound				Total	Rolling Hour	Pedestrian Crossings				
	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right			West	East	South	North	
7:00 AM	0	4	0	0	0	0	0	0	2	1	70	0	0	0	0	81	3	161	1,065	0	0	0	0
7:15 AM	0	4	0	0	0	0	0	0	1	0	121	0	0	0	0	97	0	223	1,236	0	0	0	0
7:30 AM	0	5	0	0	0	0	0	0	1	0	126	0	0	0	0	141	2	275	1,408	1	0	0	0
7:45 AM	0	6	0	1	0	0	0	0	4	3	194	0	0	0	0	197	1	406	1,533	1	0	0	0
8:00 AM	0	4	0	0	0	0	0	0	2	6	175	0	0	0	0	144	1	332	1,494	2	0	0	0
8:15 AM	0	2	0	2	0	0	0	0	0	5	175	0	0	0	0	208	3	395		2	0	0	0
8:30 AM	0	5	0	1	0	0	0	0	1	2	200	0	0	0	0	188	3	400		1	0	0	0
8:45 AM	0	3	0	3	0	0	0	0	5	3	167	0	0	0	0	184	2	367		0	0	0	0

Peak Rolling Hour Flow Rates

Vehicle Type	Eastbound				Westbound				Northbound				Southbound				Total	
	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right		
Articulated Trucks	0	0	0	0	0	0	0	0	0	0	3	0	0	0	0	6	0	9
Lights	0	17	0	4	0	0	0	0	7	16	725	0	0	0	0	709	8	1,486
Mediums	0	0	0	0	0	0	0	0	0	0	16	0	0	0	0	22	0	38
Total	0	17	0	4	0	0	0	0	7	16	744	0	0	0	0	737	8	1,533



(303) 216-2439
www.alltrafficdata.net

Location: 3 EL CAMINO REAL & SPRING ST PM

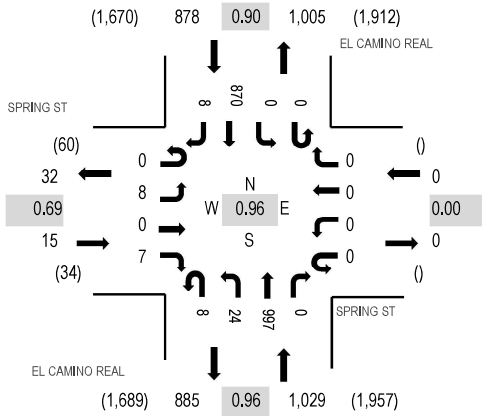
Date: Wednesday, March 8, 2023

Peak Hour: 04:45 PM - 05:45 PM

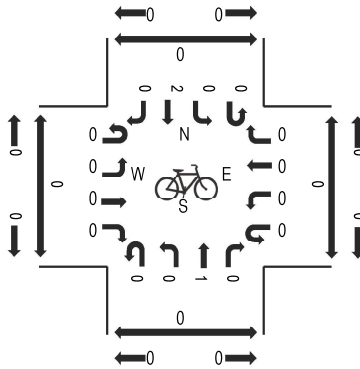
Peak 15-Minutes: 05:15 PM - 05:30 PM

Count used only for generating adjustment factors for other locations without pre-Covid counts

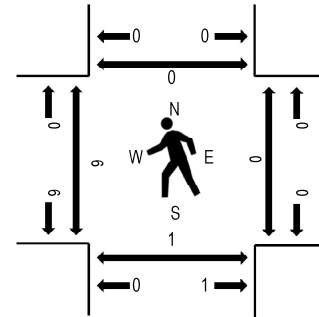
Peak Hour - Motorized Vehicles



Peak Hour - Bicycles



Peak Hour - Pedestrians



Note: Total study counts contained in parentheses.

Traffic Counts - Motorized Vehicles

Interval Start Time	SPRING ST Eastbound				SPRING ST Westbound				EL CAMINO REAL Northbound				EL CAMINO REAL Southbound				Total	Rolling Hour	Pedestrian Crossings			
	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right			West	East	South	North
4:00 PM	0	3	0	0	0	0	0	0	4	2	216	0	1	0	208	2	436	1,775	0	0	0	0
4:15 PM	0	5	0	3	0	0	0	0	1	9	223	0	0	0	179	1	421	1,828	1	0	0	0
4:30 PM	0	3	0	2	0	0	0	0	5	6	222	0	0	0	213	2	453	1,905	1	0	0	0
4:45 PM	0	2	0	4	0	0	0	0	4	6	259	0	0	0	190	0	465	1,922	0	0	0	0
5:00 PM	0	3	0	0	0	0	0	0	3	4	244	0	0	0	234	1	489	1,886	2	0	0	0
5:15 PM	0	2	0	1	0	0	0	0	1	5	244	0	0	0	243	2	498		0	0	1	0
5:30 PM	0	1	0	2	0	0	0	0	0	9	250	0	0	0	203	5	470		4	0	0	0
5:45 PM	0	3	0	0	0	0	0	0	4	5	231	0	0	0	185	1	429		4	0	0	0

Peak Rolling Hour Flow Rates

Vehicle Type	Eastbound				Westbound				Northbound				Southbound				Total
	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	
Articulated Trucks	0	0	0	0	0	0	0	0	0	0	0	0	0	0	4	0	4
Lights	0	8	0	7	0	0	0	0	8	23	980	0	0	0	861	8	1,895
Mediums	0	0	0	0	0	0	0	0	0	1	17	0	0	0	5	0	23
Total	0	8	0	7	0	0	0	0	8	24	997	0	0	0	870	8	1,922

Location: 1 EL CAMINO REAL & HARBOR BLVD AM

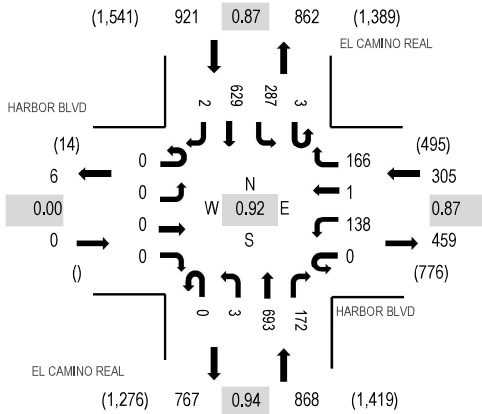
Date: Wednesday, March 8, 2023

Peak Hour: 07:45 AM - 08:45 AM

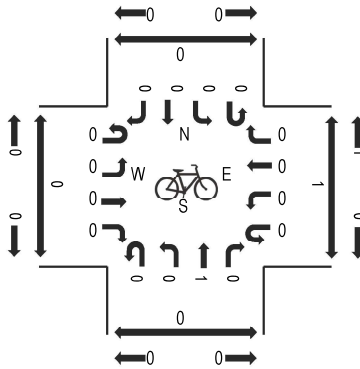
Peak 15-Minutes: 08:30 AM - 08:45 AM

Count used only for generating adjustment factors for other locations without pre-Covid counts

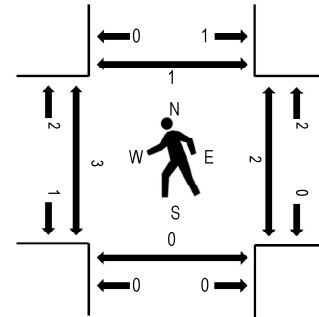
Peak Hour - Motorized Vehicles



Peak Hour - Bicycles



Peak Hour - Pedestrians



Note: Total study counts contained in parentheses.

Traffic Counts - Motorized Vehicles

Interval Start Time	HARBOR BLVD Eastbound				HARBOR BLVD Westbound				EL CAMINO REAL Northbound				EL CAMINO REAL Southbound				Total	Rolling Hour	Pedestrian Crossings			
	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right			West	East	South	North
7:00 AM	0	0	0	0	0	24	0	20	0	0	59	19	0	25	59	0	206	1,398	1	0	0	1
7:15 AM	0	0	0	0	0	17	1	12	0	0	114	37	0	51	85	0	317	1,660	6	4	0	6
7:30 AM	0	0	0	0	0	20	1	22	0	0	110	31	0	64	122	0	370	1,896	2	1	0	0
7:45 AM	0	0	0	0	0	33	1	45	0	1	176	40	2	50	157	0	505	2,094	0	1	0	0
8:00 AM	0	0	0	0	0	22	0	45	0	1	159	43	0	68	130	0	468	2,057	1	0	0	1
8:15 AM	0	0	0	0	0	49	0	39	0	1	176	39	0	77	170	2	553		1	0	0	0
8:30 AM	0	0	0	0	0	34	0	37	0	0	182	50	1	92	172	0	568		1	1	0	0
8:45 AM	0	0	0	0	0	35	1	37	0	0	153	28	0	62	147	5	468		3	0	0	2

Peak Rolling Hour Flow Rates

Vehicle Type	Eastbound				Westbound				Northbound				Southbound				Total
	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	
Articulated Trucks	0	0	0	0	0	1	0	0	0	0	2	0	0	0	4	0	7
Lights	0	0	0	0	0	130	1	163	0	3	678	171	3	285	609	2	2,045
Mediums	0	0	0	0	0	7	0	3	0	0	13	1	0	2	16	0	42
Total	0	0	0	0	0	138	1	166	0	3	693	172	3	287	629	2	2,094

Location: 1 EL CAMINO REAL & HARBOR BLVD PM

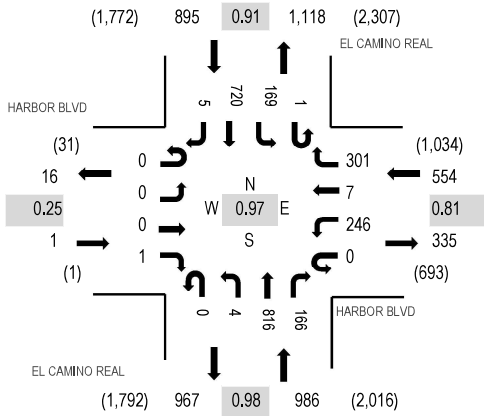
Date: Wednesday, March 8, 2023

Peak Hour: 05:00 PM - 06:00 PM

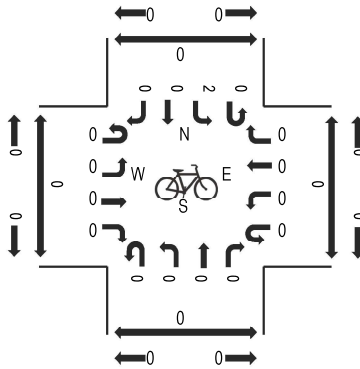
Peak 15-Minutes: 05:30 PM - 05:45 PM

Count used only for generating adjustment factors for other locations without pre-Covid counts

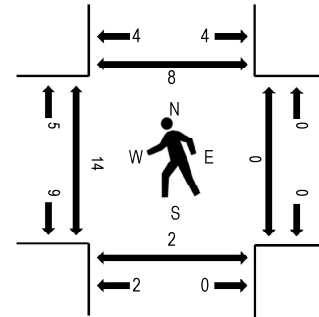
Peak Hour - Motorized Vehicles



Peak Hour - Bicycles



Peak Hour - Pedestrians



Note: Total study counts contained in parentheses.

Traffic Counts - Motorized Vehicles

Interval Start Time	HARBOR BLVD Eastbound				HARBOR BLVD Westbound				EL CAMINO REAL Northbound				EL CAMINO REAL Southbound				Total	Rolling Hour	Pedestrian Crossings			
	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right			West	East	South	North
4:00 PM	0	0	0	0	0	45	0	70	0	0	214	33	0	71	178	2	613	2,387	3	2	0	2
4:15 PM	0	0	0	0	0	45	0	82	0	1	224	39	0	56	146	3	596	2,401	1	0	0	1
4:30 PM	0	0	0	0	0	45	0	70	0	0	227	30	0	49	184	3	608	2,406	1	1	0	2
4:45 PM	0	0	0	0	0	53	3	67	0	0	234	28	1	52	129	3	570	2,427	3	0	0	0
5:00 PM	0	0	0	0	0	64	0	64	0	2	205	46	0	48	197	1	627	2,436	1	0	2	4
5:15 PM	0	0	0	0	0	56	3	67	0	1	191	51	0	38	192	2	601		5	0	0	0
5:30 PM	0	0	0	1	0	75	3	92	0	0	207	36	0	39	175	1	629		3	0	0	2
5:45 PM	0	0	0	0	0	51	1	78	0	1	213	33	1	44	156	1	579		5	0	0	2

Peak Rolling Hour Flow Rates

Vehicle Type	Eastbound				Westbound				Northbound				Southbound				Total
	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	
Articulated Trucks	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0	2
Lights	0	0	0	1	0	246	7	300	0	4	809	165	1	165	714	5	2,417
Mediums	0	0	0	0	0	0	0	1	0	0	7	1	0	4	4	0	17
Total	0	0	0	1	0	246	7	301	0	4	816	166	1	169	720	5	2,436

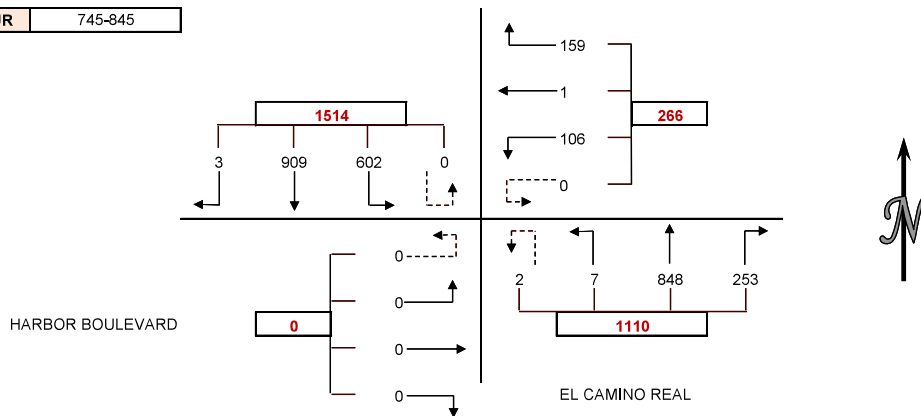
INTERSECTION CAR/PED/BIKE TRAFFIC COUNT RESULTS SUMMARY

CLIENT: W-TRANS
 PROJECT: SAN CARLOS CITYWIDE INTERSECTION COUNTS
 DATE: THURSDAY MAY 19, 2016
 PERIOD: 7:00 AM TO 9:00 AM
 INTERSECTION: N/S EL CAMINO REAL
 E/W HARBOR BOULEVARD
 CITY: SAN CARLOS

Count, after factoring up by 1% per year, is used for LOS analysis

VEHICLE COUNTS																	
15 MIN COUNTS	1	2	3	3U	4	5	6	6U	7	8	9	9U	10	11	12	12U	TOTAL
PERIOD	SBRT	SBTH	SBLT	SBUT	WBRT	WBTH	WBLT	WBUT	NBRT	NBTH	NBLT	NBUT	EBRT	EBTH	EBLT	EBUT	
700-715	0	124	74	1	24	0	20	0	37	109	1	1	0	0	0	0	391
715-730	0	145	102	0	26	1	19	0	38	137	0	0	0	0	0	0	468
730-745	0	203	133	1	73	0	26	0	45	205	1	0	0	0	0	0	687
745-800	3	246	155	0	48	0	48	0	88	233	6	0	0	0	0	0	827
800-815	0	224	132	0	35	1	19	0	44	218	1	2	0	0	0	0	676
815-830	0	211	150	0	44	0	19	0	66	200	0	0	0	0	0	0	690
830-845	0	228	165	0	32	0	20	0	55	197	0	0	0	0	0	0	697
845-900	0	220	135	1	25	0	29	0	46	208	0	0	0	0	0	0	664
HOURLY TOTALS	1	2	3	3U	4	5	6	6U	7	8	9	9U	10	11	12	12U	TOTAL
PERIOD	SBRT	SBTH	SBLT	SBUT	WBRT	WBTH	WBLT	WBUT	NBRT	NBTH	NBLT	NBUT	EBRT	EBTH	EBLT	EBUT	
700-800	3	718	464	2	171	1	113	0	208	684	8	1	0	0	0	0	2373
715-815	3	818	522	1	182	2	112	0	215	793	8	2	0	0	0	0	2658
730-830	3	884	570	1	200	1	112	0	243	856	8	2	0	0	0	0	2880
745-845	3	909	602	0	159	1	106	0	253	848	7	2	0	0	0	0	2890
800-900	0	883	582	1	136	1	87	0	211	823	1	2	0	0	0	0	2727

PEAK HOUR: 745-845



PEDESTRIAN COUNTS					
15 MIN COUNTS	NORTH LEG	EAST LEG	SOUTH LEG	WEST LEG	TOTAL
700-715	0	0	0	0	0
715-730	4	4	4	0	12
730-745	3	3	2	0	8
745-800	2	2	0	0	4
800-815	3	3	0	0	6
815-830	4	4	1	0	9
830-845	0	0	0	0	0
845-900	5	5	3	0	13
HOURLY TOTALS	NORTH LEG	EAST LEG	SOUTH LEG	WEST LEG	TOTAL
PERIOD					
700-800	9	9	6	0	24
715-815	12	12	6	0	30
730-830	12	12	3	0	27
745-845	9	9	1	0	19
800-900	12	12	4	0	28

BICYCLE COUNTS					
15 MIN COUNTS	NORTH LEG	EAST LEG	SOUTH LEG	WEST LEG	TOTAL
700-715	0	2	1	0	3
715-730	0	0	0	0	0
730-745	0	1	0	0	1
745-800	1	2	0	0	3
800-815	0	1	0	0	1
815-830	0	0	0	0	0
830-845	0	0	0	0	0
845-900	0	0	0	0	0
HOURLY TOTALS	NORTH LEG	EAST LEG	SOUTH LEG	WEST LEG	TOTAL
PERIOD					
700-800	1	5	1	0	7
715-815	1	4	0	0	5
730-830	1	4	0	0	5
745-845	1	3	0	0	4
800-900	0	1	0	0	1

APPROACH SUMMARIES									
	NORTH APRCH		EAST APRCH		SOUTH APRCH		WEST APRCH		
	APRCH	EXIT	APRCH	EXIT	APRCH	EXIT	APRCH	EXIT	
700-800	1187	857	285	672	901	832	0	0	12
715-815	1344	976	296	737	1018	932	0	0	13
730-830	1458	1057	313	813	1109	998	0	0	12
745-845	1514	1007	266	855	1110	1017	0	0	11
800-900	1466	960	224	793	1037	972	0	0	2

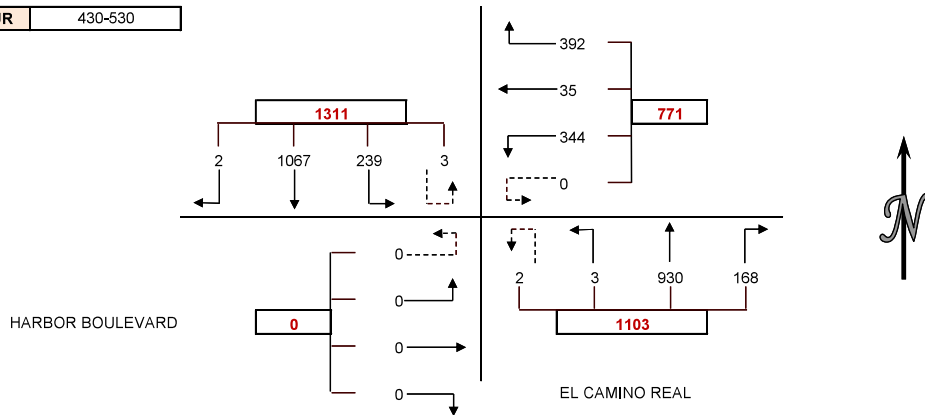
INTERSECTION CAR/PED/BIKE TRAFFIC COUNT RESULTS SUMMARY

CLIENT: W-TRANS
 PROJECT: SAN CARLOS CITYWIDE INTERSECTION COUNTS
 DATE: THURSDAY MAY 19, 2016
 PERIOD: 7:00 AM TO 9:00 AM
 INTERSECTION: N/S EL CAMINO REAL
 E/W HARBOR BOULEVARD
 CITY: SAN CARLOS

Count, after factoring up by 1% per year, is used for LOS analysis

VEHICLE COUNTS																	
15 MIN COUNTS	1	2	3	3U	4	5	6	6U	7	8	9	9U	10	11	12	12U	TOTAL
PERIOD	SBRT	SBTH	SBLT	SBUT	WBRT	WBTH	WBLT	WBUT	NBRT	NBTH	NBLT	NBUT	EBRT	EBTH	EBLT	EBUT	TOTAL
400-415	0	210	65	0	97	2	62	0	28	282	1	2	0	0	0	0	749
415-430	0	242	66	3	92	2	63	0	37	238	0	1	0	0	0	0	744
430-445	0	266	64	1	92	7	88	0	44	249	1	0	0	0	0	0	812
445-500	0	285	62	0	95	8	87	0	44	253	1	1	0	0	0	0	836
500-515	1	276	61	2	97	17	72	0	39	224	0	1	0	0	0	0	790
515-530	1	240	52	0	108	3	97	0	41	204	1	0	0	0	0	0	747
530-545	1	263	66	2	92	7	92	0	30	197	2	0	0	0	0	0	752
545-600	2	252	53	0	101	5	79	0	32	224	0	1	0	0	0	0	749
HOUR TOTALS	1	2	3	3U	4	5	6	6U	7	8	9	9U	10	11	12	12U	TOTAL
PERIOD	SBRT	SBTH	SBLT	SBUT	WBRT	WBTH	WBLT	WBUT	NBRT	NBTH	NBLT	NBUT	EBRT	EBTH	EBLT	EBUT	TOTAL
400-500	0	1003	257	4	376	19	300	0	153	1022	3	4	0	0	0	0	3141
415-515	1	1069	253	6	376	34	310	0	164	964	2	3	0	0	0	0	3182
430-530	2	1067	239	3	392	35	344	0	168	930	3	2	0	0	0	0	3185
445-545	3	1064	241	4	392	35	348	0	154	878	4	2	0	0	0	0	3125
500-600	5	1031	232	4	398	32	340	0	142	849	3	2	0	0	0	0	3038

PEAK HOUR 430-530

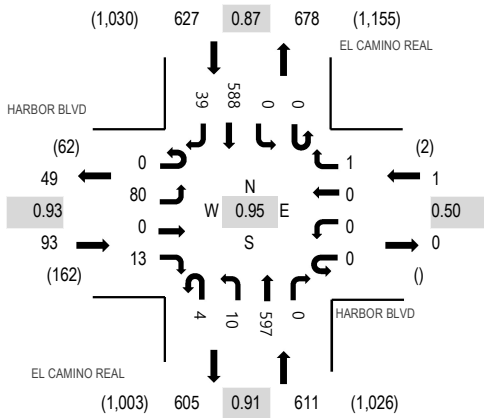


PEDESTRIAN COUNTS					
15 MIN COUNTS	NORTH LEG	EAST LEG	SOUTH LEG	WEST LEG	TOTAL
400-415	2	2	0	0	4
415-430	1	1	1	0	3
430-445	1	1	0	0	2
445-500	1	1	0	0	2
500-515	1	1	0	0	2
515-530	1	1	1	0	3
530-545	3	3	1	0	7
545-600	0	0	0	0	0
HOUR TOTALS	NORTH LEG	EAST LEG	SOUTH LEG	WEST LEG	TOTAL
400-500	5	5	1	0	11
415-515	4	4	1	0	9
430-530	4	4	1	0	9
445-545	6	6	2	0	14
500-600	5	5	2	0	12

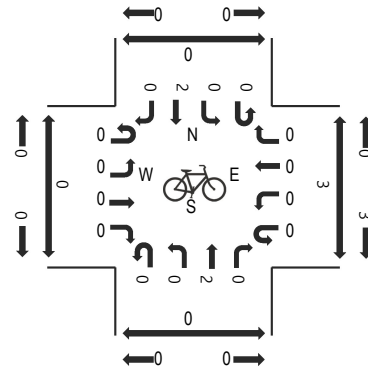
BICYCLE COUNTS					
15 MIN COUNTS	NORTH LEG	EAST LEG	SOUTH LEG	WEST LEG	TOTAL
400-415	0	0	0	0	0
415-430	2	0	0	0	2
430-445	3	0	0	0	3
445-500	1	1	0	0	2
500-515	1	1	0	0	2
515-530	0	0	0	0	0
530-545	0	0	0	0	0
545-600	1	0	0	0	1
HOUR TOTALS	NORTH LEG	EAST LEG	SOUTH LEG	WEST LEG	TOTAL
400-500	6	1	0	0	7
415-515	7	2	0	0	9
430-530	5	2	0	0	7
445-545	2	2	0	0	4
500-600	2	1	0	0	3

APPROACH SUMMARIES											
	NORTH APRCH			EAST APRCH			SOUTH APRCH			WEST APRCH	
	APRCH	EXIT		APRCH	EXIT		APRCH	EXIT		APRCH	EXIT
400-500	1264	1402		695	410		1182	1307		0	22
415-515	1329	1346		720	417		1133	1382		0	37
430-530	1311	1325		771	407		1103	1413		0	40
445-545	1312	1274		775	395		1038	1414		0	42
500-600	1272	1251		770	374		996	1373		0	40

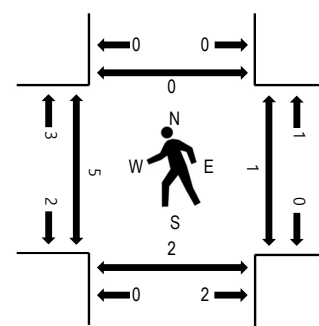
Peak Hour - Motorized Vehicles



Peak Hour - Bicycles



Peak Hour - Pedestrians



Note: Total study counts contained in parentheses.

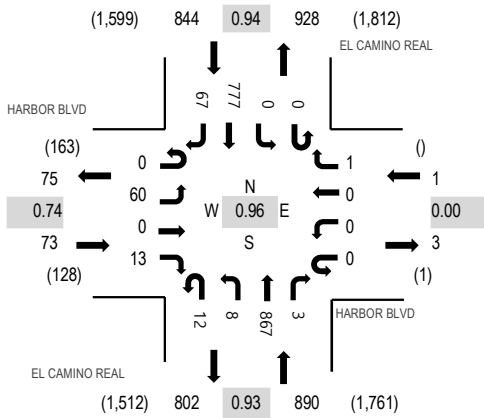
Traffic Counts - Motorized Vehicles

Interval Start Time	HARBOR BLVD Eastbound				HARBOR BLVD Westbound				EL CAMINO REAL Northbound				EL CAMINO REAL Southbound				Total	Rolling Hour	Pedestrian Crossings			
	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right			West	East	South	North
7:00 AM	0	7	0	1	0	0	0	1	0	0	57	0	0	0	76	3	145	892	0	5	2	0
7:15 AM	0	17	0	1	0	0	0	1	0	1	98	0	0	0	88	0	206	1,041	0	1	0	0
7:30 AM	0	19	0	1	0	0	0	0	0	1	135	0	0	0	99	3	258	1,186	0	0	0	0
7:45 AM	0	23	0	1	0	0	0	0	3	0	121	0	0	0	128	7	283	1,279	0	0	0	0
8:00 AM	0	15	0	3	0	0	0	0	0	3	142	0	0	0	124	7	294	1,332	2	0	0	0
8:15 AM	0	25	0	0	0	0	0	0	1	3	164	0	0	0	144	12	349		1	0	0	0
8:30 AM	0	21	0	4	0	0	0	0	1	2	141	0	0	0	172	9	350		2	1	0	0
8:45 AM	0	18	0	6	0	0	0	0	2	1	150	0	0	0	148	10	335		0	0	0	0

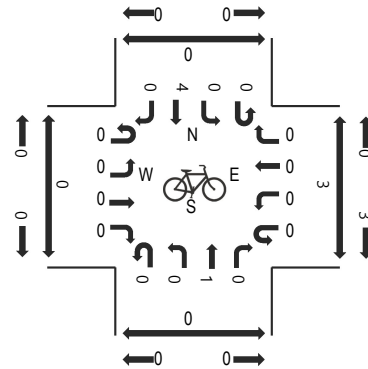
Peak Rolling Hour Flow Rates

Vehicle Type	Eastbound				Westbound				Northbound				Southbound				Total
	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	
Articulated Trucks	0	1	0	0	0	0	0	0	0	0	2	0	0	0	3	0	6
Lights	0	78	0	13	0	0	0	1	4	8	579	0	0	0	568	37	1,288
Mediums	0	1	0	0	0	0	0	0	0	2	16	0	0	0	17	2	38
Total	0	80	0	13	0	0	0	1	4	10	597	0	0	0	588	39	1,332

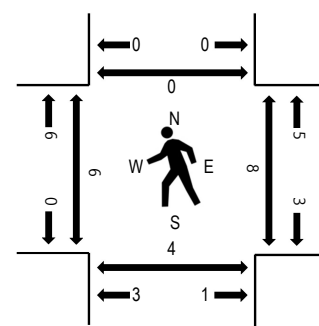
Peak Hour - Motorized Vehicles



Peak Hour - Bicycles



Peak Hour - Pedestrians



Note: Total study counts contained in parentheses.

Traffic Counts - Motorized Vehicles

Interval Start Time	HARBOR BLVD Eastbound				HARBOR BLVD Westbound				EL CAMINO REAL Northbound				EL CAMINO REAL Southbound				Total	Rolling Hour	Pedestrian Crossings			
	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right			West	East	South	North
4:00 PM	0	8	0	3	0	0	0	0	6	3	211	0	0	0	162	14	407	1,753	1	1	1	0
4:15 PM	0	13	0	2	0	0	0	0	4	3	232	0	0	0	204	13	471	1,808	2	7	0	0
4:30 PM	0	17	0	2	0	0	0	0	1	1	233	1	0	0	182	16	453	1,775	1	0	1	0
4:45 PM	0	20	0	7	0	0	0	0	4	3	180	0	0	0	184	18	416	1,780	1	0	0	0
5:00 PM	0	8	0	2	0	0	0	0	3	0	220	0	0	0	207	18	458	1,750	2	1	3	0
5:15 PM	0	17	0	5	0	0	0	0	5	3	207	0	0	0	173	30	440		2	1	0	0
5:30 PM	0	10	0	3	0	0	0	0	4	5	225	0	0	0	193	17	457		2	0	0	0
5:45 PM	0	8	0	3	0	0	0	0	2	2	203	0	0	0	151	17	386		1	0	0	0

Peak Rolling Hour Flow Rates

Vehicle Type	Eastbound				Westbound				Northbound				Southbound				Total
	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	
Articulated Trucks	0	1	0	0	0	0	0	0	0	0	2	0	0	0	0	0	3
Lights	0	58	0	13	0	0	0	1	12	7	855	3	0	0	771	65	1,785
Mediums	0	1	0	0	0	0	0	0	0	1	10	0	0	0	6	2	20
Total	0	60	0	13	0	0	0	1	12	8	867	3	0	0	777	67	1,808

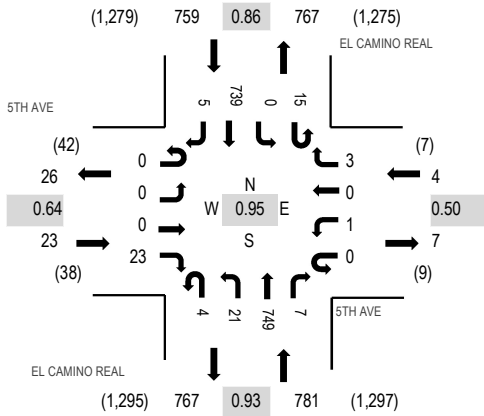
Location: 2 EL CAMINO REAL & 5TH AVE AM

Date: Wednesday, March 8, 2023

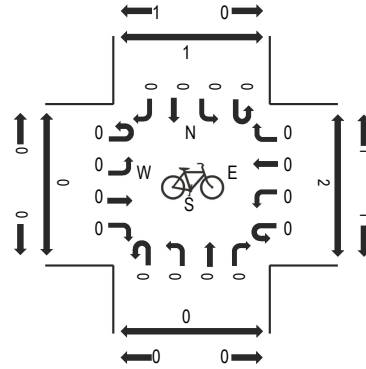
Peak Hour: 07:45 AM - 08:45 AM

Peak 15-Minutes: 08:30 AM - 08:45 AM

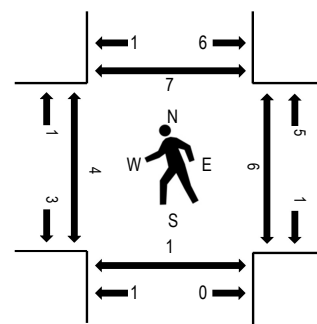
Peak Hour - Motorized Vehicles



Peak Hour - Bicycles



Peak Hour - Pedestrians



Note: Total study counts contained in parentheses.

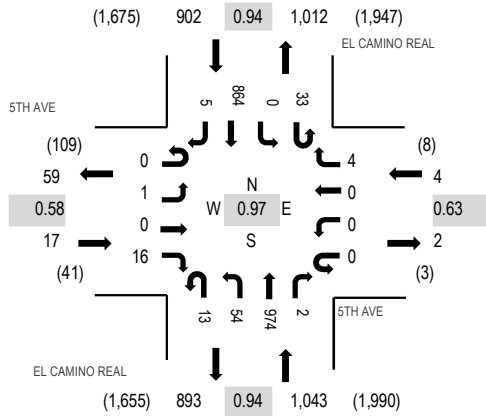
Traffic Counts - Motorized Vehicles

Interval Start Time	5TH AVE Eastbound				5TH AVE Westbound				EL CAMINO REAL Northbound				EL CAMINO REAL Southbound				Total	Rolling Hour	Pedestrian Crossings				
	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right			West	East	South	North	
7:00 AM	0	1	0	1	0	1	0	1	3	1	71	0	0	0	1	83	0	163	1,087	1	2	0	1
7:15 AM	0	1	0	2	0	0	0	0	1	3	127	0	2	1	93	0	230	1,258	0	1	0	1	
7:30 AM	0	0	0	4	0	0	0	0	0	5	129	0	0	0	143	2	283	1,438	0	0	1	0	
7:45 AM	0	0	0	7	0	1	0	0	1	1	205	2	4	0	190	0	411	1,567	1	2	0	3	
8:00 AM	0	0	0	2	0	0	0	2	1	9	169	3	2	0	145	1	334	1,534	0	1	0	1	
8:15 AM	0	0	0	9	0	0	0	0	0	4	175	2	1	0	217	2	410		2	1	1	1	
8:30 AM	0	0	0	5	0	0	0	1	2	7	200	0	8	0	187	2	412		1	2	0	2	
8:45 AM	0	1	0	5	0	0	0	1	2	5	169	0	5	0	190	0	378		0	0	0	0	

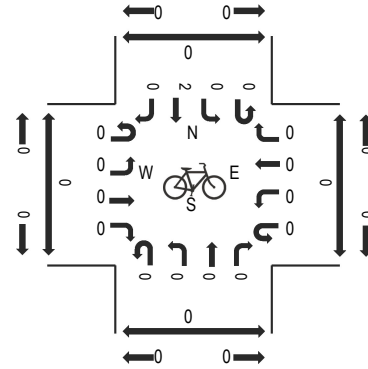
Peak Rolling Hour Flow Rates

Vehicle Type	Eastbound				Westbound				Northbound				Southbound				Total
	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	
Articulated Trucks	0	0	0	0	0	0	0	0	0	0	3	0	0	0	6	0	9
Lights	0	0	0	22	0	1	0	3	4	21	727	7	15	0	713	5	1,518
Mediums	0	0	0	1	0	0	0	0	0	0	19	0	0	0	20	0	40
Total	0	0	0	23	0	1	0	3	4	21	749	7	15	0	739	5	1,567

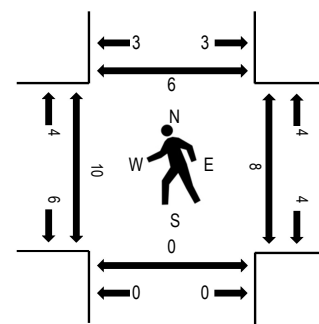
Peak Hour - Motorized Vehicles



Peak Hour - Bicycles



Peak Hour - Pedestrians



Note: Total study counts contained in parentheses.

Traffic Counts - Motorized Vehicles

Interval Start Time	5TH AVE Eastbound				5TH AVE Westbound				EL CAMINO REAL Northbound				EL CAMINO REAL Southbound				Total	Rolling Hour	Pedestrian Crossings			
	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right			West	East	South	North
4:00 PM	0	0	0	4	0	0	0	0	0	8	229	1	6	0	143	4	395	1,760	3	4	1	4
4:15 PM	0	0	0	7	0	1	0	1	2	10	226	0	6	0	176	1	430	1,868	1	1	0	1
4:30 PM	0	2	0	5	0	0	0	0	4	11	220	0	9	0	206	1	458	1,945	0	1	0	0
4:45 PM	0	1	0	2	0	0	0	2	2	10	264	2	10	0	182	2	477	1,966	0	1	0	0
5:00 PM	0	0	0	2	0	0	0	1	2	12	244	0	5	0	236	1	503	1,954	1	0	0	0
5:15 PM	0	0	0	9	0	0	0	1	4	16	230	0	5	0	241	1	507		4	6	0	5
5:30 PM	0	0	0	3	0	0	0	0	5	16	236	0	13	0	205	1	479		5	1	0	1
5:45 PM	0	1	0	5	0	0	0	2	2	11	223	0	10	0	207	4	465		1	5	0	2

Peak Rolling Hour Flow Rates

Vehicle Type	Eastbound				Westbound				Northbound				Southbound				Total
	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	
Articulated Trucks	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Lights	0	1	0	16	0	0	0	4	13	54	957	2	33	0	855	5	1,940
Mediums	0	0	0	0	0	0	0	0	0	0	17	0	0	0	9	0	26
Total	0	1	0	16	0	0	0	4	13	54	974	2	33	0	864	5	1,966



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Location: 3 EL CAMINO REAL & SPRING ST AM

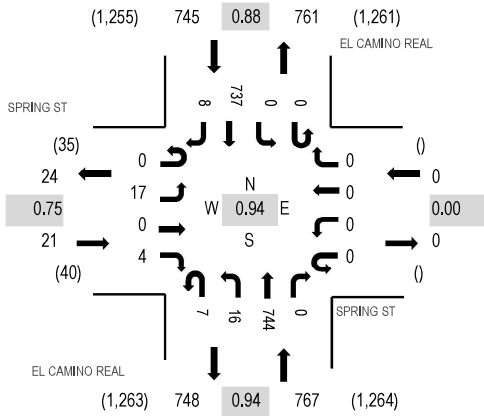
Date: Wednesday, March 8, 2023

Peak Hour: 07:45 AM - 08:45 AM

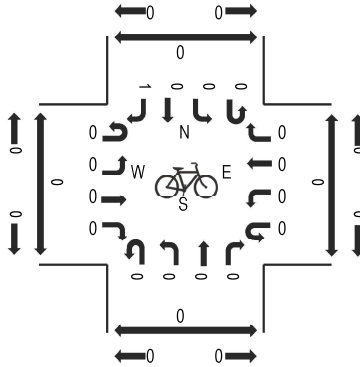
Peak 15-Minutes: 07:45 AM - 08:00 AM

Count used only for generating adjustment factors for other locations without pre-Covid counts

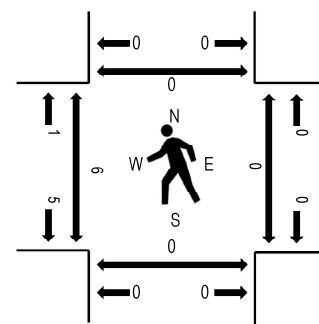
Peak Hour - Motorized Vehicles



Peak Hour - Bicycles



Peak Hour - Pedestrians



Note: Total study counts contained in parentheses.

Traffic Counts - Motorized Vehicles

Interval Start Time	SPRING ST Eastbound				SPRING ST Westbound				EL CAMINO REAL Northbound				EL CAMINO REAL Southbound				Total	Rolling Hour	Pedestrian Crossings				
	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right			West	East	South	North	
7:00 AM	0	4	0	0	0	0	0	0	2	1	70	0	0	0	0	81	3	161	1,065	0	0	0	0
7:15 AM	0	4	0	0	0	0	0	0	1	0	121	0	0	0	0	97	0	223	1,236	0	0	0	0
7:30 AM	0	5	0	0	0	0	0	0	1	0	126	0	0	0	0	141	2	275	1,408	1	0	0	0
7:45 AM	0	6	0	1	0	0	0	0	4	3	194	0	0	0	0	197	1	406	1,533	1	0	0	0
8:00 AM	0	4	0	0	0	0	0	0	2	6	175	0	0	0	0	144	1	332	1,494	2	0	0	0
8:15 AM	0	2	0	2	0	0	0	0	0	5	175	0	0	0	0	208	3	395		2	0	0	0
8:30 AM	0	5	0	1	0	0	0	0	1	2	200	0	0	0	0	188	3	400		1	0	0	0
8:45 AM	0	3	0	3	0	0	0	0	5	3	167	0	0	0	0	184	2	367		0	0	0	0

Peak Rolling Hour Flow Rates

Vehicle Type	Eastbound				Westbound				Northbound				Southbound				Total	
	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right		
Articulated Trucks	0	0	0	0	0	0	0	0	0	0	3	0	0	0	0	6	0	9
Lights	0	17	0	4	0	0	0	0	7	16	725	0	0	0	0	709	8	1,486
Mediums	0	0	0	0	0	0	0	0	0	0	16	0	0	0	0	22	0	38
Total	0	17	0	4	0	0	0	0	7	16	744	0	0	0	0	737	8	1,533



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Location: 3 EL CAMINO REAL & SPRING ST PM

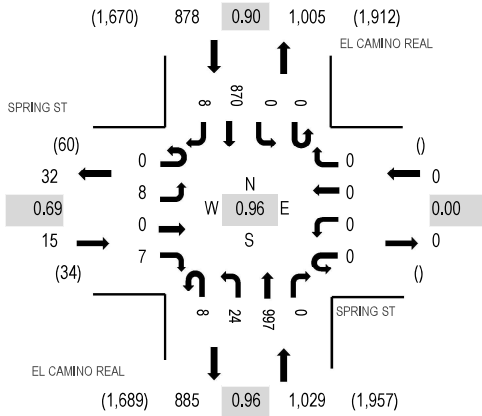
Date: Wednesday, March 8, 2023

Peak Hour: 04:45 PM - 05:45 PM

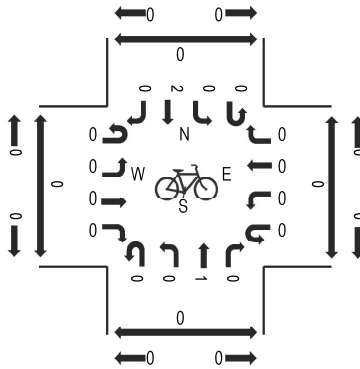
Peak 15-Minutes: 05:15 PM - 05:30 PM

Count used only for generating adjustment factors for other locations without pre-Covid counts

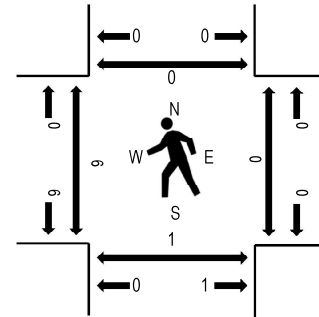
Peak Hour - Motorized Vehicles



Peak Hour - Bicycles



Peak Hour - Pedestrians



Note: Total study counts contained in parentheses.

Traffic Counts - Motorized Vehicles

Interval Start Time	SPRING ST Eastbound				SPRING ST Westbound				EL CAMINO REAL Northbound				EL CAMINO REAL Southbound				Total	Rolling Hour	Pedestrian Crossings			
	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right			West	East	South	North
4:00 PM	0	3	0	0	0	0	0	0	4	2	216	0	1	0	208	2	436	1,775	0	0	0	0
4:15 PM	0	5	0	3	0	0	0	0	1	9	223	0	0	0	179	1	421	1,828	1	0	0	0
4:30 PM	0	3	0	2	0	0	0	0	5	6	222	0	0	0	213	2	453	1,905	1	0	0	0
4:45 PM	0	2	0	4	0	0	0	0	4	6	259	0	0	0	190	0	465	1,922	0	0	0	0
5:00 PM	0	3	0	0	0	0	0	0	3	4	244	0	0	0	234	1	489	1,886	2	0	0	0
5:15 PM	0	2	0	1	0	0	0	0	1	5	244	0	0	0	243	2	498		0	0	1	0
5:30 PM	0	1	0	2	0	0	0	0	0	9	250	0	0	0	203	5	470		4	0	0	0
5:45 PM	0	3	0	0	0	0	0	0	4	5	231	0	0	0	185	1	429		4	0	0	0

Peak Rolling Hour Flow Rates

Vehicle Type	Eastbound				Westbound				Northbound				Southbound				Total
	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	
Articulated Trucks	0	0	0	0	0	0	0	0	0	0	0	0	0	0	4	0	4
Lights	0	8	0	7	0	0	0	0	8	23	980	0	0	0	861	8	1,895
Mediums	0	0	0	0	0	0	0	0	0	1	17	0	0	0	5	0	23
Total	0	8	0	7	0	0	0	0	8	24	997	0	0	0	870	8	1,922

Peak-Hour Volume Count - 22GB40

Date: 3/2/2023
 Counters: Jana, Jo
 Location Name: 11 El Camino, San Carlos
 Weather: Fair

AUTO CENSUS
Traffic Monitoring and Analysis

Thurs 3/2/23		
Start Time	IN	OUT
7:00 AM	0	0
7:15 AM	1	0
7:30 AM	1	0
7:45 AM	1	0
8:00 AM	3	1
8:15 AM	7	3
8:30 AM	11	4
8:45 AM	10	4
9:00 AM	15	8

Thurs 3/2/23		
Start Time	IN	OUT
4:00 PM	0	0
4:15 PM	8	11
4:30 PM	16	22
4:45 PM	23	30
5:00 PM	31	41
5:15 PM	39	53
5:30 PM	48	60
5:45 PM	55	77
6:00 PM	58	86

Peak Hour	IN	OUT	Hourly Totals
7:00 - 8:00	3	1	4
7:15 - 8:15	6	3	9
7:30 - 8:30	10	4	14
7:45 - 8:45	9	4	13
8:00 - 9:00	12	7	19

Peak Hour	IN	OUT	Hourly Totals
4:00 - 5:00	31	41	72
4:15 - 5:15	31	42	73
4:30 - 5:30	32	38	70
4:45 - 5:45	32	47	79
5:00 - 6:00	27	45	72

Peak Volumes: 12 7 19

Peak Volumes: 27 45 79

Peak-Hour Volume Count - 22GB40

Date: 3/2/2023
 Counters: Jana, Jo
 Location Name: 11 El Camino, San Carlos
 Weather: Fair

AUTO CENSUS
Traffic Monitoring and Analysis

Thurs 3/2/23		
Start Time	IN	OUT
7:00 AM	0	0
7:15 AM	1	0
7:30 AM	1	0
7:45 AM	1	0
8:00 AM	3	1
8:15 AM	7	3
8:30 AM	11	4
8:45 AM	10	4
9:00 AM	15	8

Thurs 3/2/23		
Start Time	IN	OUT
4:00 PM	0	0
4:15 PM	8	11
4:30 PM	16	22
4:45 PM	23	30
5:00 PM	31	41
5:15 PM	39	53
5:30 PM	48	60
5:45 PM	55	77
6:00 PM	58	86

Peak Hour	IN	OUT	Hourly Totals
7:00 - 8:00	3	1	4
7:15 - 8:15	6	3	9
7:30 - 8:30	10	4	14
7:45 - 8:45	9	4	13
8:00 - 9:00	12	7	19

Peak Hour	IN	OUT	Hourly Totals
4:00 - 5:00	31	41	72
4:15 - 5:15	31	42	73
4:30 - 5:30	32	38	70
4:45 - 5:45	32	47	79
5:00 - 6:00	27	45	72

Peak Volumes: 12 7 19

Peak Volumes: 27 45 79

Appendix C
Volume Summary

Intersection Number: **1**
 Traffic Node Number: 57
 Intersection Name: El Camino Real and Ralston Avenue
 Peak Hour: AM
 Count Date: 01/14/20
 Date of Analysis: 03/08/23

Scenario	Movements												Total
	Southbound Approach			Westbound Approach			Northbound Approach			Eastbound Approach			
	RT	TH	LT	RT	TH	LT	RT	TH	LT	RT	TH	LT	
Existing Conditions	78	747	317	183	659	191	177	520	102	16	763	107	3860
Approved Project Trips													
<u>San Carlos</u>													
1091 Industrial Rd	0	2	0	0	0	0	0	0	0	0	0	0	2
1030 Britton Ave	0	10	0	0	0	0	0	2	0	0	0	0	12
777 Industrial Rd	0	3	0	0	0	0	0	0	0	0	0	0	3
26 El Camino Real	0	12	0	0	0	0	0	8	0	0	0	0	20
888 Branston Road	0	0	0	0	0	0	0	0	0	0	0	0	0
1021 Howard Avenue	0	5	0	0	0	0	0	2	0	0	0	0	7
405 Industrial Road	0	10	0	0	0	0	0	1	0	0	0	0	11
<u>Belmont</u>													
1325 Old County Road	0	-1	-2	6	8	2	-1	2	3	-1	-4	0	12
800 Laurel Street	0	0	0	0	1	0	0	0	0	1	2	0	4
800 Belmont Ave	0	7	7	2	0	0	0	2	0	0	0	2	20
815 Old County Rd	0	0	0	0	9	3	1	0	0	0	3	0	16
Total Approved Trips	0	48	5	8	18	5	0	17	3	0	1	2	107
Background Conditions	78	795	322	191	677	196	177	537	105	16	764	109	3967
													0
Proposed Project Trips	0	2	0	0	0	2	17	11	1	0	0	0	33
Existing + Project Conditions	78	749	317	183	659	193	194	531	103	16	763	107	3893
													0
Background + Project Conditions	78	797	322	191	677	198	194	548	106	16	764	109	4000
													0
Pending Project Trips													
<u>San Carlos</u>													
987 Commercial Street	0	2	0	0	0	0	0	2	0	0	0	0	4
803 Old County Road	0	8	0	0	0	0	0	2	0	0	0	0	10
501 Industrial Road	0	2	0	0	0	0	0	2	0	0	0	0	4
642 Quarry Road	0	13	13	2	0	0	0	2	0	0	0	0	30
<u>Belmont</u>													
2 Davis Drive	0	0	0	0	3	0	0	0	2	0	1	0	6
1301 Shorewood Road Development	0	0	29	4	11	4	29	0	0	0	84	0	161
580 Masonic Way	0	0	0	0	9	6	2	0	0	0	3	0	20
601 Harbor Blvd	0	6	6	0	2	0	0	1	2	17	17	0	51
608 Harbor Blvd	0	0	0	1	1	0	0	2	2	0	0	0	6
900 El Camino Real	0	2	0	0	0	0	0	1	0	0	0	0	3
Stanford NDNU	12	0	0	0	37	0	0	0	12	4	12	4	81
Island Parkway Life Sciences	0	0	104	18	12	9	56	0	0	0	71	0	270
Total Pending Trips	12	33	152	25	75	19	87	12	18	21	188	4	646
Cumulative Conditions	90	828	474	216	752	215	264	549	123	37	952	113	4613
													0
Cumulative + Project Conditions	90	830	474	216	752	217	281	560	124	37	952	113	4646
													0

Intersection Number: **2**
 Traffic Node Number: 1
 Intersection Name: El Camino Real and Harbor Blvd (N)
 Peak Hour: AM
 Count Date: 05/19/16
 Date of Analysis: 03/08/23

