

APPENDIX K

TRAFFIC IMPACT ANALYSIS

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**DANA POINT HARBOR HOTELS
DANA POINT, CALIFORNIA**

LSA

April 2021

TRAFFIC IMPACT ANALYSIS

DANA POINT HARBOR HOTELS DANA POINT, CALIFORNIA

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LIST OF ABBREVIATIONS AND ACRONYMS

ADT	average daily traffic
CalEEMod	California Emissions Estimator Model
Caltrans	California Department of Transportation
CEQA	California Environmental Quality Act
City	City of Dana Point
CMP	Congestion Management Program
County Guidelines	<i>Final Draft Guidelines for Evaluating Vehicle Miles Traveled under CEQA</i>
CUSD	Capistrano Unified School District
DU	dwelling unit
EIR	Environmental Impact Report
EMP	employee
ft	foot/feet
HCM	Highway Capacity Manual
I-5	Interstate 5
ICU	intersection capacity utilization
ITE	Institute of Transportation Engineers
LOS	level of service
mi	mile/miles
MPAH	Master Plan of Arterial Highways
mph	miles per hour
NB	northbound
OCTA	Orange County Transportation Authority
OPR	Office of Planning and Research
PCH	Pacific Coast Highway

PMP	<i>Dana Point Harbor Revitalization PA-3 Shared Parking Assessment and Parking Management Plan</i>
project	Dana Point Harbor Hotels Project
SB	southbound
sf	square feet
SR-1	State Route 1
Technical Advisory	<i>Technical Advisory for Evaluating Transportation Impacts under CEQA</i>
TIA	Traffic Impact Analysis
TSF	thousand square feet
v/c	volume-to-capacity
VMT	vehicle miles traveled
WBL	westbound lane

TRAFFIC IMPACT ANALYSIS DANA POINT HARBOR HOTELS

INTRODUCTION

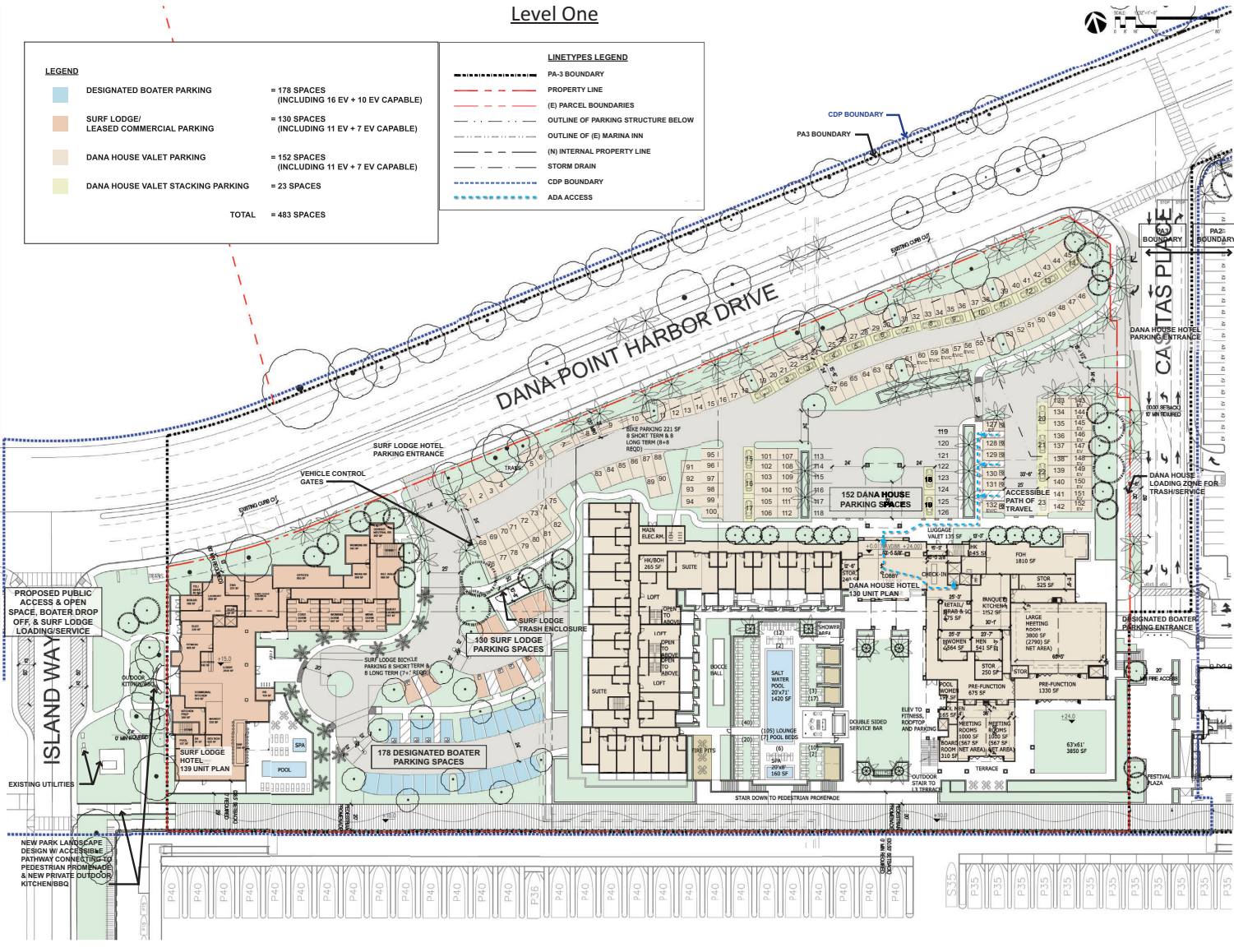
The purpose of this Traffic Impact Analysis (TIA) is to identify the potential traffic and circulation impacts associated with the proposed Dana Point Harbor Hotels Project (project) located at 24800 Dana Point Harbor Drive, near the intersection of Island Way and Dana Point Harbor Drive in Dana Point. The proposed project involves the demolition of the existing 136-room Dana Point Marina Inn, two boater service buildings, and parking areas on the project site and includes the development of two hotels, one of which would include space for boater services, associated ancillary uses, and replacement of parking areas, including designated boater and hotel parking. One of the two hotels, Dana House Hotel, would be designed as a boutique hotel including 130 market-rate rooms and associated amenities. The second hotel, Dana Point Surf Lodge, would be an affordable hotel that includes 139 rooms, three of which would be developed as dorm-style rooms, and associated amenities.

The project site is primarily located within Planning Area 3 of the Dana Point Harbor Revitalization Plan area south of Dana Point Harbor Drive at Casitas Place. Access to the site is provided via a full-access intersection at Casitas Place/Dana Point Harbor Drive and a right-in/right-out driveway on Dana Point Harbor Drive west of Casitas Place. In the existing condition, the right-in/right-out driveway is located approximately 150 feet (ft) west of Casitas Place. The project would relocate this driveway approximately 560 ft west of Casitas Place and 260 ft east of Island Way. It is possible today and will continue to be possible to access the project site from Golden Lantern by traversing the Dana Point Harbor Commercial Core. The proposed project is adding a pedestrian promenade between the proposed hotels and the Dana Point Harbor Commercial Core to support nonvehicle trips. Figure 1 illustrates the project site plan.

While pavement connects the surface parking areas for both hotels, a vehicle control gate located near the right-in/right-out driveway would only be used for emergency access and maintenance activity. The vehicle control gate would limit the ability of passenger vehicles to traverse the site. Employees and patrons of Dana Point Surf Lodge would use the right-in/right-out driveway to access Dana Point Surf Lodge. Employees and patrons of Dana House Hotel would use a right-in/right-out driveway on Casitas Place to access parking for Dana House Hotel. According to the *Dana Point Harbor Revitalization PA-3 Shared Parking Assessment and Parking Management Plan (PMP)* (MBI 2020), Dana House Hotel would provide only valet parking, while Dana Point Surf Lodge would provide self-parking. In addition to hotel parking, the project includes 178 self-park parking spaces supporting the boater services amenities. These parking spaces can be accessed from the Dana Point Surf Lodge right-in/right-out driveway or from an all-way stop controlled intersection at Casitas Place and the Commercial Core frontage road.

Level One

LEGEND		LINETYPES LEGEND	
	DESIGNATED BOATER PARKING		PA-3 BOUNDARY
	SURF LODGE/ LEASED COMMERCIAL PARKING		PROPERTY LINE
	DANA HOUSE VALET PARKING		(E) PARCEL BOUNDARIES
	DANA HOUSE VALET STACKING PARKING		OUTLINE OF PARKING STRUCTURE BELOW
	TOTAL = 483 SPACES		OUTLINE OF (E) MARINA INN
			(N) INTERNAL PROPERTY LINE
			STORM DRAIN
			CDP BOUNDARY
			ADA ACCESS



LSA



0 60 120
FEET

SOURCE: WATG

I:\DPC2001\G\Site Plan.cdr (3/17/2021)

FIGURE 1

This TIA addresses the following topics:

1. The proposed project's effect on vehicle circulation on Dana Point streets
2. The proposed project's effect on transportation according to recent changes to the *State CEQA Guidelines*
3. Site access

The circulation analysis examines the following four scenarios:

1. Existing Conditions (2020)
2. Existing Plus Project Conditions
3. Project Opening Year Conditions (2025)
4. Project Opening Year Plus Project Conditions

It should be noted that due to COVID-19, existing traffic volumes would not represent typical conditions. Therefore, the City of Dana Point (City) and LSA compiled historical traffic volume data and identified a methodology for developing a consistent set of traffic volumes approximating typical existing conditions.

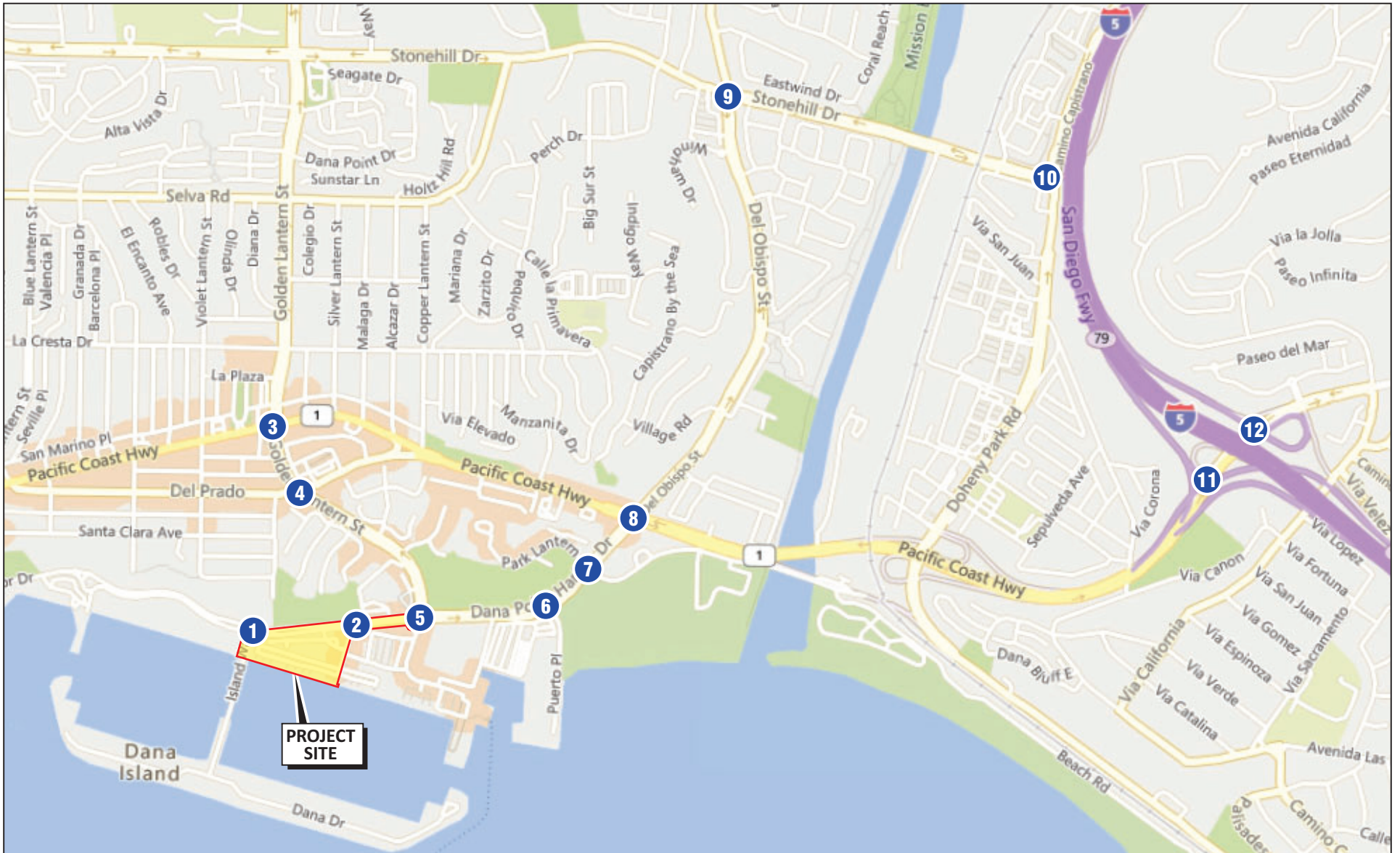
Based on discussions with the City staff, the following analysis periods have been evaluated:

- Weekday a.m. peak hour
- Weekday p.m. peak hour
- Weekend (Saturday) peak hour

Study Area

Based on review of the City's traffic study guidance, consideration of the likely distribution of project trips, and discussions with the City and its peer review consultant, 12 intersections were selected for inclusion in this study. Figure 2 shows the project location and the following study intersections:

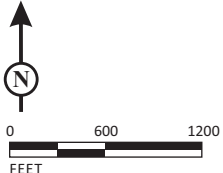
- Island Way/Dana Point Harbor Drive
- Casitas Place/Dana Point Harbor Drive
- Golden Lantern/Pacific Coast Highway (PCH)
- Golden Lantern/Del Prado Avenue
- Golden Lantern/Dana Point Harbor Drive
- Puerto Place/Dana Point Harbor Drive
- Dana Point Harbor Drive/Park Lantern
- Del Obispo Street-Dana Point Harbor Drive/PCH



LSA

LEGEND

- Study Area Intersection



SOURCE: Bing Maps

I:\DPC2001\G\Traffic\Location&Ints.cdr (12/1/2020)

FIGURE 2

Dana Point Harbor Hotels
Project Location and
Study Area Intersections

- Del Obispo Street/Stonehill Drive
- Camino Capistrano/Stonehill Drive
- Interstate 5 (I-5) southbound (SB) Ramps/Camino Las Ramblas
- I-5 northbound (NB) Ramps/Camino Las Ramblas

ANALYSIS METHODOLOGY

This TIA is prepared consistent with the objectives and requirements of the City’s General Plan Circulation Element (City of Dana Point 1995), the Orange County Congestion Management Program (CMP) (County of Orange 2019), and applicable provisions of the California Environmental Quality Act (CEQA), including disclosure of vehicle level of service (LOS) impacts in both existing and cumulative horizon years and the proposed project’s potential effect on vehicle miles traveled (VMT).

Intersection Level of Service Methodology

Traffic (Version 8.0 R1) computer software was utilized to determine the study intersection LOS based on the intersection capacity utilization (ICU) methodology for signalized intersections. Consistent with the City’s requirements, the ICU methodology compares the volume-to-capacity (v/c) ratios of conflicting turn movements at an intersection, sums up these critical conflicting v/c ratios for each intersection approach, and determines the overall ICU. The resulting ICU is expressed in terms of LOS, where LOS A represents free-flow activity and LOS F represents overcapacity operation. LOS is a qualitative assessment of the quantitative effects of such factors as traffic volume, roadway geometrics, speed, delay, and maneuverability on roadway and intersection operations. Typical intersection operations by LOS grade are described below.

Level of Service	Description
A	No approach phase is fully utilized by traffic, and no vehicle waits longer than one red indication. Typically, the approach appears quite open, turns are made easily, and nearly all drivers find freedom of operation.
B	This service level represents stable operation, where an occasional approach phase is fully utilized, and a substantial number are nearing full use. Many drivers begin to feel restricted within platoons of vehicles.
C	This level still represents stable operating conditions. Occasionally, drivers may have to wait through more than one red signal indication, and backups may develop behind turning vehicles. Most drivers feel somewhat restricted, but not objectionably so.
D	This level encompasses a zone of increasing restriction approaching instability at the intersection. Delays to approaching vehicles may be substantial during short peaks within the peak period; however, enough cycles with lower demand occur to permit periodic clearance of developing queues, thus preventing excessive backups.
E	Capacity occurs at the upper end of this service level. It represents the most vehicles that any particular intersection approach can accommodate. Full utilization of every signal cycle is attained no matter how great the demand.
F	This level describes forced-flow operations at low speeds, where volumes exceed capacity. These conditions usually result from queues of vehicles backing up from a restriction downstream.

The relationship between LOS and the ICU value (i.e., v/c ratio) is as follows:

Level of Service	Volume-to-Capacity (ICU Methodology)
A	≤0.60
B	>0.60 and ≤0.70
C	>0.70 and ≤0.80
D	>0.80 and ≤0.90
E	>0.90 and ≤1.00
F	>1.00
ICU = intersection capacity utilization	

The Highway Capacity Manual (HCM) (OCTA 2017) methodology was used to determine intersection LOS at unsignalized study intersections. For the HCM methodology, the LOS is presented in terms of total intersection delay (in seconds per vehicle). The relationship between LOS and the delay at unsignalized intersections is as follows:

Level of Service	Signalized Intersection Delay (seconds) per Vehicle	Unsignalized Intersection Delay (seconds) per Vehicle
A	≤10.0	≤10.0
B	>10.0 and ≤20.0	>10.0 and ≤15.0
C	>20.0 and ≤35.0	>15.0 and ≤25.0
D	>35.0 and ≤55.0	>25.0 and ≤35.0
E	>55.0 and ≤80.0	>35.0 and ≤50.0
F	>80.0	>50.0

Threshold of Significance

According to the *City of Dana Point General Plan Circulation Element* (City of Dana Point 1995), LOS C is the minimum acceptable condition that should be maintained during the peak commute hours for primary arterials, secondary arterials, and local streets. LOS D is the minimum acceptable condition that should be maintained during the peak commute hours for major arterials and State highways. LOS E is the minimum acceptable condition that should be maintained during the peak commute hours for CMP designated roadways. Table A lists the study intersections, the roadway classification of each intersection on the Master Plan Circulation System, and its associated LOS target according to Table C-3 of the General Plan Circulation Element.

Congestion Management Program

The Orange County Transportation Authority (OCTA) is the designated Congestion Management Agency responsible for preparing the Orange County CMP in compliance with Proposition 111 passed in June 1990. The 2019 Orange County CMP states that a TIA is required for CMP purposes for development projects generating 2,400 or more daily trips or for projects generating 1,600 or more daily trips and taking direct access to the CMP Highway System. The 2019 Orange County CMP stipulates the requirements for maintaining LOS E at CMP intersections or that the project will not result in a cumulative increase of more than 0.10 in the v/c ratio if the established LOS standard is worse than LOS E.

Table A: Study Area

Intersection	Classification	LOS Target
1. Island Way/Dana Point Harbor Dr.	Primary	C
2. Casitas Place/Dana Point Harbor Dr.	Primary	C
3. Golden Lantern/PCH	CMP	E
4. Golden Lantern/Del Prado Ave.	CMP	E
5. Golden Lantern/Dana Point Harbor Dr.	Primary	C
6. Puerto Place/Dana Point Harbor Dr.	Primary	C
7. Dana Point Harbor Dr./Park Lantern	Primary	C
8. Del Obispo St.-Dana Point Harbor Dr./PCH	Primary	C
9. Del Obispo St./Stonehill Dr.	Primary	C
10. Camino Capistrano/Stonehill Dr.	Major	D
11. I-5 SB Ramps/Camino Las Ramblas	Freeway	D
12. I-5 NB Ramps/Camino Las Ramblas	Freeway	D

CMP = Congestion Management Program
I-5 = Interstate 5
LOS = level of service

NB = northbound
PCH = Pacific Coast Highway
SB = southbound

As Table A shows, within the study area two intersections are included in the CMP Highway System:

- Golden Lantern/PCH
- Golden Lantern/Del Prado Avenue

California Environmental Quality Act

Section 21099(b)(2) of the California Public Resources Code states the following:

Upon certification of the guidelines by the Secretary of the Natural Resources Agency pursuant to this section, automobile delay, as described solely by level of service or similar measures of vehicular capacity or traffic congestion, shall not be considered a significant impact on the environment pursuant to this division, except in locations specifically identified in the guidelines, if any.

This certification occurred in January 2019, and vehicle delay and LOS analysis have been removed from consideration under CEQA. With the current *State CEQA Guidelines*, transportation impacts are to be evaluated based on a project’s effect on VMT. Although the City has not yet adopted revised traffic impact guidelines, simultaneous with clearance of the revised *State CEQA Guidelines*, the Governor’s Office of Planning and Research (OPR) released the *Technical Advisory for Evaluating Transportation Impacts under CEQA* (OPR 2018) (Technical Advisory). This State document provides sufficient guidance to permit the evaluation of project transportation impacts for the purposes of compliance with CEQA. Additionally, the *Final Draft Guidelines for Evaluating Vehicle Miles Traveled under CEQA* (County of Orange 2020) (County Guidelines) establish thresholds of significance.

City of San Juan Capistrano Guidelines

Two study intersections are located within San Juan Capistrano. For those two intersections (Camino Capistrano/Stonehill Drive and I-5 NB Ramps/Camino Las Ramblas), level of service is reported according to both Dana Point and San Juan Capistrano analysis guidelines.

Per City of San Juan Capistrano Administrative Policy No. 310, intersections are evaluated using both the intersection capacity utilization (ICU) and *Highway Capacity Manual* (HCM), 6th Edition (TRB 2017) methodologies. The City of San Juan Capistrano considers LOS D as the upper limit of satisfactory operations for intersections. Based on City of San Juan Capistrano Administration Policy No. 310, a project impact occurs at a non-hot-spot intersection (or roadway segment) when the project's increase in ICU (or v/c ratio) is 0.01 or greater and the resulting LOS is E or F (ICU methodology). A project impact also occurs at a non-hot-spot intersection when the project's increase in delay is 1.0 second or greater and the resulting LOS is E or F (HCM methodology). Neither of the study intersections within San Juan Capistrano is a hot spot location.

EXISTING BASELINE CONDITION

Existing Circulation System

Key roadways in the vicinity of the proposed project are as follows:

- **Pacific Coast Highway:** PCH is a City facility with a speed limit of 35 miles per hour (mph). It is a divided, east-west arterial highway adjacent to the project site. East of Crystal Lantern, PCH is a six-lane facility. Between Crystal Lantern and Golden Lantern, PCH consists of five lanes. West of Golden Lantern, PCH is a four-lane facility. It is designated as a Major Arterial Highway in the City's General Plan Circulation Element and Orange County Master Plan of Arterial Highways (MPAH). It is also a CMP facility. Curbside parking is permitted on both sides of the highway in select locations.
- **Dana Point Harbor Drive:** Dana Point Harbor Drive is a divided four-lane roadway that runs in an east-west direction located north of the project site. West of Casitas Place, Dana Point Harbor Drive is striped with one lane in the eastbound direction. The speed limit is 30 mph. It is designated as a Primary Arterial in the City's General Plan Circulation Element and Orange County MPAH.
- **Del Obispo Street:** Del Obispo Street is a divided four-lane roadway that runs in a north-south direction located east of the project site. The speed limit is 40 mph. It is designated as a Secondary Arterial in the City's General Plan Circulation Element and Orange County MPAH. Curbside parking is permitted on both sides of the roadway in select locations.
- **Golden Lantern:** Golden Lantern is a divided four-lane roadway that runs in a north-south direction located east of the project site. The speed limit is 35 mph. It is designated as a Primary Arterial in the City's General Plan Circulation Element. The Orange County MPAH designated Golden Lantern a Smart Street north of PCH and a Primary Arterial south of PCH. It is also a CMP facility. Curbside parking is permitted on both sides of the roadway in select locations.

- **Stonehill Drive:** Stonehill Drive is a four-lane divided roadway that runs in an east-west direction located north of the project site. It is designated as a Primary Arterial in the City's General Plan Circulation Element and Orange County MPAH. The posted speed limit is 40 mph. Curbside parking is permitted on both sides of the roadway in select locations.

The existing study intersection geometrics are shown on Figure 3.

Pedestrian Circulation

The project site currently includes internal pedestrian circulation, and walkways and sidewalks are provided along Casitas Place, Dana Point Harbor Drive, and Island Way. The sidewalk on Island Way also provides access to the rest of the marina to the west of the project site and the "island" portion of the Harbor located south of the project site across the Island Way bridge. The sidewalk along Dana Point Harbor Drive provides access to Dana Point Cove and Baby Beach to the west and to Doheny State Beach to the east.

Bicycle Circulation

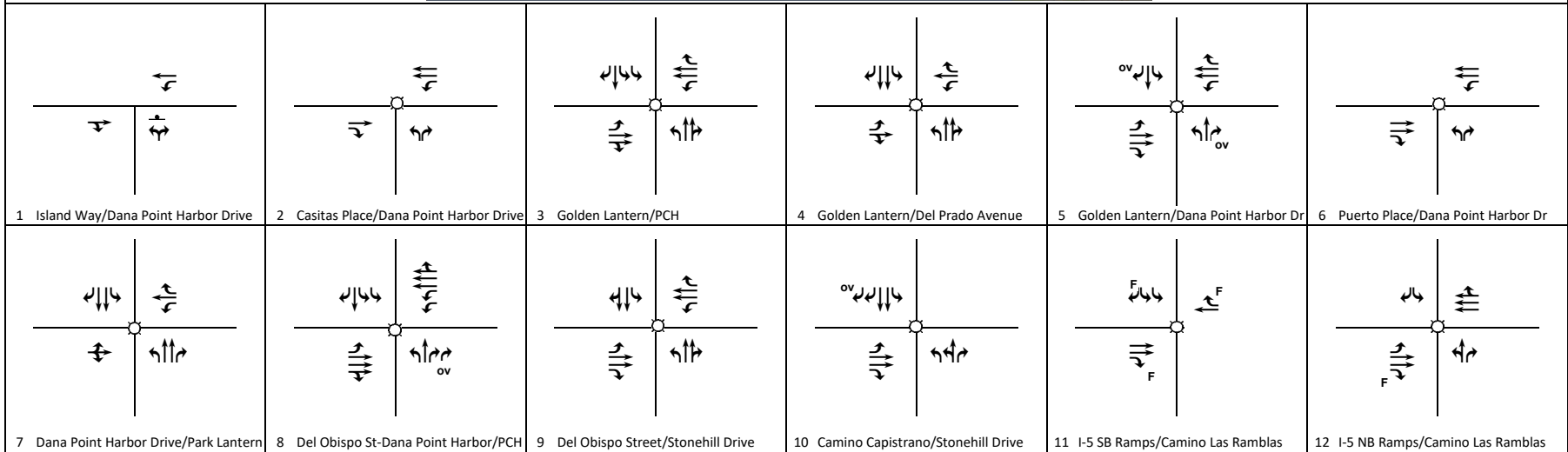
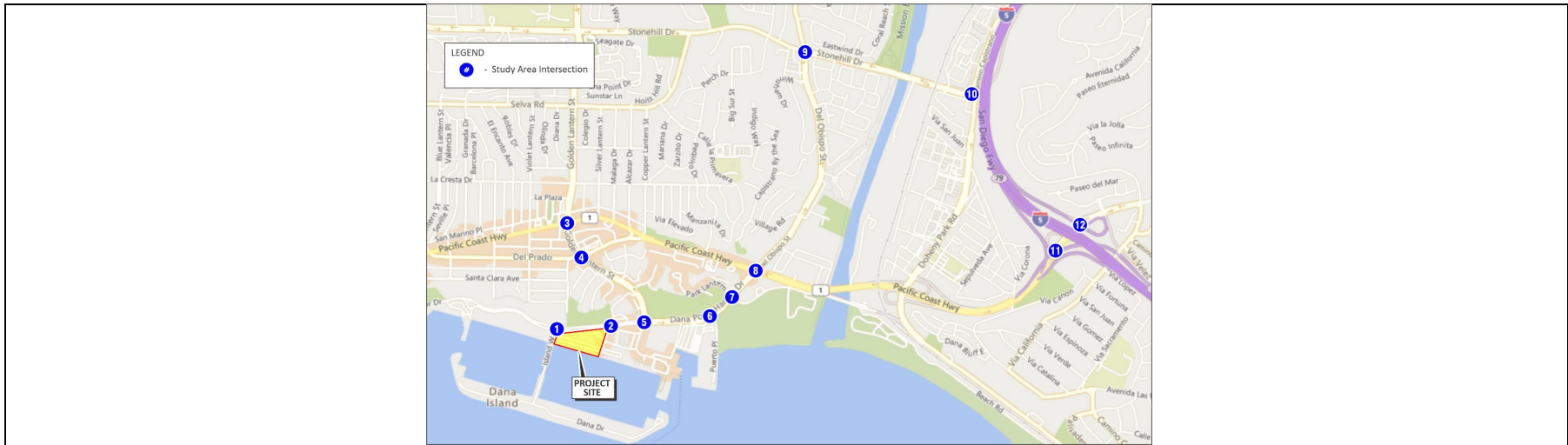
The project site is located immediately south of the existing Class 2 bike lanes on Dana Point Harbor Drive (OCTA 2009). This existing bicycle facility provides routes to employment, shopping, or recreational destinations within Dana Point Harbor and the surrounding area.

Transit Facilities

The proposed hotels would be located approximately 0.15 mile southwest of the nearest bus stop (the OCTA Route 90 bus stop at the northeast corner of Golden Lantern and Dana Point Harbor Drive). In addition, the City provides a trolley service during the summer months for local city transport, and the proposed hotels are located approximately 0.13 mile west of the nearest trolley stop (on the southeast corner of Golden Lantern and Dana Point Harbor Drive). Employees of the Dana Point Harbor Hotels may utilize available alternative transportation to access the site.

Existing Traffic Volumes and LOS Analysis

Covid-19 has disrupted typical travel patterns, and traffic data collected at this time would not reflect typical conditions. Therefore, existing conditions were approximated from historic traffic data. The City provided the latest traffic volume data for each intersection. At seven of those intersections, traffic volume data were collected in 2019 or early 2020 and reflected current typical conditions. At one intersection (Dana Point Harbor Drive/Park Lantern), 2018 traffic volume data were available during the weekday a.m. and p.m. peak hours, and 2011 traffic volume data were available during the Saturday peak hour. At the remaining four intersections (all of which are located along Dana Point Harbor Drive), the latest available traffic volume data were collected in 2005. Historic traffic volume data gathered for this analysis are presented in Appendix A.



LSA

LEGEND
 ○ Signal
 ⊥ Stop Sign
 F Free Right Turn
 ov Overlap Signal Phasing

FIGURE 3

Dana Point Harbor Hotels
 Existing Intersection Geometrics

The 2008 financial crisis and subsequent Great Recession resulted in the unusual scenario in which 2005 traffic volumes were higher than existing traffic volumes for a period of several years. In addition, as the land uses generating traffic volumes have not substantially changed, it is possible that traffic volumes on the minor approaches may have changed less than through traffic on Dana Point Harbor Drive. LSA sought historic traffic volume data that could assist in calculating a growth rate. Specifically, LSA queried roadway data provided on the OCTA Traffic Flow maps. The investigation showed that roadway volumes reported on the OCTA Traffic Flow maps have grown little or have declined since 2005 for most of the study area. In order to further understand traffic volume growth since 2005, LSA examined the peak-hour flow of traffic on Dana Point Harbor Drive between Puerto Place (data collected in 2005) and PCH (data collected in 2019). The unadjusted weekday traffic volumes at Puerto Place appear to be within a reasonable range and are occasionally higher than more recently collected data, suggesting that traffic growth from 2005 to 2019 along Dana Point Harbor Drive has been minimal. However, in order to present a conservative analysis, and in consultation with the City staff, a 0.5 percent per year growth rate was applied to all traffic volumes collected in 2019 or prior.

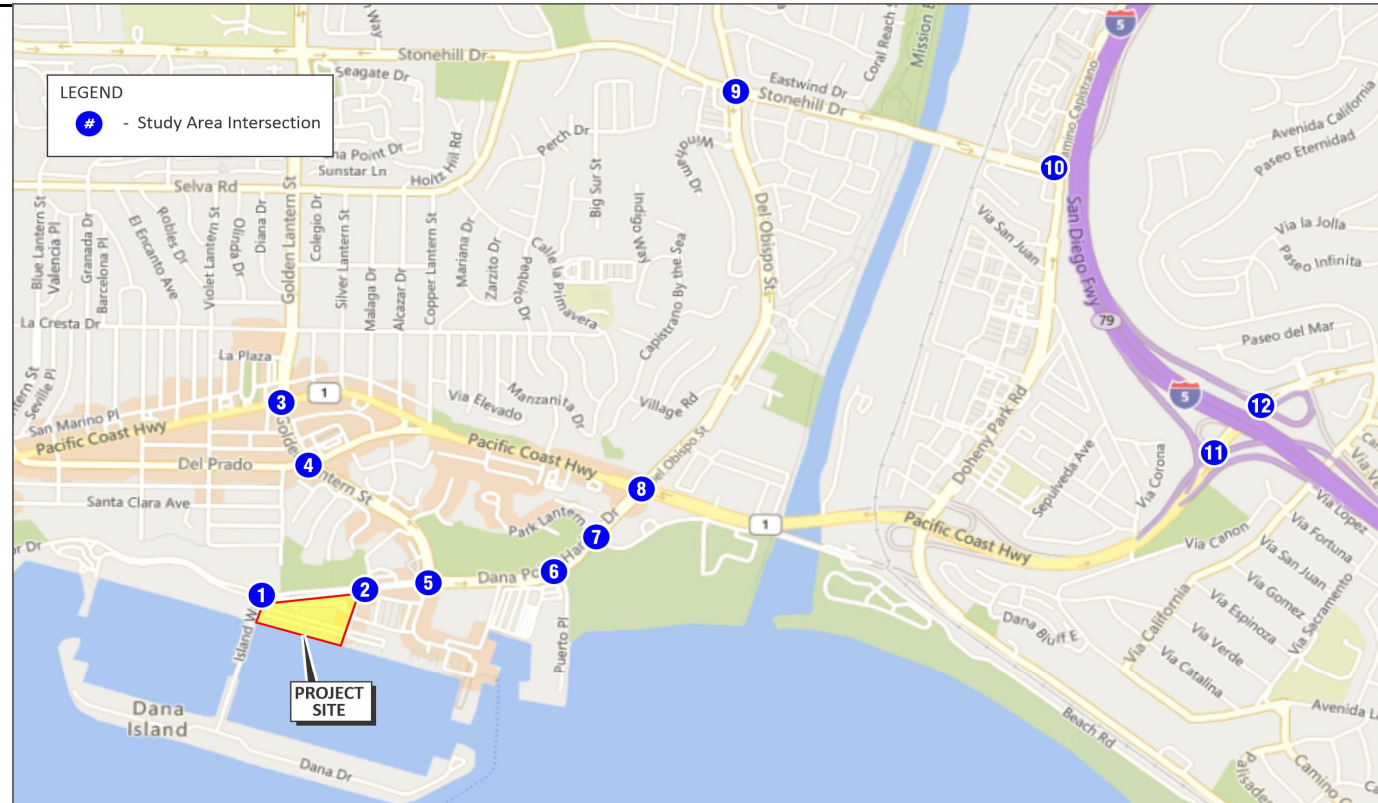
At three intersections (Dana Point Harbor Drive/Park Lantern, Golden Lantern/PCH, and Golden Lantern/Del Prado Avenue) Saturday volumes were estimated using recent weekday peak-hour volumes and ratios of Saturday-to-weekday traffic volumes. For the four intersections with only 2005 traffic volume data, LSA applied a growth rate of 0.5 percent per year, for a total growth rate of 7.5 percent.

Figures 4a and 4b present the estimated existing traffic volumes. Table B below lists the existing LOS performance of the study intersections. LOS worksheets for the existing condition are provided in Appendix B. As Table B shows, all study intersections operate within their LOS target in the existing condition.

OPENING YEAR (2025) CONDITION

Demolition of the existing structures and completion of construction of both hotels is anticipated in 2025. LSA applied an ambient growth rate of 0.5 percent per year (2.5 percent total). LSA coordinated with the City staff on identifying a list of approved and pending projects that could reasonably be assumed to be operating by the project opening year and would also contribute traffic to the study intersections. Through this process, 19 cumulative projects were identified. Figure 5 illustrates the location of these cumulative projects.

For several of these projects, traffic studies were available that calculated weekday peak-hour trip generation. For projects without traffic studies, a cumulative project trip generation table provided by the City or trip rates from the Institute of Transportation Engineers (ITE) *Trip Generation Manual*, 10th Edition, was utilized to calculate weekday a.m., weekday p.m., and weekend peak-hour of generator traffic volumes for the cumulative projects. For cumulative projects with approved a.m. and p.m. peak-hour traffic volumes (including trip credits) but no weekend traffic volumes, a ratio was calculated between ITE weekend and ITE p.m. peak-hour trip rates, and LSA applied that ratio to the cumulative project's p.m. peak-hour traffic volume. This method accounts for the trip credits applied to the proposed project.



<table border="1"> <tr> <td>170 / 135</td> <td>↑ 166 / 138</td> </tr> <tr> <td>26 / 42</td> <td>↙ 96 / 127</td> </tr> <tr> <td>18 / 40</td> <td>↘ 81 / 176</td> </tr> </table> <p>1 Island Way/Dana Point Harbor Drive</p>	170 / 135	↑ 166 / 138	26 / 42	↙ 96 / 127	18 / 40	↘ 81 / 176	<table border="1"> <tr> <td>216 / 310</td> <td>↑ 263 / 262</td> </tr> <tr> <td>20 / 25</td> <td>↙ 57 / 84</td> </tr> <tr> <td>4 / 16</td> <td>↘ 27 / 27</td> </tr> </table> <p>2 Casitas Place/Dana Point Harbor Drive</p>	216 / 310	↑ 263 / 262	20 / 25	↙ 57 / 84	4 / 16	↘ 27 / 27	<table border="1"> <tr> <td>91 / 88</td> <td>↑ 129 / 227</td> </tr> <tr> <td>194 / 293</td> <td>↑ 1046 / 863</td> </tr> <tr> <td>247 / 269</td> <td>↙ 49 / 69</td> </tr> <tr> <td>36 / 94</td> <td>↘ 42 / 122</td> </tr> <tr> <td>583 / 835</td> <td>↘ 96 / 297</td> </tr> <tr> <td>29 / 52</td> <td>↘ 13 / 42</td> </tr> </table> <p>3 Golden Lantern/PCH</p>	91 / 88	↑ 129 / 227	194 / 293	↑ 1046 / 863	247 / 269	↙ 49 / 69	36 / 94	↘ 42 / 122	583 / 835	↘ 96 / 297	29 / 52	↘ 13 / 42	<table border="1"> <tr> <td>24 / 73</td> <td>↑ 19 / 32</td> </tr> <tr> <td>150 / 203</td> <td>↑ 56 / 115</td> </tr> <tr> <td>49 / 136</td> <td>↙ 23 / 29</td> </tr> <tr> <td>36 / 58</td> <td>↘ 43 / 47</td> </tr> <tr> <td>82 / 129</td> <td>↘ 110 / 249</td> </tr> <tr> <td>75 / 97</td> <td>↘ 19 / 41</td> </tr> </table> <p>4 Golden Lantern/Del Prado Avenue</p>	24 / 73	↑ 19 / 32	150 / 203	↑ 56 / 115	49 / 136	↙ 23 / 29	36 / 58	↘ 43 / 47	82 / 129	↘ 110 / 249	75 / 97	↘ 19 / 41	<table border="1"> <tr> <td>96 / 101</td> <td>↑ 96 / 89</td> </tr> <tr> <td>88 / 81</td> <td>↑ 194 / 228</td> </tr> <tr> <td>48 / 192</td> <td>↙ 113 / 123</td> </tr> <tr> <td>62 / 125</td> <td>↘ 32 / 20</td> </tr> <tr> <td>174 / 174</td> <td>↘ 42 / 92</td> </tr> <tr> <td>10 / 15</td> <td>↘ 43 / 135</td> </tr> </table> <p>5 Golden Lantern/Dana Point Harbor Drive</p>	96 / 101	↑ 96 / 89	88 / 81	↑ 194 / 228	48 / 192	↙ 113 / 123	62 / 125	↘ 32 / 20	174 / 174	↘ 42 / 92	10 / 15	↘ 43 / 135	<table border="1"> <tr> <td>234 / 469</td> <td>↑ 356 / 430</td> </tr> <tr> <td>32 / 42</td> <td>↙ 25 / 46</td> </tr> <tr> <td>18 / 28</td> <td>↘ 26 / 76</td> </tr> </table> <p>6 Puerto Place/Dana Point Harbor Drive</p>	234 / 469	↑ 356 / 430	32 / 42	↙ 25 / 46	18 / 28	↘ 26 / 76												
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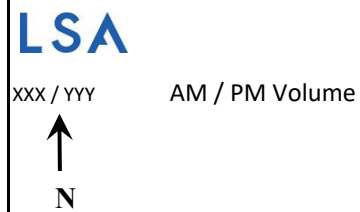
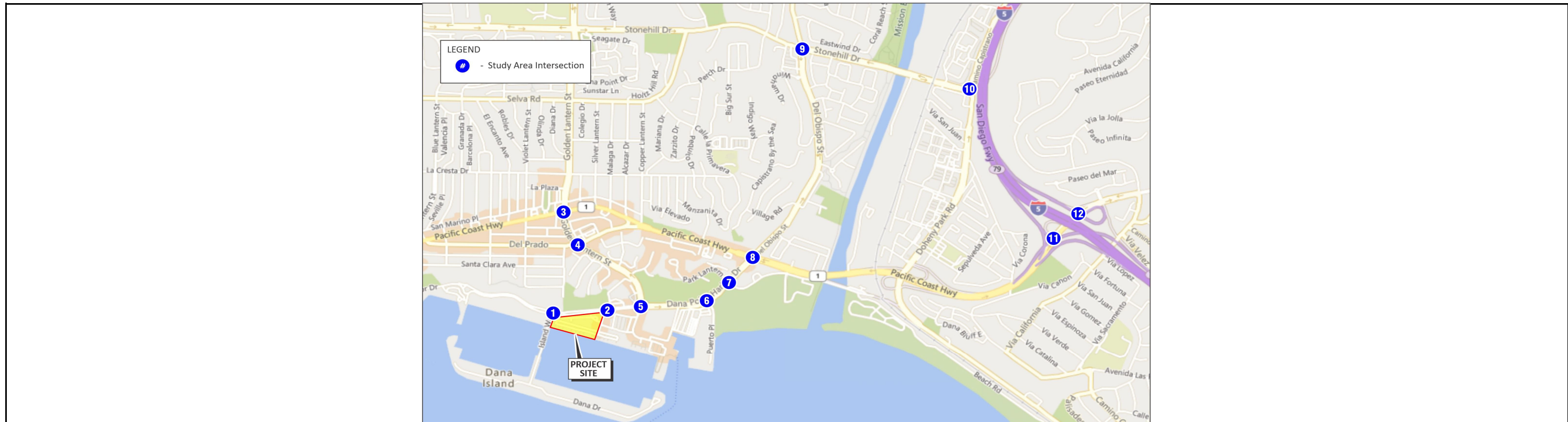


FIGURE 4a
Dana Point Harbor Hotels
Existing (2020) Weekday Traffic Volumes



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LSA FIGURE 4b

ZZZ Saturday Peak Hour Volume

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Dana Point Harbor Hotels
Existing (2020) Saturday Peak Hour Traffic Volumes

Table B: Existing Intersection LOS Summary

Intersection	AM Peak Hour		PM Peak Hour		Saturday Midday	
	ICU/ Delay	LOS	ICU/ Delay	LOS	ICU/ Delay	LOS
1. Island Way/Dana Point Harbor Dr.	10.8 sec	B	12.0 sec	B	17.6 sec	C
2. Casitas Place/Dana Point Harbor Dr.	0.226	A	0.298	A	0.410	A
3. Golden Lantern/PCH (CMP)	0.556	A	0.670	B	0.791	C
4. Golden Lantern/Del Prado Ave. (CMP)	0.225	A	0.365	A	0.459	A
5. Golden Lantern/Dana Point Harbor Dr.	0.242	A	0.384	A	0.644	B
6. Puerto Place/Dana Point Harbor Dr.	0.170	A	0.260	A	0.321	A
7. Dana Point Harbor Dr./Park Lantern	0.224	A	0.271	A	0.269	A
8. Del Obispo St.-Dana Point Harbor Dr./PCH	0.578	A	0.587	A	0.560	A
9. Del Obispo St./Stonehill Dr.	0.753	C	0.682	B	0.652	B
10. Camino Capistrano/Stonehill Dr.	0.609	B	0.689	B	0.658	B
10. Camino Capistrano/Stonehill Dr. (HCM)	27.8 sec	C	29.0 sec	C	22.5 sec	C
11. I-5 SB Ramps/Camino Las Ramblas	0.254	A	0.299	A	0.251	A
12. I-5 NB Ramps/Camino Las Ramblas	0.247	A	0.258	A	0.212	A
12. I-5 NB Ramps/Camino Las Ramblas (HCM)	7.7 sec	A	7.4 sec	A	7.0 sec	A

Unsatisfactory LOS

CMP = Congestion Management Program

I-5 = Interstate 5

HCM = Highway Capacity Manual

ICU = intersection capacity utilization

LOS = level of service

NB = northbound

PCH = Pacific Coast Highway

SB = southbound

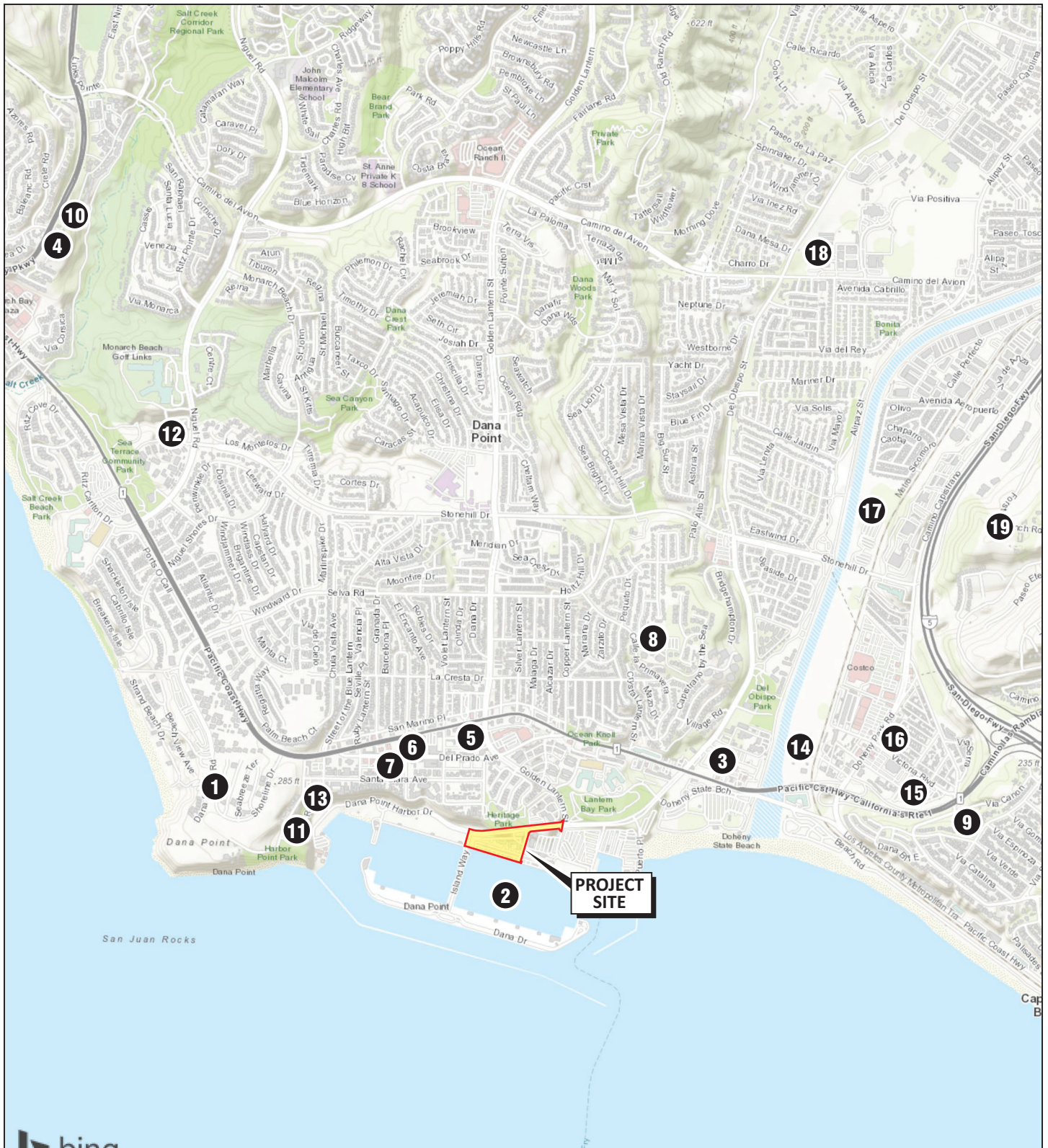
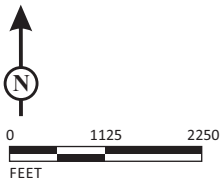


FIGURE 5

LSA

LEGEND

- 1 - Cumulative Project Location



SOURCE: ESRI/Bing

Dana Point Harbor Hotels
Cumulative Project Locations

The traffic study for the Dana Point Harbor Revitalization Project did not include weekend trip generation in the trip generation table, but weekend inbound and outbound trip generation could be calculated by adding the weekend peak-hour inbound and outbound trips illustrated on the weekend trip assignment graphic. The proposed project is located within Planning Area 3 of the Dana Point Harbor Revitalization plan. To avoid double counting, project traffic volumes were subtracted from the Planning Area 3 traffic volumes from the Dana Point Harbor Revitalization Plan. Table C, below, displays traffic generation for the cumulative projects.

While the potential trip generation for the Doheny Village Zoning District is shown on Table C, the City does not believe that any individual projects within the zoning district are anticipated by the proposed project's opening year of 2025, and therefore no additional trips were added to the study intersections for the zoning district. For the three projects with traffic studies depicting trip assignment (the Ganahl Lumber Development Project, the Dana Point Harbor Revitalization Project, and the South Cove Project), LSA used the assigned trips at shared study intersections and conserved traffic flow at both upstream and downstream study intersections. Saturday traffic volumes were estimated based on a ratio between Saturday and p.m. peak-hour trip generation. For the Dana Point Harbor Revitalization plan traffic volumes, Planning Area 3 traffic volumes were distributed in Traffix and subtracted from Dana Point Harbor Revitalization (Commercial Core) traffic volumes. Cumulative traffic volumes for the remaining cumulative projects were calculated using Traffix. The resulting cumulative project traffic volumes are illustrated on Figures 6a and 6b.

Opening Year (2025) traffic volumes were calculated by applying the ambient growth rate of 2.5 percent and adding the cumulative project traffic volumes. Figures 7a and 7b illustrate the resulting opening year baseline traffic volumes.

The City anticipates that an intersection improvement project at Golden Lantern/Dana Point Harbor Drive will be completed by the proposed project opening year of 2025. The intersection improvement project consists of restriping the northbound and southbound approaches to provide one left-turn lane, one through lane, and one through/right-turn lane and removing northbound and southbound right-turn overlap signal phasing. This intersection improvement project was included as a cumulative project when intersection LOS was calculated. In addition, this analysis considers the effect of a planned roadway improvement project as part of the Ganahl Lumber Development Project. The project would construct a third eastbound through lane on Stonehill Drive between Del Obispo Street and Camino Capistrano.

Table D presents the Opening Year (2025) No Project LOS performance at the study intersections. LOS worksheets for the Opening Year (2025) condition are provided in Appendix C. While the Stonehill Drive roadway improvement is anticipated, it is not currently fully funded. Therefore, Table D provides intersection LOS calculations without and with the Stonehill Drive improvement. As Table D shows, all study intersections are anticipated to continue to operate within their LOS target with the addition of cumulative project traffic with the exception of Del Obispo Street/Stonehill Drive. With the addition of ambient traffic growth and cumulative traffic volumes, the intersection of Del Obispo Street/Stonehill Drive is anticipated to operate at LOS D in the weekday a.m. peak hour. This is in excess of the City's performance target for Primary Arterials. With completion of the anticipated Stonehill Drive improvement, the intersection of Del Obispo Street/Stonehill Drive would operate at LOS C, which is within the City's performance target.

Table C: Cumulative Project Trip Generation

Land Use	Size	Unit	ADT	AM Peak Hour			PM Peak Hour			Weekend Peak Hour		
				In	Out	Total	In	Out	Total	In	Out	Total
Trip Rates¹												
General Light Industrial (110)		EMP	3.05	0.43	0.09	0.52	0.11	0.38	0.49	0.05	0.05	0.10
General Light Industrial (110)		TSF	4.96	0.62	0.08	0.70	0.08	0.55	0.63	0.14	0.14	0.28
Single-Family Detached Housing (210)		DU	9.44	0.19	0.55	0.74	0.62	0.37	0.99	0.50	0.43	0.93
Multifamily Housing (Low-Rise) (220)		DU	7.32	0.11	0.35	0.46	0.35	0.21	0.56	0.38	0.32	0.70
Multifamily Housing (Mid-Rise) (221)		DU	5.44	0.09	0.27	0.36	0.27	0.17	0.44	0.22	0.22	0.44
Hotel (310)		Room	8.36	0.28	0.19	0.47	0.31	0.29	0.60	0.40	0.32	0.72
Resort Hotel (330) ²		Room	5.71	0.23	0.09	0.32	0.18	0.23	0.41	0.28	0.21	0.49
Church (560)		TSF	6.95	0.20	0.13	0.33	0.22	0.27	0.49	1.64	1.14	2.78
General Office Building (710)		TSF	9.74	1.00	0.16	1.16	0.18	0.97	1.15	0.13	0.13	0.26
Building Materials and Lumber Store (812)		TSF	18.05	0.99	0.58	1.57	0.97	1.09	2.06	4.89	4.69	9.58
Shopping Center (820)		TSF	37.75	0.58	0.36	0.94	1.83	1.98	3.81	2.34	2.16	4.50
Trip Generation												
1. Headlands Specific Plan ³			4,379	100	114	214	219	178	397	176	123	299
2. Dana Point Harbor Revitalization (Commercial Core) ^{4,8}			5,477	202	182	384	252	192	444	489	369	858
Dana Point Harbor Revitalization (Marina Remodel) ⁴			420	23	3	26	17	25	42	17	35	52
3. South Cove ³	168 2,471	DU TSF	1,083	15	63	78	64	34	98	70	59	129
4. South Shores Church Master Plan ⁵	46.817	TSF	255	12	0	12	0	18	18	60	42	102
5. Vista del Mar ⁶			238	4	13	17	2	(6)	(4)	7	7	14
6. Prado West ⁶			1,085	18	41	59	13	(2)	11	41	42	83
7. The Greer ⁶			389	21	24	45	13	11	24	10	12	22
8. St. Edwards Expansion ⁶	11.463	TSF	80	2	1	3	2	4	6	19	13	32
9. Capistrano Hillside Project (210) ¹	11	DU	104	2	6	8	7	4	11	6	5	11
10. Monarch Coast Apartments (221) ¹	30	DU	163	3	8	11	8	5	13	7	7	14
11. Lantern Point Hotel ⁶	53	Room	443	15	10	25	16	16	32	21	17	38
12. Grand Monarch ⁶	45	DU	329	5	16	21	16	9	25	16	16	32
13. Resort Hotel at Cannon's ⁶	102	Room	130	30	20	50	(7)	11	4	(9)	(2)	(11)
14. Doheny Ocean Desalination Plant ⁷	15	EMP	36	10	2	12	2	10	12	1	2	3
15. Victoria Boulevard/CUSD Bus Yard (221) ⁶	400	DU	2,920	36	144	180	148	87	235	143	151	294
16. Doheny Village Zoning District ^{8,9}			7,256	152	160	312	290	329	619	311	352	663
17. Ganahl Lumber Development Project ¹⁰	161.358	TSF	3,486	168	144	312	103	116	219	519	499	1,018

Table C: Cumulative Project Trip Generation

Land Use	Size	Unit	ADT	AM Peak Hour			PM Peak Hour			Weekend Peak Hour		
				In	Out	Total	In	Out	Total	In	Out	Total
18. The Farm Specific Plan ¹¹	169	DU	1,595	32	93	125	105	63	168	85	73	158
19. Pacifica San Juan ⁶	416	DU	3,753	71	214	285	237	140	377	197	171	368

¹ Trip rates referenced from the *Trip Generation Manual*, 10th Edition (ITE 2017).

² Daily and Saturday rates calculated from standard hotel ITE rates.

³ 34202 Del Obispo Street Traffic Impact Analysis (LSA 2014a).

⁴ Dana Point Harbor Revitalization Traffic and Parking Analysis (RBF 2005).

⁵ South Shores Church Master Plan Traffic Impact Analysis and Parking Analysis (LSA 2014b).

⁶ Excerpt from Victoria Boulevard Apartments Traffic Impact Analysis (City of Dana Point 2020a).

⁷ Doheny Ocean Desalination Project Draft Environmental Impact Report (LSA 2018).

⁸ Draft Doheny Village Zoning District Overlay Zone Traffic Study (City of Dana Point 2020b).

⁹ No specific development projects are anticipated by the proposed project opening year.

¹⁰ Ganahl Lumber Development Project Traffic Impact Analysis (LSA 2020a).

¹¹ Trip Generation Analysis for the Farm Specific Plan (LSA 2020b).

ADT = average daily trips

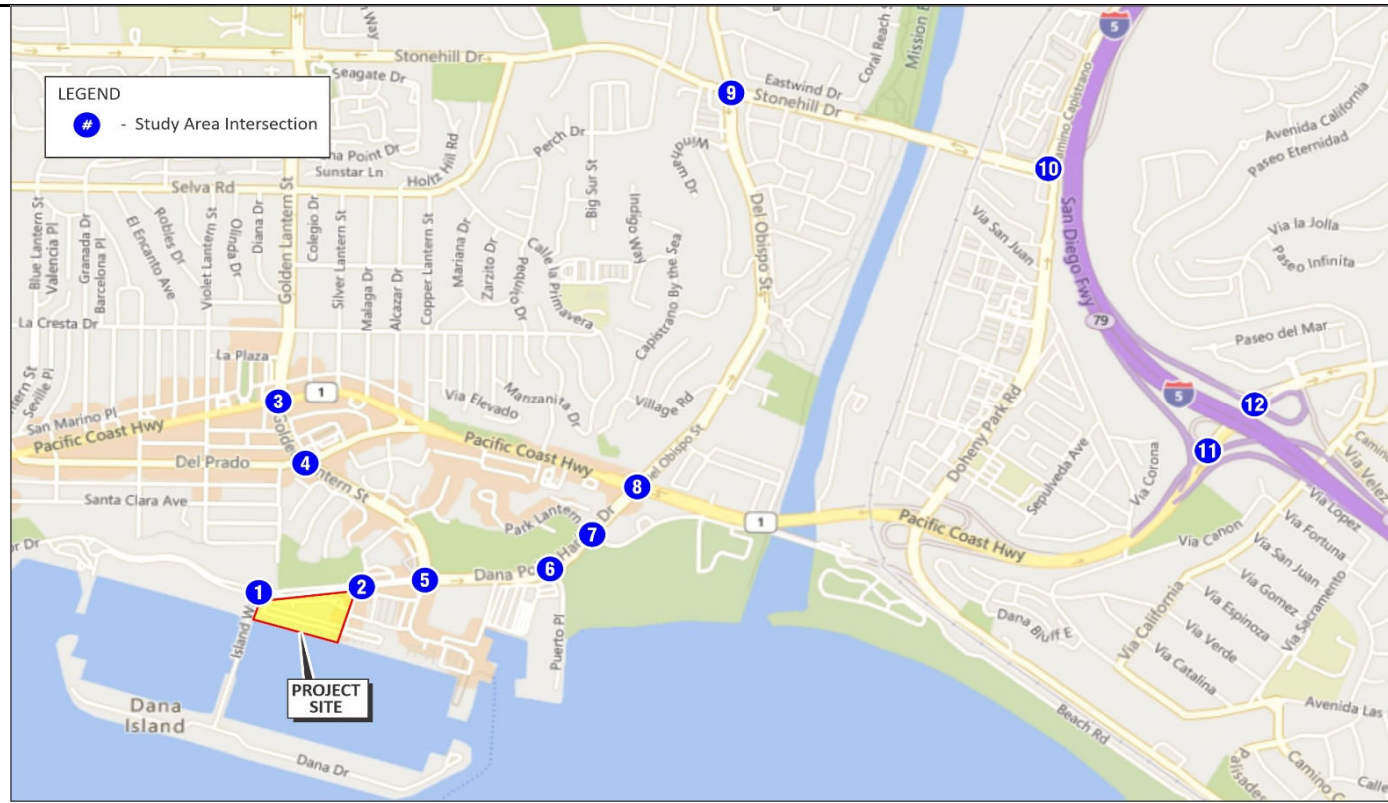
EMP = employee

CUSD = Capistrano Unified School District

ITE = Institute of Transportation Engineers

DU = dwelling unit

TSF = thousand square feet



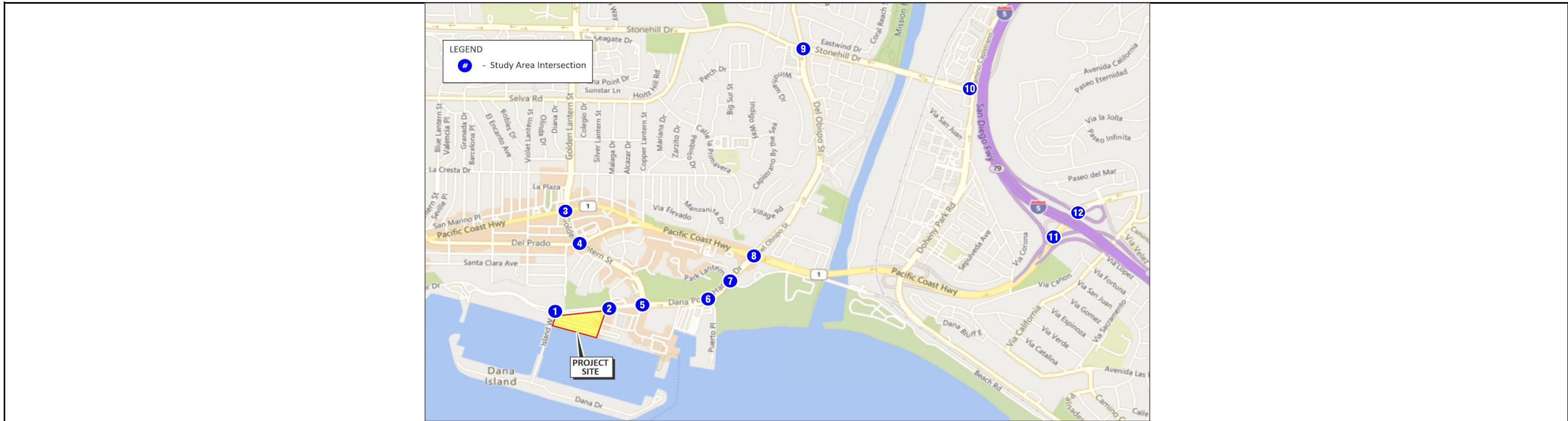
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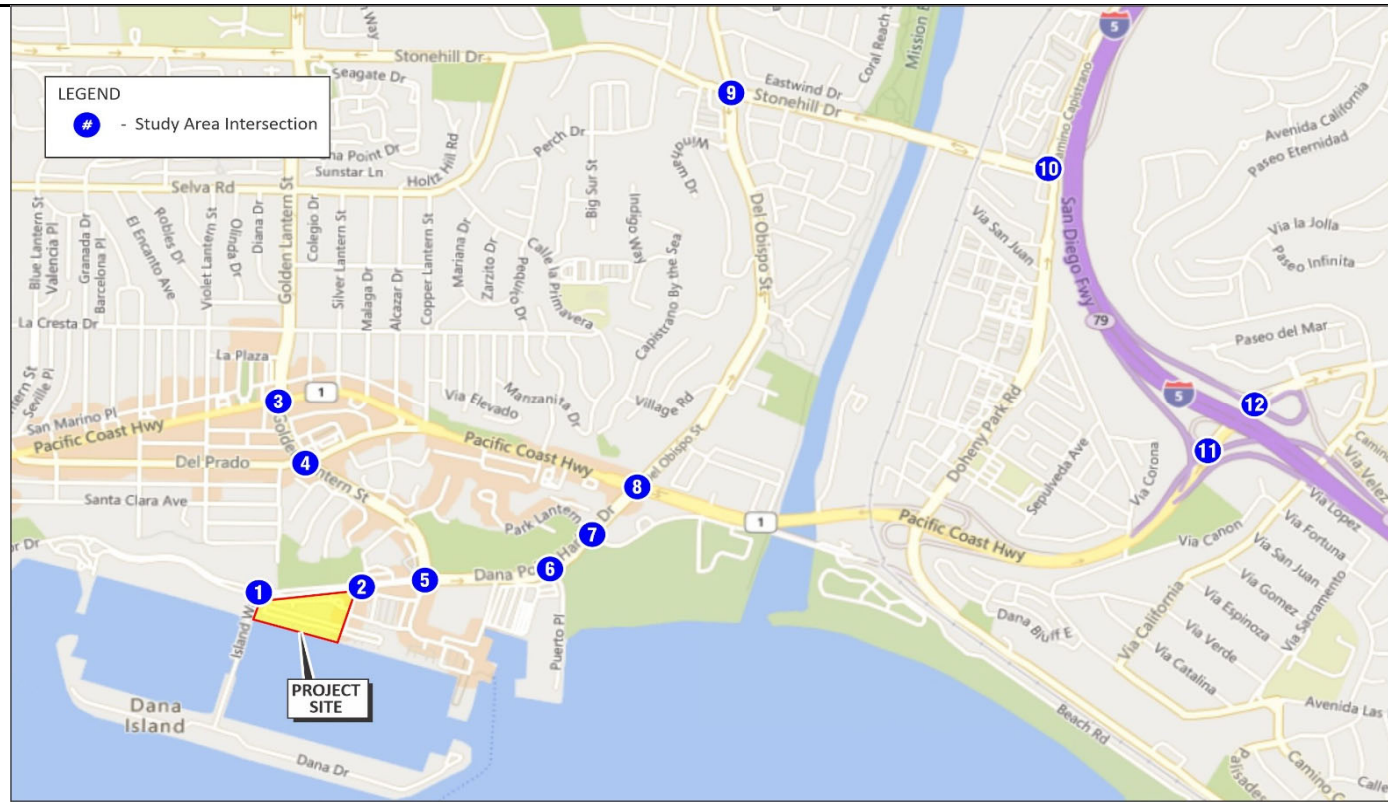
FIGURE 6a
Dana Point Harbor Hotels
Cumulative Project Weekday Traffic Volumes



<p>1 Island Way/Dana Point Harbor Drive</p>	<p>2 Casitas Place/Dana Point Harbor Drive</p>	<p>3 Golden Lantern/PCH</p>	<p>4 Golden Lantern/Del Prado Avenue</p>	<p>5 Golden Lantern/Dana Point Harbor Drive</p>	<p>6 Puerto Place/Dana Point Harbor Drive</p>
<p>7 Dana Point Harbor Drive/Park Lantern</p>	<p>8 Del Obispo St-Dana Point Harbor Dr/PCH</p>	<p>9 Del Obispo Street/Stonehill Drive</p>	<p>10 Camino Capistrano/Stonehill Drive</p>	<p>11 I-5 SB Ramps/Camino Las Ramblas</p>	<p>12 I-5 NB Ramps/Camino Las Ramblas</p>

LSA
 ZZZ Saturday Peak Hour Volume
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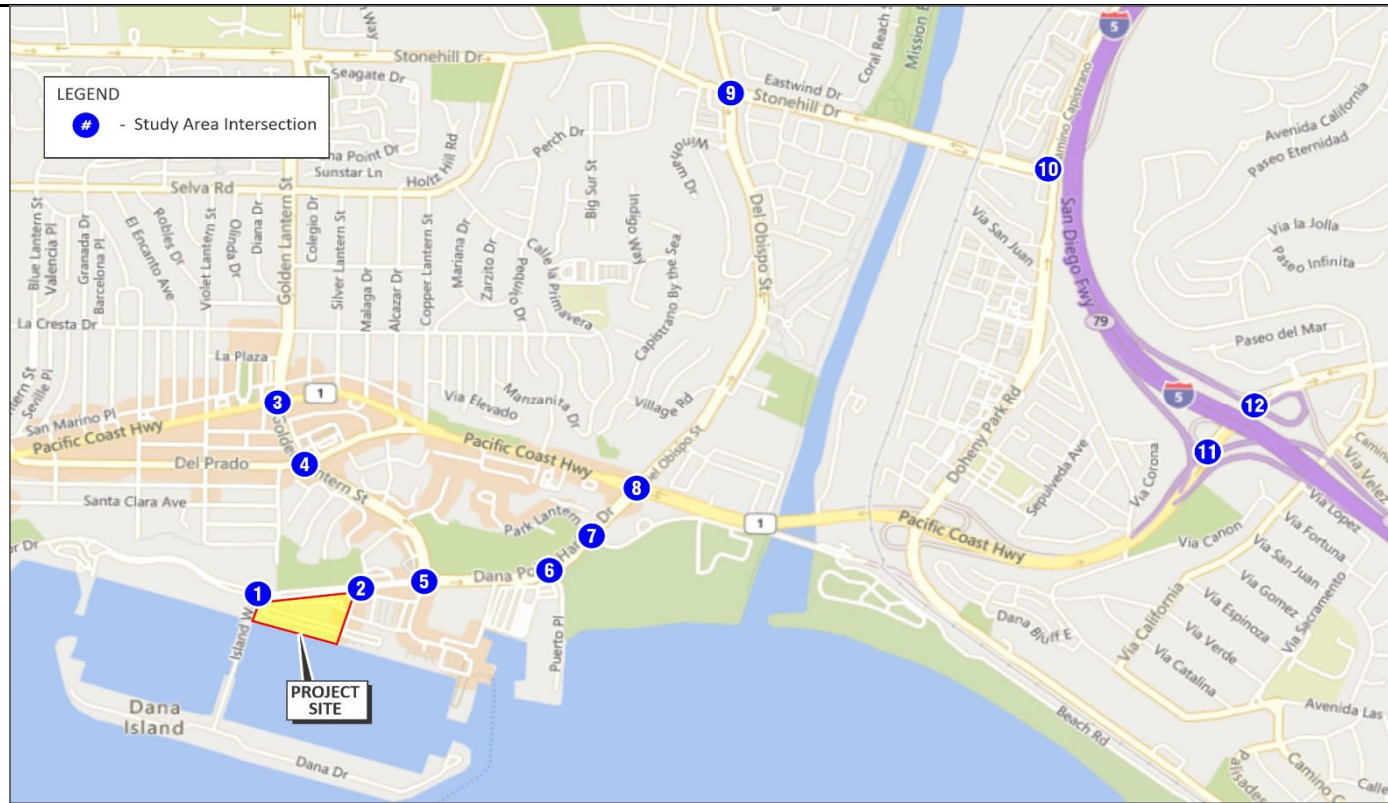
FIGURE 6b
Dana Point Harbor Hotels
 Cumulative Project Saturday Traffic Volumes



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FIGURE 7a
 Dana Point Harbor Hotels
 Opening Year (2025) Weekday Traffic Volumes



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FIGURE 7b
 Dana Point Harbor Hotels
 Opening Year (2025) Saturday Traffic Volumes

Table D: Opening Year (2025) No Project Intersection LOS Summary

Intersection	AM Peak Hour		PM Peak Hour		Saturday Midday	
	ICU/ Delay	LOS	ICU/ Delay	LOS	ICU/ Delay	LOS
1. Island Way/Dana Point Harbor Dr.	11.0 sec	B	12.4 sec	B	19.1 sec	C
2. Casitas Place/Dana Point Harbor Dr.	0.236	A	0.329	A	0.429	A
3. Golden Lantern/PCH (CMP)	0.637	B	0.752	C	0.881	D
4. Golden Lantern/Del Prado Ave. (CMP)	0.238	A	0.386	A	0.478	A
5. Golden Lantern/Dana Point Harbor Dr.	0.393	A	0.543	A	0.757	C
6. Puerto Place/Dana Point Harbor Dr.	0.254	A	0.411	A	0.414	A
7. Dana Point Harbor Dr./Park Lantern	0.297	A	0.351	A	0.344	A
8. Del Obispo St.-Dana Point Harbor Dr./PCH	0.647	B	0.666	B	0.653	B
9. Del Obispo St./Stonehill Dr.	0.828	D	0.791	C	0.778	C
Del Obispo St./Stonehill Dr. ¹	0.741	C	0.775	C	0.713	C
10. Camino Capistrano/Stonehill Dr.	0.667	B	0.759	C	0.837	D
10. Camino Capistrano/Stonehill Dr. (HCM)	30.3 sec	C	32.0 sec	C	30.8 sec	C
11. I-5 SB Ramps/Camino Las Ramblas	0.305	A	0.354	A	0.302	A
12. I-5 NB Ramps/Camino Las Ramblas	0.293	A	0.290	A	0.247	A
12. I-5 NB Ramps/Camino Las Ramblas (HCM)	7.1 sec	A	6.9 sec	A	6.4 sec	A

☐ Unsatisfactory LOS

¹ Includes the planned, but not yet fully funded addition of a third eastbound through lane on Stonehill Drive anticipated as part of the Ganahl Lumber Development Project.

CMP = Congestion Management Program

HCM = Highway Capacity Manual

I-5 = Interstate 5

ICU = intersection capacity utilization

LOS = level of service

NB = northbound

PCH = Pacific Coast Highway

SB = southbound

PROJECT IMPACTS

Trip Generation

The existing Dana Point Marina Inn contains 136 guest rooms with limited amenities. Based on the current price of guest rooms, this hotel is classified as an affordable accommodation. The Dana Point Marina Inn complex includes boater services such as showers and laundry. The entire complex would be demolished as part of the proposed project.

The proposed project would construct two hotels and include space for boater services (i.e., showers, lockers, laundry, and vending machines) in one of the hotels. Dana House Hotel is planned as a boutique hotel and would contain 130 market-rate rooms. Dana Point Surf Lodge would consist of 136 affordable rooms in a standard hotel configuration and 3 rooms providing eight bunk beds each in a “dorm” type accommodation. Amenities frequently included in hotels (such as restaurants, lounges, accessory retail space, a pool, and a recreational center) would be included in the two proposed hotels.

Because both the existing condition and proposed project contain boater services, the net effect on the project trip generation would be negligible. Trip rates for the one existing and two proposed hotels were queried from the ITE *Trip Generation Manual*, 10th Edition. Similar to calculations

identified in the PMP, the fitted-curve equations were used to calculate daily, a.m. peak-hour, p.m. peak-hour, and weekend peak-hour trip rates (Saturday peak hour of generator rates were higher than Sunday peak hour of generator rates). Because Dana House Hotel and Dana Point Surf Lodge have slightly differing numbers of total hotel rooms, the calculated trip rates are slightly different. LSA made no modification to the published ratios of inbound and outbound trips and applied the published ratios to all of the hotel classifications.

The *ITE Trip Generation Manual* does not provide trip rates for dorm-style or hostel accommodations. The New Zealand Transport Agency published a research report that included data on the trip generation characteristics of hostels (New Zealand Transport Agency 2011). Because no inbound versus outbound ratios were published for hostels, the ITE hotel inbound and outbound ratios were applied. No a.m. or weekend peak-hour rates were published for hostels, so ratios of ITE trip rates were calculated and applied to the hostel p.m. peak-hour rate.

The trip rates and resulting trip generation calculations are shown in Table E, below. As the PMP pointed out, many of the trips generated by the hotels are likely to be made within the Dana Point Harbor Complex. Similar to the PMP, LSA applied a conservative estimate of 10 percent internal trip capture. As shown on Table E, the proposed project would generate approximately 934 net new daily vehicle trips, 66 a.m. peak-hour trips, 81 p.m. peak-hour trips, and 105 Saturday peak hour trips.

Table E: Harbor Hotels Trip Generation

Land Use	Size	Unit	ADT	AM Peak Hour			PM Peak Hour			Weekend Peak Hour			
				In	Out	Total	In	Out	Total	In	Out	Total	
Trip Rates													
Boutique Hotel ¹		Room	8.01	0.27	0.19	0.46	0.28	0.27	0.55	0.41	0.31	0.72	
Select Service Hotel ¹		Room	8.15	0.27	0.19	0.46	0.28	0.28	0.56	0.40	0.32	0.72	
Hostel ²		Bed	2.5	0.28	0.19	0.47	0.31	0.29	0.60	0.40	0.32	0.72	
Existing Use													
Dana Point Marina Inn	136	Room	1,108	37	26	63	38	38	76	54	44	98	
Project Trip Generation													
Dana House Hotel	130	Room	1,041	35	25	60	36	35	71	53	41	94	
Dana Point Surf Lodge	136	Room	1,108	37	26	63	38	38	76	54	44	98	
Hostel	48	Bed	120	14	9	23	14	14	28	20	14	34	
Total Proposed Project				2,269	86	60	146	88	87	175	127	99	226
Dana Point Harbor Internal Trip Capture ³				(227)	(9)	(6)	(15)	(9)	(9)	(18)	(13)	(10)	(23)
Net New External Trips				934	40	28	68	41	40	81	60	45	105

¹ Trip rates referenced from the *ITE Trip Generation Manual*, 10th Edition (ITE 2017) land use 310. A fitted-curve equation was used.

² Daily and peak-hour trip rates referenced from Table 7.4 in *Research Report 453—Trips and Parking Related to Land Use* (New Zealand Transport Agency 2011). In/out and weekend/p.m. peak-hour ratios are from ITE land use 310.

³ Conservatively estimated at 10 percent, although a significant number of trips will likely be made within the Dana Point Harbor Complex.

ADT = average daily traffic (measured in trips)

ITE = Institute of Transportation Engineers

Trip Distribution and Assignment

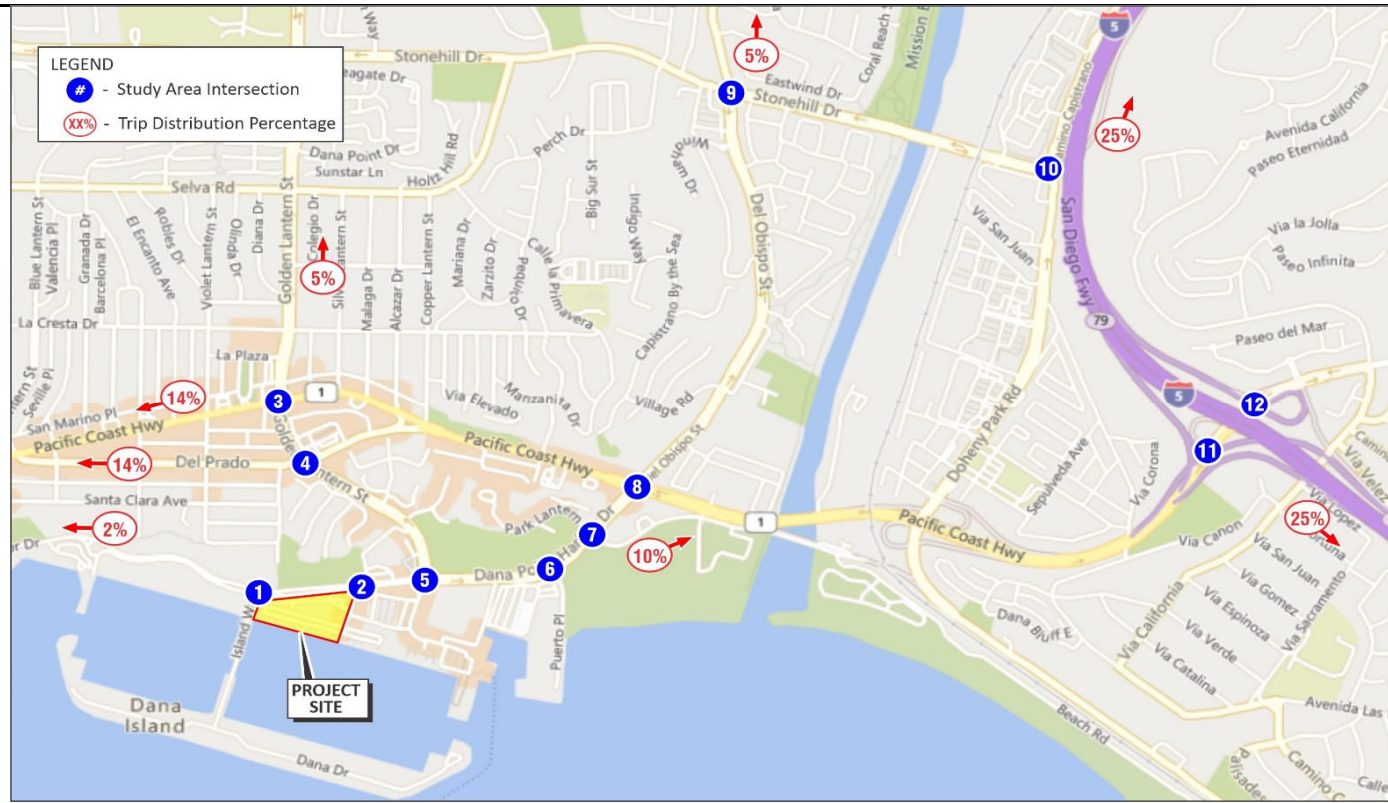
Trip distribution defines the regional percentage origins/destinations for a project. To determine trip distribution for the proposed project, LSA considered existing travel patterns and access to regional transportation networks. Project trip assignment followed the shortest travel paths. It should be noted that the access driveway for Dana Point Surf Lodge provides right-in/right-out access only. Inbound trips for Dana Point Surf Lodge could proceed westbound on Dana Point Harbor Drive until the turnaround located near Baby Beach. However, many patrons of Dana Point Surf Lodge are likely to opt for the shorter route of making a U-turn at Island Way/Dana Point Harbor Drive. This analysis assigns Dana Point Surf Lodge inbound trips to the U-turn at Island Way/Dana Point Harbor Drive, as this has the potential to be more impactful.