Scenario	Movements												Total
	Southbound Approach			Westbound Approach			Northbound Approach			Eastbound Approach			
	RT	TH	LT	RT	TH	LT	RT	TH	LT	RT	TH	LT	
Existing Conditions	3	975	645	170	1	114	271	909	10	0	0	0	3098
Approved Project Trips													
<u>San Carlos</u>													
1091 Industrial Rd	0	2	0	0	0	0	0	0	0	0	0	0	2
1030 Britton Ave	0	10	0	0	0	0	0	2	0	0	0	0	12
777 Industrial Rd	0	3	0	0	0	0	0	0	0	0	0	0	3
26 El Camino Real	0	12	0	0	0	0	0	8	0	0	0	0	20
888 Branston Road	0	0	0	0	0	0	0	0	0	0	0	0	0
1021 Howard Avenue	0	5	0	0	0	0	0	2	0	0	0	0	7
405 Industrial Road	0	5	5	0	0	0	0	1	0	0	0	0	11
<u>Belmont</u>													
1325 Old County Road	0	2	-2	5	0	6	-3	-1	0	0	0	0	7
800 Laurel Street	0	0	0	0	0	0	0	0	0	0	0	0	0
800 Belmont Ave	0	7	0	0	0	0	0	2	0	0	0	0	9
815 Old County Rd	0	3	0	0	0	0	0	1	0	0	0	0	4
Total Approved Trips	0	49	3	5	0	6	-3	15	0	0	0	0	75
Background Conditions	3	1024	648	175	1	120	268	924	10	0	0	0	3173
													0
Proposed Project Trips	0	4	0	0	0	3	3	29	0	0	0	0	39
Existing + Project Conditions	3	979	645	170	1	117	274	938	10	0	0	0	3137
													0
Background + Project Conditions	3	1028	648	175	1	123	271	953	10	0	0	0	3212
													0
Pending Project Trips													
<u>San Carlos</u>													
987 Commercial Street	0	2	0	0	0	0	0	2	0	0	0	0	4
803 Old County Road	0	0	8	0	0	0	0	2	0	0	0	0	10
501 Industrial Road	0	2	0	0	0	0	0	2	0	0	0	0	4
642 Quarry Road	0	0	13	2	0	7	43	0	0	0	0	0	65
<u>Belmont</u>													
2 Davis Drive	0	0	0	0	0	0	0	2	0	0	0	0	2
1301 Shorewood Road Development	0	4	0	0	0	0	0	29	0	0	0	0	33
580 Masonic Way	0	6	0	0	0	0	0	2	0	0	0	0	8
601 Harbor Blvd	0	0	23	3	0	1	13	0	0	0	0	0	40
608 Harbor Blvd	0	0	0	4	0	3	0	0	0	0	0	0	7
900 El Camino Real	0	2	0	0	0	0	0	1	0	0	0	0	3
Stanford NDNU	0	4	0	0	0	0	0	12	0	0	0	0	16
Island Parkway Life Sciences	0	9	0	0	0	0	0	56	0	0	0	0	65
Total Pending Trips	0	29	44	9	0	11	56	108	0	0	0	0	257
Cumulative Conditions	3	1053	692	184	1	131	324	1032	10	0	0	0	3430
													0
Cumulative + Project Conditions	3	1057	692	184	1	134	327	1061	10	0	0	0	3469
													0

Intersection Number: **3**
 Traffic Node Number: 62
 Intersection Name: El Camino Real and Harbor Blvd (S)
 Peak Hour: AM
 Count Date: 04/11/23
 Date of Analysis: 03/08/23

Scenario	Movements												Total
	Southbound Approach			Westbound Approach			Northbound Approach			Eastbound Approach			
	RT	TH	LT	RT	TH	LT	RT	TH	LT	RT	TH	LT	
Existing Conditions	55	1026	0	0	0	0	0	1038	20	18	0	112	2269
Approved Project Trips													
<u>San Carlos</u>													
1091 Industrial Rd	0	2	0	0	0	0	0	0	0	0	0	0	2
1030 Britton Ave	0	10	0	0	0	0	0	2	0	0	0	0	12
777 Industrial Rd	0	3	0	0	0	0	0	0	0	0	0	0	3
26 El Camino Real	0	12	0	0	0	0	0	8	0	0	0	0	20
888 Branston Road	0	0	0	0	0	0	0	0	0	0	0	0	0
1021 Howard Avenue	0	5	0	0	0	0	0	2	0	0	0	0	7
405 Industrial Road	0	5	0	0	0	0	0	1	0	0	0	0	6
<u>Belmont</u>													
1325 Old County Road	0	8	0	0	0	0	0	-4	0	0	0	0	4
800 Laurel Street	0	0	0	0	0	0	0	0	0	0	0	0	0
800 Belmont Ave	0	7	0	0	0	0	0	2	0	0	0	0	9
815 Old County Rd	0	3	0	0	0	0	0	1	0	0	0	0	4
Total Approved Trips	0	55	0	0	0	0	0	12	0	0	0	0	67
Background Conditions	55	1081	0	0	0	0	0	1050	20	18	0	112	2336
													0
Proposed Project Trips	0	7	0	0	0	0	0	32	0	0	0	0	39
Existing + Project Conditions	55	1033	0	0	0	0	0	1070	20	18	0	112	2308
													0
Background + Project Conditions	55	1088	0	0	0	0	0	1082	20	18	0	112	2375
													0
Pending Project Trips													
<u>San Carlos</u>													
987 Commercial Street	0	2	0	0	0	0	0	2	0	0	0	0	4
803 Old County Road	0	0	0	0	0	0	0	2	0	0	0	0	2
501 Industrial Road	0	2	0	0	0	0	0	2	0	0	0	0	4
642 Quarry Road	0	7	0	0	0	0	0	43	0	0	0	0	50
<u>Belmont</u>													
2 Davis Drive	0	0	0	0	0	0	0	2	0	0	0	0	2
1301 Shorewood Road Development	0	4	0	0	0	0	0	29	0	0	0	0	33
580 Masonic Way	0	6	0	0	0	0	0	2	0	0	0	0	8
601 Harbor Blvd	0	1	0	0	0	0	0	13	0	0	0	0	14
608 Harbor Blvd	0	3	0	0	0	0	0	0	0	0	0	0	3
900 El Camino Real	0	2	0	0	0	0	0	1	0	0	0	0	3
Stanford NDNU	0	4	0	0	0	0	0	12	0	0	0	0	16
Island Parkway Life Sciences	0	9	0	0	0	0	0	56	0	0	0	0	65
Total Pending Trips	0	40	0	0	0	0	0	164	0	0	0	0	204
Cumulative Conditions	55	1121	0	0	0	0	0	1214	20	18	0	112	2540
													0
Cumulative + Project Conditions	55	1128	0	0	0	0	0	1246	20	18	0	112	2579
													0

Intersection Number: **4**
 Traffic Node Number: 2
 Intersection Name: El Camino Real and 5th Avenue
 Peak Hour: AM
 Count Date: 03/08/23
 Date of Analysis: 03/08/23

Scenario	Movements												Total
	Southbound Approach			Westbound Approach			Northbound Approach			Eastbound Approach			
	RT	TH	LT	RT	TH	LT	RT	TH	LT	RT	TH	LT	
Existing Conditions	7	1038	21	4	0	1	10	1052	35	32	0	0	2200
Approved Project Trips													
<u>San Carlos</u>													
1091 Industrial Rd	0	2	0	0	0	0	0	0	0	0	0	0	2
1030 Britton Ave	0	10	0	0	0	0	0	2	0	0	0	0	12
777 Industrial Rd	0	3	0	0	0	0	0	0	0	0	0	0	3
26 El Camino Real	0	12	0	0	0	0	0	8	0	0	0	0	20
888 Branston Road	0	0	0	0	0	0	0	0	0	0	0	0	0
1021 Howard Avenue	0	5	0	0	0	0	0	2	0	0	0	0	7
405 Industrial Road	0	5	0	0	0	0	0	1	0	0	0	0	6
<u>Belmont</u>													
1325 Old County Road	0	8	0	0	0	0	0	-4	0	0	0	0	4
800 Laurel Street	0	0	0	0	0	0	0	0	0	0	0	0	0
800 Belmont Ave	0	7	0	0	0	0	0	2	0	0	0	0	9
815 Old County Rd	0	3	0	0	0	0	0	1	0	0	0	0	4
Total Approved Trips	0	55	0	0	0	0	0	12	0	0	0	0	67
Background Conditions	7	1093	21	4	0	1	10	1064	35	32	0	0	2267
													0
Proposed Project Trips	0	7	0	0	0	0	0	32	-2	-1	0	0	36
Existing + Project Conditions	7	1045	21	4	0	1	10	1084	33	31	0	0	2236
													0
Background + Project Conditions	7	1100	21	4	0	1	10	1096	33	31	0	0	2303
													0
Pending Project Trips													
<u>San Carlos</u>													
987 Commercial Street	0	2	0	0	0	0	0	2	0	0	0	0	4
803 Old County Road	0	0	0	0	0	0	0	2	0	0	0	0	2
501 Industrial Road	0	2	0	0	0	0	0	2	0	0	0	0	4
642 Quarry Road	0	7	0	0	0	0	0	43	0	0	0	0	50
<u>Belmont</u>													
2 Davis Drive	0	0	0	0	0	0	0	2	0	0	0	0	2
1301 Shorewood Road Development	0	4	0	0	0	0	0	29	0	0	0	0	33
580 Masonic Way	0	0	0	0	0	0	0	0	0	0	0	0	0
601 Harbor Blvd	0	1	0	0	0	0	0	13	0	0	0	0	14
608 Harbor Blvd	0	3	0	0	0	0	0	0	0	0	0	0	3
900 El Camino Real	0	2	0	0	0	0	0	1	0	0	0	0	3
Stanford NDNU	0	4	0	0	0	0	0	12	0	0	0	0	16
Island Parkway Life Sciences	0	9	0	0	0	0	0	56	0	0	0	0	65
Total Pending Trips	0	34	0	0	0	0	0	162	0	0	0	0	196
Cumulative Conditions	7	1127	21	4	0	1	10	1226	35	32	0	0	2463
													0
Cumulative + Project Conditions	7	1134	21	4	0	1	10	1258	33	31	0	0	2499
													0

Intersection Number: **5**
 Traffic Node Number: 52
 Intersection Name: El Camino Real and Spring Street
 Peak Hour: AM
 Count Date: 05/04/17
 Date of Analysis: 03/08/23

Scenario	Movements												Total
	Southbound Approach			Westbound Approach			Northbound Approach			Eastbound Approach			
	RT	TH	LT	RT	TH	LT	RT	TH	LT	RT	TH	LT	
Existing Conditions	5	1129	13	0	0	0	0	993	19	11	0	28	2198
Approved Project Trips													
<u>San Carlos</u>													
1091 Industrial Rd	0	2	0	0	0	0	0	0	0	0	0	0	2
1030 Britton Ave	0	10	0	0	0	0	0	2	0	0	0	0	12
777 Industrial Rd	0	3	0	0	0	0	0	0	0	0	0	0	3
26 El Camino Real	12	0	0	0	0	0	0	4	3	4	0	4	27
888 Branston Road	0	0	0	0	0	0	0	0	0	0	0	0	0
1021 Howard Avenue	0	5	0	0	0	0	0	2	0	0	0	0	7
405 Industrial Road	0	5	0	0	0	0	0	1	0	0	0	0	6
<u>Belmont</u>													
1325 Old County Road	0	8	0	0	0	0	0	-4	0	0	0	0	4
800 Laurel Street	0	0	0	0	0	0	0	0	0	0	0	0	0
800 Belmont Ave	0	7	0	0	0	0	0	2	0	0	0	0	9
815 Old County Rd	0	3	0	0	0	0	0	1	0	0	0	0	4
Total Approved Trips	12	43	0	0	0	0	0	8	3	4	0	4	74
Background Conditions	17	1172	13	0	0	0	0	1001	22	15	0	32	2272
													0
Proposed Project Trips	-1	0	6	30	0	35	5	0	0	0	0	-2	73
Existing + Project Conditions	4	1129	19	30	0	35	5	993	19	11	0	26	2271
													0
Background + Project Conditions	16	1172	19	30	0	35	5	1001	22	15	0	30	2345
													0
Pending Project Trips													
<u>San Carlos</u>													
987 Commercial Street	0	2	0	0	0	0	0	2	0	0	0	0	4
803 Old County Road	0	0	0	0	0	0	0	2	0	0	0	0	2
501 Industrial Road	0	2	0	0	0	0	0	2	0	0	0	0	4
642 Quarry Road	0	7	0	0	0	0	0	43	0	0	0	0	50
<u>Belmont</u>													
2 Davis Drive	0	0	0	0	0	0	0	2	0	0	0	0	2
1301 Shorewood Road Development	0	4	0	0	0	0	0	29	0	0	0	0	33
580 Masonic Way	0	0	0	0	0	0	0	0	0	0	0	0	0
601 Harbor Blvd	0	1	0	0	0	0	0	13	0	0	0	0	14
608 Harbor Blvd	0	3	0	0	0	0	0	0	0	0	0	0	3
900 El Camino Real	0	2	0	0	0	0	0	1	0	0	0	0	3
Stanford NDNU	0	4	0	0	0	0	0	12	0	0	0	0	16
Island Parkway Life Sciences	0	9	0	0	0	0	0	56	0	0	0	0	65
Total Pending Trips	0	34	0	0	0	0	0	162	0	0	0	0	196
Cumulative Conditions	17	1206	13	0	0	0	0	1163	22	15	0	32	2468
													0
Cumulative + Project Conditions	16	1206	19	30	0	35	5	1163	22	15	0	30	2541
													0

Intersection Number: **6**
 Traffic Node Number: 4
 Intersection Name: El Camino Real and Hull Drive
 Peak Hour: AM
 Count Date: 05/04/17
 Date of Analysis: 03/08/23

Scenario	Movements												Total
	Southbound Approach			Westbound Approach			Northbound Approach			Eastbound Approach			
	RT	TH	LT	RT	TH	LT	RT	TH	LT	RT	TH	LT	
Existing Conditions	58	1042	8	0	2	11	16	905	61	113	2	123	2341
Approved Project Trips													
<u>San Carlos</u>													
1091 Industrial Rd	0	2	0	0	0	0	0	0	0	0	0	0	2
1030 Britton Ave	0	10	0	0	0	0	0	2	0	0	0	0	12
777 Industrial Rd	0	3	0	0	0	0	0	0	0	0	0	0	3
26 El Camino Real	0	4	0	0	0	0	0	3	2	0	0	4	13
888 Branston Road	0	0	0	0	0	0	0	0	0	0	0	0	0
1021 Howard Avenue	0	5	0	0	0	0	0	2	0	0	0	0	7
405 Industrial Road	0	5	0	0	0	0	0	1	0	0	0	0	6
<u>Belmont</u>													
1325 Old County Road	0	8	0	0	0	0	0	-4	0	0	0	0	4
800 Laurel Street	0	0	0	0	0	0	0	0	0	0	0	0	0
800 Belmont Ave	0	7	0	0	0	0	0	2	0	0	0	0	9
815 Old County Rd	0	3	0	0	0	0	0	1	0	0	0	0	4
Total Approved Trips	0	47	0	0	0	0	0	7	2	0	0	4	60
Background Conditions	58	1089	8	0	2	11	16	912	63	113	2	127	2401
													0
Proposed Project Trips	1	34	0	0	-2	-1	0	8	0	0	0	-3	37
Existing + Project Conditions	59	1076	8	0	0	10	16	913	61	113	2	120	2378
													0
Background + Project Conditions	59	1123	8	0	0	10	16	920	63	113	2	124	2438
													0
Pending Project Trips													
<u>San Carlos</u>													
987 Commercial Street	0	2	0	0	0	0	0	2	0	0	0	0	4
803 Old County Road	0	0	0	0	0	0	0	2	0	0	0	0	2
501 Industrial Road	0	2	0	0	0	0	0	2	0	0	0	0	4
642 Quarry Road	0	7	0	0	0	0	0	43	0	0	0	0	50
<u>Belmont</u>													
2 Davis Drive	0	0	0	0	0	0	0	2	0	0	0	0	2
1301 Shorewood Road Development	0	4	0	0	0	0	0	29	0	0	0	0	33
580 Masonic Way	0	0	0	0	0	0	0	0	0	0	0	0	0
601 Harbor Blvd	0	1	0	0	0	0	0	13	0	0	0	0	14
608 Harbor Blvd	0	3	0	0	0	0	0	0	0	0	0	0	3
900 El Camino Real	0	2	0	0	0	0	0	1	0	0	0	0	3
Stanford NDNU	0	4	0	0	0	0	0	12	0	0	0	0	16
Island Parkway Life Sciences	0	9	0	0	0	0	0	56	0	0	0	0	65
Total Pending Trips	0	34	0	0	0	0	0	162	0	0	0	0	196
Cumulative Conditions	58	1123	8	0	2	11	16	1074	63	113	2	127	2597
													0
Cumulative + Project Conditions	59	1157	8	0	0	10	16	1082	63	113	2	124	2634
													0

Intersection Number: **7**
 Traffic Node Number: 5
 Intersection Name: El Camino Real and Holly Street
 Peak Hour: AM
 Count Date: 05/18/16
 Date of Analysis: 03/08/23

Scenario	Movements												Total
	Southbound Approach			Westbound Approach			Northbound Approach			Eastbound Approach			
	RT	TH	LT	RT	TH	LT	RT	TH	LT	RT	TH	LT	
Existing Conditions	53	870	220	125	195	389	337	745	23	20	596	47	3620
Approved Project Trips													
<u>San Carlos</u>													
1091 Industrial Rd	0	2	0	0	0	0	0	0	0	0	0	0	2
1030 Britton Ave	0	10	0	0	0	0	0	2	0	0	0	0	12
777 Industrial Rd	0	3	0	0	0	0	0	0	0	0	0	0	3
26 El Camino Real	0	4	0	0	0	0	0	5	0	0	0	0	9
888 Branston Road	0	0	0	0	0	0	0	0	0	0	0	0	0
1021 Howard Avenue	0	3	2	2	0	3	7	1	0	0	0	0	18
405 Industrial Road	0	0	5	1	0	9	57	0	0	0	0	0	72
<u>Belmont</u>													
1325 Old County Road	0	8	0	0	0	0	0	-4	0	0	0	0	4
800 Laurel Street	0	0	0	0	0	0	0	0	0	0	0	0	0
800 Belmont Ave	0	7	0	0	0	0	0	2	0	0	0	0	9
815 Old County Rd	0	3	0	0	0	0	0	1	0	0	0	0	4
Total Approved Trips	0	40	7	3	0	12	64	7	0	0	0	0	133
Background Conditions	53	910	227	128	195	401	401	752	23	20	596	47	3753
													0
Proposed Project Trips	0	12	21	5	0	0	0	3	0	0	0	0	41
Existing + Project Conditions	53	882	241	130	195	389	337	748	23	20	596	47	3661
													0
Background + Project Conditions	53	922	248	133	195	401	401	755	23	20	596	47	3794
													0
Pending Project Trips													
<u>San Carlos</u>													
987 Commercial Street	0	0	2	2	0	1	1	0	0	0	0	0	6
803 Old County Road	0	0	0	2	0	2	8	0	0	0	0	0	12
501 Industrial Road	0	0	2	2	0	3	7	0	0	0	0	0	14
642 Quarry Road	0	7	0	0	0	7	43	43	0	0	0	0	100
<u>Belmont</u>													
2 Davis Drive	0	0	0	0	0	0	0	2	0	0	0	0	2
1301 Shorewood Road Development	0	4	0	0	0	0	0	29	0	0	0	0	33
580 Masonic Way	0	6	0	0	0	0	0	2	0	0	0	0	8
601 Harbor Blvd	0	1	0	0	0	0	0	13	0	0	0	0	14
608 Harbor Blvd	0	3	0	0	0	0	0	0	0	0	0	0	3
900 El Camino Real	0	2	0	0	0	0	0	1	0	0	0	0	3
Stanford NDNU	0	4	0	0	0	0	0	12	0	0	0	0	16
Island Parkway Life Sciences	0	9	0	0	0	0	0	56	0	0	0	0	65
Total Pending Trips	0	36	4	6	0	13	59	158	0	0	0	0	276
Cumulative Conditions	53	946	231	134	195	414	460	910	23	20	596	47	4029
													0
Cumulative + Project Conditions	53	958	252	139	195	414	460	913	23	20	596	47	4070
													0

Intersection Number: **1**
 Traffic Node Number: 57
 Intersection Name: El Camino Real and Ralston Avenue
 Peak Hour: PM
 Count Date: 01/14/20
 Date of Analysis: 03/08/23

Scenario	Movements												Total
	Southbound Approach			Westbound Approach			Northbound Approach			Eastbound Approach			
	RT	TH	LT	RT	TH	LT	RT	TH	LT	RT	TH	LT	
Existing Conditions	127	716	249	402	590	227	144	810	60	46	619	231	4221
Approved Project Trips													
<u>San Carlos</u>													
1091 Industrial Rd	0	0	0	0	0	0	0	2	0	0	0	0	2
1030 Britton Ave	0	2	0	0	0	0	0	9	0	0	0	0	11
777 Industrial Rd	0	0	0	0	0	0	0	2	0	0	0	0	2
26 El Camino Real	0	12	0	0	0	0	0	11	0	0	0	0	23
888 Branston Road	0	0	0	0	0	0	0	0	0	0	0	0	0
1021 Howard Avenue	0	2	0	0	0	0	0	5	0	0	0	0	7
405 Industrial Road	0	1	0	0	0	0	0	8	0	0	0	0	9
<u>Belmont</u>													
1325 Old County Road	0	2	6	1	1	0	2	0	1	3	9	0	25
800 Laurel Street	0	0	0	0	3	0	0	0	0	0	2	0	5
800 Belmont Ave	0	3	3	2	5	0	0	7	0	0	0	7	27
815 Old County Rd	0	0	0	0	6	2	3	0	0	0	10	0	21
Total Approved Trips	0	22	9	3	15	2	5	44	1	3	21	7	132
Background Conditions	127	738	258	405	605	229	149	854	61	49	640	238	4353
													0
Proposed Project Trips	0	9	0	0	0	5	9	4	0	0	0	0	27
Existing + Project Conditions	127	725	249	402	590	232	153	814	60	46	619	231	4248
													0
Background + Project Conditions	127	747	258	405	605	234	158	858	61	49	640	238	4380
													0
Pending Project Trips													
<u>San Carlos</u>													
987 Commercial Street	0	0	0	0	0	0	0	7	0	0	0	0	7
803 Old County Road	0	1	0	0	0	0	0	8	0	0	0	0	9
501 Industrial Road	0	2	0	0	0	0	0	2	0	0	0	0	4
642 Quarry Road	0	3	3	11	0	0	0	11	0	0	0	0	28
<u>Belmont</u>													
2 Davis Drive	0	0	0	0	1	0	0	0	0	2	4	0	7
1301 Shorewood Road Development	0	0	5	26	75	26	5	0	0	0	15	0	152
580 Masonic Way	0	0	0	0	-6	-4	-2	0	0	0	-4	0	-16
601 Harbor Blvd	0	1	0	7	20	0	0	7	20	2	2	0	59
608 Harbor Blvd	0	2	1	1	1	0	0	0	0	2	1	0	8
900 El Camino Real	0	1	0	0	0	0	0	2	0	0	0	0	3
Stanford NDNU	6	0	0	0	18	0	0	0	6	11	34	11	86
Island Parkway Life Sciences	0	0	19	96	66	52	10	0	0	0	14	0	257
Total Pending Trips	6	10	28	141	175	74	13	37	26	17	66	11	604
Cumulative Conditions	133	748	286	546	780	303	162	891	87	66	706	249	4957
													0
Cumulative + Project Conditions	133	757	286	546	780	308	171	895	87	66	706	249	4984
													0

Intersection Number: **2**
 Traffic Node Number: 1
 Intersection Name: El Camino Real and Harbor Blvd (N)
 Peak Hour: PM
 Count Date: 05/19/16
 Date of Analysis: 03/08/23

Scenario	Movements												Total
	Southbound Approach			Westbound Approach			Northbound Approach			Eastbound Approach			
	RT	TH	LT	RT	TH	LT	RT	TH	LT	RT	TH	LT	
Existing Conditions	2	1144	259	420	38	369	180	997	5	0	0	0	3414
Approved Project Trips													
<u>San Carlos</u>													
1091 Industrial Rd	0	0	0	0	0	0	0	2	0	0	0	0	2
1030 Britton Ave	0	2	0	0	0	0	0	9	0	0	0	0	11
777 Industrial Rd	0	0	0	0	0	0	0	2	0	0	0	0	2
26 El Camino Real	0	12	0	0	0	0	0	11	0	0	0	0	23
888 Branston Road	0	0	0	0	0	0	0	0	0	0	0	0	0
1021 Howard Avenue	0	2	0	0	0	0	0	5	0	0	0	0	7
405 Industrial Road	0	1	0	4	0	0	0	4	0	0	0	0	9
<u>Belmont</u>													
1325 Old County Road	0	0	5	1	0	1	6	2	0	0	0	0	15
800 Laurel Street	0	0	0	0	0	0	0	0	0	0	0	0	0
800 Belmont Ave	0	3	0	0	0	0	0	7	0	0	0	0	10
815 Old County Rd	0	2	0	0	0	0	0	3	0	0	0	0	5
Total Approved Trips	0	22	5	5	0	1	6	45	0	0	0	0	84
Background Conditions	2	1166	264	425	38	370	186	1042	5	0	0	0	3498
													0
Proposed Project Trips	0	14	0	0	0	11	-1	13	0	0	0	0	37
Existing + Project Conditions	2	1158	259	420	38	380	179	1010	5	0	0	0	3451
													0
Background + Project Conditions	2	1180	264	425	38	381	185	1055	5	0	0	0	3535
													0
Pending Project Trips													
<u>San Carlos</u>													
987 Commercial Street	0	0	0	0	0	0	0	7	0	0	0	0	7
803 Old County Road	0	0	1	0	0	0	0	8	0	0	0	0	9
501 Industrial Road	0	2	0	0	0	0	0	2	0	0	0	0	4
642 Quarry Road	0	0	3	11	0	39	9	0	0	0	0	0	62
<u>Belmont</u>													
2 Davis Drive	0	2	0	0	0	0	0	0	0	0	0	0	2
1301 Shorewood Road Development	0	26	0	0	0	0	0	5	0	0	0	0	31
580 Masonic Way	0	-4	0	0	0	0	0	-2	0	0	0	0	-6
601 Harbor Blvd	0	0	3	27	0	14	1	0	0	0	0	0	45
608 Harbor Blvd	0	0	4	0	0	1	3	0	0	0	0	0	8
900 El Camino Real	0	1	0	0	0	0	0	2	0	0	0	0	3
Stanford NDNU	0	11	0	0	0	0	0	6	0	0	0	0	17
Island Parkway Life Sciences	0	52	0	0	0	0	0	10	0	0	0	0	62
Total Pending Trips	0	90	11	38	0	54	13	38	0	0	0	0	244
Cumulative Conditions	2	1256	275	463	38	424	199	1080	5	0	0	0	3742
													0
Cumulative + Project Conditions	2	1270	275	463	38	435	198	1093	5	0	0	0	3779
													0

Intersection Number: **3**
 Traffic Node Number: 62
 Intersection Name: El Camino Real and Harbor Blvd (S)
 Peak Hour: PM
 Count Date: 04/11/23
 Date of Analysis: 03/08/23

Scenario	Movements												Total
	Southbound Approach			Westbound Approach			Northbound Approach			Eastbound Approach			
	RT	TH	LT	RT	TH	LT	RT	TH	LT	RT	TH	LT	
Existing Conditions	94	1391	0	0	0	0	0	1117	28	18	0	84	2732
Approved Project Trips													
<u>San Carlos</u>													
1091 Industrial Rd	0	0	0	0	0	0	0	2	0	0	0	0	2
1030 Britton Ave	0	2	0	0	0	0	0	9	0	0	0	0	11
777 Industrial Rd	0	0	0	0	0	0	0	2	0	0	0	0	2
26 El Camino Real	0	12	0	0	0	0	0	11	0	0	0	0	23
888 Branston Road	0	0	0	0	0	0	0	0	0	0	0	0	0
1021 Howard Avenue	0	2	0	0	0	0	0	5	0	0	0	0	7
405 Industrial Road	0	1	0	0	0	0	0	4	0	0	0	0	5
<u>Belmont</u>													
1325 Old County Road	0	1	0	0	0	0	0	8	0	0	0	0	9
800 Laurel Street	0	0	0	0	0	0	0	0	0	0	0	0	0
800 Belmont Ave	0	3	0	0	0	0	0	7	0	0	0	0	10
815 Old County Rd	0	2	0	0	0	0	0	3	0	0	0	0	5
Total Approved Trips	0	23	0	0	0	0	0	51	0	0	0	0	74
Background Conditions	94	1414	0	0	0	0	0	1168	28	18	0	84	2806
													0
Proposed Project Trips	0	25	0	0	0	0	0	12	0	0	0	0	37
Existing + Project Conditions	94	1416	0	0	0	0	0	1129	28	18	0	84	2769
													0
Background + Project Conditions	94	1439	0	0	0	0	0	1180	28	18	0	84	2843
													0
Pending Project Trips													
<u>San Carlos</u>													
987 Commercial Street	0	0	0	0	0	0	0	7	0	0	0	0	7
803 Old County Road	0	0	0	0	0	0	0	8	0	0	0	0	8
501 Industrial Road	0	2	0	0	0	0	0	2	0	0	0	0	4
642 Quarry Road	0	39	0	0	0	0	0	9	0	0	0	0	48
<u>Belmont</u>													
2 Davis Drive	0	2	0	0	0	0	0	0	0	0	0	0	2
1301 Shorewood Road Development	0	26	0	0	0	0	0	5	0	0	0	0	31
580 Masonic Way	0	-4	0	0	0	0	0	-2	0	0	0	0	-6
601 Harbor Blvd	0	14	0	0	0	0	0	1	0	0	0	0	15
608 Harbor Blvd	0	1	0	0	0	0	0	3	0	0	0	0	4
900 El Camino Real	0	1	0	0	0	0	0	2	0	0	0	0	3
Stanford NDNU	0	11	0	0	0	0	0	6	0	0	0	0	17
Island Parkway Life Sciences	0	52	0	0	0	0	0	10	0	0	0	0	62
Total Pending Trips	0	144	0	0	0	0	0	51	0	0	0	0	195
Cumulative Conditions	94	1558	0	0	0	0	0	1219	28	18	0	84	3001
													0
Cumulative + Project Conditions	94	1583	0	0	0	0	0	1231	28	18	0	84	3038
													0

Intersection Number: **4**
 Traffic Node Number: 2
 Intersection Name: El Camino Real and 5th Avenue
 Peak Hour: PM
 Count Date: 03/08/23
 Date of Analysis: 03/08/23

Scenario	Movements												Total
	Southbound Approach			Westbound Approach			Northbound Approach			Eastbound Approach			
	RT	TH	LT	RT	TH	LT	RT	TH	LT	RT	TH	LT	
Existing Conditions	7	1313	46	6	0	0	3	1168	94	22	0	1	2660
Approved Project Trips													
<u>San Carlos</u>													
1091 Industrial Rd	0	0	0	0	0	0	0	2	0	0	0	0	2
1030 Britton Ave	0	2	0	0	0	0	0	9	0	0	0	0	11
777 Industrial Rd	0	0	0	0	0	0	0	2	0	0	0	0	2
26 El Camino Real	0	12	0	0	0	0	0	11	0	0	0	0	23
888 Branston Road	0	0	0	0	0	0	0	0	0	0	0	0	0
1021 Howard Avenue	0	2	0	0	0	0	0	5	0	0	0	0	7
405 Industrial Road	0	1	0	0	0	0	0	4	0	0	0	0	5
<u>Belmont</u>													
1325 Old County Road	0	1	0	0	0	0	0	8	0	0	0	0	9
800 Laurel Street	0	0	0	0	0	0	0	0	0	0	0	0	0
800 Belmont Ave	0	3	0	0	0	0	0	7	0	0	0	0	10
815 Old County Rd	0	2	0	0	0	0	0	3	0	0	0	0	5
Total Approved Trips	0	23	0	0	0	0	0	51	0	0	0	0	74
Background Conditions	7	1336	46	6	0	0	3	1219	94	22	0	1	2734
													0
Proposed Project Trips	0	24	0	0	0	0	0	12	-6	-1	0	0	29
Existing + Project Conditions	7	1337	46	6	0	0	3	1180	88	21	0	1	2689
													0
Background + Project Conditions	7	1360	46	6	0	0	3	1231	88	21	0	1	2763
													0
Pending Project Trips													
<u>San Carlos</u>													
987 Commercial Street	0	0	0	0	0	0	0	7	0	0	0	0	7
803 Old County Road	0	0	0	0	0	0	0	8	0	0	0	0	8
501 Industrial Road	0	2	0	0	0	0	0	2	0	0	0	0	4
642 Quarry Road	0	39	0	0	0	0	0	9	0	0	0	0	48
<u>Belmont</u>													
2 Davis Drive	0	2	0	0	0	0	0	0	0	0	0	0	2
1301 Shorewood Road Development	0	26	0	0	0	0	0	5	0	0	0	0	31
580 Masonic Way	0	0	0	0	0	0	0	0	0	0	0	0	0
601 Harbor Blvd	0	14	0	0	0	0	0	1	0	0	0	0	15
608 Harbor Blvd	0	1	0	0	0	0	0	3	0	0	0	0	4
900 El Camino Real	0	1	0	0	0	0	0	2	0	0	0	0	3
Stanford NDNU	0	11	0	0	0	0	0	6	0	0	0	0	17
Island Parkway Life Sciences	0	52	0	0	0	0	0	10	0	0	0	0	62
Total Pending Trips	0	148	0	0	0	0	0	53	0	0	0	0	201
Cumulative Conditions	7	1484	46	6	0	0	3	1272	94	22	0	1	2935
													0
Cumulative + Project Conditions	7	1508	46	6	0	0	3	1284	88	21	0	1	2964
													0

Intersection Number: **5**
 Trafix Node Number: 52
 Intersection Name: El Camino Real and Spring Street
 Peak Hour: PM
 Count Date: 05/04/17
 Date of Analysis: 03/08/23

Scenario	Movements												Total
	Southbound Approach			Westbound Approach			Northbound Approach			Eastbound Approach			
	RT	TH	LT	RT	TH	LT	RT	TH	LT	RT	TH	LT	
Existing Conditions	15	1252	8	0	0	0	0	1162	68	13	0	5	2523
Approved Project Trips													
<u>San Carlos</u>													
1091 Industrial Rd	0	0	0	0	0	0	0	2	0	0	0	0	2
1030 Britton Ave	0	2	0	0	0	0	0	9	0	0	0	0	11
777 Industrial Rd	0	0	0	0	0	0	0	2	0	0	0	0	2
26 El Camino Real	12	0	0	0	0	0	0	5	3	5	0	6	31
888 Branston Road	0	0	0	0	0	0	0	0	0	0	0	0	0
1021 Howard Avenue	0	2	0	0	0	0	0	5	0	0	0	0	7
405 Industrial Road	0	1	0	0	0	0	0	4	0	0	0	0	5
<u>Belmont</u>													
1325 Old County Road	0	1	0	0	0	0	0	8	0	0	0	0	9
800 Laurel Street	0	0	0	0	0	0	0	0	0	0	0	0	0
800 Belmont Ave	0	3	0	0	0	0	0	7	0	0	0	0	10
815 Old County Rd	0	2	0	0	0	0	0	3	0	0	0	0	5
Total Approved Trips	12	11	0	0	0	0	0	45	3	5	0	6	82
Background Conditions	27	1263	8	0	0	0	0	1207	71	18	0	11	2605
													0
Proposed Project Trips	-4	0	23	6	0	19	23	0	0	0	0	-3	64
Existing + Project Conditions	11	1252	31	6	0	19	23	1162	68	13	0	2	2587
													0
Background + Project Conditions	23	1263	31	6	0	19	23	1207	71	18	0	8	2669
													0
Pending Project Trips													
<u>San Carlos</u>													
987 Commercial Street	0	0	0	0	0	0	0	7	0	0	0	0	7
803 Old County Road	0	0	0	0	0	0	0	8	0	0	0	0	8
501 Industrial Road	0	2	0	0	0	0	0	2	0	0	0	0	4
642 Quarry Road	0	39	0	0	0	0	0	9	0	0	0	0	48
<u>Belmont</u>													
2 Davis Drive	0	2	0	0	0	0	0	0	0	0	0	0	2
1301 Shorewood Road Development	0	26	0	0	0	0	0	5	0	0	0	0	31
580 Masonic Way	0	0	0	0	0	0	0	0	0	0	0	0	0
601 Harbor Blvd	0	14	0	0	0	0	0	1	0	0	0	0	15
608 Harbor Blvd	0	1	0	0	0	0	0	3	0	0	0	0	4
900 El Camino Real	0	1	0	0	0	0	0	2	0	0	0	0	3
Stanford NDNLU	0	11	0	0	0	0	0	6	0	0	0	0	17
Island Parkway Life Sciences	0	52	0	0	0	0	0	10	0	0	0	0	62
Total Pending Trips	0	148	0	0	0	0	0	53	0	0	0	0	201
Cumulative Conditions	27	1411	8	0	0	0	0	1260	71	18	0	11	2806
													0
Cumulative + Project Conditions	23	1411	31	6	0	19	23	1260	71	18	0	8	2870
													0

Intersection Number: **6**
 Trafix Node Number: 4
 Intersection Name: El Camino Real and Hull Drive
 Peak Hour: PM
 Count Date: 05/04/17
 Date of Analysis: 03/08/23

Scenario	Movements												Total
	Southbound Approach			Westbound Approach			Northbound Approach			Eastbound Approach			
	RT	TH	LT	RT	TH	LT	RT	TH	LT	RT	TH	LT	
Existing Conditions	115	1112	14	4	19	34	50	1178	98	56	0	62	2742
Approved Project Trips													
<u>San Carlos</u>													
1091 Industrial Rd	0	0	0	0	0	0	0	2	0	0	0	0	2
1030 Britton Ave	0	2	0	0	0	0	0	9	0	0	0	0	11
777 Industrial Rd	0	0	0	0	0	0	0	2	0	0	0	0	2

26 El Camino Real	0	5	0	0	0	0	0	3	2	0	0	5	15
888 Branston Road	0	0	0	0	0	0	0	0	0	0	0	0	0
1021 Howard Avenue	0	2	0	0	0	0	0	5	0	0	0	0	7
405 Industrial Road	0	1	0	0	0	0	0	4	0	0	0	0	5
Belmont													
1325 Old County Road	0	1	0	0	0	0	0	8	0	0	0	0	9
800 Laurel Street	0	0	0	0	0	0	0	0	0	0	0	0	0
800 Belmont Ave	0	3	0	0	0	0	0	7	0	0	0	0	10
815 Old County Rd	0	2	0	0	0	0	0	3	0	0	0	0	5
<i>Total Approved Trips</i>	<i>0</i>	<i>16</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>43</i>	<i>2</i>	<i>0</i>	<i>0</i>	<i>5</i>	<i>66</i>
Background Conditions	115	1128	14	4	19	34	50	1221	100	56	0	67	2808
													<i>0</i>
Proposed Project Trips	1	18	0	0	-5	-4	0	25	0	0	0	-2	33
Existing + Project Conditions	116	1130	14	4	14	30	50	1203	98	56	0	60	2775
													<i>0</i>
Background + Project Conditions	116	1146	14	4	14	30	50	1246	100	56	0	65	2841
													<i>0</i>
Pending Project Trips													
San Carlos													
987 Commercial Street	0	0	0	0	0	0	0	7	0	0	0	0	7
803 Old County Road	0	0	0	0	0	0	0	8	0	0	0	0	8
501 Industrial Road	0	2	0	0	0	0	0	2	0	0	0	0	4
642 Quarry Road	0	39	0	0	0	0	0	9	0	0	0	0	48
Belmont													
2 Davis Drive	0	2	0	0	0	0	0	0	0	0	0	0	2
1301 Shorewood Road Development	0	26	0	0	0	0	0	5	0	0	0	0	31
580 Masonic Way	0	0	0	0	0	0	0	0	0	0	0	0	0
601 Harbor Blvd	0	14	0	0	0	0	0	1	0	0	0	0	15
608 Harbor Blvd	0	1	0	0	0	0	0	3	0	0	0	0	4
900 El Camino Real	0	1	0	0	0	0	0	2	0	0	0	0	3
Stanford NDNU	0	11	0	0	0	0	0	6	0	0	0	0	17
Island Parkway Life Sciences	0	52	0	0	0	0	0	10	0	0	0	0	62
<i>Total Pending Trips</i>	<i>0</i>	<i>148</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>53</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>201</i>
Cumulative Conditions	115	1276	14	4	19	34	50	1274	100	56	0	67	3009
													<i>0</i>
Cumulative + Project Conditions	116	1294	14	4	14	30	50	1299	100	56	0	65	3042
													<i>0</i>

Intersection Number: **7**
 Traffic Node Number: 5
 Intersection Name: El Camino Real and Holly Street
 Peak Hour: PM
 Count Date: 05/18/16
 Date of Analysis: 03/08/23






















Scenario	Movements												Total
	Southbound Approach			Westbound Approach			Northbound Approach			Eastbound Approach			
	RT	TH	LT	RT	TH	LT	RT	TH	LT	RT	TH	LT	
Existing Conditions	77	993	173	264	383	447	341	1093	26	25	236	93	4151
Approved Project Trips													
<u>San Carlos</u>													
1091 Industrial Rd	0	0	0	0	0	0	0	2	0	0	0	0	2
1030 Britton Ave	0	2	0	0	0	0	0	9	0	0	0	0	11
777 Industrial Rd	0	0	0	0	0	0	0	2	0	0	0	0	2
26 El Camino Real	0	5	0	0	0	0	0	5	0	0	0	0	10
888 Branston Road	0	0	0	0	0	0	0	0	0	0	0	0	0
1021 Howard Avenue	0	0	2	2	0	3	7	3	0	0	0	0	17
405 Industrial Road	0	0	1	4	0	55	10	0	0	0	0	0	70
<u>Belmont</u>													
1325 Old County Road	0	1	0	0	0	0	0	8	0	0	0	0	9
800 Laurel Street	0	0	0	0	0	0	0	0	0	0	0	0	0
800 Belmont Ave	0	3	0	0	0	0	0	7	0	0	0	0	10
815 Old County Rd	0	2	0	0	0	0	0	3	0	0	0	0	5
Total Approved Trips	0	13	3	6	0	58	17	39	0	0	0	0	136
Background Conditions	77	1006	176	270	383	505	358	1132	26	25	236	93	4287
													0
Proposed Project Trips	0	6	8	16	0	0	0	9	0	0	0	0	39
Existing + Project Conditions	77	999	181	280	383	447	341	1102	26	25	236	93	4190
													0
Background + Project Conditions	77	1012	184	286	383	505	358	1141	26	25	236	93	4326
													0
Pending Project Trips													
<u>San Carlos</u>													
987 Commercial Street	0	0	0	7	0	3	0	0	0	0	0	0	10
803 Old County Road	0	0	0	8	0	8	1	0	0	0	0	0	17
501 Industrial Road	0	0	2	2	0	3	7	0	0	0	0	0	14
642 Quarry Road	0	39	0	0	0	39	9	9	0	0	0	0	96
<u>Belmont</u>													
2 Davis Drive	0	2	0	0	0	0	0	0	0	0	0	0	2
1301 Shorewood Road Development	0	26	0	0	0	0	0	5	0	0	0	0	31
580 Masonic Way	0	-4	0	0	0	0	0	-2	0	0	0	0	-6
601 Harbor Blvd	0	14	0	0	0	0	0	1	0	0	0	0	15
608 Harbor Blvd	0	1	0	0	0	0	0	3	0	0	0	0	4
900 El Camino Real	0	1	0	0	0	0	0	2	0	0	0	0	3
Stanford NDNU	0	11	0	0	0	0	0	6	0	0	0	0	17
Island Parkway Life Sciences	0	52	0	0	0	0	0	10	0	0	0	0	62
Total Pending Trips	0	142	2	17	0	53	17	34	0	0	0	0	265
Cumulative Conditions	77	1148	178	287	383	558	375	1166	26	25	236	93	4552
													0
Cumulative + Project Conditions	77	1154	186	303	383	558	375	1175	26	25	236	93	4591
													0

Appendix D
Level of Service Analysis

HCM Signalized Intersection Capacity Analysis

1: El Camino Real & Dwy/Harbor Blvd (N)






















05/01/2023

													
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR	
Lane Configurations													
Traffic Volume (vph)	0	0	0	114	1	170	10	909	271	645	975	3	
Future Volume (vph)	0	0	0	114	1	170	10	909	271	645	975	3	
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	
Total Lost time (s)				5.0	5.0	5.0	4.5	5.0		5.0	5.0		
Lane Util. Factor				0.95	0.95	1.00	1.00	0.95		0.97	0.95		
Frt				1.00	1.00	0.85	1.00	0.97		1.00	1.00		
Flt Protected				0.95	0.95	1.00	0.95	1.00		0.95	1.00		
Satd. Flow (prot)				1681	1687	1583	1770	3417		3433	3538		
Flt Permitted				0.95	0.95	1.00	0.95	1.00		0.95	1.00		
Satd. Flow (perm)				1681	1687	1583	1770	3417		3433	3538		
Peak-hour factor, PHF	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. Flow (vph)	0	0	0	114	1	170	10	909	271	645	975	3	
RTOR Reduction (vph)	0	0	0	0	0	151	0	21	0	0	0	0	
Lane Group Flow (vph)	0	0	0	57	58	19	10	1159	0	645	978	0	
Turn Type				Perm	NA	Perm	Prot	NA		Prot	NA		
Protected Phases					8		5	2		1	6		
Permitted Phases				8		8							
Actuated Green, G (s)				14.3	14.3	14.3	1.0	51.6		49.1	100.2		
Effective Green, g (s)				14.3	14.3	14.3	1.0	51.6		49.1	100.2		
Actuated g/C Ratio				0.11	0.11	0.11	0.01	0.40		0.38	0.77		
Clearance Time (s)				5.0	5.0	5.0	4.5	5.0		5.0	5.0		
Vehicle Extension (s)				3.0	3.0	3.0	3.0	3.0		3.0	3.0		
Lane Grp Cap (vph)				184	185	174	13	1356		1296	2726		
v/s Ratio Prot							0.01	c0.34		c0.19	0.28		
v/s Ratio Perm				0.03	0.03	0.01							
v/c Ratio				0.31	0.31	0.11	0.77	0.86		0.50	0.36		
Uniform Delay, d1				53.3	53.3	52.1	64.4	35.8		31.0	4.7		
Progression Factor				1.00	1.00	1.00	1.00	1.00		1.00	1.00		
Incremental Delay, d2				1.0	1.0	0.3	195.8	5.8		1.4	0.4		
Delay (s)				54.3	54.3	52.4	260.1	41.6		32.4	5.1		
Level of Service				D	D	D	F	D		C	A		
Approach Delay (s)		0.0			53.1			43.4			15.9		
Approach LOS		A			D			D			B		
Intersection Summary													
HCM 2000 Control Delay			29.9		HCM 2000 Level of Service						C		
HCM 2000 Volume to Capacity ratio			0.63										
Actuated Cycle Length (s)			130.0		Sum of lost time (s)					15.0			
Intersection Capacity Utilization			68.8%		ICU Level of Service					C			
Analysis Period (min)			60										
c Critical Lane Group													

HCM Unsignalized Intersection Capacity Analysis

2: El Camino Real & 5th Street/Dwy

05/01/2023

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	0	32	1	0	4	35	1052	10	21	1038	7
Future Volume (Veh/h)	0	0	32	1	0	4	35	1052	10	21	1038	7
Sign Control	Stop			Stop			Free			Free		
Grade	0%			0%			0%			0%		
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Hourly flow rate (vph)	0	0	32	1	0	4	35	1052	10	21	1038	7
Pedestrians												
Lane Width (ft)												
Walking Speed (ft/s)												
Percent Blockage												
Right turn flare (veh)												
Median type												
Median storage veh												
Upstream signal (ft)												
pX, platoon unblocked	0.81	0.81	0.81	0.81	0.81		0.81					
vC, conflicting volume	1684	2216	522	1720	2214	531	1045			1062		
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	1379	2034	0	1424	2032	531	593			1062		
tC, single (s)	7.5	6.5	6.9	7.5	6.5	6.9	4.1			4.1		
tC, 2 stage (s)												
tF (s)	3.5	4.0	3.3	3.5	4.0	3.3	2.2			2.2		
p0 queue free %	100	100	96	99	100	99	96			97		
cM capacity (veh/h)	79	42	881	71	42	493	795			652		
Direction, Lane #	EB 1	EB 2	WB 1	NB 1	NB 2	NB 3	SB 1	SB 2	SB 3			
Volume Total	0	32	5	35	701	361	21	692	353			
Volume Left	0	0	1	35	0	0	21	0	0			
Volume Right	0	32	4	0	0	10	0	0	7			
cSH	1700	881	225	795	1700	1700	652	1700	1700			
Volume to Capacity	0.00	0.04	0.02	0.04	0.41	0.21	0.03	0.41	0.21			
Queue Length 95th (ft)	0	3	2	3	0	0	2	0	0			
Control Delay (s)	0.0	9.2	21.4	9.7	0.0	0.0	10.7	0.0	0.0			
Lane LOS	A	A	C	A			B					
Approach Delay (s)	9.2		21.4	0.3			0.2					
Approach LOS	A		C									
Intersection Summary												
Average Delay			0.4									
Intersection Capacity Utilization			45.6%		ICU Level of Service				A			
Analysis Period (min)			60									

HCM Signalized Intersection Capacity Analysis

4: El Camino Real & Hull Dr

05/01/2023



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕	↗		↕	↗	↗	↕↗		↗	↕↗	
Traffic Volume (vph)	123	2	113	11	2	0	61	905	16	8	1042	58
Future Volume (vph)	123	2	113	11	2	0	61	905	16	8	1042	58
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.5	4.5		4.5		4.5	4.5		4.5	4.5	
Lane Util. Factor		1.00	1.00		1.00		1.00	0.95		1.00	0.91	
Frt		1.00	0.85		1.00		1.00	1.00		1.00	0.99	
Flt Protected		0.95	1.00		0.96		0.95	1.00		0.95	1.00	
Satd. Flow (prot)		1775	1583		1787		1770	3530		1770	5045	
Flt Permitted		0.95	1.00		0.96		0.95	1.00		0.95	1.00	
Satd. Flow (perm)		1775	1583		1787		1770	3530		1770	5045	
Peak-hour factor, PHF	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. Flow (vph)	123	2	113	11	2	0	61	905	16	8	1042	58
RTOR Reduction (vph)	0	0	87	0	0	0	0	1	0	0	5	0
Lane Group Flow (vph)	0	125	26	0	13	0	61	920	0	8	1095	0
Turn Type	Split	NA	Perm	Split	NA	Perm	Prot	NA		Prot	NA	
Protected Phases	4	4		8	8		5	2		1	6	
Permitted Phases			4			8						
Actuated Green, G (s)		15.9	15.9		0.9		6.4	32.2		1.0	26.8	
Effective Green, g (s)		15.9	15.9		0.9		6.4	32.2		1.0	26.8	
Actuated g/C Ratio		0.23	0.23		0.01		0.09	0.47		0.01	0.39	
Clearance Time (s)		4.5	4.5		4.5		4.5	4.5		4.5	4.5	
Vehicle Extension (s)		3.0	3.0		3.0		3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)		415	370		23		166	1671		26	1988	
v/s Ratio Prot		c0.07			c0.01		c0.03	c0.26		0.00	0.22	
v/s Ratio Perm			0.02									
v/c Ratio		0.30	0.07		0.57		0.37	0.55		0.31	0.55	
Uniform Delay, d1		21.5	20.3		33.4		28.9	12.7		33.2	15.9	
Progression Factor		1.00	1.00		1.00		1.00	1.00		1.00	1.00	
Incremental Delay, d2		0.4	0.1		30.9		1.4	0.4		6.7	0.3	
Delay (s)		21.9	20.4		64.3		30.3	13.1		39.9	16.3	
Level of Service		C	C		E		C	B		D	B	
Approach Delay (s)		21.2			64.3			14.2			16.4	
Approach LOS		C			E			B			B	






