Special attention was also paid to access for boater services. LSA examined weekday trip generation rates and weekday and Saturday traffic volumes presented in the Dana Point Harbor Revitalization Traffic and Parking Analysis (RBF 2005) to calculate trips associated with the boater services amenities and parking spaces included in the proposed project. Specifically, land uses taking access at Island Way/Dana Point Harbor Drive are predominantly boater services, and LSA compared traffic turning volumes at Island Way to the size of boater services in Planning Area 4 to develop weekday and Saturday trip generation rates for boater services. LSA applied the calculated rates to the 4,300 sf of existing boater services and 6,800 sf of future boater services in Planning Area 3. After reviewing the existing and future boater services traffic volumes, and considering that future access is possible from both the right-in/right-out driveway on Dana Point Harbor Drive and from Casitas Place, it was decided to assign the new boater services traffic volume to Island Way U-turns and the right-in/right-out driveway (4 inbound and 2 outbound in the a.m. peak hour; 4 inbound and 2 outbound in the p.m. peak hour, and 6 inbound and 0 outbound in the Saturday midday peak hour).

Figures 8a and 8b illustrate the project trip distribution and resulting assignment of project trips at each study intersection. It should be noted that westbound left-turn volume at Island Way/Dana Point Harbor Drive comprises U-turns.

EXISTING PLUS PROJECT CONDITION

The net project trips were added to the existing traffic volumes at the study intersections. Figures 9a and 9b show the resulting Existing Plus Project peak-hour traffic volumes. Table F summarizes the results of the Existing Plus Project LOS analysis for all study intersections. LOS worksheets for the Existing Plus Project condition are provided in Appendix D. As Table F indicates, all study intersections are anticipated to operate at an acceptable LOS in the weekday a.m. peak-hour, weekday p.m. peak-hour, and Saturday midday peak-hour scenarios.



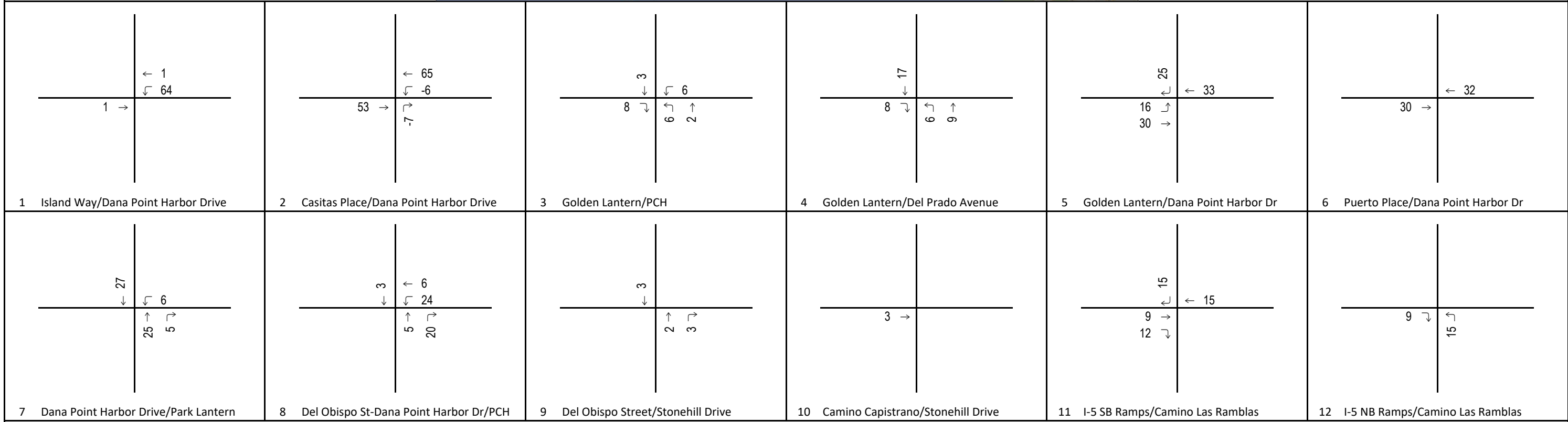
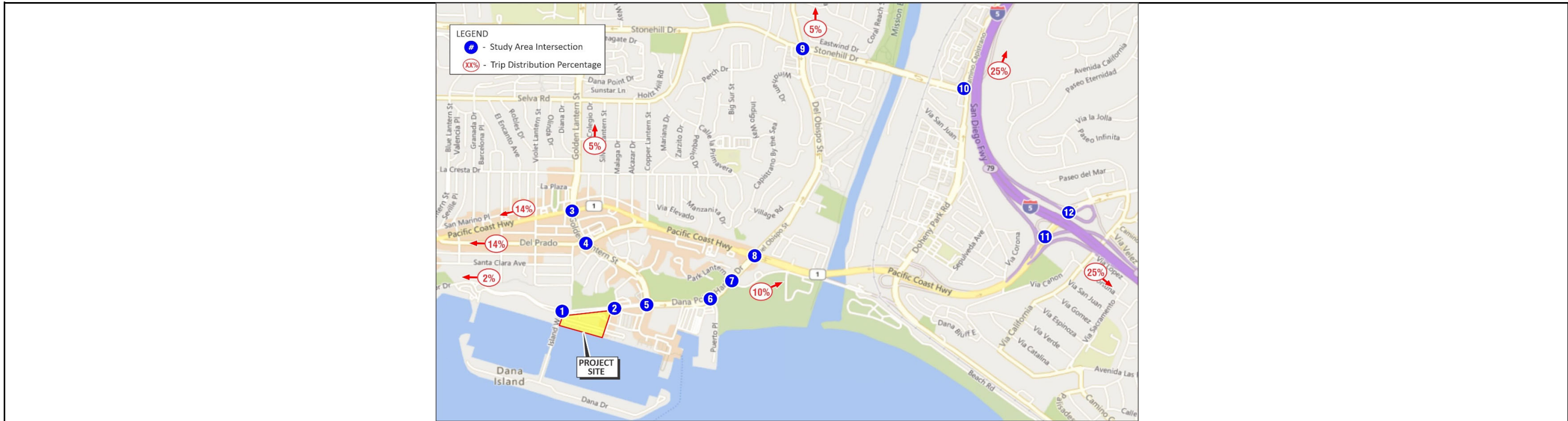
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XXX / YYY AM / PM Volume

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FIGURE 8a

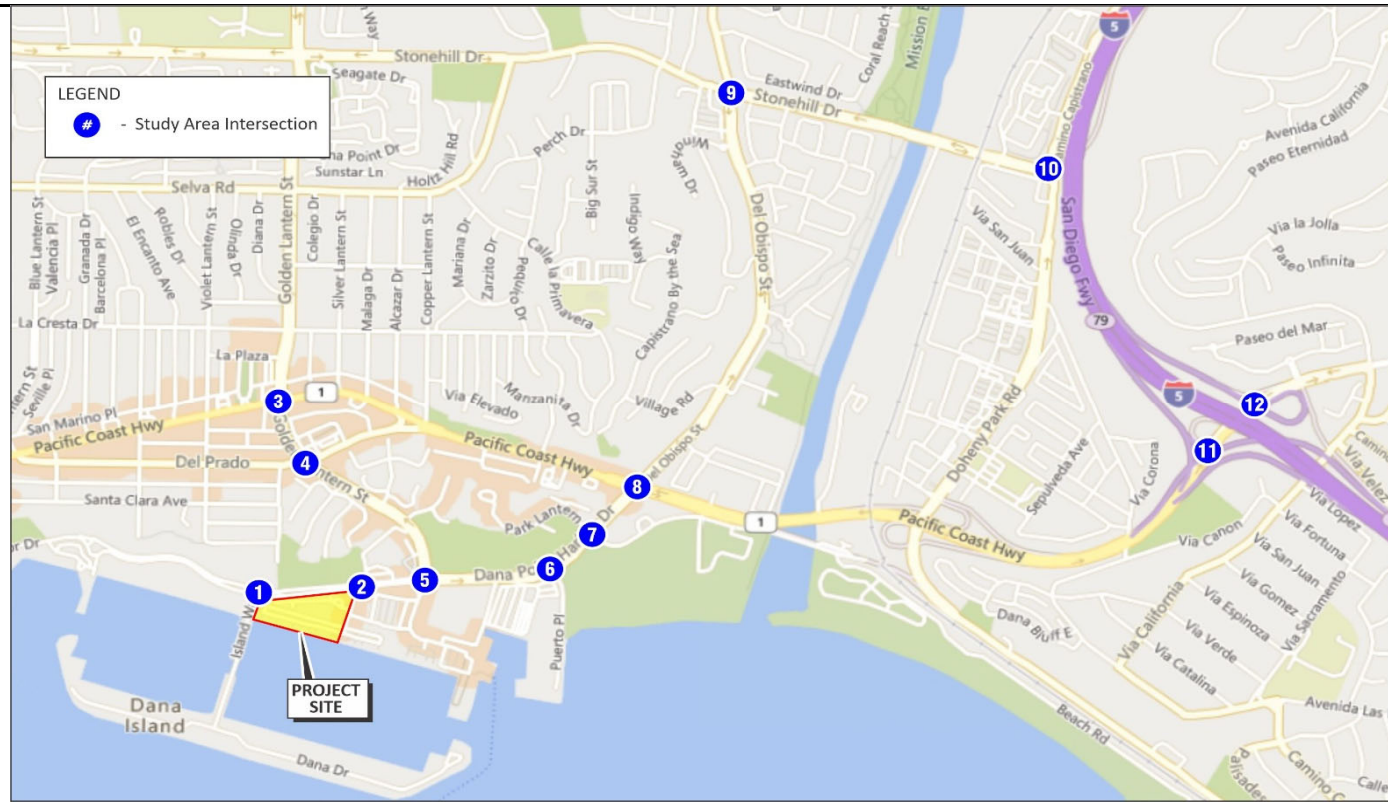
Dana Point Harbor Hotels
Weekday Peak Hour Project Trip Distribution and Assignment



LSA
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FIGURE 8b

Dana Point Harbor Hotels
 Saturday Peak Hour Project Trip Distribution and Assignment



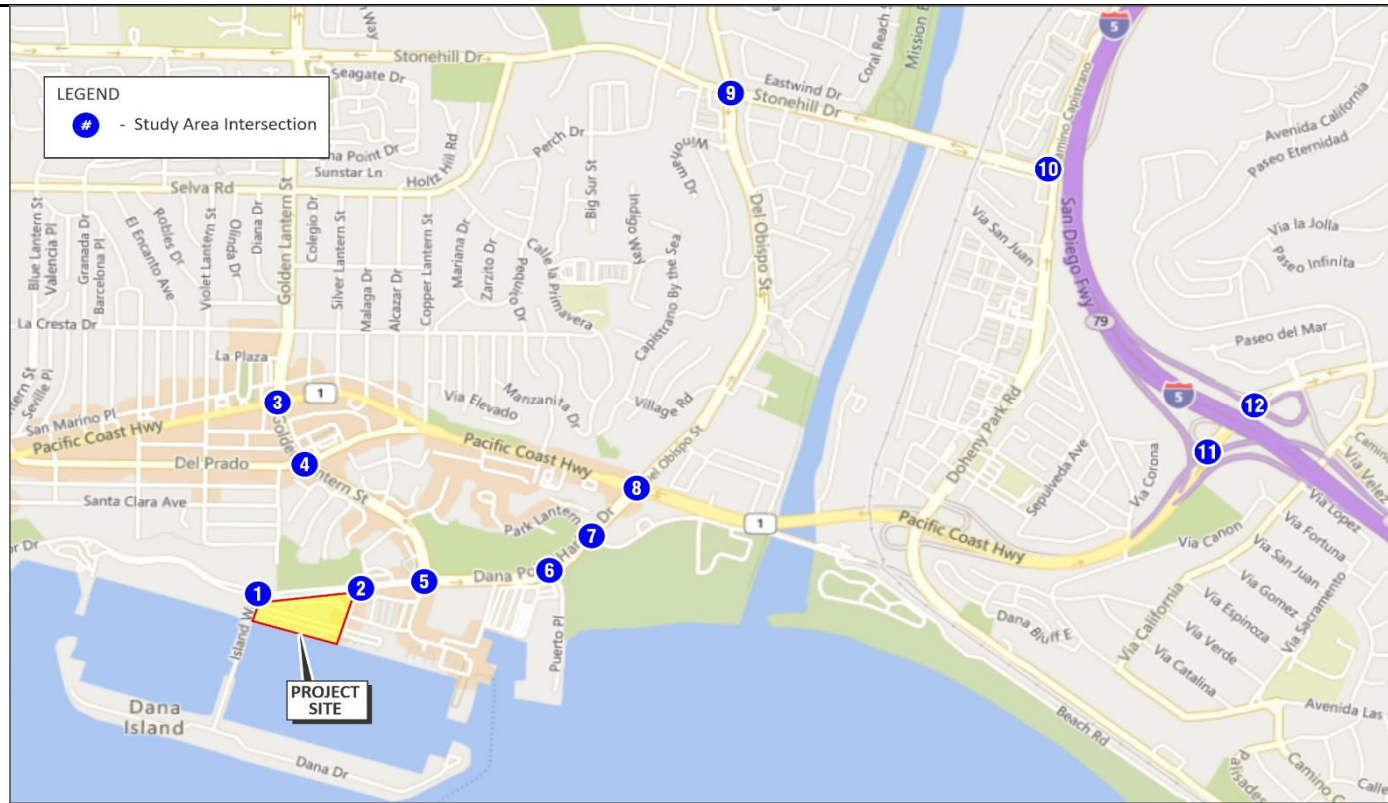
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FIGURE 9b
Dana Point Harbor Hotels
 Existing Plus Project Saturday Traffic Volumes

Table F: Existing Plus Project Intersection LOS Summary

Intersection	AM Peak Hour		PM Peak Hour		Saturday Midday	
	ICU/ Delay	LOS	ICU/ Delay	LOS	ICU/ Delay	LOS
1. Island Way/Dana Point Harbor Dr.	11.2 sec	B	12.7 sec	B	20.7 sec	C
2. Casitas Place/Dana Point Harbor Dr.	0.214	A	0.317	A	0.434	A
3. Golden Lantern/PCH (CMP)	0.559	A	0.675	B	0.796	C
4. Golden Lantern/Del Prado Ave. (CMP)	0.235	A	0.371	A	0.467	A
5. Golden Lantern/Dana Point Harbor Dr.	0.247	A	0.400	A	0.653	B
6. Puerto Place/Dana Point Harbor Dr.	0.177	A	0.268	A	0.331	A
7. Dana Point Harbor Dr./Park Lantern	0.230	A	0.279	A	0.282	A
8. Del Obispo St.-Dana Point Harbor Dr./PCH	0.581	A	0.591	A	0.565	A
9. Del Obispo St./Stonehill Dr.	0.754	C	0.684	B	0.653	B
10. Camino Capistrano/Stonehill Dr.	0.610	B	0.690	B	0.658	B
10. Camino Capistrano/Stonehill Dr. (HCM)	27.8 sec	C	29.6 sec	C	24.0 sec	C
11. I-5 SB Ramps/Camino Las Ramblas	0.256	A	0.301	A	0.253	A
12. I-5 NB Ramps/Camino Las Ramblas	0.253	A	0.258	A	0.212	A
12. I-5 NB Ramps/Camino Las Ramblas (HCM)	7.7 sec	A	7.4 sec	A	7.0 sec	A

☐ Unsatisfactory LOS

CMP = Congestion Management Program

HCM = Highway Capacity Manual

I-5 = Interstate 5

ICU = intersection capacity utilization

LOS = level of service

NB = northbound

PCH = Pacific Coast Highway

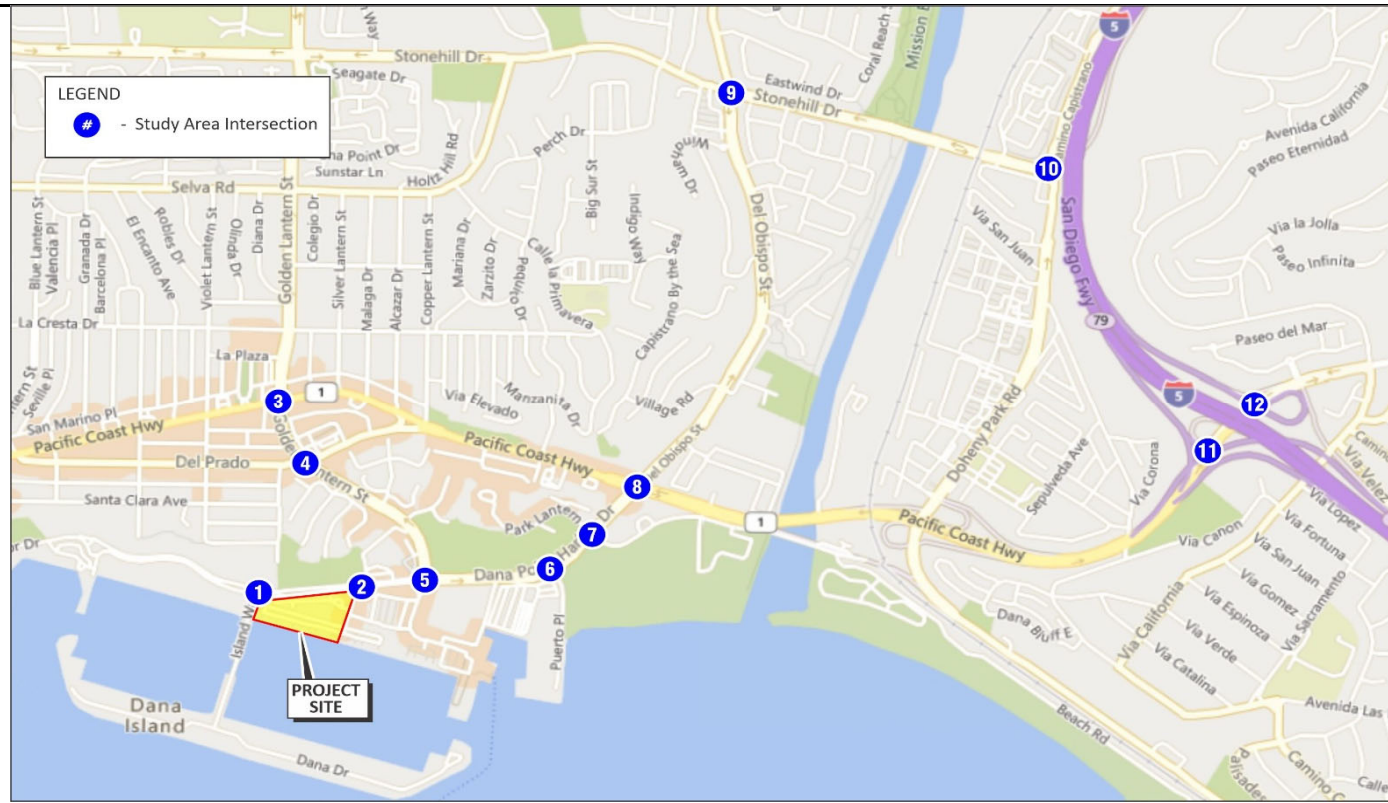
SB = southbound

OPENING YEAR (2025) PLUS PROJECT CONDITION

The net project trips were added to the baseline Opening Year (2025) traffic volumes at the study intersections. Figures 10a and 10b show the resulting Opening Year (2025) Plus Project peak-hour traffic volumes. Table G summarizes the results of the Opening Year (2025) Plus Project LOS analysis for all study intersections. LOS worksheets for the Opening Year (2025) Plus Project condition are provided in Appendix E. As Table G indicates, all study intersections are anticipated to operate at an acceptable LOS in the weekday a.m. peak-hour, weekday p.m. peak-hour, and Saturday midday peak-hour scenarios with the exception of Del Obispo Street/Stonehill Drive. Del Obispo Street/Stonehill Drive would continue to operate at LOS D in the a.m. peak hour with the addition of project traffic. The proposed project's effect on intersection performance (0.001 in the a.m. peak hour) is below the City's established threshold of 0.01. Therefore, the proposed project would not have a significant impact on intersection performance. It should be noted that with completion of the anticipated Stonehill Drive improvement, the intersection of Del Obispo Street/Stonehill Drive would operate at LOS C, which is within the City's performance target.

CONGESTION MANAGEMENT PROGRAM ANALYSIS

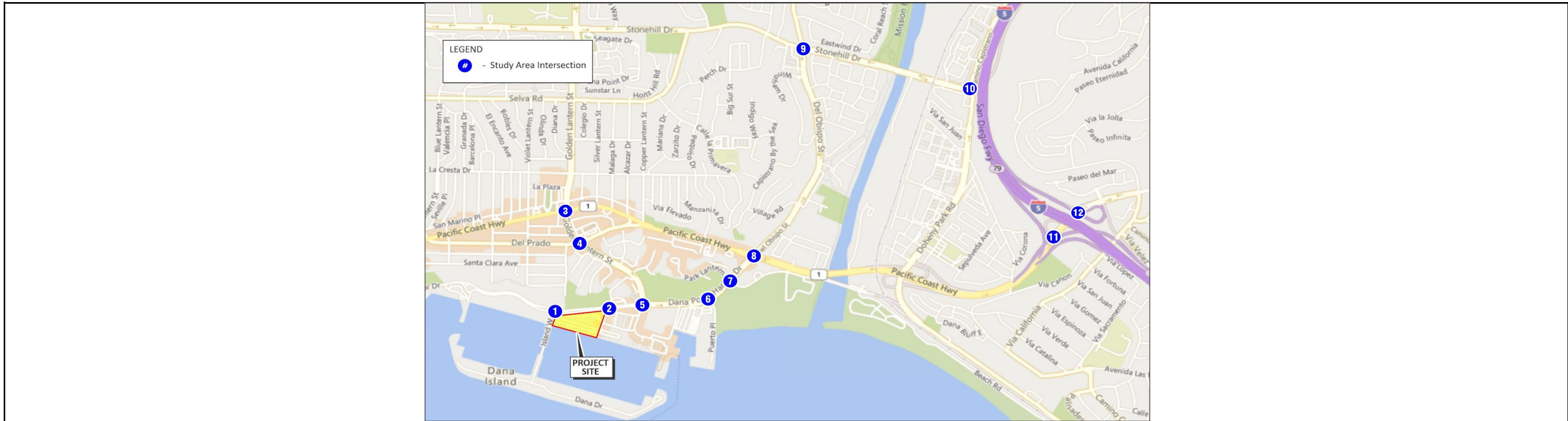
Table E demonstrated that the proposed project would generate fewer than 2,400 net new trips. Therefore, the proposed project would not be required by the CMP to prepare an analysis of the CMP Highway System. However, two intersections in the study area are included in the CMP Highway System, and the LOS results presented above are summarized here.



<table border="1"> <tr> <td>171 / 131</td> <td>↔</td> <td>↖ 172 / 124</td> </tr> <tr> <td>27 / 43</td> <td>↘</td> <td>↗ 170 / 195</td> </tr> <tr> <td>18 / 41</td> <td>↖</td> <td>↗ 86 / 205</td> </tr> </table> <p>1 Island Way/Dana Point Harbor Drive</p>	171 / 131	↔	↖ 172 / 124	27 / 43	↘	↗ 170 / 195	18 / 41	↖	↗ 86 / 205	<table border="1"> <tr> <td>255 / 385</td> <td>↔</td> <td>↖ 348 / 318</td> </tr> <tr> <td>21 / 26</td> <td>↘</td> <td>↗ 62 / 106</td> </tr> <tr> <td>4 / 16</td> <td>↖</td> <td>↗ 24 / 21</td> </tr> </table> <p>2 Casitas Place/Dana Point Harbor Drive</p>	255 / 385	↔	↖ 348 / 318	21 / 26	↘	↗ 62 / 106	4 / 16	↖	↗ 24 / 21	<table border="1"> <tr> <td>131 / 142</td> <td>↔</td> <td>↖ 144 / 242</td> </tr> <tr> <td>212 / 316</td> <td>↘</td> <td>↗ 1168 / 973</td> </tr> <tr> <td>257 / 289</td> <td>↘</td> <td>↗ 54 / 75</td> </tr> <tr> <td>82 / 138</td> <td>↖</td> <td>↗ 54 / 140</td> </tr> <tr> <td>664 / 958</td> <td>↘</td> <td>↗ 109 / 317</td> </tr> <tr> <td>36 / 59</td> <td>↘</td> <td>↗ 13 / 43</td> </tr> </table> <p>3 Golden Lantern/PCH</p>	131 / 142	↔	↖ 144 / 242	212 / 316	↘	↗ 1168 / 973	257 / 289	↘	↗ 54 / 75	82 / 138	↖	↗ 54 / 140	664 / 958	↘	↗ 109 / 317	36 / 59	↘	↗ 13 / 43	<table border="1"> <tr> <td>25 / 75</td> <td>↔</td> <td>↖ 19 / 33</td> </tr> <tr> <td>170 / 224</td> <td>↘</td> <td>↗ 57 / 118</td> </tr> <tr> <td>50 / 139</td> <td>↘</td> <td>↗ 24 / 30</td> </tr> <tr> <td>37 / 59</td> <td>↖</td> <td>↗ 48 / 54</td> </tr> <tr> <td>84 / 132</td> <td>↘</td> <td>↗ 136 / 283</td> </tr> <tr> <td>95 / 117</td> <td>↘</td> <td>↗ 19 / 42</td> </tr> </table> <p>4 Golden Lantern/Del Prado Avenue</p>	25 / 75	↔	↖ 19 / 33	170 / 224	↘	↗ 57 / 118	50 / 139	↘	↗ 24 / 30	37 / 59	↖	↗ 48 / 54	84 / 132	↘	↗ 136 / 283	95 / 117	↘	↗ 19 / 42	<table border="1"> <tr> <td>117 / 122</td> <td>↔</td> <td>↖ 103 / 100</td> </tr> <tr> <td>102 / 95</td> <td>↘</td> <td>↗ 268 / 262</td> </tr> <tr> <td>52 / 208</td> <td>↘</td> <td>↗ 261 / 278</td> </tr> <tr> <td>75 / 143</td> <td>↖</td> <td>↗ 33 / 21</td> </tr> <tr> <td>200 / 219</td> <td>↘</td> <td>↗ 57 / 106</td> </tr> <tr> <td>10 / 15</td> <td>↘</td> <td>↗ 174 / 249</td> </tr> </table> <p>5 Golden Lantern/Dana Point Harbor Drive</p>	117 / 122	↔	↖ 103 / 100	102 / 95	↘	↗ 268 / 262	52 / 208	↘	↗ 261 / 278	75 / 143	↖	↗ 33 / 21	200 / 219	↘	↗ 57 / 106	10 / 15	↘	↗ 174 / 249	<table border="1"> <tr> <td>391 / 633</td> <td>↔</td> <td>↖ 578 / 622</td> </tr> <tr> <td>36 / 54</td> <td>↘</td> <td>↗ 57 / 150</td> </tr> <tr> <td>23 / 38</td> <td>↖</td> <td>↗ 70 / 161</td> </tr> </table> <p>6 Puerto Place/Dana Point Harbor Drive</p>	391 / 633	↔	↖ 578 / 622	36 / 54	↘	↗ 57 / 150	23 / 38	↖	↗ 70 / 161																		
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FIGURE 10a
 Dana Point Harbor Hotels
 Opening Year (2025) Plus Project Weekday Traffic Volumes



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FIGURE 10b
 Dana Point Harbor Hotels
 Opening Year (2025) Plus Project Saturday Traffic Volumes

Table G: Opening Year (2025) Plus Project Intersection LOS Summary

Intersection	AM Peak Hour		PM Peak Hour		Saturday Midday	
	ICU/ Delay	LOS	ICU/ Delay	LOS	ICU/ Delay	LOS
1. Island Way/Dana Point Harbor Dr.	11.4 sec	B	13.1 sec	B	23.0 sec	C
2. Casitas Place/Dana Point Harbor Dr.	0.251	A	0.348	A	0.453	A
3. Golden Lantern/PCH (CMP)	0.641	B	0.757	C	0.886	D
4. Golden Lantern/Del Prado Ave. (CMP)	0.247	A	0.392	A	0.486	A
5. Golden Lantern/Dana Point Harbor Dr.	0.398	A	0.552	A	0.766	C
6. Puerto Place/Dana Point Harbor Dr.	0.261	A	0.419	A	0.425	A
7. Dana Point Harbor Dr./Park Lantern	0.303	A	0.358	A	0.351	A
8. Del Obispo St.-Dana Point Harbor Dr./PCH	0.650	B	0.674	B	0.657	B
9. Del Obispo St./Stonehill Dr.	0.829	D	0.792	C	0.780	C
Del Obispo St./Stonehill Dr. ¹	0.742	C	0.776	C	0.714	C
10. Camino Capistrano/Stonehill Dr.	0.668	B	0.759	C	0.837	D
10. Camino Capistrano/Stonehill Dr. (HCM)	30.4 sec	C	32.0 sec	C	30.9 sec	C
11. I-5 SB Ramps/Camino Las Ramblas	0.306	A	0.356	A	0.305	A
12. I-5 NB Ramps/Camino Las Ramblas	0.299	A	0.296	A	0.257	A
12. I-5 NB Ramps/Camino Las Ramblas (HCM)	7.1 sec	A	6.8 sec	A	6.4 sec	A

¹ Includes the planned, but not yet fully funded addition of a third eastbound through lane on Stonehill Drive anticipated as part of the Ganahl Lumber Development Project.

☐ Unsatisfactory LOS

CMP = Congestion Management Program

HCM = Highway Capacity Manual

I-5 = Interstate 5

ICU = intersection capacity utilization

LOS = level of service

NB = northbound

PCH = Pacific Coast Highway

SB = southbound

Table H summarizes the LOS calculations for these two intersections. The Orange County CMP stipulates the requirements for maintaining LOS E at CMP intersections. Table H shows that LOS E or better is anticipated at the CMP intersections. Therefore, the proposed project would not impact the CMP Highway System.

Table H: CMP Intersection LOS Summary

Intersection	No Project				Plus Project				Change With Project	
	AM Peak Hour		PM Peak Hour		AM Peak Hour		PM Peak Hour		AM	PM
	ICU	LOS	ICU	LOS	ICU	LOS	ICU	LOS		
3. Golden Lantern/PCH										
Existing	0.556	A	0.670	B	0.559	A	0.675	B	0.003	0.005
2025	0.637	B	0.752	C	0.641	B	0.757	C	0.004	0.005
4. Golden Lantern/Del Prado Avenue										
Existing	0.225	A	0.365	A	0.235	A	0.371	A	0.010	0.006
2025	0.238	A	0.386	A	0.247	A	0.392	A	0.009	0.006

CMP = Congestion Management Program

ICU = intersection capacity utilization

LOS = level of service

PCH = Pacific Coast Highway

CALTRANS ANALYSIS

In a comment letter received on October 26, 2020, the California Department of Transportation (Caltrans) requested preparation of a traffic impact study to consider impacts to on State Route 1 (SR-1) and I-5. The City has accepted delegation of SR-1 (PCH) west of Doheny Park Road. In addition, the State’s assessment of a project’s potential impacts to transportation have shifted from vehicle LOS to VMT, which is discussed in the section below. Furthermore, the Caltrans Guide for the Preparation of Traffic Impact Studies (Caltrans 2002) provides guidance that a traffic impact study may be needed for projects assigning 50 to 100 peak hour trips to a State highway facility experiencing noticeable delay or approaching unstable traffic flow conditions. Figure 8a shows that the proposed project’s traffic volume during the weekday peak hours is low (i.e., below this guidance threshold).

However, an analysis of vehicle LOS impacts was prepared for the proposed project, and intersections along SR-1 and intersections with I-5 were included in the study area. Table I summarizes the LOS calculations for these intersections. As Table I shows, each study intersection along SR-1 and I-5 is anticipated to operate at LOS D or better without or with the proposed project. Project traffic has a small effect on intersection performance, which would be expected given the low traffic volumes identified on Figure 8a.

Table I: Caltrans Intersection LOS Summary

Intersection	No Project				Plus Project				Change with Project	
	AM Peak Hour		PM Peak Hour		AM Peak Hour		PM Peak Hour		AM	PM
	ICU	LOS	ICU	LOS	ICU	LOS	ICU	LOS		
10. Camino Capistrano/Stonehill Dr.										
Existing	0.609	B	0.689	B	0.610	B	0.690	B	0.001	0.001
2025	0.667	B	0.759	C	0.668	B	0.759	C	0.001	0.000
11. I-5 SB Ramps/Camino Las Ramblas										
Existing	0.254	A	0.299	A	0.256	A	0.301	A	0.002	0.002
2025	0.305	A	0.354	A	0.306	A	0.356	A	0.001	0.002
12. I-5 NB Ramps/Camino Las Ramblas										
Existing	0.311	A	0.259	A	0.317	A	0.259	A	0.006	0.000
2025	0.359	A	0.291	A	0.365	A	0.297	A	0.006	0.006

CMP = Congestion Management Program
I-5 = Interstate 5
ICU = intersection capacity utilization
LOS = level of service
NB = northbound
PCH = Pacific Coast Highway
SB = southbound

VEHICLE MILES TRAVELED

According to the revised *State CEQA Guidelines* codified in Section 15064.3(a), project-related transportation impacts are generally best measured by evaluating the project’s VMT. VMT refers to the amount and distance of automobile travel attributable to a project.

In order to determine whether a project has a significant transportation impact under CEQA, the traffic analysis must determine whether the project would conflict or be inconsistent with *State*

CEQA Guidelines Section 15064.3 subdivision (b). Specifically related to land use projects, Section 15064.3(b) of the California Code of Regulations states the following:

Vehicle miles traveled exceeding an applicable threshold of significance may indicate a significant impact.

The City has not yet adopted applicable thresholds of significance related to VMT. However, simultaneously occurring with clearance of the revised *State CEQA Guidelines*, the OPR released the Technical Advisory (OPR 2018). This State document provides guidance to permit the evaluation of project transportation impacts. Additionally, the County Guidelines (County of Orange 2020) establish thresholds of significance.

The Technical Advisory recommends establishing a threshold of 15 percent below existing regional average VMT per capita for residential projects, a threshold of 15 percent below existing regional average VMT per employee for office projects, and a threshold of no net increase in total VMT for retail projects. The Technical Advisory does not provide a recommendation for significance thresholds for other land uses. The County Guidelines establish a threshold of no net increase in the VMT rate for other land uses consistent with the General Plan or a threshold of 15 percent below the existing regional average rate for land uses inconsistent with the General Plan. The County Guidelines provide substantial evidence for use of the County as the regional average.

The proposed project is a hotel use, which generates trips from employees and guests. Given the combined nature of the land use, the proposed project's VMT per service population (guests plus employees) was compared to the Orange County regional average VMT per service population. The regional average VMT per service population for Orange County is 27.1.

According to the California Emissions Estimator Model (CalEEMod) calculations prepared as part of the greenhouse gas emissions analysis for this project, the proposed project is estimated to result in 4,776,504 annual VMT. This equates to 13,086 daily VMT ($4,776,504 / 365 = 13,086$). The PMP states that the hotels are anticipated to have between 60 and 70 employees working the morning shift and 40 to 55 employees working the second shift. Taking the midpoint of these ranges results in an estimate of 113 employees. The proposed project will have a total of 266 hotel rooms and 48 hostel beds. Average per-room occupancy for leisure hotels is 2.1 guests per room, and the usual occupancy of rooms is approximately 80 percent. Therefore, on average, 485 guests are anticipated to reside at the hotels ($266 \text{ rooms} \times 2.1 \text{ persons/room} \times 0.80 + 48 \text{ hostel beds} \times 1 \text{ person/bed} \times 0.80 = 447 \text{ persons} + 38 \text{ persons} = 485 \text{ persons}$). In total, the proposed project's service population is anticipated to be 598 persons ($113 \text{ employees} + 485 \text{ guests} = 598$), and the VMT per service population is anticipated to be 21.9 ($13,086 / 598 = 21.9$). Table J summarizes the VMT calculation.

The proposed project's VMT per service population (21.9) is more than 15 percent below the regional average VMT per service population (27.1). The proposed project does not exceed an applicable threshold and would, therefore, have a less than significant impact.

The PMP recommended that a transportation coordinator be appointed for employees within Planning Area 3. If this recommendation is adopted, further VMT reductions are anticipated.

Table J: Project VMT Calculation

VMT		
Annual VMT		4,776,504
Daily VMT (Annual VMT/365)		13,086
Service Population		
Employees		113
Guests		485
Hotel Rooms	266	
Occupants per Room	2.1	
Hotel Occupancy	0.8	
Hotel Room Guests	447	
Hostel Beds	48	
Occupants per Bed	1	
Hostel Occupancy	0.8	
Hostel Room Guests	38	
Total Service Population		598
VMT per Service Population		21.9

VMT = vehicle miles traveled

ACCESS AND ON-SITE CIRCULATION ANALYSIS

U-Turns at Island Way

As stated previously, vehicles can only enter the Dana Point Surf Lodge parking lot at the right-in/right-out driveway that will be located approximately 260 ft east of Island Way. Most vehicles will be approaching Dana Point Surf Lodge from the east and would either proceed westbound on Dana Point Harbor Drive until the turnaround located near Baby Beach or make a U-turn at Island Way/Dana Point Harbor Drive. This analysis assigned all traffic to the shorter route, which is making a U-turn at Island Way/Dana Point Harbor Drive.

As Tables F and G showed, the intersection of Island Way/Dana Point Harbor Drive is anticipated to operate at a satisfactory LOS even with the addition of project U-turns. LSA also examined queueing in the westbound left-turn lane to confirm that the addition of anticipated left turns would not result in the queue exceeding the storage provided. The westbound left turn has a turn pocket with 300 ft of storage in the existing condition. This is sufficient to hold about 12 vehicles. Table K summarizes the calculated 95th percentile queues. This is the queue length that would not be exceeded 95 percent of the time and is the usual metric for maximum anticipated queue. The analysis software presents the calculation in fractions of vehicles. LSA has rounded these calculations up to the next whole number. As Table K shows, the queue in the westbound left-turn lane at Island Way/Dana Point Harbor Drive is not anticipated to exceed the existing storage in any of the plus project analysis scenarios.

**Table K: Island Way/Dana Point Harbor Drive
Queueing Summary**

	Westbound Left-Turn
Existing Plus Project	
AM Peak Hour	1 vehicle
PM Peak Hour	1 vehicle
Saturday Peak Hour	1 vehicle
Opening Year (2025) Plus Project	
AM Peak Hour	1 vehicle
PM Peak Hour	1 vehicle
Saturday Peak Hour	1 vehicle

Casitas Place/Dana Point Harbor Drive

In the existing condition, protected-permitted signal phasing is provided for the westbound left-turn at Casitas Place/Dana Point Harbor Drive. This phasing provides a protected left-turn arrow at the beginning of the east-west cycle, then permits additional left turns to occur with the westbound through movement when no conflicting eastbound vehicles are present. Protected-permitted left-turn phasing allows more left turns to occur per cycle and reduces the queue of vehicles waiting to turn. At this location, limiting the westbound left-turn queue is necessary because the turn pocket sits back-to-back with the eastbound left-turn pocket for Golden Lantern/Dana Point Harbor Drive, and one turn pocket cannot be extended without shortening the other.

The trade-off when providing this protected-permitted signal phasing is that the crosswalk crossing Casitas Place receives a walk signal with the east-west through movement, but westbound left-turn vehicles may still attempt to complete a left turn. If drivers are not watching for pedestrians in the crosswalk simultaneously while watching eastbound traffic, then vehicle-pedestrian conflicts are possible.

Completion of the proposed project may reduce the concern about vehicle-pedestrian conflicts because the proposed project would provide an accessible and attractive alternative in the pedestrian promenade south of the hotels. However, LSA examined the operation of this intersection with protected-permitted signal phasing and with protected-only signal phasing.

The crosswalk along the east leg of the intersection connects to pathways up the coastal bluff to Heritage Park. This crosswalk receives a walk signal simultaneously with the green light for the northbound movement. The resulting conflict between right-turning vehicles and the crosswalk is present at most traffic signals. This conflict would not be resolved by changing westbound protected-permitted signal phasing to protected-only signal phasing. LSA tested an additional alternative retaining westbound protected-permitted signal phasing and adding a pedestrian-only signal phase.

Table L presents the results of this comparison. LOS and queueing worksheets are provided in Appendix F. As Table L shows, the westbound left-turn phasing could be modified to protected-only (alternative 1) without resulting in an LOS or queueing impact. Table L also shows that a pedestrian-only phase could be added without resulting in an LOS or a queueing impact (alternative 2).

Table L: Casitas Place/Dana Point Harbor Drive LOS and Queueing Summary

	AM Peak Hour			PM Peak Hour			Saturday Peak Hour		
	ICU	LOS	WBL (180 ft)	ICU	LOS	WBL (180 ft)	ICU	LOS	WBL (180 ft)
Existing Plus Project									
No Change	0.173	A	26 ft	0.219	A	36 ft	0.305	A	40 ft
Alternative 1	0.173	A	49 ft	0.219	A	73 ft	0.305	A	84 ft
Alternative 2	0.483	A	44 ft	0.529	A	55 ft	0.615	B	75 ft
Opening Year (2025) Plus Project									
No Change	0.182	A	26 ft	0.243	A	42 ft	0.316	A	41 ft
Alternative 1	0.182	A	49 ft	0.243	A	82 ft	0.316	A	87 ft
Alternative 2	0.492	A	44 ft	0.553	A	72 ft	0.626	B	76 ft

Alternative 1 = Convert the westbound left turn to protected-only phasing
 Alternative 2 = Retain the westbound left-turn protected-permitted phasing and add a pedestrian-only phase
 ft = foot/feet
 ICU = intersection capacity utilization
 LOS = level of service
 WBL = westbound lane

Valet Parking

Dana Point Surf Lodge would be served by a gated parking field. Upon first arriving, guests would park in the porte cochere and check in. Once checked in, guests would have access through the parking gate and would self-park their vehicles. Similarly, tenants of boat slips would have access through separate parking gates to a separate self-park area serving the boater services amenities.

As previously stated, parking for Dana House Hotel would be provided solely through a valet service. The PMP analyzed the valet parking operation. The Dana House Hotel porte cochere has a planned 28 ft drive aisle, which is sufficient for three travel lanes (e.g., temporary parking for checking in, a pass-through lane, and a valet drop-off/pickup area. According to the PMP, the porte cochere and approach to the valet drop-off/pickup area have temporary queueing space for 9 to 10 vehicles.

The PMP analyzed how many valet attendants would be needed to limit queued vehicles to eight total (four waiting to be parked and four waiting for an attendant) given typical valet attendant processing times of 5.5 minutes to park a vehicle and 4.5 minutes to retrieve a vehicle. Based on these typical times, the PMP estimates that four valet attendants would be able to serve 40 to 44 inbound vehicles per hour without the queueing capacity being exceeded. However, Table E shows that peak inbound traffic volumes for the Dana House Hotel is estimated to be 53 vehicles per hour during the Saturday peak hour.

Valet attendant processing times are highly dependent on the distance between the valet stand and parking space. It is possible that four valet attendants would be able to serve the peak Saturday

inbound volume without exceeding the available queueing area so long as the parking supply is managed to leave the closest parking spaces available in anticipation of the Saturday peak inbound period.

LSA concurs with the recommendation of the PMP that the valet plan should be reviewed periodically during the first year of operation to determine the optimal number of valet attendants needed for variable periods of parking demand.

Delivery Access

The PMP also briefly discussed the proposed project's access plan. Figure 11 presents the proposed access routes including delivery truck access. LSA reviewed the truck turning movements presented in the PMP and concur that they demonstrate that a maximum of a three-axle truck could access the loading/unloading zones without blocking the adjacent roadway. The loading/unloading zone for Dana House Hotel would be located on the east side of the property along Casitas Place. Delivery trucks for Dana House Hotel would enter from the Casitas Place/Dana Point Harbor Drive traffic signal, pull straight in, and then back into the loading zone. These trucks would exit along the commercial core frontage road leading to Golden Lantern and the traffic signal at Golden Lantern/Dana Point Harbor Drive. After exiting the loading/unloading zone, trucks are only driving forward; no backing up is required.

The loading/unloading zone for Dana Point Surf Lodge would be located on the west side of the property along Island Way. Delivery trucks for Dana Point Surf Lodge would turn left at the unsignalized intersection of Island Way/Dana Point Harbor Drive. It should be noted that the westbound left-turn lane at this intersection was discussed above. Queueing analysis concluded that the 300 ft turn pocket would be expected to typically have a queue of no more than one passenger vehicle.

The 300 ft turn pocket would be sufficient to hold a delivery truck. After turning onto Island Way, delivery trucks would travel to the west side turnaround at the end of Island Way, then pull into the loading zone on the east side of Island Way, adjacent to Dana Point Surf Lodge. These trucks would exit by traveling north to the intersection of Island Way/Dana Point Harbor Drive and turning right onto Dana Point Harbor Drive. Some delivery vehicles (e.g., 30 ft long box trucks) can follow this route only driving forward, with no backing required. Larger delivery trucks will not be able to negotiate the turnaround on Island Way in a single movement. Rather, a multistage U-turn requiring backing up would be necessary at the terminus of Island Way. This is a low-volume street, and any passenger vehicle approaching the turnaround from the connecting parking lot would be able to see the truck. This location should be able to accommodate the multistage U-turn required for large delivery trucks.

Neither of the access plans requires delivery trucks to enter the project site. Both access plans are dependent on City streets for maneuvering delivery vehicles into and out of the loading zones.

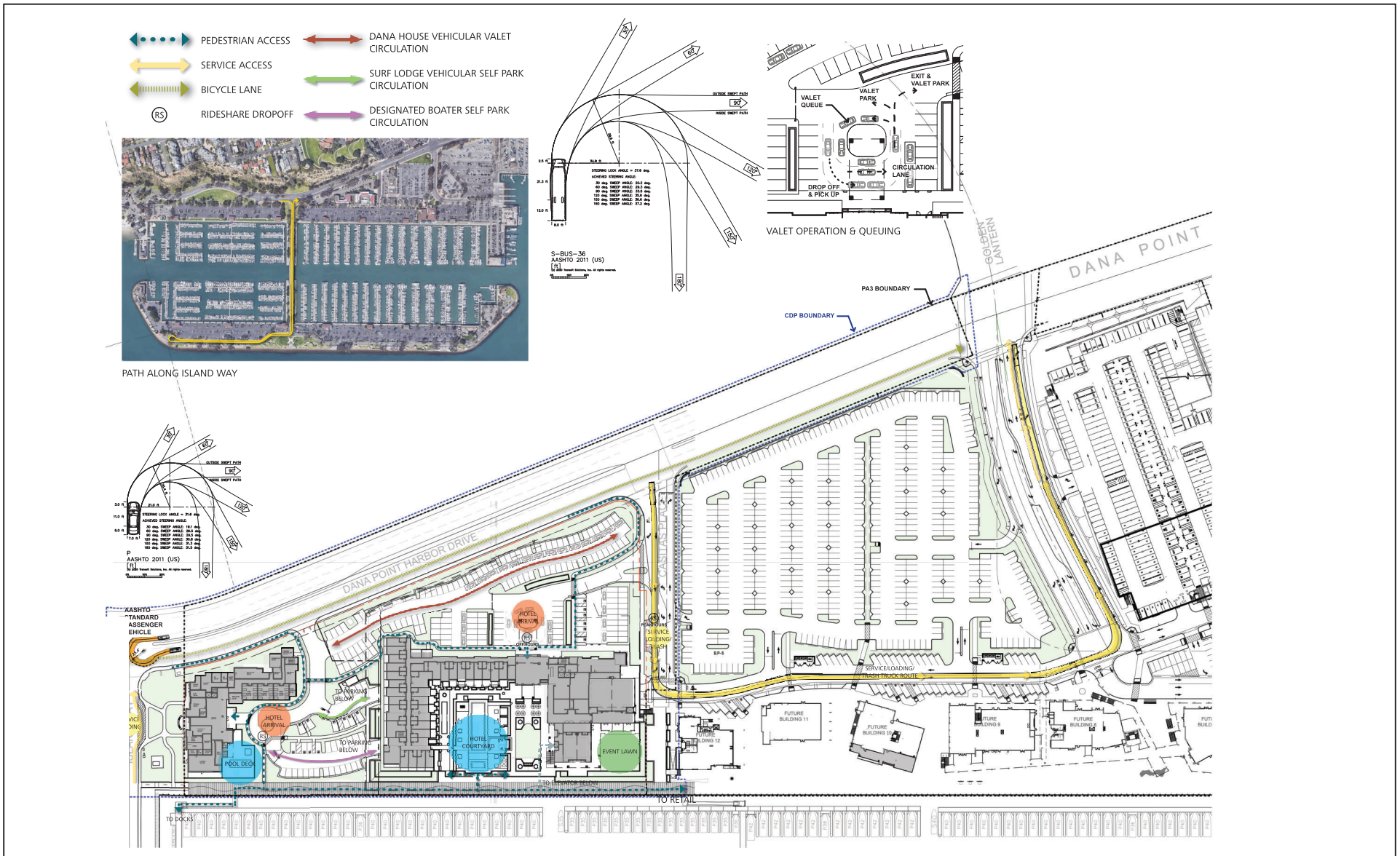
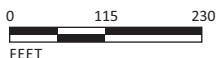


FIGURE 11

LSA



SOURCE: WATG

Dana Point Harbor Hotels
Truck Access Plan

CONSTRUCTION ANALYSIS

According to the project description, construction equipment and vehicles will be staged on site. Although the proposed project does not include any characteristics (e.g., permanent road closure or long-term blocking of road access) that would physically impair or otherwise interfere with the use of City streets, construction of the proposed project would require temporary lane closures on Dana Point Harbor Drive, Island Way, and Casitas Place to allow for utility connections as well as sidewalk, gutter, and driveway improvements.

Project construction would occur for approximately 38 months. During project construction, the number of worker and truck trips per day is anticipated to be fewer than during project operations, which are expected to generate approximately 934 net new daily vehicle trips. Although construction trip generation would be significantly less than the net trip generation of the proposed project, which was determined to not have a significant effect on City streets, construction traffic impacts could result in traffic delays and detours.

In order to ensure that traffic impacts associated with construction activities and damage along haul routes are minimized, the proposed project would be required to comply with Standard Condition 4.12-1 (SC 4.12-1), which requires the proposed project to prepare and comply with a Construction Management Plan for that project. Development of a Construction Management Plan is also required by Mitigation Measure 4.5-3 of the Dana Point Harbor Revitalization Project Program Environmental Impact Report (EIR). Compliance with SC 4.12-1 and the Construction Management Plan also requires the Project Applicant's construction contractor to keep all haul routes used during the demolition and site preparation phases clean and free of debris and repair any damage to existing pavement, streets, curbs, or gutters along such routes. With implementation of SC 4.12-1, impacts due to construction delivery and haul trips would be alleviated.

CONCLUSIONS

This TIA identified the potential traffic and circulation impacts associated with the proposed demolition of the Dana Point Marina Inn (and existing boater services) and construction of two hotels (and replacement boater services). The project site is primarily located within Planning Area 3 of the Dana Point Harbor Revitalization Plan. Access to the site is provided via a full-access intersection at Casitas Place/Dana Point Harbor Drive and a right-in/right-out driveway on Dana Point Harbor Drive west of Casitas Place, which would be moved from its current location 150 ft west of Casitas place to a new location 260 ft east of Island Way. The TIA considered the proposed project's effect on vehicle circulation on City streets, the proposed project's effect on transportation according to recent changes to CEQA guidelines, and site access.

Analysis of roadway conditions required the use of historic traffic volume data to estimate existing conditions if the Covid-19 pandemic had not affected traffic volumes. Based on the traffic volumes developed for the 12 study intersections and the additional traffic generated by the proposed project, the TIA concluded that traffic impacts resulting from the proposed project would be less than the City's thresholds of significance. The proposed project would also have minimal impact on CMP monitored intersections and intersections on the State Highway System.

The TIA considered the proposed project's potential impact on transportation according to the revised *State CEQA Guidelines*, which require consideration of a project's VMT. While the City has not yet adopted VMT guidelines or thresholds, application of Technical Advisory and County Guidelines facilitated this analysis. LSA calculated the proposed project's VMT per service population and compared that to the regional average VMT per service population. The proposed project's VMT per service population (21.9) is more than 15 percent below the regional average VMT per service population (27.1). The proposed project does not exceed an applicable threshold and would therefore have a less than significant impact on transportation according to CEQA. The PMP recommended that a transportation coordinator be appointed for employees within Planning Area 3. If this recommendation is adopted, further VMT reductions are anticipated.

Site access considered U-turns at Island Way/Dana Point Harbor Drive that are necessary to access the Dana Point Surf Lodge right-in/right-out driveway. Queues in the westbound left-turn lane would be less than the available turn pocket storage. Similarly, westbound left-turn queues at Casitas Place/Dana Point Harbor Drive would be less than the available turn pocket storage whether the existing protected-permitted signal phasing is maintained, the signal phasing is converted to protected-only, or a pedestrian-only phase is added to the traffic signal.

The valet parking plan was discussed in the PMP. A minimum of four valet attendants are required to service peak arrivals at Dana House Hotel while keeping the valet queue from exceeding the available storage. Valet operations would also need to leave the closest parking spaces available in preparation for peak inbound flows. Both the PMP and LSA recommend that the valet plan be reviewed periodically during the first year of operation to determine the optimal number of valet attendants needed for variable periods of parking demand.

The delivery access plans were also discussed in the PMP. Loading areas for Dana House Hotel and Dana Point Surf Lodge are located on the east and west sides of the property (respectively) and do not require delivery trucks to enter the project site. Both rely on City streets for delivery truck maneuvering. Trucks arriving and departing the Dana House Hotel loading area would not need to back up during any portion of their trip. Delivery trucks arriving at the Dana Point Surf Lodge loading area would turn from Dana Point Harbor Drive onto Island Way and then use the west turnaround at the terminus of Island Way to reach the Dana Point Surf Lodge loading area. Smaller delivery trucks (e.g., 30 ft box trucks) can use the Island Way turnaround in a single movement. Larger trucks would need to perform a multistage U-turn requiring backing up. Island Way is a low-volume street and should be able to accommodate the necessary multistage U-turns.

REFERENCES

- California Department of Transportation (Caltrans). 2002. Caltrans Guide for the Preparation of Traffic Impact Studies.
- City of Dana Point. 1995. General Plan, Circulation Element.
- _____. 2020a. Victoria Boulevard Apartments Traffic Impact Analysis.
- _____. 2020b. Draft Doheny Village Zoning District Overlay Zone Traffic Study.

County of Orange. 2019. Congestion Management Program.

_____. 2020. *Final Draft Guidelines for Evaluating Vehicle Miles Traveled under CEQA*. September.

Governor's Office of Planning and Research (OPR). 2018. *Technical Advisory for Evaluating Transportation Impacts under CEQA*. December.

Institute of Transportation Engineers (ITE). 2017. *Trip Generation Manual*. 10th Ed.

LSA Associates, Inc. (LSA). 2014a. 34202 Del Obispo Street Traffic Impact Analysis.

_____. 2014b. South Shores Church Master Plan Traffic Impact Analysis and Parking Analysis.

_____. 2018. Doheny Ocean Desalination Project Draft Environmental Impact Report.

_____. 2020a. Ganahl Lumber Development Project Traffic Impact Analysis.

_____. 2020b. Trip Generation Analysis for the Farm Specific Plan.

Michael Baker International (MBI). 2020. *Dana Point Harbor Revitalization PA-3 Shared Parking Assessment and Parking Management Plan*. October.

New Zealand Transport Agency. 2011. *Research Report 453—Trips and Parking Related to Land Use*.

Orange County Transportation Authority (OCTA). 2009. *2009 Commuter Bikeways Strategic Plan*.
Website: <https://octa.net/pdf/bikeways09.pdf> (accessed September 30, 2020).

_____. 2017. *Highway Capacity Manual*. 6th Ed.

RBF Consulting (RBF). 2005. Dana Point Harbor Revitalization Traffic and Parking Analysis.

APPENDIX A

HISTORIC TRAFFIC VOLUMES

Intersection Turning Movement

Prepared by: Southland Car Counters

N-S STREET: Island Way

DATE: 6/1/2005

LOCATION: City of Dana Point

E-W STREET: Dana Point Harbor Dr

DAY: WEDNESDAY

PROJECT# 05-1120-005

LANES:	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			TOTAL
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	
6:00 AM													
6:15 AM													
6:30 AM													
6:45 AM													
7:00 AM	5		8					22	4	17	43		99
7:15 AM	6		13					19	7	23	34		102
7:30 AM	4		10					18	7	25	32		96
7:45 AM	3		24					37	4	26	40		134
8:00 AM	2		20					62	2	26	45		157
8:15 AM	5		22					37	9	21	36		130
8:30 AM	7		9					22	9	16	33		96
8:45 AM	4		28					15	5	20	27		99
9:00 AM													
9:15 AM													
9:30 AM													
9:45 AM													
10:00 AM													
10:15 AM													
10:30 AM													
10:45 AM													
11:00 AM													
11:15 AM													
11:30 AM													
11:45 AM													

TOTAL VOLUMES =	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
	36	0	134	0	0	0	0	232	47	174	290	0	913

AM Peak Hr Begins at: 745 AM

PEAK VOLUMES =	17	0	75	0	0	0	0	158	24	89	154	0	517
PEAK HR. FACTOR:		0.852			0.000			0.711			0.856		0.823

CONTROL:

Intersection Turning Movement

Prepared by: Southland Car Counters

N-S STREET: Island Way

DATE: 6/1/2005

LOCATION: City of Dana Point

E-W STREET: Dana Point Harbor Dr

DAY: WEDNESDAY

PROJECT# 05-1120-005

LANES:	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			TOTAL
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	
1:00 PM													
1:15 PM													
1:30 PM													
1:45 PM													
2:00 PM													
2:15 PM													
2:30 PM													
2:45 PM													
3:00 PM													
3:15 PM													
3:30 PM													
3:45 PM													
4:00 PM	4		42					29	11	31	35		152
4:15 PM	10		39					30	8	34	29		150
4:30 PM	9		47					31	9	26	28		150
4:45 PM	14		36					36	11	27	36		160
5:00 PM	12		39					37	8	30	25		151
5:15 PM	7		37					27	14	23	36		144
5:30 PM	5		36					27	8	24	42		142
5:45 PM	5		29					41	12	41	36		164
6:00 PM													
6:15 PM													
6:30 PM													
6:45 PM													

TOTAL VOLUMES =	NL 66	NT 0	NR 305	SL 0	ST 0	SR 0	EL 0	ET 258	ER 81	WL 236	WT 267	WR 0	TOTAL 1213
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PM Peak Hr Begins at: 400 PM

PEAK VOLUMES =	37	0	164	0	0	0	0	126	39	118	128	0	612
PEAK HR. FACTOR:		0.897			0.000			0.878			0.932		0.956

CONTROL:

Intersection Turning Movement

Prepared by: Southland Car Counters

N-S STREET: Island Way DATE: 5/28/2005 LOCATION: City of Dana Point
 E-W STREET: Dana Point Harbor Dr. DAY: SATURDAY PROJECT# 05-1117-005

LANES:	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			TOTAL
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	
	1	0	0	0	0	0	1	0	1	2	0		
10:00 AM													
10:15 AM													
10:30 AM													
10:45 AM													
11:00 AM													
11:15 AM													
11:30 AM	5	0	25					57	3	27	46		163
11:45 AM	7	0	27					67	6	29	57		193
12:00 PM	4	0	29					62	7	35	71		208
12:15 PM	5	0	32					61	9	39	70		216
12:30 PM	6	0	25					73	18	36	80		238
12:45 PM	7	0	33					73	11	49	73		246
1:00 PM	11	0	36					53	12	38	69		219
1:15 PM	5	1	32					59	8	44	61		210
1:30 PM													
1:45 PM													
2:00 PM													
2:15 PM													
2:30 PM													
2:45 PM													

TOTAL VOLUMES =	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
	50	1	239	0	0	0	0	505	74	297	527	0	1693

NOON Peak Hr Begins at: 1215 PM.

PEAK VOLUMES =	29	0	126	0	0	0	0	260	50	162	292	0	919
PEAK HR. FACTOR:		0.824			0.000			0.852			0.000		0.934

CONTROL: 1 WAY STOP(N) 0

Intersection Turning Movement

Prepared by: Southland Car Counters

N-S STREET: Island Way

DATE: 5/28/2005

LOCATION: City of Dana Point

E-W STREET: Dana Point Harbor Dr.

DAY: SATURDAY

PROJECT# 05-1117-005

LANES:	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			TOTAL
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	
	1	0	0	0	0	0	1	0	1	2	0		
1:00 PM													
1:15 PM													
1:30 PM	4		29					73	10	35	70		221
1:45 PM	6		31					64	10	46	93		250
2:00 PM	6		38					69	6	43	81		243
2:15 PM	7		37					69	9	50	76		248
2:30 PM	10		50					73	10	48	77		268
2:45 PM	9		28					71	7	35	70		220
3:00 PM	10		31					55	20	38	83		237
3:15 PM	9		42					70	8	36	78		243
3:30 PM													
3:45 PM													
4:00 PM													
4:15 PM													
4:30 PM													
4:45 PM													
5:00 PM													
5:15 PM													
5:30 PM													
5:45 PM													
6:00 PM													
6:15 PM													
6:30 PM													
6:45 PM													

TOTAL VOLUMES =	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
	61	0	286	0	0	0	0	544	80	331	628	0	1930

PM Peak Hr Begins at: 145 PM

PEAK VOLUMES =	29	0	156	0	0	0	0	275	35	187	327	0	1009
PEAK HR. FACTOR:	0.771			0.000			0.934			0.924			0.941

CONTROL: 1 WAY STOP(N) 0

Intersection Turning Movement

Prepared by: Southland Car Counters

N-S STREET: Casitas Pl.

DATE: 6/1/2005

LOCATION: City of Dana Point

E-W STREET: Dana Point Harbor Dr

DAY: WEDNESDAY

PROJECT# 05-1120-006

LANES:	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			TOTAL
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	
6:00 AM													
6:15 AM													
6:30 AM													
6:45 AM													
7:00 AM	2	0					0	36	1	6	67		112
7:15 AM	1	1					1	37	2	5	59		106
7:30 AM	9	3					0	40	2	12	39		105
7:45 AM	3	2					0	42	5	7	56		115
8:00 AM	2	9					0	84	7	12	69		183
8:15 AM	0	3					0	47	3	5	58		116
8:30 AM	2	5					0	30	2	21	49		109
8:45 AM	0	8					0	40	7	15	69		139
9:00 AM													
9:15 AM													
9:30 AM													
9:45 AM													
10:00 AM													
10:15 AM													
10:30 AM													
10:45 AM													
11:00 AM													
11:15 AM													
11:30 AM													
11:45 AM													

TOTAL VOLUMES =	NL 19	NT 31	NR 0	SL 0	ST 0	SR 0	EL 1	ET 356	ER 29	WL 83	WT 466	WR 0	TOTAL 985
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AM Peak Hr Begins at: 800 AM

PEAK VOLUMES =	4	25	0	0	0	0	0	201	19	53	245	0	547
PEAK HR. FACTOR:		0.659			0.000			0.604			0.887		0.747

CONTROL:

Intersection Turning Movement

Prepared by: Southland Car Counters

N-S STREET: Casitas Pl.

DATE: 6/1/2005

LOCATION: City of Dana Point

E-W STREET: Dana Point Harbor Dr

DAY: WEDNESDAY

PROJECT# 05-1120-006

LANES:	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			TOTAL
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	
1:00 PM													
1:15 PM													
1:30 PM													
1:45 PM													
2:00 PM													
2:15 PM													
2:30 PM													
2:45 PM													
3:00 PM													
3:15 PM													
3:30 PM													
3:45 PM													
4:00 PM	4	6					0	70	3	12	65		160
4:15 PM	5	9					1	73	6	17	62		173
4:30 PM	3	4					0	88	4	20	64		183
4:45 PM	5	7					0	57	8	23	56		156
5:00 PM	2	5					1	70	5	18	62		163
5:15 PM	3	9					0	57	6	16	62		153
5:30 PM	3	9					0	65	3	12	71		163
5:45 PM	4	8					0	58	6	9	62		147
6:00 PM													
6:15 PM													
6:30 PM													
6:45 PM													

TOTAL VOLUMES =	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
	29	57	0	0	0	0	2	538	41	127	504	0	1298

PM Peak Hr Begins at: 415 PM

PEAK VOLUMES =	15	25	0	0	0	0	2	288	23	78	244	0	675
PEAK HR. FACTOR:		0.714			0.000			0.851			0.958		0.922

CONTROL:

Intersection Turning Movement

Prepared by: Southland Car Counters

N-S STREET: Casitas Pl.

DATE: 5/28/2005

LOCATION: City of Dana Point

E-W STREET: Dana Point Harbor Dr.

DAY: SATURDAY

PROJECT# 05-1117-006

LANES:	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			TOTAL
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	
	1	0	0	0	0	0	1	0	1	2	0		
10:00 AM													
10:15 AM													
10:30 AM													
10:45 AM													
11:00 AM													
11:15 AM													
11:30 AM	2		7				79	3	19	71			181
11:45 AM	3		9				91	5	27	83			218
12:00 PM	3		17				84	7	26	103			240
12:15 PM	2		14				91	6	29	107			249
12:30 PM	1		13				97	2	25	115			253
12:45 PM	6		14				101	5	39	116			281
1:00 PM	5		11				85	4	33	102			240
1:15 PM	3		15				81	11	32	102			244
1:30 PM													
1:45 PM													
2:00 PM													
2:15 PM													
2:30 PM													
2:45 PM													
TOTAL VOLUMES =	25	0	100	0	0	0	0	709	43	230	799	0	1906

NOON Peak Hr Begins at: 1215 PM

PEAK VOLUMES =	14	0	52	0	0	0	0	374	17	126	440	0	1023
PEAK HR. FACTOR:		0.825			0.000			0.922			0.000		0.910

CONTROL: 1 WAY STOP(N)0

Intersection Turning Movement

Prepared by: Southland Car Counters

N-S STREET: Casitas Pl. DATE: 5/28/2005 LOCATION: City of Dana Point
 E-W STREET: Dana Point Harbor Dr. DAY: SATURDAY PROJECT# 05-1117-006

LANES:	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			TOTAL
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	
1:00 PM	1	0	0	0	0	0	1	0	1	2	0		
1:15 PM													
1:30 PM	4		16					97	5	26	101		249
1:45 PM	5		13					86	11	36	134		285
2:00 PM	3		16					103	4	24	121		271
2:15 PM	9		12					96	11	23	117		268
2:30 PM	6		21					112	13	27	119		298
2:45 PM	6		18					93	6	25	99		247
3:00 PM	5		12					83	6	24	116		246
3:15 PM	9		34					102	10	26	105		286
3:30 PM													
3:45 PM													
4:00 PM													
4:15 PM													
4:30 PM													
4:45 PM													
5:00 PM													
5:15 PM													
5:30 PM													
5:45 PM													
6:00 PM													
6:15 PM													
6:30 PM													
6:45 PM													

TOTAL VOLUMES =	NL 47	NT 0	NR 142	SL 0	ST 0	SR 0	EL 0	ET 772	ER 66	WL 211	WT 912	WR 0	TOTAL 2150
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PM Peak Hr Begins at: 145 PM

PEAK VOLUMES =	23	0	62	0	0	0	0	397	39	110	491	0	1122
PEAK HR. FACTOR:		0.787			0.000			0.872			0.884		0.941

CONTROL: 1 WAY STOP(N)0

INTERSECTION TURNING MOVEMENT COUNTS AVERAGE SHEET

PREPARED BY: AimTD LLC. tel: 714 253 7888 cs@aimtd.com

DATE:
AVERAGE FOR THREE DAYS

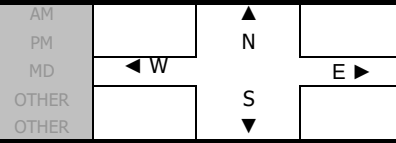
LOCATION:
NORTH & SOUTH:
EAST & WEST:

Dana Point
St of Golden Lantern
Pacific Coast

PROJECT #:
LOCATION #:
CONTROL:

CMP2019
82
SIGNAL

NOTES:



LANES:	NORTHBOUND <small>St of Golden Lantern</small>			SOUTHBOUND <small>St of Golden Lantern</small>			EASTBOUND <small>Pacific Coast</small>			WESTBOUND <small>Pacific Coast</small>			TOTAL
	NL 1	NT 2	NR 0	SL 2	ST 1	SR 1	EL 1	ET 2	ER 0	WL 1	WT 2	WR 0	

AM	6:00 AM	2	3	1	23	11	4	1	44	2	4	72	6	173
	6:15 AM	4	3	0	26	8	5	2	50	2	2	100	13	215
	6:30 AM	5	5	2	33	12	8	2	64	3	4	130	10	278
	6:45 AM	3	5	1	38	23	11	3	76	3	6	187	20	376
	7:00 AM	6	13	1	39	24	11	3	73	5	5	186	16	382
	7:15 AM	8	11	3	42	20	11	4	108	3	2	237	31	480
	7:30 AM	9	15	1	90	38	20	9	127	7	7	234	38	595
	7:45 AM	11	17	5	66	56	16	11	171	6	14	265	34	672
	8:00 AM	12	23	2	75	45	23	8	139	7	11	248	27	620
	8:15 AM	9	21	3	55	39	19	11	124	10	18	248	36	593
	8:30 AM	15	25	4	58	43	22	10	136	8	15	230	35	601
	8:45 AM	19	30	4	56	54	21	9	138	7	16	237	35	626
	VOLUMES	103	171	27	601	373	171	73	1,250	63	104	2,374	301	5,611
	APPROACH %	34%	57%	9%	52%	33%	15%	5%	90%	5%	4%	85%	11%	
	APP/DEPART	301	/	543	1,145	/	528	1,386	/	1,886	2,779	/	2,654	
BEGIN PEAK HR	7:45 AM													
VOLUMES	47	86	14	254	183	80	40	570	31	58	991	132	2,486	
APPROACH %	32%	59%	10%	49%	35%	15%	6%	89%	5%	5%	84%	11%		
PEAK HR FACTOR	0.835			0.904			0.852			0.943			0.925	
APP/DEPART	147	/	259	517	/	263	641	/	843	1,181	/	1,121		
PM	03:00 PM	26	65	14	69	54	23	32	192	10	17	201	54	757
	3:15 PM	27	55	10	66	60	18	26	214	12	13	199	55	755
	3:30 PM	32	53	9	59	55	19	22	198	12	14	234	60	767
	3:45 PM	26	58	10	51	61	26	26	210	12	21	216	59	776
	4:00 PM	33	61	6	74	74	25	24	220	13	16	208	52	806
	4:15 PM	25	67	8	60	73	17	25	220	13	19	204	53	784
	4:30 PM	37	62	8	72	63	18	26	210	7	12	199	55	769
	4:45 PM	27	70	10	44	68	21	20	206	19	18	214	67	784
	5:00 PM	28	74	11	65	60	26	22	199	11	15	204	58	773
	5:15 PM	26	67	6	62	70	20	27	204	15	18	200	56	771
	5:30 PM	25	60	9	63	61	24	18	207	12	14	221	65	779
	5:45 PM	28	66	11	56	56	23	23	184	14	20	218	64	763
	6:00 PM	30	79	9	69	67	22	25	170	14	14	185	50	734
	6:15 PM	23	70	10	52	58	22	22	167	12	12	187	50	685
	6:30 PM	33	59	8	55	46	14	21	165	11	13	176	47	648
6:45 PM	19	61	8	54	55	16	21	149	11	16	160	52	622	
VOLUMES	445	1,027	147	971	981	334	380	3,115	198	252	3,226	897	11,973	
APPROACH %	27%	63%	9%	42%	43%	15%	10%	84%	5%	6%	74%	21%		
APP/DEPART	1,619	/	2,294	2,286	/	1,421	3,693	/	4,256	4,375	/	4,002		
BEGIN PEAK HR	4:00 PM													
VOLUMES	122	260	32	250	278	81	95	856	52	65	825	227	3,143	
APPROACH %	29%	63%	8%	41%	46%	13%	9%	85%	5%	6%	74%	20%		
PEAK HR FACTOR	0.967			0.880			0.972			0.934			0.975	
APP/DEPART	414	/	580	609	/	390	1,003	/	1,145	1,117	/	1,028		

INTERSECTION TURNING MOVEMENT COUNTS AVERAGE SHEET

PREPARED BY: AimTD LLC. tel: 714 253 7888 cs@aimtd.com

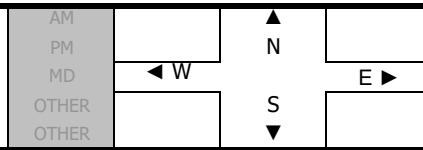
DATE:
AVERAGE FOR THREE DAYS

LOCATION:
NORTH & SOUTH:
EAST & WEST:

Dana Point
St of Golden Lantern
Del Prado

PROJECT #: CMP2019
LOCATION #: 81
CONTROL: SIGNAL

NOTES:



	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			TOTAL
	St of Golden Lantern			St of Golden Lantern			Del Prado			Del Prado			
LANES:	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	
	1	1.5	0.5	1	2	0	1	0.5	0.5	1	1	1	
6:00 AM	0	4	1	4	8	2	1	5	3	0	4	1	32
6:15 AM	0	4	2	3	9	1	1	6	3	0	4	1	34
6:30 AM	1	9	0	3	13	2	0	7	5	1	7	1	48
6:45 AM	3	6	1	2	21	3	2	5	11	3	15	0	73
7:00 AM	3	13	2	6	23	3	5	9	7	3	10	1	85
7:15 AM	5	12	3	2	20	5	6	9	8	2	9	2	82
7:30 AM	6	16	2	6	33	6	4	13	9	3	10	4	112
7:45 AM	7	20	3	11	51	3	5	19	19	5	15	2	159
8:00 AM	9	26	5	9	38	4	7	12	14	5	13	3	144
8:15 AM	5	18	4	11	37	7	6	19	19	4	15	6	151
8:30 AM	7	28	6	9	36	10	6	21	17	4	19	5	167
8:45 AM	10	30	6	7	37	9	12	23	20	4	12	4	174
VOLUMES	56	185	36	71	327	55	54	147	133	33	133	30	1,304
APPROACH %	20%	67%	13%	14%	66%	11%	16%	44%	40%	17%	68%	15%	
APP/DEPART	278	/	311	496	/	493	334	/	256	196	/	244	
BEGIN PEAK HR	8:00 AM												
VOLUMES	32	102	21	62	149	30	31	74	69	17	59	18	663
APPROACH %	20%	66%	14%	26%	62%	13%	18%	43%	40%	18%	63%	19%	
PEAK HR FACTOR	0.841			0.981			0.796			0.839			0.915
APP/DEPART	155	/	177	241	/	235	174	/	131	94	/	121	
03:00 PM	16	55	4	15	36	15	17	39	23	6	27	8	262
3:15 PM	18	53	7	12	45	17	17	29	22	7	36	6	270
3:30 PM	15	50	13	16	37	12	14	37	23	6	33	10	268
3:45 PM	14	57	15	10	47	18	17	35	24	7	35	9	287
4:00 PM	13	69	8	20	53	19	15	34	25	5	30	5	296
4:15 PM	10	55	12	18	45	18	14	28	25	7	32	10	275
4:30 PM	15	59	15	11	46	16	12	34	29	9	29	10	284
4:45 PM	11	63	11	21	49	17	17	34	24	6	29	9	290
5:00 PM	10	54	11	17	55	16	13	30	22	7	29	9	273
5:15 PM	10	59	11	20	61	15	14	28	22	5	28	10	283
5:30 PM	9	47	9	14	46	17	14	31	25	8	30	10	260
5:45 PM	10	62	8	16	42	15	13	25	24	4	27	12	260
6:00 PM	9	61	6	15	48	18	13	22	21	4	25	10	254
6:15 PM	12	65	10	9	45	11	11	19	18	6	27	8	240
6:30 PM	12	54	9	13	38	10	17	23	16	6	27	9	234
6:45 PM	9	51	7	15	31	11	14	24	17	5	29	7	218
VOLUMES	193	915	156	243	725	246	232	471	360	101	471	142	4,484
APPROACH %	15%	72%	12%	17%	50%	17%	22%	44%	34%	14%	66%	20%	
APP/DEPART	1,264	/	1,517	1,442	/	1,187	1,064	/	870	714	/	911	
BEGIN PEAK HR	4:00 PM												
VOLUMES	49	246	45	134	193	71	58	129	103	28	119	34	1,210
APPROACH %	14%	72%	13%	34%	48%	18%	20%	44%	36%	15%	66%	19%	
PEAK HR FACTOR	0.952			0.901			0.973			0.930			0.962
APP/DEPART	340	/	402	398	/	324	291	/	245	181	/	239	

Intersection Turning Movement

Prepared by: Southland Car Counters

N-S STREET: Golden Lantern

DATE: 6/1/2005

LOCATION: City of Dana Point

E-W STREET: Dana Point Harbor Dr

DAY: WEDNESDAY

PROJECT# 05-1120-007

LANES:	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			TOTAL
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	
6:00 AM													
6:15 AM													
6:30 AM													
6:45 AM													
7:00 AM	1	4	6	23	9	16	21	12	3	12	58	14	179
7:15 AM	2	8	4	14	4	19	9	27	2	8	43	9	149
7:30 AM	2	10	6	14	20	10	12	30	1	19	39	21	184
7:45 AM	5	8	13	19	12	25	9	32	4	26	33	23	209
8:00 AM	3	9	10	12	16	23	29	62	3	21	54	21	263
8:15 AM	4	9	9	17	24	20	12	36	2	24	37	23	217
8:30 AM	11	8	9	11	19	22	8	26	1	31	39	23	208
8:45 AM	12	13	12	5	23	24	9	38	3	29	50	22	240
9:00 AM													
9:15 AM													
9:30 AM													
9:45 AM													
10:00 AM													
10:15 AM													
10:30 AM													
10:45 AM													
11:00 AM													
11:15 AM													
11:30 AM													
11:45 AM													

TOTAL VOLUMES =	40	69	69	115	127	159	109	263	19	170	353	156	1649
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AM Peak Hr Begins at: 800 AM

PEAK VOLUMES =	30	39	40	45	82	89	58	162	9	105	180	89	928
PEAK HR. FACTOR:		0.736			0.885			0.609			0.926		0.882

CONTROL:

Intersection Turning Movement

Prepared by: Southland Car Counters

N-S STREET: Golden Lantern

DATE: 6/1/2005

LOCATION: City of Dana Point

E-W STREET: Dana Point Harbor Dr

DAY: WEDNESDAY

PROJECT# 05-1120-007

	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			TOTAL
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	
LANES:													
1:00 PM													
1:15 PM													
1:30 PM													
1:45 PM													
2:00 PM													
2:15 PM													
2:30 PM													
2:45 PM													
3:00 PM													
3:15 PM													
3:30 PM													
3:45 PM													
4:00 PM	6	20	43	69	25	27	26	41	6	29	49	25	366
4:15 PM	3	22	30	51	18	25	30	44	2	22	50	17	314
4:30 PM	4	27	24	33	15	22	31	49	3	27	58	23	316
4:45 PM	6	17	29	26	17	20	29	28	3	36	55	18	284
5:00 PM	8	20	35	31	23	22	24	37	5	49	51	16	321
5:15 PM	5	25	32	28	16	23	26	32	4	39	48	19	297
5:30 PM	3	28	28	34	20	29	29	30	5	32	52	24	314
5:45 PM	3	19	26	27	15	21	20	38	3	27	47	17	263
6:00 PM													
6:15 PM													
6:30 PM													
6:45 PM													

TOTAL VOLUMES =	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
	38	178	247	299	149	189	215	299	31	261	410	159	2475

PM Peak Hr Begins at: 400 PM

PEAK VOLUMES =	19	86	126	179	75	94	116	162	14	114	212	83	1280
PEAK HR. FACTOR:		0.837		0.719			0.880			0.938			0.874

CONTROL:

Intersection Turning Movement

Prepared by: Southland Car Counters

N-S STREET: Street of the Golden Lantern DATE: 5/28/2005

LOCATION: City of Dana Point

E-W STREET: Dana Point Harbor Dr. DAY: SATURDAY

PROJECT# 05-1117-007

LANES:	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			TOTAL
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	
	1	1	1	1	1	1	1	2	0	1	2	0	
10:00 AM													
10:15 AM													
10:30 AM													
10:45 AM													
11:00 AM													
11:15 AM													
11:30 AM	7	56	27	23	23	21	22	61	3	73	65	15	396
11:45 AM	6	61	29	39	35	21	29	66	5	85	83	19	478
12:00 PM	9	67	32	45	39	29	35	62	4	90	92	24	528
12:15 PM	11	69	34	50	43	28	35	64	6	101	99	27	567
12:30 PM	16	67	28	40	54	25	37	68	5	59	99	22	520
12:45 PM	21	55	42	39	51	31	30	73	12	61	101	20	536
1:00 PM	14	47	38	43	46	30	38	51	7	66	91	14	485
1:15 PM	13	67	34	32	40	38	30	58	8	59	83	11	473
1:30 PM													
1:45 PM													
2:00 PM													
2:15 PM													
2:30 PM													
2:45 PM													

TOTAL VOLUMES =	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
	97	489	264	311	331	223	256	503	50	594	713	152	3983

NOON Peak Hr Begins at: 1200 PM

PEAK VOLUMES =	57	258	136	174	187	113	137	267	27	311	391	93	2151
PEAK HR. FACTOR:		0.956		0.979			0.937			0.876			0.948

CONTROL: SIGNALIZED

Intersection Turning Movement

Prepared by: Southland Car Counters

N-S STREET: Street of the Golden Lantern DATE: 5/28/2005

LOCATION: City of Dana Point

E-W STREET: Dana Point Harbor Dr. DAY: SATURDAY

PROJECT# 05-1117-007

LANES:	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			TOTAL
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	
	1	1	1	1	1	1	1	2	0	1	2	0	
1:00 PM													
1:15 PM													
1:30 PM	15	83	40	35	41	32	26	78	9	44	80	20	503
1:45 PM	10	46	53	31	30	34	24	69	8	67	128	14	514
2:00 PM	13	41	59	26	45	33	38	82	2	46	98	14	497
2:15 PM	11	67	55	31	34	34	32	68	8	64	95	24	523
2:30 PM	15	71	28	43	34	20	43	80	11	64	111	20	540
2:45 PM	22	60	40	53	47	22	37	70	4	130	79	30	594
3:00 PM	24	70	49	58	48	35	24	61	10	73	92	21	565
3:15 PM	16	52	39	23	25	20	51	72	9	47	94	32	480
3:30 PM													
3:45 PM													
4:00 PM													
4:15 PM													
4:30 PM													
4:45 PM													
5:00 PM													
5:15 PM													
5:30 PM													
5:45 PM													
6:00 PM													
6:15 PM													
6:30 PM													
6:45 PM													

TOTAL VOLUMES =	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
	126	490	363	300	304	230	275	580	61	535	777	175	4216

PM Peak Hr Begins at: 2:15 PM

PEAK VOLUMES =	72	268	172	185	163	111	136	279	33	331	377	95	2222
PEAK HR. FACTOR:		0.895		0.814			0.836			0.840			0.935

CONTROL: SIGNALIZED

Intersection Turning Movement

Prepared by: Southland Car Counters

N-S STREET: Puerto Pl.