Intersection Summary

HCM 2000 Control Delay	16.3	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.49		
Actuated Cycle Length (s)	68.0	Sum of lost time (s)	18.0
Intersection Capacity Utilization	54.5%	ICU Level of Service	A
Analysis Period (min)	60		

c Critical Lane Group

HCM Signalized Intersection Capacity Analysis
 5: El Camino Real & Holly St




















05/01/2023

													
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR	
Lane Configurations													
Traffic Volume (vph)	47	596	20	389	195	125	23	745	337	220	870	53	
Future Volume (vph)	47	596	20	389	195	125	23	745	337	220	870	53	
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	
Total Lost time (s)		5.0		5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0		
Lane Util. Factor		0.95		0.97	1.00	1.00	1.00	0.95	0.88	0.97	0.95		
Frt		1.00		1.00	1.00	0.85	1.00	1.00	0.85	1.00	0.99		
Flt Protected		1.00		0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00		
Satd. Flow (prot)		3511		3433	1863	1583	1770	3539	2787	3433	3509		
Flt Permitted		1.00		0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00		
Satd. Flow (perm)		3511		3433	1863	1583	1770	3539	2787	3433	3509		
Peak-hour factor, PHF	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. Flow (vph)	47	596	20	389	195	125	23	745	337	220	870	53	
RTOR Reduction (vph)	0	2	0	0	0	95	0	0	244	0	3	0	
Lane Group Flow (vph)	0	661	0	389	195	30	23	745	93	220	920	0	
Turn Type	Split	NA		Split	NA	Perm	Prot	NA	Perm	Prot	NA		
Protected Phases	4	4		8	8		5	2		1	6		
Permitted Phases						8			2				
Actuated Green, G (s)		29.0		31.5	31.5	31.5	4.9	35.9	35.9	13.6	44.6		
Effective Green, g (s)		29.0		31.5	31.5	31.5	4.9	35.9	35.9	13.6	44.6		
Actuated g/C Ratio		0.22		0.24	0.24	0.24	0.04	0.28	0.28	0.10	0.34		
Clearance Time (s)		5.0		5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0		
Vehicle Extension (s)		3.0		3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0		
Lane Grp Cap (vph)		783		831	451	383	66	977	769	359	1203		
v/s Ratio Prot		c0.19		c0.11	0.10		0.01	0.21		c0.06	c0.26		
v/s Ratio Perm						0.02			0.03				
v/c Ratio		0.84		0.47	0.43	0.08	0.35	0.76	0.12	0.61	0.76		
Uniform Delay, d1		48.3		42.1	41.7	38.0	61.0	43.1	35.2	55.7	38.0		
Progression Factor		1.00		0.59	0.58	1.82	1.00	1.00	1.00	1.00	1.00		
Incremental Delay, d2		9.0		1.5	2.4	0.3	3.2	3.7	0.1	3.1	3.0		
Delay (s)		57.4		26.3	26.8	69.4	64.2	46.8	35.3	58.8	41.0		
Level of Service		E		C	C	E	E	D	D	E	D		
Approach Delay (s)		57.4			34.0			43.7			44.5		
Approach LOS		E			C			D			D		
Intersection Summary													
HCM 2000 Control Delay			44.5		HCM 2000 Level of Service					D			
HCM 2000 Volume to Capacity ratio			0.71										
Actuated Cycle Length (s)			130.0		Sum of lost time (s)					20.0			
Intersection Capacity Utilization			76.1%		ICU Level of Service					D			
Analysis Period (min)			60										

c Critical Lane Group

HCM Unsignalized Intersection Capacity Analysis
52: El Camino Real & Spring Street

05/01/2023

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	28	0	11	0	0	0	19	993	0	13	1129	5
Future Volume (Veh/h)	28	0	11	0	0	0	19	993	0	13	1129	5
Sign Control		Stop			Stop			Free			Free	
Grade		0%			0%			0%			0%	
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Hourly flow rate (vph)	28	0	11	0	0	0	19	993	0	13	1129	5
Pedestrians												
Lane Width (ft)												
Walking Speed (ft/s)												
Percent Blockage												
Right turn flare (veh)												
Median type												
								None				None
Median storage veh												
Upstream signal (ft)												
								508				
pX, platoon unblocked	0.82	0.82		0.82	0.82	0.82				0.82		
vC, conflicting volume	1692	2188	379	1444	2191	496	1134			993		
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	1409	2013	379	1108	2016	0	1134			559		
tC, single (s)	7.5	6.5	6.9	7.5	6.5	6.9	4.1			4.1		
tC, 2 stage (s)												
tF (s)	3.5	4.0	3.3	3.5	4.0	3.3	2.2			2.2		
p0 queue free %	64	100	98	100	100	100	97			98		
cM capacity (veh/h)	78	46	619	128	45	891	612			829		
Direction, Lane #	EB 1	WB 1	NB 1	NB 2	NB 3	SB 1	SB 2	SB 3	SB 4			
Volume Total	39	0	19	662	331	13	452	452	231			
Volume Left	28	0	19	0	0	13	0	0	0			
Volume Right	11	0	0	0	0	0	0	0	5			
cSH	104	1700	612	1700	1700	829	1700	1700	1700			
Volume to Capacity	0.38	0.43	0.03	0.39	0.19	0.02	0.27	0.27	0.14			
Queue Length 95th (ft)	43	0	2	0	0	1	0	0	0			
Control Delay (s)	60.3	0.0	11.1	0.0	0.0	9.4	0.0	0.0	0.0			
Lane LOS	F	A	B			A						
Approach Delay (s)	60.3	0.0	0.2			0.1						
Approach LOS	F	A										
Intersection Summary												
Average Delay			1.2									
Intersection Capacity Utilization			37.4%			ICU Level of Service				A		
Analysis Period (min)			60									

HCM Signalized Intersection Capacity Analysis
62: El Camino Real & Harbor Blvd (N)

05/01/2023



Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	112	18	20	1038	1026	55
Future Volume (vph)	112	18	20	1038	1026	55
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.5		4.5	4.5	4.5	
Lane Util. Factor	1.00		1.00	0.95	0.95	
Frt	0.98		1.00	1.00	0.99	
Flt Protected	0.96		0.95	1.00	1.00	
Satd. Flow (prot)	1752		1770	3539	3512	
Flt Permitted	0.96		0.95	1.00	1.00	
Satd. Flow (perm)	1752		1770	3539	3512	
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	112	18	20	1038	1026	55
RTOR Reduction (vph)	6	0	0	0	2	0
Lane Group Flow (vph)	124	0	20	1038	1079	0
Turn Type	Perm		Prot	NA	NA	
Protected Phases			5	2	6	
Permitted Phases	4					
Actuated Green, G (s)	10.2		1.0	33.1	27.6	
Effective Green, g (s)	10.2		1.0	33.1	27.6	
Actuated g/C Ratio	0.20		0.02	0.63	0.53	
Clearance Time (s)	4.5		4.5	4.5	4.5	
Vehicle Extension (s)	3.0		3.0	3.0	3.0	
Lane Grp Cap (vph)	341		33	2239	1853	
v/s Ratio Prot			0.01	c0.29	c0.31	
v/s Ratio Perm	c0.07					
v/c Ratio	0.36		0.61	0.46	0.58	
Uniform Delay, d1	18.2		25.5	5.0	8.4	
Progression Factor	1.00		1.00	1.00	1.00	
Incremental Delay, d2	0.7		30.6	0.2	0.5	
Delay (s)	18.9		56.0	5.1	8.9	
Level of Service	B		E	A	A	
Approach Delay (s)	18.9			6.1	8.9	
Approach LOS	B			A	A	

Intersection Summary






























HCM 2000 Control Delay	8.2	HCM 2000 Level of Service	A
HCM 2000 Volume to Capacity ratio	0.55		
Actuated Cycle Length (s)	52.3	Sum of lost time (s)	13.5
Intersection Capacity Utilization	44.9%	ICU Level of Service	A
Analysis Period (min)	60		

c Critical Lane Group

HCM Signalized Intersection Capacity Analysis

57: El Camino Real & Ralston Ave






















05/01/2023

													
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR	
Lane Configurations	 	 		 	 			 			 		
Traffic Volume (vph)	107	763	16	191	659	183	102	520	177	317	747	78	
Future Volume (vph)	107	763	16	191	659	183	102	520	177	317	747	78	
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	
Total Lost time (s)	4.0	4.0		4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	
Lane Util. Factor	0.97	0.95		0.91	0.91	1.00	1.00	0.95	1.00	1.00	0.95	1.00	
Frt	1.00	1.00		1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85	
Flt Protected	0.95	1.00		0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00	
Satd. Flow (prot)	3400	3494		1595	3352	1568	1752	3505	1568	1752	3505	1568	
Flt Permitted	0.95	1.00		0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00	
Satd. Flow (perm)	3400	3494		1595	3352	1568	1752	3505	1568	1752	3505	1568	
Peak-hour factor, PHF	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	
Adj. Flow (vph)	110	787	16	197	679	189	105	536	182	327	770	80	
RTOR Reduction (vph)	0	1	0	0	0	134	0	0	131	0	0	45	
Lane Group Flow (vph)	110	802	0	177	699	55	105	536	51	327	770	35	
Heavy Vehicles (%)	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%	
Turn Type	Split	NA		Split	NA	Perm	Prot	NA	Perm	Prot	NA	Perm	
Protected Phases	8	8		4	4		1	6		5	2		
Permitted Phases						4			6			2	
Actuated Green, G (s)	33.0	33.0		31.0	31.0	31.0	16.0	31.7	31.7	33.3	49.0	49.0	
Effective Green, g (s)	33.0	33.0		31.0	31.0	31.0	16.0	31.7	31.7	33.3	49.0	49.0	
Actuated g/C Ratio	0.23	0.23		0.21	0.21	0.21	0.11	0.22	0.22	0.23	0.34	0.34	
Clearance Time (s)	4.0	4.0		4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	
Vehicle Extension (s)	3.0	3.0		3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	
Lane Grp Cap (vph)	773	795		341	716	335	193	766	342	402	1184	529	
v/s Ratio Prot	0.03	c0.23		0.11	c0.21		0.06	c0.15		c0.19	0.22		
v/s Ratio Perm						0.03			0.03			0.02	
v/c Ratio	0.14	1.01		0.52	0.98	0.16	0.54	0.70	0.15	0.81	0.65	0.07	
Uniform Delay, d1	44.7	56.0		50.4	56.6	46.4	61.0	52.3	45.7	52.9	40.7	32.5	
Progression Factor	1.00	1.00		0.31	0.37	0.30	1.00	1.00	1.00	1.00	1.00	1.00	
Incremental Delay, d2	0.4	34.2		3.9	22.8	0.7	10.6	2.8	0.2	16.3	2.8	0.2	
Delay (s)	45.1	90.2		19.3	44.0	14.5	71.6	55.1	46.0	69.2	43.5	32.7	
Level of Service	D	F		B	D	B	E	E	D	E	D	C	
Approach Delay (s)		84.7			34.6			55.2			49.9		
Approach LOS		F			C			E			D		
Intersection Summary													
HCM 2000 Control Delay			54.9									HCM 2000 Level of Service	D
HCM 2000 Volume to Capacity ratio			0.87										
Actuated Cycle Length (s)			145.0									Sum of lost time (s)	16.0
Intersection Capacity Utilization			105.9%									ICU Level of Service	G
Analysis Period (min)			15										
c	Critical Lane Group												

HCM Signalized Intersection Capacity Analysis

1: El Camino Real & dwy/Harbor Blvd (N)





















05/01/2023

													
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR	
Lane Configurations													
Traffic Volume (vph)	0	0	0	369	38	420	5	997	180	259	1144	2	
Future Volume (vph)	0	0	0	369	38	420	5	997	180	259	1144	2	
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	
Total Lost time (s)				5.0	5.0	5.0	4.5	5.0		5.0	5.0		
Lane Util. Factor				0.95	0.95	1.00	1.00	0.95		0.97	0.95		
Frt				1.00	1.00	0.85	1.00	0.98		1.00	1.00		
Flt Protected				0.95	0.96	1.00	0.95	1.00		0.95	1.00		
Satd. Flow (prot)				1681	1700	1583	1770	3458		3433	3538		
Flt Permitted				0.76	0.77	1.00	0.95	1.00		0.95	1.00		
Satd. Flow (perm)				1340	1355	1583	1770	3458		3433	3538		
Peak-hour factor, PHF	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. Flow (vph)	0	0	0	369	38	420	5	997	180	259	1144	2	
RTOR Reduction (vph)	0	0	0	0	0	210	0	10	0	0	0	0	
Lane Group Flow (vph)	0	0	0	203	204	210	5	1167	0	259	1146	0	
Turn Type				Perm	NA	Perm	Prot	NA		Prot	NA		
Protected Phases		4			8		5	2		1	6		
Permitted Phases	4			8		8							
Actuated Green, G (s)				30.0	30.0	30.0	1.4	62.2		37.8	99.1		
Effective Green, g (s)				30.0	30.0	30.0	1.4	62.2		37.8	99.1		
Actuated g/C Ratio				0.21	0.21	0.21	0.01	0.43		0.26	0.68		
Clearance Time (s)				5.0	5.0	5.0	4.5	5.0		5.0	5.0		
Vehicle Extension (s)				3.0	3.0	3.0	3.0	3.0		3.0	3.0		
Lane Grp Cap (vph)				277	280	327	17	1483		894	2418		
v/s Ratio Prot							0.00	c0.34		c0.08	c0.32		
v/s Ratio Perm				c0.15	0.15	0.13							
v/c Ratio				0.73	0.73	0.64	0.29	0.79		0.29	0.47		
Uniform Delay, d1				53.8	53.7	52.6	71.3	35.7		42.9	10.7		
Progression Factor				1.00	1.00	1.00	1.00	1.00		0.93	2.17		
Incremental Delay, d2				10.2	9.6	4.3	9.6	2.9		0.8	0.6		
Delay (s)				63.9	63.3	56.9	80.9	38.6		40.5	24.0		
Level of Service				E	E	E	F	D		D	C		
Approach Delay (s)		0.0			60.2			38.8			27.0		
Approach LOS		A			E			D			C		
Intersection Summary													
HCM 2000 Control Delay			39.1		HCM 2000 Level of Service						D		
HCM 2000 Volume to Capacity ratio			0.68										
Actuated Cycle Length (s)			145.0		Sum of lost time (s)					15.0			
Intersection Capacity Utilization			67.6%		ICU Level of Service					C			
Analysis Period (min)			60										
c Critical Lane Group													

HCM Unsignalized Intersection Capacity Analysis

2: El Camino Real & 5th Street/Dwy























05/01/2023

													
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR	
Lane Configurations													
Traffic Volume (veh/h)	1	0	22	0	0	6	94	1168	3	46	1313	7	
Future Volume (Veh/h)	1	0	22	0	0	6	94	1168	3	46	1313	7	
Sign Control	Stop			Stop			Free			Free			
Grade	0%			0%			0%			0%			
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
Hourly flow rate (vph)	1	0	22	0	0	6	94	1168	3	46	1313	7	
Pedestrians													
Lane Width (ft)													
Walking Speed (ft/s)													
Percent Blockage													
Right turn flare (veh)													
Median type													
Median storage veh													
Upstream signal (ft)													
pX, platoon unblocked	0.86	0.86	0.77	0.86	0.86	0.81	0.77			0.81			
vC, conflicting volume	2186	2768	660	2128	2770	586	1320			1171			
vC1, stage 1 conf vol													
vC2, stage 2 conf vol													
vCu, unblocked vol	1095	1767	0	1027	1770	37	823			756			
tC, single (s)	7.5	6.5	6.9	7.5	6.5	6.9	4.1			4.1			
tC, 2 stage (s)													
tF (s)	3.5	4.0	3.3	3.5	4.0	3.3	2.2			2.2			
p0 queue free %	99	100	97	100	100	99	85			93			
cM capacity (veh/h)	121	57	837	133	56	837	619			693			
Direction, Lane #	EB 1	EB 2	WB 1	NB 1	NB 2	NB 3	SB 1	SB 2	SB 3				
Volume Total	1	22	6	94	779	392	46	875	445				
Volume Left	1	0	0	94	0	0	46	0	0				
Volume Right	0	22	6	0	0	3	0	0	7				
cSH	121	837	837	619	1700	1700	693	1700	1700				
Volume to Capacity	0.01	0.03	0.01	0.15	0.46	0.23	0.07	0.51	0.26				
Queue Length 95th (ft)	1	2	1	13	0	0	5	0	0				
Control Delay (s)	35.0	9.4	9.3	11.9	0.0	0.0	10.6	0.0	0.0				
Lane LOS	D	A	A	B			B						
Approach Delay (s)	10.5		9.3	0.9			0.4						
Approach LOS	B		A										
Intersection Summary													
Average Delay			0.7										
Intersection Capacity Utilization			55.1%	ICU Level of Service					B				
Analysis Period (min)			60										

HCM Signalized Intersection Capacity Analysis

4: El Camino Real & Hull Dr

05/01/2023






















												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	62	0	56	34	19	4	98	1178	50	14	1112	115
Future Volume (vph)	62	0	56	34	19	4	98	1178	50	14	1112	115
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.5	4.5		4.5	4.5	4.5	4.5		4.5	4.5	
Lane Util. Factor		1.00	1.00		1.00	1.00	1.00	0.95		1.00	0.91	
Frt		1.00	0.85		1.00	0.85	1.00	0.99		1.00	0.99	
Flt Protected		0.95	1.00		0.97	1.00	0.95	1.00		0.95	1.00	
Satd. Flow (prot)		1770	1583		1805	1583	1770	3518		1770	5014	
Flt Permitted		0.95	1.00		0.97	1.00	0.95	1.00		0.95	1.00	
Satd. Flow (perm)		1770	1583		1805	1583	1770	3518		1770	5014	
Peak-hour factor, PHF	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. Flow (vph)	62	0	56	34	19	4	98	1178	50	14	1112	115
RTOR Reduction (vph)	0	0	48	0	0	4	0	2	0	0	9	0
Lane Group Flow (vph)	0	62	8	0	53	0	98	1226	0	14	1218	0
Turn Type	Split	NA	Perm	Split	NA	Perm	Prot	NA		Prot	NA	
Protected Phases	4	4		8	8		5	2		1	6	
Permitted Phases			4			8						
Actuated Green, G (s)		11.5	11.5		4.3	4.3	11.5	47.1		1.4	37.0	
Effective Green, g (s)		11.5	11.5		4.3	4.3	11.5	47.1		1.4	37.0	
Actuated g/C Ratio		0.14	0.14		0.05	0.05	0.14	0.57		0.02	0.45	
Clearance Time (s)		4.5	4.5		4.5	4.5	4.5	4.5		4.5	4.5	
Vehicle Extension (s)		3.0	3.0		3.0	3.0	3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)		247	221		94	82	247	2013		30	2254	
v/s Ratio Prot		c0.04			c0.03		c0.06	c0.35		0.01	0.24	
v/s Ratio Perm			0.00			0.00						
v/c Ratio		0.25	0.04		0.56	0.00	0.40	0.61		0.47	0.54	
Uniform Delay, d1		31.6	30.6		38.1	37.0	32.2	11.6		40.1	16.5	
Progression Factor		1.00	1.00		1.00	1.00	1.00	1.00		1.00	1.00	
Incremental Delay, d2		0.5	0.1		7.7	0.0	1.1	0.5		11.4	0.3	
Delay (s)		32.1	30.7		45.8	37.0	33.3	12.1		51.5	16.7	
Level of Service		C	C		D	D	C	B		D	B	
Approach Delay (s)		31.4			45.2			13.7			17.1	
Approach LOS		C			D			B			B	
Intersection Summary												
HCM 2000 Control Delay			16.6		HCM 2000 Level of Service						B	
HCM 2000 Volume to Capacity ratio			0.55									
Actuated Cycle Length (s)			82.3		Sum of lost time (s)						18.0	
Intersection Capacity Utilization			59.7%		ICU Level of Service						B	
Analysis Period (min)			60									

c Critical Lane Group

HCM Signalized Intersection Capacity Analysis

5: El Camino Real & Holly St




















05/01/2023

													
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR	
Lane Configurations													
Traffic Volume (vph)	93	236	25	447	383	264	26	1093	341	173	993	77	
Future Volume (vph)	93	236	25	447	383	264	26	1093	341	173	993	77	
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	
Total Lost time (s)		5.0		5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0		
Lane Util. Factor		0.95		0.97	1.00	1.00	1.00	0.95	0.88	0.97	0.95		
Frt		0.99		1.00	1.00	0.85	1.00	1.00	0.85	1.00	0.99		
Flt Protected		0.99		0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00		
Satd. Flow (prot)		3456		3433	1863	1583	1770	3539	2787	3433	3501		
Flt Permitted		0.99		0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00		
Satd. Flow (perm)		3456		3433	1863	1583	1770	3539	2787	3433	3501		
Peak-hour factor, PHF	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. Flow (vph)	93	236	25	447	383	264	26	1093	341	173	993	77	
RTOR Reduction (vph)	0	5	0	0	0	192	0	0	240	0	4	0	
Lane Group Flow (vph)	0	349	0	447	383	72	26	1093	101	173	1066	0	
Turn Type	Split	NA		Split	NA	Perm	Prot	NA	Perm	Prot	NA		
Protected Phases	4	4		8	8		5	2		1	6		
Permitted Phases						8			2				
Actuated Green, G (s)		24.6		35.4	35.4	35.4	3.0	38.6	38.6	11.4	47.0		
Effective Green, g (s)		24.6		35.4	35.4	35.4	3.0	38.6	38.6	11.4	47.0		
Actuated g/C Ratio		0.19		0.27	0.27	0.27	0.02	0.30	0.30	0.09	0.36		
Clearance Time (s)		5.0		5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0		
Vehicle Extension (s)		3.0		3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0		
Lane Grp Cap (vph)		653		934	507	431	40	1050	827	301	1265		
v/s Ratio Prot		c0.10		0.13	c0.21		0.01	c0.31		0.05	c0.30		
v/s Ratio Perm						0.05			0.04				
v/c Ratio		0.53		0.48	0.76	0.17	0.65	1.04	0.12	0.57	0.84		
Uniform Delay, d1		47.5		39.6	43.3	36.1	63.0	45.7	33.3	57.0	38.1		
Progression Factor		1.00		0.77	0.81	3.12	1.00	1.00	1.00	1.00	1.00		
Incremental Delay, d2		0.8		1.1	7.0	0.5	36.3	104.5	0.1	2.7	5.5		
Delay (s)		48.4		31.7	42.2	113.2	99.3	150.2	33.4	59.6	43.6		
Level of Service		D		C	D	F	F	F	C	E	D		
Approach Delay (s)		48.4			55.1			122.0			45.9		
Approach LOS		D			E			F			D		
Intersection Summary													
HCM 2000 Control Delay			75.3		HCM 2000 Level of Service					E			
HCM 2000 Volume to Capacity ratio			0.83										
Actuated Cycle Length (s)			130.0		Sum of lost time (s)					20.0			
Intersection Capacity Utilization			82.0%		ICU Level of Service					D			
Analysis Period (min)			60										

c Critical Lane Group

HCM Unsignalized Intersection Capacity Analysis
52: El Camino Real & Spring Street

05/01/2023

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	5	0	13	0	0	0	68	1162	0	8	1252	15
Future Volume (Veh/h)	5	0	13	0	0	0	68	1162	0	8	1252	15
Sign Control		Stop			Stop			Free			Free	
Grade		0%			0%			0%			0%	
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Hourly flow rate (vph)	5	0	13	0	0	0	68	1162	0	8	1252	15
Pedestrians												
Lane Width (ft)												
Walking Speed (ft/s)												
Percent Blockage												
Right turn flare (veh)												
Median type												
								None			None	
Median storage (veh)												
Upstream signal (ft)												
								507				
pX, platoon unblocked	0.78	0.78		0.78	0.78	0.78				0.78		
vC, conflicting volume	1992	2574	425	1744	2581	581	1267			1162		
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	1706	2452	425	1387	2462	0	1267			639		
tC, single (s)	7.5	6.5	6.9	7.5	6.5	6.9	4.1			4.1		
tC, 2 stage (s)												
tF (s)	3.5	4.0	3.3	3.5	4.0	3.3	2.2			2.2		
p0 queue free %	88	100	98	100	100	100	88			99		
cM capacity (veh/h)	41	21	578	70	20	844	544			732		
Direction, Lane #	EB 1	WB 1	NB 1	NB 2	NB 3	SB 1	SB 2	SB 3	SB 4			
Volume Total	18	0	68	775	387	8	501	501	265			
Volume Left	5	0	68	0	0	8	0	0	0			
Volume Right	13	0	0	0	0	0	0	0	15			
cSH	125	1700	544	1700	1700	732	1700	1700	1700			
Volume to Capacity	0.14	0.00	0.12	0.46	0.23	0.01	0.29	0.29	0.16			
Queue Length 95th (ft)	12	0	11	0	0	1	0	0	0			
Control Delay (s)	38.6	0.0	12.6	0.0	0.0	10.0	0.0	0.0	0.0			
Lane LOS	E	A	B			A						
Approach Delay (s)	38.6	0.0	0.7			0.1						
Approach LOS	E	A										
Intersection Summary												
Average Delay			0.6									
Intersection Capacity Utilization			48.8%		ICU Level of Service				A			
Analysis Period (min)			60									

HCM Signalized Intersection Capacity Analysis

62: El Camino Real & Harbor Blvd (S)

05/01/2023



Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	84	18	28	1117	1391	94
Future Volume (vph)	84	18	28	1117	1391	94
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.5		4.5	4.5	4.5	
Lane Util. Factor	1.00		1.00	0.95	0.95	
Frt	0.98		1.00	1.00	0.99	
Flt Protected	0.96		0.95	1.00	1.00	
Satd. Flow (prot)	1746		1770	3539	3506	
Flt Permitted	0.96		0.95	1.00	1.00	
Satd. Flow (perm)	1746		1770	3539	3506	
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	84	18	28	1117	1391	94
RTOR Reduction (vph)	8	0	0	0	2	0
Lane Group Flow (vph)	94	0	28	1117	1483	0
Turn Type	Prot		Prot	NA	NA	
Protected Phases	4		5	2	6	
Permitted Phases						
Actuated Green, G (s)	7.3		2.6	50.1	43.0	
Effective Green, g (s)	7.3		2.6	50.1	43.0	
Actuated g/C Ratio	0.11		0.04	0.75	0.65	
Clearance Time (s)	4.5		4.5	4.5	4.5	
Vehicle Extension (s)	3.0		3.0	3.0	3.0	
Lane Grp Cap (vph)	191		69	2670	2270	
v/s Ratio Prot	c0.05		0.02	c0.32	c0.42	
v/s Ratio Perm						
v/c Ratio	0.49		0.41	0.42	0.65	
Uniform Delay, d1	27.8		31.1	2.9	7.1	
Progression Factor	1.00		1.00	1.00	1.00	
Incremental Delay, d2	2.0		3.9	0.1	0.7	
Delay (s)	29.8		35.1	3.0	7.8	
Level of Service	C		D	A	A	
Approach Delay (s)	29.8			3.8	7.8	
Approach LOS	C			A	A	

Intersection Summary
































HCM 2000 Control Delay	7.0	HCM 2000 Level of Service	A
HCM 2000 Volume to Capacity ratio	0.63		
Actuated Cycle Length (s)	66.4	Sum of lost time (s)	13.5
Intersection Capacity Utilization	54.7%	ICU Level of Service	A
Analysis Period (min)	60		

c Critical Lane Group

HCM Signalized Intersection Capacity Analysis

57: El Camino Real & Ralston Ave

05/01/2023

													
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR	
Lane Configurations	 	 		 	 			 		 	 	 	
Traffic Volume (vph)	231	619	46	227	590	402	60	810	144	249	716	127	
Future Volume (vph)	231	619	46	227	590	402	60	810	144	249	716	127	
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	
Total Lost time (s)	4.0	4.0		4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	
Lane Util. Factor	0.97	0.95		0.91	0.91	1.00	1.00	0.95	1.00	1.00	0.95	1.00	
Frpb, ped/bikes	1.00	1.00		1.00	1.00	0.92	1.00	1.00	0.97	1.00	1.00	0.95	
Flpb, ped/bikes	1.00	1.00		1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
Frt	1.00	0.99		1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85	
Flt Protected	0.95	1.00		0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00	
Satd. Flow (prot)	3433	3487		1610	3384	1451	1770	3539	1532	1770	3539	1502	
Flt Permitted	0.95	1.00		0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00	
Satd. Flow (perm)	3433	3487		1610	3384	1451	1770	3539	1532	1770	3539	1502	
Peak-hour factor, PHF	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	
Adj. Flow (vph)	233	625	46	229	596	406	61	818	145	252	723	128	
RTOR Reduction (vph)	0	4	0	0	0	288	0	0	72	0	0	65	
Lane Group Flow (vph)	233	667	0	206	619	118	61	818	73	252	723	63	
Confl. Peds. (#/hr)	52		38	38		52	33		14	14		33	
Confl. Bikes (#/hr)			1						5			2	
Turn Type	Split	NA		Split	NA	Perm	Prot	NA	Perm	Prot	NA	Perm	
Protected Phases	8	8		4	4		1	6		5	2		
Permitted Phases						4			6			2	
Actuated Green, G (s)	34.8	34.8		30.4	30.4	30.4	14.4	38.0	38.0	25.8	49.4	49.4	
Effective Green, g (s)	34.8	34.8		30.4	30.4	30.4	14.4	38.0	38.0	25.8	49.4	49.4	
Actuated g/C Ratio	0.24	0.24		0.21	0.21	0.21	0.10	0.26	0.26	0.18	0.34	0.34	
Clearance Time (s)	4.0	4.0		4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	
Vehicle Extension (s)	3.0	3.0		3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	
Lane Grp Cap (vph)	823	836		337	709	304	175	927	401	314	1205	511	
v/s Ratio Prot	0.07	c0.19		0.13	c0.18		0.03	c0.23		c0.14	0.20		
v/s Ratio Perm						0.08			0.05			0.04	
v/c Ratio	0.28	0.80		0.61	0.87	0.39	0.35	0.88	0.18	0.80	0.60	0.12	
Uniform Delay, d1	44.9	51.8		51.9	55.4	49.3	60.9	51.4	41.4	57.2	39.6	32.9	
Progression Factor	1.00	1.00		0.54	0.57	1.22	1.00	1.00	1.00	1.00	1.00	1.00	
Incremental Delay, d2	0.9	7.8		2.7	9.6	0.7	1.2	11.9	1.0	19.2	2.2	0.5	
Delay (s)	45.8	59.6		30.8	41.2	61.0	62.1	63.3	42.4	76.3	41.8	33.4	
Level of Service	D	E		C	D	E	E	E	D	E	D	C	
Approach Delay (s)		56.1			46.0			60.2			48.7		
Approach LOS		E			D			E			D		
Intersection Summary													
HCM 2000 Control Delay			52.3									HCM 2000 Level of Service	D
HCM 2000 Volume to Capacity ratio			0.84										
Actuated Cycle Length (s)			145.0									Sum of lost time (s)	16.0
Intersection Capacity Utilization			108.6%									ICU Level of Service	G
Analysis Period (min)			15										

c Critical Lane Group

HCM Signalized Intersection Capacity Analysis

1: El Camino Real & Dwy/Harbor Blvd (N)

05/01/2023



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations				↖	↖	↖	↖	↕		↗	↗	↗
Traffic Volume (vph)	0	0	0	117	1	170	10	938	274	645	979	3
Future Volume (vph)	0	0	0	117	1	170	10	938	274	645	979	3
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)				5.0	5.0	5.0	4.5	5.0		5.0	5.0	
Lane Util. Factor				0.95	0.95	1.00	1.00	0.95		0.97	0.95	
Frt				1.00	1.00	0.85	1.00	0.97		1.00	1.00	
Flt Protected				0.95	0.95	1.00	0.95	1.00		0.95	1.00	
Satd. Flow (prot)				1681	1687	1583	1770	3419		3433	3538	
Flt Permitted				0.95	0.95	1.00	0.95	1.00		0.95	1.00	
Satd. Flow (perm)				1681	1687	1583	1770	3419		3433	3538	
Peak-hour factor, PHF	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. Flow (vph)	0	0	0	117	1	170	10	938	274	645	979	3
RTOR Reduction (vph)	0	0	0	0	0	151	0	20	0	0	0	0
Lane Group Flow (vph)	0	0	0	58	60	19	10	1192	0	645	982	0
Turn Type				Perm	NA	Perm	Prot	NA		Prot	NA	
Protected Phases					8		5	2		1	6	
Permitted Phases				8		8						
Actuated Green, G (s)				14.4	14.4	14.4	1.0	52.0		48.6	100.1	
Effective Green, g (s)				14.4	14.4	14.4	1.0	52.0		48.6	100.1	
Actuated g/C Ratio				0.11	0.11	0.11	0.01	0.40		0.37	0.77	
Clearance Time (s)				5.0	5.0	5.0	4.5	5.0		5.0	5.0	
Vehicle Extension (s)				3.0	3.0	3.0	3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)				186	186	175	13	1367		1283	2724	
v/s Ratio Prot							0.01	c0.35		c0.19	0.28	
v/s Ratio Perm				0.03	0.04	0.01						
v/c Ratio				0.31	0.32	0.11	0.77	0.87		0.50	0.36	
Uniform Delay, d1				53.2	53.3	52.0	64.4	35.9		31.4	4.8	
Progression Factor				1.00	1.00	1.00	1.00	1.00		1.00	1.00	
Incremental Delay, d2				1.0	1.0	0.3	195.8	6.9		1.4	0.4	
Delay (s)				54.2	54.3	52.3	260.1	42.8		32.8	5.1	
Level of Service				D	D	D	F	D		C	A	
Approach Delay (s)		0.0			53.1			44.6			16.1	
Approach LOS		A			D			D			B	

Intersection Summary





















HCM 2000 Control Delay	30.6	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.65		
Actuated Cycle Length (s)	130.0	Sum of lost time (s)	15.0
Intersection Capacity Utilization	69.7%	ICU Level of Service	C
Analysis Period (min)	60		

c Critical Lane Group

HCM Unsignalized Intersection Capacity Analysis

2: El Camino Real & 5th Street/Dwy























05/01/2023

													
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR	
Lane Configurations													
Traffic Volume (veh/h)	0	0	31	1	0	4	33	1084	10	21	1045	7	
Future Volume (Veh/h)	0	0	31	1	0	4	33	1084	10	21	1045	7	
Sign Control	Stop			Stop			Free			Free			
Grade	0%			0%			0%			0%			
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
Hourly flow rate (vph)	0	0	31	1	0	4	33	1084	10	21	1045	7	
Pedestrians													
Lane Width (ft)													
Walking Speed (ft/s)													
Percent Blockage													
Right turn flare (veh)													
Median type													
None													
Median storage (veh)													
Upstream signal (ft)													
682													
pX, platoon unblocked	0.81	0.81	0.81	0.81	0.81		0.81						
vC, conflicting volume	1702	2250	526	1750	2249	547	1052			1094			
vC1, stage 1 conf vol													
vC2, stage 2 conf vol													
vCu, unblocked vol	1402	2077	0	1461	2075	547	600			1094			
tC, single (s)	7.5	6.5	6.9	7.5	6.5	6.9	4.1			4.1			
tC, 2 stage (s)													
tF (s)	3.5	4.0	3.3	3.5	4.0	3.3	2.2			2.2			
p0 queue free %	100	100	96	98	100	99	96			97			
cM capacity (veh/h)	76	40	880	67	40	481	790			634			
Direction, Lane #	EB 1	EB 2	WB 1	NB 1	NB 2	NB 3	SB 1	SB 2	SB 3				
Volume Total	0	31	5	33	723	371	21	697	355				
Volume Left	0	0	1	33	0	0	21	0	0				
Volume Right	0	31	4	0	0	10	0	0	7				
cSH	1700	880	214	790	1700	1700	634	1700	1700				
Volume to Capacity	0.00	0.04	0.02	0.04	0.43	0.22	0.03	0.41	0.21				
Queue Length 95th (ft)	0	3	2	3	0	0	3	0	0				
Control Delay (s)	0.0	9.2	22.2	9.8	0.0	0.0	10.9	0.0	0.0				
Lane LOS	A	A	C	A			B						
Approach Delay (s)	9.2		22.2	0.3			0.2						
Approach LOS	A		C										
Intersection Summary													
Average Delay			0.4										
Intersection Capacity Utilization			45.8%	ICU Level of Service					A				
Analysis Period (min)			60										

HCM Signalized Intersection Capacity Analysis

4: El Camino Real & Hull Dr

05/01/2023

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	120	2	113	10	0	0	61	913	16	8	1076	59
Future Volume (vph)	120	2	113	10	0	0	61	913	16	8	1076	59
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.5	4.5		4.5		4.5	4.5		4.5	4.5	
Lane Util. Factor		1.00	1.00		1.00		1.00	0.95		1.00	0.91	
Frt		1.00	0.85		1.00		1.00	1.00		1.00	0.99	
Flt Protected		0.95	1.00		0.95		0.95	1.00		0.95	1.00	
Satd. Flow (prot)		1775	1583		1770		1770	3530		1770	5046	
Flt Permitted		0.95	1.00		0.95		0.95	1.00		0.95	1.00	
Satd. Flow (perm)		1775	1583		1770		1770	3530		1770	5046	
Peak-hour factor, PHF	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. Flow (vph)	120	2	113	10	0	0	61	913	16	8	1076	59
RTOR Reduction (vph)	0	0	87	0	0	0	0	1	0	0	5	0
Lane Group Flow (vph)	0	122	26	0	10	0	61	928	0	8	1130	0
Turn Type	Split	NA	Perm	Split	NA	Perm	Prot	NA		Prot	NA	
Protected Phases	4	4		8	8		5	2		1	6	
Permitted Phases			4			8						
Actuated Green, G (s)		15.8	15.8		0.9		6.3	32.3		1.0	27.0	
Effective Green, g (s)		15.8	15.8		0.9		6.3	32.3		1.0	27.0	
Actuated g/C Ratio		0.23	0.23		0.01		0.09	0.47		0.01	0.40	
Clearance Time (s)		4.5	4.5		4.5		4.5	4.5		4.5	4.5	
Vehicle Extension (s)		3.0	3.0		3.0		3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)		412	367		23		163	1676		26	2003	
v/s Ratio Prot		c0.07			c0.01		c0.03	c0.26		0.00	0.22	
v/s Ratio Perm			0.02									
v/c Ratio		0.30	0.07		0.43		0.37	0.55		0.31	0.56	
Uniform Delay, d1		21.5	20.4		33.3		29.0	12.7		33.2	15.9	
Progression Factor		1.00	1.00		1.00		1.00	1.00		1.00	1.00	
Incremental Delay, d2		0.4	0.1		13.1		1.5	0.4		6.7	0.4	
Delay (s)		21.9	20.5		46.4		30.4	13.1		39.9	16.3	
Level of Service		C	C		D		C	B		D	B	
Approach Delay (s)		21.2			46.4			14.2			16.5	
Approach LOS		C			D			B			B	
Intersection Summary												
HCM 2000 Control Delay			16.1				HCM 2000 Level of Service				B	
HCM 2000 Volume to Capacity ratio			0.48									
Actuated Cycle Length (s)			68.0				Sum of lost time (s)				18.0	
Intersection Capacity Utilization			54.6%				ICU Level of Service				A	
Analysis Period (min)			60									

c Critical Lane Group

HCM Signalized Intersection Capacity Analysis

5: El Camino Real & Holly St

05/01/2023



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↔↔		↔↔	↑	↗	↖	↑↑	↗↗	↖↖	↕↕	
Traffic Volume (vph)	47	596	20	389	195	130	23	748	337	241	882	53
Future Volume (vph)	47	596	20	389	195	130	23	748	337	241	882	53
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		5.0		5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	
Lane Util. Factor		0.95		0.97	1.00	1.00	1.00	0.95	0.88	0.97	0.95	
Frt		1.00		1.00	1.00	0.85	1.00	1.00	0.85	1.00	0.99	
Flt Protected		1.00		0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	
Satd. Flow (prot)		3511		3433	1863	1583	1770	3539	2787	3433	3509	
Flt Permitted		1.00		0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	
Satd. Flow (perm)		3511		3433	1863	1583	1770	3539	2787	3433	3509	
Peak-hour factor, PHF	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. Flow (vph)	47	596	20	389	195	130	23	748	337	241	882	53
RTOR Reduction (vph)	0	2	0	0	0	99	0	0	244	0	3	0
Lane Group Flow (vph)	0	661	0	389	195	31	23	748	93	241	932	0
Turn Type	Split	NA		Split	NA	Perm	Prot	NA	Perm	Prot	NA	
Protected Phases	4	4		8	8		5	2		1	6	
Permitted Phases						8			2			
Actuated Green, G (s)		29.0		31.0	31.0	31.0	4.9	35.8	35.8	14.2	45.1	
Effective Green, g (s)		29.0		31.0	31.0	31.0	4.9	35.8	35.8	14.2	45.1	
Actuated g/C Ratio		0.22		0.24	0.24	0.24	0.04	0.28	0.28	0.11	0.35	
Clearance Time (s)		5.0		5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	
Vehicle Extension (s)		3.0		3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	
Lane Grp Cap (vph)		783		818	444	377	66	974	767	374	1217	
v/s Ratio Prot		c0.19		c0.11	0.10		0.01	0.21		c0.07	c0.27	
v/s Ratio Perm						0.02			0.03			
v/c Ratio		0.84		0.48	0.44	0.08	0.35	0.77	0.12	0.64	0.77	
Uniform Delay, d1		48.3		42.5	42.1	38.5	61.0	43.3	35.3	55.5	37.7	
Progression Factor		1.00		0.60	0.59	1.89	1.00	1.00	1.00	1.00	1.00	
Incremental Delay, d2		9.0		1.6	2.5	0.3	3.2	3.8	0.1	3.8	3.0	
Delay (s)		57.4		26.9	27.3	73.2	64.2	47.1	35.4	59.3	40.7	
Level of Service		E		C	C	E	E	D	D	E	D	
Approach Delay (s)		57.4			35.4			43.9			44.6	
Approach LOS		E			D			D			D	

Intersection Summary

HCM 2000 Control Delay	44.9	HCM 2000 Level of Service	D
HCM 2000 Volume to Capacity ratio	0.71		
Actuated Cycle Length (s)	130.0	Sum of lost time (s)	20.0
Intersection Capacity Utilization	76.5%	ICU Level of Service	D
Analysis Period (min)	60		

c Critical Lane Group

HCM Unsignalized Intersection Capacity Analysis

52: El Camino Real & Spring Street

05/01/2023



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕		↗	↕		↗	↕	↕
Traffic Volume (veh/h)	26	0	11	35	0	30	19	993	5	19	1129	4
Future Volume (Veh/h)	26	0	11	35	0	30	19	993	5	19	1129	4
Sign Control		Stop			Stop			Free			Free	
Grade		0%			0%			0%			0%	
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Hourly flow rate (vph)	26	0	11	35	0	30	19	993	5	19	1129	4
Pedestrians												
Lane Width (ft)												
Walking Speed (ft/s)												
Percent Blockage												
Right turn flare (veh)												
Median type												
Median storage veh												
Upstream signal (ft)												
pX, platoon unblocked	0.82	0.82		0.82	0.82	0.82		508			0.82	
vC, conflicting volume	1734	2205	378	1459	2204	499	1133			998		
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	1456	2031	378	1121	2030	0	1133			559		
tC, single (s)	7.5	6.5	6.9	7.5	6.5	6.9	4.1			4.1		
tC, 2 stage (s)												
tF (s)	3.5	4.0	3.3	3.5	4.0	3.3	2.2			2.2		
p0 queue free %	62	100	98	72	100	97	97			98		
cM capacity (veh/h)	69	44	619	124	44	889	612			827		
Direction, Lane #	EB 1	WB 1	NB 1	NB 2	NB 3	SB 1	SB 2	SB 3	SB 4			
Volume Total	37	65	19	662	336	19	452	452	230			
Volume Left	26	35	19	0	0	19	0	0	0			
Volume Right	11	30	0	0	5	0	0	0	4			
cSH	94	206	612	1700	1700	827	1700	1700	1700			
Volume to Capacity	0.39	0.32	0.03	0.39	0.20	0.02	0.27	0.27	0.14			
Queue Length 95th (ft)	46	34	2	0	0	2	0	0	0			
Control Delay (s)	67.7	30.4	11.1	0.0	0.0	9.5	0.0	0.0	0.0			
Lane LOS	F	D	B			A						
Approach Delay (s)	67.7	30.4	0.2			0.2						
Approach LOS	F	D										
Intersection Summary												
Average Delay			2.1									
Intersection Capacity Utilization			38.3%		ICU Level of Service				A			
Analysis Period (min)			60									

HCM Signalized Intersection Capacity Analysis

62: El Camino Real & Harbor Blvd (N)

05/01/2023



Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	112	18	20	1070	1033	55
Future Volume (vph)	112	18	20	1070	1033	55
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.5		4.5	4.5	4.5	
Lane Util. Factor	1.00		1.00	0.95	0.95	
Frt	0.98		1.00	1.00	0.99	
Flt Protected	0.96		0.95	1.00	1.00	
Satd. Flow (prot)	1752		1770	3539	3512	
Flt Permitted	0.96		0.95	1.00	1.00	
Satd. Flow (perm)	1752		1770	3539	3512	
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	112	18	20	1070	1033	55
RTOR Reduction (vph)	6	0	0	0	2	0
Lane Group Flow (vph)	124	0	20	1070	1086	0
Turn Type	Perm		Prot	NA	NA	
Protected Phases			5	2	6	
Permitted Phases	4					
Actuated Green, G (s)	10.2		1.0	33.7	28.2	
Effective Green, g (s)	10.2		1.0	33.7	28.2	
Actuated g/C Ratio	0.19		0.02	0.64	0.53	
Clearance Time (s)	4.5		4.5	4.5	4.5	
Vehicle Extension (s)	3.0		3.0	3.0	3.0	
Lane Grp Cap (vph)	337		33	2254	1872	
v/s Ratio Prot			0.01	c0.30	c0.31	
v/s Ratio Perm	c0.07					
v/c Ratio	0.37		0.61	0.47	0.58	
Uniform Delay, d1	18.6		25.8	5.0	8.3	
Progression Factor	1.00		1.00	1.00	1.00	
Incremental Delay, d2	0.7		30.6	0.2	0.5	
Delay (s)	19.2		56.3	5.2	8.8	
Level of Service	B		E	A	A	
Approach Delay (s)	19.2			6.1	8.8	
Approach LOS	B			A	A	

Intersection Summary































HCM 2000 Control Delay	8.1	HCM 2000 Level of Service	A
HCM 2000 Volume to Capacity ratio	0.55		
Actuated Cycle Length (s)	52.9	Sum of lost time (s)	13.5
Intersection Capacity Utilization	45.1%	ICU Level of Service	A
Analysis Period (min)	60		

c Critical Lane Group

HCM Signalized Intersection Capacity Analysis

57: El Camino Real & Ralston Ave





















05/01/2023

													
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR	
Lane Configurations	 	 		 	 			 		 	 		
Traffic Volume (vph)	107	763	16	193	659	183	103	531	194	317	749	78	
Future Volume (vph)	107	763	16	193	659	183	103	531	194	317	749	78	
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	
Total Lost time (s)	4.0	4.0		4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	
Lane Util. Factor	0.97	0.95		0.91	0.91	1.00	1.00	0.95	1.00	1.00	0.95	1.00	
Frt	1.00	1.00		1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85	
Flt Protected	0.95	1.00		0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00	
Satd. Flow (prot)	3400	3494		1595	3352	1568	1752	3505	1568	1752	3505	1568	
Flt Permitted	0.95	1.00		0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00	
Satd. Flow (perm)	3400	3494		1595	3352	1568	1752	3505	1568	1752	3505	1568	
Peak-hour factor, PHF	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	
Adj. Flow (vph)	110	787	16	199	679	189	106	547	200	327	772	80	
RTOR Reduction (vph)	0	1	0	0	0	134	0	0	141	0	0	45	
Lane Group Flow (vph)	110	802	0	179	699	55	106	547	59	327	772	35	
Heavy Vehicles (%)	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%	
Turn Type	Split	NA		Split	NA	Perm	Prot	NA	Perm	Prot	NA	Perm	
Protected Phases	8	8		4	4		1	6		5	2		
Permitted Phases						4			6			2	
Actuated Green, G (s)	33.0	33.0		31.0	31.0	31.0	16.0	31.9	31.9	33.1	49.0	49.0	
Effective Green, g (s)	33.0	33.0		31.0	31.0	31.0	16.0	31.9	31.9	33.1	49.0	49.0	
Actuated g/C Ratio	0.23	0.23		0.21	0.21	0.21	0.11	0.22	0.22	0.23	0.34	0.34	
Clearance Time (s)	4.0	4.0		4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	
Vehicle Extension (s)	3.0	3.0		3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	
Lane Grp Cap (vph)	773	795		341	716	335	193	771	344	399	1184	529	
v/s Ratio Prot	0.03	c0.23		0.11	c0.21		0.06	c0.16		c0.19	0.22		
v/s Ratio Perm						0.03			0.04			0.02	
v/c Ratio	0.14	1.01		0.52	0.98	0.16	0.55	0.71	0.17	0.82	0.65	0.07	
Uniform Delay, d1	44.7	56.0		50.5	56.6	46.4	61.1	52.3	45.8	53.1	40.8	32.5	
Progression Factor	1.00	1.00		0.31	0.37	0.30	1.00	1.00	1.00	1.00	1.00	1.00	
Incremental Delay, d2	0.4	34.2		4.0	22.8	0.7	10.8	3.0	0.2	17.0	2.8	0.2	
Delay (s)	45.1	90.2		19.5	44.0	14.5	71.9	55.3	46.1	70.1	43.6	32.7	
Level of Service	D	F		B	D	B	E	E	D	E	D	C	
Approach Delay (s)		84.7			34.7			55.2			50.2		
Approach LOS		F			C			E			D		
Intersection Summary													
HCM 2000 Control Delay			55.0									HCM 2000 Level of Service	D
HCM 2000 Volume to Capacity ratio			0.88										
Actuated Cycle Length (s)			145.0									Sum of lost time (s)	16.0
Intersection Capacity Utilization			105.9%									ICU Level of Service	G
Analysis Period (min)			15										
c Critical Lane Group													

HCM Signalized Intersection Capacity Analysis

1: El Camino Real & dwy/Harbor Blvd (N)