DATE: 6/1/2005

LOCATION: City of Dana Point

E-W STREET: Dana Point Harbor Dr

DAY: WEDNESDAY

PROJECT# 05-1120-008

LANES:	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			TOTAL
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	
6:00 AM													
6:15 AM													
6:30 AM													
6:45 AM													
7:00 AM	1		0				37	1	2	81			122
7:15 AM	3		1				36	3	4	51			98
7:30 AM	5		3				44	9	5	72			138
7:45 AM	8		6				48	14	8	75			159
8:00 AM	5		5				80	9	6	78			183
8:15 AM	4		3				54	6	7	72			146
8:30 AM	5		7				38	7	6	85			148
8:45 AM	3		9				46	8	4	96			166
9:00 AM													
9:15 AM													
9:30 AM													
9:45 AM													
10:00 AM													
10:15 AM													
10:30 AM													
10:45 AM													
11:00 AM													
11:15 AM													
11:30 AM													
11:45 AM													

TOTAL VOLUMES =	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
	34	0	34	0	0	0	0	383	57	42	610	0	1160

AM Peak Hr Begins at: 800 AM

PEAK VOLUMES =	17	0	24	0	0	0	0	218	30	23	331	0	643
PEAK HR. FACTOR:		0.854			0.000			0.697			0.885		0.878

CONTROL:

Intersection Turning Movement

Prepared by: Southland Car Counters

N-S STREET: Puerto Pl.

DATE: 6/1/2005

LOCATION: City of Dana Point

E-W STREET: Dana Point Harbor Dr

DAY: WEDNESDAY

PROJECT# 05-1120-008

LANES:	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			TOTAL
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	
1:00 PM													
1:15 PM													
1:30 PM													
1:45 PM													
2:00 PM													
2:15 PM													
2:30 PM													
2:45 PM													
3:00 PM													
3:15 PM													
3:30 PM													
3:45 PM													
4:00 PM	4		13					110	9	9	104		249
4:15 PM	6		19					104	12	14	87		242
4:30 PM	7		18					116	10	12	112		275
4:45 PM	9		21					106	8	8	97		249
5:00 PM	7		19					100	7	9	102		244
5:15 PM	6		15					92	6	6	105		230
5:30 PM	8		20					95	8	10	128		269
5:45 PM	5		18					99	9	11	78		220
6:00 PM													
6:15 PM													
6:30 PM													
6:45 PM													

TOTAL VOLUMES =	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
	52	0	143	0	0	0	0	822	69	79	813	0	1978

PM Peak Hr Begins at: 400 PM

PEAK VOLUMES =	26	0	71	0	0	0	0	436	39	43	400	0	1015
PEAK HR. FACTOR:		0.808			0.000			0.942			0.893		0.923

CONTROL:

Intersection Turning Movement

Prepared by: Southland Car Counters

N-S STREET: Puerto Pl.

DATE: 5/28/2005

LOCATION: City of Dana Point

E-W STREET: Dana Point Harbor Dr.

DAY: SATURDAY

PROJECT# 05-1117-008

LANES:	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			TOTAL
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	
	0	0	0	0	0	0	0	2	0	1	2	0	
10:00 AM													
10:15 AM													
10:30 AM													
10:45 AM													
11:00 AM													
11:15 AM													
11:30 AM	7		12					110	5	10	162		306
11:45 AM	8		11					136	7	12	165		339
12:00 PM	9		10					110	6	10	194		339
12:15 PM	6		9					132	7	11	192		357
12:30 PM	4		14					123	8	10	179		338
12:45 PM	5		11					140	10	12	162		340
1:00 PM	6		12					126	6	19	181		350
1:15 PM	7		11					95	9	12	159		293
1:30 PM													
1:45 PM													
2:00 PM													
2:15 PM													
2:30 PM													
2:45 PM													

TOTAL VOLUMES =	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
	52	0	90	0	0	0	0	972	58	96	1394	0	2662

NOON Peak Hr Begins at: 1215 PM

PEAK VOLUMES =	21	0	46	0	0	0	0	521	31	52	714	0	1385
PEAK HR. FACTOR:		0.931			0.000			0.920			0.000		0.970

CONTROL: Signalized

Intersection Turning Movement

Prepared by: Southland Car Counters

N-S STREET: Puerto Pl.

DATE: 5/28/2005

LOCATION: City of Dana Point

E-W STREET: Dana Point Harbor Dr.

DAY: SATURDAY

PROJECT# 05-1117-008

LANES:	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			TOTAL
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	
	0	0	0	0	0	0	0	2	0	1	2	0	
1:00 PM													
1:15 PM													
1:30 PM	8		16					138	12	13	150		337
1:45 PM	8		13					146	9	13	145		334
2:00 PM	6		10					122	5	18	174		335
2:15 PM	12		10					163	12	16	138		351
2:30 PM	7		9					129	8	13	202		368
2:45 PM	8		23					132	14	19	182		378
3:00 PM	7		21					152	11	16	170		377
3:15 PM	10		19					178	10	22	159		398
3:30 PM													
3:45 PM													
4:00 PM													
4:15 PM													
4:30 PM													
4:45 PM													
5:00 PM													
5:15 PM													
5:30 PM													
5:45 PM													
6:00 PM													
6:15 PM													
6:30 PM													
6:45 PM													

TOTAL VOLUMES =	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
	66	0	121	0	0	0	0	1160	81	130	1320	0	2878

PM Peak Hr Begins at: 230 PM

PEAK VOLUMES =	32	0	72	0	0	0	0	591	43	70	713	0	1521
PEAK HR. FACTOR:		0.839			0.000			0.843			0.910		0.955

CONTROL: Signalized

National Data & Surveying Services Intersection Turning Movement Count

Location: Dana Point Harbor Dr & Park Lantern
City: Dana Point
Control: Signalized

Project ID: 18-01049-002
Date: 3/13/2018

Total

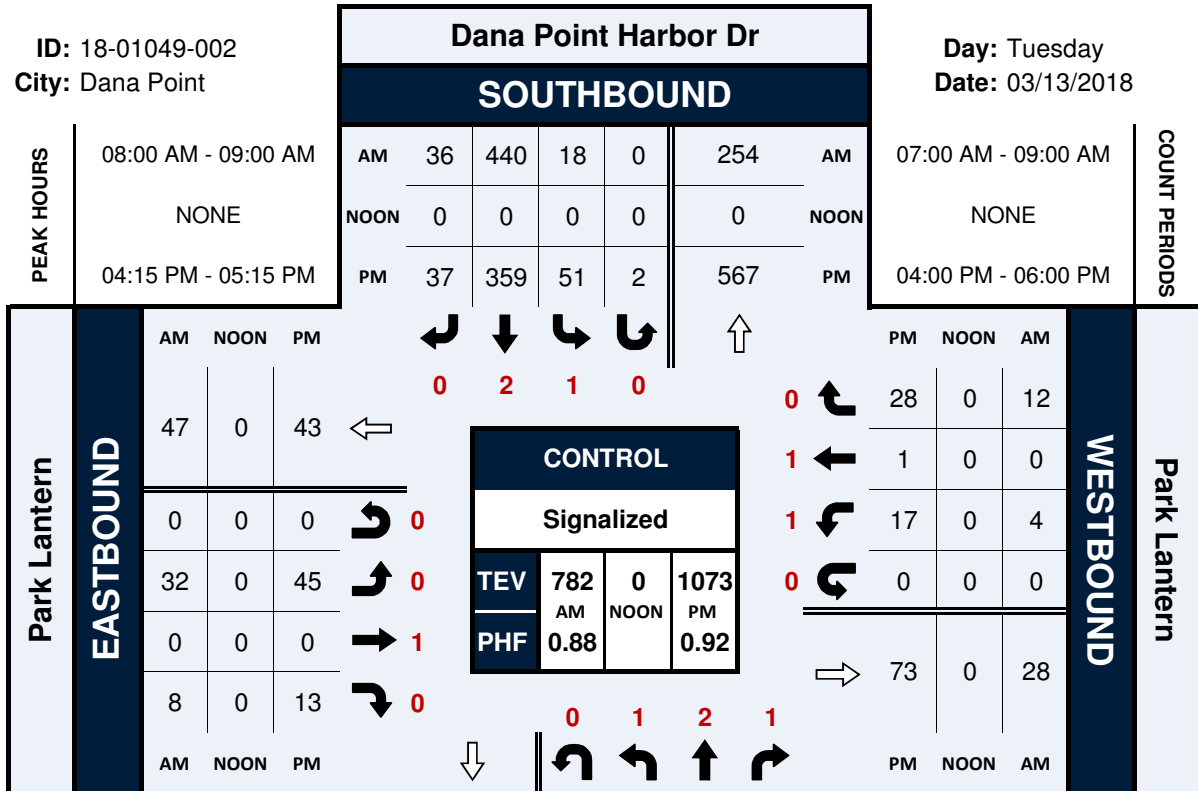
NS/EW Streets:	Dana Point Harbor Dr				Dana Point Harbor Dr				Park Lantern				Park Lantern				TOTAL
	NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				
AM	1	2	1	0	1	2	0	0	0	1	0	0	1	1	0	0	TOTAL
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	
7:00 AM	1	27	0	0	8	53	8	0	6	0	2	0	0	0	1	0	106
7:15 AM	3	29	0	0	6	68	11	1	4	0	1	0	1	1	1	0	126
7:30 AM	2	40	2	0	3	76	13	1	8	0	7	0	0	0	5	0	157
7:45 AM	1	35	3	0	5	113	20	0	7	0	4	0	2	0	3	0	193
8:00 AM	5	62	3	0	3	99	8	0	11	0	0	0	1	0	4	0	196
8:15 AM	2	45	3	0	4	111	8	0	9	0	5	0	1	0	2	0	190
8:30 AM	3	45	3	0	4	95	11	0	9	0	1	0	1	0	3	0	175
8:45 AM	1	58	1	1	7	135	9	0	3	0	2	0	1	0	3	0	221
TOTAL VOLUMES :	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
	18	341	15	1	40	750	88	2	57	0	22	0	7	1	22	0	1364
APPROACH %'s :	4.80%	90.93%	4.00%	0.27%	4.55%	85.23%	10.00%	0.23%	72.15%	0.00%	27.85%	0.00%	23.33%	3.33%	73.33%	0.00%	
PEAK HR :	08:00 AM - 09:00 AM																TOTAL
PEAK HR VOL :	11	210	10	1	18	440	36	0	32	0	8	0	4	0	12	0	782
PEAK HR FACTOR :	0.550	0.847	0.833	0.250	0.643	0.815	0.818	0.000	0.727	0.000	0.400	0.000	1.000	0.000	0.750	0.000	0.885
	0.829				0.818				0.714				0.800				
PM	1	2	1	0	1	2	0	0	0	1	0	0	1	1	0	0	TOTAL
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	
4:00 PM	3	102	5	0	20	98	8	0	9	2	5	0	4	0	9	0	265
4:15 PM	0	126	7	0	15	88	7	2	9	0	3	0	3	0	3	0	263
4:30 PM	1	103	3	0	12	98	7	0	9	0	3	0	4	0	13	0	253
4:45 PM	2	115	8	1	7	100	9	0	13	0	3	0	4	1	3	0	266
5:00 PM	2	148	4	0	17	73	14	0	14	0	4	0	6	0	9	0	291
5:15 PM	5	100	4	0	13	93	14	0	11	0	1	0	0	0	10	0	251
5:30 PM	0	82	3	0	13	94	9	0	15	0	9	0	4	0	9	0	238
5:45 PM	4	85	4	1	7	92	7	0	7	0	4	0	1	0	10	0	222
TOTAL VOLUMES :	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
	17	861	38	2	104	736	75	2	87	2	32	0	26	1	66	0	2049
APPROACH %'s :	1.85%	93.79%	4.14%	0.22%	11.34%	80.26%	8.18%	0.22%	71.90%	1.65%	26.45%	0.00%	27.96%	1.08%	70.97%	0.00%	
PEAK HR :	04:15 PM - 05:15 PM																TOTAL
PEAK HR VOL :	5	492	22	1	51	359	37	2	45	0	13	0	17	1	28	0	1073
PEAK HR FACTOR :	0.625	0.831	0.688	0.250	0.750	0.898	0.661	0.250	0.804	0.000	0.813	0.000	0.708	0.250	0.538	0.000	0.922
	0.844				0.959				0.806				0.676				

Dana Point Harbor Dr & Park Lantern

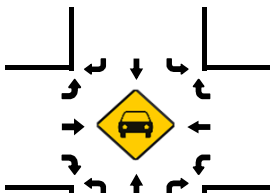
Peak Hour Turning Movement Count

ID: 18-01049-002
City: Dana Point

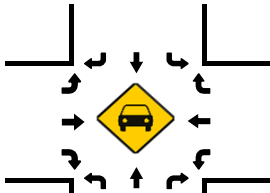
Day: Tuesday
Date: 03/13/2018



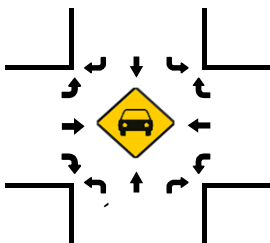
Total Vehicles (AM)



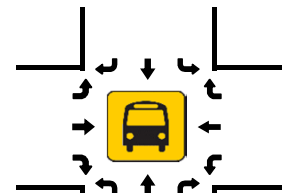
Total Vehicles (NOON)



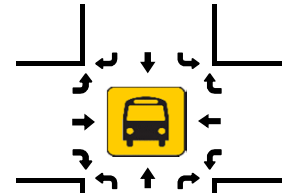
Total Vehicles (PM)



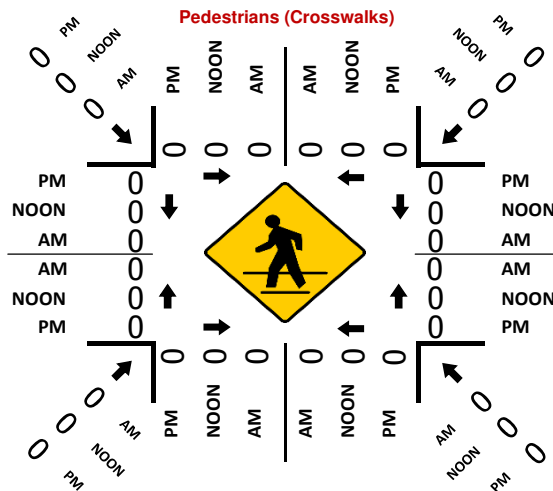
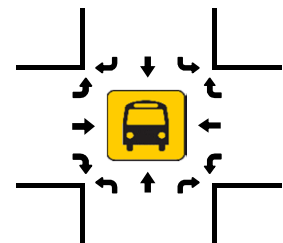
Total Vehicles (AM)



Total Vehicles (NOON)



Total Vehicles (PM)



Intersection Turning Movement

Prepared by:

National Data & Surveying Services

N-S STREET: Del Obispo St/Dana Harbor Dr

DATE: 03/19/2011

LOCATION: City of Dana Point

E-W STREET: Park Lantern

DAY: SATURDAY

PROJECT# 11-1028-002

LANES:	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			TOTAL
	NL 1	NT 2	NR 1	SL 1	ST 2	SR 0	EL 0	ET 1	ER 0	WL 1	WT 1	WR 0	
10:00 AM	4	77	2	10	132	5	8	0	11	3	0	3	255
10:15 AM	2	81	3	14	131	15	6	0	6	4	0	8	270
10:30 AM	2	125	3	12	128	7	7	0	2	3	0	7	296
10:45 AM	2	101	8	9	118	10	16	2	2	5	1	7	281
11:00 AM	0	106	6	13	124	12	8	2	12	8	0	12	303
11:15 AM	3	114	7	14	124	6	14	0	2	6	0	8	298
11:30 AM	3	104	10	19	150	8	6	0	4	7	0	13	324
11:45 AM	6	100	4	21	140	9	12	1	4	3	0	5	305
12:00 PM	2	118	9	12	115	3	9	0	4	5	2	11	290
12:15 PM	0	120	10	17	156	16	4	0	4	5	0	12	344
12:30 PM	3	123	5	15	152	7	13	0	3	4	1	13	339
12:45 PM	3	106	4	14	143	17	10	1	9	2	0	11	320
1:00 PM	5	126	3	13	149	7	7	0	3	2	1	7	323
1:15 PM	5	134	3	16	128	12	8	1	4	1	0	5	317
1:30 PM	6	107	8	19	120	4	12	3	5	1	1	7	293
1:45 PM	7	122	3	12	127	5	8	0	7	4	0	7	302
TOTAL VOLUMES =	53	1764	88	230	2137	143	148	10	82	63	6	136	4860

NOON Peak Hr Begins at: 1215 PM

PEAK VOLUMES =	11	475	22	59	600	47	34	1	19	13	2	43	1326
PEAK HR. FACTOR:		0.948		0.934			0.675			0.806			0.964

CONTROL: Signalized

City: DANA POINT
 N-S Direction: DEL OBISPO STREET
 E-W Direction: PACIFIC COAST HIGHWAY

File Name : H1912007
 Site Code : 00000000
 Start Date : 12/5/2019
 Page No : 1

Groups Printed- Turning Movements

Start Time	DEL OBISPO STREET Southbound				PACIFIC COAST HIGHWAY Westbound				DEL OBISPO STREET Northbound				PACIFIC COAST HIGHWAY Eastbound				Int. Total
	Right	Thru	Left	U Turns	Right	Thru	Left	U Turns	Right	Thru	Left	U Turns	Right	Thru	Left	U Turns	
07:00	19	22	46	1	42	240	46	0	31	12	4	0	11	146	6	0	626
07:15	28	19	79	2	81	292	53	0	27	12	3	0	12	204	12	1	825
07:30	28	20	99	2	75	439	56	0	31	5	4	0	13	210	15	0	997
07:45	24	35	112	1	54	344	109	0	46	13	6	0	14	269	19	1	1047
Total	99	96	336	6	252	1315	264	0	135	42	17	0	50	829	52	2	3495
08:00	27	21	83	2	60	348	80	0	60	16	7	0	19	295	16	1	1035
08:15	25	29	99	0	66	305	81	0	49	18	5	1	15	232	27	1	953
08:30	23	27	62	2	58	334	82	0	53	13	7	1	21	213	11	0	907
08:45	24	24	82	2	54	281	85	0	54	17	6	0	20	182	17	2	850
Total	99	101	326	6	238	1268	328	0	216	64	25	2	75	922	71	4	3745
16:00	35	19	66	3	81	345	94	0	105	22	4	0	12	301	25	4	1116
16:15	31	17	77	4	77	354	98	0	105	33	8	0	12	275	34	0	1125
16:30	22	23	62	1	83	331	89	0	106	20	12	1	18	300	32	0	1100
16:45	41	22	76	0	78	347	117	0	90	20	8	0	10	260	26	1	1096
Total	129	81	281	8	319	1377	398	0	406	95	32	1	52	1136	117	5	4437
17:00	34	37	59	1	79	346	130	0	108	18	8	0	23	250	26	3	1122
17:15	34	24	74	0	124	339	97	0	103	27	10	0	20	275	27	1	1155
17:30	20	33	58	0	65	345	104	0	87	21	5	0	13	257	38	2	1048
17:45	28	22	44	0	77	295	88	0	74	20	10	0	16	230	33	3	940
Total	116	116	235	1	345	1325	419	0	372	86	33	0	72	1012	124	9	4265
Grand Total	443	394	1178	21	1154	5285	1409	0	1129	287	107	3	249	3899	364	20	15942
Apprch %	21.8	19.4	57.9	1	14.7	67.3	18	0	74	18.8	7	0.2	5.5	86	8	0.4	
Total %	2.8	2.5	7.4	0.1	7.2	33.2	8.8	0	7.1	1.8	0.7	0	1.6	24.5	2.3	0.1	

City: DANA POINT
 N-S Direction: DEL OBISPO STREET
 E-W Direction: PACIFIC COAST HIGHWAY

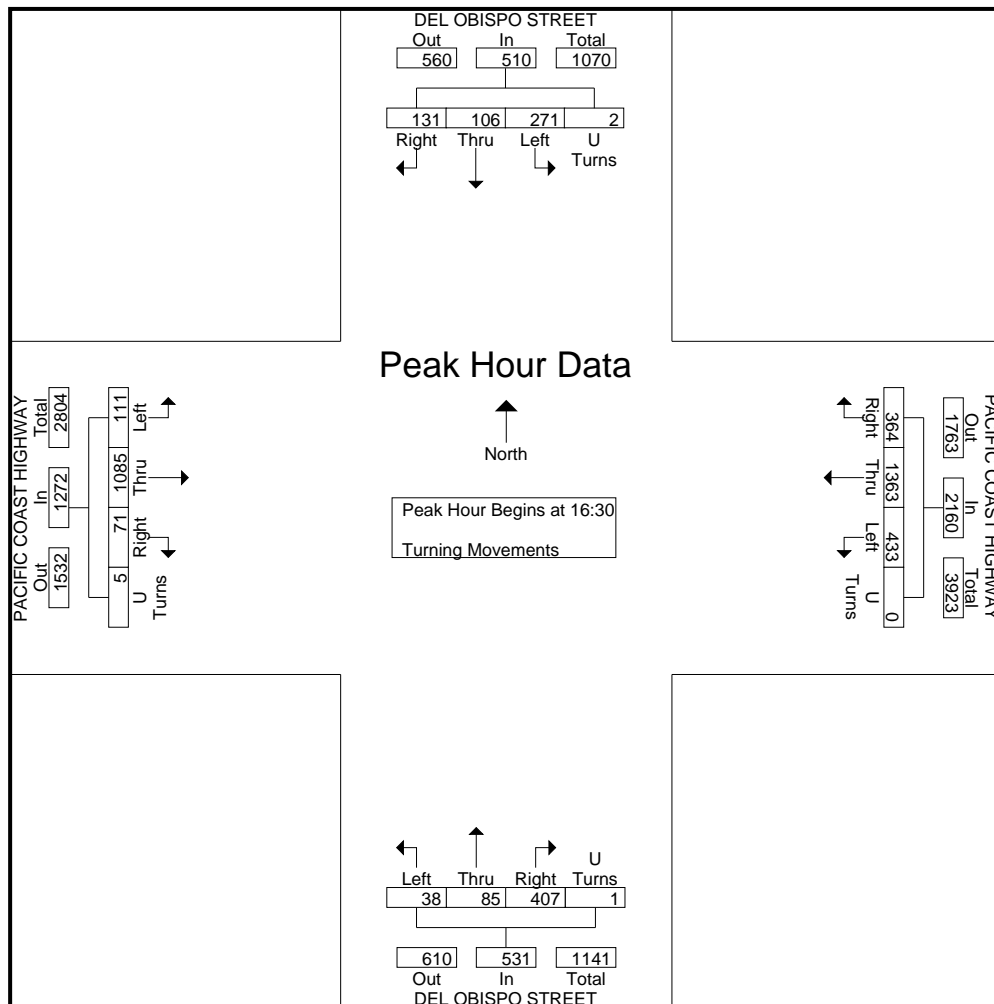
File Name : H1912007
 Site Code : 00000000
 Start Date : 12/5/2019
 Page No : 2

Start Time	DEL OBISPO STREET Southbound					PACIFIC COAST HIGHWAY Westbound					DEL OBISPO STREET Northbound					PACIFIC COAST HIGHWAY Eastbound					Int. Total
	Right	Thru	Left	U Turns	App. Total	Right	Thru	Left	U Turns	App. Total	Right	Thru	Left	U Turns	App. Total	Right	Thru	Left	U Turns	App. Total	
Peak Hour Analysis From 07:00 to 08:45 - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 07:30																					
07:30	28			2		75	439	56	0	570	31	5	4	0	40	13	210	15	0	238	997
07:45	24	35	112	2	172	54	344	109	0	488	60		7		83	19	295	16	1	331	1047
08:00	27	21	83	2	133	60	348	80	0	488	60		7		83	19	295	16	1	331	1035
08:15	25	29	99	0	153	66	305	81	0	452	49	18	5	1						27	
Total Volume	104	105	393	5	607	255	1436	326	0	2017	186	52	22	1	261	61	1006	77	3	1147	4032
% App. Total	17.1	17.3	64.7	0.8		12.6	71.2	16.2	0		71.3	19.9	8.4	0.4		5.3	87.7	6.7	0.3		
PHF	.929	.750	.877	.625	.882	.850	.818	.748	.000	.885	.775	.722	.786	.250	.786	.803	.853	.713	.750	.866	.963

City: DANA POINT
 N-S Direction: DEL OBISPO STREET
 E-W Direction: PACIFIC COAST HIGHWAY

File Name : H1912007
 Site Code : 00000000
 Start Date : 12/5/2019
 Page No : 3

Start Time	DEL OBISPO STREET Southbound					PACIFIC COAST HIGHWAY Westbound					DEL OBISPO STREET Northbound					PACIFIC COAST HIGHWAY Eastbound					Int. Total
	Right	Thru	Left	U Turns	App. Total	Right	Thru	Left	U Turns	App. Total	Right	Thru	Left	U Turns	App. Total	Right	Thru	Left	U Turns	App. Total	
Peak Hour Analysis From 16:00 to 17:45 - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 16:30																					
16:30	22	23	62	1		78	347	117	0	542	90	20	12	1	118	10	300	32	1	350	1100
16:45	41		76		139	79	346	130			108		8	0		23	260	26		297	1096
17:00	34	37	59	1	131	79	346	130			108		8	0		23	260	26		297	1096
17:15	34	24	74	0	132	124	339	97	0	560	103	27	10	0	140	20	275	27	1	323	1155
Total Volume	131	106	271	2	510	364	1363	433	0	2160	407	85	38	1	531	71	1085	111	5	1272	4473
% App. Total	25.7	20.8	53.1	0.4		16.9	63.1	20	0		76.6	16	7.2	0.2		5.6	85.3	8.7	0.4		
PHF	.799	.716	.891	.500	.917	.734	.982	.833	.000	.964	.942	.787	.792	.250	.948	.772	.904	.867	.417	.909	.968



City: DANA POINT
 N-S Direction: DEL OBISPO STREET
 E-W Direction: PACIFIC COAST HIGHWAY

File Name : H1912018
 Site Code : 00000000
 Start Date : 12/7/2019
 Page No : 1

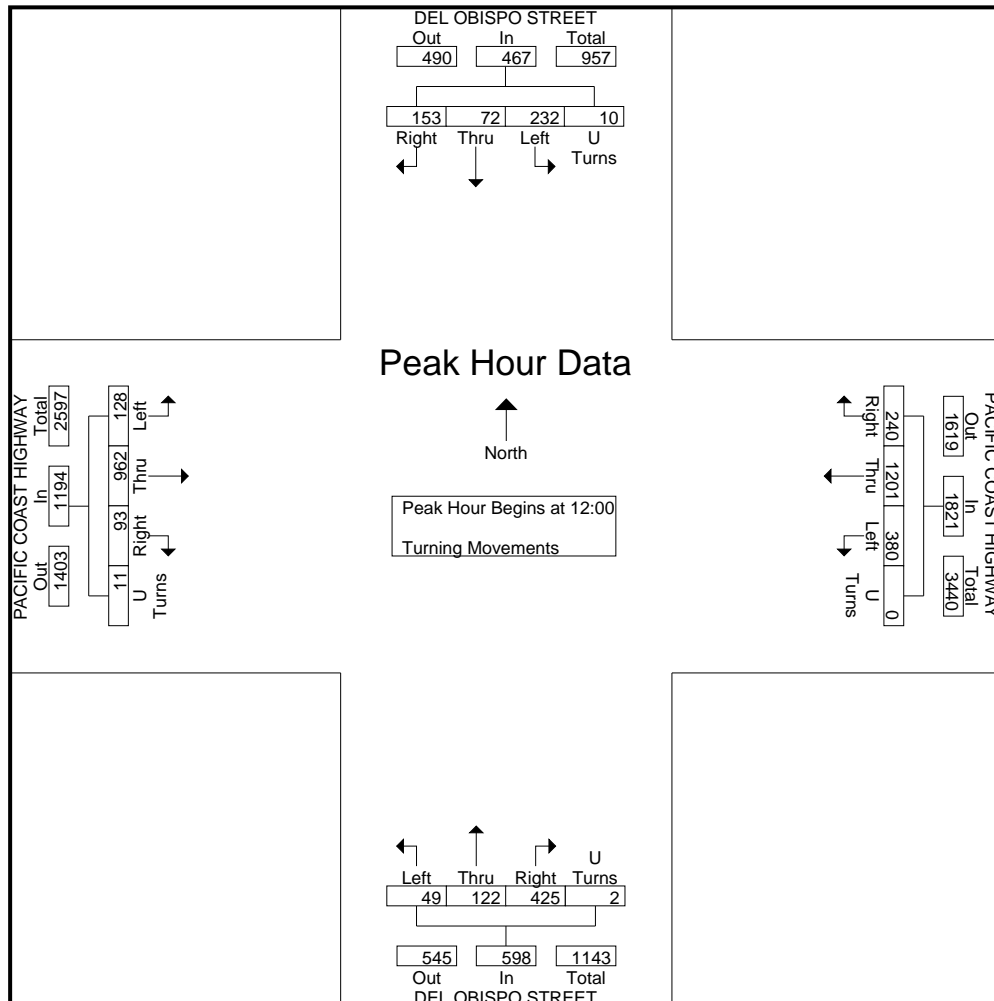
Groups Printed- Turning Movements

Start Time	DEL OBISPO STREET Southbound				PACIFIC COAST HIGHWAY Westbound				DEL OBISPO STREET Northbound				PACIFIC COAST HIGHWAY Eastbound				Int. Total
	Right	Thru	Left	U Turns	Right	Thru	Left	U Turns	Right	Thru	Left	U Turns	Right	Thru	Left	U Turns	
10:00	29	26	34	2	56	249	105	0	63	15	7	0	17	211	23	1	838
10:15	31	19	61	2	49	257	100	0	90	21	8	0	9	218	25	2	892
10:30	41	29	52	5	51	280	102	0	109	17	9	0	13	221	29	2	960
10:45	40	31	85	2	55	292	99	0	86	39	10	0	23	228	24	2	1016
Total	141	105	232	11	211	1078	406	0	348	92	34	0	62	878	101	7	3706
11:00	32	26	54	2	70	289	116	1	82	32	10	0	19	247	24	0	1004
11:15	30	29	72	2	55	255	105	0	99	31	16	0	18	211	26	3	952
11:30	31	15	53	2	67	277	106	0	95	29	6	0	23	265	37	0	1006
11:45	31	32	74	1	68	282	95	0	92	31	14	0	22	213	20	4	979
Total	124	102	253	7	260	1103	422	1	368	123	46	0	82	936	107	7	3941
12:00	27	16	65	1	66	296	105	0	106	29	13	0	18	252	37	2	1033
12:15	46	27	71	0	46	290	89	0	113	30	14	0	19	212	28	4	989
12:30	39	14	41	3	69	310	89	0	102	25	9	2	30	263	36	3	1035
12:45	41	15	55	6	59	305	97	0	104	38	13	0	26	235	27	2	1023
Total	153	72	232	10	240	1201	380	0	425	122	49	2	93	962	128	11	4080
13:00	39	16	65	1	58	281	104	0	114	31	14	0	24	248	22	2	1019
13:15	30	27	56	2	60	289	85	0	125	21	14	0	22	220	27	0	978
13:30	39	20	50	3	62	274	106	0	112	24	12	0	23	268	28	1	1022
13:45	44	15	67	0	61	280	93	0	96	21	10	0	23	265	31	1	1007
Total	152	78	238	6	241	1124	388	0	447	97	50	0	92	1001	108	4	4026
Grand Total	570	357	955	34	952	4506	1596	1	1588	434	179	2	329	3777	444	29	15753
Apprch %	29.7	18.6	49.8	1.8	13.5	63.9	22.6	0	72.1	19.7	8.1	0.1	7.2	82.5	9.7	0.6	
Total %	3.6	2.3	6.1	0.2	6	28.6	10.1	0	10.1	2.8	1.1	0	2.1	24	2.8	0.2	

City: DANA POINT
 N-S Direction: DEL OBISPO STREET
 E-W Direction: PACIFIC COAST HIGHWAY

File Name : H1912018
 Site Code : 0000000
 Start Date : 12/7/2019
 Page No : 2

Start Time	DEL OBISPO STREET Southbound					PACIFIC COAST HIGHWAY Westbound					DEL OBISPO STREET Northbound					PACIFIC COAST HIGHWAY Eastbound					Int. Total
	Right	Thru	Left	U Turns	App. Total	Right	Thru	Left	U Turns	App. Total	Right	Thru	Left	U Turns	App. Total	Right	Thru	Left	U Turns	App. Total	
Peak Hour Analysis From 10:00 to 13:45 - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 12:00																					
12:00	27	16	65	1	109	66	296	105			113	30	14	0	157			37			
12:15	46	27	71	0	144	46	290	89	0	425	102	25	9	2	138	30	263	36	3	332	1035
12:30	39	14	41	3	97	69	310	89	0	468											
12:45	41	15	55	6								38	13	0	155	26	235	27	2	290	1023
Total Volume	153	72	232	10	467	240	1201	380	0	1821	425	122	49	2	598	93	962	128	11	1194	4080
% App. Total	32.8	15.4	49.7	2.1		13.2	66	20.9	0		71.1	20.4	8.2	0.3		7.8	80.6	10.7	0.9		
PHF	.832	.667	.817	.417	.811	.870	.969	.905	.000	.973	.940	.803	.875	.250	.952	.775	.914	.865	.688	.899	.986



City: DANA POINT
 N-S Direction: DEL OBISPO STREET
 E-W Direction: STONEHILL DRIVE

File Name : H2001017
 Site Code : 00000000
 Start Date : 1/15/2020
 Page No : 1

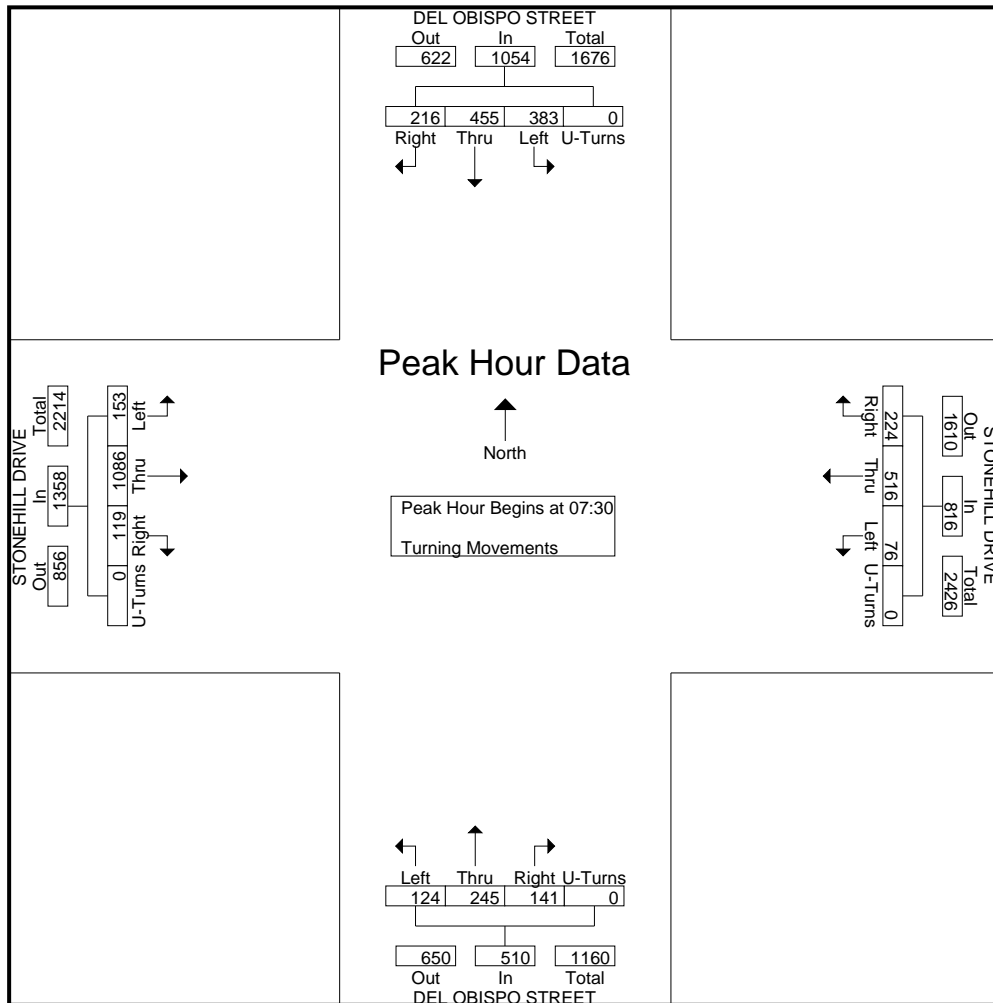
Groups Printed- Turning Movements

Start Time	DEL OBISPO STREET Southbound				STONEHILL DRIVE Westbound				DEL OBISPO STREET Northbound				STONEHILL DRIVE Eastbound				Int. Total
	Right	Thru	Left	U-Turns	Right	Thru	Left	U-Turns	Right	Thru	Left	U-Turns	Right	Thru	Left	U-Turns	
07:00	16	50	68	0	35	78	22	0	19	21	19	0	11	216	10	0	565
07:15	45	74	89	0	47	114	10	0	31	69	15	0	23	227	23	0	767
07:30	80	123	115	0	66	160	15	0	43	78	43	0	21	261	27	0	1032
07:45	71	119	100	0	57	132	22	0	35	60	35	0	43	297	55	0	1026
Total	212	366	372	0	205	484	69	0	128	228	112	0	98	1001	115	0	3390
08:00	34	109	98	0	53	109	23	0	32	58	22	0	32	287	29	0	886
08:15	31	104	70	0	48	115	16	0	31	49	24	0	23	241	42	0	794
08:30	31	101	100	0	41	109	27	0	20	51	17	0	24	230	30	0	781
08:45	32	54	79	0	63	99	22	0	41	75	28	0	34	239	34	0	800
Total	128	368	347	0	205	432	88	0	124	233	91	0	113	997	135	0	3261
16:00	28	65	70	0	91	214	33	0	38	79	34	0	31	249	25	0	957
16:15	24	88	78	0	114	166	39	0	34	68	42	0	25	210	33	0	921
16:30	26	65	68	0	93	209	42	0	44	74	28	0	29	211	33	0	922
16:45	32	80	82	0	104	194	37	0	35	65	35	0	19	202	34	0	919
Total	110	298	298	0	402	783	151	0	151	286	139	0	104	872	125	0	3719
17:00	23	75	54	0	116	222	38	0	39	63	31	0	21	245	35	0	962
17:15	28	86	80	0	107	220	32	0	38	66	49	0	24	202	29	0	961
17:30	20	62	51	0	82	206	32	0	29	66	34	0	23	218	33	0	856
17:45	24	70	55	0	91	174	24	0	36	65	40	0	19	173	39	0	810
Total	95	293	240	0	396	822	126	0	142	260	154	0	87	838	136	0	3589
Grand Total	545	1325	1257	0	1208	2521	434	0	545	1007	496	0	402	3708	511	0	13959
Apprch %	17.4	42.4	40.2	0	29	60.6	10.4	0	26.6	49.2	24.2	0	8.7	80.2	11.1	0	
Total %	3.9	9.5	9	0	8.7	18.1	3.1	0	3.9	7.2	3.6	0	2.9	26.6	3.7	0	

City: DANA POINT
 N-S Direction: DEL OBISPO STREET
 E-W Direction: STONEHILL DRIVE