05/01/2023





















													
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR	
Lane Configurations													
Traffic Volume (vph)	0	0	0	380	38	420	5	1010	179	259	1158	2	
Future Volume (vph)	0	0	0	380	38	420	5	1010	179	259	1158	2	
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	
Total Lost time (s)				5.0	5.0	5.0	4.5	5.0		5.0	5.0		
Lane Util. Factor				0.95	0.95	1.00	1.00	0.95		0.97	0.95		
Frt				1.00	1.00	0.85	1.00	0.98		1.00	1.00		
Flt Protected				0.95	0.96	1.00	0.95	1.00		0.95	1.00		
Satd. Flow (prot)				1681	1700	1583	1770	3459		3433	3538		
Flt Permitted				0.76	0.76	1.00	0.95	1.00		0.95	1.00		
Satd. Flow (perm)				1340	1353	1583	1770	3459		3433	3538		
Peak-hour factor, PHF	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. Flow (vph)	0	0	0	380	38	420	5	1010	179	259	1158	2	
RTOR Reduction (vph)	0	0	0	0	0	207	0	10	0	0	0	0	
Lane Group Flow (vph)	0	0	0	209	209	213	5	1179	0	259	1160	0	
Turn Type				Perm	NA	Perm	Prot	NA		Prot	NA		
Protected Phases		4			8		5	2		1	6		
Permitted Phases	4			8		8							
Actuated Green, G (s)				30.6	30.6	30.6	1.4	62.6		36.8	98.5		
Effective Green, g (s)				30.6	30.6	30.6	1.4	62.6		36.8	98.5		
Actuated g/C Ratio				0.21	0.21	0.21	0.01	0.43		0.25	0.68		
Clearance Time (s)				5.0	5.0	5.0	4.5	5.0		5.0	5.0		
Vehicle Extension (s)				3.0	3.0	3.0	3.0	3.0		3.0	3.0		
Lane Grp Cap (vph)				282	285	334	17	1493		871	2403		
v/s Ratio Prot							0.00	c0.34		c0.08	c0.33		
v/s Ratio Perm				c0.16	0.15	0.13							
v/c Ratio				0.74	0.73	0.64	0.29	0.79		0.30	0.48		
Uniform Delay, d1				53.5	53.4	52.1	71.3	35.5		43.7	11.1		
Progression Factor				1.00	1.00	1.00	1.00	1.00		0.93	2.16		
Incremental Delay, d2				10.6	9.9	4.0	9.6	2.9		0.8	0.6		
Delay (s)				64.1	63.3	56.1	80.9	38.4		41.5	24.6		
Level of Service				E	E	E	F	D		D	C		
Approach Delay (s)		0.0			59.9			38.6			27.7		
Approach LOS		A			E			D			C		
Intersection Summary													
HCM 2000 Control Delay			39.3		HCM 2000 Level of Service						D		
HCM 2000 Volume to Capacity ratio			0.69										
Actuated Cycle Length (s)			145.0		Sum of lost time (s)					15.0			
Intersection Capacity Utilization			68.0%		ICU Level of Service					C			
Analysis Period (min)			60										

c Critical Lane Group

HCM Unsignalized Intersection Capacity Analysis

2: El Camino Real & 5th Street/Dwy

05/01/2023

													
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR	
Lane Configurations													
Traffic Volume (veh/h)	1	0	21	0	0	6	88	1180	3	46	1337	7	
Future Volume (Veh/h)	1	0	21	0	0	6	88	1180	3	46	1337	7	
Sign Control	Stop			Stop			Free			Free			
Grade	0%			0%			0%			0%			
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
Hourly flow rate (vph)	1	0	21	0	0	6	88	1180	3	46	1337	7	
Pedestrians													
Lane Width (ft)													
Walking Speed (ft/s)													
Percent Blockage													
Right turn flare (veh)													
Median type													
Median storage veh													
Upstream signal (ft)													
pX, platoon unblocked	0.85	0.85	0.76	0.85	0.85	0.81	0.76			0.81			
vC, conflicting volume	2204	2792	672	2139	2794	592	1344			1183			
vC1, stage 1 conf vol													
vC2, stage 2 conf vol													
vCu, unblocked vol	1083	1771	0	1007	1774	39	821			766			
tC, single (s)	7.5	6.5	6.9	7.5	6.5	6.9	4.1			4.1			
tC, 2 stage (s)													
tF (s)	3.5	4.0	3.3	3.5	4.0	3.3	2.2			2.2			
p0 queue free %	99	100	97	100	100	99	86			93			
cM capacity (veh/h)	123	56	824	137	56	833	611			686			
Direction, Lane #	EB 1	EB 2	WB 1	NB 1	NB 2	NB 3	SB 1	SB 2	SB 3				
Volume Total	1	21	6	88	787	396	46	891	453				
Volume Left	1	0	0	88	0	0	46	0	0				
Volume Right	0	21	6	0	0	3	0	0	7				
cSH	123	824	833	611	1700	1700	686	1700	1700				
Volume to Capacity	0.01	0.03	0.01	0.14	0.46	0.23	0.07	0.52	0.27				
Queue Length 95th (ft)	1	2	1	13	0	0	5	0	0				
Control Delay (s)	34.6	9.5	9.4	11.9	0.0	0.0	10.6	0.0	0.0				
Lane LOS	D	A	A	B			B						
Approach Delay (s)	10.6		9.4	0.8			0.4						
Approach LOS	B		A										
Intersection Summary													
Average Delay			0.7										
Intersection Capacity Utilization			55.4%	ICU Level of Service					B				
Analysis Period (min)			60										

HCM Signalized Intersection Capacity Analysis

4: El Camino Real & Hull Dr

05/01/2023



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↖	↗		↖	↗	↖	↕		↖	↗	↘
Traffic Volume (vph)	60	0	56	30	14	4	98	1203	50	14	1130	116
Future Volume (vph)	60	0	56	30	14	4	98	1203	50	14	1130	116
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.5	4.5		4.5	4.5	4.5	4.5		4.5	4.5	
Lane Util. Factor		1.00	1.00		1.00	1.00	1.00	0.95		1.00	0.91	
Frt		1.00	0.85		1.00	0.85	1.00	0.99		1.00	0.99	
Flt Protected		0.95	1.00		0.97	1.00	0.95	1.00		0.95	1.00	
Satd. Flow (prot)		1770	1583		1801	1583	1770	3518		1770	5014	
Flt Permitted		0.95	1.00		0.97	1.00	0.95	1.00		0.95	1.00	
Satd. Flow (perm)		1770	1583		1801	1583	1770	3518		1770	5014	
Peak-hour factor, PHF	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. Flow (vph)	60	0	56	30	14	4	98	1203	50	14	1130	116
RTOR Reduction (vph)	0	0	48	0	0	4	0	2	0	0	9	0
Lane Group Flow (vph)	0	60	8	0	44	0	98	1251	0	14	1237	0
Turn Type	Split	NA	Perm	Split	NA	Perm	Prot	NA		Prot	NA	
Protected Phases	4	4		8	8		5	2		1	6	
Permitted Phases			4			8						
Actuated Green, G (s)		11.5	11.5		4.2	4.2	11.7	48.2		1.4	37.9	
Effective Green, g (s)		11.5	11.5		4.2	4.2	11.7	48.2		1.4	37.9	
Actuated g/C Ratio		0.14	0.14		0.05	0.05	0.14	0.58		0.02	0.45	
Clearance Time (s)		4.5	4.5		4.5	4.5	4.5	4.5		4.5	4.5	
Vehicle Extension (s)		3.0	3.0		3.0	3.0	3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)		244	218		90	79	248	2035		29	2281	
v/s Ratio Prot		c0.03			c0.02		c0.06	c0.36		0.01	0.25	
v/s Ratio Perm			0.00			0.00						
v/c Ratio		0.25	0.04		0.49	0.00	0.40	0.61		0.48	0.54	
Uniform Delay, d1		32.0	31.1		38.5	37.6	32.6	11.5		40.6	16.4	
Progression Factor		1.00	1.00		1.00	1.00	1.00	1.00		1.00	1.00	
Incremental Delay, d2		0.5	0.1		4.2	0.0	1.0	0.6		12.6	0.3	
Delay (s)		32.6	31.2		42.7	37.6	33.6	12.0		53.2	16.7	
Level of Service		C	C		D	D	C	B		D	B	
Approach Delay (s)		31.9			42.3			13.6			17.1	
Approach LOS		C			D			B			B	

Intersection Summary























HCM 2000 Control Delay	16.4	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.55		
Actuated Cycle Length (s)	83.3	Sum of lost time (s)	18.0
Intersection Capacity Utilization	60.3%	ICU Level of Service	B
Analysis Period (min)	60		

c Critical Lane Group

HCM Signalized Intersection Capacity Analysis

5: El Camino Real & Holly St




















05/01/2023

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	93	236	25	447	383	280	26	1102	341	181	999	77
Future Volume (vph)	93	236	25	447	383	280	26	1102	341	181	999	77
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		5.0		5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	
Lane Util. Factor		0.95		0.97	1.00	1.00	1.00	0.95	0.88	0.97	0.95	
Frt		0.99		1.00	1.00	0.85	1.00	1.00	0.85	1.00	0.99	
Flt Protected		0.99		0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	
Satd. Flow (prot)		3456		3433	1863	1583	1770	3539	2787	3433	3501	
Flt Permitted		0.99		0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	
Satd. Flow (perm)		3456		3433	1863	1583	1770	3539	2787	3433	3501	
Peak-hour factor, PHF	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. Flow (vph)	93	236	25	447	383	280	26	1102	341	181	999	77
RTOR Reduction (vph)	0	5	0	0	0	204	0	0	240	0	4	0
Lane Group Flow (vph)	0	349	0	447	383	76	26	1102	101	181	1072	0
Turn Type	Split	NA		Split	NA	Perm	Prot	NA	Perm	Prot	NA	
Protected Phases	4	4		8	8		5	2		1	6	
Permitted Phases						8			2			
Actuated Green, G (s)		24.6		35.4	35.4	35.4	3.0	38.4	38.4	11.6	47.0	
Effective Green, g (s)		24.6		35.4	35.4	35.4	3.0	38.4	38.4	11.6	47.0	
Actuated g/C Ratio		0.19		0.27	0.27	0.27	0.02	0.30	0.30	0.09	0.36	
Clearance Time (s)		5.0		5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	
Vehicle Extension (s)		3.0		3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	
Lane Grp Cap (vph)		653		934	507	431	40	1045	823	306	1265	
v/s Ratio Prot		c0.10		0.13	c0.21		0.01	c0.31		0.05	c0.31	
v/s Ratio Perm						0.05			0.04			
v/c Ratio		0.53		0.48	0.76	0.18	0.65	1.05	0.12	0.59	0.85	
Uniform Delay, d1		47.5		39.6	43.3	36.2	63.0	45.8	33.5	56.9	38.2	
Progression Factor		1.00		0.77	0.81	3.26	1.00	1.00	1.00	1.00	1.00	
Incremental Delay, d2		0.8		1.1	7.0	0.6	36.3	124.5	0.1	3.1	5.7	
Delay (s)		48.4		31.7	42.2	118.6	99.3	170.3	33.5	60.0	43.9	
Level of Service		D		C	D	F	F	F	C	E	D	
Approach Delay (s)		48.4			57.3			137.3			46.3	
Approach LOS		D			E			F			D	
Intersection Summary												
HCM 2000 Control Delay			81.3		HCM 2000 Level of Service				F			
HCM 2000 Volume to Capacity ratio			0.84									
Actuated Cycle Length (s)			130.0	Sum of lost time (s)					20.0			
Intersection Capacity Utilization			82.5%	ICU Level of Service				E				
Analysis Period (min)			60									

c Critical Lane Group

HCM Unsignalized Intersection Capacity Analysis
52: El Camino Real & Spring Street

05/01/2023

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	2	0	13	19	0	6	68	1162	23	31	1252	11
Future Volume (Veh/h)	2	0	13	19	0	6	68	1162	23	31	1252	11
Sign Control		Stop			Stop			Free			Free	
Grade		0%			0%			0%			0%	
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Hourly flow rate (vph)	2	0	13	19	0	6	68	1162	23	31	1252	11
Pedestrians												
Lane Width (ft)												
Walking Speed (ft/s)												
Percent Blockage												
Right turn flare (veh)												
Median type												
								None			None	
Median storage (veh)												
Upstream signal (ft)												
								507				
pX, platoon unblocked	0.77	0.77		0.77	0.77	0.77					0.77	
vC, conflicting volume	2042	2640	423	1802	2634	592	1263				1185	
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	1762	2535	423	1451	2528	0	1263				654	
tC, single (s)	7.5	6.5	6.9	7.5	6.5	6.9	4.1				4.1	
tC, 2 stage (s)												
tF (s)	3.5	4.0	3.3	3.5	4.0	3.3	2.2				2.2	
p0 queue free %	94	100	98	69	100	99	88				96	
cM capacity (veh/h)	36	17	580	61	18	839	546				719	
Direction, Lane #	EB 1	WB 1	NB 1	NB 2	NB 3	SB 1	SB 2	SB 3	SB 4			
Volume Total	15	25	68	775	410	31	501	501	261			
Volume Left	2	19	68	0	0	31	0	0	0			
Volume Right	13	6	0	0	23	0	0	0	11			
cSH	192	78	546	1700	1700	719	1700	1700	1700			
Volume to Capacity	0.08	0.32	0.12	0.46	0.24	0.04	0.29	0.29	0.15			
Queue Length 95th (ft)	6	34	11	0	0	3	0	0	0			
Control Delay (s)	25.3	72.5	12.5	0.0	0.0	10.2	0.0	0.0	0.0			
Lane LOS	D	F	B			B						
Approach Delay (s)	25.3	72.5	0.7			0.2						
Approach LOS	D	F										
Intersection Summary												
Average Delay			1.3									
Intersection Capacity Utilization			51.8%			ICU Level of Service				A		
Analysis Period (min)			60									

HCM Signalized Intersection Capacity Analysis
62: El Camino Real & Harbor Blvd (S)

05/01/2023



Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	84	18	28	1129	1416	94
Future Volume (vph)	84	18	28	1129	1416	94
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.5		4.5	4.5	4.5	
Lane Util. Factor	1.00		1.00	0.95	0.95	
Frt	0.98		1.00	1.00	0.99	
Flt Protected	0.96		0.95	1.00	1.00	
Satd. Flow (prot)	1746		1770	3539	3506	
Flt Permitted	0.96		0.95	1.00	1.00	
Satd. Flow (perm)	1746		1770	3539	3506	
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	84	18	28	1129	1416	94
RTOR Reduction (vph)	8	0	0	0	2	0
Lane Group Flow (vph)	94	0	28	1129	1508	0
Turn Type	Prot		Prot	NA	NA	
Protected Phases	4		5	2	6	
Permitted Phases						
Actuated Green, G (s)	7.3		2.6	50.1	43.0	
Effective Green, g (s)	7.3		2.6	50.1	43.0	
Actuated g/C Ratio	0.11		0.04	0.75	0.65	
Clearance Time (s)	4.5		4.5	4.5	4.5	
Vehicle Extension (s)	3.0		3.0	3.0	3.0	
Lane Grp Cap (vph)	191		69	2670	2270	
v/s Ratio Prot	c0.05		0.02	c0.32	c0.43	
v/s Ratio Perm						
v/c Ratio	0.49		0.41	0.42	0.66	
Uniform Delay, d1	27.8		31.1	2.9	7.2	
Progression Factor	1.00		1.00	1.00	1.00	
Incremental Delay, d2	2.0		3.9	0.1	0.7	
Delay (s)	29.8		35.1	3.0	8.0	
Level of Service	C		D	A	A	
Approach Delay (s)	29.8			3.8	8.0	
Approach LOS	C			A	A	
























Intersection Summary			
HCM 2000 Control Delay	7.0	HCM 2000 Level of Service	A
HCM 2000 Volume to Capacity ratio	0.64		
Actuated Cycle Length (s)	66.4	Sum of lost time (s)	13.5
Intersection Capacity Utilization	55.4%	ICU Level of Service	B
Analysis Period (min)	60		

c Critical Lane Group

HCM Signalized Intersection Capacity Analysis

57: El Camino Real & Ralston Ave

05/01/2023






















												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	231	619	46	232	590	402	60	814	153	249	725	127
Future Volume (vph)	231	619	46	232	590	402	60	814	153	249	725	127
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0		4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	0.97	0.95		0.91	0.91	1.00	1.00	0.95	1.00	1.00	0.95	1.00
Frbp, ped/bikes	1.00	1.00		1.00	1.00	0.92	1.00	1.00	0.97	1.00	1.00	0.95
Flpb, ped/bikes	1.00	1.00		1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt	1.00	0.99		1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	3433	3487		1610	3384	1451	1770	3539	1532	1770	3539	1502
Flt Permitted	0.95	1.00		0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (perm)	3433	3487		1610	3384	1451	1770	3539	1532	1770	3539	1502
Peak-hour factor, PHF	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99
Adj. Flow (vph)	233	625	46	234	596	406	61	822	155	252	732	128
RTOR Reduction (vph)	0	4	0	0	0	288	0	0	72	0	0	65
Lane Group Flow (vph)	233	667	0	211	619	118	61	822	83	252	732	63
Confl. Peds. (#/hr)	52		38	38		52	33		14	14		33
Confl. Bikes (#/hr)			1						5			2
Turn Type	Split	NA		Split	NA	Perm	Prot	NA	Perm	Prot	NA	Perm
Protected Phases	8	8		4	4		1	6		5	2	
Permitted Phases						4			6			2
Actuated Green, G (s)	34.8	34.8		30.4	30.4	30.4	14.4	38.0	38.0	25.8	49.4	49.4
Effective Green, g (s)	34.8	34.8		30.4	30.4	30.4	14.4	38.0	38.0	25.8	49.4	49.4
Actuated g/C Ratio	0.24	0.24		0.21	0.21	0.21	0.10	0.26	0.26	0.18	0.34	0.34
Clearance Time (s)	4.0	4.0		4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Vehicle Extension (s)	3.0	3.0		3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	823	836		337	709	304	175	927	401	314	1205	511
v/s Ratio Prot	0.07	c0.19		0.13	c0.18		0.03	c0.23		c0.14	0.21	
v/s Ratio Perm						0.08			0.05			0.04
v/c Ratio	0.28	0.80		0.63	0.87	0.39	0.35	0.89	0.21	0.80	0.61	0.12
Uniform Delay, d1	44.9	51.8		52.1	55.4	49.3	60.9	51.4	41.7	57.2	39.7	32.9
Progression Factor	1.00	1.00		0.54	0.57	1.22	1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	0.9	7.8		3.0	9.7	0.7	1.2	12.3	1.2	19.2	2.3	0.5
Delay (s)	45.8	59.6		31.3	41.3	60.7	62.1	63.7	42.9	76.3	42.0	33.4
Level of Service	D	E		C	D	E	E	E	D	E	D	C
Approach Delay (s)		56.1			46.0			60.5			48.8	
Approach LOS		E			D			E			D	
Intersection Summary												
HCM 2000 Control Delay			52.3				HCM 2000 Level of Service				D	
HCM 2000 Volume to Capacity ratio			0.84									
Actuated Cycle Length (s)			145.0			Sum of lost time (s)				16.0		
Intersection Capacity Utilization			108.6%			ICU Level of Service				G		
Analysis Period (min)			15									

c Critical Lane Group

HCM Signalized Intersection Capacity Analysis

1: El Camino Real & Dwy/Harbor Blvd (N)





















05/01/2023

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	0	0	0	120	1	175	10	924	268	648	1024	3
Future Volume (vph)	0	0	0	120	1	175	10	924	268	648	1024	3
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)				5.0	5.0	5.0	4.5	5.0		5.0	5.0	
Lane Util. Factor				0.95	0.95	1.00	1.00	0.95		0.97	0.95	
Frt				1.00	1.00	0.85	1.00	0.97		1.00	1.00	
Flt Protected				0.95	0.95	1.00	0.95	1.00		0.95	1.00	
Satd. Flow (prot)				1681	1687	1583	1770	3420		3433	3538	
Flt Permitted				0.95	0.95	1.00	0.95	1.00		0.95	1.00	
Satd. Flow (perm)				1681	1687	1583	1770	3420		3433	3538	
Peak-hour factor, PHF	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. Flow (vph)	0	0	0	120	1	175	10	924	268	648	1024	3
RTOR Reduction (vph)	0	0	0	0	0	155	0	20	0	0	0	0
Lane Group Flow (vph)	0	0	0	60	61	20	10	1172	0	648	1027	0
Turn Type				Perm	NA	Perm	Prot	NA		Prot	NA	
Protected Phases					8		5	2		1	6	
Permitted Phases				8		8						
Actuated Green, G (s)				14.5	14.5	14.5	1.0	51.8		48.7	100.0	
Effective Green, g (s)				14.5	14.5	14.5	1.0	51.8		48.7	100.0	
Actuated g/C Ratio				0.11	0.11	0.11	0.01	0.40		0.37	0.77	
Clearance Time (s)				5.0	5.0	5.0	4.5	5.0		5.0	5.0	
Vehicle Extension (s)				3.0	3.0	3.0	3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)				187	188	176	13	1362		1286	2721	
v/s Ratio Prot							0.01	c0.34		c0.19	0.29	
v/s Ratio Perm				0.04	0.04	0.01						
v/c Ratio				0.32	0.32	0.11	0.77	0.86		0.50	0.38	
Uniform Delay, d1				53.2	53.2	52.0	64.4	35.8		31.3	4.9	
Progression Factor				1.00	1.00	1.00	1.00	1.00		1.00	1.00	
Incremental Delay, d2				1.0	1.0	0.3	195.8	6.2		1.4	0.4	
Delay (s)				54.2	54.2	52.2	260.1	42.0		32.8	5.3	
Level of Service				D	D	D	F	D		C	A	
Approach Delay (s)		0.0			53.0			43.8			15.9	
Approach LOS		A			D			D			B	
Intersection Summary												
HCM 2000 Control Delay			29.9	HCM 2000 Level of Service				C				
HCM 2000 Volume to Capacity ratio			0.64									
Actuated Cycle Length (s)			130.0	Sum of lost time (s)				15.0				
Intersection Capacity Utilization			69.3%	ICU Level of Service				C				
Analysis Period (min)			60									
c Critical Lane Group												

HCM Unsignalized Intersection Capacity Analysis

2: El Camino Real & 5th Street/Dwy























05/01/2023

													
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR	
Lane Configurations													
Traffic Volume (veh/h)	0	0	32	1	0	4	35	1064	10	21	1093	7	
Future Volume (Veh/h)	0	0	32	1	0	4	35	1064	10	21	1093	7	
Sign Control	Stop			Stop			Free			Free			
Grade	0%			0%			0%			0%			
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
Hourly flow rate (vph)	0	0	32	1	0	4	35	1064	10	21	1093	7	
Pedestrians													
Lane Width (ft)													
Walking Speed (ft/s)													
Percent Blockage													
Right turn flare (veh)													
Median type													
Median storage veh													
Upstream signal (ft)													
pX, platoon unblocked	0.81	0.81	0.81	0.81	0.81		0.81						
vC, conflicting volume	1744	2282	550	1760	2281	537	1100			1074			
vC1, stage 1 conf vol													
vC2, stage 2 conf vol													
vCu, unblocked vol	1452	2115	0	1470	2113	537	657			1074			
tC, single (s)	7.5	6.5	6.9	7.5	6.5	6.9	4.1			4.1			
tC, 2 stage (s)													
tF (s)	3.5	4.0	3.3	3.5	4.0	3.3	2.2			2.2			
p0 queue free %	100	100	96	98	100	99	95			97			
cM capacity (veh/h)	69	37	879	65	38	488	751			645			
Direction, Lane #	EB 1	EB 2	WB 1	NB 1	NB 2	NB 3	SB 1	SB 2	SB 3				
Volume Total	0	32	5	35	709	365	21	729	371				
Volume Left	0	0	1	35	0	0	21	0	0				
Volume Right	0	32	4	0	0	10	0	0	7				
cSH	1700	879	212	751	1700	1700	645	1700	1700				
Volume to Capacity	0.00	0.04	0.02	0.05	0.42	0.21	0.03	0.43	0.22				
Queue Length 95th (ft)	0	3	2	4	0	0	3	0	0				
Control Delay (s)	0.0	9.2	22.4	10.0	0.0	0.0	10.8	0.0	0.0				
Lane LOS	A	A	C	B			B						
Approach Delay (s)	9.2		22.4	0.3			0.2						
Approach LOS	A		C										
Intersection Summary													
Average Delay			0.4										
Intersection Capacity Utilization			47.1%	ICU Level of Service					A				
Analysis Period (min)			60										

HCM Signalized Intersection Capacity Analysis

4: El Camino Real & Hull Dr

05/01/2023























												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	127	2	113	11	2	0	63	912	16	8	1089	58
Future Volume (vph)	127	2	113	11	2	0	63	912	16	8	1089	58
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.5	4.5		4.5		4.5	4.5		4.5	4.5	
Lane Util. Factor		1.00	1.00		1.00		1.00	0.95		1.00	0.91	
Frt		1.00	0.85		1.00		1.00	1.00		1.00	0.99	
Flt Protected		0.95	1.00		0.96		0.95	1.00		0.95	1.00	
Satd. Flow (prot)		1775	1583		1787		1770	3530		1770	5047	
Flt Permitted		0.95	1.00		0.96		0.95	1.00		0.95	1.00	
Satd. Flow (perm)		1775	1583		1787		1770	3530		1770	5047	
Peak-hour factor, PHF	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. Flow (vph)	127	2	113	11	2	0	63	912	16	8	1089	58
RTOR Reduction (vph)	0	0	87	0	0	0	0	1	0	0	5	0
Lane Group Flow (vph)	0	129	26	0	13	0	63	927	0	8	1142	0
Turn Type	Split	NA	Perm	Split	NA	Perm	Prot	NA		Prot	NA	
Protected Phases	4	4		8	8		5	2		1	6	
Permitted Phases			4			8						
Actuated Green, G (s)		16.1	16.1		0.9		6.4	33.4		1.1	28.1	
Effective Green, g (s)		16.1	16.1		0.9		6.4	33.4		1.1	28.1	
Actuated g/C Ratio		0.23	0.23		0.01		0.09	0.48		0.02	0.40	
Clearance Time (s)		4.5	4.5		4.5		4.5	4.5		4.5	4.5	
Vehicle Extension (s)		3.0	3.0		3.0		3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)		411	366		23		162	1696		28	2040	
v/s Ratio Prot		c0.07			c0.01		c0.04	c0.26		0.00	0.23	
v/s Ratio Perm			0.02									
v/c Ratio		0.31	0.07		0.57		0.39	0.55		0.29	0.56	
Uniform Delay, d1		22.1	20.9		34.1		29.7	12.7		33.8	15.9	
Progression Factor		1.00	1.00		1.00		1.00	1.00		1.00	1.00	
Incremental Delay, d2		0.4	0.1		30.9		1.6	0.4		5.6	0.3	
Delay (s)		22.6	20.9		65.0		31.3	13.1		39.4	16.3	
Level of Service		C	C		E		C	B		D	B	
Approach Delay (s)		21.8			65.0			14.2			16.4	
Approach LOS		C			E			B			B	
Intersection Summary												
HCM 2000 Control Delay			16.3				HCM 2000 Level of Service			B		
HCM 2000 Volume to Capacity ratio			0.49									
Actuated Cycle Length (s)			69.5				Sum of lost time (s)			18.0		
Intersection Capacity Utilization			54.9%				ICU Level of Service			A		
Analysis Period (min)			60									

c Critical Lane Group

HCM Signalized Intersection Capacity Analysis

5: El Camino Real & Holly St

05/01/2023

													
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR	
Lane Configurations													
Traffic Volume (vph)	47	596	20	401	195	128	23	752	401	227	910	53	
Future Volume (vph)	47	596	20	401	195	128	23	752	401	227	910	53	
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	
Total Lost time (s)		5.0		5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0		
Lane Util. Factor		0.95		0.97	1.00	1.00	1.00	0.95	0.88	0.97	0.95		
Frt		1.00		1.00	1.00	0.85	1.00	1.00	0.85	1.00	0.99		
Flt Protected		1.00		0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00		
Satd. Flow (prot)		3511		3433	1863	1583	1770	3539	2787	3433	3510		
Flt Permitted		1.00		0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00		
Satd. Flow (perm)		3511		3433	1863	1583	1770	3539	2787	3433	3510		
Peak-hour factor, PHF	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. Flow (vph)	47	596	20	401	195	128	23	752	401	227	910	53	
RTOR Reduction (vph)	0	2	0	0	0	98	0	0	289	0	3	0	
Lane Group Flow (vph)	0	661	0	401	195	30	23	752	112	227	960	0	
Turn Type	Split	NA		Split	NA	Perm	Prot	NA	Perm	Prot	NA		
Protected Phases	4	4		8	8		5	2		1	6		
Permitted Phases						8			2				
Actuated Green, G (s)		29.0		30.9	30.9	30.9	4.9	36.3	36.3	13.8	45.2		
Effective Green, g (s)		29.0		30.9	30.9	30.9	4.9	36.3	36.3	13.8	45.2		
Actuated g/C Ratio		0.22		0.24	0.24	0.24	0.04	0.28	0.28	0.11	0.35		
Clearance Time (s)		5.0		5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0		
Vehicle Extension (s)		3.0		3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0		
Lane Grp Cap (vph)		783		815	442	376	66	988	778	364	1220		
v/s Ratio Prot		c0.19		c0.12	0.10		0.01	0.21		c0.07	c0.27		
v/s Ratio Perm						0.02			0.04				
v/c Ratio		0.84		0.49	0.44	0.08	0.35	0.76	0.14	0.62	0.79		
Uniform Delay, d1		48.3		42.8	42.2	38.5	61.0	42.9	35.2	55.6	38.1		
Progression Factor		1.00		0.61	0.60	1.92	1.00	1.00	1.00	1.00	1.00		
Incremental Delay, d2		9.0		1.7	2.5	0.3	3.2	3.6	0.1	3.4	3.5		
Delay (s)		57.4		27.7	27.8	74.3	64.2	46.5	35.3	59.0	41.6		
Level of Service		E		C	C	E	E	D	D	E	D		
Approach Delay (s)		57.4			36.0			43.0			44.9		
Approach LOS		E			D			D			D		
Intersection Summary													
HCM 2000 Control Delay			44.8		HCM 2000 Level of Service					D			
HCM 2000 Volume to Capacity ratio			0.73										
Actuated Cycle Length (s)			130.0		Sum of lost time (s)					20.0			
Intersection Capacity Utilization			77.6%		ICU Level of Service					D			
Analysis Period (min)			60										

c Critical Lane Group

HCM Unsignalized Intersection Capacity Analysis

52: El Camino Real & Spring Street

05/01/2023



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕		↗	↕		↗	↕	↗
Traffic Volume (veh/h)	32	0	15	0	0	0	22	1001	0	13	1172	17
Future Volume (Veh/h)	32	0	15	0	0	0	22	1001	0	13	1172	17
Sign Control		Stop			Stop			Free			Free	
Grade		0%			0%			0%			0%	
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Hourly flow rate (vph)	32	0	15	0	0	0	22	1001	0	13	1172	17
Pedestrians												
Lane Width (ft)												
Walking Speed (ft/s)												
Percent Blockage												
Right turn flare (veh)												
Median type												
Median storage veh												
Upstream signal (ft)												
pX, platoon unblocked	0.82	0.82		0.82	0.82	0.82				0.82		
vC, conflicting volume	1751	2252	399	1477	2260	500	1189			1001		
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	1482	2090	399	1148	2100	0	1189			570		
tC, single (s)	7.5	6.5	6.9	7.5	6.5	6.9	4.1			4.1		
tC, 2 stage (s)												
tF (s)	3.5	4.0	3.3	3.5	4.0	3.3	2.2			2.2		
p0 queue free %	53	100	98	100	100	100	96			98		
cM capacity (veh/h)	69	40	600	118	40	892	583			821		
Direction, Lane #												
	EB 1	WB 1	NB 1	NB 2	NB 3	SB 1	SB 2	SB 3	SB 4			
Volume Total	47	0	22	667	334	13	469	469	251			
Volume Left	32	0	22	0	0	13	0	0	0			
Volume Right	15	0	0	0	0	0	0	0	17			
cSH	96	1700	583	1700	1700	821	1700	1700	1700			
Volume to Capacity	0.49	0.00	0.04	0.39	0.20	0.02	0.28	0.28	0.15			
Queue Length 95th (ft)	65	0	3	0	0	1	0	0	0			
Control Delay (s)	77.6	0.0	11.4	0.0	0.0	9.5	0.0	0.0	0.0			
Lane LOS	F	A	B			A						
Approach Delay (s)	77.6	0.0	0.2			0.1						
Approach LOS	F	A										
Intersection Summary												
Average Delay			1.8									
Intersection Capacity Utilization			37.7%		ICU Level of Service				A			
Analysis Period (min)			60									

HCM Signalized Intersection Capacity Analysis

62: El Camino Real & Harbor Blvd (N)

05/01/2023



Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	112	18	20	1050	1081	55
Future Volume (vph)	112	18	20	1050	1081	55
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.5		4.5	4.5	4.5	
Lane Util. Factor	1.00		1.00	0.95	0.95	
Frt	0.98		1.00	1.00	0.99	
Flt Protected	0.96		0.95	1.00	1.00	
Satd. Flow (prot)	1752		1770	3539	3514	
Flt Permitted	0.96		0.95	1.00	1.00	
Satd. Flow (perm)	1752		1770	3539	3514	
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	112	18	20	1050	1081	55
RTOR Reduction (vph)	6	0	0	0	2	0
Lane Group Flow (vph)	124	0	20	1050	1134	0
Turn Type	Perm		Prot	NA	NA	
Protected Phases			5	2	6	
Permitted Phases	4					
Actuated Green, G (s)	10.0		1.1	38.5	32.9	
Effective Green, g (s)	10.0		1.1	38.5	32.9	
Actuated g/C Ratio	0.17		0.02	0.67	0.57	
Clearance Time (s)	4.5		4.5	4.5	4.5	
Vehicle Extension (s)	3.0		3.0	3.0	3.0	
Lane Grp Cap (vph)	304		33	2369	2010	
v/s Ratio Prot			0.01	c0.30	c0.32	
v/s Ratio Perm	c0.07					
v/c Ratio	0.41		0.61	0.44	0.56	
Uniform Delay, d1	21.1		28.0	4.5	7.8	
Progression Factor	1.00		1.00	1.00	1.00	
Incremental Delay, d2	0.9		30.6	0.1	0.4	
Delay (s)	22.0		58.6	4.6	8.1	
Level of Service	C		E	A	A	
Approach Delay (s)	22.0			5.6	8.1	
Approach LOS	C			A	A	
























Intersection Summary

HCM 2000 Control Delay	7.8	HCM 2000 Level of Service	A
HCM 2000 Volume to Capacity ratio	0.55		
Actuated Cycle Length (s)	57.5	Sum of lost time (s)	13.5
Intersection Capacity Utilization	46.4%	ICU Level of Service	A
Analysis Period (min)	60		

c Critical Lane Group

HCM Signalized Intersection Capacity Analysis
57: El Camino Real & Ralston Ave






















05/01/2023

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	109	764	16	196	677	191	105	537	177	322	795	78
Future Volume (vph)	109	764	16	196	677	191	105	537	177	322	795	78
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0		4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	0.97	0.95		0.91	0.91	1.00	1.00	0.95	1.00	1.00	0.95	1.00
Frt	1.00	1.00		1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	3400	3494		1595	3353	1568	1752	3505	1568	1752	3505	1568
Flt Permitted	0.95	1.00		0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (perm)	3400	3494		1595	3353	1568	1752	3505	1568	1752	3505	1568
Peak-hour factor, PHF	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Adj. Flow (vph)	112	788	16	202	698	197	108	554	182	332	820	80
RTOR Reduction (vph)	0	1	0	0	0	136	0	0	126	0	0	46
Lane Group Flow (vph)	112	803	0	182	718	61	108	554	56	332	820	34
Heavy Vehicles (%)	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%
Turn Type	Split	NA		Split	NA	Perm	Prot	NA	Perm	Prot	NA	Perm
Protected Phases	8	8		4	4		1	6		5	2	
Permitted Phases						4			6			2
Actuated Green, G (s)	35.0	35.0		31.0	31.0	31.0	17.0	32.0	32.0	31.0	46.0	46.0
Effective Green, g (s)	35.0	35.0		31.0	31.0	31.0	17.0	32.0	32.0	31.0	46.0	46.0
Actuated g/C Ratio	0.24	0.24		0.21	0.21	0.21	0.12	0.22	0.22	0.21	0.32	0.32
Clearance Time (s)	4.0	4.0		4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Vehicle Extension (s)	3.0	3.0		3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	820	843		341	716	335	205	773	346	374	1111	497
v/s Ratio Prot	0.03	c0.23		0.11	c0.21		0.06	0.16		c0.19	c0.23	
v/s Ratio Perm						0.04			0.04			0.02
v/c Ratio	0.14	0.95		0.53	1.00	0.18	0.53	0.72	0.16	0.89	0.74	0.07
Uniform Delay, d1	43.1	54.2		50.6	57.0	46.6	60.2	52.3	45.7	55.3	44.1	34.5
Progression Factor	1.00	1.00		0.31	0.34	0.19	1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	0.3	21.5		3.6	26.7	0.7	9.4	3.2	0.2	25.3	4.4	0.3
Delay (s)	43.5	75.6		19.1	46.1	9.4	69.6	55.5	45.9	80.6	48.5	34.8
Level of Service	D	E		B	D	A	E	E	D	F	D	C
Approach Delay (s)		71.7			35.0			55.2			56.3	
Approach LOS		E			D			E			E	
Intersection Summary												
HCM 2000 Control Delay			53.8				HCM 2000 Level of Service			D		
HCM 2000 Volume to Capacity ratio			0.90									
Actuated Cycle Length (s)			145.0				Sum of lost time (s)			16.0		
Intersection Capacity Utilization			106.2%				ICU Level of Service			G		
Analysis Period (min)			15									
c Critical Lane Group												

HCM Signalized Intersection Capacity Analysis

1: El Camino Real & dwy/Harbor Blvd (N)





















05/01/2023

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	0	0	0	370	38	425	5	1042	186	264	1166	2
Future Volume (vph)	0	0	0	370	38	425	5	1042	186	264	1166	2
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)				5.0	5.0	5.0	4.5	5.0		5.0	5.0	
Lane Util. Factor				0.95	0.95	1.00	1.00	0.95		0.97	0.95	
Frt				1.00	1.00	0.85	1.00	0.98		1.00	1.00	
Flt Protected				0.95	0.96	1.00	0.95	1.00		0.95	1.00	
Satd. Flow (prot)				1681	1700	1583	1770	3459		3433	3538	
Flt Permitted				0.76	0.77	1.00	0.95	1.00		0.95	1.00	
Satd. Flow (perm)				1340	1354	1583	1770	3459		3433	3538	
Peak-hour factor, PHF	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. Flow (vph)	0	0	0	370	38	425	5	1042	186	264	1166	2
RTOR Reduction (vph)	0	0	0	0	0	205	0	10	0	0	0	0
Lane Group Flow (vph)	0	0	0	203	205	220	5	1218	0	264	1168	0
Turn Type				Perm	NA	Perm	Prot	NA		Prot	NA	
Protected Phases		4			8		5	2		1	6	
Permitted Phases	4			8		8						
Actuated Green, G (s)				30.1	30.1	30.1	1.4	63.9		36.0	99.0	
Effective Green, g (s)				30.1	30.1	30.1	1.4	63.9		36.0	99.0	
Actuated g/C Ratio				0.21	0.21	0.21	0.01	0.44		0.25	0.68	
Clearance Time (s)				5.0	5.0	5.0	4.5	5.0		5.0	5.0	
Vehicle Extension (s)				3.0	3.0	3.0	3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)				278	281	328	17	1524		852	2415	
v/s Ratio Prot							0.00	c0.35		c0.08	c0.33	
v/s Ratio Perm				c0.15	0.15	0.14						
v/c Ratio				0.73	0.73	0.67	0.29	0.80		0.31	0.48	
Uniform Delay, d1				53.7	53.6	52.9	71.3	35.0		44.4	10.9	
Progression Factor				1.00	1.00	1.00	1.00	1.00		0.93	2.17	
Incremental Delay, d2				10.0	9.6	5.4	9.6	3.1		0.9	0.6	
Delay (s)				63.7	63.3	58.3	80.9	38.1		42.1	24.3	
Level of Service				E	E	E	F	D		D	C	
Approach Delay (s)		0.0			60.8			38.3			27.6	
Approach LOS		A			E			D			C	
Intersection Summary												
HCM 2000 Control Delay			39.3		HCM 2000 Level of Service						D	
HCM 2000 Volume to Capacity ratio			0.69									
Actuated Cycle Length (s)			145.0		Sum of lost time (s)					15.0		
Intersection Capacity Utilization			69.4%		ICU Level of Service					C		
Analysis Period (min)			60									
c Critical Lane Group												

HCM Unsignalized Intersection Capacity Analysis

2: El Camino Real & 5th Street/Dwy























05/01/2023

													
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR	
Lane Configurations													
Traffic Volume (veh/h)	1	0	22	0	0	6	94	1219	3	46	1336	7	
Future Volume (Veh/h)	1	0	22	0	0	6	94	1219	3	46	1336	7	
Sign Control	Stop			Stop			Free			Free			
Grade	0%			0%			0%			0%			
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
Hourly flow rate (vph)	1	0	22	0	0	6	94	1219	3	46	1336	7	
Pedestrians													
Lane Width (ft)													
Walking Speed (ft/s)													
Percent Blockage													
Right turn flare (veh)													
Median type													
Median storage veh													
Upstream signal (ft)													
pX, platoon unblocked	0.86	0.86	0.76	0.86	0.86	0.80	0.76			0.80			
vC, conflicting volume	2235	2842	672	2190	2844	611	1343			1222			
vC1, stage 1 conf vol													
vC2, stage 2 conf vol													
vCu, unblocked vol	1074	1780	0	1022	1782	22	821			784			
tC, single (s)	7.5	6.5	6.9	7.5	6.5	6.9	4.1			4.1			
tC, 2 stage (s)													
tF (s)	3.5	4.0	3.3	3.5	4.0	3.3	2.2			2.2			
p0 queue free %	99	100	97	100	100	99	85			93			
cM capacity (veh/h)	124	55	825	133	55	842	611			666			
Direction, Lane #	EB 1	EB 2	WB 1	NB 1	NB 2	NB 3	SB 1	SB 2	SB 3				
Volume Total	1	22	6	94	813	409	46	891	452				
Volume Left	1	0	0	94	0	0	46	0	0				
Volume Right	0	22	6	0	0	3	0	0	7				
cSH	124	825	842	611	1700	1700	666	1700	1700				
Volume to Capacity	0.01	0.03	0.01	0.15	0.48	0.24	0.07	0.52	0.27				
Queue Length 95th (ft)	1	2	1	14	0	0	6	0	0				
Control Delay (s)	34.2	9.5	9.3	12.0	0.0	0.0	10.8	0.0	0.0				
Lane LOS	D	A	A	B			B						
Approach Delay (s)	10.6		9.3	0.9			0.4						
Approach LOS	B		A										
Intersection Summary													
Average Delay			0.7										
Intersection Capacity Utilization			55.7%	ICU Level of Service					B				
Analysis Period (min)			60										

HCM Signalized Intersection Capacity Analysis

4: El Camino Real & Hull Dr

05/01/2023























												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	67	0	56	34	19	4	100	1221	50	14	1128	115
Future Volume (vph)	67	0	56	34	19	4	100	1221	50	14	1128	115
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.5	4.5		4.5	4.5	4.5	4.5		4.5	4.5	
Lane Util. Factor		1.00	1.00		1.00	1.00	1.00	0.95		1.00	0.91	
Frt		1.00	0.85		1.00	0.85	1.00	0.99		1.00	0.99	
Flt Protected		0.95	1.00		0.97	1.00	0.95	1.00		0.95	1.00	
Satd. Flow (prot)		1770	1583		1805	1583	1770	3518		1770	5015	
Flt Permitted		0.95	1.00		0.97	1.00	0.95	1.00		0.95	1.00	
Satd. Flow (perm)		1770	1583		1805	1583	1770	3518		1770	5015	
Peak-hour factor, PHF	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. Flow (vph)	67	0	56	34	19	4	100	1221	50	14	1128	115
RTOR Reduction (vph)	0	0	48	0	0	4	0	2	0	0	9	0
Lane Group Flow (vph)	0	67	8	0	53	0	100	1269	0	14	1234	0
Turn Type	Split	NA	Perm	Split	NA	Perm	Prot	NA		Prot	NA	
Protected Phases	4	4		8	8		5	2		1	6	
Permitted Phases			4			8						
Actuated Green, G (s)		11.6	11.6		4.3	4.3	11.9	48.8		1.4	38.3	
Effective Green, g (s)		11.6	11.6		4.3	4.3	11.9	48.8		1.4	38.3	
Actuated g/C Ratio		0.14	0.14		0.05	0.05	0.14	0.58		0.02	0.46	
Clearance Time (s)		4.5	4.5		4.5	4.5	4.5	4.5		4.5	4.5	
Vehicle Extension (s)		3.0	3.0		3.0	3.0	3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)		244	218		92	80	250	2041		29	2283	
v/s Ratio Prot		c0.04			c0.03		c0.06	c0.36		0.01	0.25	
v/s Ratio Perm			0.00			0.00						
v/c Ratio		0.27	0.04		0.58	0.00	0.40	0.62		0.48	0.54	
Uniform Delay, d1		32.5	31.4		39.0	37.9	32.9	11.6		41.0	16.5	
Progression Factor		1.00	1.00		1.00	1.00	1.00	1.00		1.00	1.00	
Incremental Delay, d2		0.6	0.1		8.7	0.0	1.1	0.6		12.6	0.3	
Delay (s)		33.1	31.5		47.7	37.9	33.9	12.2		53.6	16.8	
Level of Service		C	C		D	D	C	B		D	B	
Approach Delay (s)		32.4			47.0			13.8			17.2	
Approach LOS		C			D			B			B	
Intersection Summary												
HCM 2000 Control Delay			16.8				HCM 2000 Level of Service				B	
HCM 2000 Volume to Capacity ratio			0.57									
Actuated Cycle Length (s)			84.1				Sum of lost time (s)				18.0	
Intersection Capacity Utilization			61.1%				ICU Level of Service				B	
Analysis Period (min)			60									

c Critical Lane Group

HCM Signalized Intersection Capacity Analysis

5: El Camino Real & Holly St




















05/01/2023

													
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR	
Lane Configurations													
Traffic Volume (vph)	93	236	25	505	383	270	26	1132	358	176	1006	77	
Future Volume (vph)	93	236	25	505	383	270	26	1132	358	176	1006	77	
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	
Total Lost time (s)		5.0		5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0		
Lane Util. Factor		0.95		0.97	1.00	1.00	1.00	0.95	0.88	0.97	0.95		
Frt		0.99		1.00	1.00	0.85	1.00	1.00	0.85	1.00	0.99		
Flt Protected		0.99		0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00		
Satd. Flow (prot)		3456		3433	1863	1583	1770	3539	2787	3433	3501		
Flt Permitted		0.99		0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00		
Satd. Flow (perm)		3456		3433	1863	1583	1770	3539	2787	3433	3501		
Peak-hour factor, PHF	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. Flow (vph)	93	236	25	505	383	270	26	1132	358	176	1006	77	
RTOR Reduction (vph)	0	5	0	0	0	196	0	0	252	0	4	0	
Lane Group Flow (vph)	0	349	0	505	383	74	26	1132	106	176	1079	0	
Turn Type	Split	NA		Split	NA	Perm	Prot	NA	Perm	Prot	NA		
Protected Phases	4	4		8	8		5	2		1	6		
Permitted Phases						8			2				
Actuated Green, G (s)		24.6		35.4	35.4	35.4	3.0	38.6	38.6	11.4	47.0		
Effective Green, g (s)		24.6		35.4	35.4	35.4	3.0	38.6	38.6	11.4	47.0		
Actuated g/C Ratio		0.19		0.27	0.27	0.27	0.02	0.30	0.30	0.09	0.36		
Clearance Time (s)		5.0		5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0		
Vehicle Extension (s)		3.0		3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0		
Lane Grp Cap (vph)		653		934	507	431	40	1050	827	301	1265		
v/s Ratio Prot		c0.10		0.15	c0.21		0.01	c0.32		0.05	c0.31		
v/s Ratio Perm						0.05			0.04				
v/c Ratio		0.53		0.54	0.76	0.17	0.65	1.08	0.13	0.58	0.85		
Uniform Delay, d1		47.5		40.4	43.3	36.1	63.0	45.7	33.4	57.0	38.3		
Progression Factor		1.00		0.78	0.81	3.19	1.00	1.00	1.00	1.00	1.00		
Incremental Delay, d2		0.8		1.5	7.0	0.6	36.3	161.2	0.1	2.9	6.1		
Delay (s)		48.4		33.1	42.2	115.7	99.3	206.9	33.5	59.9	44.5		
Level of Service		D		C	D	F	F	F	C	E	D		
Approach Delay (s)		48.4			55.4			164.1			46.6		
Approach LOS		D			E			F			D		
Intersection Summary													
HCM 2000 Control Delay			90.7		HCM 2000 Level of Service					F			
HCM 2000 Volume to Capacity ratio			0.85										
Actuated Cycle Length (s)			130.0		Sum of lost time (s)					20.0			
Intersection Capacity Utilization			83.2%		ICU Level of Service					E			
Analysis Period (min)			60										

c Critical Lane Group

HCM Unsignalized Intersection Capacity Analysis
 52: El Camino Real & Spring Street

05/01/2023

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	11	0	18	0	0	0	71	1207	0	8	1263	27
Future Volume (Veh/h)	11	0	18	0	0	0	71	1207	0	8	1263	27
Sign Control		Stop			Stop			Free			Free	
Grade		0%			0%			0%			0%	
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Hourly flow rate (vph)	11	0	18	0	0	0	71	1207	0	8	1263	27
Pedestrians												
Lane Width (ft)												
Walking Speed (ft/s)												
Percent Blockage												
Right turn flare (veh)												
Median type												
Median storage veh												
Upstream signal (ft)												
pX, platoon unblocked	0.77	0.77		0.77	0.77	0.77					0.77	
vC, conflicting volume	2038	2642	434	1804	2655	604	1290			1207		
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	1749	2534	434	1445	2551	0	1290			668		
tC, single (s)	7.5	6.5	6.9	7.5	6.5	6.9	4.1			4.1		
tC, 2 stage (s)												
tF (s)	3.5	4.0	3.3	3.5	4.0	3.3	2.2			2.2		
p0 queue free %	71	100	97	100	100	100	87			99		
cM capacity (veh/h)	37	18	570	61	17	834	533			705		
Direction, Lane #	EB 1	WB 1	NB 1	NB 2	NB 3	SB 1	SB 2	SB 3	SB 4			
Volume Total	29	0	71	805	402	8	505	505	280			
Volume Left	11	0	71	0	0	8	0	0	0			
Volume Right	18	0	0	0	0	0	0	0	27			
cSH	89	1700	533	1700	1700	705	1700	1700	1700			
Volume to Capacity	0.32	0.00	0.13	0.47	0.24	0.01	0.30	0.30	0.16			
Queue Length 95th (ft)	35	0	11	0	0	1	0	0	0			
Control Delay (s)	64.5	0.0	12.8	0.0	0.0	10.2	0.0	0.0	0.0			
Lane LOS	F	A	B			B						
Approach Delay (s)	64.5	0.0	0.7			0.1						
Approach LOS	F	A										
Intersection Summary												
Average Delay			1.1									
Intersection Capacity Utilization			50.0%		ICU Level of Service				A			
Analysis Period (min)			60									

HCM Signalized Intersection Capacity Analysis

62: El Camino Real & Harbor Blvd (S)

05/01/2023



Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	84	18	28	1168	1414	94
Future Volume (vph)	84	18	28	1168	1414	94
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.5		4.5	4.5	4.5	
Lane Util. Factor	1.00		1.00	0.95	0.95	
Frt	0.98		1.00	1.00	0.99	
Flt Protected	0.96		0.95	1.00	1.00	
Satd. Flow (prot)	1746		1770	3539	3506	
Flt Permitted	0.96		0.95	1.00	1.00	
Satd. Flow (perm)	1746		1770	3539	3506	
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	84	18	28	1168	1414	94
RTOR Reduction (vph)	8	0	0	0	2	0
Lane Group Flow (vph)	94	0	28	1168	1506	0
Turn Type	Prot		Prot	NA	NA	
Protected Phases	4		5	2	6	
Permitted Phases						
Actuated Green, G (s)	7.3		2.6	50.1	43.0	
Effective Green, g (s)	7.3		2.6	50.1	43.0	
Actuated g/C Ratio	0.11		0.04	0.75	0.65	
Clearance Time (s)	4.5		4.5	4.5	4.5	
Vehicle Extension (s)	3.0		3.0	3.0	3.0	
Lane Grp Cap (vph)	191		69	2670	2270	
v/s Ratio Prot	c0.05		0.02	c0.33	c0.43	
v/s Ratio Perm						
v/c Ratio	0.49		0.41	0.44	0.66	
Uniform Delay, d1	27.8		31.1	3.0	7.2	
Progression Factor	1.00		1.00	1.00	1.00	
Incremental Delay, d2	2.0		3.9	0.1	0.7	
Delay (s)	29.8		35.1	3.1	8.0	
Level of Service	C		D	A	A	
Approach Delay (s)	29.8			3.8	8.0	
Approach LOS	C			A	A	

Intersection Summary



































HCM 2000 Control Delay	7.0	HCM 2000 Level of Service	A
HCM 2000 Volume to Capacity ratio	0.64		
Actuated Cycle Length (s)	66.4	Sum of lost time (s)	13.5
Intersection Capacity Utilization	55.3%	ICU Level of Service	B
Analysis Period (min)	60		

c Critical Lane Group

HCM Signalized Intersection Capacity Analysis

57: El Camino Real & Ralston Ave

05/01/2023

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	 	 		 	 	 	 	 	 	 	 	 
Traffic Volume (vph)	238	640	49	229	605	405	61	854	149	258	738	127
Future Volume (vph)	238	640	49	229	605	405	61	854	149	258	738	127
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0		4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	0.97	0.95		0.91	0.91	1.00	1.00	0.95	1.00	1.00	0.95	1.00
Frpb, ped/bikes	1.00	1.00		1.00	1.00	0.92	1.00	1.00	0.97	1.00	1.00	0.95
Flpb, ped/bikes	1.00	1.00		1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt	1.00	0.99		1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	3433	3486		1610	3384	1451	1770	3539	1532	1770	3539	1502
Flt Permitted	0.95	1.00		0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (perm)	3433	3486		1610	3384	1451	1770	3539	1532	1770	3539	1502
Peak-hour factor, PHF	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99
Adj. Flow (vph)	240	646	49	231	611	409	62	863	151	261	745	128
RTOR Reduction (vph)	0	4	0	0	0	266	0	0	72	0	0	63
Lane Group Flow (vph)	240	691	0	208	634	143	62	863	79	261	745	65
Confl. Peds. (#/hr)	52		38	38		52	33		14	14		33
Confl. Bikes (#/hr)			1						5			2
Turn Type	Split	NA		Split	NA	Perm	Prot	NA	Perm	Prot	NA	Perm
Protected Phases	8	8		4	4		1	6		5	2	
Permitted Phases						4			6			2
Actuated Green, G (s)	33.4	33.4		32.8	32.8	32.8	14.4	38.0	38.0	24.8	48.4	48.4
Effective Green, g (s)	33.4	33.4		32.8	32.8	32.8	14.4	38.0	38.0	24.8	48.4	48.4
Actuated g/C Ratio	0.23	0.23		0.23	0.23	0.23	0.10	0.26	0.26	0.17	0.33	0.33
Clearance Time (s)	4.0	4.0		4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Vehicle Extension (s)	3.0	3.0		3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	790	802		364	765	328	175	927	401	302	1181	501
v/s Ratio Prot	0.07	c0.20		0.13	c0.19		0.04	c0.24		c0.15	0.21	
v/s Ratio Perm						0.10			0.05			0.04
v/c Ratio	0.30	0.86		0.57	0.83	0.44	0.35	0.93	0.20	0.86	0.63	0.13
Uniform Delay, d1	46.2	53.6		49.9	53.4	48.2	61.0	52.2	41.6	58.5	40.8	33.6
Progression Factor	1.00	1.00		0.46	0.50	0.70	1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	1.0	11.8		1.5	5.4	0.7	1.2	16.9	1.1	26.5	2.6	0.5
Delay (s)	47.2	65.4		24.4	31.9	34.2	62.2	69.2	42.7	84.9	43.3	34.2
Level of Service	D	E		C	C	C	E	E	D	F	D	C
Approach Delay (s)		60.7			31.4			65.0			51.9	
Approach LOS		E			C			E			D	
Intersection Summary												
HCM 2000 Control Delay			51.2				HCM 2000 Level of Service				D	
HCM 2000 Volume to Capacity ratio			0.87									
Actuated Cycle Length (s)			145.0				Sum of lost time (s)				16.0	
Intersection Capacity Utilization			109.1%				ICU Level of Service				H	
Analysis Period (min)			15									

c Critical Lane Group

HCM Signalized Intersection Capacity Analysis

1: El Camino Real & Dwy/Harbor Blvd (N)

05/01/2023



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations				↖	↖	↖	↖	↕		↗	↗	↗
Traffic Volume (vph)	0	0	0	123	1	175	10	953	271	648	1028	3
Future Volume (vph)	0	0	0	123	1	175	10	953	271	648	1028	3
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)				5.0	5.0	5.0	4.5	5.0		5.0	5.0	
Lane Util. Factor				0.95	0.95	1.00	1.00	0.95		0.97	0.95	
Frt				1.00	1.00	0.85	1.00	0.97		1.00	1.00	
Flt Protected				0.95	0.95	1.00	0.95	1.00		0.95	1.00	
Satd. Flow (prot)				1681	1687	1583	1770	3422		3433	3538	
Flt Permitted				0.95	0.95	1.00	0.95	1.00		0.95	1.00	
Satd. Flow (perm)				1681	1687	1583	1770	3422		3433	3538	
Peak-hour factor, PHF	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. Flow (vph)	0	0	0	123	1	175	10	953	271	648	1028	3
RTOR Reduction (vph)	0	0	0	0	0	155	0	19	0	0	0	0
Lane Group Flow (vph)	0	0	0	61	63	20	10	1205	0	648	1031	0
Turn Type				Perm	NA	Perm	Prot	NA		Prot	NA	
Protected Phases					8		5	2		1	6	
Permitted Phases				8		8						
Actuated Green, G (s)				14.6	14.6	14.6	1.0	52.1		48.3	99.9	
Effective Green, g (s)				14.6	14.6	14.6	1.0	52.1		48.3	99.9	
Actuated g/C Ratio				0.11	0.11	0.11	0.01	0.40		0.37	0.77	
Clearance Time (s)				5.0	5.0	5.0	4.5	5.0		5.0	5.0	
Vehicle Extension (s)				3.0	3.0	3.0	3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)				188	189	177	13	1371		1275	2718	
v/s Ratio Prot							0.01	c0.35		c0.19	0.29	
v/s Ratio Perm				0.04	0.04	0.01						
v/c Ratio				0.32	0.33	0.11	0.77	0.88		0.51	0.38	
Uniform Delay, d1				53.2	53.2	51.9	64.4	36.0		31.6	4.9	
Progression Factor				1.00	1.00	1.00	1.00	1.00		1.00	1.00	
Incremental Delay, d2				1.0	1.0	0.3	195.8	7.3		1.5	0.4	
Delay (s)				54.2	54.3	52.1	260.1	43.3		33.1	5.3	
Level of Service				D	D	D	F	D		C	A	
Approach Delay (s)		0.0			53.0			45.1			16.0	
Approach LOS		A			D			D			B	

Intersection Summary





















HCM 2000 Control Delay	30.6	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.65		
Actuated Cycle Length (s)	130.0	Sum of lost time (s)	15.0
Intersection Capacity Utilization	70.1%	ICU Level of Service	C
Analysis Period (min)	60		

c Critical Lane Group

HCM Unsignalized Intersection Capacity Analysis

2: El Camino Real & 5th Street/Dwy
























05/01/2023

													
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR	
Lane Configurations													
Traffic Volume (veh/h)	0	0	31	1	0	4	33	1096	10	21	1100	7	
Future Volume (Veh/h)	0	0	31	1	0	4	33	1096	10	21	1100	7	
Sign Control	Stop			Stop			Free			Free			
Grade	0%			0%			0%			0%			
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
Hourly flow rate (vph)	0	0	31	1	0	4	33	1096	10	21	1100	7	
Pedestrians													
Lane Width (ft)													
Walking Speed (ft/s)													
Percent Blockage													
Right turn flare (veh)													
Median type													
Median storage veh													
Upstream signal (ft)													
pX, platoon unblocked	0.81	0.81	0.81	0.81	0.81		0.81						
vC, conflicting volume	1764	2318	554	1790	2316	553	1107			1106			
vC1, stage 1 conf vol													
vC2, stage 2 conf vol													
vCu, unblocked vol	1474	2158	0	1507	2156	553	664			1106			
tC, single (s)	7.5	6.5	6.9	7.5	6.5	6.9	4.1			4.1			
tC, 2 stage (s)													
tF (s)	3.5	4.0	3.3	3.5	4.0	3.3	2.2			2.2			
p0 queue free %	100	100	96	98	100	99	96			97			
cM capacity (veh/h)	67	35	879	61	35	477	746			627			
Direction, Lane #	EB 1	EB 2	WB 1	NB 1	NB 2	NB 3	SB 1	SB 2	SB 3				
Volume Total	0	31	5	33	731	375	21	733	374				
Volume Left	0	0	1	33	0	0	21	0	0				
Volume Right	0	31	4	0	0	10	0	0	7				
cSH	1700	879	202	746	1700	1700	627	1700	1700				
Volume to Capacity	0.00	0.04	0.02	0.04	0.43	0.22	0.03	0.43	0.22				
Queue Length 95th (ft)	0	3	2	3	0	0	3	0	0				
Control Delay (s)	0.0	9.2	23.2	10.0	0.0	0.0	10.9	0.0	0.0				
Lane LOS	A	A	C	B			B						
Approach Delay (s)	9.2		23.2	0.3			0.2						
Approach LOS	A		C										
Intersection Summary													
Average Delay			0.4										
Intersection Capacity Utilization			47.3%	ICU Level of Service					A				
Analysis Period (min)			60										

HCM Signalized Intersection Capacity Analysis

4: El Camino Real & Hull Dr

05/01/2023























													
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR	
Lane Configurations													
Traffic Volume (vph)	124	2	113	10	0	0	63	920	16	8	1123	59	
Future Volume (vph)	124	2	113	10	0	0	63	920	16	8	1123	59	
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	
Total Lost time (s)		4.5	4.5		4.5		4.5	4.5		4.5	4.5		
Lane Util. Factor		1.00	1.00		1.00		1.00	0.95		1.00	0.91		
Frt		1.00	0.85		1.00		1.00	1.00		1.00	0.99		
Flt Protected		0.95	1.00		0.95		0.95	1.00		0.95	1.00		
Satd. Flow (prot)		1775	1583		1770		1770	3530		1770	5047		
Flt Permitted		0.95	1.00		0.95		0.95	1.00		0.95	1.00		
Satd. Flow (perm)		1775	1583		1770		1770	3530		1770	5047		
Peak-hour factor, PHF	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. Flow (vph)	124	2	113	10	0	0	63	920	16	8	1123	59	
RTOR Reduction (vph)	0	0	87	0	0	0	0	1	0	0	5	0	
Lane Group Flow (vph)	0	126	26	0	10	0	63	935	0	8	1177	0	
Turn Type	Split	NA	Perm	Split	NA	Perm	Prot	NA		Prot	NA		
Protected Phases	4	4		8	8		5	2		1	6		
Permitted Phases			4			8							
Actuated Green, G (s)		16.1	16.1		0.9		6.5	33.6		1.2	28.3		
Effective Green, g (s)		16.1	16.1		0.9		6.5	33.6		1.2	28.3		
Actuated g/C Ratio		0.23	0.23		0.01		0.09	0.48		0.02	0.41		
Clearance Time (s)		4.5	4.5		4.5		4.5	4.5		4.5	4.5		
Vehicle Extension (s)		3.0	3.0		3.0		3.0	3.0		3.0	3.0		
Lane Grp Cap (vph)		409	365		22		164	1699		30	2046		
v/s Ratio Prot		c0.07			c0.01		c0.04	c0.26		0.00	0.23		
v/s Ratio Perm			0.02										
v/c Ratio		0.31	0.07		0.45		0.38	0.55		0.27	0.58		
Uniform Delay, d1		22.2	21.0		34.2		29.8	12.8		33.9	16.1		
Progression Factor		1.00	1.00		1.00		1.00	1.00		1.00	1.00		
Incremental Delay, d2		0.4	0.1		14.8		1.5	0.4		4.8	0.4		
Delay (s)		22.7	21.1		49.0		31.3	13.2		38.6	16.5		
Level of Service		C	C		D		C	B		D	B		
Approach Delay (s)		21.9			49.0			14.3			16.6		
Approach LOS		C			D			B			B		
Intersection Summary													
HCM 2000 Control Delay			16.3				HCM 2000 Level of Service				B		
HCM 2000 Volume to Capacity ratio			0.49										
Actuated Cycle Length (s)			69.8				Sum of lost time (s)			18.0			
Intersection Capacity Utilization			55.0%				ICU Level of Service			A			
Analysis Period (min)			60										

c Critical Lane Group

HCM Signalized Intersection Capacity Analysis

5: El Camino Real & Holly St

05/01/2023




















												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	47	596	20	401	195	133	23	755	401	248	922	53
Future Volume (vph)	47	596	20	401	195	133	23	755	401	248	922	53
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		5.0		5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	
Lane Util. Factor		0.95		0.97	1.00	1.00	1.00	0.95	0.88	0.97	0.95	
Frt		1.00		1.00	1.00	0.85	1.00	1.00	0.85	1.00	0.99	
Flt Protected		1.00		0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	
Satd. Flow (prot)		3511		3433	1863	1583	1770	3539	2787	3433	3510	
Flt Permitted		1.00		0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	
Satd. Flow (perm)		3511		3433	1863	1583	1770	3539	2787	3433	3510	
Peak-hour factor, PHF	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. Flow (vph)	47	596	20	401	195	133	23	755	401	248	922	53
RTOR Reduction (vph)	0	2	0	0	0	102	0	0	289	0	3	0
Lane Group Flow (vph)	0	661	0	401	195	31	23	755	112	248	972	0
Turn Type	Split	NA		Split	NA	Perm	Prot	NA	Perm	Prot	NA	
Protected Phases	4	4		8	8		5	2		1	6	
Permitted Phases						8			2			
Actuated Green, G (s)		29.0		30.4	30.4	30.4	4.9	36.2	36.2	14.4	45.7	
Effective Green, g (s)		29.0		30.4	30.4	30.4	4.9	36.2	36.2	14.4	45.7	
Actuated g/C Ratio		0.22		0.23	0.23	0.23	0.04	0.28	0.28	0.11	0.35	
Clearance Time (s)		5.0		5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	
Vehicle Extension (s)		3.0		3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	
Lane Grp Cap (vph)		783		802	435	370	66	985	776	380	1233	
v/s Ratio Prot		c0.19		c0.12	0.10		0.01	0.21		c0.07	c0.28	
v/s Ratio Perm						0.02			0.04			
v/c Ratio		0.84		0.50	0.45	0.08	0.35	0.77	0.14	0.65	0.79	
Uniform Delay, d1		48.3		43.2	42.6	38.9	61.0	43.0	35.3	55.4	37.8	
Progression Factor		1.00		0.61	0.60	1.99	1.00	1.00	1.00	1.00	1.00	
Incremental Delay, d2		9.0		1.8	2.6	0.4	3.2	3.7	0.1	4.1	3.5	
Delay (s)		57.4		28.2	28.4	77.7	64.2	46.7	35.3	59.5	41.3	
Level of Service		E		C	C	E	E	D	D	E	D	
Approach Delay (s)		57.4			37.3			43.2			45.0	
Approach LOS		E			D			D			D	
Intersection Summary												
HCM 2000 Control Delay			45.1		HCM 2000 Level of Service					D		
HCM 2000 Volume to Capacity ratio			0.73									
Actuated Cycle Length (s)			130.0		Sum of lost time (s)					20.0		
Intersection Capacity Utilization			77.9%		ICU Level of Service					D		
Analysis Period (min)			60									

c Critical Lane Group

HCM Unsignalized Intersection Capacity Analysis

52: El Camino Real & Spring Street

05/01/2023

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	30	0	15	35	0	30	22	1001	5	19	1172	16
Future Volume (Veh/h)	30	0	15	35	0	30	22	1001	5	19	1172	16
Sign Control		Stop			Stop			Free			Free	
Grade		0%			0%			0%			0%	
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Hourly flow rate (vph)	30	0	15	35	0	30	22	1001	5	19	1172	16
Pedestrians												
Lane Width (ft)												
Walking Speed (ft/s)												
Percent Blockage												
Right turn flare (veh)												
Median type												
								None			None	
Median storage veh												
Upstream signal (ft)												
								508				
pX, platoon unblocked	0.82	0.82		0.82	0.82	0.82					0.82	
vC, conflicting volume	1792	2268	399	1491	2274	503	1188			1006		
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	1528	2108	399	1161	2114	0	1188			569		
tC, single (s)	7.5	6.5	6.9	7.5	6.5	6.9	4.1			4.1		
tC, 2 stage (s)												
tF (s)	3.5	4.0	3.3	3.5	4.0	3.3	2.2			2.2		
p0 queue free %	51	100	98	70	100	97	96			98		
cM capacity (veh/h)	61	39	601	115	39	890	583			820		
Direction, Lane #	EB 1	WB 1	NB 1	NB 2	NB 3	SB 1	SB 2	SB 3	SB 4			
Volume Total	45	65	22	667	339	19	469	469	250			
Volume Left	30	35	22	0	0	19	0	0	0			
Volume Right	15	30	0	0	5	0	0	0	16			
cSH	87	192	583	1700	1700	820	1700	1700	1700			
Volume to Capacity	0.52	0.34	0.04	0.39	0.20	0.02	0.28	0.28	0.15			
Queue Length 95th (ft)	71	38	3	0	0	2	0	0	0			
Control Delay (s)	89.2	33.3	11.4	0.0	0.0	9.5	0.0	0.0	0.0			
Lane LOS	F	D	B			A						
Approach Delay (s)	89.2	33.3	0.2			0.1						
Approach LOS	F	D										
Intersection Summary												
Average Delay			2.8									
Intersection Capacity Utilization			38.6%		ICU Level of Service				A			
Analysis Period (min)			60									

HCM Signalized Intersection Capacity Analysis

62: El Camino Real & Harbor Blvd (N)

05/01/2023



Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	112	18	20	1082	1088	55
Future Volume (vph)	112	18	20	1082	1088	55
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.5		4.5	4.5	4.5	
Lane Util. Factor	1.00		1.00	0.95	0.95	
Frt	0.98		1.00	1.00	0.99	
Flt Protected	0.96		0.95	1.00	1.00	
Satd. Flow (prot)	1752		1770	3539	3514	
Flt Permitted	0.96		0.95	1.00	1.00	
Satd. Flow (perm)	1752		1770	3539	3514	
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	112	18	20	1082	1088	55
RTOR Reduction (vph)	6	0	0	0	2	0
Lane Group Flow (vph)	124	0	20	1082	1141	0
Turn Type	Perm		Prot	NA	NA	
Protected Phases			5	2	6	
Permitted Phases	4					
Actuated Green, G (s)	10.1		1.1	39.3	33.7	
Effective Green, g (s)	10.1		1.1	39.3	33.7	
Actuated g/C Ratio	0.17		0.02	0.67	0.58	
Clearance Time (s)	4.5		4.5	4.5	4.5	
Vehicle Extension (s)	3.0		3.0	3.0	3.0	
Lane Grp Cap (vph)	303		33	2381	2027	
v/s Ratio Prot			0.01	c0.31	c0.32	
v/s Ratio Perm	c0.07					
v/c Ratio	0.41		0.61	0.45	0.56	
Uniform Delay, d1	21.5		28.4	4.5	7.7	
Progression Factor	1.00		1.00	1.00	1.00	
Incremental Delay, d2	0.9		30.6	0.1	0.4	
Delay (s)	22.4		59.0	4.6	8.1	
Level of Service	C		E	A	A	
Approach Delay (s)	22.4			5.6	8.1	
Approach LOS	C			A	A	

Intersection Summary






























HCM 2000 Control Delay	7.7	HCM 2000 Level of Service	A
HCM 2000 Volume to Capacity ratio	0.55		
Actuated Cycle Length (s)	58.4	Sum of lost time (s)	13.5
Intersection Capacity Utilization	46.6%	ICU Level of Service	A
Analysis Period (min)	60		

c Critical Lane Group

HCM Signalized Intersection Capacity Analysis

57: El Camino Real & Ralston Ave






















05/01/2023

													
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR	
Lane Configurations	 	 		 	 			 			 		
Traffic Volume (vph)	109	764	16	198	677	191	106	548	194	322	797	78	
Future Volume (vph)	109	764	16	198	677	191	106	548	194	322	797	78	
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	
Total Lost time (s)	4.0	4.0		4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	
Lane Util. Factor	0.97	0.95		0.91	0.91	1.00	1.00	0.95	1.00	1.00	0.95	1.00	
Frt	1.00	1.00		1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85	
Flt Protected	0.95	1.00		0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00	
Satd. Flow (prot)	3400	3494		1595	3353	1568	1752	3505	1568	1752	3505	1568	
Flt Permitted	0.95	1.00		0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00	
Satd. Flow (perm)	3400	3494		1595	3353	1568	1752	3505	1568	1752	3505	1568	
Peak-hour factor, PHF	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	
Adj. Flow (vph)	112	788	16	204	698	197	109	565	200	332	822	80	
RTOR Reduction (vph)	0	1	0	0	0	136	0	0	136	0	0	46	
Lane Group Flow (vph)	112	803	0	184	718	61	109	565	64	332	822	34	
Heavy Vehicles (%)	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%	
Turn Type	Split	NA		Split	NA	Perm	Prot	NA	Perm	Prot	NA	Perm	
Protected Phases	8	8		4	4		1	6		5	2		
Permitted Phases						4			6			2	
Actuated Green, G (s)	35.0	35.0		31.0	31.0	31.0	17.0	32.1	32.1	30.9	46.0	46.0	
Effective Green, g (s)	35.0	35.0		31.0	31.0	31.0	17.0	32.1	32.1	30.9	46.0	46.0	
Actuated g/C Ratio	0.24	0.24		0.21	0.21	0.21	0.12	0.22	0.22	0.21	0.32	0.32	
Clearance Time (s)	4.0	4.0		4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	
Vehicle Extension (s)	3.0	3.0		3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	
Lane Grp Cap (vph)	820	843		341	716	335	205	775	347	373	1111	497	
v/s Ratio Prot	0.03	c0.23		0.12	c0.21		0.06	0.16		c0.19	c0.23		
v/s Ratio Perm						0.04			0.04			0.02	
v/c Ratio	0.14	0.95		0.54	1.00	0.18	0.53	0.73	0.18	0.89	0.74	0.07	
Uniform Delay, d1	43.1	54.2		50.7	57.0	46.6	60.3	52.4	45.8	55.4	44.2	34.5	
Progression Factor	1.00	1.00		0.31	0.34	0.19	1.00	1.00	1.00	1.00	1.00	1.00	
Incremental Delay, d2	0.3	21.5		3.6	26.7	0.7	9.5	3.5	0.3	25.7	4.4	0.3	
Delay (s)	43.5	75.6		19.2	46.1	9.4	69.8	55.9	46.1	81.1	48.6	34.8	
Level of Service	D	E		B	D	A	E	E	D	F	D	C	
Approach Delay (s)		71.7			35.0			55.4			56.5		
Approach LOS		E			C			E			E		
Intersection Summary													
HCM 2000 Control Delay			53.9									HCM 2000 Level of Service	D
HCM 2000 Volume to Capacity ratio			0.90										
Actuated Cycle Length (s)			145.0									Sum of lost time (s)	16.0
Intersection Capacity Utilization			106.2%									ICU Level of Service	G
Analysis Period (min)			15										
c Critical Lane Group													

HCM Signalized Intersection Capacity Analysis

1: El Camino Real & dwy/Harbor Blvd (N)





















05/01/2023

													
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR	
Lane Configurations													
Traffic Volume (vph)	0	0	0	381	38	425	5	1055	185	264	1180	2	
Future Volume (vph)	0	0	0	381	38	425	5	1055	185	264	1180	2	
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	
Total Lost time (s)				5.0	5.0	5.0	4.5	5.0		5.0	5.0		
Lane Util. Factor				0.95	0.95	1.00	1.00	0.95		0.97	0.95		
Frt				1.00	1.00	0.85	1.00	0.98		1.00	1.00		
Flt Protected				0.95	0.96	1.00	0.95	1.00		0.95	1.00		
Satd. Flow (prot)				1681	1700	1583	1770	3460		3433	3538		
Flt Permitted				0.76	0.76	1.00	0.95	1.00		0.95	1.00		
Satd. Flow (perm)				1340	1353	1583	1770	3460		3433	3538		
Peak-hour factor, PHF	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. Flow (vph)	0	0	0	381	38	425	5	1055	185	264	1180	2	
RTOR Reduction (vph)	0	0	0	0	0	203	0	10	0	0	0	0	
Lane Group Flow (vph)	0	0	0	210	209	222	5	1230	0	264	1182	0	
Turn Type				Perm	NA	Perm	Prot	NA		Prot	NA		
Protected Phases		4			8		5	2		1	6		
Permitted Phases	4			8		8							
Actuated Green, G (s)				30.7	30.7	30.7	1.4	64.1		35.2	98.4		
Effective Green, g (s)				30.7	30.7	30.7	1.4	64.1		35.2	98.4		
Actuated g/C Ratio				0.21	0.21	0.21	0.01	0.44		0.24	0.68		
Clearance Time (s)				5.0	5.0	5.0	4.5	5.0		5.0	5.0		
Vehicle Extension (s)				3.0	3.0	3.0	3.0	3.0		3.0	3.0		
Lane Grp Cap (vph)				283	286	335	17	1529		833	2400		
v/s Ratio Prot							0.00	c0.36		c0.08	c0.33		
v/s Ratio Perm				c0.16	0.15	0.14							
v/c Ratio				0.74	0.73	0.66	0.29	0.80		0.32	0.49		
Uniform Delay, d1				53.4	53.3	52.4	71.3	35.0		45.0	11.2		
Progression Factor				1.00	1.00	1.00	1.00	1.00		0.93	2.15		
Incremental Delay, d2				10.7	9.7	5.0	9.6	3.3		0.9	0.7		
Delay (s)				64.1	63.0	57.3	80.9	38.3		42.9	24.9		
Level of Service				E	E	E	F	D		D	C		
Approach Delay (s)		0.0			60.4			38.5			28.2		
Approach LOS		A			E			D			C		
Intersection Summary													
HCM 2000 Control Delay			39.5		HCM 2000 Level of Service						D		
HCM 2000 Volume to Capacity ratio			0.70										
Actuated Cycle Length (s)			145.0		Sum of lost time (s)					15.0			
Intersection Capacity Utilization			69.7%		ICU Level of Service					C			
Analysis Period (min)			60										
c Critical Lane Group													

HCM Unsignalized Intersection Capacity Analysis

2: El Camino Real & 5th Street/Dwy

05/01/2023

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	1	0	21	0	0	6	88	1231	3	46	1360	7
Future Volume (Veh/h)	1	0	21	0	0	6	88	1231	3	46	1360	7
Sign Control	Stop			Stop			Free			Free		
Grade	0%			0%			0%			0%		
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Hourly flow rate (vph)	1	0	21	0	0	6	88	1231	3	46	1360	7
Pedestrians												
Lane Width (ft)												
Walking Speed (ft/s)												
Percent Blockage												
Right turn flare (veh)												
Median type												
Median storage veh												
Upstream signal (ft)												
pX, platoon unblocked	0.85	0.85	0.75	0.85	0.85	0.80	0.75			0.80		
vC, conflicting volume	2253	2866	684	2202	2868	617	1367			1234		
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	1052	1773	0	991	1775	15	819			788		
tC, single (s)	7.5	6.5	6.9	7.5	6.5	6.9	4.1			4.1		
tC, 2 stage (s)												
tF (s)	3.5	4.0	3.3	3.5	4.0	3.3	2.2			2.2		
p0 queue free %	99	100	97	100	100	99	85			93		
cM capacity (veh/h)	128	55	812	140	55	847	603			661		
Direction, Lane #	EB 1	EB 2	WB 1	NB 1	NB 2	NB 3	SB 1	SB 2	SB 3			
Volume Total	1	21	6	88	821	413	46	907	460			
Volume Left	1	0	0	88	0	0	46	0	0			
Volume Right	0	21	6	0	0	3	0	0	7			
cSH	128	812	847	603	1700	1700	661	1700	1700			
Volume to Capacity	0.01	0.03	0.01	0.15	0.48	0.24	0.07	0.53	0.27			
Queue Length 95th (ft)	1	2	1	13	0	0	6	0	0			
Control Delay (s)	33.3	9.6	9.3	12.0	0.0	0.0	10.9	0.0	0.0			
Lane LOS	D	A	A	B			B					
Approach Delay (s)	10.6		9.3	0.8			0.4					
Approach LOS	B		A									
Intersection Summary												
Average Delay			0.7									
Intersection Capacity Utilization			56.0%	ICU Level of Service		B						
Analysis Period (min)			60									

HCM Signalized Intersection Capacity Analysis

4: El Camino Real & Hull Dr

05/01/2023



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕	↗		↕	↗	↘	↕↗		↘	↕↗↘	
Traffic Volume (vph)	65	0	56	30	14	4	100	1246	50	14	1146	116
Future Volume (vph)	65	0	56	30	14	4	100	1246	50	14	1146	116
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.5	4.5		4.5	4.5	4.5	4.5		4.5	4.5	
Lane Util. Factor		1.00	1.00		1.00	1.00	1.00	0.95		1.00	0.91	
Frt		1.00	0.85		1.00	0.85	1.00	0.99		1.00	0.99	
Flt Protected		0.95	1.00		0.97	1.00	0.95	1.00		0.95	1.00	
Satd. Flow (prot)		1770	1583		1801	1583	1770	3519		1770	5015	
Flt Permitted		0.95	1.00		0.97	1.00	0.95	1.00		0.95	1.00	
Satd. Flow (perm)		1770	1583		1801	1583	1770	3519		1770	5015	
Peak-hour factor, PHF	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. Flow (vph)	65	0	56	30	14	4	100	1246	50	14	1146	116
RTOR Reduction (vph)	0	0	48	0	0	4	0	2	0	0	9	0
Lane Group Flow (vph)	0	65	8	0	44	0	100	1294	0	14	1253	0
Turn Type	Split	NA	Perm	Split	NA	Perm	Prot	NA		Prot	NA	
Protected Phases	4	4		8	8		5	2		1	6	
Permitted Phases			4			8						
Actuated Green, G (s)		11.6	11.6		4.2	4.2	11.8	49.0		1.4	38.6	
Effective Green, g (s)		11.6	11.6		4.2	4.2	11.8	49.0		1.4	38.6	
Actuated g/C Ratio		0.14	0.14		0.05	0.05	0.14	0.58		0.02	0.46	
Clearance Time (s)		4.5	4.5		4.5	4.5	4.5	4.5		4.5	4.5	
Vehicle Extension (s)		3.0	3.0		3.0	3.0	3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)		243	218		89	78	248	2047		29	2299	
v/s Ratio Prot		c0.04			c0.02		c0.06	c0.37		0.01	0.25	
v/s Ratio Perm			0.00			0.00						
v/c Ratio		0.27	0.04		0.49	0.00	0.40	0.63		0.48	0.55	
Uniform Delay, d1		32.5	31.5		39.0	38.0	33.0	11.6		41.0	16.5	
Progression Factor		1.00	1.00		1.00	1.00	1.00	1.00		1.00	1.00	
Incremental Delay, d2		0.6	0.1		4.3	0.0	1.1	0.6		12.6	0.3	
Delay (s)		33.1	31.5		43.3	38.0	34.1	12.3		53.6	16.7	
Level of Service		C	C		D	D	C	B		D	B	
Approach Delay (s)		32.4			42.9			13.8			17.1	
Approach LOS		C			D			B			B	

Intersection Summary























HCM 2000 Control Delay	16.6	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.57		
Actuated Cycle Length (s)	84.2	Sum of lost time (s)	18.0
Intersection Capacity Utilization	61.7%	ICU Level of Service	B
Analysis Period (min)	60		

c Critical Lane Group

HCM Signalized Intersection Capacity Analysis

5: El Camino Real & Holly St

05/01/2023




















													
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR	
Lane Configurations													
Traffic Volume (vph)	93	236	25	505	383	286	26	1141	358	184	1012	77	
Future Volume (vph)	93	236	25	505	383	286	26	1141	358	184	1012	77	
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	
Total Lost time (s)		5.0		5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0		
Lane Util. Factor		0.95		0.97	1.00	1.00	1.00	0.95	0.88	0.97	0.95		
Frt		0.99		1.00	1.00	0.85	1.00	1.00	0.85	1.00	0.99		
Flt Protected		0.99		0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00		
Satd. Flow (prot)		3456		3433	1863	1583	1770	3539	2787	3433	3502		
Flt Permitted		0.99		0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00		
Satd. Flow (perm)		3456		3433	1863	1583	1770	3539	2787	3433	3502		
Peak-hour factor, PHF	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. Flow (vph)	93	236	25	505	383	286	26	1141	358	184	1012	77	
RTOR Reduction (vph)	0	5	0	0	0	208	0	0	252	0	4	0	
Lane Group Flow (vph)	0	349	0	505	383	78	26	1141	106	184	1085	0	
Turn Type	Split	NA		Split	NA	Perm	Prot	NA	Perm	Prot	NA		
Protected Phases	4	4		8	8		5	2		1	6		
Permitted Phases						8			2				
Actuated Green, G (s)		24.6		35.4	35.4	35.4	3.0	38.4	38.4	11.6	47.0		
Effective Green, g (s)		24.6		35.4	35.4	35.4	3.0	38.4	38.4	11.6	47.0		
Actuated g/C Ratio		0.19		0.27	0.27	0.27	0.02	0.30	0.30	0.09	0.36		
Clearance Time (s)		5.0		5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0		
Vehicle Extension (s)		3.0		3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0		
Lane Grp Cap (vph)		653		934	507	431	40	1045	823	306	1266		
v/s Ratio Prot		c0.10		0.15	c0.21		0.01	c0.32		0.05	c0.31		
v/s Ratio Perm						0.05			0.04				
v/c Ratio		0.53		0.54	0.76	0.18	0.65	1.09	0.13	0.60	0.86		
Uniform Delay, d1		47.5		40.4	43.3	36.2	63.0	45.8	33.5	57.0	38.4		
Progression Factor		1.00		0.78	0.81	3.31	1.00	1.00	1.00	1.00	1.00		
Incremental Delay, d2		0.8		1.5	7.0	0.6	36.3	183.8	0.1	3.4	6.3		
Delay (s)		48.4		33.1	42.2	120.3	99.3	229.6	33.6	60.3	44.7		
Level of Service		D		C	D	F	F	F	C	E	D		
Approach Delay (s)		48.4			57.3			181.4			47.0		
Approach LOS		D			E			F			D		
Intersection Summary													
HCM 2000 Control Delay			97.3		HCM 2000 Level of Service				F				
HCM 2000 Volume to Capacity ratio			0.85										
Actuated Cycle Length (s)			130.0		Sum of lost time (s)				20.0				
Intersection Capacity Utilization			83.6%		ICU Level of Service				E				
Analysis Period (min)			60										

c Critical Lane Group

HCM Unsignalized Intersection Capacity Analysis

52: El Camino Real & Spring Street

05/01/2023

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	8	0	18	19	0	6	71	1207	23	31	1263	23
Future Volume (Veh/h)	8	0	18	19	0	6	71	1207	23	31	1263	23
Sign Control		Stop			Stop			Free			Free	
Grade		0%			0%			0%			0%	
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Hourly flow rate (vph)	8	0	18	19	0	6	71	1207	23	31	1263	23
Pedestrians												
Lane Width (ft)												
Walking Speed (ft/s)												
Percent Blockage												
Right turn flare (veh)												
Median type												
								None			None	
Median storage veh												
Upstream signal (ft)												
								507				
pX, platoon unblocked	0.76	0.76		0.76	0.76	0.76					0.76	
vC, conflicting volume	2088	2708	432	1862	2708	615	1286				1230	
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	1802	2617	432	1505	2617	0	1286				676	
tC, single (s)	7.5	6.5	6.9	7.5	6.5	6.9	4.1				4.1	
tC, 2 stage (s)												
tF (s)	3.5	4.0	3.3	3.5	4.0	3.3	2.2				2.2	
p0 queue free %	76	100	97	64	100	99	87				96	
cM capacity (veh/h)	33	15	571	53	15	826	535				694	
Direction, Lane #	EB 1	WB 1	NB 1	NB 2	NB 3	SB 1	SB 2	SB 3	SB 4			
Volume Total	26	25	71	805	425	31	505	505	276			
Volume Left	8	19	71	0	0	31	0	0	0			
Volume Right	18	6	0	0	23	0	0	0	23			
cSH	94	69	535	1700	1700	694	1700	1700	1700			
Volume to Capacity	0.28	0.36	0.13	0.47	0.25	0.04	0.30	0.30	0.16			
Queue Length 95th (ft)	28	40	11	0	0	4	0	0	0			
Control Delay (s)	57.5	86.1	12.8	0.0	0.0	10.4	0.0	0.0	0.0			
Lane LOS	F	F	B			B						
Approach Delay (s)	57.5	86.1	0.7			0.2						
Approach LOS	F	F										
Intersection Summary												
Average Delay			1.8									
Intersection Capacity Utilization			50.8%			ICU Level of Service				A		
Analysis Period (min)			60									

HCM Signalized Intersection Capacity Analysis

62: El Camino Real & Harbor Blvd (S)

05/01/2023



Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	84	18	28	1180	1439	94
Future Volume (vph)	84	18	28	1180	1439	94
Ideal Flow (vphp)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.5		4.5	4.5	4.5	
Lane Util. Factor	1.00		1.00	0.95	0.95	
Frt	0.98		1.00	1.00	0.99	
Flt Protected	0.96		0.95	1.00	1.00	
Satd. Flow (prot)	1746		1770	3539	3507	
Flt Permitted	0.96		0.95	1.00	1.00	
Satd. Flow (perm)	1746		1770	3539	3507	
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	84	18	28	1180	1439	94
RTOR Reduction (vph)	8	0	0	0	2	0
Lane Group Flow (vph)	94	0	28	1180	1531	0
Turn Type	Prot		Prot	NA	NA	
Protected Phases	4		5	2	6	
Permitted Phases						
Actuated Green, G (s)	7.3		2.6	50.1	43.0	
Effective Green, g (s)	7.3		2.6	50.1	43.0	
Actuated g/C Ratio	0.11		0.04	0.75	0.65	
Clearance Time (s)	4.5		4.5	4.5	4.5	
Vehicle Extension (s)	3.0		3.0	3.0	3.0	
Lane Grp Cap (vph)	191		69	2670	2271	
v/s Ratio Prot	c0.05		0.02	c0.33	c0.44	
v/s Ratio Perm						
v/c Ratio	0.49		0.41	0.44	0.67	
Uniform Delay, d1	27.8		31.1	3.0	7.3	
Progression Factor	1.00		1.00	1.00	1.00	
Incremental Delay, d2	2.0		3.9	0.1	0.8	
Delay (s)	29.8		35.1	3.1	8.1	
Level of Service	C		D	A	A	
Approach Delay (s)	29.8			3.9	8.1	
Approach LOS	C			A	A	

Intersection Summary




































HCM 2000 Control Delay	7.1	HCM 2000 Level of Service	A
HCM 2000 Volume to Capacity ratio	0.65		
Actuated Cycle Length (s)	66.4	Sum of lost time (s)	13.5
Intersection Capacity Utilization	56.0%	ICU Level of Service	B
Analysis Period (min)	60		

c Critical Lane Group

HCM Signalized Intersection Capacity Analysis

57: El Camino Real & Ralston Ave

05/01/2023

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	 	 		 	  	 	 	 	 	 	 	 
Traffic Volume (vph)	238	640	49	234	605	405	61	858	158	258	747	127
Future Volume (vph)	238	640	49	234	605	405	61	858	158	258	747	127
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0		4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	0.97	0.95		0.91	0.91	1.00	1.00	0.95	1.00	1.00	0.95	1.00
Frpb, ped/bikes	1.00	1.00		1.00	1.00	0.92	1.00	1.00	0.97	1.00	1.00	0.95
Flpb, ped/bikes	1.00	1.00		1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt	1.00	0.99		1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	3433	3486		1610	3384	1451	1770	3539	1532	1770	3539	1502
Flt Permitted	0.95	1.00		0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (perm)	3433	3486		1610	3384	1451	1770	3539	1532	1770	3539	1502
Peak-hour factor, PHF	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99
Adj. Flow (vph)	240	646	49	236	611	409	62	867	160	261	755	128
RTOR Reduction (vph)	0	4	0	0	0	266	0	0	72	0	0	63
Lane Group Flow (vph)	240	691	0	212	635	143	62	867	88	261	755	65
Confl. Peds. (#/hr)	52		38	38		52	33		14	14		33
Confl. Bikes (#/hr)			1						5			2
Turn Type	Split	NA		Split	NA	Perm	Prot	NA	Perm	Prot	NA	Perm
Protected Phases	8	8		4	4		1	6		5	2	
Permitted Phases						4			6			2
Actuated Green, G (s)	33.4	33.4		32.8	32.8	32.8	14.4	38.0	38.0	24.8	48.4	48.4
Effective Green, g (s)	33.4	33.4		32.8	32.8	32.8	14.4	38.0	38.0	24.8	48.4	48.4
Actuated g/C Ratio	0.23	0.23		0.23	0.23	0.23	0.10	0.26	0.26	0.17	0.33	0.33
Clearance Time (s)	4.0	4.0		4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Vehicle Extension (s)	3.0	3.0		3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	790	802		364	765	328	175	927	401	302	1181	501
v/s Ratio Prot	0.07	c0.20		0.13	c0.19		0.04	c0.24		c0.15	0.21	
v/s Ratio Perm						0.10			0.06			0.04
v/c Ratio	0.30	0.86		0.58	0.83	0.44	0.35	0.94	0.22	0.86	0.64	0.13
Uniform Delay, d1	46.2	53.6		50.0	53.4	48.2	61.0	52.3	41.9	58.5	40.9	33.6
Progression Factor	1.00	1.00		0.46	0.50	0.70	1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	1.0	11.8		1.7	5.5	0.7	1.2	17.5	1.3	26.5	2.7	0.5
Delay (s)	47.2	65.4		24.6	32.1	34.2	62.2	69.8	43.1	84.9	43.6	34.2
Level of Service	D	E		C	C	C	E	E	D	F	D	C
Approach Delay (s)		60.7			31.5			65.5			52.0	
Approach LOS		E			C			E			D	
Intersection Summary												
HCM 2000 Control Delay			51.3				HCM 2000 Level of Service				D	
HCM 2000 Volume to Capacity ratio			0.87									
Actuated Cycle Length (s)			145.0				Sum of lost time (s)				16.0	
Intersection Capacity Utilization			109.1%				ICU Level of Service				H	
Analysis Period (min)			15									

c Critical Lane Group

HCM Signalized Intersection Capacity Analysis

1: El Camino Real & Dwy/Harbor Blvd (N)

05/01/2023



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations				↖	↖	↖	↖	↕		↗	↗	↗
Traffic Volume (vph)	0	0	0	131	1	184	10	1032	324	692	1053	3
Future Volume (vph)	0	0	0	131	1	184	10	1032	324	692	1053	3
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)				5.0	5.0	5.0	4.5	5.0		5.0	5.0	
Lane Util. Factor				0.95	0.95	1.00	1.00	0.95		0.97	0.95	
Frt				1.00	1.00	0.85	1.00	0.96		1.00	1.00	
Flt Protected				0.95	0.95	1.00	0.95	1.00		0.95	1.00	
Satd. Flow (prot)				1681	1687	1583	1770	3412		3433	3538	
Flt Permitted				0.95	0.95	1.00	0.95	1.00		0.95	1.00	
Satd. Flow (perm)				1681	1687	1583	1770	3412		3433	3538	
Peak-hour factor, PHF	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. Flow (vph)	0	0	0	131	1	184	10	1032	324	692	1053	3
RTOR Reduction (vph)	0	0	0	0	0	163	0	22	0	0	0	0
Lane Group Flow (vph)	0	0	0	65	67	21	10	1334	0	692	1056	0
Turn Type				Perm	NA	Perm	Prot	NA		Prot	NA	
Protected Phases					8		5	2		1	6	
Permitted Phases				8		8						
Actuated Green, G (s)				14.8	14.8	14.8	1.0	53.6		46.6	99.7	
Effective Green, g (s)				14.8	14.8	14.8	1.0	53.6		46.6	99.7	
Actuated g/C Ratio				0.11	0.11	0.11	0.01	0.41		0.36	0.77	
Clearance Time (s)				5.0	5.0	5.0	4.5	5.0		5.0	5.0	
Vehicle Extension (s)				3.0	3.0	3.0	3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)				191	192	180	13	1406		1230	2713	
v/s Ratio Prot							0.01	c0.39		c0.20	0.30	
v/s Ratio Perm				0.04	0.04	0.01						
v/c Ratio				0.34	0.35	0.12	0.77	0.95		0.56	0.39	
Uniform Delay, d1				53.1	53.2	51.7	64.4	36.9		33.5	5.0	
Progression Factor				1.00	1.00	1.00	1.00	1.00		1.00	1.00	
Incremental Delay, d2				1.1	1.1	0.3	195.8	18.0		1.9	0.4	
Delay (s)				54.2	54.3	52.0	260.1	54.9		35.4	5.5	
Level of Service				D	D	D	F	D		D	A	
Approach Delay (s)		0.0			52.9			56.4			17.3	
Approach LOS		A			D			E			B	

Intersection Summary





















HCM 2000 Control Delay	36.1	HCM 2000 Level of Service	D
HCM 2000 Volume to Capacity ratio	0.71		
Actuated Cycle Length (s)	130.0	Sum of lost time (s)	15.0
Intersection Capacity Utilization	75.3%	ICU Level of Service	D
Analysis Period (min)	60		

c Critical Lane Group

HCM Unsignalized Intersection Capacity Analysis

2: El Camino Real & 5th Street/Dwy

05/01/2023

													
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR	
Lane Configurations													
Traffic Volume (veh/h)	0	0	32	1	0	4	35	1226	10	21	1127	7	
Future Volume (Veh/h)	0	0	32	1	0	4	35	1226	10	21	1127	7	
Sign Control	Stop			Stop			Free			Free			
Grade	0%			0%			0%			0%			
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
Hourly flow rate (vph)	0	0	32	1	0	4	35	1226	10	21	1127	7	
Pedestrians													
Lane Width (ft)													
Walking Speed (ft/s)													
Percent Blockage													
Right turn flare (veh)													
Median type													
None													
Median storage (veh)													
Upstream signal (ft)													
682													
pX, platoon unblocked	0.81	0.81	0.81	0.81	0.81		0.81						
vC, conflicting volume	1860	2478	567	1938	2477	618	1134			1236			
vC1, stage 1 conf vol													
vC2, stage 2 conf vol													
vCu, unblocked vol	1591	2356	0	1689	2354	618	695			1236			
tC, single (s)	7.5	6.5	6.9	7.5	6.5	6.9	4.1			4.1			
tC, 2 stage (s)													
tF (s)	3.5	4.0	3.3	3.5	4.0	3.3	2.2			2.2			
p0 queue free %	100	100	96	98	100	99	95			96			
cM capacity (veh/h)	54	26	878	44	26	432	726			559			
Direction, Lane #	EB 1	EB 2	WB 1	NB 1	NB 2	NB 3	SB 1	SB 2	SB 3				
Volume Total	0	32	5	35	817	419	21	751	383				
Volume Left	0	0	1	35	0	0	21	0	0				
Volume Right	0	32	4	0	0	10	0	0	7				
cSH	1700	878	157	726	1700	1700	559	1700	1700				
Volume to Capacity	0.00	0.04	0.03	0.05	0.48	0.25	0.04	0.44	0.23				
Queue Length 95th (ft)	0	3	2	4	0	0	3	0	0				
Control Delay (s)	0.0	9.3	28.6	10.2	0.0	0.0	11.7	0.0	0.0				
Lane LOS	A	A	D	B			B						
Approach Delay (s)	9.3		28.6	0.3			0.2						
Approach LOS	A		D										
Intersection Summary													
Average Delay			0.4										
Intersection Capacity Utilization			48.0%	ICU Level of Service					A				
Analysis Period (min)			60										

HCM Signalized Intersection Capacity Analysis

4: El Camino Real & Hull Dr

05/01/2023



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕	↗		↕	↗	↗	↕↗		↗	↕↗	
Traffic Volume (vph)	127	2	113	11	2	0	63	1074	16	8	1123	58
Future Volume (vph)	127	2	113	11	2	0	63	1074	16	8	1123	58
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.5	4.5		4.5		4.5	4.5		4.5	4.5	
Lane Util. Factor		1.00	1.00		1.00		1.00	0.95		1.00	0.91	
Frt		1.00	0.85		1.00		1.00	1.00		1.00	0.99	
Flt Protected		0.95	1.00		0.96		0.95	1.00		0.95	1.00	
Satd. Flow (prot)		1775	1583		1787		1770	3531		1770	5048	
Flt Permitted		0.95	1.00		0.96		0.95	1.00		0.95	1.00	
Satd. Flow (perm)		1775	1583		1787		1770	3531		1770	5048	
Peak-hour factor, PHF	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. Flow (vph)	127	2	113	11	2	0	63	1074	16	8	1123	58
RTOR Reduction (vph)	0	0	87	0	0	0	0	1	0	0	4	0
Lane Group Flow (vph)	0	129	26	0	13	0	63	1089	0	8	1177	0
Turn Type	Split	NA	Perm	Split	NA	Perm	Prot	NA		Prot	NA	
Protected Phases	4	4		8	8		5	2		1	6	
Permitted Phases			4			8						
Actuated Green, G (s)		16.2	16.2		0.9		6.9	35.8		0.8	29.7	
Effective Green, g (s)		16.2	16.2		0.9		6.9	35.8		0.8	29.7	
Actuated g/C Ratio		0.23	0.23		0.01		0.10	0.50		0.01	0.41	
Clearance Time (s)		4.5	4.5		4.5		4.5	4.5		4.5	4.5	
Vehicle Extension (s)		3.0	3.0		3.0		3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)		401	357		22		170	1763		19	2091	
v/s Ratio Prot		c0.07			c0.01		c0.04	c0.31		0.00	0.23	
v/s Ratio Perm			0.02									
v/c Ratio		0.32	0.07		0.59		0.37	0.62		0.42	0.56	
Uniform Delay, d1		23.2	21.8		35.2		30.4	13.0		35.2	16.0	
Progression Factor		1.00	1.00		1.00		1.00	1.00		1.00	1.00	
Incremental Delay, d2		0.5	0.1		40.8		1.4	0.7		14.9	0.4	
Delay (s)		23.6	21.9		76.0		31.7	13.6		50.2	16.4	
Level of Service		C	C		E		C	B		D	B	
Approach Delay (s)		22.8			76.0			14.6			16.6	
Approach LOS		C			E			B			B	

Intersection Summary

HCM 2000 Control Delay	16.6	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.54		
Actuated Cycle Length (s)	71.7	Sum of lost time (s)	18.0
Intersection Capacity Utilization	59.4%	ICU Level of Service	B
Analysis Period (min)	60		

c Critical Lane Group

HCM Signalized Intersection Capacity Analysis

5: El Camino Real & Holly St

05/01/2023



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↔↔		↔↔	↑	↔	↔	↑↑	↔↔	↔↔	↑↔	
Traffic Volume (vph)	47	596	20	414	195	134	23	910	460	231	946	53
Future Volume (vph)	47	596	20	414	195	134	23	910	460	231	946	53
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		5.0		5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	
Lane Util. Factor		0.95		0.97	1.00	1.00	1.00	0.95	0.88	0.97	0.95	
Frt		1.00		1.00	1.00	0.85	1.00	1.00	0.85	1.00	0.99	
Flt Protected		1.00		0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	
Satd. Flow (prot)		3511		3433	1863	1583	1770	3539	2787	3433	3511	
Flt Permitted		1.00		0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	
Satd. Flow (perm)		3511		3433	1863	1583	1770	3539	2787	3433	3511	
Peak-hour factor, PHF	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. Flow (vph)	47	596	20	414	195	134	23	910	460	231	946	53
RTOR Reduction (vph)	0	2	0	0	0	109	0	0	307	0	2	0
Lane Group Flow (vph)	0	661	0	414	195	25	23	910	153	231	997	0
Turn Type	Split	NA		Split	NA	Perm	Prot	NA	Perm	Prot	NA	
Protected Phases	4	4		8	8		5	2		1	6	
Permitted Phases						8			2			
Actuated Green, G (s)		29.0		23.9	23.9	23.9	4.9	43.3	43.3	13.8	52.2	
Effective Green, g (s)		29.0		23.9	23.9	23.9	4.9	43.3	43.3	13.8	52.2	
Actuated g/C Ratio		0.22		0.18	0.18	0.18	0.04	0.33	0.33	0.11	0.40	
Clearance Time (s)		5.0		5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	
Vehicle Extension (s)		3.0		3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	
Lane Grp Cap (vph)		783		631	342	291	66	1178	928	364	1409	
v/s Ratio Prot		c0.19		c0.12	0.10		0.01	c0.26		c0.07	c0.28	
v/s Ratio Perm						0.02			0.05			
v/c Ratio		0.84		0.66	0.57	0.08	0.35	0.77	0.17	0.63	0.71	
Uniform Delay, d1		48.3		49.2	48.4	44.0	61.0	38.9	30.6	55.7	32.5	
Progression Factor		1.00		0.69	0.67	2.28	1.00	1.00	1.00	1.00	1.00	
Incremental Delay, d2		9.0		4.3	5.5	0.5	3.2	3.3	0.1	3.7	1.7	
Delay (s)		57.4		38.1	37.9	100.6	64.2	42.2	30.7	59.3	34.2	
Level of Service		E		D	D	F	E	D	C	E	C	
Approach Delay (s)		57.4			49.3			38.8			38.9	
Approach LOS		E			D			D			D	




