File Name : H2001017
 Site Code : 00000000
 Start Date : 1/15/2020
 Page No : 2

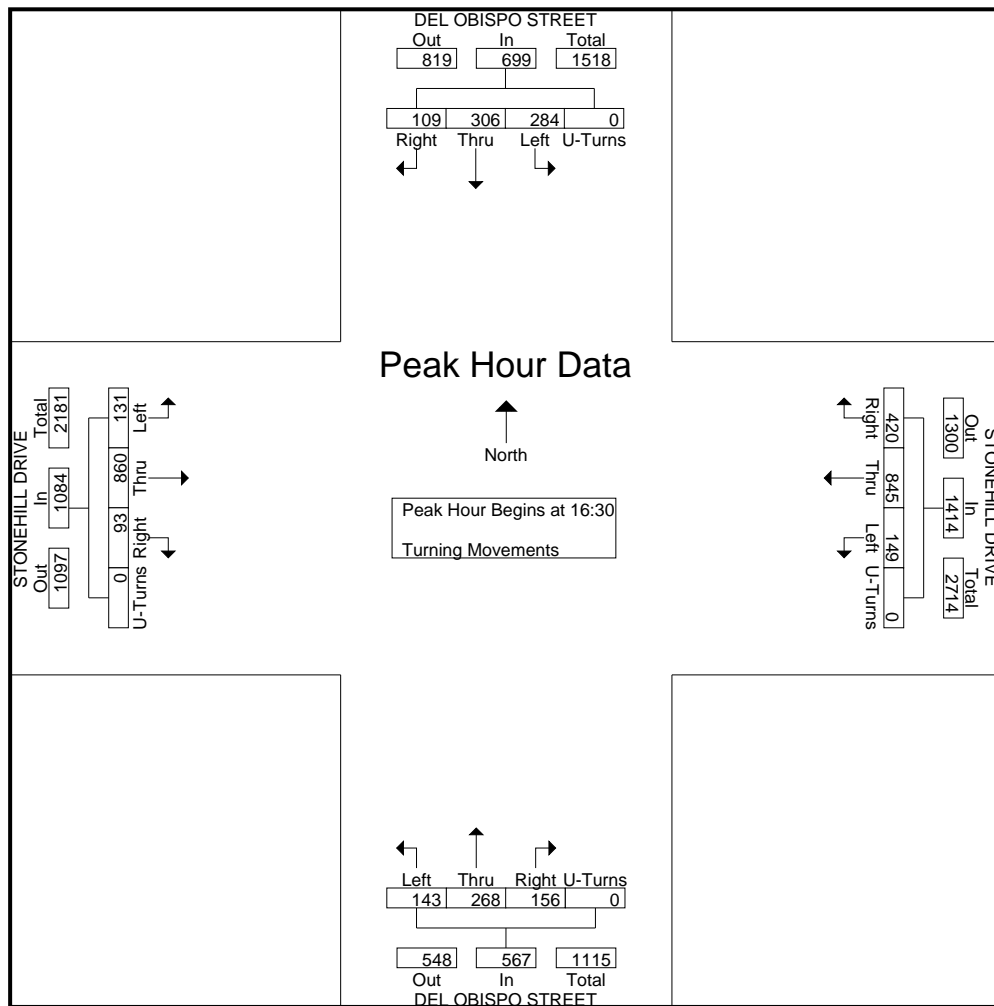
Start Time	DEL OBISPO STREET Southbound					STONEHILL DRIVE Westbound					DEL OBISPO STREET Northbound					STONEHILL DRIVE Eastbound					Int. Total
	Right	Thru	Left	U-Turns	App. Total	Right	Thru	Left	U-Turns	App. Total	Right	Thru	Left	U-Turns	App. Total	Right	Thru	Left	U-Turns	App. Total	
Peak Hour Analysis From 07:00 to 08:45 - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 07:30																					
07:30	80	123	115	0	318	66	160	15	0	241	43	78	43	0	164	21	261	27	0	309	1032
07:45	71	119	100	0	290	57	132	22	0	211	35	60	35	0	130	43	297	55	0	395	1026
08:00	34	109	98	0	241	53	109	23	0	179	31	49	24	0	104	23	241	42	0	306	794
08:15	31	104	70	0	205	48	115	16	0	179	31	49	24	0	104	23	241	42	0	306	794
Total Volume	216	455	383	0	1054	224	516	76	0	816	141	245	124	0	510	119	1086	153	0	1358	3738
% App. Total	20.5	43.2	36.3	0		27.5	63.2	9.3	0		27.6	48	24.3	0		8.8	80	11.3	0		
PHF	.675	.925	.833	.000	.829	.848	.806	.826	.000	.846	.820	.785	.721	.000	.777	.692	.914	.695	.000	.859	.906



City: DANA POINT
 N-S Direction: DEL OBISPO STREET
 E-W Direction: STONEHILL DRIVE

File Name : H2001017
 Site Code : 0000000
 Start Date : 1/15/2020
 Page No : 3

Start Time	DEL OBISPO STREET Southbound					STONEHILL DRIVE Westbound					DEL OBISPO STREET Northbound					STONEHILL DRIVE Eastbound					Int. Total	
	Right	Thru	Left	U-Turns	App. Total	Right	Thru	Left	U-Turns	App. Total	Right	Thru	Left	U-Turns	App. Total	Right	Thru	Left	U-Turns	App. Total		
Peak Hour Analysis From 16:00 to 17:45 - Peak 1 of 1																						
Peak Hour for Entire Intersection Begins at 16:30																						
16:30	26	65	68	0	159	93	209	42	0	335	44	74	28	0	146	29	19	202	34	0	255	919
16:45	32	80	82	0	194	104	194	37	0	335	35	65	35	0	135	19	202	34	0	255	919	
17:00	23	75	54	0	152	116	222	38	0	376	39	63	31	0	133	21	245	35	0	301	962	
17:15	28	86	80	0	194	107	220	32	0	359	38	66	49	0	153	24	202	29	0	255	961	
Total Volume	109	306	284	0	699	420	845	149	0	1414	156	268	143	0	567	93	860	131	0	1084	3764	
% App. Total	15.6	43.8	40.6	0		29.7	59.8	10.5	0		27.5	47.3	25.2	0		8.6	79.3	12.1	0			
PHF	.852	.890	.866	.000	.901	.905	.952	.887	.000	.940	.886	.905	.730	.000	.926	.802	.878	.936	.000	.900	.978	



City: DANA POINT
 N-S Direction: DEL OBISPO STREET
 E-W Direction: STONEHILL DRIVE

File Name : H2001017SAT
 Site Code : 00000000
 Start Date : 1/18/2020
 Page No : 1

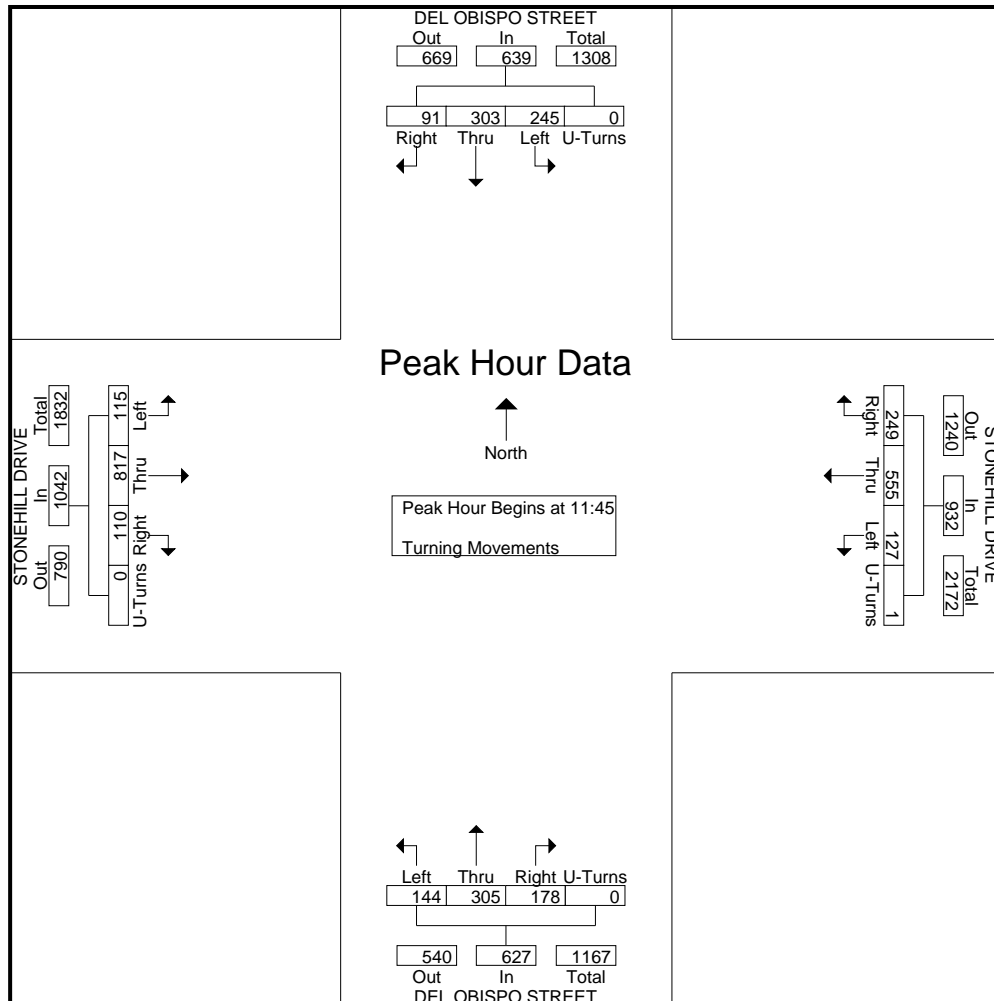
Groups Printed- Turning Movements

Start Time	DEL OBISPO STREET Southbound				STONEHILL DRIVE Westbound				DEL OBISPO STREET Northbound				STONEHILL DRIVE Eastbound				Int. Total
	Right	Thru	Left	U-Turns	Right	Thru	Left	U-Turns	Right	Thru	Left	U-Turns	Right	Thru	Left	U-Turns	
10:00	21	65	54	0	38	98	23	1	34	61	16	0	22	188	20	0	641
10:15	17	74	66	0	54	112	25	1	33	66	35	0	25	230	37	0	775
10:30	20	97	62	0	45	132	25	0	38	58	21	0	18	213	19	0	748
10:45	18	107	73	0	51	138	25	0	53	69	30	0	35	178	21	0	798
Total	76	343	255	0	188	480	98	2	158	254	102	0	100	809	97	0	2962
11:00	18	89	73	0	66	113	33	0	35	50	31	0	30	224	19	0	781
11:15	23	109	71	0	67	120	26	0	39	77	30	0	25	198	21	0	806
11:30	17	63	62	0	58	143	27	1	58	69	28	0	21	205	35	0	787
11:45	26	98	56	0	56	124	37	0	63	86	41	0	32	169	33	0	821
Total	84	359	262	0	247	500	123	1	195	282	130	0	108	796	108	0	3195
12:00	21	75	62	0	60	144	23	0	45	63	42	0	30	225	35	0	825
12:15	26	74	66	0	65	120	36	1	35	77	35	0	22	214	25	0	796
12:30	18	56	61	0	68	167	31	0	35	79	26	0	26	209	22	0	798
12:45	18	84	56	0	62	135	41	0	44	69	37	0	24	166	19	0	755
Total	83	289	245	0	255	566	131	1	159	288	140	0	102	814	101	0	3174
13:00	24	85	47	0	59	157	27	0	35	62	33	0	23	210	28	0	790
13:15	31	85	66	0	51	118	28	0	47	63	36	0	16	169	21	0	731
13:30	18	67	54	0	58	146	39	0	50	61	36	0	25	228	23	0	805
13:45	17	81	53	0	53	123	39	0	43	62	31	0	20	168	29	0	719
Total	90	318	220	0	221	544	133	0	175	248	136	0	84	775	101	0	3045
Grand Total	333	1309	982	0	911	2090	485	4	687	1072	508	0	394	3194	407	0	12376
Apprch %	12.7	49.9	37.4	0	26.1	59.9	13.9	0.1	30.3	47.3	22.4	0	9.9	79.9	10.2	0	
Total %	2.7	10.6	7.9	0	7.4	16.9	3.9	0	5.6	8.7	4.1	0	3.2	25.8	3.3	0	

City: DANA POINT
 N-S Direction: DEL OBISPO STREET
 E-W Direction: STONEHILL DRIVE

File Name : H2001017SAT
 Site Code : 00000000
 Start Date : 1/18/2020
 Page No : 2

Start Time	DEL OBISPO STREET Southbound					STONEHILL DRIVE Westbound					DEL OBISPO STREET Northbound					STONEHILL DRIVE Eastbound					Int. Total
	Right	Thru	Left	U-Turns	App. Total	Right	Thru	Left	U-Turns	App. Total	Right	Thru	Left	U-Turns	App. Total	Right	Thru	Left	U-Turns	App. Total	
Peak Hour Analysis From 10:00 to 13:45 - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 11:45																					
11:45	26	98	56	0	180	56	124	37	0	227	63	86	41	0	190	32	225	35	0	290	825
12:00	21	75	62	0	158	60	144	23	1	227	45	63	42	0	150	30	225	35	0	290	825
12:15	26	74	66	0	166	68	167	31	0	266	35	79	26	0	140	26	209	22	0	257	798
12:30	18	56	61	0	135	68	167	31	0	266	35	79	26	0	140	26	209	22	0	257	798
Total Volume	91	303	245	0	639	249	555	127	1	932	178	305	144	0	627	110	817	115	0	1042	3240
% App. Total	14.2	47.4	38.3	0		26.7	59.5	13.6	0.1		28.4	48.6	23	0		10.6	78.4	11	0		
PHF	.875	.773	.928	.000	.888	.915	.831	.858	.250	.876	.706	.887	.857	.000	.825	.859	.908	.821	.000	.898	.982



City: DANA POINT
 N-S Direction: CAMINO CAPISTRANO
 E-W Direction: STONEHILL DRIVE

File Name : H1912008
 Site Code : 00000000
 Start Date : 12/5/2019
 Page No : 1

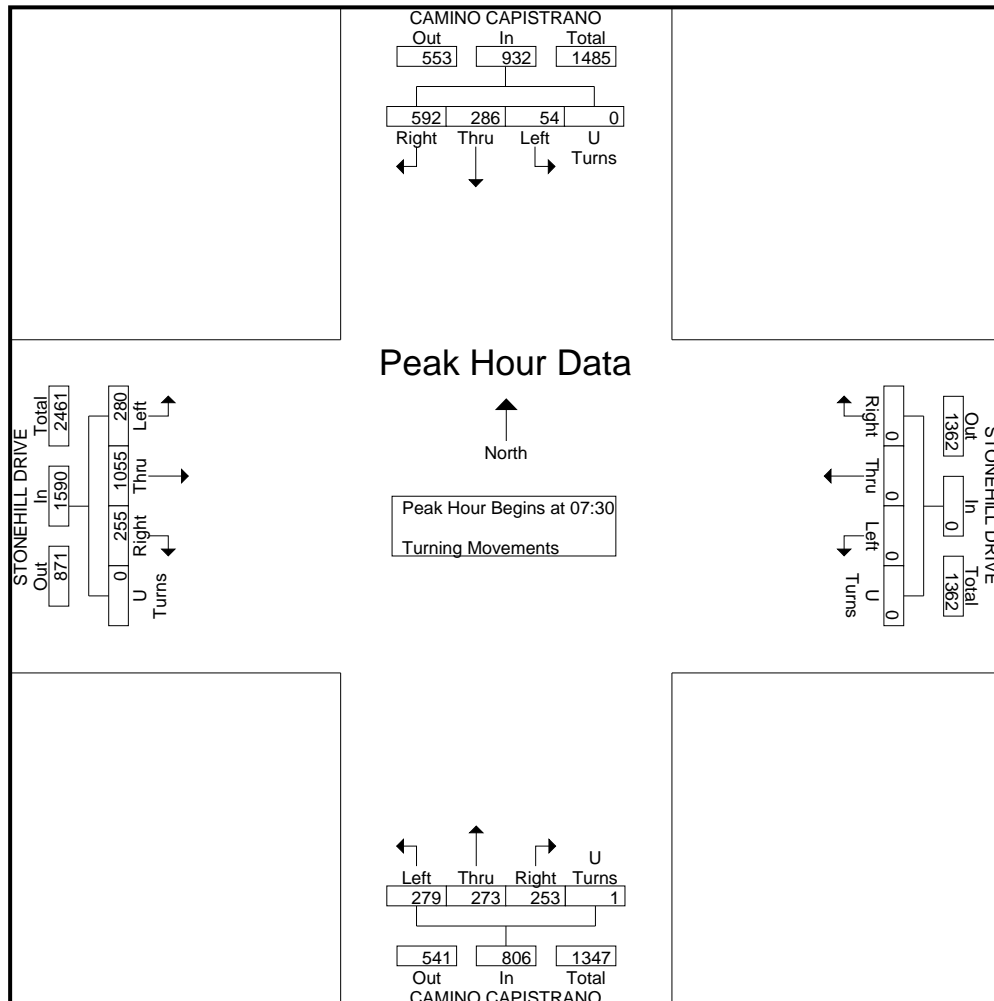
Groups Printed- Turning Movements

Start Time	CAMINO CAPISTRANO Southbound				STONEHILL DRIVE Westbound				CAMINO CAPISTRANO Northbound				STONEHILL DRIVE Eastbound				Int. Total
	Right	Thru	Left	U Turns	Right	Thru	Left	U Turns	Right	Thru	Left	U Turns	Right	Thru	Left	U Turns	
07:00	90	43	9	0	0	0	0	0	50	45	45	0	53	252	42	0	629
07:15	127	52	12	0	0	0	0	0	61	50	73	0	63	259	51	0	748
07:30	161	65	12	0	0	0	0	0	63	51	80	0	54	272	68	0	826
07:45	143	71	13	0	0	0	0	0	70	68	76	0	72	298	84	0	895
Total	521	231	46	0	0	0	0	0	244	214	274	0	242	1081	245	0	3098
08:00	140	75	18	0	0	0	0	0	51	78	61	0	70	284	72	0	849
08:15	148	75	11	0	0	0	0	0	69	76	62	1	59	201	56	0	758
08:30	121	82	11	0	0	0	0	0	58	63	62	0	70	245	52	0	764
08:45	126	73	21	0	0	0	0	0	68	81	61	0	79	211	65	0	785
Total	535	305	61	0	0	0	0	0	246	298	246	1	278	941	245	0	3156
16:00	203	162	35	0	0	0	0	0	83	69	121	0	98	190	53	0	1014
16:15	204	152	34	0	0	0	0	0	71	66	140	0	104	207	42	0	1020
16:30	201	148	41	0	0	0	0	0	98	67	101	0	97	211	45	0	1009
16:45	223	166	26	0	0	0	0	0	85	64	109	0	91	173	46	0	983
Total	831	628	136	0	0	0	0	0	337	266	471	0	390	781	186	0	4026
17:00	219	157	52	0	0	0	0	0	103	62	127	0	89	214	51	0	1074
17:15	220	110	20	0	0	0	0	0	84	70	133	0	91	165	25	0	918
17:30	230	122	39	0	0	0	0	0	95	53	106	0	88	194	34	0	961
17:45	217	119	22	0	0	0	0	0	65	50	107	0	68	151	38	0	837
Total	886	508	133	0	0	0	0	0	347	235	473	0	336	724	148	0	3790
Grand Total	2773	1672	376	0	0	0	0	0	1174	1013	1464	1	1246	3527	824	0	14070
Apprch %	57.5	34.7	7.8	0	0	0	0	0	32.1	27.7	40.1	0	22.3	63	14.7	0	
Total %	19.7	11.9	2.7	0	0	0	0	0	8.3	7.2	10.4	0	8.9	25.1	5.9	0	

City: DANA POINT
 N-S Direction: CAMINO CAPISTRANO
 E-W Direction: STONEHILL DRIVE

File Name : H1912008
 Site Code : 00000000
 Start Date : 12/5/2019
 Page No : 2

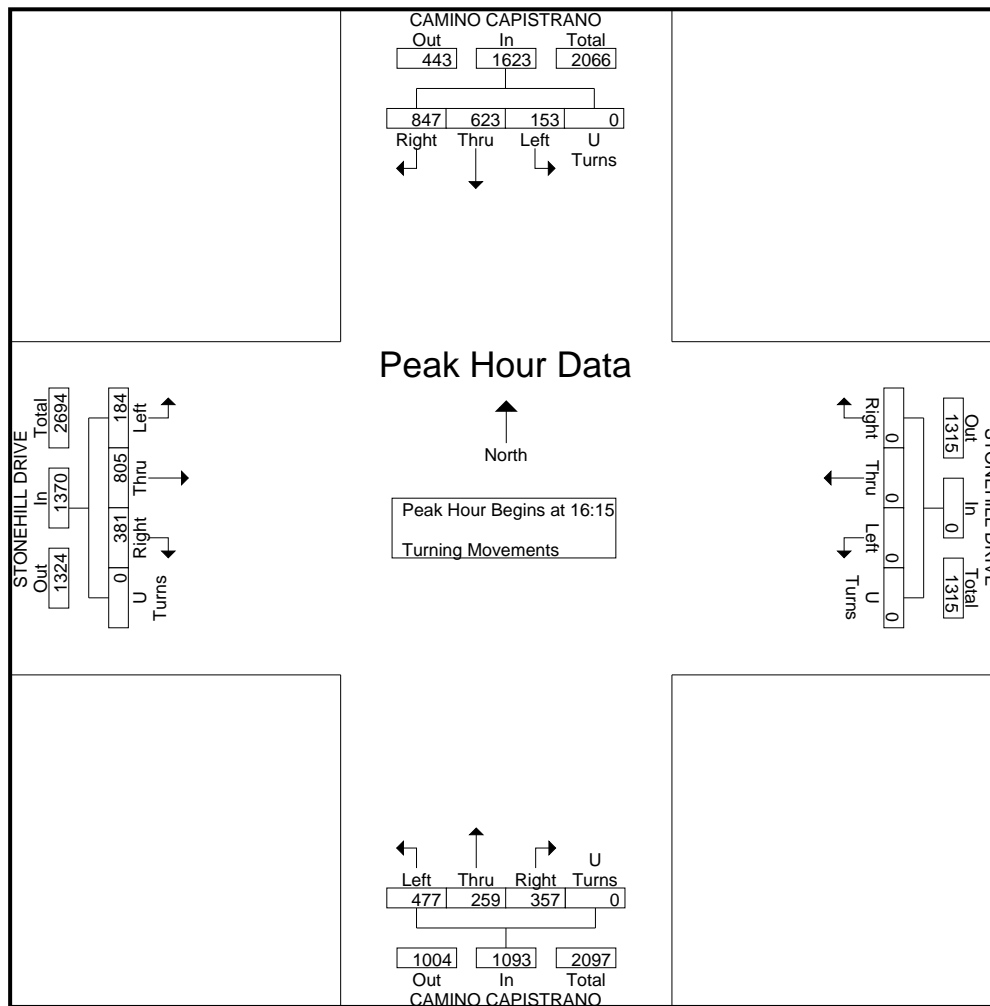
Start Time	CAMINO CAPISTRANO Southbound					STONEHILL DRIVE Westbound					CAMINO CAPISTRANO Northbound					STONEHILL DRIVE Eastbound					Int. Total
	Right	Thru	Left	U Turns	App. Total	Right	Thru	Left	U Turns	App. Total	Right	Thru	Left	U Turns	App. Total	Right	Thru	Left	U Turns	App. Total	
Peak Hour Analysis From 07:00 to 08:45 - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 07:30																					
07:30	161				238	0	0	0	0	0	63	51	80			72	298	84	0	454	895
07:45	143	71	13	0	227	0	0	0	0	0	70	68	76	0	214	70	284	72	0	426	849
08:00	140	75	18									78	61	0	190						
08:15	148	75	11	0	234	0	0	0	0	0	69	76	62	1							
Total Volume	592	286	54	0	932	0	0	0	0	0	253	273	279	1	806	255	1055	280	0	1590	3328
% App. Total	63.5	30.7	5.8	0		0	0	0	0		31.4	33.9	34.6	0.1		16	66.4	17.6	0		
PHF	.919	.953	.750	.000	.979	.000	.000	.000	.000	.000	.904	.875	.872	.250	.942	.885	.885	.833	.000	.876	.930



City: DANA POINT
 N-S Direction: CAMINO CAPISTRANO
 E-W Direction: STONEHILL DRIVE

File Name : H1912008
 Site Code : 00000000
 Start Date : 12/5/2019
 Page No : 3

Start Time	CAMINO CAPISTRANO Southbound					STONEHILL DRIVE Westbound					CAMINO CAPISTRANO Northbound					STONEHILL DRIVE Eastbound					Int. Total	
	Right	Thru	Left	U Turns	App. Total	Right	Thru	Left	U Turns	App. Total	Right	Thru	Left	U Turns	App. Total	Right	Thru	Left	U Turns	App. Total		
Peak Hour Analysis From 16:00 to 17:45 - Peak 1 of 1																						
Peak Hour for Entire Intersection Begins at 16:15																						
16:15	204	152	34	0	390	0	0	0	0	0	71	66	140	0	266	104	97	211	45	0	353	1009
16:30	201	148	41	0	390	0	0	0	0	0	98	67	101	0	266	97	211	45	0	353	1009	
16:45	223	166	26	0	415	0	0	0	0	0	85	64	109	0	258	91	173	46	0	310	983	
17:00	219	157	52	0	428	0	0	0	0	0	103	71	140	0	292	89	214	51	0	354	1074	
Total Volume	847	623	153	0	1623	0	0	0	0	0	357	259	477	0	1093	381	805	184	0	1370	4086	
% App. Total	52.2	38.4	9.4	0		0	0	0	0	0	32.7	23.7	43.6	0		27.8	58.8	13.4	0			
PHF	.950	.938	.736	.000	.948	.000	.000	.000	.000	.000	.867	.966	.852	.000	.936	.916	.940	.902	.000	.968	.951	



City: DANA POINT
 N-S Direction: CAMINO CAPISTRANO
 E-W Direction: STONEHILL DRIVE

File Name : H1912019
 Site Code : 00000000
 Start Date : 12/7/2019
 Page No : 1

Groups Printed- Turning Movements

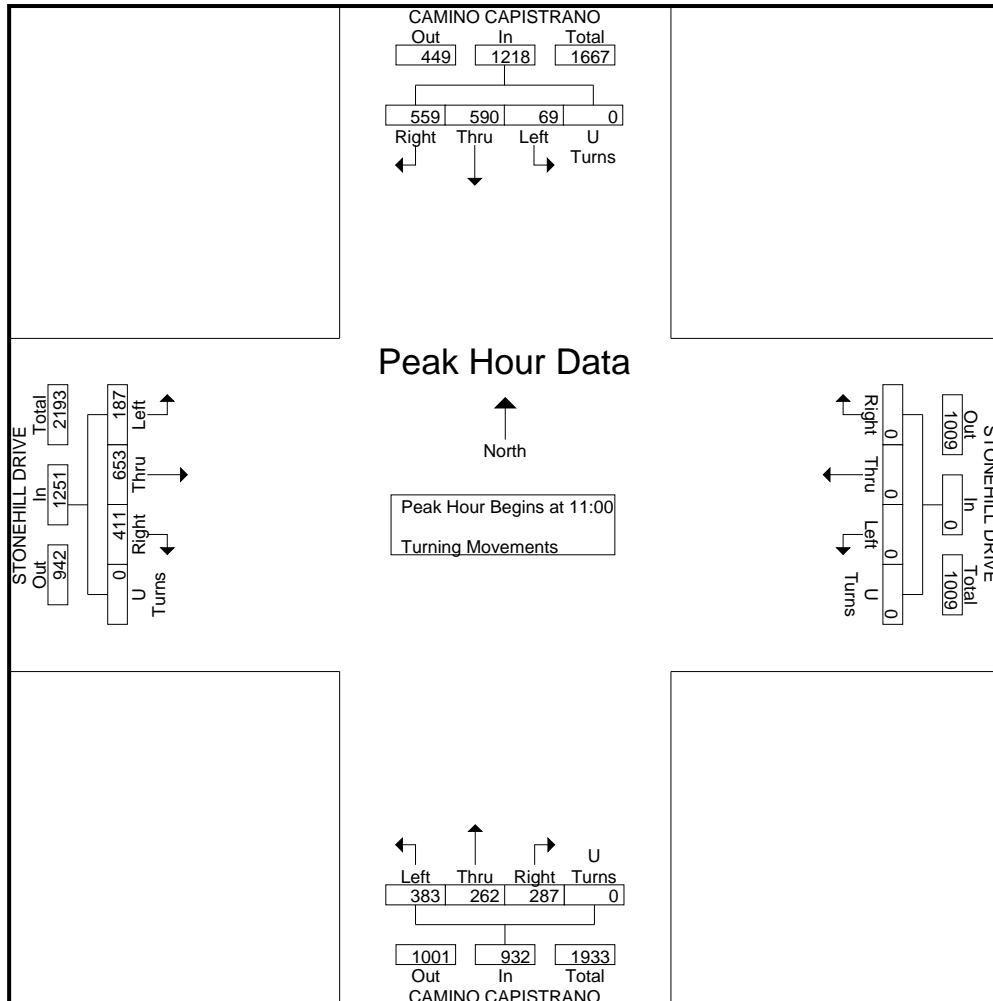
Start Time	CAMINO CAPISTRANO Southbound				STONEHILL DRIVE Westbound				CAMINO CAPISTRANO Northbound				STONEHILL DRIVE Eastbound				Int. Total
	Right	Thru	Left	U Turns	Right	Thru	Left	U Turns	Right	Thru	Left	U Turns	Right	Thru	Left	U Turns	
10:00	118	106	23	0	0	0	0	0	93	65	73	0	108	169	46	0	801
10:15	112	107	8	0	0	0	0	0	71	85	91	0	86	147	36	0	743
10:30	143	150	15	0	0	0	0	0	54	62	76	0	96	198	56	0	850
10:45	115	131	16	0	0	0	0	0	69	52	88	0	113	161	58	0	803
Total	488	494	62	0	0	0	0	0	287	264	328	0	403	675	196	0	3197
11:00	128	152	19	0	0	0	0	0	65	57	89	0	96	168	46	0	820
11:15	138	144	15	0	0	0	0	0	70	78	95	0	102	168	56	0	866
11:30	163	147	17	0	0	0	0	0	77	70	96	0	91	141	39	0	841
11:45	130	147	18	0	0	0	0	0	75	57	103	0	122	176	46	0	874
Total	559	590	69	0	0	0	0	0	287	262	383	0	411	653	187	0	3401
12:00	130	114	25	0	0	0	0	0	99	70	82	0	109	132	42	0	803
12:15	126	130	13	0	0	0	0	0	78	70	109	0	103	141	38	0	808
12:30	131	138	15	0	0	0	0	0	82	83	88	0	103	133	35	0	808
12:45	141	141	23	0	0	0	0	0	81	67	125	0	103	163	35	0	879
Total	528	523	76	0	0	0	0	0	340	290	404	0	418	569	150	0	3298
13:00	144	155	22	0	0	0	0	0	103	69	81	0	106	142	26	0	848
13:15	130	121	15	0	0	0	0	0	77	86	132	0	98	121	44	0	824
13:30	158	146	11	0	0	0	0	0	83	62	80	0	91	136	32	0	799
13:45	143	126	12	0	0	0	0	0	66	74	100	0	89	149	38	0	797
Total	575	548	60	0	0	0	0	0	329	291	393	0	384	548	140	0	3268
Grand Total	2150	2155	267	0	0	0	0	0	1243	1107	1508	0	1616	2445	673	0	13164
Apprch %	47	47.1	5.8	0	0	0	0	0	32.2	28.7	39.1	0	34.1	51.6	14.2	0	
Total %	16.3	16.4	2	0	0	0	0	0	9.4	8.4	11.5	0	12.3	18.6	5.1	0	

City: DANA POINT
 N-S Direction: CAMINO CAPISTRANO
 E-W Direction: STONEHILL DRIVE

File Name : H1912019
 Site Code : 0000000
 Start Date : 12/7/2019
 Page No : 2

Start Time	CAMINO CAPISTRANO Southbound					STONEHILL DRIVE Westbound					CAMINO CAPISTRANO Northbound					STONEHILL DRIVE Eastbound					Int. Total
	Right	Thru	Left	U Turns	App. Total	Right	Thru	Left	U Turns	App. Total	Right	Thru	Left	U Turns	App. Total	Right	Thru	Left	U Turns	App. Total	
11:00	128	152	19	0	297	0	0	0	0	0	70	78	95	0	243	102	168	56	0	326	866
11:15	138	144	15	0	297	0	0	0	0	0	77	70	96	0	243	91	141	39	0	271	841
11:30	163	147	17	0	295	0	0	0	0	0	75	57	103	0	235	122	176	46	0	344	874
11:45	130	147	18	0	295	0	0	0	0	0	75	57	103	0	235	122	176	46	0	344	874
Total Volume	559	590	69	0	1218	0	0	0	0	0	287	262	383	0	932	411	653	187	0	1251	3401
% App. Total	45.9	48.4	5.7	0		0	0	0	0		30.8	28.1	41.1	0		32.9	52.2	14.9	0		
PHF	.857	.970	.908	.000	.931	.000	.000	.000	.000	.000	.932	.840	.930	.000	.959	.842	.928	.835	.000	.909	.973

Peak Hour Analysis From 10:00 to 13:45 - Peak 1 of 1
 Peak Hour for Entire Intersection Begins at 11:00



City: DANA POINT
 N-S Direction: I-5 SB RAMPS
 E-W Direction: CAMINO LAS RAMBLAS

File Name : H1912017
 Site Code : 00000000
 Start Date : 12/5/2019
 Page No : 1

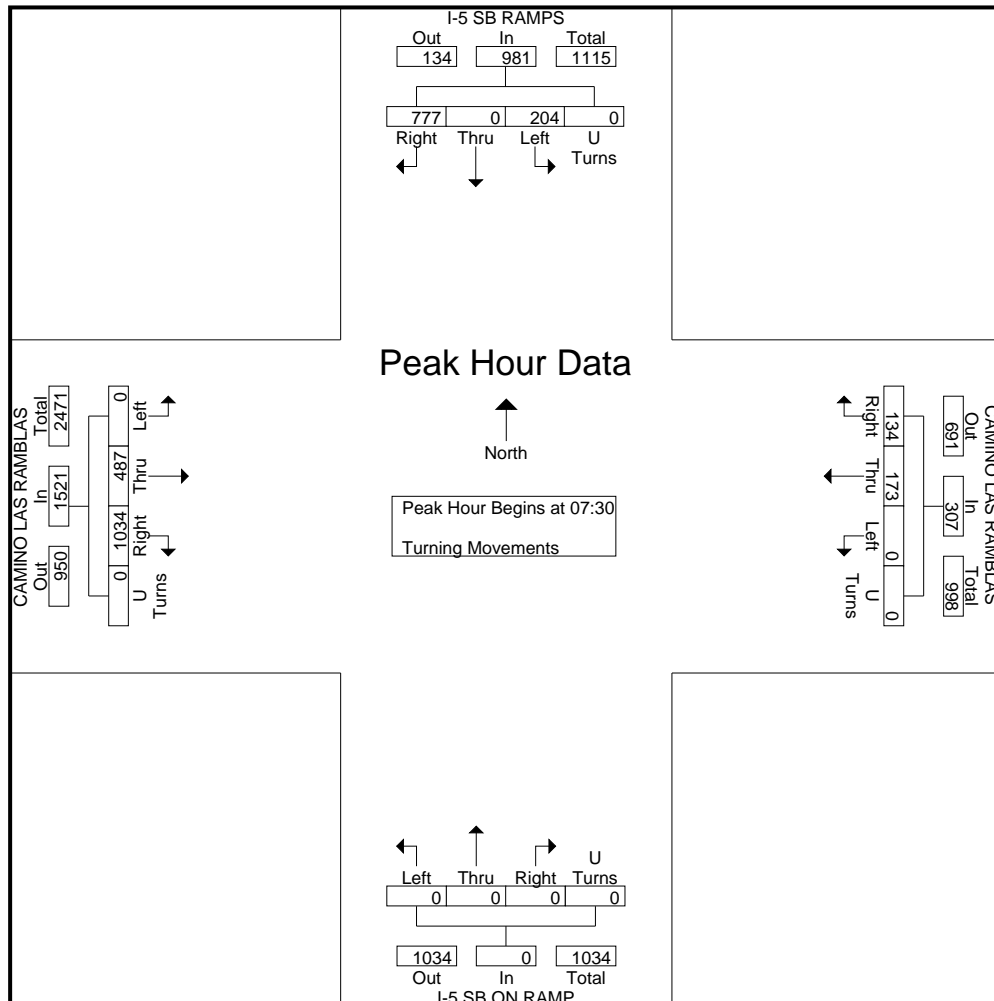
Groups Printed- Turning Movements

Start Time	I-5 SB RAMPS Southbound				CAMINO LAS RAMBLAS Westbound				I-5 SB ON RAMP Northbound				CAMINO LAS RAMBLAS Eastbound				Int. Total
	Right	Thru	Left	U Turns	Right	Thru	Left	U Turns	Right	Thru	Left	U Turns	Right	Thru	Left	U Turns	
07:00	113	0	40	0	28	29	0	0	0	0	0	0	164	68	0	0	442
07:15	155	0	48	0	37	39	0	0	0	0	0	0	197	93	0	0	569
07:30	200	0	45	0	45	48	0	0	0	0	0	0	233	101	0	0	672
07:45	222	0	56	0	31	51	0	0	0	0	0	0	269	132	0	0	761
Total	690	0	189	0	141	167	0	0	0	0	0	0	863	394	0	0	2444
08:00	171	0	59	0	25	43	0	0	0	0	0	0	270	165	0	0	733
08:15	184	0	44	0	33	31	0	0	0	0	0	0	262	89	0	0	643
08:30	147	0	38	0	28	34	0	0	0	0	0	0	211	100	0	0	558
08:45	169	0	58	0	32	30	0	0	0	0	0	0	224	89	0	0	602
Total	671	0	199	0	118	138	0	0	0	0	0	0	967	443	0	0	2536
16:00	202	0	71	0	25	40	0	0	0	0	0	0	383	131	0	0	852
16:15	203	0	78	0	24	31	0	0	0	0	0	0	316	127	0	0	779
16:30	192	0	85	0	19	31	0	0	0	0	0	0	347	139	0	0	813
16:45	215	0	73	0	20	40	0	0	0	0	0	0	309	136	0	0	793
Total	812	0	307	0	88	142	0	0	0	0	0	0	1355	533	0	0	3237
17:00	222	0	63	0	32	34	0	0	0	0	0	0	298	141	0	0	790
17:15	178	0	79	0	21	29	0	0	0	0	0	0	355	139	0	0	801
17:30	185	0	63	0	35	37	0	1	0	0	0	0	305	134	0	0	760
17:45	189	0	72	0	26	32	0	0	0	0	0	0	243	110	0	0	672
Total	774	0	277	0	114	132	0	1	0	0	0	0	1201	524	0	0	3023
Grand Total	2947	0	972	0	461	579	0	1	0	0	0	0	4386	1894	0	0	11240
Apprch %	75.2	0	24.8	0	44.3	55.6	0	0.1	0	0	0	0	69.8	30.2	0	0	
Total %	26.2	0	8.6	0	4.1	5.2	0	0	0	0	0	0	39	16.9	0	0	