Intersection Summary

HCM 2000 Control Delay	43.8	HCM 2000 Level of Service	D
HCM 2000 Volume to Capacity ratio	0.75		
Actuated Cycle Length (s)	130.0	Sum of lost time (s)	20.0
Intersection Capacity Utilization	79.0%	ICU Level of Service	D
Analysis Period (min)	60		

c Critical Lane Group

HCM Unsignalized Intersection Capacity Analysis
52: El Camino Real & Spring Street

05/01/2023

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	32	0	15	0	0	0	22	1163	0	13	1206	17
Future Volume (Veh/h)	32	0	15	0	0	0	22	1163	0	13	1206	17
Sign Control		Stop			Stop			Free			Free	
Grade		0%			0%			0%			0%	
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Hourly flow rate (vph)	32	0	15	0	0	0	22	1163	0	13	1206	17
Pedestrians												
Lane Width (ft)												
Walking Speed (ft/s)												
Percent Blockage												
Right turn flare (veh)												
Median type												
								None			None	
Median storage veh												
Upstream signal (ft)												
								508				
pX, platoon unblocked	0.78	0.78		0.78	0.78	0.78					0.78	
vC, conflicting volume	1866	2448	410	1650	2456	582	1223				1163	
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	1542	2290	410	1264	2301	0	1223				638	
tC, single (s)	7.5	6.5	6.9	7.5	6.5	6.9	4.1				4.1	
tC, 2 stage (s)												
tF (s)	3.5	4.0	3.3	3.5	4.0	3.3	2.2				2.2	
p0 queue free %	45	100	97	100	100	100	96				98	
cM capacity (veh/h)	58	28	590	92	28	843	566				732	
Direction, Lane #	EB 1	WB 1	NB 1	NB 2	NB 3	SB 1	SB 2	SB 3	SB 4			
Volume Total	47	0	22	775	388	13	482	482	258			
Volume Left	32	0	22	0	0	13	0	0	0			
Volume Right	15	0	0	0	0	0	0	0	17			
cSH	82	1700	566	1700	1700	732	1700	1700	1700			
Volume to Capacity	0.57	0.00	0.04	0.46	0.23	0.02	0.28	0.28	0.15			
Queue Length 95th (ft)	85	0	3	0	0	1	0	0	0			
Control Delay (s)	104.2	0.0	11.6	0.0	0.0	10.0	0.0	0.0	0.0			
Lane LOS	F	A	B			B						
Approach Delay (s)	104.2	0.0	0.2			0.1						
Approach LOS	F	A										
Intersection Summary												
Average Delay			2.1									
Intersection Capacity Utilization			42.1%		ICU Level of Service				A			
Analysis Period (min)			60									

HCM Signalized Intersection Capacity Analysis

62: El Camino Real & Harbor Blvd (N)

05/01/2023



Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	112	18	20	1214	1121	55
Future Volume (vph)	112	18	20	1214	1121	55
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.5		4.5	4.5	4.5	
Lane Util. Factor	1.00		1.00	0.95	0.95	
Frt	0.98		1.00	1.00	0.99	
Flt Protected	0.96		0.95	1.00	1.00	
Satd. Flow (prot)	1752		1770	3539	3514	
Flt Permitted	0.96		0.95	1.00	1.00	
Satd. Flow (perm)	1752		1770	3539	3514	
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	112	18	20	1214	1121	55
RTOR Reduction (vph)	6	0	0	0	2	0
Lane Group Flow (vph)	124	0	20	1214	1174	0
Turn Type	Perm		Prot	NA	NA	
Protected Phases			5	2	6	
Permitted Phases	4					
Actuated Green, G (s)	10.0		1.1	42.5	36.9	
Effective Green, g (s)	10.0		1.1	42.5	36.9	
Actuated g/C Ratio	0.16		0.02	0.69	0.60	
Clearance Time (s)	4.5		4.5	4.5	4.5	
Vehicle Extension (s)	3.0		3.0	3.0	3.0	
Lane Grp Cap (vph)	284		31	2445	2108	
v/s Ratio Prot			0.01	c0.34	c0.33	
v/s Ratio Perm	c0.07					
v/c Ratio	0.44		0.65	0.50	0.56	
Uniform Delay, d1	23.2		30.0	4.5	7.4	
Progression Factor	1.00		1.00	1.00	1.00	
Incremental Delay, d2	1.1		43.9	0.2	0.3	
Delay (s)	24.3		73.9	4.6	7.7	
Level of Service	C		E	A	A	
Approach Delay (s)	24.3			5.7	7.7	
Approach LOS	C			A	A	

Intersection Summary

























HCM 2000 Control Delay	7.6	HCM 2000 Level of Service	A
HCM 2000 Volume to Capacity ratio	0.55		
Actuated Cycle Length (s)	61.5	Sum of lost time (s)	13.5
Intersection Capacity Utilization	48.4%	ICU Level of Service	A
Analysis Period (min)	60		

c Critical Lane Group

HCM Signalized Intersection Capacity Analysis

57: El Camino Real & Ralston Ave

05/01/2023























												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	113	952	37	215	752	216	123	549	264	474	828	90
Future Volume (vph)	113	952	37	215	752	216	123	549	264	474	828	90
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.5	4.5	4.0	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5
Lane Util. Factor	0.91	0.91	1.00	0.91	0.91	1.00	1.00	0.95	1.00	1.00	0.95	1.00
Frt	1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	1610	3388	1583	1610	3385	1583	1770	3539	1583	1770	3539	1583
Flt Permitted	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (perm)	1610	3388	1583	1610	3385	1583	1770	3539	1583	1770	3539	1583
Peak-hour factor, PHF	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. Flow (vph)	113	952	37	215	752	216	123	549	264	474	828	90
RTOR Reduction (vph)	0	0	27	0	0	144	0	0	193	0	0	45
Lane Group Flow (vph)	102	963	10	193	774	72	123	549	71	474	828	45
Turn Type	Split	NA	Perm	Split	NA	Perm	Prot	NA	Perm	Prot	NA	Perm
Protected Phases	8	8		4	4		1	6		5	2	
Permitted Phases			8			4			6			2
Actuated Green, G (s)	36.0	36.0	36.0	26.0	26.0	26.0	11.8	30.0	30.0	32.0	50.2	50.2
Effective Green, g (s)	35.5	35.5	36.0	25.5	25.5	25.5	11.3	29.5	29.5	31.5	49.7	49.7
Actuated g/C Ratio	0.25	0.25	0.26	0.18	0.18	0.18	0.08	0.21	0.21	0.22	0.36	0.36
Clearance Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	408	859	407	293	616	288	142	745	333	398	1256	561
v/s Ratio Prot	0.06	c0.28		0.12	c0.23		0.07	c0.16		c0.27	0.23	
v/s Ratio Perm			0.01			0.05			0.04			0.03
v/c Ratio	0.25	1.12	0.02	0.66	1.26	0.25	0.87	0.74	0.21	1.19	0.66	0.08
Uniform Delay, d1	41.6	52.2	38.9	53.2	57.2	49.1	63.6	51.6	45.6	54.2	38.0	30.0
Progression Factor	1.00	1.00	1.00	0.31	0.34	0.32	1.00	1.00	1.00	0.80	0.69	0.55
Incremental Delay, d2	1.5	69.7	0.1	2.2	121.0	0.2	38.7	3.8	0.3	104.2	1.0	0.0
Delay (s)	43.1	121.9	39.0	18.5	140.5	16.0	102.3	55.4	46.0	147.3	27.2	16.4
Level of Service	D	F	D	B	F	B	F	E	D	F	C	B
Approach Delay (s)		111.8			97.9			58.9			67.4	
Approach LOS		F			F			E			E	
Intersection Summary												
HCM 2000 Control Delay			84.1			HCM 2000 Level of Service			F			
HCM 2000 Volume to Capacity ratio			1.07									
Actuated Cycle Length (s)			140.0	Sum of lost time (s)					18.0			
Intersection Capacity Utilization			110.9%	ICU Level of Service			H					
Analysis Period (min)			15									

c Critical Lane Group

HCM Signalized Intersection Capacity Analysis

1: El Camino Real & dwy/Harbor Blvd (N)




















05/01/2023

													
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR	
Lane Configurations													
Traffic Volume (vph)	0	0	0	424	38	463	5	1080	199	275	1256	2	
Future Volume (vph)	0	0	0	424	38	463	5	1080	199	275	1256	2	
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	
Total Lost time (s)				5.0	5.0	5.0	4.5	5.0		5.0	5.0		
Lane Util. Factor				0.95	0.95	1.00	1.00	0.95		0.97	0.95		
Frt				1.00	1.00	0.85	1.00	0.98		1.00	1.00		
Flt Protected				0.95	0.96	1.00	0.95	1.00		0.95	1.00		
Satd. Flow (prot)				1681	1699	1583	1770	3457		3433	3538		
Flt Permitted				0.76	0.76	1.00	0.95	1.00		0.95	1.00		
Satd. Flow (perm)				1340	1346	1583	1770	3457		3433	3538		
Peak-hour factor, PHF	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. Flow (vph)	0	0	0	424	38	463	5	1080	199	275	1256	2	
RTOR Reduction (vph)	0	0	0	0	0	197	0	10	0	0	0	0	
Lane Group Flow (vph)	0	0	0	229	233	266	5	1269	0	275	1258	0	
Turn Type				Perm	NA	Perm	Prot	NA		Prot	NA		
Protected Phases		4			8		5	2		1	6		
Permitted Phases	4			8		8							
Actuated Green, G (s)				33.2	33.2	33.2	1.1	65.1		31.7	96.2		
Effective Green, g (s)				33.2	33.2	33.2	1.1	65.1		31.7	96.2		
Actuated g/C Ratio				0.23	0.23	0.23	0.01	0.45		0.22	0.66		
Clearance Time (s)				5.0	5.0	5.0	4.5	5.0		5.0	5.0		
Vehicle Extension (s)				3.0	3.0	3.0	3.0	3.0		3.0	3.0		
Lane Grp Cap (vph)				306	308	362	13	1552		750	2347		
v/s Ratio Prot							0.00	c0.37		c0.08	c0.36		
v/s Ratio Perm				0.17	c0.17	0.17							
v/c Ratio				0.75	0.76	0.74	0.38	0.82		0.37	0.54		
Uniform Delay, d1				52.0	52.1	51.8	71.6	34.8		48.1	12.7		
Progression Factor				1.00	1.00	1.00	1.00	1.00		1.00	1.99		
Incremental Delay, d2				10.2	10.8	7.9	18.7	3.6		1.2	0.8		
Delay (s)				62.2	62.9	59.8	90.3	38.3		49.2	26.1		
Level of Service				E	E	E	F	D		D	C		
Approach Delay (s)		0.0			61.2			38.6			30.2		
Approach LOS		A			E			D			C		
Intersection Summary													
HCM 2000 Control Delay			40.7	HCM 2000 Level of Service							D		
HCM 2000 Volume to Capacity ratio			0.73										
Actuated Cycle Length (s)			145.0	Sum of lost time (s)						15.0			
Intersection Capacity Utilization			73.2%	ICU Level of Service						D			
Analysis Period (min)			60										
c Critical Lane Group													

HCM Unsignalized Intersection Capacity Analysis

2: El Camino Real & 5th Street/Dwy























05/01/2023

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	1	0	22	0	0	6	94	1272	3	46	1484	7
Future Volume (Veh/h)	1	0	22	0	0	6	94	1272	3	46	1484	7
Sign Control	Stop			Stop			Free			Free		
Grade	0%			0%			0%			0%		
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Hourly flow rate (vph)	1	0	22	0	0	6	94	1272	3	46	1484	7
Pedestrians												
Lane Width (ft)												
Walking Speed (ft/s)												
Percent Blockage												
Right turn flare (veh)												
Median type												
Median storage veh												
Upstream signal (ft)												
pX, platoon unblocked												
vC, conflicting volume												
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol												
tC, single (s)												
tC, 2 stage (s)												
tF (s)												
p0 queue free %												
cM capacity (veh/h)												
Direction, Lane #	EB 1	EB 2	WB 1	NB 1	NB 2	NB 3	SB 1	SB 2	SB 3			
Volume Total	1	22	6	94	848	427	46	989	502			
Volume Left	1	0	0	94	0	0	46	0	0			
Volume Right	0	22	6	0	0	3	0	0	7			
cSH	129	742	843	563	1700	1700	647	1700	1700			
Volume to Capacity	0.01	0.03	0.01	0.17	0.50	0.25	0.07	0.58	0.30			
Queue Length 95th (ft)	1	2	1	15	0	0	6	0	0			
Control Delay (s)	33.1	10.0	9.3	12.7	0.0	0.0	11.0	0.0	0.0			
Lane LOS	D	B	A	B				B				
Approach Delay (s)	11.0	9.3		0.9				0.3				
Approach LOS	B	A										
Intersection Summary												
Average Delay												
Intersection Capacity Utilization												
Analysis Period (min)												

HCM Signalized Intersection Capacity Analysis

4: El Camino Real & Hull Dr

05/01/2023






















												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	67	0	56	34	19	4	100	1274	50	14	1276	115
Future Volume (vph)	67	0	56	34	19	4	100	1274	50	14	1276	115
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.5	4.5		4.5	4.5	4.5	4.5		4.5	4.5	
Lane Util. Factor		1.00	1.00		1.00	1.00	1.00	0.95		1.00	0.91	
Frt		1.00	0.85		1.00	0.85	1.00	0.99		1.00	0.99	
Flt Protected		0.95	1.00		0.97	1.00	0.95	1.00		0.95	1.00	
Satd. Flow (prot)		1770	1583		1805	1583	1770	3519		1770	5022	
Flt Permitted		0.95	1.00		0.97	1.00	0.95	1.00		0.95	1.00	
Satd. Flow (perm)		1770	1583		1805	1583	1770	3519		1770	5022	
Peak-hour factor, PHF	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. Flow (vph)	67	0	56	34	19	4	100	1274	50	14	1276	115
RTOR Reduction (vph)	0	0	49	0	0	4	0	2	0	0	7	0
Lane Group Flow (vph)	0	67	7	0	53	0	100	1322	0	14	1384	0
Turn Type	Split	NA	Perm	Split	NA	Perm	Prot	NA		Prot	NA	
Protected Phases	4	4		8	8		5	2		1	6	
Permitted Phases			4			8						
Actuated Green, G (s)		11.8	11.8		6.2	6.2	10.9	51.5		1.5	42.1	
Effective Green, g (s)		11.8	11.8		6.2	6.2	10.9	51.5		1.5	42.1	
Actuated g/C Ratio		0.13	0.13		0.07	0.07	0.12	0.58		0.02	0.47	
Clearance Time (s)		4.5	4.5		4.5	4.5	4.5	4.5		4.5	4.5	
Vehicle Extension (s)		3.0	3.0		3.0	3.0	3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)		234	209		125	110	216	2036		29	2375	
v/s Ratio Prot		c0.04			c0.03		c0.06	c0.38		0.01	0.28	
v/s Ratio Perm			0.00			0.00						
v/c Ratio		0.29	0.04		0.42	0.00	0.46	0.65		0.48	0.58	
Uniform Delay, d1		34.8	33.6		39.7	38.5	36.3	12.7		43.4	17.1	
Progression Factor		1.00	1.00		1.00	1.00	1.00	1.00		1.00	1.00	
Incremental Delay, d2		0.7	0.1		2.3	0.0	1.6	0.7		12.6	0.4	
Delay (s)		35.5	33.7		42.0	38.5	37.9	13.4		55.9	17.4	
Level of Service		D	C		D	D	D	B		E	B	
Approach Delay (s)		34.7			41.8			15.1			17.8	
Approach LOS		C			D			B			B	
Intersection Summary												
HCM 2000 Control Delay			17.7				HCM 2000 Level of Service				B	
HCM 2000 Volume to Capacity ratio			0.58									
Actuated Cycle Length (s)			89.0				Sum of lost time (s)				18.0	
Intersection Capacity Utilization			62.6%				ICU Level of Service				B	
Analysis Period (min)			60									

c Critical Lane Group

HCM Signalized Intersection Capacity Analysis

5: El Camino Real & Holly St

05/01/2023




















													
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR	
Lane Configurations													
Traffic Volume (vph)	93	236	25	558	383	287	26	1166	375	178	1148	77	
Future Volume (vph)	93	236	25	558	383	287	26	1166	375	178	1148	77	
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	
Total Lost time (s)		5.0		5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0		
Lane Util. Factor		0.95		0.97	1.00	1.00	1.00	0.95	0.88	0.97	0.95		
Frt		0.99		1.00	1.00	0.85	1.00	1.00	0.85	1.00	0.99		
Flt Protected		0.99		0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00		
Satd. Flow (prot)		3456		3433	1863	1583	1770	3539	2787	3433	3506		
Flt Permitted		0.99		0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00		
Satd. Flow (perm)		3456		3433	1863	1583	1770	3539	2787	3433	3506		
Peak-hour factor, PHF	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. Flow (vph)	93	236	25	558	383	287	26	1166	375	178	1148	77	
RTOR Reduction (vph)	0	5	0	0	0	209	0	0	264	0	4	0	
Lane Group Flow (vph)	0	349	0	558	383	78	26	1166	111	178	1221	0	
Turn Type	Split	NA		Split	NA	Perm	Prot	NA	Perm	Prot	NA		
Protected Phases	4	4		8	8		5	2		1	6		
Permitted Phases						8			2				
Actuated Green, G (s)		24.6		35.4	35.4	35.4	3.0	38.5	38.5	11.5	47.0		
Effective Green, g (s)		24.6		35.4	35.4	35.4	3.0	38.5	38.5	11.5	47.0		
Actuated g/C Ratio		0.19		0.27	0.27	0.27	0.02	0.30	0.30	0.09	0.36		
Clearance Time (s)		5.0		5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0		
Vehicle Extension (s)		3.0		3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0		
Lane Grp Cap (vph)		653		934	507	431	40	1048	825	303	1267		
v/s Ratio Prot		c0.10		0.16	c0.21		0.01	c0.33		0.05	c0.35		
v/s Ratio Perm						0.05			0.04				
v/c Ratio		0.53		0.60	0.76	0.18	0.65	1.11	0.13	0.59	0.96		
Uniform Delay, d1		47.5		41.1	43.3	36.2	63.0	45.8	33.5	57.0	40.7		
Progression Factor		1.00		0.79	0.81	3.32	1.00	1.00	1.00	1.00	1.00		
Incremental Delay, d2		0.8		1.9	7.0	0.6	36.3	218.4	0.1	2.9	25.5		
Delay (s)		48.4		34.5	42.2	120.8	99.3	264.2	33.6	59.9	66.1		
Level of Service		D		C	D	F	F	F	C	E	E		
Approach Delay (s)		48.4			57.1			206.3			65.3		
Approach LOS		D			E			F			E		
Intersection Summary													
HCM 2000 Control Delay			110.3		HCM 2000 Level of Service				F				
HCM 2000 Volume to Capacity ratio			0.87										
Actuated Cycle Length (s)			130.0		Sum of lost time (s)				20.0				
Intersection Capacity Utilization			85.2%		ICU Level of Service				E				
Analysis Period (min)			60										

c Critical Lane Group

HCM Unsignalized Intersection Capacity Analysis

52: El Camino Real & Spring Street

05/01/2023

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	11	0	18	0	0	0	71	1260	0	8	1411	27
Future Volume (Veh/h)	11	0	18	0	0	0	71	1260	0	8	1411	27
Sign Control		Stop			Stop			Free			Free	
Grade		0%			0%			0%			0%	
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Hourly flow rate (vph)	11	0	18	0	0	0	71	1260	0	8	1411	27
Pedestrians												
Lane Width (ft)												
Walking Speed (ft/s)												
Percent Blockage												
Right turn flare (veh)												
Median type												
Median storage veh												
Upstream signal (ft)												
pX, platoon unblocked	0.75	0.75		0.75	0.75	0.75					0.75	
vC, conflicting volume	2212	2842	484	1906	2856	630	1438			1260		
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	1950	2790	484	1541	2808	0	1438			679		
tC, single (s)	7.5	6.5	6.9	7.5	6.5	6.9	4.1			4.1		
tC, 2 stage (s)												
tF (s)	3.5	4.0	3.3	3.5	4.0	3.3	2.2			2.2		
p0 queue free %	57	100	97	100	100	100	85			99		
cM capacity (veh/h)	25	12	529	50	11	813	468			681		
Direction, Lane #	EB 1	WB 1	NB 1	NB 2	NB 3	SB 1	SB 2	SB 3	SB 4			
Volume Total	29	0	71	840	420	8	564	564	309			
Volume Left	11	0	71	0	0	8	0	0	0			
Volume Right	18	0	0	0	0	0	0	0	27			
cSH	62	1700	468	1700	1700	681	1700	1700	1700			
Volume to Capacity	0.47	0.36	0.15	0.49	0.25	0.01	0.33	0.33	0.18			
Queue Length 95th (ft)	58	0	13	0	0	1	0	0	0			
Control Delay (s)	111.8	0.0	14.1	0.0	0.0	10.3	0.0	0.0	0.0			
Lane LOS	F	A	B			B						
Approach Delay (s)	111.8	0.0	0.8			0.1						
Approach LOS	F	A										
Intersection Summary												
Average Delay			1.5									
Intersection Capacity Utilization			51.5%		ICU Level of Service				A			
Analysis Period (min)			60									

HCM Signalized Intersection Capacity Analysis

62: El Camino Real & Harbor Blvd (S)

05/01/2023



Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	84	18	28	1219	1558	94
Future Volume (vph)	84	18	28	1219	1558	94
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.5		4.5	4.5	4.5	
Lane Util. Factor	1.00		1.00	0.95	0.95	
Frt	0.98		1.00	1.00	0.99	
Flt Protected	0.96		0.95	1.00	1.00	
Satd. Flow (prot)	1746		1770	3539	3509	
Flt Permitted	0.96		0.95	1.00	1.00	
Satd. Flow (perm)	1746		1770	3539	3509	
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	84	18	28	1219	1558	94
RTOR Reduction (vph)	8	0	0	0	2	0
Lane Group Flow (vph)	94	0	28	1219	1650	0
Turn Type	Prot		Prot	NA	NA	
Protected Phases	4		5	2	6	
Permitted Phases						
Actuated Green, G (s)	7.3		2.6	50.1	43.0	
Effective Green, g (s)	7.3		2.6	50.1	43.0	
Actuated g/C Ratio	0.11		0.04	0.75	0.65	
Clearance Time (s)	4.5		4.5	4.5	4.5	
Vehicle Extension (s)	3.0		3.0	3.0	3.0	
Lane Grp Cap (vph)	191		69	2670	2272	
v/s Ratio Prot	c0.05		0.02	c0.34	c0.47	
v/s Ratio Perm						
v/c Ratio	0.49		0.41	0.46	0.73	
Uniform Delay, d1	27.8		31.1	3.1	7.8	
Progression Factor	1.00		1.00	1.00	1.00	
Incremental Delay, d2	2.0		3.9	0.1	1.2	
Delay (s)	29.8		35.1	3.2	9.0	
Level of Service	C		D	A	A	
Approach Delay (s)	29.8			3.9	9.0	
Approach LOS	C			A	A	

Intersection Summary

























HCM 2000 Control Delay	7.6	HCM 2000 Level of Service	A
HCM 2000 Volume to Capacity ratio	0.70		
Actuated Cycle Length (s)	66.4	Sum of lost time (s)	13.5
Intersection Capacity Utilization	59.3%	ICU Level of Service	B
Analysis Period (min)	60		

c Critical Lane Group

HCM Signalized Intersection Capacity Analysis

57: El Camino Real & Ralston Ave

05/01/2023

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	249	706	66	303	780	546	87	891	162	286	748	133
Future Volume (vph)	249	706	66	303	780	546	87	891	162	286	748	133
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	0.91	0.91	1.00	0.91	0.91	1.00	1.00	0.95	1.00	1.00	0.95	1.00
Frpb, ped/bikes	1.00	1.00	0.89	1.00	1.00	0.86	1.00	1.00	0.95	1.00	1.00	0.91
Flpb, ped/bikes	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt	1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	1610	3384	1416	1610	3384	1363	1770	3539	1504	1770	3539	1434
Flt Permitted	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (perm)	1610	3384	1416	1610	3384	1363	1770	3539	1504	1770	3539	1434
Peak-hour factor, PHF	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. Flow (vph)	249	706	66	303	780	546	87	891	162	286	748	133
RTOR Reduction (vph)	0	0	51	0	0	273	0	0	68	0	0	67
Lane Group Flow (vph)	224	731	15	273	810	273	87	891	94	286	748	66
Confl. Peds. (#/hr)	52		38	38		52	33		14	14		33
Confl. Bikes (#/hr)			1						5			2
Turn Type	Split	NA	Perm	Split	NA	Perm	Prot	NA	Perm	Prot	NA	Perm
Protected Phases	8	8		4	4		1	6		5	2	
Permitted Phases			8			4			6			2
Actuated Green, G (s)	35.0	35.0	35.0	31.0	31.0	31.0	18.0	42.0	42.0	26.0	50.0	50.0
Effective Green, g (s)	35.0	35.0	35.0	31.0	31.0	31.0	18.0	42.0	42.0	26.0	50.0	50.0
Actuated g/C Ratio	0.23	0.23	0.23	0.21	0.21	0.21	0.12	0.28	0.28	0.17	0.33	0.33
Clearance Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	375	789	330	332	699	281	212	990	421	306	1179	478
v/s Ratio Prot	0.14	c0.22		0.17	c0.24		0.05	c0.25		c0.16	0.21	
v/s Ratio Perm			0.01			0.20			0.06			0.05
v/c Ratio	0.60	0.93	0.05	0.82	1.16	0.97	0.41	0.90	0.22	0.93	0.63	0.14
Uniform Delay, d1	51.2	56.2	44.6	56.9	59.5	59.1	61.1	52.0	41.5	61.2	42.3	35.0
Progression Factor	1.00	1.00	1.00	0.48	0.48	0.51	1.00	1.00	1.00	0.73	0.69	0.47
Incremental Delay, d2	6.9	18.5	0.3	6.0	77.7	25.3	1.3	12.8	1.2	20.0	1.1	0.2
Delay (s)	58.1	74.7	44.8	33.2	106.4	55.5	62.4	64.7	42.7	64.5	30.2	16.6
Level of Service	E	E	D	C	F	E	E	E	D	E	C	B
Approach Delay (s)		69.1			77.0			61.4			37.0	
Approach LOS		E			E			E			D	
Intersection Summary												
HCM 2000 Control Delay			62.4				HCM 2000 Level of Service				E	
HCM 2000 Volume to Capacity ratio			0.97									
Actuated Cycle Length (s)			150.0			Sum of lost time (s)				16.0		
Intersection Capacity Utilization			95.7%			ICU Level of Service				F		
Analysis Period (min)			15									

c Critical Lane Group

HCM Signalized Intersection Capacity Analysis

1: El Camino Real & Dwy/Harbor Blvd (N)

05/01/2023























Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations				↖	↖	↖	↖	↕		↗	↗	↗
Traffic Volume (vph)	0	0	0	134	1	184	10	1061	327	692	1057	3
Future Volume (vph)	0	0	0	134	1	184	10	1061	327	692	1057	3
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)				5.0	5.0	5.0	4.5	5.0		5.0	5.0	
Lane Util. Factor				0.95	0.95	1.00	1.00	0.95		0.97	0.95	
Frt				1.00	1.00	0.85	1.00	0.96		1.00	1.00	
Flt Protected				0.95	0.95	1.00	0.95	1.00		0.95	1.00	
Satd. Flow (prot)				1681	1687	1583	1770	3414		3433	3538	
Flt Permitted				0.95	0.95	1.00	0.95	1.00		0.95	1.00	
Satd. Flow (perm)				1681	1687	1583	1770	3414		3433	3538	
Peak-hour factor, PHF	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. Flow (vph)	0	0	0	134	1	184	10	1061	327	692	1057	3
RTOR Reduction (vph)	0	0	0	0	0	163	0	21	0	0	0	0
Lane Group Flow (vph)	0	0	0	67	68	21	10	1367	0	692	1060	0
Turn Type				Perm	NA	Perm	Prot	NA		Prot	NA	
Protected Phases					8		5	2		1	6	
Permitted Phases				8		8						
Actuated Green, G (s)				14.9	14.9	14.9	1.0	54.6		45.5	99.6	
Effective Green, g (s)				14.9	14.9	14.9	1.0	54.6		45.5	99.6	
Actuated g/C Ratio				0.11	0.11	0.11	0.01	0.42		0.35	0.77	
Clearance Time (s)				5.0	5.0	5.0	4.5	5.0		5.0	5.0	
Vehicle Extension (s)				3.0	3.0	3.0	3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)				192	193	181	13	1433		1201	2710	
v/s Ratio Prot							0.01	c0.40		c0.20	0.30	
v/s Ratio Perm				0.04	0.04	0.01						
v/c Ratio				0.35	0.35	0.12	0.77	0.95		0.58	0.39	
Uniform Delay, d1				53.1	53.1	51.6	64.4	36.5		34.4	5.1	
Progression Factor				1.00	1.00	1.00	1.00	1.00		1.00	1.00	
Incremental Delay, d2				1.1	1.1	0.3	195.8	19.3		2.0	0.4	
Delay (s)				54.2	54.2	51.9	260.1	55.8		36.4	5.5	
Level of Service				D	D	D	F	E		D	A	
Approach Delay (s)		0.0			52.9			57.2			17.7	
Approach LOS		A			D			E			B	
Intersection Summary												
HCM 2000 Control Delay			36.9	HCM 2000 Level of Service				D				
HCM 2000 Volume to Capacity ratio			0.73									
Actuated Cycle Length (s)			130.0	Sum of lost time (s)				15.0				
Intersection Capacity Utilization			76.2%	ICU Level of Service				D				
Analysis Period (min)			60									

c Critical Lane Group

HCM Unsignalized Intersection Capacity Analysis
 2: El Camino Real & 5th Street/Dwy























05/01/2023

													
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR	
Lane Configurations													
Traffic Volume (veh/h)	0	0	31	1	0	4	33	1258	10	21	1134	7	
Future Volume (Veh/h)	0	0	31	1	0	4	33	1258	10	21	1134	7	
Sign Control	Stop			Stop			Free			Free			
Grade	0%			0%			0%			0%			
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
Hourly flow rate (vph)	0	0	31	1	0	4	33	1258	10	21	1134	7	
Pedestrians													
Lane Width (ft)													
Walking Speed (ft/s)													
Percent Blockage													
Right turn flare (veh)													
Median type													
Median storage veh													
Upstream signal (ft)													
pX, platoon unblocked	0.81	0.81	0.81	0.81	0.81		0.81						
vC, conflicting volume	1878	2514	570	1969	2512	634	1141			1268			
vC1, stage 1 conf vol													
vC2, stage 2 conf vol													
vCu, unblocked vol	1612	2398	0	1724	2396	634	700			1268			
tC, single (s)	7.5	6.5	6.9	7.5	6.5	6.9	4.1			4.1			
tC, 2 stage (s)													
tF (s)	3.5	4.0	3.3	3.5	4.0	3.3	2.2			2.2			
p0 queue free %	100	100	96	98	100	99	95			96			
cM capacity (veh/h)	52	24	876	42	25	422	722			544			
Direction, Lane #	EB 1	EB 2	WB 1	NB 1	NB 2	NB 3	SB 1	SB 2	SB 3				
Volume Total	0	31	5	33	839	429	21	756	385				
Volume Left	0	0	1	33	0	0	21	0	0				
Volume Right	0	31	4	0	0	10	0	0	7				
cSH	1700	876	150	722	1700	1700	544	1700	1700				
Volume to Capacity	0.00	0.04	0.03	0.05	0.49	0.25	0.04	0.44	0.23				
Queue Length 95th (ft)	0	3	3	4	0	0	3	0	0				
Control Delay (s)	0.0	9.3	29.9	10.2	0.0	0.0	11.9	0.0	0.0				
Lane LOS	A	A	D	B			B						
Approach Delay (s)	9.3		29.9	0.3			0.2						
Approach LOS	A		D										
Intersection Summary													
Average Delay			0.4										
Intersection Capacity Utilization			48.2%	ICU Level of Service					A				
Analysis Period (min)			60										

HCM Signalized Intersection Capacity Analysis

4: El Camino Real & Hull Dr

05/01/2023























												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	124	2	113	10	0	0	63	1082	16	8	1157	59
Future Volume (vph)	124	2	113	10	0	0	63	1082	16	8	1157	59
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.5	4.5		4.5		4.5	4.5		4.5	4.5	
Lane Util. Factor		1.00	1.00		1.00		1.00	0.95		1.00	0.91	
Frt		1.00	0.85		1.00		1.00	1.00		1.00	0.99	
Flt Protected		0.95	1.00		0.95		0.95	1.00		0.95	1.00	
Satd. Flow (prot)		1775	1583		1770		1770	3531		1770	5048	
Flt Permitted		0.95	1.00		0.95		0.95	1.00		0.95	1.00	
Satd. Flow (perm)		1775	1583		1770		1770	3531		1770	5048	
Peak-hour factor, PHF	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. Flow (vph)	124	2	113	10	0	0	63	1082	16	8	1157	59
RTOR Reduction (vph)	0	0	88	0	0	0	0	1	0	0	4	0
Lane Group Flow (vph)	0	126	25	0	10	0	63	1098	0	8	1212	0
Turn Type	Split	NA	Perm	Split	NA	Perm	Prot	NA		Prot	NA	
Protected Phases	4	4		8	8		5	2		1	6	
Permitted Phases			4			8						
Actuated Green, G (s)		16.1	16.1		0.9		6.7	35.8		0.8	29.9	
Effective Green, g (s)		16.1	16.1		0.9		6.7	35.8		0.8	29.9	
Actuated g/C Ratio		0.22	0.22		0.01		0.09	0.50		0.01	0.42	
Clearance Time (s)		4.5	4.5		4.5		4.5	4.5		4.5	4.5	
Vehicle Extension (s)		3.0	3.0		3.0		3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)		399	355		22		165	1765		19	2108	
v/s Ratio Prot		c0.07			c0.01		c0.04	c0.31		0.00	0.24	
v/s Ratio Perm			0.02									
v/c Ratio		0.32	0.07		0.45		0.38	0.62		0.42	0.57	
Uniform Delay, d1		23.2	21.9		35.1		30.5	13.0		35.2	16.0	
Progression Factor		1.00	1.00		1.00		1.00	1.00		1.00	1.00	
Incremental Delay, d2		0.5	0.1		14.8		1.5	0.7		14.9	0.4	
Delay (s)		23.6	21.9		49.9		32.0	13.7		50.1	16.4	
Level of Service		C	C		D		C	B		D	B	
Approach Delay (s)		22.8			49.9			14.7			16.6	
Approach LOS		C			D			B			B	
Intersection Summary												
HCM 2000 Control Delay			16.4				HCM 2000 Level of Service			B		
HCM 2000 Volume to Capacity ratio			0.54									
Actuated Cycle Length (s)			71.6				Sum of lost time (s)			18.0		
Intersection Capacity Utilization			59.5%				ICU Level of Service			B		
Analysis Period (min)			60									

c Critical Lane Group

HCM Signalized Intersection Capacity Analysis

5: El Camino Real & Holly St

05/01/2023

													
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR	
Lane Configurations													
Traffic Volume (vph)	47	596	20	414	195	139	23	913	460	252	958	53	
Future Volume (vph)	47	596	20	414	195	139	23	913	460	252	958	53	
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	
Total Lost time (s)		5.0		5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0		
Lane Util. Factor		0.95		0.97	1.00	1.00	1.00	0.95	0.88	0.97	0.95		
Frt		1.00		1.00	1.00	0.85	1.00	1.00	0.85	1.00	0.99		
Flt Protected		1.00		0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00		
Satd. Flow (prot)		3511		3433	1863	1583	1770	3539	2787	3433	3511		
Flt Permitted		1.00		0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00		
Satd. Flow (perm)		3511		3433	1863	1583	1770	3539	2787	3433	3511		
Peak-hour factor, PHF	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. Flow (vph)	47	596	20	414	195	139	23	913	460	252	958	53	
RTOR Reduction (vph)	0	2	0	0	0	114	0	0	309	0	2	0	
Lane Group Flow (vph)	0	661	0	414	195	25	23	913	151	252	1009	0	
Turn Type	Split	NA		Split	NA	Perm	Prot	NA	Perm	Prot	NA		
Protected Phases	4	4		8	8		5	2		1	6		
Permitted Phases						8			2				
Actuated Green, G (s)		29.0		23.7	23.7	23.7	4.9	42.8	42.8	14.5	52.4		
Effective Green, g (s)		29.0		23.7	23.7	23.7	4.9	42.8	42.8	14.5	52.4		
Actuated g/C Ratio		0.22		0.18	0.18	0.18	0.04	0.33	0.33	0.11	0.40		
Clearance Time (s)		5.0		5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0		
Vehicle Extension (s)		3.0		3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0		
Lane Grp Cap (vph)		783		625	339	288	66	1165	917	382	1415		
v/s Ratio Prot		c0.19		c0.12	0.10		0.01	c0.26		c0.07	c0.29		
v/s Ratio Perm						0.02			0.05				
v/c Ratio		0.84		0.66	0.58	0.09	0.35	0.78	0.17	0.66	0.71		
Uniform Delay, d1		48.3		49.4	48.6	44.2	61.0	39.4	30.9	55.4	32.5		
Progression Factor		1.00		0.69	0.67	2.29	1.00	1.00	1.00	1.00	1.00		
Incremental Delay, d2		9.0		4.5	5.7	0.5	3.2	3.6	0.1	4.2	1.7		
Delay (s)		57.4		38.6	38.4	101.6	64.2	43.0	31.0	59.6	34.2		
Level of Service		E		D	D	F	E	D	C	E	C		
Approach Delay (s)		57.4			50.3			39.4			39.3		
Approach LOS		E			D			D			D		
Intersection Summary													
HCM 2000 Control Delay			44.3		HCM 2000 Level of Service					D			
HCM 2000 Volume to Capacity ratio			0.76										
Actuated Cycle Length (s)			130.0		Sum of lost time (s)					20.0			
Intersection Capacity Utilization			79.4%		ICU Level of Service					D			
Analysis Period (min)			60										

c Critical Lane Group

HCM Unsignalized Intersection Capacity Analysis

52: El Camino Real & Spring Street

05/01/2023



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕		↗	↕		↗	↕	↕
Traffic Volume (veh/h)	30	0	15	35	0	30	22	1163	5	19	1206	16
Future Volume (Veh/h)	30	0	15	35	0	30	22	1163	5	19	1206	16
Sign Control		Stop			Stop			Free			Free	
Grade		0%			0%			0%			0%	
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Hourly flow rate (vph)	30	0	15	35	0	30	22	1163	5	19	1206	16
Pedestrians												
Lane Width (ft)												
Walking Speed (ft/s)												
Percent Blockage												
Right turn flare (veh)												
Median type												
Median storage veh												
Upstream signal (ft)												
pX, platoon unblocked	0.78	0.78		0.78	0.78	0.78				0.78		
vC, conflicting volume	1908	2464	410	1664	2470	584	1222			1168		
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	1591	2309	410	1278	2316	0	1222			638		
tC, single (s)	7.5	6.5	6.9	7.5	6.5	6.9	4.1			4.1		
tC, 2 stage (s)												
tF (s)	3.5	4.0	3.3	3.5	4.0	3.3	2.2			2.2		
p0 queue free %	41	100	97	61	100	96	96			97		
cM capacity (veh/h)	51	27	591	89	27	841	566			731		
Direction, Lane #	EB 1	WB 1	NB 1	NB 2	NB 3	SB 1	SB 2	SB 3	SB 4			
Volume Total	45	65	22	775	393	19	482	482	257			
Volume Left	30	35	22	0	0	19	0	0	0			
Volume Right	15	30	0	0	5	0	0	0	16			
cSH	74	151	566	1700	1700	731	1700	1700	1700			
Volume to Capacity	0.61	0.43	0.04	0.46	0.23	0.03	0.28	0.28	0.15			
Queue Length 95th (ft)	93	54	3	0	0	2	0	0	0			
Control Delay (s)	123.8	46.6	11.6	0.0	0.0	10.1	0.0	0.0	0.0			
Lane LOS	F	E	B			B						
Approach Delay (s)	123.8	46.6	0.2			0.2						
Approach LOS	F	E										
Intersection Summary												
Average Delay			3.6									
Intersection Capacity Utilization			43.1%		ICU Level of Service				A			
Analysis Period (min)			60									

HCM Signalized Intersection Capacity Analysis

62: El Camino Real & Harbor Blvd (N)

05/01/2023



Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	112	18	20	1246	1128	55
Future Volume (vph)	112	18	20	1246	1128	55
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.5		4.5	4.5	4.5	
Lane Util. Factor	1.00		1.00	0.95	0.95	
Frt	0.98		1.00	1.00	0.99	
Flt Protected	0.96		0.95	1.00	1.00	
Satd. Flow (prot)	1752		1770	3539	3515	
Flt Permitted	0.96		0.95	1.00	1.00	
Satd. Flow (perm)	1752		1770	3539	3515	
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	112	18	20	1246	1128	55
RTOR Reduction (vph)	6	0	0	0	2	0
Lane Group Flow (vph)	124	0	20	1246	1181	0
Turn Type	Perm		Prot	NA	NA	
Protected Phases			5	2	6	
Permitted Phases	4					
Actuated Green, G (s)	10.1		1.2	43.3	37.6	
Effective Green, g (s)	10.1		1.2	43.3	37.6	
Actuated g/C Ratio	0.16		0.02	0.69	0.60	
Clearance Time (s)	4.5		4.5	4.5	4.5	
Vehicle Extension (s)	3.0		3.0	3.0	3.0	
Lane Grp Cap (vph)	283		34	2455	2118	
v/s Ratio Prot			0.01	c0.35	c0.34	
v/s Ratio Perm	c0.07					
v/c Ratio	0.44		0.59	0.51	0.56	
Uniform Delay, d1	23.6		30.4	4.5	7.4	
Progression Factor	1.00		1.00	1.00	1.00	
Incremental Delay, d2	1.1		25.4	0.2	0.3	
Delay (s)	24.7		55.8	4.7	7.7	
Level of Service	C		E	A	A	
Approach Delay (s)	24.7			5.5	7.7	
Approach LOS	C			A	A	





























Intersection Summary

HCM 2000 Control Delay	7.5	HCM 2000 Level of Service	A
HCM 2000 Volume to Capacity ratio	0.55		
Actuated Cycle Length (s)	62.4	Sum of lost time (s)	13.5
Intersection Capacity Utilization	49.2%	ICU Level of Service	A
Analysis Period (min)	60		

c Critical Lane Group

HCM Signalized Intersection Capacity Analysis
57: El Camino Real & Ralston Ave

05/01/2023






















												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		 			 			 			 	
Traffic Volume (vph)	113	952	37	217	752	216	124	560	281	474	830	90
Future Volume (vph)	113	952	37	217	752	216	124	560	281	474	830	90
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.5	4.5	4.0	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5
Lane Util. Factor	0.91	0.91	1.00	0.91	0.91	1.00	1.00	0.95	1.00	1.00	0.95	1.00
Frt	1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	1610	3388	1583	1610	3385	1583	1770	3539	1583	1770	3539	1583
Flt Permitted	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (perm)	1610	3388	1583	1610	3385	1583	1770	3539	1583	1770	3539	1583
Peak-hour factor, PHF	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. Flow (vph)	113	952	37	217	752	216	124	560	281	474	830	90
RTOR Reduction (vph)	0	0	27	0	0	144	0	0	202	0	0	45
Lane Group Flow (vph)	102	963	10	195	774	72	124	560	79	474	830	45
Turn Type	Split	NA	Perm	Split	NA	Perm	Prot	NA	Perm	Prot	NA	Perm
Protected Phases	8	8		4	4		1	6		5	2	
Permitted Phases			8			4			6			2
Actuated Green, G (s)	36.0	36.0	36.0	26.0	26.0	26.0	11.8	30.3	30.3	31.7	50.2	50.2
Effective Green, g (s)	35.5	35.5	36.0	25.5	25.5	25.5	11.3	29.8	29.8	31.2	49.7	49.7
Actuated g/C Ratio	0.25	0.25	0.26	0.18	0.18	0.18	0.08	0.21	0.21	0.22	0.36	0.36
Clearance Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	408	859	407	293	616	288	142	753	336	394	1256	561
v/s Ratio Prot	0.06	c0.28		0.12	c0.23		0.07	c0.16		c0.27	0.23	
v/s Ratio Perm			0.01			0.05			0.05			0.03
v/c Ratio	0.25	1.12	0.02	0.67	1.26	0.25	0.87	0.74	0.24	1.20	0.66	0.08
Uniform Delay, d1	41.6	52.2	38.9	53.3	57.2	49.1	63.6	51.5	45.7	54.4	38.0	30.0
Progression Factor	1.00	1.00	1.00	0.31	0.34	0.32	1.00	1.00	1.00	0.80	0.69	0.55
Incremental Delay, d2	1.5	69.7	0.1	2.3	121.0	0.2	40.5	4.0	0.4	109.1	1.0	0.0
Delay (s)	43.1	121.9	39.0	18.7	140.5	16.0	104.1	55.5	46.0	152.4	27.3	16.4
Level of Service	D	F	D	B	F	B	F	E	D	F	C	B
Approach Delay (s)		111.8			97.8			59.0			69.1	
Approach LOS		F			F			E			E	
Intersection Summary												
HCM 2000 Control Delay			84.5				HCM 2000 Level of Service			F		
HCM 2000 Volume to Capacity ratio			1.08									
Actuated Cycle Length (s)			140.0				Sum of lost time (s)			18.0		
Intersection Capacity Utilization			110.9%				ICU Level of Service			H		
Analysis Period (min)			15									

c Critical Lane Group

HCM Signalized Intersection Capacity Analysis

1: El Camino Real & dwy/Harbor Blvd (N)





















05/01/2023

													
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR	
Lane Configurations													
Traffic Volume (vph)	0	0	0	435	38	463	5	1093	198	275	1270	2	
Future Volume (vph)	0	0	0	435	38	463	5	1093	198	275	1270	2	
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	
Total Lost time (s)				5.0	5.0	5.0	4.5	5.0		5.0	5.0		
Lane Util. Factor				0.95	0.95	1.00	1.00	0.95		0.97	0.95		
Frt				1.00	1.00	0.85	1.00	0.98		1.00	1.00		
Flt Protected				0.95	0.96	1.00	0.95	1.00		0.95	1.00		
Satd. Flow (prot)				1681	1698	1583	1770	3458		3433	3538		
Flt Permitted				0.76	0.76	1.00	0.95	1.00		0.95	1.00		
Satd. Flow (perm)				1340	1344	1583	1770	3458		3433	3538		
Peak-hour factor, PHF	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. Flow (vph)	0	0	0	435	38	463	5	1093	198	275	1270	2	
RTOR Reduction (vph)	0	0	0	0	0	195	0	10	0	0	0	0	
Lane Group Flow (vph)	0	0	0	235	238	268	5	1281	0	275	1272	0	
Turn Type				Perm	NA	Perm	Prot	NA		Prot	NA		
Protected Phases		4			8		5	2		1	6		
Permitted Phases	4			8		8							
Actuated Green, G (s)				33.6	33.6	33.6	1.1	65.3		31.1	95.8		
Effective Green, g (s)				33.6	33.6	33.6	1.1	65.3		31.1	95.8		
Actuated g/C Ratio				0.23	0.23	0.23	0.01	0.45		0.21	0.66		
Clearance Time (s)				5.0	5.0	5.0	4.5	5.0		5.0	5.0		
Vehicle Extension (s)				3.0	3.0	3.0	3.0	3.0		3.0	3.0		
Lane Grp Cap (vph)				310	311	366	13	1557		736	2337		
v/s Ratio Prot							0.00	c0.37		c0.08	c0.36		
v/s Ratio Perm				0.18	c0.18	0.17							
v/c Ratio				0.76	0.77	0.73	0.38	0.82		0.37	0.54		
Uniform Delay, d1				51.9	52.0	51.5	71.6	34.8		48.6	13.0		
Progression Factor				1.00	1.00	1.00	1.00	1.00		1.00	1.98		
Incremental Delay, d2				10.8	11.5	7.7	18.7	3.8		1.2	0.8		
Delay (s)				62.7	63.5	59.2	90.3	38.6		49.8	26.6		
Level of Service				E	E	E	F	D		D	C		
Approach Delay (s)		0.0			61.2			38.8			30.7		
Approach LOS		A			E			D			C		
Intersection Summary													
HCM 2000 Control Delay			41.0		HCM 2000 Level of Service						D		
HCM 2000 Volume to Capacity ratio			0.74										
Actuated Cycle Length (s)			145.0		Sum of lost time (s)					15.0			
Intersection Capacity Utilization			73.5%		ICU Level of Service					D			
Analysis Period (min)			60										
c Critical Lane Group													

HCM Unsignalized Intersection Capacity Analysis

2: El Camino Real & 5th Street/Dwy























05/01/2023

													
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR	
Lane Configurations													
Traffic Volume (veh/h)	1	0	21	0	0	6	88	1284	3	46	1508	7	
Future Volume (Veh/h)	1	0	21	0	0	6	88	1284	3	46	1508	7	
Sign Control	Stop			Stop			Free			Free			
Grade	0%			0%			0%			0%			
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
Hourly flow rate (vph)	1	0	21	0	0	6	88	1284	3	46	1508	7	
Pedestrians													
Lane Width (ft)													
Walking Speed (ft/s)													
Percent Blockage													
Right turn flare (veh)													
Median type													
Median storage veh													
Upstream signal (ft)													
pX, platoon unblocked	0.78	0.78	0.67	0.78	0.78	0.78	0.67			0.78			
vC, conflicting volume	2428	3066	758	2328	3068	644	1515			1287			
vC1, stage 1 conf vol													
vC2, stage 2 conf vol													
vCu, unblocked vol	1017	1838	0	890	1841	0	785			816			
tC, single (s)	7.5	6.5	6.9	7.5	6.5	6.9	4.1			4.1			
tC, 2 stage (s)													
tF (s)	3.5	4.0	3.3	3.5	4.0	3.3	2.2			2.2			
p0 queue free %	99	100	97	100	100	99	84			93			
cM capacity (veh/h)	123	45	727	149	45	850	556			633			
Direction, Lane #	EB 1	EB 2	WB 1	NB 1	NB 2	NB 3	SB 1	SB 2	SB 3				
Volume Total	1	21	6	88	856	431	46	1005	510				
Volume Left	1	0	0	88	0	0	46	0	0				
Volume Right	0	21	6	0	0	3	0	0	7				
cSH	123	727	850	556	1700	1700	633	1700	1700				
Volume to Capacity	0.01	0.03	0.01	0.16	0.50	0.25	0.07	0.59	0.30				
Queue Length 95th (ft)	1	2	1	14	0	0	6	0	0				
Control Delay (s)	34.5	10.1	9.3	12.7	0.0	0.0	11.1	0.0	0.0				
Lane LOS	D	B	A	B			B						
Approach Delay (s)	11.2		9.3	0.8			0.3						
Approach LOS	B		A										
Intersection Summary													
Average Delay			0.7										
Intersection Capacity Utilization			60.1%	ICU Level of Service					B				
Analysis Period (min)			60										

HCM Signalized Intersection Capacity Analysis

4: El Camino Real & Hull Dr

05/01/2023























												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	65	0	56	30	14	4	100	1299	50	14	1294	116
Future Volume (vph)	65	0	56	30	14	4	100	1299	50	14	1294	116
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.5	4.5		4.5	4.5	4.5	4.5		4.5	4.5	
Lane Util. Factor		1.00	1.00		1.00	1.00	1.00	0.95		1.00	0.91	
Frt		1.00	0.85		1.00	0.85	1.00	0.99		1.00	0.99	
Flt Protected		0.95	1.00		0.97	1.00	0.95	1.00		0.95	1.00	
Satd. Flow (prot)		1770	1583		1801	1583	1770	3520		1770	5023	
Flt Permitted		0.95	1.00		0.97	1.00	0.95	1.00		0.95	1.00	
Satd. Flow (perm)		1770	1583		1801	1583	1770	3520		1770	5023	
Peak-hour factor, PHF	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. Flow (vph)	65	0	56	30	14	4	100	1299	50	14	1294	116
RTOR Reduction (vph)	0	0	49	0	0	4	0	2	0	0	7	0
Lane Group Flow (vph)	0	65	7	0	44	0	100	1347	0	14	1403	0
Turn Type	Split	NA	Perm	Split	NA	Perm	Prot	NA		Prot	NA	
Protected Phases	4	4		8	8		5	2		1	6	
Permitted Phases			4			8						
Actuated Green, G (s)		11.7	11.7		4.2	4.2	11.3	52.3		1.5	42.5	
Effective Green, g (s)		11.7	11.7		4.2	4.2	11.3	52.3		1.5	42.5	
Actuated g/C Ratio		0.13	0.13		0.05	0.05	0.13	0.60		0.02	0.48	
Clearance Time (s)		4.5	4.5		4.5	4.5	4.5	4.5		4.5	4.5	
Vehicle Extension (s)		3.0	3.0		3.0	3.0	3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)		236	211		86	75	228	2099		30	2434	
v/s Ratio Prot		c0.04			c0.02		c0.06	c0.38		0.01	0.28	
v/s Ratio Perm			0.00			0.00						
v/c Ratio		0.28	0.04		0.51	0.00	0.44	0.64		0.47	0.58	
Uniform Delay, d1		34.2	33.1		40.7	39.8	35.3	11.6		42.7	16.2	
Progression Factor		1.00	1.00		1.00	1.00	1.00	1.00		1.00	1.00	
Incremental Delay, d2		0.6	0.1		5.1	0.0	1.4	0.7		11.4	0.3	
Delay (s)		34.8	33.2		45.9	39.8	36.6	12.3		54.1	16.5	
Level of Service		C	C		D	D	D	B		D	B	
Approach Delay (s)		34.1			45.4			13.9			16.9	
Approach LOS		C			D			B			B	
Intersection Summary												
HCM 2000 Control Delay			16.6				HCM 2000 Level of Service				B	
HCM 2000 Volume to Capacity ratio			0.58									
Actuated Cycle Length (s)			87.7				Sum of lost time (s)			18.0		
Intersection Capacity Utilization			63.2%				ICU Level of Service			B		
Analysis Period (min)			60									

c Critical Lane Group

HCM Signalized Intersection Capacity Analysis

5: El Camino Real & Holly St

05/01/2023




















													
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR	
Lane Configurations													
Traffic Volume (vph)	93	236	25	558	383	303	26	1175	375	186	1154	77	
Future Volume (vph)	93	236	25	558	383	303	26	1175	375	186	1154	77	
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	
Total Lost time (s)		5.0		5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0		
Lane Util. Factor		0.95		0.97	1.00	1.00	1.00	0.95	0.88	0.97	0.95		
Frt		0.99		1.00	1.00	0.85	1.00	1.00	0.85	1.00	0.99		
Flt Protected		0.99		0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00		
Satd. Flow (prot)		3456		3433	1863	1583	1770	3539	2787	3433	3506		
Flt Permitted		0.99		0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00		
Satd. Flow (perm)		3456		3433	1863	1583	1770	3539	2787	3433	3506		
Peak-hour factor, PHF	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. Flow (vph)	93	236	25	558	383	303	26	1175	375	186	1154	77	
RTOR Reduction (vph)	0	5	0	0	0	220	0	0	264	0	4	0	
Lane Group Flow (vph)	0	349	0	558	383	83	26	1175	111	186	1227	0	
Turn Type	Split	NA		Split	NA	Perm	Prot	NA	Perm	Prot	NA		
Protected Phases	4	4		8	8		5	2		1	6		
Permitted Phases						8			2				
Actuated Green, G (s)		24.6		35.4	35.4	35.4	3.0	38.4	38.4	11.6	47.0		
Effective Green, g (s)		24.6		35.4	35.4	35.4	3.0	38.4	38.4	11.6	47.0		
Actuated g/C Ratio		0.19		0.27	0.27	0.27	0.02	0.30	0.30	0.09	0.36		
Clearance Time (s)		5.0		5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0		
Vehicle Extension (s)		3.0		3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0		
Lane Grp Cap (vph)		653		934	507	431	40	1045	823	306	1267		
v/s Ratio Prot		c0.10		0.16	c0.21		0.01	c0.33		0.05	c0.35		
v/s Ratio Perm						0.05			0.04				
v/c Ratio		0.53		0.60	0.76	0.19	0.65	1.12	0.13	0.61	0.97		
Uniform Delay, d1		47.5		41.1	43.3	36.3	63.0	45.8	33.6	57.0	40.8		
Progression Factor		1.00		0.80	0.82	3.40	1.00	1.00	1.00	1.00	1.00		
Incremental Delay, d2		0.8		1.9	7.1	0.7	36.3	238.5	0.1	3.4	27.6		
Delay (s)		48.4		34.6	42.5	124.2	99.3	284.3	33.7	60.5	68.3		
Level of Service		D		C	D	F	F	F	C	E	E		
Approach Delay (s)		48.4			58.9			221.6			67.3		
Approach LOS		D			E			F			E		
Intersection Summary													
HCM 2000 Control Delay			116.5		HCM 2000 Level of Service					F			
HCM 2000 Volume to Capacity ratio			0.88										
Actuated Cycle Length (s)			130.0		Sum of lost time (s)					20.0			
Intersection Capacity Utilization			85.4%		ICU Level of Service					E			
Analysis Period (min)			60										

c Critical Lane Group

HCM Unsignalized Intersection Capacity Analysis

52: El Camino Real & Spring Street

05/01/2023

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	8	0	18	19	0	6	71	1260	23	31	1411	23
Future Volume (Veh/h)	8	0	18	19	0	6	71	1260	23	31	1411	23
Sign Control		Stop			Stop			Free			Free	
Grade		0%			0%			0%			0%	
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Hourly flow rate (vph)	8	0	18	19	0	6	71	1260	23	31	1411	23
Pedestrians												
Lane Width (ft)												
Walking Speed (ft/s)												
Percent Blockage												
Right turn flare (veh)												
Median type												
								None			None	
Median storage veh												
Upstream signal (ft)												
								507				
pX, platoon unblocked	0.75	0.75		0.75	0.75	0.75				0.75		
vC, conflicting volume	2262	2910	482	1964	2910	642	1434			1283		
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	2019	2880	482	1622	2880	0	1434			717		
tC, single (s)	7.5	6.5	6.9	7.5	6.5	6.9	4.1			4.1		
tC, 2 stage (s)												
tF (s)	3.5	4.0	3.3	3.5	4.0	3.3	2.2			2.2		
p0 queue free %	63	100	97	55	100	99	85			95		
cM capacity (veh/h)	22	10	531	42	10	815	470			662		
Direction, Lane #	EB 1	WB 1	NB 1	NB 2	NB 3	SB 1	SB 2	SB 3	SB 4			
Volume Total	26	25	71	840	443	31	564	564	305			
Volume Left	8	19	71	0	0	31	0	0	0			
Volume Right	18	6	0	0	23	0	0	0	23			
cSH	65	55	470	1700	1700	662	1700	1700	1700			
Volume to Capacity	0.40	0.46	0.15	0.49	0.26	0.05	0.33	0.33	0.18			
Queue Length 95th (ft)	46	55	13	0	0	4	0	0	0			
Control Delay (s)	96.8	123.2	14.0	0.0	0.0	10.7	0.0	0.0	0.0			
Lane LOS	F	F	B			B						
Approach Delay (s)	96.8	123.2	0.7			0.2						
Approach LOS	F	F										
Intersection Summary												
Average Delay			2.4									
Intersection Capacity Utilization			52.2%			ICU Level of Service				A		
Analysis Period (min)			60									

HCM Signalized Intersection Capacity Analysis

62: El Camino Real & Harbor Blvd (S)

05/01/2023



Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	84	18	28	1231	1583	94
Future Volume (vph)	84	18	28	1231	1583	94
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.5		4.5	4.5	4.5	
Lane Util. Factor	1.00		1.00	0.95	0.95	
Frt	0.98		1.00	1.00	0.99	
Flt Protected	0.96		0.95	1.00	1.00	
Satd. Flow (prot)	1746		1770	3539	3509	
Flt Permitted	0.96		0.95	1.00	1.00	
Satd. Flow (perm)	1746		1770	3539	3509	
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	84	18	28	1231	1583	94
RTOR Reduction (vph)	8	0	0	0	2	0
Lane Group Flow (vph)	94	0	28	1231	1675	0
Turn Type	Prot		Prot	NA	NA	
Protected Phases	4		5	2	6	
Permitted Phases						
Actuated Green, G (s)	7.3		2.6	50.1	43.0	
Effective Green, g (s)	7.3		2.6	50.1	43.0	
Actuated g/C Ratio	0.11		0.04	0.75	0.65	
Clearance Time (s)	4.5		4.5	4.5	4.5	
Vehicle Extension (s)	3.0		3.0	3.0	3.0	
Lane Grp Cap (vph)	191		69	2670	2272	
v/s Ratio Prot	c0.05		0.02	c0.35	c0.48	
v/s Ratio Perm						
v/c Ratio	0.49		0.41	0.46	0.74	
Uniform Delay, d1	27.8		31.1	3.1	7.9	
Progression Factor	1.00		1.00	1.00	1.00	
Incremental Delay, d2	2.0		3.9	0.1	1.3	
Delay (s)	29.8		35.1	3.2	9.2	
Level of Service	C		D	A	A	
Approach Delay (s)	29.8			3.9	9.2	
Approach LOS	C			A	A	

Intersection Summary

























HCM 2000 Control Delay	7.7	HCM 2000 Level of Service	A
HCM 2000 Volume to Capacity ratio	0.71		
Actuated Cycle Length (s)	66.4	Sum of lost time (s)	13.5
Intersection Capacity Utilization	60.0%	ICU Level of Service	B
Analysis Period (min)	60		

c Critical Lane Group

HCM Signalized Intersection Capacity Analysis

57: El Camino Real & Ralston Ave

05/01/2023

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	249	706	66	308	780	546	87	895	171	286	757	133
Future Volume (vph)	249	706	66	308	780	546	87	895	171	286	757	133
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	0.91	0.91	1.00	0.91	0.91	1.00	1.00	0.95	1.00	1.00	0.95	1.00
Frpb, ped/bikes	1.00	1.00	0.89	1.00	1.00	0.86	1.00	1.00	0.95	1.00	1.00	0.91
Flpb, ped/bikes	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt	1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	1610	3384	1416	1610	3384	1363	1770	3539	1504	1770	3539	1434
Flt Permitted	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (perm)	1610	3384	1416	1610	3384	1363	1770	3539	1504	1770	3539	1434
Peak-hour factor, PHF	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. Flow (vph)	249	706	66	308	780	546	87	895	171	286	757	133
RTOR Reduction (vph)	0	0	51	0	0	272	0	0	68	0	0	66
Lane Group Flow (vph)	224	731	15	277	811	274	87	895	103	286	757	67
Confl. Peds. (#/hr)	52		38	38		52	33		14	14		33
Confl. Bikes (#/hr)			1						5			2
Turn Type	Split	NA	Perm	Split	NA	Perm	Prot	NA	Perm	Prot	NA	Perm
Protected Phases	8	8		4	4		1	6		5	2	
Permitted Phases			8			4			6			2
Actuated Green, G (s)	35.0	35.0	35.0	31.0	31.0	31.0	18.0	42.0	42.0	26.0	50.0	50.0
Effective Green, g (s)	35.0	35.0	35.0	31.0	31.0	31.0	18.0	42.0	42.0	26.0	50.0	50.0
Actuated g/C Ratio	0.23	0.23	0.23	0.21	0.21	0.21	0.12	0.28	0.28	0.17	0.33	0.33
Clearance Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	375	789	330	332	699	281	212	990	421	306	1179	478
v/s Ratio Prot	0.14	c0.22		0.17	c0.24		0.05	c0.25		c0.16	0.21	
v/s Ratio Perm			0.01			0.20			0.07			0.05
v/c Ratio	0.60	0.93	0.05	0.83	1.16	0.97	0.41	0.90	0.24	0.93	0.64	0.14
Uniform Delay, d1	51.2	56.2	44.6	57.0	59.5	59.1	61.1	52.1	41.7	61.2	42.4	35.0
Progression Factor	1.00	1.00	1.00	0.48	0.48	0.51	1.00	1.00	1.00	0.73	0.69	0.47
Incremental Delay, d2	6.9	18.5	0.3	6.7	78.4	26.1	1.3	13.1	1.4	20.0	1.1	0.2
Delay (s)	58.1	74.7	44.8	34.0	107.1	56.1	62.4	65.2	43.1	64.5	30.3	16.5
Level of Service	E	E	D	C	F	E	E	E	D	E	C	B
Approach Delay (s)		69.1			77.7			61.7			37.1	
Approach LOS		E			E			E			D	
Intersection Summary												
HCM 2000 Control Delay			62.6				HCM 2000 Level of Service				E	
HCM 2000 Volume to Capacity ratio			0.97									
Actuated Cycle Length (s)			150.0			Sum of lost time (s)				16.0		
Intersection Capacity Utilization			95.7%			ICU Level of Service				F		
Analysis Period (min)			15									

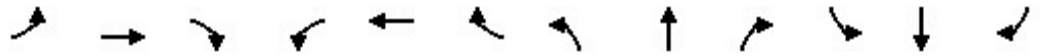
c Critical Lane Group

Appendix E
Queuing Analysis

Queues

5: El Camino Real & Holly St

03/30/2023



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↔↔		↔↔	↑	↗	↖	↑↑	↗↗	↖↖	↑↔	
Traffic Volume (vph)	47	596	20	389	195	125	23	745	337	220	870	53
Future Volume (vph)	47	596	20	389	195	125	23	745	337	220	870	53
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0		0	95		0	170		490	230		0
Storage Lanes	0		0	2		1	1		2	2		0
Taper Length (ft)	25			25			25			25		
Right Turn on Red			Yes			Yes			Yes			Yes
Link Speed (mph)		30			30			30				30
Link Distance (ft)		388			258			1003				1769
Travel Time (s)		8.8			5.9			22.8				40.2
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	663	0	389	195	125	23	745	337	220	923	0
v/c Ratio		0.85		0.44	0.41	0.25	0.23	0.81	0.35	0.61	0.77	
Control Delay		60.3		26.2	27.0	13.8	63.9	53.1	4.8	63.1	43.3	
Queue Delay		187.0		1.0	1.8	0.6	0.0	0.0	0.1	213.5	0.0	
Total Delay		247.3		27.3	28.8	14.4	63.9	53.1	4.9	276.6	43.3	
Queue Length 50th (ft)		277		171	161	63	19	303	0	92	370	
Queue Length 95th (ft)		#430		m239	m241	m102	54	#500	61	147	#592	
Internal Link Dist (ft)		308			178			923			1689	
Turn Bay Length (ft)				95			170		490	230		
Base Capacity (vph)		837		982	533	542	112	940	987	380	1206	
Starvation Cap Reductn		137		352	205	200	0	0	0	0	0	
Spillback Cap Reductn		241		0	0	0	0	0	144	240	0	
Storage Cap Reductn		0		0	0	0	0	0	0	0	0	
Reduced v/c Ratio		1.11		0.62	0.59	0.37	0.21	0.79	0.40	1.57	0.77	

Intersection Summary

- Area Type: Other
- # 95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.
- m Volume for 95th percentile queue is metered by upstream signal.

Queues

5: El Camino Real & Holly St

03/30/2023



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↔↔		↔↔	↑	↔	↔	↑↑	↔↔	↔↔	↑↔	
Traffic Volume (vph)	93	236	25	447	383	264	26	1093	341	173	993	77
Future Volume (vph)	93	236	25	447	383	264	26	1093	341	173	993	77
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0		0	95		0	170		490	230		0
Storage Lanes	0		0	2		1	1		2	2		0
Taper Length (ft)	25			25			25			25		
Right Turn on Red			Yes			Yes			Yes			Yes
Link Speed (mph)		30			30			30				30
Link Distance (ft)		388			258			1003				1767
Travel Time (s)		8.8			5.9			22.8				40.2
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	354	0	447	383	264	26	1093	341	173	1070	0
v/c Ratio		0.54		0.45	0.72	0.41	0.37	1.10	0.33	0.57	0.84	
Control Delay		48.8		31.8	41.6	16.1	76.0	238.0	4.6	64.8	46.4	
Queue Delay		0.0		2.0	193.9	1.7	0.0	0.0	0.0	217.5	0.0	
Total Delay		48.8		33.8	235.5	17.8	76.0	238.0	4.6	282.2	46.4	
Queue Length 50th (ft)		131		201	340	110	22	~554	0	73	453	
Queue Length 95th (ft)		204		m246	m#479	m165	#63	#831	59	124	#711	
Internal Link Dist (ft)		308			178			923			1687	
Turn Bay Length (ft)				95			170		490	230		
Base Capacity (vph)		934		986	535	643	71	996	1029	343	1270	
Starvation Cap Reductn		0		378	203	228	0	0	0	0	0	
Spillback Cap Reductn		0		0	0	0	0	0	31	218	0	
Storage Cap Reductn		0		0	0	0	0	0	0	0	0	
Reduced v/c Ratio		0.38		0.74	1.15	0.64	0.37	1.10	0.34	1.38	0.84	

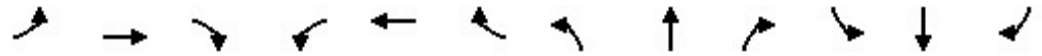
Intersection Summary

- Area Type: Other
- ~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.
- # 95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.
- m Volume for 95th percentile queue is metered by upstream signal.

Queues

5: El Camino Real & Holly St

03/30/2023



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↔↔		↔↔	↑	↗	↖	↑↑	↗↗	↖↖	↑↑	
Traffic Volume (vph)	47	596	20	389	195	130	23	748	337	241	882	53
Future Volume (vph)	47	596	20	389	195	130	23	748	337	241	882	53
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0		0	95		0	170		490	230		0
Storage Lanes	0		0	2		1	1		2	2		0
Taper Length (ft)	25			25			25			25		
Right Turn on Red			Yes			Yes			Yes			Yes
Link Speed (mph)		30			30			30				30
Link Distance (ft)		388			258			1003				1769
Travel Time (s)		8.8			5.9			22.8				40.2
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	663	0	389	195	130	23	748	337	241	935	0
v/c Ratio		0.85		0.45	0.41	0.26	0.23	0.81	0.35	0.64	0.77	
Control Delay		60.3		24.5	25.4	12.4	63.9	53.7	4.8	63.5	43.1	
Queue Delay		187.2		0.9	1.6	0.6	0.0	0.0	0.2	213.2	0.0	
Total Delay		247.5		25.4	27.0	13.0	63.9	53.7	5.0	276.8	43.1	
Queue Length 50th (ft)		277		156	152	63	19	304	0	101	372	
Queue Length 95th (ft)		#430		m224	m224	m98	54	#506	61	160	#605	
Internal Link Dist (ft)		308			178			923			1689	
Turn Bay Length (ft)				95			170		490	230		
Base Capacity (vph)		837		974	528	542	112	935	984	390	1219	
Starvation Cap Reductn		137		326	192	192	0	0	0	0	0	
Spillback Cap Reductn		250		0	0	0	0	0	148	250	0	
Storage Cap Reductn		0		0	0	0	0	0	0	0	0	
Reduced v/c Ratio		1.13		0.60	0.58	0.37	0.21	0.80	0.40	1.72	0.77	

Intersection Summary

Area Type: Other

95th percentile volume exceeds capacity, queue may be longer.
 Queue shown is maximum after two cycles.

m Volume for 95th percentile queue is metered by upstream signal.

Queues

5: El Camino Real & Holly St

03/30/2023



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↔↔		↗↗	↑	↖	↖	↑↑	↗↗	↗↗	↑↔	
Traffic Volume (vph)	93	236	25	447	383	280	26	1102	341	181	999	77
Future Volume (vph)	93	236	25	447	383	280	26	1102	341	181	999	77
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0		0	95		0	170		490	230		0
Storage Lanes	0		0	2		1	1		2	2		0
Taper Length (ft)	25			25			25			25		
Right Turn on Red			Yes			Yes			Yes			Yes
Link Speed (mph)		30			30			30				30
Link Distance (ft)		388			258			1003				1767
Travel Time (s)		8.8			5.9			22.8				40.2
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	354	0	447	383	280	26	1102	341	181	1076	0
v/c Ratio		0.54		0.45	0.72	0.43	0.37	1.11	0.33	0.59	0.85	
Control Delay		48.8		31.6	41.4	15.6	76.8	260.7	4.6	65.3	46.7	
Queue Delay		0.0		2.0	193.8	1.7	0.0	0.0	0.0	217.3	0.0	
Total Delay		48.8		33.6	235.1	17.3	76.8	260.7	4.6	282.6	46.7	
Queue Length 50th (ft)		131		200	340	113	22	~566	0	76	456	
Queue Length 95th (ft)		204		m243	m#474	m173	#63	#841	59	129	#718	
Internal Link Dist (ft)		308			178			923			1687	
Turn Bay Length (ft)				95			170		490	230		
Base Capacity (vph)		934		986	535	654	70	991	1026	343	1270	
Starvation Cap Reductn		0		376	201	225	0	0	0	0	0	
Spillback Cap Reductn		0		0	0	0	0	0	33	218	0	
Storage Cap Reductn		0		0	0	0	0	0	0	0	0	
Reduced v/c Ratio		0.38		0.73	1.15	0.65	0.37	1.11	0.34	1.45	0.85	

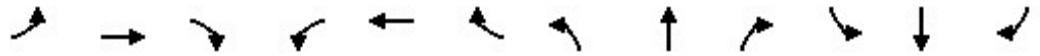
Intersection Summary

- Area Type: Other
- ~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.
- # 95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.
- m Volume for 95th percentile queue is metered by upstream signal.

Queues

5: El Camino Real & Holly St

03/30/2023



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↔↔		↔↔	↑	↗	↖	↑↑	↗↗	↖↖	↑↑	
Traffic Volume (vph)	47	596	20	401	195	128	23	752	401	227	910	53
Future Volume (vph)	47	596	20	401	195	128	23	752	401	227	910	53
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0		0	95		0	170		490	230		0
Storage Lanes	0		0	2		1	1		2	2		0
Taper Length (ft)	25			25			25			25		
Right Turn on Red			Yes			Yes			Yes			Yes
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		388			258			1003			1769	
Travel Time (s)		8.8			5.9			22.8			40.2	
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	663	0	401	195	128	23	752	401	227	963	0
v/c Ratio		0.85		0.46	0.41	0.26	0.23	0.81	0.39	0.63	0.79	
Control Delay		60.3		27.3	27.9	14.3	63.9	52.6	4.7	63.4	44.0	
Queue Delay		187.0		0.9	1.6	0.6	0.0	0.0	0.2	213.2	0.0	
Total Delay		247.3		28.2	29.5	14.8	63.9	52.6	4.8	276.6	44.0	
Queue Length 50th (ft)		277		181	171	65	19	301	0	95	383	
Queue Length 95th (ft)		#430		m246	m241	m105	54	#510	67	152	#637	
Internal Link Dist (ft)		308			178			923			1689	
Turn Bay Length (ft)				95			170		490	230		
Base Capacity (vph)		837		973	528	540	112	950	1041	382	1224	
Starvation Cap Reductn		137		319	191	188	0	0	0	0	0	
Spillback Cap Reductn		236		0	0	0	0	0	159	241	0	
Storage Cap Reductn		0		0	0	0	0	0	0	0	0	
Reduced v/c Ratio		1.10		0.61	0.58	0.36	0.21	0.79	0.45	1.61	0.79	

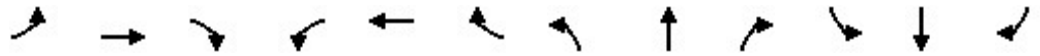
Intersection Summary

- Area Type: Other
- # 95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.
- m Volume for 95th percentile queue is metered by upstream signal.

Queues

5: El Camino Real & Holly St

03/30/2023



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↔↔		↔↔	↑	↗	↖	↑↑	↗↗	↖↖	↑↔	
Traffic Volume (vph)	93	236	25	505	383	270	26	1132	358	176	1006	77
Future Volume (vph)	93	236	25	505	383	270	26	1132	358	176	1006	77
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0		0	95		0	170		490	230		0
Storage Lanes	0		0	2		1	1		2	2		0
Taper Length (ft)	25			25			25			25		
Right Turn on Red			Yes			Yes			Yes			Yes
Link Speed (mph)		30			30			30				30
Link Distance (ft)		388			258			1003				1767
Travel Time (s)		8.8			5.9			22.8				40.2
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	354	0	505	383	270	26	1132	358	176	1083	0
v/c Ratio		0.54		0.51	0.72	0.42	0.38	1.14	0.34	0.58	0.85	
Control Delay		48.8		33.0	41.5	16.1	77.0	304.8	4.6	65.1	47.2	
Queue Delay		0.0		3.5	193.9	1.8	0.0	0.0	0.0	217.4	0.0	
Total Delay		48.8		36.5	235.4	17.9	77.0	304.8	4.6	282.5	47.2	
Queue Length 50th (ft)		131		228	341	113	22	~591	0	74	461	
Queue Length 95th (ft)		204		m276	m#478	m169	#63	#872	61	126	#726	
Internal Link Dist (ft)		308			178			923			1687	
Turn Bay Length (ft)				95			170		490	230		
Base Capacity (vph)		934		986	535	647	69	995	1040	343	1269	
Starvation Cap Reductn		0		374	204	229	0	0	0	0	0	
Spillback Cap Reductn		0		0	0	0	0	0	34	218	0	
Storage Cap Reductn		0		0	0	0	0	0	0	0	0	
Reduced v/c Ratio		0.38		0.83	1.16	0.65	0.38	1.14	0.36	1.41	0.85	

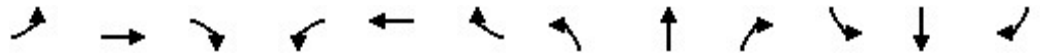
Intersection Summary

- Area Type: Other
- ~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.
- # 95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.
- m Volume for 95th percentile queue is metered by upstream signal.

Queues

5: El Camino Real & Holly St

03/30/2023



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↔↔		↔↔	↑	↗	↖	↑↑	↗↗	↖↖	↑↑	↗↗
Traffic Volume (vph)	47	596	20	401	195	133	23	755	401	248	922	53
Future Volume (vph)	47	596	20	401	195	133	23	755	401	248	922	53
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0		0	95		0	170		490	230		0
Storage Lanes	0		0	2		1	1		2	2		0
Taper Length (ft)	25			25			25			25		
Right Turn on Red			Yes			Yes			Yes			Yes
Link Speed (mph)		30			30			30				30
Link Distance (ft)		388			258			1003				1769
Travel Time (s)		8.8			5.9			22.8				40.2
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	663	0	401	195	133	23	755	401	248	975	0
v/c Ratio		0.85		0.47	0.42	0.27	0.23	0.81	0.39	0.65	0.79	
Control Delay		60.3		25.6	26.2	12.9	63.9	53.3	4.7	63.8	43.8	
Queue Delay		187.1		0.9	1.5	0.6	0.0	0.0	0.2	213.1	0.0	
Total Delay		247.4		26.5	27.7	13.5	63.9	53.3	4.9	276.9	43.8	
Queue Length 50th (ft)		277		175	158	64	19	303	0	104	387	
Queue Length 95th (ft)		#430		m231	m224	m101	54	#513	67	164	#650	
Internal Link Dist (ft)		308			178			923			1689	
Turn Bay Length (ft)				95			170		490	230		
Base Capacity (vph)		837		963	523	540	112	944	1038	392	1236	
Starvation Cap Reductn		137		309	182	184	0	0	0	0	0	
Spillback Cap Reductn		243		0	0	0	0	0	156	252	0	
Storage Cap Reductn		0		0	0	0	0	0	0	0	0	
Reduced v/c Ratio		1.12		0.61	0.57	0.37	0.21	0.80	0.45	1.77	0.79	

Intersection Summary

- Area Type: Other
- # 95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.
- m Volume for 95th percentile queue is metered by upstream signal.

Queues

5: El Camino Real & Holly St

03/30/2023



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕↕		↕↕	↑	↗	↖	↑↑	↗↗	↕↕	↑↕	
Traffic Volume (vph)	93	236	25	505	383	286	26	1141	358	184	1012	77
Future Volume (vph)	93	236	25	505	383	286	26	1141	358	184	1012	77
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0		0	95		0	170		490	230		0
Storage Lanes	0		0	2		1	1		2	2		0
Taper Length (ft)	25			25			25			25		
Right Turn on Red			Yes			Yes			Yes			Yes
Link Speed (mph)		30			30			30				30
Link Distance (ft)		388			258			1003				1767
Travel Time (s)		8.8			5.9			22.8				40.2
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	354	0	505	383	286	26	1141	358	184	1089	0
v/c Ratio		0.54		0.51	0.72	0.43	0.38	1.15	0.35	0.60	0.86	
Control Delay		48.8		32.8	41.3	15.6	77.0	330.5	4.6	65.6	47.6	
Queue Delay		0.0		3.3	193.8	1.8	0.0	0.0	0.0	217.2	0.0	
Total Delay		48.8		36.1	235.1	17.4	77.0	330.5	4.6	282.8	47.6	
Queue Length 50th (ft)		131		227	341	116	22	~603	0	77	465	
Queue Length 95th (ft)		204		m274	m#474	m178	#63	#881	61	130	#733	
Internal Link Dist (ft)		308			178			923			1687	
Turn Bay Length (ft)				95			170		490	230		
Base Capacity (vph)		934		986	535	658	69	990	1037	343	1269	
Starvation Cap Reductn		0		369	201	226	0	0	0	0	0	
Spillback Cap Reductn		0		0	0	0	0	0	35	218	0	
Storage Cap Reductn		0		0	0	0	0	0	0	0	0	
Reduced v/c Ratio		0.38		0.82	1.15	0.66	0.38	1.15	0.36	1.47	0.86	

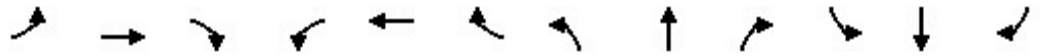
Intersection Summary

- Area Type: Other
- ~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.
- # 95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.
- m Volume for 95th percentile queue is metered by upstream signal.

Queues

1: El Camino Real & Dwy/Harbor Blvd

03/30/2023



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	0	0	0	131	1	184	10	1016	324	692	1049	3
Future Volume (vph)	0	0	0	131	1	184	10	1016	324	692	1049	3
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0		0	55		0	105		0	515		0
Storage Lanes	0		0	1		1	1		0	2		0
Taper Length (ft)	25			25			25			25		
Right Turn on Red			Yes			Yes			Yes			Yes
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		101			329			1081			1647	
Travel Time (s)		2.3			7.5			24.6			37.4	
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Shared Lane Traffic (%)				50%								
Lane Group Flow (vph)	0	0	0	65	67	184	10	1340	0	692	1052	0
v/c Ratio				0.36	0.37	0.55	0.14	0.96		0.53	0.37	
Control Delay				59.8	60.2	12.7	68.8	62.4		37.2	6.1	
Queue Delay				0.0	0.0	0.1	0.0	0.0		0.0	0.0	
Total Delay				59.8	60.2	12.9	68.8	62.4		37.2	6.1	
Queue Length 50th (ft)				61	62	0	9	602		237	81	
Queue Length 95th (ft)				102	104	85	33	#927		#503	382	
Internal Link Dist (ft)		21			249			1001			1567	
Turn Bay Length (ft)				55			105			515		
Base Capacity (vph)				433	435	545	73	1403		1308	2855	
Starvation Cap Reductn				0	0	48	0	0		0	0	
Spillback Cap Reductn				0	0	0	0	0		0	0	
Storage Cap Reductn				0	0	0	0	0		0	0	
Reduced v/c Ratio				0.15	0.15	0.37	0.14	0.96		0.53	0.37	























Intersection Summary

Area Type: Other
 # 95th percentile volume exceeds capacity, queue may be longer.
 Queue shown is maximum after two cycles.

Queues

4: El Camino Real & Hull Dr

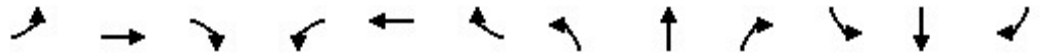
03/30/2023

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	127	2	113	11	2	0	63	1058	16	8	1119	58
Future Volume (vph)	127	2	113	11	2	0	63	1058	16	8	1119	58
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0		0	0		0	180		0	155		0
Storage Lanes	0		1	0		1	1		0	1		0
Taper Length (ft)	25			25			25			25		
Right Turn on Red			Yes			Yes			Yes			Yes
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		241			101			1769			508	
Travel Time (s)		5.5			2.3			40.2			11.5	
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	129	113	0	13	0	63	1074	0	8	1177	0
v/c Ratio		0.30	0.23		0.06		0.24	0.57		0.04	0.52	
Control Delay		26.9	6.1		42.8		37.9	13.7		43.2	17.2	
Queue Delay		0.0	0.0		0.0		0.0	0.0		0.0	0.0	
Total Delay		26.9	6.1		42.8		37.9	13.7		43.2	17.2	
Queue Length 50th (ft)		38	0		4		19	75		3	99	
Queue Length 95th (ft)		146	49		33		96	467		24	343	
Internal Link Dist (ft)		161			21			1689			428	
Turn Bay Length (ft)							180			155		
Base Capacity (vph)		1164	1081		260		498	2980		257	4097	
Starvation Cap Reductn		0	0		0		0	0		0	0	
Spillback Cap Reductn		0	0		0		0	0		0	0	
Storage Cap Reductn		0	0		0		0	0		0	0	
Reduced v/c Ratio		0.11	0.10		0.05		0.13	0.36		0.03	0.29	
Intersection Summary												
Area Type:	Other											

Queues

5: El Camino Real & Holly St

03/30/2023



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↔↔		↔↔	↑	↗	↖	↑↑	↗↗	↖↖	↑↑	↗↗
Traffic Volume (vph)	47	596	20	414	195	134	23	894	460	231	942	53
Future Volume (vph)	47	596	20	414	195	134	23	894	460	231	942	53
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0		0	95		0	170		490	230		0
Storage Lanes	0		0	2		1	1		2	2		0
Taper Length (ft)	25			25			25			25		
Right Turn on Red			Yes			Yes			Yes			Yes
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		388			258			1003			1769	
Travel Time (s)		8.8			5.9			22.8			40.2	
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	663	0	414	195	134	23	894	460	231	995	0
v/c Ratio		0.85		0.59	0.51	0.31	0.23	0.81	0.39	0.64	0.72	
Control Delay		60.3		33.2	33.2	16.7	63.9	49.1	4.3	63.9	38.2	
Queue Delay		187.3		0.9	1.5	0.6	0.0	0.0	0.1	213.3	0.0	
Total Delay		247.7		34.1	34.7	17.3	63.9	49.1	4.4	277.2	38.2	
Queue Length 50th (ft)		277		189	173	68	19	357	0	97	378	
Queue Length 95th (ft)		#430		m228	m217	m97	54	#661	73	155	#678	
Internal Link Dist (ft)		308			178			923			1689	
Turn Bay Length (ft)				95			170		490	230		
Base Capacity (vph)		837		897	487	512	112	1101	1184	381	1388	
Starvation Cap Reductn		137		243	150	158	0	0	0	0	0	
Spillback Cap Reductn		261		0	0	0	0	0	156	241	0	
Storage Cap Reductn		0		0	0	0	0	0	0	0	0	
Reduced v/c Ratio		1.15		0.63	0.58	0.38	0.21	0.81	0.45	1.65	0.72	

Intersection Summary

Area Type: Other

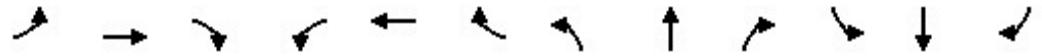
95th percentile volume exceeds capacity, queue may be longer.
 Queue shown is maximum after two cycles.

m Volume for 95th percentile queue is metered by upstream signal.

Queues

1: El Camino Real & Harbor Blvd

03/30/2023



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	0	0	0	424	38	463	5	1074	199	275	1241	2
Future Volume (vph)	0	0	0	424	38	463	5	1074	199	275	1241	2
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0		0	55		0	105		0	515		0
Storage Lanes	0		0	1		1	1		0	2		0
Taper Length (ft)	25			25			25			25		
Right Turn on Red			Yes			Yes			Yes			Yes
Link Speed (mph)		30			30			30				30
Link Distance (ft)		191			329			1521				1650
Travel Time (s)		4.3			7.5			34.6				37.5
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Shared Lane Traffic (%)				46%								
Lane Group Flow (vph)	0	0	0	229	233	463	5	1273	0	275	1243	0
v/c Ratio				0.63	0.63	0.88	0.08	0.86		0.31	0.50	
Control Delay				61.6	61.8	50.3	74.8	46.3		51.3	12.8	
Queue Delay				3.9	4.2	10.1	0.0	0.0		0.0	0.0	
Total Delay				65.6	66.0	60.4	74.8	46.3		51.3	12.8	
Queue Length 50th (ft)				220	224	241	5	599		117	272	
Queue Length 95th (ft)				336	341	#500	23	744		212	562	
Internal Link Dist (ft)		111			249			1441			1570	
Turn Bay Length (ft)				55			105			515		
Base Capacity (vph)				478	483	618	65	1699		893	2499	
Starvation Cap Reductn				169	173	119	0	0		0	0	
Spillback Cap Reductn				0	0	0	0	0		0	0	
Storage Cap Reductn				0	0	0	0	0		0	0	
Reduced v/c Ratio				0.74	0.75	0.93	0.08	0.75		0.31	0.50	

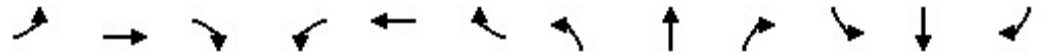
Intersection Summary

Area Type: Other
 # 95th percentile volume exceeds capacity, queue may be longer.
 Queue shown is maximum after two cycles.

Queues

4: El Camino Real & Hull Dr

03/30/2023



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕	↗		↕	↗	↗	↕↗		↗	↕↗	
Traffic Volume (vph)	67	0	56	34	19	4	100	1268	50	14	1261	115
Future Volume (vph)	67	0	56	34	19	4	100	1268	50	14	1261	115
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0		0	0		0	180		0	155		0
Storage Lanes	0		1	0		1	1		0	1		0
Taper Length (ft)	25			25			25			25		
Right Turn on Red			Yes			Yes			Yes			Yes
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		242			113			1767			507	
Travel Time (s)		5.5			2.6			40.2			11.5	
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	67	56	0	53	4	100	1318	0	14	1376	0
v/c Ratio		0.20	0.14		0.24	0.01	0.35	0.58		0.08	0.51	
Control Delay		38.1	0.7		51.6	0.0	48.5	17.5		55.7	21.6	
Queue Delay		0.0	0.0		0.0	0.0	0.0	0.0		0.0	0.0	
Total Delay		38.1	0.7		51.6	0.0	48.5	17.5		55.7	21.6	
Queue Length 50th (ft)		32	0		25	0	47	187		7	187	
Queue Length 95th (ft)		97	0		98	0	157	638		39	437	
Internal Link Dist (ft)		162			33			1687			427	
Turn Bay Length (ft)							180			155		
Base Capacity (vph)		813	796		319	383	497	2681		177	3397	
Starvation Cap Reductn		0	0		0	0	0	0		0	0	
Spillback Cap Reductn		0	0		0	0	0	0		0	0	
Storage Cap Reductn		0	0		0	0	0	0		0	0	
Reduced v/c Ratio		0.08	0.07		0.17	0.01	0.20	0.49		0.08	0.41	

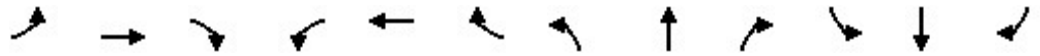
Intersection Summary

Area Type: Other

Queues

5: El Camino Real & Holly St

03/30/2023



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕↕		↗↘	↑	↗	↘	↕↕	↗↘	↗↘	↕↕	
Traffic Volume (vph)	93	236	25	558	383	287	26	1160	375	178	1133	77
Future Volume (vph)	93	236	25	558	383	287	26	1160	375	178	1133	77
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0		0	95		0	170		490	230		0
Storage Lanes	0		0	2		1	1		2	2		0
Taper Length (ft)	25			25			25			25		
Right Turn on Red			Yes			Yes			Yes			Yes
Link Speed (mph)		30			30			30				30
Link Distance (ft)		388			258			1003				1767
Travel Time (s)		8.8			5.9			22.8				40.2
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	354	0	558	383	287	26	1160	375	178	1210	0
v/c Ratio		0.54		0.57	0.72	0.44	0.38	1.17	0.36	0.59	0.95	
Control Delay		48.8		34.9	41.6	16.6	77.7	355.2	4.5	65.2	63.2	
Queue Delay		0.0		7.1	193.8	2.0	0.0	0.0	0.0	219.0	0.0	
Total Delay		48.8		42.0	235.5	18.6	77.7	355.2	4.6	284.3	63.2	
Queue Length 50th (ft)		131		253	341	121	22	~617	0	75	~577	
Queue Length 95th (ft)		204		m296	m#437	m163	#63	#901	63	127	#859	
Internal Link Dist (ft)		308			178			923			1687	
Turn Bay Length (ft)				95			170		490	230		
Base Capacity (vph)		934		986	535	659	68	994	1052	343	1271	
Starvation Cap Reductn		0		368	202	234	0	0	0	0	0	
Spillback Cap Reductn		0		0	0	0	0	0	45	224	0	
Storage Cap Reductn		0		0	0	0	0	0	0	0	0	
Reduced v/c Ratio		0.38		0.90	1.15	0.68	0.38	1.17	0.37	1.50	0.95	

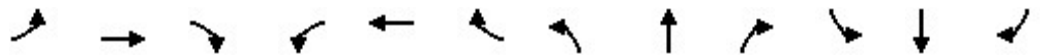
Intersection Summary

- Area Type: Other
- ~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.
- # 95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.
- m Volume for 95th percentile queue is metered by upstream signal.

Queues

1: El Camino Real & Dwy/Harbor Blvd

03/30/2023



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	0	0	0	134	1	184	10	1045	327	692	1053	3
Future Volume (vph)	0	0	0	134	1	184	10	1045	327	692	1053	3
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0		0	55		0	105		0	515		0
Storage Lanes	0		0	1		1	1		0	2		0
Taper Length (ft)	25			25			25			25		
Right Turn on Red			Yes			Yes			Yes			Yes
Link Speed (mph)		30			30			30				30
Link Distance (ft)		101			329			1081				1647
Travel Time (s)		2.3			7.5			24.6				37.4
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Shared Lane Traffic (%)				50%								
Lane Group Flow (vph)	0	0	0	67	68	184	10	1372	0	692	1056	0
v/c Ratio				0.35	0.35	0.54	0.13	1.01		0.53	0.38	
Control Delay				54.6	54.7	11.8	63.4	95.1		35.3	6.5	
Queue Delay				0.0	0.0	0.1	0.0	0.0		0.0	0.0	
Total Delay				54.6	54.7	12.0	63.4	95.1		35.3	6.5	
Queue Length 50th (ft)				57	58	0	8	~602		219	80	
Queue Length 95th (ft)				96	97	79	31	#926		#496	390	
Internal Link Dist (ft)		21			249			1001			1567	
Turn Bay Length (ft)				55			105			515		
Base Capacity (vph)				465	466	571	79	1361		1297	2810	
Starvation Cap Reductn				0	0	52	0	0		0	0	
Spillback Cap Reductn				0	0	0	0	0		0	0	
Storage Cap Reductn				0	0	0	0	0		0	0	
Reduced v/c Ratio				0.14	0.15	0.35	0.13	1.01		0.53	0.38	

Intersection Summary

Area Type: Other

~ Volume exceeds capacity, queue is theoretically infinite.
 Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.
 Queue shown is maximum after two cycles.

Queues

4: El Camino Real & Hull Dr

03/30/2023



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕	↗		↕	↗	↗	↕↗		↗	↕↗	
Traffic Volume (vph)	124	2	113	10	0	0	63	1066	16	8	1153	59
Future Volume (vph)	124	2	113	10	0	0	63	1066	16	8	1153	59
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0		0	0		0	180		0	155		0
Storage Lanes	0		1	0		1	1		0	1		0
Taper Length (ft)	25			25			25			25		
Right Turn on Red			Yes			Yes			Yes			Yes
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		241			101			1769			508	
Travel Time (s)		5.5			2.3			40.2			11.5	
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	126	113	0	10	0	63	1082	0	8	1212	0
v/c Ratio		0.29	0.23		0.05		0.24	0.57		0.04	0.53	
Control Delay		26.4	6.0		42.6		38.1	13.8		42.8	17.1	
Queue Delay		0.0	0.0		0.0		0.0	0.0		0.0	0.0	
Total Delay		26.4	6.0		42.6		38.1	13.8		42.8	17.1	
Queue Length 50th (ft)		38	0		3		19	75		3	103	
Queue Length 95th (ft)		144	49		28		97	472		24	350	
Internal Link Dist (ft)		161			21			1689			428	
Turn Bay Length (ft)							180			155		
Base Capacity (vph)		1157	1076		256		495	3000		256	4117	
Starvation Cap Reductn		0	0		0		0	0		0	0	
Spillback Cap Reductn		0	0		0		0	0		0	0	
Storage Cap Reductn		0	0		0		0	0		0	0	
Reduced v/c Ratio		0.11	0.11		0.04		0.13	0.36		0.03	0.29	

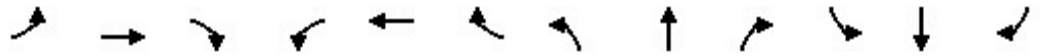
Intersection Summary

Area Type: Other

Queues

5: El Camino Real & Holly St

03/30/2023



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↔↔		↔↔	↑	↔	↔	↑↑	↔↔	↔↔	↑↔	
Traffic Volume (vph)	47	596	20	414	195	139	23	897	460	252	954	53
Future Volume (vph)	47	596	20	414	195	139	23	897	460	252	954	53
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0		0	95		0	170		490	230		0
Storage Lanes	0		0	2		1	1		2	2		0
Taper Length (ft)	25			25			25			25		
Right Turn on Red			Yes			Yes			Yes			Yes
Link Speed (mph)		30			30			30				30
Link Distance (ft)		388			258			1003				1769
Travel Time (s)		8.8			5.9			22.8				40.2
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	663	0	414	195	139	23	897	460	252	1007	0
v/c Ratio		0.85		0.60	0.52	0.32	0.23	0.82	0.39	0.66	0.72	
Control Delay		60.3		31.8	31.8	15.3	63.9	49.6	4.3	64.1	38.0	
Queue Delay		187.4		0.9	1.5	0.6	0.0	0.0	0.1	212.8	0.0	
Total Delay		247.8		32.8	33.3	15.9	63.9	49.6	4.5	276.9	38.0	
Queue Length 50th (ft)		277		189	172	69	19	362	0	106	384	
Queue Length 95th (ft)		#430		m219	m208	m95	54	#663	73	168	#691	
Internal Link Dist (ft)		308			178			923			1689	
Turn Bay Length (ft)				95			170		490	230		
Base Capacity (vph)		837		897	487	516	112	1097	1181	393	1404	
Starvation Cap Reductn		137		244	150	158	0	0	0	0	0	
Spillback Cap Reductn		267		0	0	0	0	0	167	252	0	
Storage Cap Reductn		0		0	0	0	0	0	0	0	0	
Reduced v/c Ratio		1.16		0.63	0.58	0.39	0.21	0.82	0.45	1.79	0.72	

Intersection Summary

Area Type: Other

95th percentile volume exceeds capacity, queue may be longer.
 Queue shown is maximum after two cycles.

m Volume for 95th percentile queue is metered by upstream signal.

Queues

1: El Camino Real & Harbor Blvd

03/30/2023



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	0	0	0	435	38	463	5	1087	198	275	1255	2
Future Volume (vph)	0	0	0	435	38	463	5	1087	198	275	1255	2
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0		0	55		0	105		0	515		0
Storage Lanes	0		0	1		1	1		0	2		0
Taper Length (ft)	25			25			25			25		
Right Turn on Red			Yes			Yes			Yes			Yes
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		191			329			1521			1650	
Travel Time (s)		4.3			7.5			34.6			37.5	
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Shared Lane Traffic (%)				46%								
Lane Group Flow (vph)	0	0	0	235	238	463	5	1285	0	275	1257	0
v/c Ratio				0.65	0.65	0.86	0.07	0.87		0.31	0.51	
Control Delay				59.0	59.0	41.3	69.6	45.1		48.5	12.8	
Queue Delay				2.2	2.2	3.3	0.0	0.0		0.0	0.0	
Total Delay				61.2	61.2	44.7	69.6	45.1		48.5	12.8	
Queue Length 50th (ft)				214	216	205	5	554		111	253	
Queue Length 95th (ft)				320	322	408	22	#794		197	579	
Internal Link Dist (ft)		111			249			1441			1570	
Turn Bay Length (ft)				55			105			515		
Base Capacity (vph)				510	515	657	69	1560		875	2481	
Starvation Cap Reductn				158	162	109	0	0		0	0	
Spillback Cap Reductn				0	0	0	0	0		0	0	
Storage Cap Reductn				0	0	0	0	0		0	0	
Reduced v/c Ratio				0.67	0.67	0.84	0.07	0.82		0.31	0.51	

Intersection Summary

Area Type: Other

95th percentile volume exceeds capacity, queue may be longer.

Queue shown is maximum after two cycles.