City: DANA POINT
 N-S Direction: I-5 SB RAMPS
 E-W Direction: CAMINO LAS RAMBLAS

File Name : H1912017
 Site Code : 00000000
 Start Date : 12/5/2019
 Page No : 2

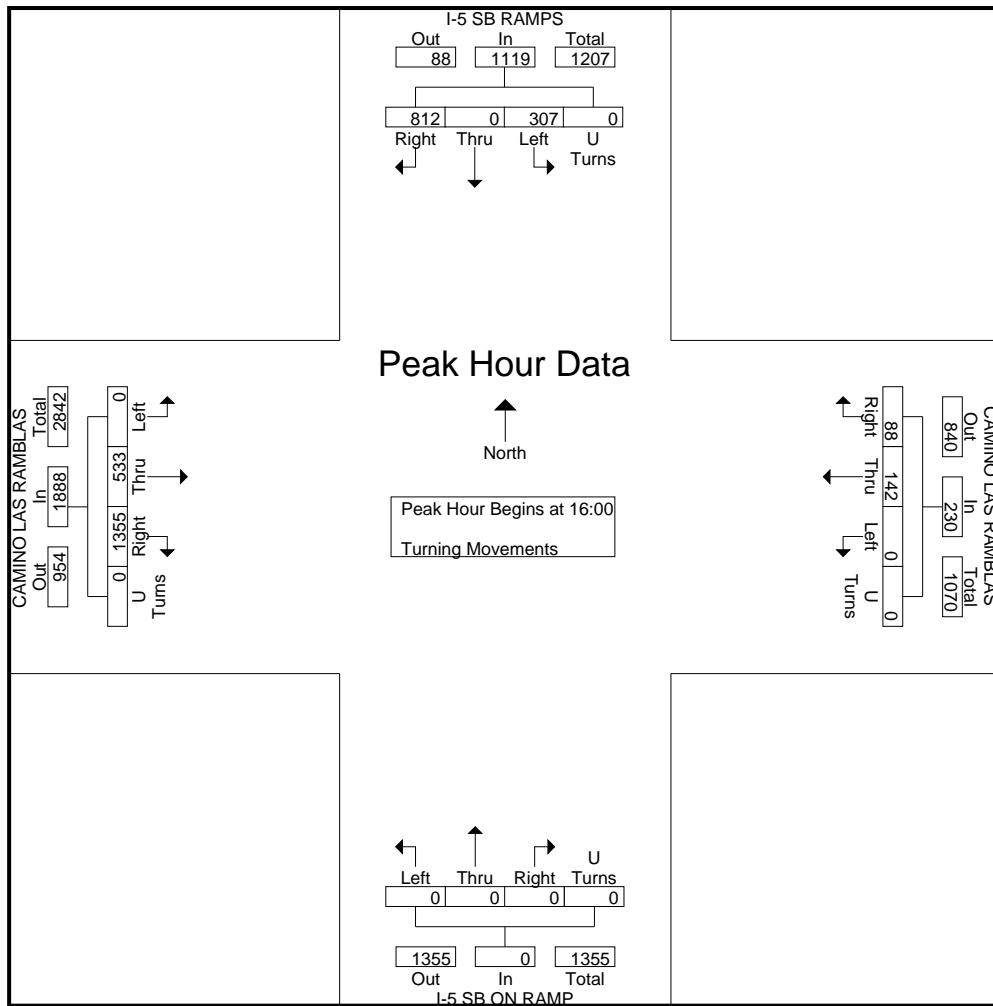
Start Time	I-5 SB RAMPS Southbound					CAMINO LAS RAMBLAS Westbound					I-5 SB ON RAMP Northbound					CAMINO LAS RAMBLAS Eastbound					Int. Total
	Right	Thru	Left	U Turns	App. Total	Right	Thru	Left	U Turns	App. Total	Right	Thru	Left	U Turns	App. Total	Right	Thru	Left	U Turns	App. Total	
Peak Hour Analysis From 07:00 to 08:45 - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 07:30																					
07:30	200	0	45	0	245	45				93	0	0	0	0	0	233	101	0	0	334	672
07:45	222				278	31	51	0	0	82	0	0	0	0	0	269	132	0	0	401	761
08:00	171	0	59													270	165	0	0	435	733
08:15	184	0	44	0	228	33	31	0	0	64	0	0	0	0	0	262	89	0	0	351	643
Total Volume	777	0	204	0	981	134	173	0	0	307	0	0	0	0	0	1034	487	0	0	1521	2809
% App. Total	79.2		20.8			43.6	56.4														
PHF	.875	.000	.864	.000	.882	.744	.848	.000	.000	.825	.000	.000	.000	.000	.000	.957	.738	.000	.000	.874	.923



City: DANA POINT
 N-S Direction: I-5 SB RAMPS
 E-W Direction: CAMINO LAS RAMBLAS

File Name : H1912017
 Site Code : 00000000
 Start Date : 12/5/2019
 Page No : 3

Start Time	I-5 SB RAMPS Southbound					CAMINO LAS RAMBLAS Westbound					I-5 SB ON RAMP Northbound					CAMINO LAS RAMBLAS Eastbound					Int. Total
	Right	Thru	Left	U Turns	App. Total	Right	Thru	Left	U Turns	App. Total	Right	Thru	Left	U Turns	App. Total	Right	Thru	Left	U Turns	App. Total	
Peak Hour Analysis From 16:00 to 17:45 - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 16:00																					
16:00	202	0	71	0	273	25	40	0	0	65	0	0	0	0	0	383	127	0	0	514	852
16:15	203	0	78	0	281	24	31	0	0	55	0	0	0	0	0	316	127	0	0	443	779
16:30	192	0	85														139	0	0	486	813
16:45	215				288	20	40	0	0	60	0	0	0	0	0	309	136	0	0	445	793
Total Volume	812	0	307	0	1119	88	142	0	0	230	0	0	0	0	0	1355	533	0	0	1888	3237
% App. Total	72.6		27.4			38.3	61.7									71.8	28.2				
PHF	.944	.000	.903	.000	.971	.880	.888	.000	.000	.885	.000	.000	.000	.000	.000	.884	.959	.000	.000	.918	.950



City: DANA POINT
 N-S Direction: I-5 SB RAMPS
 E-W Direction: CAMINO LAS RAMBLAS

File Name : H1912028
 Site Code : 00000000
 Start Date : 12/7/2019
 Page No : 1

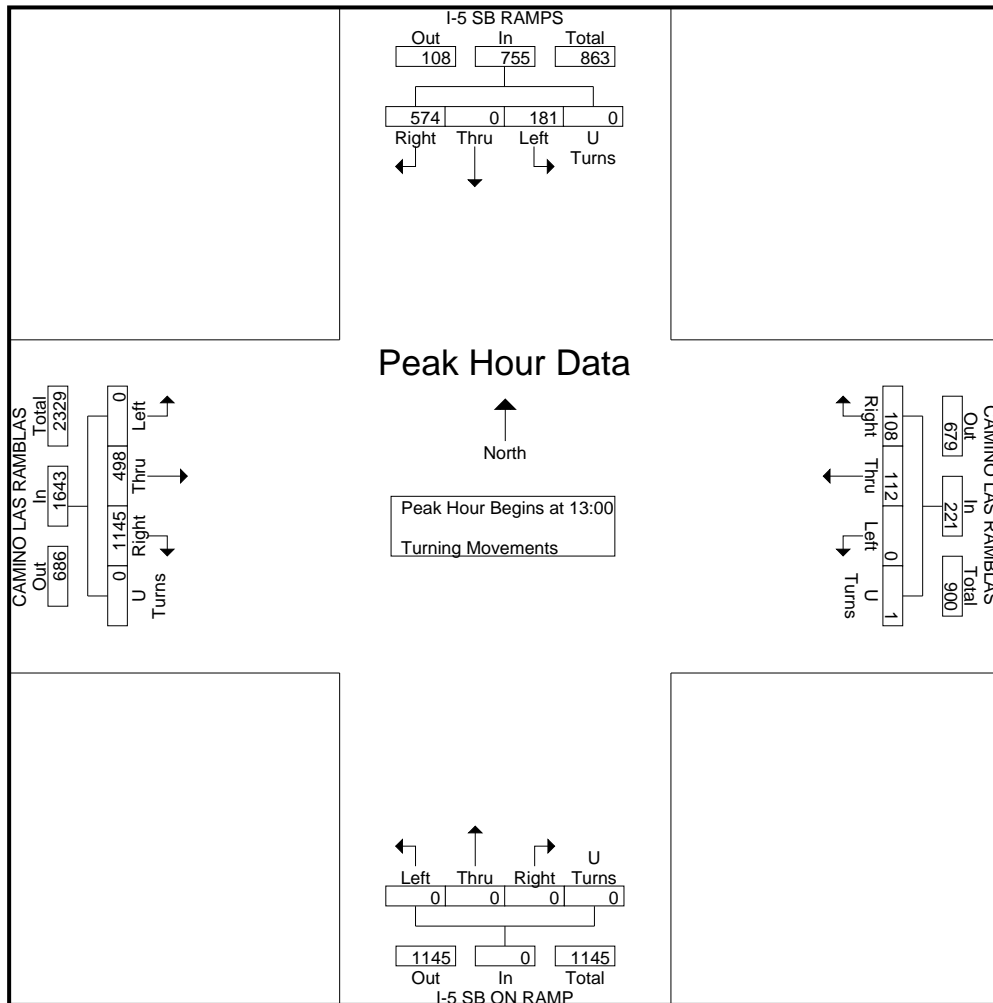
Groups Printed- Turning Movements

Start Time	I-5 SB RAMPS Southbound				CAMINO LAS RAMBLAS Westbound				I-5 SB ON RAMP Northbound				CAMINO LAS RAMBLAS Eastbound				Int. Total
	Right	Thru	Left	U Turns	Right	Thru	Left	U Turns	Right	Thru	Left	U Turns	Right	Thru	Left	U Turns	
10:00	135	0	30	0	18	32	0	0	0	0	0	0	236	87	0	0	538
10:15	136	0	46	0	31	51	0	0	0	0	0	0	263	100	0	1	628
10:30	140	0	33	0	32	33	0	0	0	0	0	0	256	121	0	0	615
10:45	138	0	31	0	28	36	0	0	0	0	0	0	281	116	0	0	630
Total	549	0	140	0	109	152	0	0	0	0	0	0	1036	424	0	1	2411
11:00	139	0	33	0	30	43	0	0	0	0	0	0	282	114	0	0	641
11:15	154	0	40	0	28	33	0	0	0	0	0	0	253	117	0	0	625
11:30	150	0	39	0	31	46	0	1	0	0	0	0	277	120	0	0	664
11:45	137	0	48	0	38	39	0	2	0	0	0	0	257	116	0	0	637
Total	580	0	160	0	127	161	0	3	0	0	0	0	1069	467	0	0	2567
12:00	136	0	39	0	28	32	0	0	0	0	0	0	281	119	0	0	635
12:15	143	0	45	0	27	32	0	0	0	0	0	0	275	115	0	0	637
12:30	165	0	44	0	24	29	0	0	0	0	0	0	299	109	0	0	670
12:45	116	0	55	0	22	42	0	0	0	0	0	0	253	99	0	0	587
Total	560	0	183	0	101	135	0	0	0	0	0	0	1108	442	0	0	2529
13:00	137	0	42	0	27	25	0	0	0	0	0	0	303	126	0	0	660
13:15	149	0	43	0	33	26	0	0	0	0	0	0	262	130	0	0	643
13:30	134	0	48	0	25	40	0	1	0	0	0	0	305	127	0	0	680
13:45	154	0	48	0	23	21	0	0	0	0	0	0	275	115	0	0	636
Total	574	0	181	0	108	112	0	1	0	0	0	0	1145	498	0	0	2619
Grand Total	2263	0	664	0	445	560	0	4	0	0	0	0	4358	1831	0	1	10126
Apprch %	77.3	0	22.7	0	44.1	55.5	0	0.4	0	0	0	0	70.4	29.6	0	0	
Total %	22.3	0	6.6	0	4.4	5.5	0	0	0	0	0	0	43	18.1	0	0	

City: DANA POINT
 N-S Direction: I-5 SB RAMPS
 E-W Direction: CAMINO LAS RAMBLAS

File Name : H1912028
 Site Code : 00000000
 Start Date : 12/7/2019
 Page No : 2

Start Time	I-5 SB RAMPS Southbound					CAMINO LAS RAMBLAS Westbound					I-5 SB ON RAMP Northbound					CAMINO LAS RAMBLAS Eastbound					Int. Total
	Right	Thru	Left	U Turns	App. Total	Right	Thru	Left	U Turns	App. Total	Right	Thru	Left	U Turns	App. Total	Right	Thru	Left	U Turns	App. Total	
Peak Hour Analysis From 10:00 to 13:45 - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 13:00																					
13:00	137	0	42	0	179	27	25	0	0	52	0	0	0	0	0	303	126	0	0	429	660
13:15	149	0	43	0	192	33										130				392	643
13:30	134	0	48				40	0	1	66	0	0	0	0	0	305				432	680
13:45	154				202	23	21	0	0	44	0	0	0	0	0	275	115	0	0	390	636
Total Volume	574	0	181	0	755	108	112	0	1	221	0	0	0	0	0	1145	498	0	0	1643	2619
% App. Total						48.9	50.7									69.7	30.3				
PHF	.932	.000	.943	.000	.934	.818	.700	.000	.250	.837	.000	.000	.000	.000	.000	.939	.958	.000	.000	.951	.963



City: DANA POINT
 N-S Direction: I-5 NB RAMPS
 E-W Direction: PCH & CAMINO LAS RAMBLAS

File Name : H2001019
 Site Code : 00000000
 Start Date : 1/15/2020
 Page No : 1

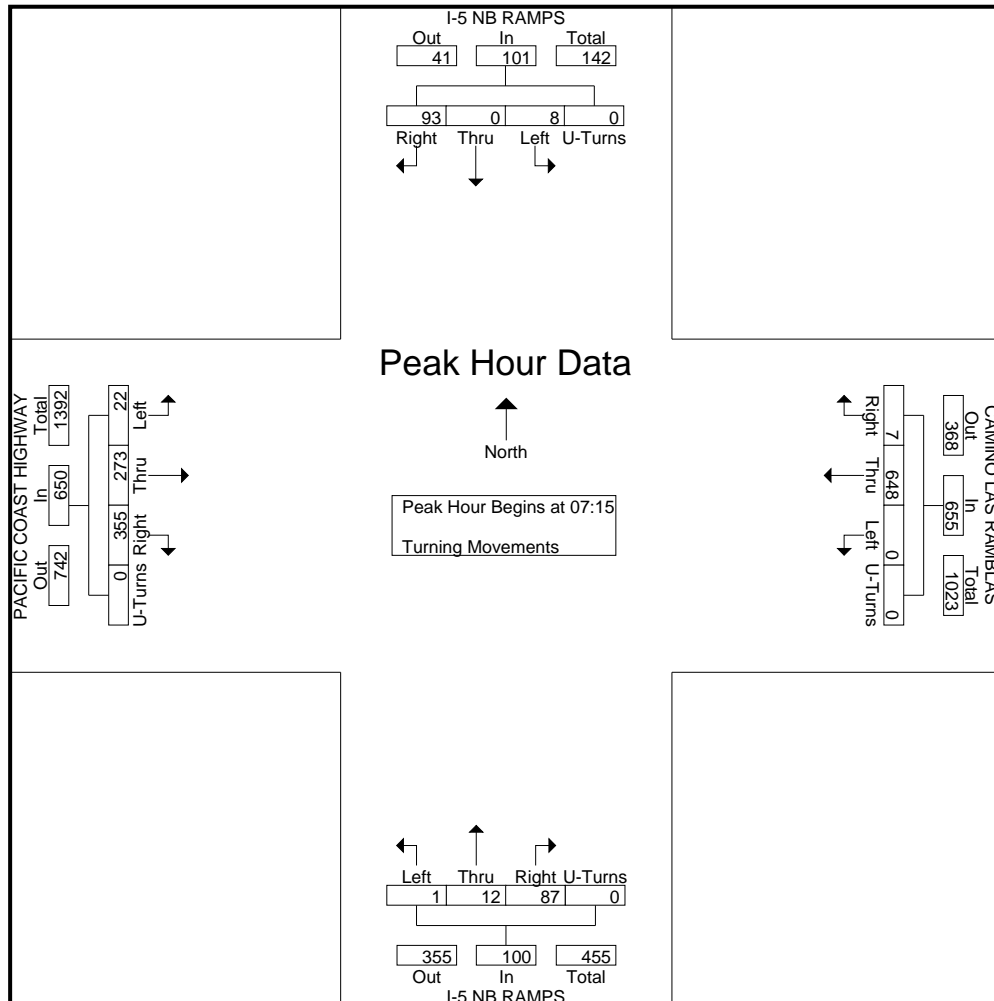
Groups Printed- Turning Movements

Start Time	I-5 NB RAMPS Southbound				CAMINO LAS RAMBLAS Westbound				I-5 NB RAMPS Northbound				PACIFIC COAST HIGHWAY Eastbound				Int. Total
	Right	Thru	Left	U-Turns	Right	Thru	Left	U-Turns	Right	Thru	Left	U-Turns	Right	Thru	Left	U-Turns	
07:00	19	0	2	0	1	132	0	0	9	0	2	0	51	52	5	0	273
07:15	32	0	2	0	2	163	0	0	14	5	0	0	69	46	10	0	343
07:30	22	0	5	0	3	191	0	0	22	1	1	0	91	62	4	0	402
07:45	24	0	1	0	2	152	0	0	27	3	0	0	91	80	6	0	386
Total	97	0	10	0	8	638	0	0	72	9	3	0	302	240	25	0	1404
08:00	15	0	0	0	0	142	0	0	24	3	0	0	104	85	2	0	375
08:15	17	0	1	0	1	135	0	0	23	1	2	0	78	63	6	0	327
08:30	14	0	0	0	0	132	0	0	13	2	2	0	73	74	7	0	317
08:45	9	0	1	0	1	116	0	0	22	2	3	0	61	71	8	0	294
Total	55	0	2	0	2	525	0	0	82	8	7	0	316	293	23	0	1313
16:00	14	0	0	0	3	95	0	0	26	4	2	0	112	87	10	0	353
16:15	19	0	3	0	1	89	0	0	23	7	1	0	72	90	10	0	315
16:30	13	0	1	0	3	86	0	0	24	6	1	0	84	100	12	0	330
16:45	15	0	1	0	1	94	0	0	26	3	2	0	85	108	15	0	350
Total	61	0	5	0	8	364	0	0	99	20	6	0	353	385	47	0	1348
17:00	12	0	0	0	3	93	0	0	39	13	2	0	112	95	8	0	377
17:15	10	0	1	0	3	101	0	0	20	7	0	0	101	134	11	0	388
17:30	11	0	4	0	3	76	0	0	31	9	3	0	91	127	13	0	368
17:45	12	0	0	0	0	91	0	0	29	8	2	0	76	115	14	0	347
Total	45	0	5	0	9	361	0	0	119	37	7	0	380	471	46	0	1480
Grand Total	258	0	22	0	27	1888	0	0	372	74	23	0	1351	1389	141	0	5545
Apprch %	92.1	0	7.9	0	1.4	98.6	0	0	79.3	15.8	4.9	0	46.9	48.2	4.9	0	
Total %	4.7	0	0.4	0	0.5	34	0	0	6.7	1.3	0.4	0	24.4	25	2.5	0	

City: DANA POINT
 N-S Direction: I-5 NB RAMPS
 E-W Direction: PCH & CAMINO LAS RAMBLAS

File Name : H2001019
 Site Code : 0000000
 Start Date : 1/15/2020
 Page No : 2

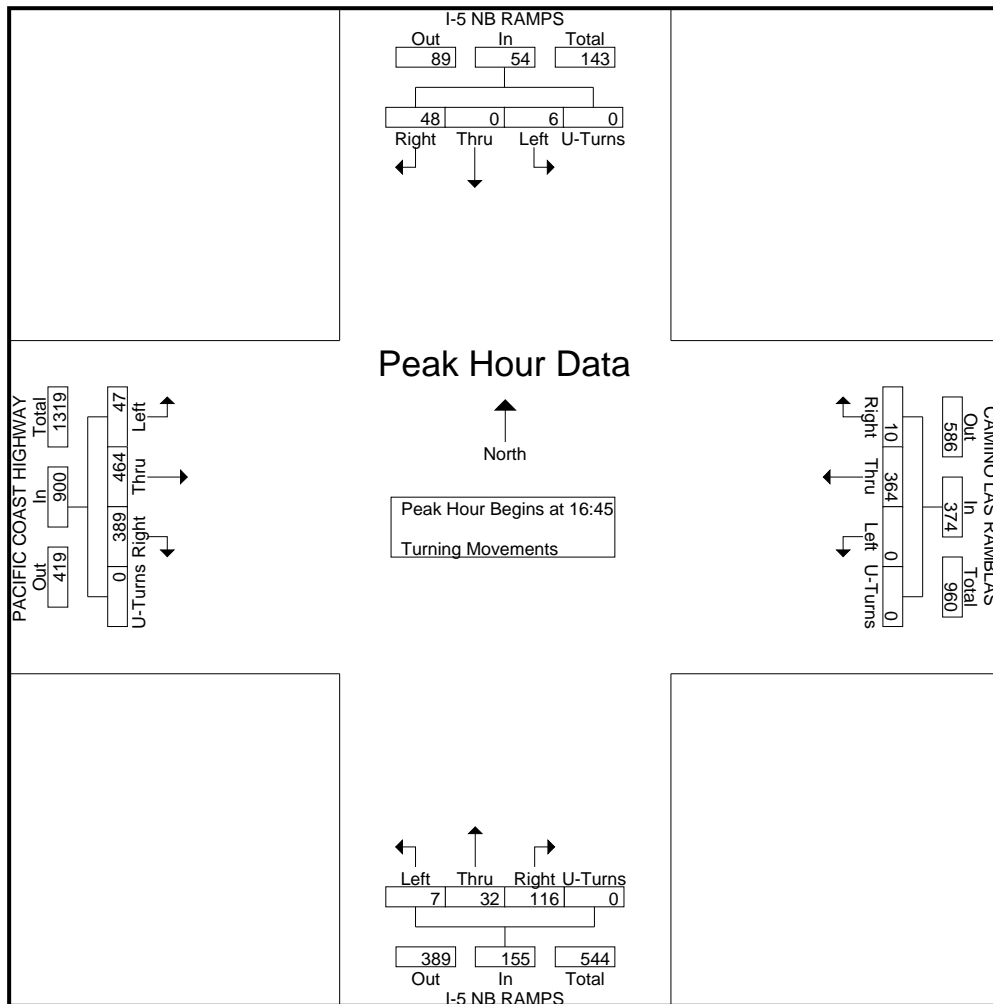
Start Time	I-5 NB RAMPS Southbound					CAMINO LAS RAMBLAS Westbound					I-5 NB RAMPS Northbound					PACIFIC COAST HIGHWAY Eastbound					Int. Total
	Right	Thru	Left	U-Turns	App. Total	Right	Thru	Left	U-Turns	App. Total	Right	Thru	Left	U-Turns	App. Total	Right	Thru	Left	U-Turns	App. Total	
Peak Hour Analysis From 07:00 to 08:45 - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 07:15																					
07:15	32	0	5	0	34	2	163	0	0	165	14	5	0	0	19	69	46	10	0	125	
07:30	22	0	5	0	27	3	191	0	0	194	22	1	1	0	24	91	62	4	0	157	402
07:45	24	0	1	0	25	2	152	0	0	154	27				30	91	80	6	0	177	386
08:00	15	0	0	0	15	0	142	0	0	142	24	3	0	0	27	104	85	2	0	191	375
Total Volume	93	0	8	0	101	7	648	0	0	655	87	12	1	0	100	355	273	22	0	650	1506
% App. Total	92.1	0	7.9	0		1.1	98.9	0	0		87	12	1	0		54.6	42	3.4	0		
PHF	.727	.000	.400	.000	.743	.583	.848	.000	.000	.844	.806	.600	.250	.000	.833	.853	.803	.550	.000	.851	.937



City: DANA POINT
 N-S Direction: I-5 NB RAMPS
 E-W Direction: PCH & CAMINO LAS RAMBLAS

File Name : H2001019
 Site Code : 0000000
 Start Date : 1/15/2020
 Page No : 3

Start Time	I-5 NB RAMPS Southbound					CAMINO LAS RAMBLAS Westbound					I-5 NB RAMPS Northbound					PACIFIC COAST HIGHWAY Eastbound					Int. Total
	Right	Thru	Left	U-Turns	App. Total	Right	Thru	Left	U-Turns	App. Total	Right	Thru	Left	U-Turns	App. Total	Right	Thru	Left	U-Turns	App. Total	
Peak Hour Analysis From 16:00 to 17:45 - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 16:45																					
16:45	15	0	0	0	16	1	94	0	0	95	26	3	2	0	31	85	108	15	0	215	377
17:00	12	0	0	0	12	3	93	0	0	96	39	13	2	0	54	112	95	8	0	215	377
17:15	10	0	1	0	11	3	101	0	0	104	20	7	0	0	27	101	134	11	0	246	388
17:30	11	0	4	0									3								
Total Volume	48	0	6	0	54	10	364	0	0	374	116	32	7	0	155	389	464	47	0	900	1483
% App. Total	88.9	0	11.1	0		2.7	97.3	0	0		74.8	20.6	4.5	0		43.2	51.6	5.2	0		
PHF	.800	.000	.375	.000	.844	.833	.901	.000	.000	.899	.744	.615	.583	.000	.718	.868	.866	.783	.000	.915	.956



APPENDIX B

EXISTING CONDITION LOS WORKSHEETS

HCM 6th TWSC
 1: Island Way & Dana Point Harbor Drive

11/19/2020

Intersection						
Int Delay, s/veh	3.3					
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	170	26	96	166	18	81
Future Vol, veh/h	170	26	96	166	18	81
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	300	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	95	95	95	95	95	95
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	179	27	101	175	19	85

Major/Minor	Major1	Major2	Minor1	Minor2	Minor3
Conflicting Flow All	0	0	206	0	570
Stage 1	-	-	-	-	193
Stage 2	-	-	-	-	377
Critical Hdwy	-	-	4.12	-	6.42
Critical Hdwy Stg 1	-	-	-	-	5.42
Critical Hdwy Stg 2	-	-	-	-	5.42
Follow-up Hdwy	-	-	2.218	-	3.518
Pot Cap-1 Maneuver	-	-	1365	-	483
Stage 1	-	-	-	-	840
Stage 2	-	-	-	-	694
Platoon blocked, %	-	-	-	-	-
Mov Cap-1 Maneuver	-	-	1365	-	447
Mov Cap-2 Maneuver	-	-	-	-	447
Stage 1	-	-	-	-	840
Stage 2	-	-	-	-	643

Approach	EB	WB	NB
HCM Control Delay, s	0	2.9	10.8
HCM LOS			B

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	730	-	-	1365	-
HCM Lane V/C Ratio	0.143	-	-	0.074	-
HCM Control Delay (s)	10.8	-	-	7.8	-
HCM Lane LOS	B	-	-	A	-
HCM 95th %tile Q(veh)	0.5	-	-	0.2	-

Level Of Service Computation Report

ICU 1(Loss as Cycle Length %) Method (Future Volume Alternative)

Intersection #2 Casitas Place/Dana Point Harbor Drive

Cycle (sec): 100 Critical Vol./Cap.(X): 0.169
Loss Time (sec): 5 Average Delay (sec/veh): xxxxxx
Optimal Cycle: 15 Level Of Service: A

Street Name: Casitas Place Dana Point Harbor Drive
Approach: North Bound South Bound East Bound West Bound
Movement: L - T - R L - T - R L - T - R L - T - R

Control: Protected Protected Protected Prot+Permit
Rights: Include Include Include Include
Min. Green: 0 0 0 0 0 0 0 0 0 0 0 0
Y+R: 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0
Lanes: 1 0 0 0 1 0 0 0 0 0 0 0 1 0 2 0 0

Volume Module:

Base Vol: 4 0 27 0 0 0 0 216 20 57 263 0
Growth Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
Initial Bse: 4 0 27 0 0 0 0 216 20 57 263 0
Added Vol: 0 0 0 0 0 0 0 0 0 0 0 0
PasserByVol: 0 0 0 0 0 0 0 0 0 0 0 0
Initial Fut: 4 0 27 0 0 0 0 216 20 57 263 0
User Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
PHF Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
PHF Volume: 4 0 27 0 0 0 0 216 20 57 263 0
Reduct Vol: 0 0 0 0 0 0 0 0 0 0 0 0
Reduced Vol: 4 0 27 0 0 0 0 216 20 57 263 0
PCE Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
MLF Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
FinalVolume: 4 0 27 0 0 0 0 216 20 57 263 0

Saturation Flow Module:

Sat/Lane: 1700 1700 1700 1700 1700 1700 1700 1700 1700 1700 1700 1700
Adjustment: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
Lanes: 1.00 0.00 1.00 0.00 0.00 0.00 0.00 1.83 0.17 1.00 2.00 0.00
Final Sat.: 1700 0 1700 0 0 0 0 3112 288 1700 3400 0

Capacity Analysis Module:

Vol/Sat: 0.00 0.00 0.02 0.00 0.00 0.00 0.00 0.07 0.07 0.03 0.08 0.00
Crit Moves: ****

Level Of Service Computation Report

ICU 1(Loss as Cycle Length %) Method (Future Volume Alternative)

Intersection #3 Golden Lantern/PCH

Cycle (sec): 100 Critical Vol./Cap.(X): 0.556
Loss Time (sec): 5 Average Delay (sec/veh): xxxxxx
Optimal Cycle: 26 Level Of Service: A

Street Name: Golden Lantern PCH

Approach: North Bound South Bound East Bound West Bound

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

Control: Protected Protected Protected Protected
Rights: Include Include Include Include
Min. Green: 0 0 0 0 0 0 0 0 0 0 0 0
Y+R: 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0
Lanes: 1 0 1 1 0 2 0 1 0 1 1 0 1 1 0 1 0 1 1 0

Volume Module:

Base Vol: 42 96 13 247 194 91 36 583 29 49 1046 129
Growth Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
Initial Bse: 42 96 13 247 194 91 36 583 29 49 1046 129
Added Vol: 0 0 0 0 0 0 0 0 0 0 0 0
PasserByVol: 0 0 0 0 0 0 0 0 0 0 0 0
Initial Fut: 42 96 13 247 194 91 36 583 29 49 1046 129
User Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
PHF Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
PHF Volume: 42 96 13 247 194 91 36 583 29 49 1046 129
Reduct Vol: 0 0 0 0 0 0 0 0 0 0 0 0
Reduced Vol: 42 96 13 247 194 91 36 583 29 49 1046 129
PCE Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
MLF Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
FinalVolume: 42 96 13 247 194 91 36 583 29 49 1046 129

Saturation Flow Module:

Sat/Lane: 1700 1700 1700 1700 1700 1700 1700 1700 1700 1700 1700 1700
Adjustment: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
Lanes: 1.00 1.76 0.24 2.00 1.00 1.00 1.00 1.91 0.09 1.00 1.78 0.22
Final Sat.: 1700 2994 406 3400 1700 1700 1700 3239 161 1700 3027 373

Capacity Analysis Module:

Vol/Sat: 0.02 0.03 0.03 0.07 0.11 0.05 0.02 0.18 0.18 0.03 0.35 0.35
Crit Moves: **** **** **** ****

Level Of Service Computation Report

ICU 1(Loss as Cycle Length %) Method (Future Volume Alternative)

Intersection #4 Golden Lantern/Del Prado Avenue

Cycle (sec): 100 Critical Vol./Cap.(X): 0.225
Loss Time (sec): 5 Average Delay (sec/veh): xxxxxx
Optimal Cycle: 16 Level Of Service: A

Street Name: Golden Lantern Del Prado Avenue

Approach: North Bound South Bound East Bound West Bound

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

Control: Protected Protected Prot+Permit Prot+Permit

Rights: Include Include Include Include

Min. Green: 0 0 0 0 0 0 0 0 0 0 0 0

Y+R: 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0

Lanes: 1 0 1 1 0 1 0 2 0 1 1 0 0 1 0 1 1 0 1

-----|-----|-----|-----|-----|-----|-----|-----|

Volume Module:

Table with 13 columns and 14 rows of volume data including Base Vol, Growth Adj, Initial Bse, Added Vol, PasserByVol, Initial Fut, User Adj, PHF Adj, PHF Volume, Reduct Vol, Reduced Vol, PCE Adj, MLF Adj, Final Volume.

Saturation Flow Module:

Table with 13 columns and 4 rows of saturation flow data including Sat/Lane, Adjustment, Lanes, Final Sat.

Capacity Analysis Module:

Table with 13 columns and 2 rows of capacity analysis data including Vol/Sat, Crit Moves.

Level Of Service Computation Report

ICU 1(Loss as Cycle Length %) Method (Future Volume Alternative)

Intersection #5 Golden Lantern/Dana Point Harbor Drive

Cycle (sec): 100 Critical Vol./Cap.(X): 0.242
Loss Time (sec): 5 Average Delay (sec/veh): xxxxxx
Optimal Cycle: 16 Level Of Service: A

Street Name: Golden Lantern Dana Point Harbor Drive

Approach: North Bound South Bound East Bound West Bound

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

Control: Protected Protected Protected Protected

Rights: Ovl Ovl Include Include

Min. Green: 0 0 0 0 0 0 0 0 0 0 0 0

Y+R: 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0

Lanes: 1 0 1 0 1 1 0 1 0 1 1 0 1 0 1 0

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Volume Module:

Base Vol: 32 42 43 48 88 96 62 174 10 113 194 96

Growth Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00

Initial Bse: 32 42 43 48 88 96 62 174 10 113 194 96

Added Vol: 0 0 0 0 0 0 0 0 0 0 0 0

PasserByVol: 0 0 0 0 0 0 0 0 0 0 0 0

Initial Fut: 32 42 43 48 88 96 62 174 10 113 194 96

User Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00

PHF Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00

PHF Volume: 32 42 43 48 88 96 62 174 10 113 194 96

Reduct Vol: 0 0 0 0 0 0 0 0 0 0 0 0

Reduced Vol: 32 42 43 48 88 96 62 174 10 113 194 96

PCE Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00

MLF Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00

FinalVolume: 32 42 43 48 88 96 62 174 10 113 194 96

OvlAdjVol: 0 34

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Saturation Flow Module:

Sat/Lane: 1700 1700 1700 1700 1700 1700 1700 1700 1700 1700 1700 1700

Adjustment: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00

Lanes: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.89 0.11 1.00 1.34 0.66

Final Sat.: 1700 1700 1700 1700 1700 1700 1700 3215 185 1700 2274 1126

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Capacity Analysis Module:

Vol/Sat: 0.02 0.02 0.03 0.03 0.05 0.06 0.04 0.05 0.05 0.07 0.09 0.09

OvlAdjV/S: 0.00 0.02

Crit Moves: **** **** **** ****

Level Of Service Computation Report

ICU 1(Loss as Cycle Length %) Method (Future Volume Alternative)

Intersection #6 Puerto Place/Dana Point Harbor Drive

Cycle (sec): 100 Critical Vol./Cap.(X): 0.170
Loss Time (sec): 5 Average Delay (sec/veh): xxxxxx
Optimal Cycle: 15 Level Of Service: A

Street Name: Puerto Place Dana Point Harbor Drive

Approach: North Bound South Bound East Bound West Bound

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

Control: Protected Protected Protected Protected
Rights: Include Include Include Include
Min. Green: 0 0 0 0 0 0 0 0 0 0 0 0
Y+R: 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0
Lanes: 1 0 0 0 1 0 0 0 0 0 0 2 0 1 1 0 2 0 0

Volume Module:

Base Vol: 18 0 26 0 0 0 0 234 32 25 356 0
Growth Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
Initial Bse: 18 0 26 0 0 0 0 234 32 25 356 0
Added Vol: 0 0 0 0 0 0 0 0 0 0 0 0
PasserByVol: 0 0 0 0 0 0 0 0 0 0 0 0
Initial Fut: 18 0 26 0 0 0 0 234 32 25 356 0
User Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
PHF Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
PHF Volume: 18 0 26 0 0 0 0 234 32 25 356 0
Reduct Vol: 0 0 0 0 0 0 0 0 0 0 0 0
Reduced Vol: 18 0 26 0 0 0 0 234 32 25 356 0
PCE Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
MLF Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
FinalVolume: 18 0 26 0 0 0 0 234 32 25 356 0

Saturation Flow Module:

Sat/Lane: 1700 1700 1700 1700 1700 1700 1700 1700 1700 1700 1700 1700
Adjustment: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
Lanes: 1.00 0.00 1.00 0.00 0.00 0.00 0.00 2.00 1.00 1.00 2.00 0.00
Final Sat.: 1700 0 1700 0 0 0 0 3400 1700 1700 3400 0

Capacity Analysis Module:

Vol/Sat: 0.01 0.00 0.02 0.00 0.00 0.00 0.00 0.07 0.02 0.01 0.10 0.00
Crit Moves: ****

Level Of Service Computation Report

ICU 1(Loss as Cycle Length %) Method (Future Volume Alternative)

Intersection #7 Dana Point Harbor Drive/Park Lantern

Cycle (sec): 100 Critical Vol./Cap.(X): 0.224
Loss Time (sec): 5 Average Delay (sec/veh): xxxxxx
Optimal Cycle: 16 Level Of Service: A

Street Name: Dana Point Harbor Drive Park Landtern

Approach: North Bound South Bound East Bound West Bound

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

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Control: Protected Protected Permitted Permitted

Rights: Include Include Include Include

Min. Green: 0 0 0 0 0 0 0 0 0 0 0 0

Y+R: 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0

Lanes: 1 0 2 0 1 1 0 1 1 0 0 0 1! 0 0 1 0 0 1 0

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Volume Module:

Base Vol: 12 212 10 18 444 36 32 0 8 4 0 12

Growth Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00

Initial Bse: 12 212 10 18 444 36 32 0 8 4 0 12

Added Vol: 0 0 0 0 0 0 0 0 0 0 0 0

PasserByVol: 0 0 0 0 0 0 0 0 0 0 0 0

Initial Fut: 12 212 10 18 444 36 32 0 8 4 0 12

User Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00

PHF Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00

PHF Volume: 12 212 10 18 444 36 32 0 8 4 0 12

Reduct Vol: 0 0 0 0 0 0 0 0 0 0 0 0

Reduced Vol: 12 212 10 18 444 36 32 0 8 4 0 12

PCE Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00

MLF Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00

FinalVolume: 12 212 10 18 444 36 32 0 8 4 0 12

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Saturation Flow Module:

Sat/Lane: 1700 1700 1700 1700 1700 1700 1700 1700 1700 1700 1700 1700

Adjustment: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00

Lanes: 1.00 2.00 1.00 1.00 1.85 0.15 0.80 0.00 0.20 1.00 0.00 1.00

Final Sat.: 1700 3400 1700 1700 3145 255 1360 0 340 1700 0 1700

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Capacity Analysis Module:

Vol/Sat: 0.01 0.06 0.01 0.01 0.14 0.14 0.02 0.00 0.02 0.00 0.00 0.01

Crit Moves: **** **** **** ****

Level Of Service Computation Report

ICU 1(Loss as Cycle Length %) Method (Future Volume Alternative)

Intersection #8 Del Obispo Street-Dana Point Harbor Drive/PCH

Cycle (sec): 100 Critical Vol./Cap.(X): 0.578
Loss Time (sec): 5 Average Delay (sec/veh): xxxxxx
Optimal Cycle: 28 Level Of Service: A

Street Name:Del Obispo Street-Dana Point Harb PCH

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

Control: Protected Protected Protected Protected
Rights: Ovl Include Include Include
Min. Green: 0 0 0 0 0 0 0 0 0 0 0 0
Y+R: 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0
Lanes: 1 0 1 0 2 2 0 1 0 1 1 0 2 1 0

Volume Module:

Base Vol: 23 52 187 400 106 105 80 1011 61 328 1443 256
Growth Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
Initial Bse: 23 52 187 400 106 105 80 1011 61 328 1443 256
Added Vol: 0 0 0 0 0 0 0 0 0 0 0 0
PasserByVol: 0 0 0 0 0 0 0 0 0 0 0 0
Initial Fut: 23 52 187 400 106 105 80 1011 61 328 1443 256
User Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
PHF Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
PHF Volume: 23 52 187 400 106 105 80 1011 61 328 1443 256
Reduct Vol: 0 0 0 0 0 0 0 0 0 0 0 0
Reduced Vol: 23 52 187 400 106 105 80 1011 61 328 1443 256
PCE Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
MLF Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
FinalVolume: 23 52 187 400 106 105 80 1011 61 328 1443 256
OvlAdjVol: 0

Saturation Flow Module:

Sat/Lane: 1700 1700 1700 1700 1700 1700 1700 1700 1700 1700 1700 1700
Adjustment: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
Lanes: 1.00 1.00 2.00 2.00 1.00 1.00 1.00 2.83 0.17 2.00 2.55 0.45
Final Sat.: 1700 1700 3400 3400 1700 1700 1700 4810 290 3400 4332 768

Capacity Analysis Module:

Vol/Sat: 0.01 0.03 0.06 0.12 0.06 0.06 0.05 0.21 0.21 0.10 0.33 0.33
OvlAdjV/S: 0.00
Crit Moves: **** *

Level Of Service Computation Report

ICU 1(Loss as Cycle Length %) Method (Future Volume Alternative)

Intersection #9 Del Opisobo Street/Stonehill Drive

Cycle (sec): 100 Critical Vol./Cap.(X): 0.753
Loss Time (sec): 5 Average Delay (sec/veh): xxxxxx
Optimal Cycle: 44 Level Of Service: C

Street Name: Del Opisobo Street Stonehill Drive

Approach: North Bound South Bound East Bound West Bound

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

Control: Protected Protected Protected Protected

Rights: Include Include Include Include

Min. Green: 0 0 0 0 0 0 0 0 0 0 0 0

Y+R: 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0

Lanes: 1 0 1 1 0 1 0 1 1 0 1 0 2 0 1 1 0 2 0 1

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Volume Module:

Base Vol: 124 245 141 383 455 216 153 1086 119 76 516 224

Growth Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00

Initial Bse: 124 245 141 383 455 216 153 1086 119 76 516 224

Added Vol: 0 0 0 0 0 0 0 0 0 0 0 0

PasserByVol: 0 0 0 0 0 0 0 0 0 0 0 0

Initial Fut: 124 245 141 383 455 216 153 1086 119 76 516 224

User Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00

PHF Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00

PHF Volume: 124 245 141 383 455 216 153 1086 119 76 516 224

Reduct Vol: 0 0 0 0 0 0 0 0 0 0 0 0

Reduced Vol: 124 245 141 383 455 216 153 1086 119 76 516 224

PCE Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00

MLF Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00

FinalVolume: 124 245 141 383 455 216 153 1086 119 76 516 224

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Saturation Flow Module:

Sat/Lane: 1700 1700 1700 1700 1700 1700 1700 1700 1700 1700 1700 1700

Adjustment: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00

Lanes: 1.00 1.27 0.73 1.00 1.36 0.64 1.00 2.00 1.00 1.00 2.00 1.00

Final Sat.: 1700 2158 1242 1700 2306 1094 1700 3400 1700 1700 3400 1700

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Capacity Analysis Module:

Vol/Sat: 0.07 0.11 0.11 0.23 0.20 0.20 0.09 0.32 0.07 0.04 0.15 0.13

Crit Moves: **** **** **** ****

Level Of Service Computation Report

ICU 1(Loss as Cycle Length %) Method (Future Volume Alternative)

Intersection #10 Camino Capistrano/Stonehill Drive

Cycle (sec): 100 Critical Vol./Cap.(X): 0.609
Loss Time (sec): 5 Average Delay (sec/veh): xxxxxx
Optimal Cycle: 30 Level Of Service: B

Street Name: Camino Capistrano Stonehill Drive

Approach: North Bound South Bound East Bound West Bound

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

Control: Split Phase Split Phase Split Phase Split Phase

Rights: Include Ovl Include Include

Min. Green: 0 0 0 0 0 0 0 0 0 0 0 0

Y+R: 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0

Lanes: 1 1 0 0 1 1 0 2 0 2 1 0 2 0 0 0 0

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Volume Module:

Base Vol: 281 274 254 54 287 595 281 1060 256 0 0 0

Growth Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00

Initial Bse: 281 274 254 54 287 595 281 1060 256 0 0 0

Added Vol: 0 0 0 0 0 0 0 0 0 0 0 0

PasserByVol: 0 0 0 0 0 0 0 0 0 0 0 0

Initial Fut: 281 274 254 54 287 595 281 1060 256 0 0 0

User Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00

PHF Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00

PHF Volume: 281 274 254 54 287 595 281 1060 256 0 0 0

Reduct Vol: 0 0 0 0 0 0 0 0 0 0 0 0

Reduced Vol: 281 274 254 54 287 595 281 1060 256 0 0 0

PCE Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00

MLF Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00

FinalVolume: 281 274 254 54 287 595 281 1060 256 0 0 0

OvlAdjVol: 0

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Saturation Flow Module:

Sat/Lane: 1700 1700 1700 1700 1700 1700 1700 1700 1700 1700 1700 1700

Adjustment: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00

Lanes: 1.01 0.99 1.00 1.00 2.00 2.00 1.00 2.00 1.00 0.00 0.00 0.00

Final Sat.: 1721 1679 1700 1700 3400 3400 1700 3400 1700 0 0 0

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Capacity Analysis Module:

Vol/Sat: 0.16 0.16 0.15 0.03 0.08 0.17 0.17 0.31 0.15 0.00 0.00 0.00

OvlAdjV/S: 0.00

Crit Moves: **** **** ****

HCM 6th Signalized Intersection Summary
 10: Camino Capistrano & Stonehill Drive/I-5 NB Ramp

02/19/2021



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↶	↷	↷				↶	↷	↷	↶	↷	↷
Traffic Volume (veh/h)	281	1060	256	0	0	0	281	274	254	54	287	595
Future Volume (veh/h)	281	1060	256	0	0	0	281	274	254	54	287	595
Initial Q (Qb), veh	0	0	0				0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00				1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00				1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No					No			No		
Adj Sat Flow, veh/h/ln	1870	1870	1870				1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	296	1116	0				292	294	267	57	302	626
Peak Hour Factor	0.95	0.95	0.95				0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	2	2	2				2	2	2	2	2	2
Cap, veh/h	603	1202					429	450	381	429	855	1615
Arrive On Green	0.34	0.34	0.00				0.24	0.24	0.24	0.24	0.24	0.24
Sat Flow, veh/h	1781	3554	1585				1781	1870	1585	1781	3554	2790
Grp Volume(v), veh/h	296	1116	0				292	294	267	57	302	626
Grp Sat Flow(s),veh/h/ln	1781	1777	1585				1781	1870	1585	1781	1777	1395
Q Serve(g_s), s	9.9	22.7	0.0				11.1	10.6	11.5	1.9	5.3	9.1
Cycle Q Clear(g_c), s	9.9	22.7	0.0				11.1	10.6	11.5	1.9	5.3	9.1
Prop In Lane	1.00		1.00				1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	603	1202					429	450	381	429	855	1615
V/C Ratio(X)	0.49	0.93					0.68	0.65	0.70	0.13	0.35	0.39
Avail Cap(c_a), veh/h	607	1211					429	450	381	429	855	1615
HCM Platoon Ratio	1.00	1.00	1.00				1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	0.00				1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	19.6	23.9	0.0				25.8	25.6	25.9	22.3	23.6	8.6
Incr Delay (d2), s/veh	0.6	12.3	0.0				8.5	7.2	10.2	0.6	1.1	0.7
Initial Q Delay(d3),s/veh	0.0	0.0	0.0				0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	4.0	10.9	0.0				5.5	5.4	5.2	0.8	2.3	5.4
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	20.3	36.2	0.0				34.3	32.8	36.2	22.9	24.7	9.3
LnGrp LOS	C	D					C	C	D	C	C	A
Approach Vol, veh/h		1412	A				853				985	
Approach Delay, s/veh		32.8					34.4				14.8	
Approach LOS		C					C				B	
Timer - Assigned Phs		2		4			6					
Phs Duration (G+Y+Rc), s		22.5		29.8			22.5					
Change Period (Y+Rc), s		4.5		4.5			4.5					
Max Green Setting (Gmax), s		18.0		25.5			18.0					
Max Q Clear Time (g_c+I1), s		13.5		24.7			11.1					
Green Ext Time (p_c), s		1.6		0.7			2.8					

Intersection Summary

HCM 6th Ctrl Delay	27.8
HCM 6th LOS	C

Notes

- User approved volume balancing among the lanes for turning movement.
- User approved changes to right turn type.
- Unsignalized Delay for [EBR] is excluded from calculations of the approach delay and intersection delay.