Queues

4: El Camino Real & Hull Dr

03/30/2023



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕	↗		↕	↗	↗	↕↗		↗	↕↗	
Traffic Volume (vph)	65	0	56	30	14	4	100	1293	50	14	1279	116
Future Volume (vph)	65	0	56	30	14	4	100	1293	50	14	1279	116
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0		0	0		0	180		0	155		0
Storage Lanes	0		1	0		1	1		0	1		0
Taper Length (ft)	25			25			25			25		
Right Turn on Red			Yes			Yes			Yes			Yes
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		242			113			1767			507	
Travel Time (s)		5.5			2.6			40.2			11.5	
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	65	56	0	44	4	100	1343	0	14	1395	0
v/c Ratio		0.19	0.14		0.20	0.01	0.35	0.57		0.08	0.50	
Control Delay		37.6	0.7		51.5	0.0	48.5	16.4		55.9	19.9	
Queue Delay		0.0	0.0		0.0	0.0	0.0	0.0		0.0	0.0	
Total Delay		37.6	0.7		51.5	0.0	48.5	16.4		55.9	19.9	
Queue Length 50th (ft)		30	0		21	0	46	188		7	188	
Queue Length 95th (ft)		95	0		86	0	157	655		39	442	
Internal Link Dist (ft)		162			33			1687			427	
Turn Bay Length (ft)							180			155		
Base Capacity (vph)		843	820		314	380	510	2730		182	3572	
Starvation Cap Reductn		0	0		0	0	0	0		0	0	
Spillback Cap Reductn		0	0		0	0	0	0		0	0	
Storage Cap Reductn		0	0		0	0	0	0		0	0	
Reduced v/c Ratio		0.08	0.07		0.14	0.01	0.20	0.49		0.08	0.39	

Intersection Summary

Area Type: Other

Queues

5: El Camino Real & Holly St

03/30/2023



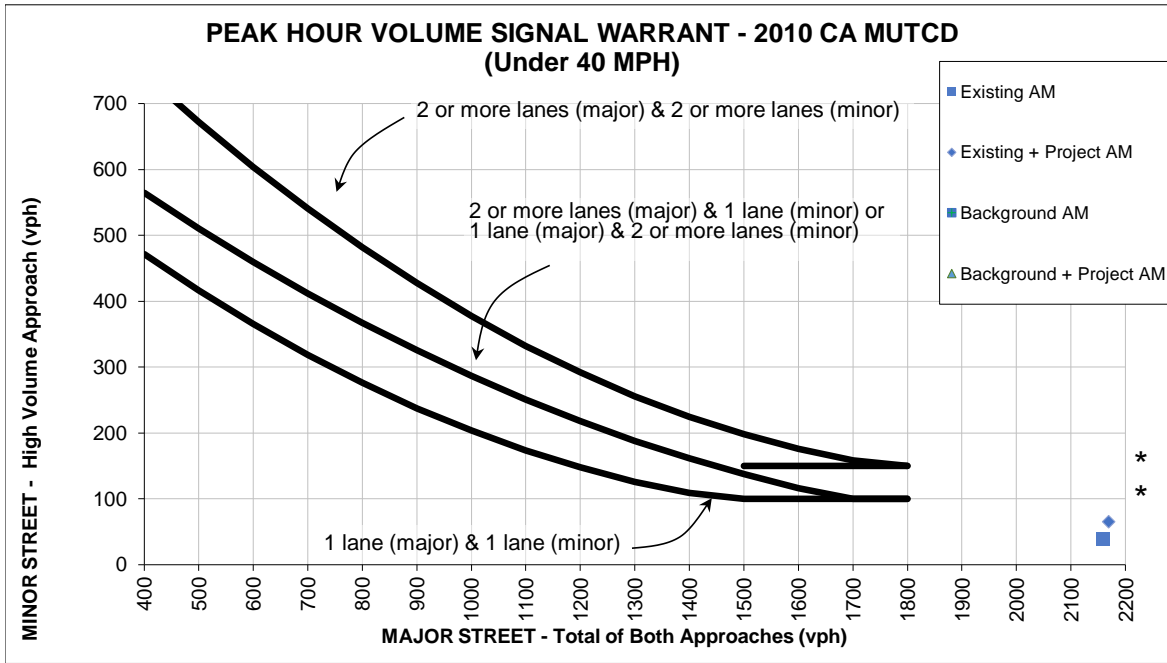
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕↕		↗↘	↑	↗	↘	↕↕	↗↘	↗↘	↕↕	
Traffic Volume (vph)	93	236	25	558	383	303	26	1169	375	186	1139	77
Future Volume (vph)	93	236	25	558	383	303	26	1169	375	186	1139	77
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0		0	95		0	170		490	230		0
Storage Lanes	0		0	2		1	1		2	2		0
Taper Length (ft)	25			25			25			25		
Right Turn on Red			Yes			Yes			Yes			Yes
Link Speed (mph)		30			30			30				30
Link Distance (ft)		388			258			1003				1767
Travel Time (s)		8.8			5.9			22.8				40.2
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	354	0	558	383	303	26	1169	375	186	1216	0
v/c Ratio		0.54		0.57	0.72	0.45	0.38	1.18	0.36	0.61	0.96	
Control Delay		48.8		33.8	40.5	15.8	77.7	379.0	4.5	65.8	64.6	
Queue Delay		0.0		7.3	193.9	2.1	0.0	0.0	0.0	219.4	0.0	
Total Delay		48.8		41.1	234.4	17.9	77.7	379.0	4.6	285.3	64.6	
Queue Length 50th (ft)		131		253	340	124	22	~629	0	78	~583	
Queue Length 95th (ft)		204		m286	m#419	m162	#63	#911	63	132	#865	
Internal Link Dist (ft)		308			178			923			1687	
Turn Bay Length (ft)				95			170		490	230		
Base Capacity (vph)		934		986	535	671	68	990	1050	343	1272	
Starvation Cap Reductn		0		370	203	235	0	0	0	0	0	
Spillback Cap Reductn		0		0	0	0	0	0	45	226	0	
Storage Cap Reductn		0		0	0	0	0	0	0	0	0	
Reduced v/c Ratio		0.38		0.91	1.15	0.69	0.38	1.18	0.37	1.59	0.96	

Intersection Summary

- Area Type: Other
- ~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.
- # 95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.
- m Volume for 95th percentile queue is metered by upstream signal.

Appendix F
Signal Warrant

El Camino Real/Spring Street

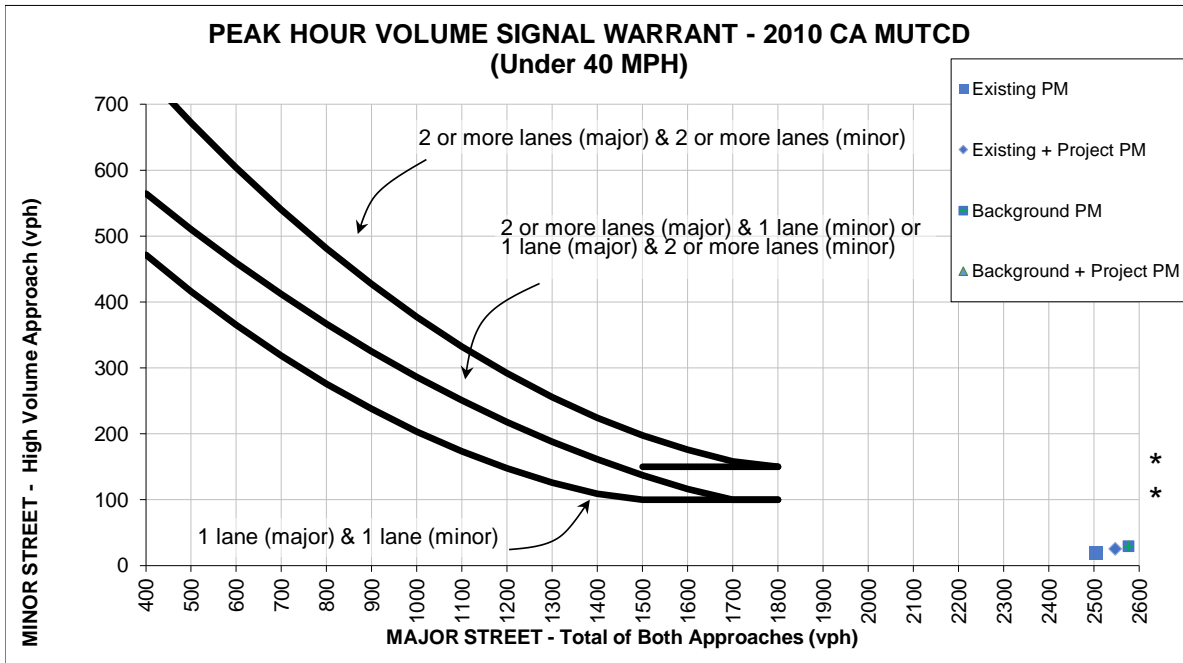


* NOTE: 150 vph applies as the lower threshold volume for a minor street approach with 2 or more lanes and 100 vph applies as the lower threshold volume for a minor street approach with 1 lane.

Peak Hour Volume Warrant Per 2003 MUTCD- Under 40 MPH

		Approach Lanes		AM Peak Hour Volumes					
				Existing AM	Existing + Project AM	Background AM	Background + Project AM	Cumulative AM	Cumulative plus Project AM
		2 or	One More						
Major Street - Both Approaches	El Camino Real		X	2159	2169	2225	2235	2421	2421
Minor Street - Highest Approach	Spring Street	X		39	65	47	65	47	65
Warrant Met?				no	no	no	no	no	no

El Camino Real/Spring Street



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

Peak Hour Volume Warrant Per 2003 MUTCD- Under 40 MPH

		PM Peak Hour Volumes							
		Approach Lanes		<i>Existing PM</i>	<i>Existing + Project PM</i>	<i>Background PM</i>	<i>Background + Project PM</i>	<i>Cumulative PM</i>	<i>Cumulative plus Project PM</i>
		2 or	One More						
Major Street - Both Approaches	El Camino Real		x	2505	2547	2576	2618	2777	2819
Minor Street - Highest Approach	Spring Street	x		18	25	29	25	29	26
Warrant Met?				no	no	no	no	no	no

Appendix G

TDM Plan



HEXAGON TRANSPORTATION CONSULTANTS, INC.



Transportation Demand Management Plan

11 El Camino Real Residential Development in City of San Carlos



Prepared for:

City of San Carlos

On Behalf of SummerHill Apartment Communities



August 22, 2023



Hexagon Transportation Consultants, Inc.

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Document Name: 11 ECR TDM Plan.docx

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1. Introduction

This Transportation Demand Management (TDM) Plan was developed for the proposed residential development project at 11 El Camino Real in San Carlos, California. This plan was developed in accordance with Article III, section 18.25 of the City of San Carlos municipal code, which requires the adoption of a Transportation Demand Management (TDM) Plan for new developments. The purpose of the TDM plan is to (1) reduce the amount of traffic generated by new development by 20 percent.; (2) promote the more efficient utilization of existing transportation facilities and ensure that new projects are designed in ways to maximize the potential for alternative transportation usage; and (3) establish an ongoing monitoring and enforcement program to ensure that the City’s desired alternative mode use percentages are achieved.

In addition, the TDM Plan may reduce the parking demand generated by a development and allow for a reduction in parking supply. The San Carlos municipal code allows a 20% reduction in the number of required parking spaces with the implementation of a TDM Plan.

Project Description

The proposed project is located at 11 El Camino Real in San Carlos, California (see Figure 1). The project would demolish the existing retail use that currently occupies the site and construct a multi-family residential development with 242 units consisting of studio, 1 bedroom, 2 bedroom, and 3 bedroom units.

A two-level at and below grade parking garage with a total of 297 parking spaces is proposed for the development. A total of 84 bike parking spaces (60 long-term spaces and 24 short-term spaces) would be provided for the proposed residential development.

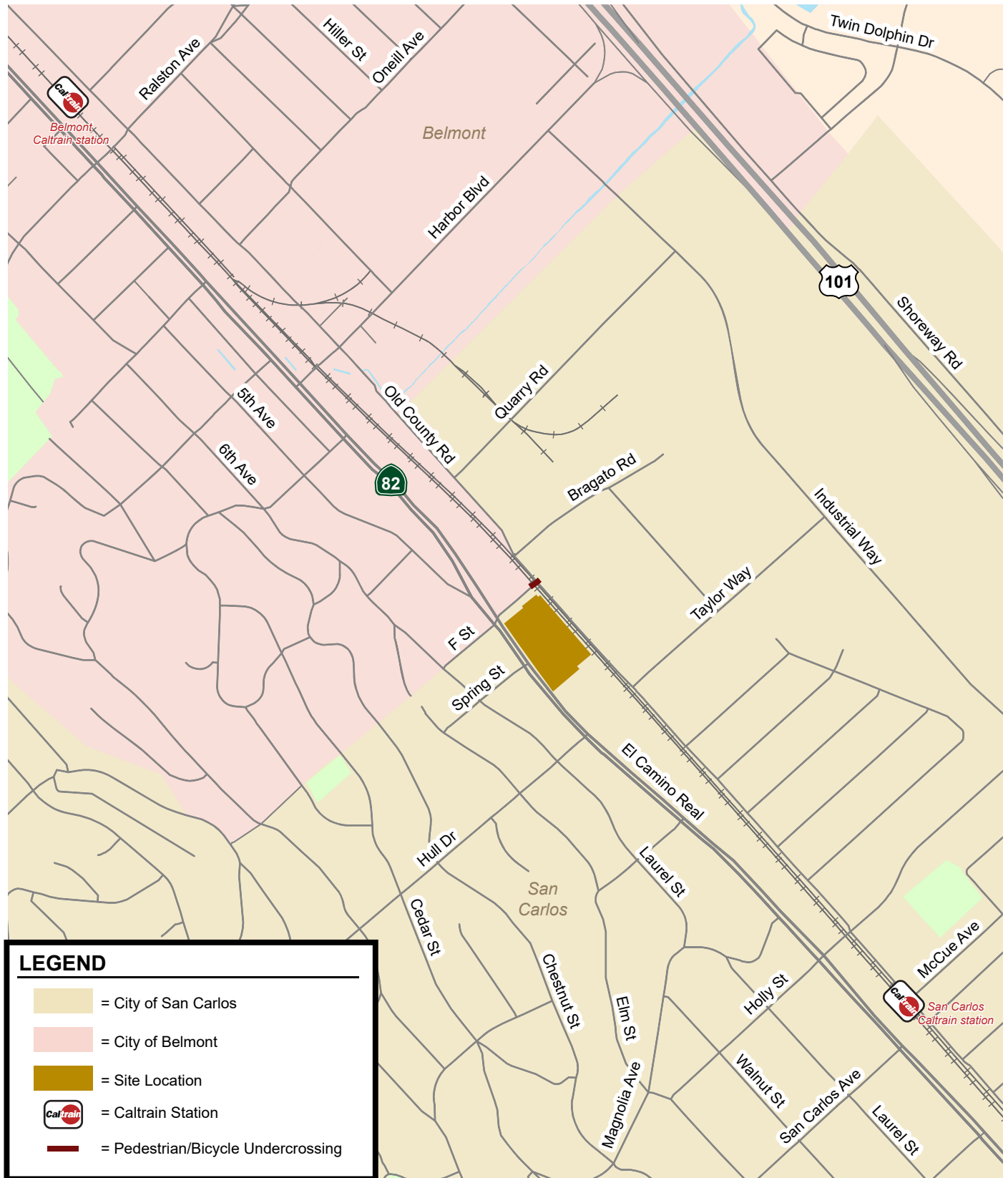


Figure 1
Site Location and Surrounding Area

Project Trip Generation

The City of San Carlos requires that each project shall incorporate measures to meet vehicle trip generation rates that are twenty percent (20%) lower than the standard rates as established in the most recent edition of the ITE *Trip Generation Manual* (San Carlos Municipal Code Section 18.25.030). This plan has been prepared with the goal of achieving at least a 20 percent reduction in project trips.

The trip generation rates published in the Institute of Transportation Engineers’ (ITE) manual entitled *Trip Generation, 11th Edition (2021)* for Multifamily Housing (Mid-Rise) Not Close to Rail Transit (Land Use 221) were used for this study. Before TDM reductions, the proposed project is estimated to generate a total of 1,099 daily trips with 90 trips during the AM peak hour and 94 trips during the PM peak hour.

As shown in Table 1, in order to meet the City’s 20 percent reduction requirement, the project should aim to generate a maximum of 879 daily trips, including 72 AM peak hour trips and 75 PM peak hour trips.

**Table 1
Project Trip Generation Estimates**

Land Use	Size	Unit	Daily Rate	Daily Trips	AM Peak Hour			PM Peak Hour				
					Peak Rate	Trips In	Trips Out	Total Trips	Peak Rate	Trips In	Trips Out	Total Trips
<i>Proposed Project</i>												
Multi-Family Housing	242	DU	4.54	1,099	0.37	21	69	90	0.39	57	37	94
20% TDM Reduction				(220)		(4)	(14)	(18)		(11)	(8)	(19)
Total Project Trips				879		17	55	72		46	29	75

Notes:
 All rates are from: Institute of Transportation Engineers, *Trip Generation, 11th Edition (2021)*
 1. Land Use Code 221: Multifamily Housing (Mid-Rise) Not Close to Rail Transit (average rates, expressed in trips per dwelling unit (DU)).

2. **Transportation Setting**

Transportation facilities and services that support sustainable modes of transportation include commuter rail, buses and shuttle buses, bicycle facilities, and pedestrian facilities. This chapter describes existing facilities and services near the project site that will support the TDM measures contained in this plan.

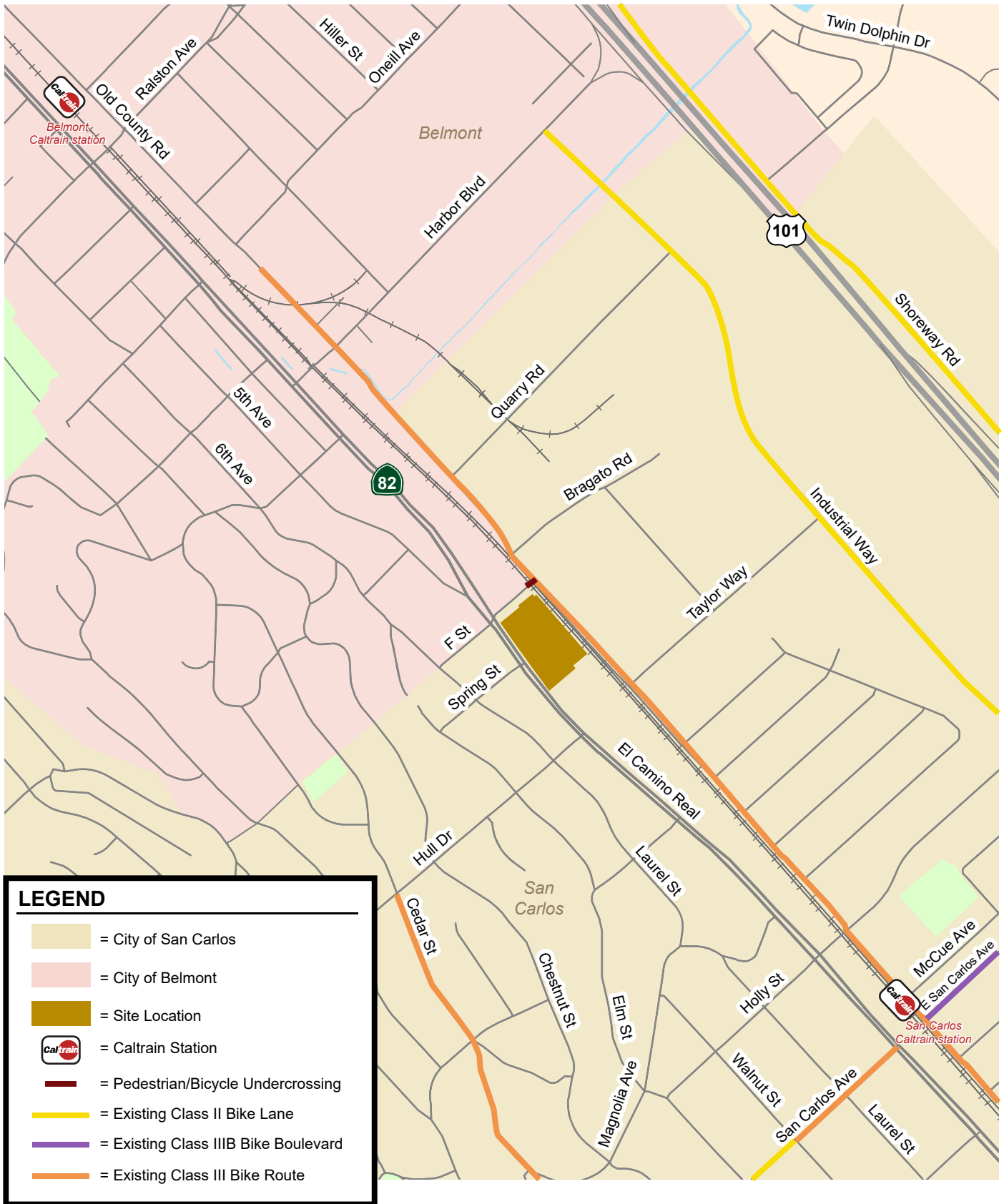
Bicycle Network

Bicycle facilities in the study area include Class II bike lanes and Class III bike routes. Class II bicycle lanes are lanes on roadways designated for use by bicycles with special lane markings, pavement legends, and signage. Class III bike routes are existing streets that accommodate bicycles but are not separate from the existing travel lanes.

As shown in Figure 3, existing Class II bicycle lanes are located on Industrial Road between Harbor Boulevard and Middlefield Road. Existing Class III bicycle routes are located on Old County Road from Ralston Avenue to Terminal Way, along Cedar Street from Hull Drive to Eaton Avenue, and along San Carlos Avenue from Elm Street to Old County Road. Lastly, a bicycle boulevard exists along San Carlos Avenue, from Old County Road to Industrial Road.

There is an underpass available for bicycle and pedestrian users to cross under the Caltrain tracks at F Street/Old County Road, which is adjacent to the site.





LEGEND

- = City of San Carlos
- = City of Belmont
- = Site Location
- = Caltrain Station
- = Pedestrian/Bicycle Undercrossing
- = Existing Class II Bike Lane
- = Existing Class IIIB Bike Boulevard
- = Existing Class III Bike Route

Figure 3
Existing Bicycle Network

Pedestrian Facilities

At the project site along El Camino Real, a continuous sidewalk is present along both sides of the street. There is a walkway along the south side of F Street to access to underpass for pedestrian and bicycle users. These sidewalks can be used to access the San Carlos Caltrain station.

Crosswalks with pedestrian signal heads and push buttons are found on one or more approaches at all the nearby signalized intersections. The intersection at El Camino Real/Hull Drive has crosswalks on the west and south approaches. The intersections at El Camino Real/Holly Street and El Camino Real/San Carlos Avenue have crosswalks on all approaches. Marked crosswalks also exist on the south approach at the intersection of El Camino Real and Oak Street and on the north approach at the intersection of El Camino Real and 5th Avenue.



Transit Service

Existing transit service to the study area is provided by the San Mateo County Transit District (SamTrans) and Caltrain (see **Figure 4**). The Caltrain and SamTrans routes and schedules within the vicinity of the proposed project are described below.

SamTrans Bus Routes

Existing bus service to the project vicinity is provided by the San Mateo County Transit District (SamTrans). SamTrans provides bus service within San Carlos and throughout San Mateo County and has several commute period, weekend, and school-day only routes. The project site is served by Routes ECR, 397 and 398. The closest bus stop is located 300 feet away from the project site at the intersection of El Camino Real and 5th Avenue. Many other bus routes serve the San Carlos Caltrain Station, which is about 0.55 miles from the project site.

The bus routes that provide peak hour services near the project site are described in Table 2 and shown on Figure 4.

**Table 2
Existing Bus Service**

Bus Route	Description	Operating Hours	Peak Hour Headway	Closest Bus Stop	Walk Distance to Project Site
ECR	Between Daly City BART Station and Palo Alto Transit Center via El Camino Real	4 AM to 2 AM (next day)	14-17 min.	El Camino Real and 5th Avenue	300 feet
260	Between San Carlos Caltrain station and the Carlmont Village	6:00 AM to 7:00 PM	1 hr	San Carlos Caltrain Station	0.55 miles
295	Between Hillsdale Mall and Redwood City Caltrain Station	6:20 AM to 7:00 PM	1 hr	San Carlos Caltrain Station	0.55 miles
397	Between Palo Alto Transit Center and downtown San Francisco (Clay Street and Drumm Street), via U.S. 101 and El Camino Real	1:00 AM to 5:00 AM (This route does not operate mid-day or in the evening.)	45-60 min.	El Camino Real and 5th Avenue	300 feet
398	Between downtown San Francisco (Clay Street and Drumm Street) and Redwood City Transit Center, via U.S. 101 and El Camino Real	6:00 AM to 9:15 PM	1 hr	El Camino Real and 5th Avenue	300 feet

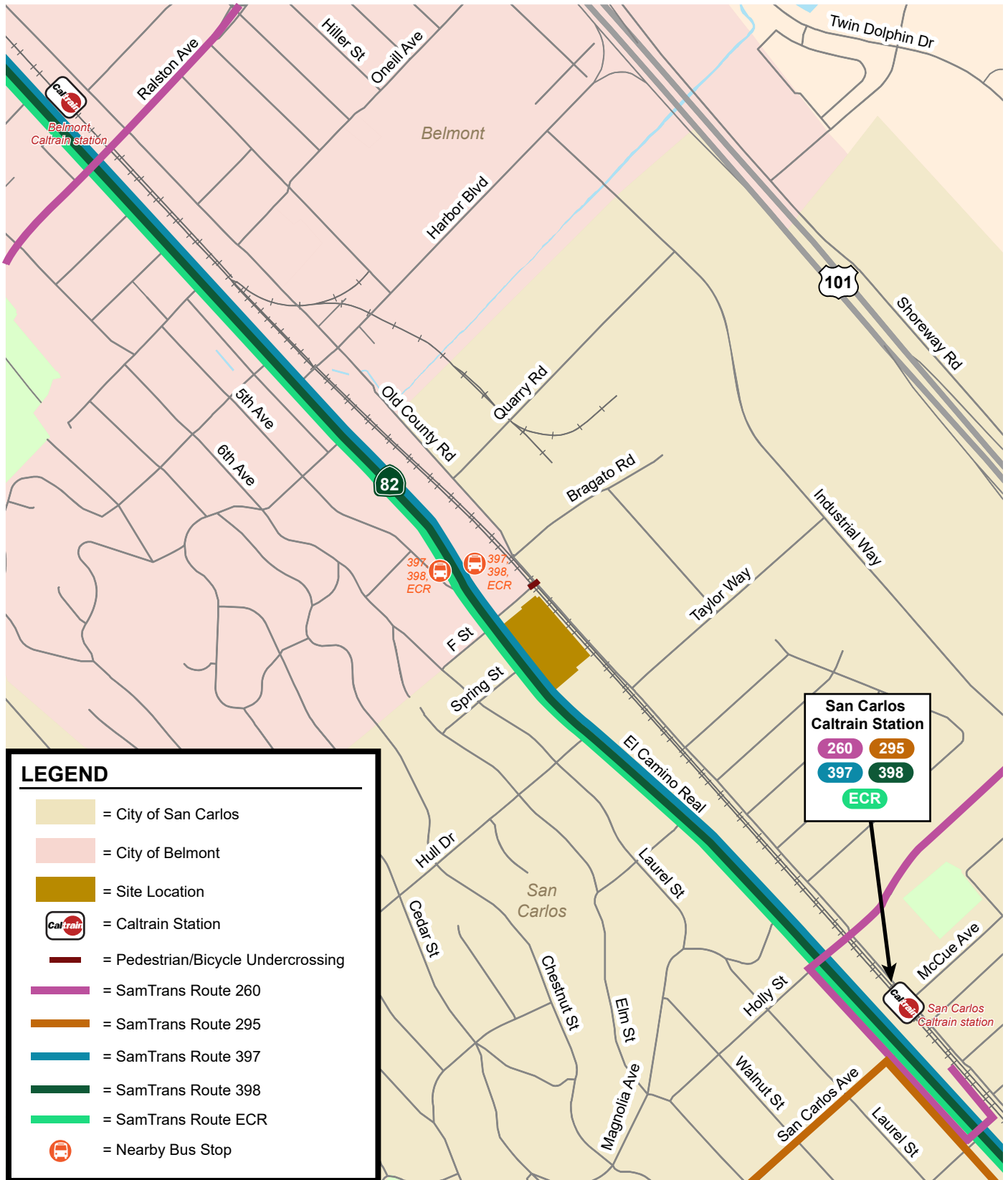
Caltrain Commuter Rail

Caltrain provides commuter rail service between San Francisco and San Jose, with limited service to Gilroy during commute hours. The San Carlos Station is located 0.55 miles south of the project site on El Camino Real. At a normal walking pace, it would take approximately 13 minutes to walk from the project site to the San Carlos Station.



The San Carlos Caltrain Station includes 24 bicycle rack spaces, on demand BikeLink e-lockers, and a parking lot for Caltrain customers. The San Carlos Caltrain Station is served by local-stop and limited-stop trains. As of September 2022, there are four northbound trains (two limited-stop trains and two local trains) and four southbound trains (two limited-stop trains and two local trains) serving the San Carlos station during the AM peak period. During the PM peak period between 4:00 and 7:30, there are seven northbound trains (four limited-stop trains and three local trains) and seven southbound trains (three limited-stop trains and four local trains) serving the San Carlos station.

The Belmont Caltrain Station is located 0.7 miles north of the project site on El Camino Real. At a normal pace, it would take approximately 15 minutes to walk from the project site to the Belmont Station. The Belmont Station includes 18 bicycle rack spaces, on demand BikeLink e-lockers, and a parking lot for Caltrain customers. The Belmont Caltrain Station is served by local-stop and limited-stop trains. As of September 2022, there are four northbound trains (two limited-stop trains and two local trains) and four southbound trains (two limited-stop trains and two local trains) serving the Belmont station during the AM peak period. During the PM peak period, there are seven northbound trains (four limited-stop trains and three local trains) and eight southbound trains (four limited-stop trains and four local trains) serving the Belmont station.



LEGEND

- = City of San Carlos
- = City of Belmont
- = Site Location
- = Caltrain Station
- = Pedestrian/Bicycle Undercrossing
- = SamTrans Route 260
- = SamTrans Route 295
- = SamTrans Route 397
- = SamTrans Route 398
- = SamTrans Route ECR
- = Nearby Bus Stop

San Carlos Caltrain Station

- 260
- 295
- 397
- 398
- ECR

Figure 4
Existing Transit Services

3. Proposed TDM Measures

This chapter describes Transportation Demand Management (TDM) measures that will be implemented by the proposed project. This plan has been developed to meet the 20 percent trip reduction requirement set forth in Section 18.25.030 of the San Carlos municipal code for the proposed project.

The TDM measures to be implemented by the project include services, incentives, actions, and planning and design features related to the attributes of the site design and site amenities. Such design features encourage walking, biking, and use of transit. Some of the proposed TDM measures are programs that will be created and implemented by the building manager.

Proximity to Transit

The location of the project near to downtown San Carlos promotes pedestrian and bicycle travel in a high density area of complementary land uses. The project also is located within walking distance to various bus stops and within 0.55 miles of the San Carlos Caltrain Station. The proximity of the San Carlos Caltrain Station and various bus stops would encourage the use of Caltrain and SamTrans buses for residents of the proposed project.

TDM Administration and Promotion

Transportation Coordinator

The project owner or its tenant/lessee will designate an individual to serve as the Transportation Coordinator. This individual will facilitate the TDM program and provide information regarding alternative modes of transportation to residents. The Transportation Coordinator will provide the following services and functions:

- Provide transportation information brochures to new tenants, for distribution to all residents.
- Set up and maintain an online kiosk with information about alternatives to driving alone to work (single-occupant vehicles).
- Provide trip planning assistance and/or ride-matching assistance to residents who are considering an alternative mode.
- Manage annual surveys and submit annual TDM monitoring reports to the City.

Online Transportation Kiosk

An “online kiosk” will be established with transportation information that residents can access from their smart phones, their homes, or anywhere else. This online kiosk will be available on the project website.

By allowing someone to have all the information about transportation alternatives and TDM programs available to them in a single online location, people will be more likely to refer to this information from home. The project developer or property manager will have responsibility for setting up and maintaining this online information center. This website will include site-specific information about all the measures, services, and facilities discussed in this plan. In addition, this online information center will include:

- A summary of SamTrans, Caltrain, and nearby shuttle services and links to further information about their routes and schedules.
- Information about ride matching services (511.org and on-site ride matching) and the incentive programs available to carpools and vanpools.
- Information about services such as Uber, Lyft, and other on-demand transportation services.
- A local bikeways map and bicycling resources on 511.org.
- A link to the many other resources available in the Bay Area, such as the 511 Carpool Calculator, the 511 Transit Trip Planner, real-time traffic conditions, etc.

New Resident Electronic Information Brochure

The Transportation Coordinator will email electronic transportation information brochures to all new residents at the project site. This brochure will include information about transit subsidies, ride matching services, transit maps/schedules (Caltrain and SamTrans), locations of bus stops, transit planning resources, a bicycle map and the location of bicycle parking on site. Also included in the brochure will be information regarding how to contact the Transportation Coordinator.

Bicycle and Pedestrian Amenities

Bicycle Parking

The project proposes both short-term and long-term bicycle parking. The City’s municipal code (section 18.20.080B) states that for residential uses, long-term bicycle parking shall be provided for every five units for multi-unit residential and group resident projects. This calculates to 49 long-term bicycle parking spaces. The project will provide 60 long-term bicycle parking spaces in the bike storage room located at the southeast corner of the site. Based on the City’s municipal code (Section 18.20.080A), short-term bicycle parking shall be at least ten percent of the number of required automobile parking spaces for multi-unit residential, group residential, and single room occupancy with five or more units. This calculates to 23 short-term bicycle parking spaces. The project will provide 24 short-term bicycle parking spaces near the main entrance of the building.

Bicycle Repair Station

The project will provide a bicycle repair station on site. The bicycle repair station will encourage residents to bike to and from the project site and to work on their bike. The bike repair station would provide tools to residents.

Bicycle Resources

As part of the project's transportation kiosk, resources useful to cyclists will be included. For example, the local bikeway maps will be posted for easy reference. The resources listed below are available to bicycle commuters through 511.org and will be noted as part of the project's transportation kiosk.

- Free Bike Buddy matching
- Bicycle maps
- Bicycle safety tips
- Information about taking bikes on public transit
- Location and use of bike parking at transit stations
- Information on Bike to Work Day
- Tips on selecting a bike, commute gear, and clothing
- Links to bicycle organizations

Pedestrian Design Elements

The project will build a plaza area along the building frontage, and pedestrian paths will connect the building entrances to El Camino Real. Within the project site, pedestrian paths will connect the proposed building, parking garages, and other amenities on-site. The project proposes to provide a drop-off area on the south side of the project site for passenger loading/move-in vehicles.

e-Scooters On-Site

The project proposes to partner with Ridy, an electric scooter company to provide approximately 12 electric scooters on-site for residents to use for free. The electric scooters will be stationed in the lobby or at an easily accessible location in the garage. The electric scooters will encourage residents to travel to and from the project site as an alternative form of transportation.

Carpool and Vanpool Programs

On-Site Ride Matching Assistance

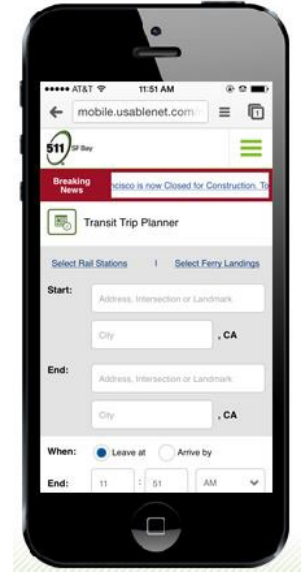
One of the greatest impediments to carpool and vanpool formation can be finding suitable riders with similar work schedules, origins, and destinations. Facilitated rideshare matching can overcome this obstacle by enabling commuters who are interested in ridesharing to enter their travel preferences into a database and receive a list of potential rideshare partners. The success of these programs is largely determined by the number of participants and, in turn, the number of potential matches that can be made.

The Transportation Coordinator will distribute a carpool/vanpool matching application to all residents as part of the welcome brochures. The application will match residents who work in the same area who may be able to carpool or vanpool together. Some residents who may be reluctant to reach out to find carpool partners via the 511 RideMatch service or Waze Carpool may be more likely to fill out a form that will be administered by their Transportation Coordinator. Furthermore, residents may be more willing to carpool with someone who lives in the same development.

511 Ride Matching Assistance

511 RideMatch

The 511 RideMatch service provides an interactive, on-demand system that helps commuters find carpools, vanpools or bicycle partners. The Transportation Coordinator, in conjunction with the future tenant(s) contact(s), will promote the on-line 511 service to residents. This free car and vanpool ride matching service helps commuters find others with similar routes and travel patterns with whom they may share a ride. Registered users are provided with a list of other commuters near their employment or residential ZIP code along with the closest cross street, email, phone number, and hours they are available to commute to and from work. Participants are then able to select and contact others with whom they wish to commute. The service also provides a list of existing car and vanpools in their residential area that may have vacancies. In addition, tenant(s) may provide private ride matching assistance to their residents to match co-workers making the same drive via 511 services.



Scoop

Scoop offers a fee-based ride matching service through an easy-to-use app. Scoop allows commuters to separate their AM and PM trips, to help accommodate unpredictable work schedules. Scoop also lets users schedule a trip as a driver or passenger, depending on their daily needs. Scoop identifies carpoolers who are heading the same direction and finds the most efficient carpool trip based on fastest route, nearby carpoolers, carpool lanes, and other factors. Payment for each trip is made through the app.

Ride matching assistance is also available through a number of peer-to-peer matching programs, which utilize social networks to match commuters.

Carpool/Vanpool Incentives

Scoop Discounts for San Mateo County Carpools

The San Mateo City/County Association of Governments (C/CAG) has developed the “Carpool 2.0 Rewards Program”, which provides financial incentives for all forms of carpooling for trips that begin or end in San Mateo County. Drivers and riders track carpool trips through the STAR Commute Tracker app or by connecting a Scoop or Waze Carpool account to a STAR account to auto-track carpool trips. For every 10 carpool days tracked, commuters can claim a \$25 e-gift card reward, up to \$100.

The Star Store

The Peninsula Traffic Congestion Relief Alliance has established a program called the Star Store. Residents and commuters who travel to, from, or through San Mateo County can earn points by logging their commutes in the STAR platform. Every day that someone commutes by an alternative to driving alone, they earn a point. Users collect points and then redeem them for rewards.

Vanpool Participant Rebates

The Peninsula Traffic Congestion Relief Alliance also offers an incentive to commuters to try vanpooling. The Alliance will pay half of the cost of a new vanpool participant’s seat, up to \$100 per month, for the first three months in



the van. New vanpools that operate for at least six months can receive a one-time rebate of \$500, paid to the vanpool driver (rotating drivers may share the bonus).

Transit and Ridesharing Subsidies

Transit subsidies are an extremely effective means of encouraging residents to use transit rather than driving. There are a number of ways that transit subsidies can be implemented. The project may subsidize transit or ridesharing for residents through one or more of the following: participating in the SamTrans Way2Go Program, purchasing Caltrain Go Passes, and/or reimbursing travel expenses.

SamTrans Way2Go Program

The SamTrans Way2Go program allows residential complexes to purchase annual ride passes for all eligible residents. Residential complex participants pay an annual fee for every eligible resident regardless of who will use the program. Currently, residential complexes pay an annual fee of \$40 for every eligible user with a minimum contract of \$2,500. The cost is pro-rated if a participant joins for less than a full year.

If the project enrolls in the SamTrans Way2Go Program, the cost of enrollment will be covered for all residents.

Caltrain Go Pass

The Caltrain Go Pass program allows residential complexes to purchase annual passes that offer unlimited rides on Caltrain through all zones, seven days a week. Participants pay an annual fee to provide the Go Pass to every resident, regardless of how many will use the transit pass. For 2022 and 2023, the total cost of participating in the Go Pass Program is the greater of \$342 per eligible resident or \$28,728. The cost is pro-rated if a participant joins for less than a full year. If the project enrolls in the Caltrain Go Pass program, the cost of enrollment will be covered for all residents.

Reimbursing Travel Expenses

The SamTrans Way2Go program and Caltrain Go Pass program are generally geared towards large developments. Due to the minimum fees imposed by both programs, it may be more economical for the project to forego enrollment into a program and simply reimburse travel expenses based on the needs of each resident. For this option, residents could choose their method of commuting and keep track of all expenses (train passes, ridesharing, bus passes, etc.). Residents will need to provide appropriate documentation in order to request the reimbursement. The residents could then be reimbursed for transit or ridesharing commuting expenses.

Once the site is fully occupied and resident preferred commute modes are ascertained, it will be possible to determine what combination of transit program and reimbursement method would work best. This TDM plan would consider subsidizing their residents' transit expenses, to the amount required by the C/CAG, but also allows the flexibility to determine the best way of doing that based on actual usage patterns.

Guaranteed Ride Home Program

An emergency ride home program provides residents with a free taxi ride or a 24-hour car rental in the case of an emergency. An Emergency Ride Home program guarantees that residents need not worry about being stranded at work without a car in the event of illness, family emergency, or unexpected overtime if they use transit, carpool, or vanpool. Commute.org provides a guaranteed ride home program for residents in San Mateo County. Commuters who use alternative modes of

transportation to get to work and need an emergency ride home can use any form of transportation to get home. Commute.org will reimburse people who commute to work in San Mateo County and have an emergency or qualifying circumstance via Tango Card, which can be redeemed for gift cards, or PayPal. Commuters can be reimbursed up to \$60, four times per calendar year.

On-site Amenities

The project proposes to include on-site amenities. A fitness area and lounge/mail area would be provided at the southwest corner on the ground floor. There is also an amenity room at the northwest corner on the ground floor. The amenity room will be used for work from home spaces. The project also proposes to have a clubroom and pool on the 2nd floor, and a Wi-Fi lounge on the 3rd floor.

Other amenities adjacent to the project site include a dry cleaning store, restaurants, a market, and vision care.

Partnership with the Alliance

Currently, there is no Transportation Management Agency (TMA) in San Carlos. The project will partner with the Peninsula Congestion Relief Alliance (commute.org) for ongoing support of the alternative commute programs described above. Free services provided by the Alliance may include:

- Rewards program for using carpool, vanpool, bicycling, walking and telecommuting
- Free on-site bicycle safety workshops
- Free transit tickets to try SamTrans, Caltrain, or San Francisco Ferry
- Guaranteed Ride Home Program

TDM Plan Checklist Summary

As required by the San Carlos Municipal Code (Section 18.25.050.A), a checklist of the trip reduction measures for the proposed project is summarized in Table 3. The Municipal Code states that any combination of the measures listed in Section 18.25.040 can be used to meet the trip reduction requirement.

Table 3
TDM Plan Checklist Summary

TDM Program	X = Included in the Proposed Project's TDM Plan
Trip Reduction Measures from San Carlos Municipal Code (Section 18.25.040)	
A . Passenger Loading Zones	X
B . Direct Route to Transit	X
C . Pedestrian Connections	X
D . Bicycle Connections	X
E . Land Dedication for Transit/Bus Shelter	
F . Long-Term Bicycle Parking	X
G . Short-Term Bicycle Parking	X
H . Free Preferential Carpool and Vanpool Parking	
I . Showers/Clothes Lockers	
J . Transportation Management Association (TMA)	X
K . Paid Parking at Prevalent Market Rates	
L . Alternative Commute Subsidies/Parking Cash Out	X
M . Carpool and Vanpool Ride-Matching Services	X
N . Guaranteed Ride Home	X
O . Shuttle Program	
P . Information Board/Kiosks	X
Q . Promotion Programs	X
R . Compressed Work Week	
S . Flextime	
T . On-Site Amenities	x
U . Telecommuting	
V . Other Measures	

C/CAG TDM Requirement

The City/County Association of Governments (C/CAG) for San Mateo County has established trip reduction requirements for new development within the county. C/CAG separates new developments into small projects and large projects. Residential projects (Multi-Family) larger than 50 units (generating more than 500 average daily trips) are considered to be large projects. The proposed project is located 300 feet away from the SamTrans Route ECR bus stop. Therefore, the project qualifies as a transit-oriented development (TOD), which is defined as a project within 0.5 miles of a transit station or stop serving "high-quality" transit service. "High-quality" transit is defined as a rail station or a transit stop featuring bus service with 15-minute headways during the peak hours of 6-10 AM and 3-7 PM. The recommended vehicle trip reduction target for large residential (Multi-Family) projects that are transit oriented (TOD) is 25 percent.

To accomplish the reduction goal, C/CAG provides a list of potential TDM measures, some of which are required and some of which are optional. Each measure has an associated point value and reduction percentage. Based on the C/CAG TDM policy, the project must first fulfill all required measures prior to selecting a sufficient number of additional recommended measures to achieve the minimum 25 percent trip reduction.

As shown in the Appendix, the project will achieve the reduction goal of 25 percent with the TDM measures included in this plan. C/CAG requires the following for large residential projects:

- A TDM self-certification status form biennially for the first six (6) years after occupancy.

4. TDM Implementation, Monitoring, and Reporting

The purpose of the TDM Plan is to reduce vehicle trips, parking demand, traffic congestion, and vehicle emissions generated by the proposed project. Per Section 18.25.080 of the City of San Carlos municipal code, regular monitoring will be necessary to ensure that the implemented TDM measures are effective and achieve the stated 20 percent trip reduction requirement. The program will be evaluated annually to assess the actual level of trip reduction achieved at the site.

Implementation

The project applicant and Transportation Coordinator will be responsible for ensuring that the TDM Plan is implemented. The project applicant and Transportation Coordinator will provide the transportation information to all residents on site.

Monitoring

Active monitoring will occur per the Municipal Code.

Consistent with common traffic engineering data collection principles, trip generation will be monitored annually by means of AM and PM commute hour driveway counts. The counts will be conducted between 7:00 AM and 9:00 AM and between 4:00 PM and 6:00 PM one day per year on a typical weekday (Tuesday, Wednesday, or Thursday) during the fall when school is in session. Mechanical tube counts, hand counts, or video counts may be used. The peak 60-minute period will be calculated for each two-hour traffic count period.

An annual resident survey will be conducted to determine resident transportation mode choice (i.e. drive alone, carpool, bus, Caltrain, etc.). This annual commuter survey will be formatted as a general survey including non-transportation questions (i.e. satisfaction with property management, activities, etc.) to increase the response rate.

The site Transportation Coordinator will work with an independent consultant to obtain traffic count data, implement the annual commuter surveys, and document the results in a TDM monitoring report. The annual monitoring report will be submitted to the City by the Transportation Coordinator. The data will be reviewed by the City to assess whether the goal of a 20% trip reduction is being met. This will be assessed by comparing the driveway counts to the trip targets of this TDM plan

report. Based on the trip generation estimates presented in Table 1, the driveway counts should show a maximum of 68 vehicle trips during the AM peak hour and 72 vehicle trips during the PM peak hours, respectively.

In addition to the annual monitoring reports, a five-year review will be conducted to evaluate the overall effectiveness of the TDM measures. If the City determines that the trip reduction goal is not being achieved, additional TDM measures may be implemented. Modifications to the TDM plan may include additional programs or substitute activities for achieving vehicle trip reductions. The annual TDM monitoring report will describe any planned modifications to the TDM program intended to ensure compliance with the trip reduction targets established for this project.

Appendix

500+ ADT; ~50+ Units

About this Form

Any new development project anticipated to generate at least 100 average daily trips is subject to the C/CAG TDM Policy and must complete a TDM Checklist and implement associated measures to mitigate traffic impacts. [Read more at ccagtdm.org](http://ccagtdm.org)

? Questions?
support@ccagtdm.org

A Applicant Information

Project Address		Contact First and Last Name
<input type="text"/>		<input type="text"/>
Parcel Number	Application Date	Contact Phone Address
<input type="text"/>	<input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/>	<input type="text"/>
Project Jurisdiction		Contact Email Address
<input type="text"/>		<input type="text"/>

B Trip Reduction Target

Select one option based on your project's distance to high quality transit

Read more about high quality transit at ccagtdm.org/high-quality-transit

Identify your project type

<input type="checkbox"/> TOD Less than 1/2-mile from high quality transit service 25% Trip Reduction Required	<input type="checkbox"/> Transit Proximate 1/2 to 3 miles from high quality transit service 35% Trip Reduction Required	<input type="checkbox"/> Non-Transit Proximate More than 3 miles from high quality transit service 35% Trip Reduction Required
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C Required Measures

You must select all measures that apply for your project type

[Click on each measure's title for more information](#)

Measure	Project Types	Percentage	Yes
1 M2 - Orientation, Education, Promotional Programs and/or Materials Offer new residents an orientation or education program or materials.	ALL	1%	<input type="checkbox"/>
2 M3 - TDM Coordinator/Contact Person Provide TDM coordinator/liaison for tenants. May be contracted through 3rd party provider, such as Commute.org.	ALL	0.5%	<input type="checkbox"/>
3 M4 - Actively Participate in Commute.org or Transportation Management Association (TMA) Equivalent Obtain certification of registration from Commute.org or equivalent TMA incorporation documents. Select only one based on Project Type	TOD & Non-transit Proximate Transit Proximate	5% 15%	<input type="checkbox"/> <input type="checkbox"/>
4 M6 - Transit or Ridesharing Passes/Subsidies Offer tenants passes or subsidies for monthly public transit or ridesharing costs incurred, equivalent to 30% of value or \$50 - whichever is lower.	ALL	10%	<input type="checkbox"/>
5 M8 - Secure Bicycle Storage Comply with CalGREEN minimum bicycle parking requirements.	ALL	1%	<input type="checkbox"/>
6 M9 - Design Streets to Encourage Bike/Ped Access Design adjacent streets or roadways to facilitate multimodal travel.	ALL	1%	<input type="checkbox"/>
7	Total from Required Measures Sum percentages from each selected measure from rows 1-6		<input type="text"/> %

Form Continues on Page 2 →

D Additional Recommended Select enough to meet the trip reduction target from section B Click on each measure's title for more information

Measure	Project Types	Percentage	Yes
8 M5 – Carpool or Vanpool Program Establish carpool/vanpool program for tenants and register program with Commute.org.	ALL	2%	<input type="checkbox"/>
9 M10 – Delivery Amenities Offer delivery amenities, including dedicated receipt and storage areas, to reduce need for multiple trips to conduct similar business.	ALL	1%	<input type="checkbox"/>
10 M11 – Family-supportive Amenities On-site secure storage of personal car seats, strollers, cargo bicycles, or other large bicycles. Property owners can also provide shared building equipment, such as shopping carts or cargo bicycles for check out by residents.	ALL	3%	<input type="checkbox"/>
11 M14 – Paid Parking at Market Rate Offer hourly/daily parking rates proportional to monthly rate or equivalent to cost of transit fare.	ALL	25%	<input type="checkbox"/>
12 M15 – Reduced Parking Provide off-street parking at least 10% below locally-required minimums, or else below the locally-permitted parking maximums. Consideration may be required of potential spillover parking into surrounding areas.	ALL	10%	<input type="checkbox"/>
13 M17 – Developer TDM Fee/TDM Fund Voluntary impact fee payment on a per unit or square footage basis, to fund the implementation of TDM programs.	ALL	4%	<input type="checkbox"/>
14 M18 – Car Share On-Site Provide on-site car share or vehicle fleets.	ALL	1%	<input type="checkbox"/>
15 M19 – Land Dedication or Capital Improvements for Transit Contribute space on, or adjacent to, the project site for transit improvements. Select one or more	Bus Pullout Space <input type="checkbox"/> 1% Bus Shelter <input type="checkbox"/> 1% Visual/Electrical Improvements (i.e., Lighting, Signage) <input type="checkbox"/> 1% Other (i.e., Micromobility Parking Zone, TNC Loading Zone) <input type="checkbox"/> 1%	<input type="checkbox"/> ALL <input type="checkbox"/> % Total percentages selected	<input type="checkbox"/>
16 M20 – Shuttle Program/Shuttle Consortium/Fund Transit Service Establish a shuttle service to regional transit hubs or commercial centers. Shuttle service should be provided free of charge to employees and guests.	Non-transit Proximate	10%	<input type="checkbox"/>
17 M21 – Bike/Scooter Share On-Site Allocate space for bike/scooter share parking.	All	1%	<input type="checkbox"/>
18 M22 – Active Transportation Subsidies Offer biking/walking incentives to tenants, such as gift card/product raffles.	All	2%	<input type="checkbox"/>
19 M23 – Gap Closure Construct or enhance quality of biking and walking facilities to/from site to existing trails, bikeways, and/or adjacent streets.	All	7%	<input type="checkbox"/>
20 M24 – Bike Repair Station Offer on-site bike repair space/tools in visible, secure area.	All	0.5%	<input type="checkbox"/>
21 M26 – Pedestrian Oriented Uses & Amenities on Ground Floor Provide on-site, visible amenities to tenants and guests, such as cafes, gyms, childcare, retail.	All	3%	<input type="checkbox"/>
22	Total from Additional Measures Sum percentages from each selected measure from rows 8 – 21		<input type="checkbox"/> %

E Project Totals

Percentage from Required Measures Section C Row 7 %


+ Percentage from Additional Measures Section D Row 22 %

Total Percentage from all Selected Measures Sum of required and additional measures %


Trip Reduction Target Copy from Section B %


Total Percentage from all selected measures must be greater than or equal to Trip Reduction Target

F Submit Checklist

 See ccagtdm.org/submission for how to submit this form.

Questions?

 Email Us support@ccagtdm.org

 Visit Our Website ccagtdm.org