Level Of Service Computation Report

ICU 1(Loss as Cycle Length %) Method (Future Volume Alternative)

Intersection #11 I-5 SB Ramps/Camino Las Ramblas

Cycle (sec): 100 Critical Vol./Cap.(X): 0.254
Loss Time (sec): 5 Average Delay (sec/veh): xxxxxx
Optimal Cycle: 16 Level Of Service: A

Street Name: I-5 SB Ramps Camino Las Ramblas
Approach: North Bound South Bound East Bound West Bound
Movement: L - T - R L - T - R L - T - R L - T - R

Control: Protected Protected Protected Protected
Rights: Include Ignore Ignore Ignore
Min. Green: 0 0 0 0 0 0 0 0 0 0 0 0
Y+R: 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0
Lanes: 0 0 0 0 0 2 0 0 0 1 0 0 2 0 1 0 0 1 0 1

Volume Module:

Base Vol: 0 0 0 205 0 781 0 489 1039 0 174 135
Growth Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
Initial Bse: 0 0 0 205 0 781 0 489 1039 0 174 135
Added Vol: 0 0 0 0 0 0 0 0 0 0 0 0
PasserByVol: 0 0 0 0 0 0 0 0 0 0 0 0
Initial Fut: 0 0 0 205 0 781 0 489 1039 0 174 135
User Adj: 1.00 1.00 1.00 1.00 1.00 0.00 1.00 1.00 0.00 1.00 1.00 0.00
PHF Adj: 1.00 1.00 1.00 1.00 1.00 0.00 1.00 1.00 0.00 1.00 1.00 0.00
PHF Volume: 0 0 0 205 0 0 0 489 0 0 174 0
Reduct Vol: 0 0 0 0 0 0 0 0 0 0 0 0
Reduced Vol: 0 0 0 205 0 0 0 489 0 0 174 0
PCE Adj: 1.00 1.00 1.00 1.00 1.00 0.00 1.00 1.00 0.00 1.00 1.00 0.00
MLF Adj: 1.00 1.00 1.00 1.00 1.00 0.00 1.00 1.00 0.00 1.00 1.00 0.00
FinalVolume: 0 0 0 205 0 0 0 489 0 0 174 0

Saturation Flow Module:

Sat/Lane: 1700 1700 1700 1700 1700 1700 1700 1700 1700 1700 1700 1700
Adjustment: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
Lanes: 0.00 0.00 0.00 2.00 0.00 1.00 0.00 2.00 1.00 0.00 1.00 1.00
Final Sat.: 0 0 0 3400 0 1700 0 3400 1700 0 1700 1700

Capacity Analysis Module:

Vol/Sat: 0.00 0.00 0.00 0.06 0.00 0.00 0.00 0.14 0.00 0.00 0.10 0.00
Crit Moves: ****

Level Of Service Computation Report

ICU 1(Loss as Cycle Length %) Method (Future Volume Alternative)

Intersection #12 I-5 NB Ramps/Camino Las Ramblas

Cycle (sec): 100 Critical Vol./Cap.(X): 0.247
Loss Time (sec): 5 Average Delay (sec/veh): xxxxxx
Optimal Cycle: 16 Level Of Service: A

Street Name: I-5 NB Ramps Camino Las Ramblas

Approach: North Bound South Bound East Bound West Bound

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

Control: Permitted Permitted Permitted Permitted

Rights: Include Include Ignore Include

Min. Green: 0 0 0 0 0 0 0 0 0 0 0 0

Y+R: 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0

Lanes: 0 1 0 0 1 1 0 0 0 1 1 0 2 0 1 0 0 0 2 1 0

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Volume Module:

Base Vol: 1 12 87 8 0 93 22 273 355 0 648 7

Growth Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00

Initial Bse: 1 12 87 8 0 93 22 273 355 0 648 7

Added Vol: 0 0 0 0 0 0 0 0 0 0 0 0

PasserByVol: 0 0 0 0 0 0 0 0 0 0 0 0

Initial Fut: 1 12 87 8 0 93 22 273 355 0 648 7

User Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 0.00 1.00 1.00 1.00

PHF Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 0.00 1.00 1.00 1.00

PHF Volume: 1 12 87 8 0 93 22 273 0 0 648 7

Reduct Vol: 0 0 0 0 0 0 0 0 0 0 0 0

Reduced Vol: 1 12 87 8 0 93 22 273 0 0 648 7

PCE Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 0.00 1.00 1.00 1.00

MLF Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 0.00 1.00 1.00 1.00

FinalVolume: 1 12 87 8 0 93 22 273 0 0 648 7

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Saturation Flow Module:

Sat/Lane: 1700 1700 1700 1700 1700 1700 1700 1700 1700 1700 1700 1700

Adjustment: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00

Lanes: 0.08 0.92 1.00 1.00 0.00 1.00 1.00 2.00 1.00 0.00 2.97 0.03

Final Sat.: 131 1569 1700 1700 0 1700 1700 3400 1700 0 5045 55

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Capacity Analysis Module:

Vol/Sat: 0.00 0.01 0.05 0.00 0.00 0.05 0.01 0.08 0.00 0.00 0.13 0.13

Crit Moves: **** **** **** ****

HCM Signalized Intersection Capacity Analysis

12: I-5 NB Ramps & Camino Las Ramlas

02/19/2021



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	22	273	355	0	648	7	1	12	87	8	0	93
Future Volume (vph)	22	273	355	0	648	7	1	12	87	8	0	93
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
Lane Util. Factor	1.00	0.95	1.00		0.91			1.00	1.00	1.00		1.00
Frt	1.00	1.00	0.85		1.00			1.00	0.85	1.00		0.85
Flt Protected	0.95	1.00	1.00		1.00			1.00	1.00	0.95		1.00
Satd. Flow (prot)	1770	3539	1583		5078			1856	1583	1770		1583
Flt Permitted	0.38	1.00	1.00		1.00			1.00	1.00	0.75		1.00
Satd. Flow (perm)	705	3539	1583		5078			1856	1583	1394		1583
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	23	287	374	0	682	7	1	13	92	8	0	98
RTOR Reduction (vph)	0	0	0	0	3	0	0	0	49	0	0	53
Lane Group Flow (vph)	23	287	374	0	686	0	0	14	43	8	0	45
Turn Type	Perm	NA	Free		NA		Perm	NA	Perm	Perm		Perm
Protected Phases		4			8			2				
Permitted Phases	4		Free				2		2	6		6
Actuated Green, G (s)	12.0	12.0	39.1		12.0			18.1	18.1	18.1		18.1
Effective Green, g (s)	12.0	12.0	39.1		12.0			18.1	18.1	18.1		18.1
Actuated g/C Ratio	0.31	0.31	1.00		0.31			0.46	0.46	0.46		0.46
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)	216	1086	1583		1558			859	732	645		732
v/s Ratio Prot		0.08			c0.14							
v/s Ratio Perm	0.03		c0.24					0.01	0.03	0.01		0.03
v/c Ratio	0.11	0.26	0.24		0.44			0.02	0.06	0.01		0.06
Uniform Delay, d1	9.7	10.2	0.0		10.9			5.7	5.8	5.7		5.8
Progression Factor	1.00	1.00	1.00		1.00			1.00	1.00	1.00		1.00
Incremental Delay, d2	0.2	0.1	0.4		0.2			0.0	0.2	0.0		0.2
Delay (s)	9.9	10.4	0.4		11.1			5.7	5.9	5.7		6.0
Level of Service	A	B	A		B			A	A	A		A
Approach Delay (s)		4.9			11.1			5.9			5.9	
Approach LOS		A			B			A			A	

Intersection Summary

HCM 2000 Control Delay	7.7	HCM 2000 Level of Service	A
HCM 2000 Volume to Capacity ratio	0.35		
Actuated Cycle Length (s)	39.1	Sum of lost time (s)	9.0
Intersection Capacity Utilization	33.9%	ICU Level of Service	A
Analysis Period (min)	15		

c Critical Lane Group

HCM 6th TWSC
 1: Island Way & Dana Point Harbor Drive

11/19/2020

Intersection						
Int Delay, s/veh	5.5					
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	135	42	127	138	40	176
Future Vol, veh/h	135	42	127	138	40	176
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	300	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	95	95	95	95	95	95
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	142	44	134	145	42	185

Major/Minor	Major1	Major2	Minor1		
Conflicting Flow All	0	0	186	0	577 164
Stage 1	-	-	-	-	164 -
Stage 2	-	-	-	-	413 -
Critical Hdwy	-	-	4.12	-	6.42 6.22
Critical Hdwy Stg 1	-	-	-	-	5.42 -
Critical Hdwy Stg 2	-	-	-	-	5.42 -
Follow-up Hdwy	-	-	2.218	-	3.518 3.318
Pot Cap-1 Maneuver	-	-	1388	-	478 881
Stage 1	-	-	-	-	865 -
Stage 2	-	-	-	-	668 -
Platoon blocked, %	-	-	-	-	-
Mov Cap-1 Maneuver	-	-	1388	-	432 881
Mov Cap-2 Maneuver	-	-	-	-	432 -
Stage 1	-	-	-	-	865 -
Stage 2	-	-	-	-	603 -

Approach	EB	WB	NB
HCM Control Delay, s	0	3.8	12
HCM LOS			B

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	739	-	-	1388	-
HCM Lane V/C Ratio	0.308	-	-	0.096	-
HCM Control Delay (s)	12	-	-	7.9	-
HCM Lane LOS	B	-	-	A	-
HCM 95th %tile Q(veh)	1.3	-	-	0.3	-

Level Of Service Computation Report

ICU 1(Loss as Cycle Length %) Method (Future Volume Alternative)

Intersection #2 Casitas Place/Dana Point Harbor Drive

Cycle (sec): 100 Critical Vol./Cap.(X): 0.214
Loss Time (sec): 5 Average Delay (sec/veh): xxxxxx
Optimal Cycle: 16 Level Of Service: A

Street Name: Casitas Place Dana Point Harbor Drive
Approach: North Bound South Bound East Bound West Bound
Movement: L - T - R L - T - R L - T - R L - T - R

Control: Protected Protected Protected Prot+Permit
Rights: Include Include Include Include
Min. Green: 0 0 0 0 0 0 0 0 0 0 0 0
Y+R: 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0
Lanes: 1 0 0 0 1 0 0 0 0 0 0 0 1 0 2 0 0

Volume Module:

Base Vol: 16 0 27 0 0 0 0 310 25 84 262 0
Growth Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
Initial Bse: 16 0 27 0 0 0 0 310 25 84 262 0
Added Vol: 0 0 0 0 0 0 0 0 0 0 0 0
PasserByVol: 0 0 0 0 0 0 0 0 0 0 0 0
Initial Fut: 16 0 27 0 0 0 0 310 25 84 262 0
User Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
PHF Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
PHF Volume: 16 0 27 0 0 0 0 310 25 84 262 0
Reduct Vol: 0 0 0 0 0 0 0 0 0 0 0 0
Reduced Vol: 16 0 27 0 0 0 0 310 25 84 262 0
PCE Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
MLF Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
FinalVolume: 16 0 27 0 0 0 0 310 25 84 262 0

Saturation Flow Module:

Sat/Lane: 1700 1700 1700 1700 1700 1700 1700 1700 1700 1700 1700 1700
Adjustment: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
Lanes: 1.00 0.00 1.00 0.00 0.00 0.00 0.00 1.85 0.15 1.00 2.00 0.00
Final Sat.: 1700 0 1700 0 0 0 0 3146 254 1700 3400 0

Capacity Analysis Module:

Vol/Sat: 0.01 0.00 0.02 0.00 0.00 0.00 0.00 0.10 0.10 0.05 0.08 0.00
Crit Moves: ****

Level Of Service Computation Report

ICU 1(Loss as Cycle Length %) Method (Future Volume Alternative)

Intersection #3 Golden Lantern/PCH

Cycle (sec): 100 Critical Vol./Cap.(X): 0.670
Loss Time (sec): 5 Average Delay (sec/veh): xxxxxx
Optimal Cycle: 34 Level Of Service: B

Street Name: Golden Lantern PCH

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

Control: Protected Protected Protected Protected
Rights: Include Include Include Include
Min. Green: 0 0 0 0 0 0 0 0 0 0 0 0
Y+R: 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0
Lanes: 1 0 1 1 0 2 0 1 0 1 1 0 1 1 0

Volume Module:

Base Vol: 122 297 42 269 293 88 94 835 52 69 863 227
Growth Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
Initial Bse: 122 297 42 269 293 88 94 835 52 69 863 227
Added Vol: 0 0 0 0 0 0 0 0 0 0 0 0
PasserByVol: 0 0 0 0 0 0 0 0 0 0 0 0
Initial Fut: 122 297 42 269 293 88 94 835 52 69 863 227
User Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
PHF Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
PHF Volume: 122 297 42 269 293 88 94 835 52 69 863 227
Reduct Vol: 0 0 0 0 0 0 0 0 0 0 0 0
Reduced Vol: 122 297 42 269 293 88 94 835 52 69 863 227
PCE Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
MLF Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
FinalVolume: 122 297 42 269 293 88 94 835 52 69 863 227

Saturation Flow Module:

Sat/Lane: 1700 1700 1700 1700 1700 1700 1700 1700 1700 1700 1700 1700
Adjustment: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
Lanes: 1.00 1.75 0.25 2.00 1.00 1.00 1.00 1.88 0.12 1.00 1.58 0.42
Final Sat.: 1700 2979 421 3400 1700 1700 1700 3201 199 1700 2692 708

Capacity Analysis Module:

Vol/Sat: 0.07 0.10 0.10 0.08 0.17 0.05 0.06 0.26 0.26 0.04 0.32 0.32
Crit Moves: **** **** **** ****

Level Of Service Computation Report

ICU 1(Loss as Cycle Length %) Method (Future Volume Alternative)

Intersection #4 Golden Lantern/Del Prado Avenue

Cycle (sec): 100 Critical Vol./Cap.(X): 0.365
Loss Time (sec): 5 Average Delay (sec/veh): xxxxxx
Optimal Cycle: 19 Level Of Service: A

Street Name: Golden Lantern Del Prado Avenue

Approach: North Bound South Bound East Bound West Bound

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

Control: Protected Protected Prot+Permit Prot+Permit

Rights: Include Include Include Include

Min. Green: 0 0 0 0 0 0 0 0 0 0 0 0

Y+R: 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0

Lanes: 1 0 1 1 0 1 0 2 0 1 1 0 0 1 0 1 1 0 1

Volume Module:

Base Vol: 47 249 41 136 203 73 58 129 97 29 115 32

Growth Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00

Initial Bse: 47 249 41 136 203 73 58 129 97 29 115 32

Added Vol: 0 0 0 0 0 0 0 0 0 0 0 0

PasserByVol: 0 0 0 0 0 0 0 0 0 0 0 0

Initial Fut: 47 249 41 136 203 73 58 129 97 29 115 32

User Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00

PHF Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00

PHF Volume: 47 249 41 136 203 73 58 129 97 29 115 32

Reduct Vol: 0 0 0 0 0 0 0 0 0 0 0 0

Reduced Vol: 47 249 41 136 203 73 58 129 97 29 115 32

PCE Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00

MLF Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00

FinalVolume: 47 249 41 136 203 73 58 129 97 29 115 32

Saturation Flow Module:

Sat/Lane: 1700 1700 1700 1700 1700 1700 1700 1700 1700 1700 1700 1700

Adjustment: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00

Lanes: 1.00 1.72 0.28 1.00 2.00 1.00 1.00 0.57 0.43 1.00 1.00 1.00

Final Sat.: 1700 2919 481 1700 3400 1700 1700 970 730 1700 1700 1700

Capacity Analysis Module:

Vol/Sat: 0.03 0.09 0.09 0.08 0.06 0.04 0.03 0.13 0.13 0.02 0.07 0.02

Crit Moves: ****

Level Of Service Computation Report

ICU 1(Loss as Cycle Length %) Method (Future Volume Alternative)

Intersection #5 Golden Lantern/Dana Point Harbor Drive

Cycle (sec): 100 Critical Vol./Cap.(X): 0.384
Loss Time (sec): 5 Average Delay (sec/veh): xxxxxx
Optimal Cycle: 20 Level Of Service: A

Street Name: Golden Lantern Dana Point Harbor Drive

Approach: North Bound South Bound East Bound West Bound

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

Control: Protected Protected Protected Protected

Rights: Ovl Ovl Include Include

Min. Green: 0 0 0 0 0 0 0 0 0 0 0 0

Y+R: 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0

Lanes: 1 0 1 0 1 1 0 1 0 1 1 0 1 0 1 0

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Volume Module:

Base Vol: 20 92 135 192 81 101 125 174 15 123 228 89

Growth Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00

Initial Bse: 20 92 135 192 81 101 125 174 15 123 228 89

Added Vol: 0 0 0 0 0 0 0 0 0 0 0 0

PasserByVol: 0 0 0 0 0 0 0 0 0 0 0 0

Initial Fut: 20 92 135 192 81 101 125 174 15 123 228 89

User Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00

PHF Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00

PHF Volume: 20 92 135 192 81 101 125 174 15 123 228 89

Reduct Vol: 0 0 0 0 0 0 0 0 0 0 0 0

Reduced Vol: 20 92 135 192 81 101 125 174 15 123 228 89

PCE Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00

MLF Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00

FinalVolume: 20 92 135 192 81 101 125 174 15 123 228 89

OvlAdjVol: 12 0

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Saturation Flow Module:

Sat/Lane: 1700 1700 1700 1700 1700 1700 1700 1700 1700 1700 1700 1700

Adjustment: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00

Lanes: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.84 0.16 1.00 1.44 0.56

Final Sat.: 1700 1700 1700 1700 1700 1700 1700 3130 270 1700 2445 955

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Capacity Analysis Module:

Vol/Sat: 0.01 0.05 0.08 0.11 0.05 0.06 0.07 0.06 0.06 0.07 0.09 0.09

OvlAdjV/S: 0.01 0.00

Crit Moves: **** *

Level Of Service Computation Report

ICU 1(Loss as Cycle Length %) Method (Future Volume Alternative)

Intersection #6 Puerto Place/Dana Point Harbor Drive

Cycle (sec): 100 Critical Vol./Cap.(X): 0.260
Loss Time (sec): 5 Average Delay (sec/veh): xxxxxx
Optimal Cycle: 16 Level Of Service: A

Street Name: Puerto Place Dana Point Harbor Drive

Approach: North Bound South Bound East Bound West Bound

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

Control: Protected Protected Protected Protected

Rights: Include Include Include Include

Min. Green: 0 0 0 0 0 0 0 0 0 0 0 0

Y+R: 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0

Lanes: 1 0 0 0 1 0 0 0 0 0 0 0 2 0 1 1 0 2 0 0

-----|-----|-----|-----|

Volume Module:

Base Vol: 28 0 76 0 0 0 0 469 42 46 430 0

Growth Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00

Initial Bse: 28 0 76 0 0 0 0 469 42 46 430 0

Added Vol: 0 0 0 0 0 0 0 0 0 0 0 0

PasserByVol: 0 0 0 0 0 0 0 0 0 0 0 0

Initial Fut: 28 0 76 0 0 0 0 469 42 46 430 0

User Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00

PHF Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00

PHF Volume: 28 0 76 0 0 0 0 469 42 46 430 0

Reduct Vol: 0 0 0 0 0 0 0 0 0 0 0 0

Reduced Vol: 28 0 76 0 0 0 0 469 42 46 430 0

PCE Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00

MLF Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00

FinalVolume: 28 0 76 0 0 0 0 469 42 46 430 0

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Saturation Flow Module:

Sat/Lane: 1700 1700 1700 1700 1700 1700 1700 1700 1700 1700 1700 1700

Adjustment: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00

Lanes: 1.00 0.00 1.00 0.00 0.00 0.00 0.00 2.00 1.00 1.00 2.00 0.00

Final Sat.: 1700 0 1700 0 0 0 0 3400 1700 1700 3400 0

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Capacity Analysis Module:

Vol/Sat: 0.02 0.00 0.04 0.00 0.00 0.00 0.00 0.14 0.02 0.03 0.13 0.00

Crit Moves: **** **** ****

Level Of Service Computation Report

ICU 1(Loss as Cycle Length %) Method (Future Volume Alternative)

Intersection #7 Dana Point Harbor Drive/Park Lantern

Cycle (sec): 100 Critical Vol./Cap.(X): 0.271
Loss Time (sec): 5 Average Delay (sec/veh): xxxxxx
Optimal Cycle: 17 Level Of Service: A

Street Name: Dana Point Harbor Drive Park Landtern

Approach: North Bound South Bound East Bound West Bound

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

Control: Protected Protected Permitted Permitted

Rights: Include Include Include Include

Min. Green: 0 0 0 0 0 0 0 0 0 0 0 0 0

Y+R: 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0

Lanes: 1 0 2 0 1 1 0 1 1 0 0 0 1! 0 0 1 0 0 1 0

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Volume Module:

Base Vol: 6 497 22 54 363 37 45 0 13 17 1 28

Growth Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00

Initial Bse: 6 497 22 54 363 37 45 0 13 17 1 28

Added Vol: 0 0 0 0 0 0 0 0 0 0 0 0

PasserByVol: 0 0 0 0 0 0 0 0 0 0 0 0

Initial Fut: 6 497 22 54 363 37 45 0 13 17 1 28

User Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00

PHF Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00

PHF Volume: 6 497 22 54 363 37 45 0 13 17 1 28

Reduct Vol: 0 0 0 0 0 0 0 0 0 0 0 0

Reduced Vol: 6 497 22 54 363 37 45 0 13 17 1 28

PCE Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00

MLF Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00

FinalVolume: 6 497 22 54 363 37 45 0 13 17 1 28

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Saturation Flow Module:

Sat/Lane: 1700 1700 1700 1700 1700 1700 1700 1700 1700 1700 1700 1700

Adjustment: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00

Lanes: 1.00 2.00 1.00 1.00 1.82 0.18 0.78 0.00 0.22 1.00 0.03 0.97

Final Sat.: 1700 3400 1700 1700 3086 315 1319 0 381 1700 59 1641

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Capacity Analysis Module:

Vol/Sat: 0.00 0.15 0.01 0.03 0.12 0.12 0.03 0.00 0.03 0.01 0.02 0.02

Crit Moves: **** **** **** ****

Level Of Service Computation Report

ICU 1(Loss as Cycle Length %) Method (Future Volume Alternative)

Intersection #8 Del Obispo Street-Dana Point Harbor Drive/PCH

Cycle (sec): 100 Critical Vol./Cap.(X): 0.587
Loss Time (sec): 5 Average Delay (sec/veh): xxxxxx
Optimal Cycle: 28 Level Of Service: A

Street Name:Del Obispo Street-Dana Point Harb PCH

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

Control: Protected Protected Protected Protected
Rights: Ovl Include Include Include
Min. Green: 0 0 0 0 0 0 0 0 0 0 0 0
Y+R: 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0
Lanes: 1 0 1 0 2 2 0 1 0 1 1 0 2 1 0

Volume Module:

Base Vol: 39 85 409 274 109 132 112 1090 71 435 1370 366
Growth Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
Initial Bse: 39 85 409 274 109 132 112 1090 71 435 1370 366
Added Vol: 0 0 0 0 0 0 0 0 0 0 0 0
PasserByVol: 0 0 0 0 0 0 0 0 0 0 0 0
Initial Fut: 39 85 409 274 109 132 112 1090 71 435 1370 366
User Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
PHF Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
PHF Volume: 39 85 409 274 109 132 112 1090 71 435 1370 366
Reduct Vol: 0 0 0 0 0 0 0 0 0 0 0 0
Reduced Vol: 39 85 409 274 109 132 112 1090 71 435 1370 366
PCE Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
MLF Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
FinalVolume: 39 85 409 274 109 132 112 1090 71 435 1370 366
OvlAdjVol: 0

Saturation Flow Module:

Sat/Lane: 1700 1700 1700 1700 1700 1700 1700 1700 1700 1700 1700 1700
Adjustment: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
Lanes: 1.00 1.00 2.00 2.00 1.00 1.00 1.00 2.82 0.18 2.00 2.37 0.63
Final Sat.: 1700 1700 3400 3400 1700 1700 1700 4788 312 3400 4025 1075

Capacity Analysis Module:

Vol/Sat: 0.02 0.05 0.12 0.08 0.06 0.08 0.07 0.23 0.23 0.13 0.34 0.34
OvlAdjV/S: 0.00
Crit Moves: ****

Level Of Service Computation Report

ICU 1(Loss as Cycle Length %) Method (Future Volume Alternative)

Intersection #9 Del Opisobo Street/Stonehill Drive

Cycle (sec): 100 Critical Vol./Cap.(X): 0.682
Loss Time (sec): 5 Average Delay (sec/veh): xxxxxx
Optimal Cycle: 35 Level Of Service: B

Street Name: Del Opisobo Street Stonehill Drive

Approach: North Bound South Bound East Bound West Bound

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

Control: Protected Protected Protected Protected

Rights: Include Include Include Include

Min. Green: 0 0 0 0 0 0 0 0 0 0 0 0

Y+R: 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0

Lanes: 1 0 1 1 0 1 0 1 1 0 1 0 2 0 1 1 0 2 0 1

-----|-----|-----|-----|-----|

Volume Module:

Base Vol: 143 268 156 284 308 109 131 860 93 149 845 420

Growth Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00

Initial Bse: 143 268 156 284 308 109 131 860 93 149 845 420

Added Vol: 0 0 0 0 0 0 0 0 0 0 0 0

PasserByVol: 0 0 0 0 0 0 0 0 0 0 0 0

Initial Fut: 143 268 156 284 308 109 131 860 93 149 845 420

User Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00

PHF Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00

PHF Volume: 143 268 156 284 308 109 131 860 93 149 845 420

Reduct Vol: 0 0 0 0 0 0 0 0 0 0 0 0

Reduced Vol: 143 268 156 284 308 109 131 860 93 149 845 420

PCE Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00

MLF Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00

FinalVolume: 143 268 156 284 308 109 131 860 93 149 845 420

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Saturation Flow Module:

Sat/Lane: 1700 1700 1700 1700 1700 1700 1700 1700 1700 1700 1700 1700

Adjustment: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00

Lanes: 1.00 1.26 0.74 1.00 1.48 0.52 1.00 2.00 1.00 1.00 2.00 1.00

Final Sat.: 1700 2149 1251 1700 2511 889 1700 3400 1700 1700 3400 1700

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Capacity Analysis Module:

Vol/Sat: 0.08 0.12 0.12 0.17 0.12 0.12 0.08 0.25 0.05 0.09 0.25 0.25

Crit Moves: **** **** **** ****

Level Of Service Computation Report

ICU 1(Loss as Cycle Length %) Method (Future Volume Alternative)

Intersection #10 Camino Capistrano/Stonehill Drive

Cycle (sec): 100 Critical Vol./Cap.(X): 0.689
Loss Time (sec): 5 Average Delay (sec/veh): xxxxxx
Optimal Cycle: 36 Level Of Service: B

Street Name: Camino Capistrano Stonehill Drive

Approach: North Bound South Bound East Bound West Bound

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

Control: Split Phase Split Phase Split Phase Split Phase
Rights: Include Ovl Include Include
Min. Green: 0 0 0 0 0 0 0 0 0 0 0 0
Y+R: 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0
Lanes: 1 1 0 0 1 1 0 2 0 2 1 0 2 0 1 0 0 0 0 0

Volume Module:

Base Vol: 479 260 359 154 626 851 185 809 383 0 0 0
Growth Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
Initial Bse: 479 260 359 154 626 851 185 809 383 0 0 0
Added Vol: 0 0 0 0 0 0 0 0 0 0 0 0
PasserByVol: 0 0 0 0 0 0 0 0 0 0 0 0
Initial Fut: 479 260 359 154 626 851 185 809 383 0 0 0
User Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
PHF Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
PHF Volume: 479 260 359 154 626 851 185 809 383 0 0 0
Reduct Vol: 0 0 0 0 0 0 0 0 0 0 0 0
Reduced Vol: 479 260 359 154 626 851 185 809 383 0 0 0
PCE Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
MLF Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
FinalVolume: 479 260 359 154 626 851 185 809 383 0 0 0
OvlAdjVol: 42

Saturation Flow Module:

Sat/Lane: 1700 1700 1700 1700 1700 1700 1700 1700 1700 1700 1700 1700
Adjustment: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
Lanes: 1.30 0.70 1.00 1.00 2.00 2.00 1.00 2.00 1.00 0.00 0.00 0.00
Final Sat.: 2204 1196 1700 1700 3400 3400 1700 3400 1700 0 0 0

Capacity Analysis Module:

Vol/Sat: 0.22 0.22 0.21 0.09 0.18 0.25 0.11 0.24 0.23 0.00 0.00 0.00
OvlAdjV/S: 0.01

Crit Moves: **** **** ****

HCM 6th Signalized Intersection Summary
 10: Camino Capistrano & Stonehill Drive/I-5 NB Ramp

02/19/2021



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	185	809	383	0	0	0	479	260	359	154	626	851
Future Volume (veh/h)	185	809	383	0	0	0	479	260	359	154	626	851
Initial Q (Qb), veh	0	0	0				0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00				1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00				1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No					No			No		
Adj Sat Flow, veh/h/ln	1870	1870	1870				1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	195	852	0				389	435	378	162	659	896
Peak Hour Factor	0.95	0.95	0.95				0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	2	2	2				2	2	2	2	2	2
Cap, veh/h	469	936					510	535	453	459	915	1453
Arrive On Green	0.26	0.26	0.00				0.29	0.29	0.29	0.26	0.26	0.26
Sat Flow, veh/h	1781	3554	1585				1781	1870	1585	1781	3554	2790
Grp Volume(v), veh/h	195	852	0				389	435	378	162	659	896
Grp Sat Flow(s),veh/h/ln	1781	1777	1585				1781	1870	1585	1781	1777	1395
Q Serve(g_s), s	6.3	16.2	0.0				13.9	15.1	15.6	5.2	11.8	15.9
Cycle Q Clear(g_c), s	6.3	16.2	0.0				13.9	15.1	15.6	5.2	11.8	15.9
Prop In Lane	1.00		1.00				1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	469	936					510	535	453	459	915	1453
V/C Ratio(X)	0.42	0.91					0.76	0.81	0.83	0.35	0.72	0.62
Avail Cap(c_a), veh/h	471	940					510	535	453	459	915	1453
HCM Platoon Ratio	1.00	1.00	1.00				1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	0.00				1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	21.3	25.0	0.0				22.8	23.2	23.4	21.2	23.7	11.8
Incr Delay (d2), s/veh	0.6	12.7	0.0				10.4	12.7	16.3	2.1	4.9	2.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0				0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.6	8.0	0.0				6.9	8.1	7.5	2.3	5.3	7.8
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	21.9	37.6	0.0				33.2	35.9	39.7	23.3	28.5	13.8
LnGrp LOS	C	D					C	D	D	C	C	B
Approach Vol, veh/h		1047	A				1202				1717	
Approach Delay, s/veh		34.7					36.2				20.4	
Approach LOS		C					D				C	
Timer - Assigned Phs		2		4		6						
Phs Duration (G+Y+Rc), s		24.5		22.9		22.5						
Change Period (Y+Rc), s		4.5		4.5		4.5						
Max Green Setting (Gmax), s		20.0		18.5		18.0						
Max Q Clear Time (g_c+I1), s		17.6		18.2		17.9						
Green Ext Time (p_c), s		1.3		0.2		0.1						

Intersection Summary

HCM 6th Ctrl Delay	29.0
HCM 6th LOS	C

Notes

- User approved volume balancing among the lanes for turning movement.
- User approved changes to right turn type.
- Unsignalized Delay for [EBR] is excluded from calculations of the approach delay and intersection delay.

Level Of Service Computation Report

ICU 1(Loss as Cycle Length %) Method (Future Volume Alternative)

Intersection #11 I-5 SB Ramps/Camino Las Ramblas

Cycle (sec): 100 Critical Vol./Cap.(X): 0.299
Loss Time (sec): 5 Average Delay (sec/veh): xxxxxx
Optimal Cycle: 17 Level Of Service: A

Street Name: I-5 SB Ramps Camino Las Ramblas
Approach: North Bound South Bound East Bound West Bound
Movement: L - T - R L - T - R L - T - R L - T - R

Control: Protected Protected Protected Protected
Rights: Include Ignore Ignore Ignore
Min. Green: 0 0 0 0 0 0 0 0 0 0 0 0
Y+R: 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0
Lanes: 0 0 0 0 0 2 0 0 0 1 0 0 2 0 1 0 0 1 0 1

Volume Module:

Base Vol: 0 0 0 309 0 816 0 536 1362 0 143 88
Growth Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
Initial Bse: 0 0 0 309 0 816 0 536 1362 0 143 88
Added Vol: 0 0 0 0 0 0 0 0 0 0 0 0
PasserByVol: 0 0 0 0 0 0 0 0 0 0 0 0
Initial Fut: 0 0 0 309 0 816 0 536 1362 0 143 88
User Adj: 1.00 1.00 1.00 1.00 1.00 0.00 1.00 1.00 0.00 1.00 1.00 0.00
PHF Adj: 1.00 1.00 1.00 1.00 1.00 0.00 1.00 1.00 0.00 1.00 1.00 0.00
PHF Volume: 0 0 0 309 0 0 0 536 0 0 143 0
Reduct Vol: 0 0 0 0 0 0 0 0 0 0 0 0
Reduced Vol: 0 0 0 309 0 0 0 536 0 0 143 0
PCE Adj: 1.00 1.00 1.00 1.00 1.00 0.00 1.00 1.00 0.00 1.00 1.00 0.00
MLF Adj: 1.00 1.00 1.00 1.00 1.00 0.00 1.00 1.00 0.00 1.00 1.00 0.00
FinalVolume: 0 0 0 309 0 0 0 536 0 0 143 0

Saturation Flow Module:

Sat/Lane: 1700 1700 1700 1700 1700 1700 1700 1700 1700 1700 1700 1700
Adjustment: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
Lanes: 0.00 0.00 0.00 2.00 0.00 1.00 0.00 2.00 1.00 0.00 1.00 1.00
Final Sat.: 0 0 0 3400 0 1700 0 3400 1700 0 1700 1700

Capacity Analysis Module:

Vol/Sat: 0.00 0.00 0.00 0.09 0.00 0.00 0.00 0.16 0.00 0.00 0.08 0.00
Crit Moves: ****

Level Of Service Computation Report

ICU 1(Loss as Cycle Length %) Method (Future Volume Alternative)

Intersection #12 I-5 NB Ramps/Camino Las Ramblas

Cycle (sec): 100 Critical Vol./Cap.(X): 0.258
Loss Time (sec): 5 Average Delay (sec/veh): xxxxxx
Optimal Cycle: 16 Level Of Service: A

Street Name: I-5 NB Ramps Camino Las Ramblas

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

Control: Permitted Permitted Permitted Permitted
Rights: Include Include Ignore Include
Min. Green: 0 0 0 0 0 0 0 0 0 0 0 0
Y+R: 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0
Lanes: 0 1 0 0 1 1 0 0 0 1 1 0 0 2 0 1 0 0 2 1 0

Volume Module:

Base Vol: 7 32 116 6 0 48 47 464 389 0 364 10
Growth Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
Initial Bse: 7 32 116 6 0 48 47 464 389 0 364 10
Added Vol: 0 0 0 0 0 0 0 0 0 0 0 0
PasserByVol: 0 0 0 0 0 0 0 0 0 0 0 0
Initial Fut: 7 32 116 6 0 48 47 464 389 0 364 10
User Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 0.00 1.00 1.00 1.00
PHF Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 0.00 1.00 1.00 1.00
PHF Volume: 7 32 116 6 0 48 47 464 0 0 364 10
Reduct Vol: 0 0 0 0 0 0 0 0 0 0 0 0
Reduced Vol: 7 32 116 6 0 48 47 464 0 0 364 10
PCE Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 0.00 1.00 1.00 1.00
MLF Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 0.00 1.00 1.00 1.00
FinalVolume: 7 32 116 6 0 48 47 464 0 0 364 10

Saturation Flow Module:

Sat/Lane: 1700 1700 1700 1700 1700 1700 1700 1700 1700 1700 1700 1700
Adjustment: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
Lanes: 0.18 0.82 1.00 1.00 0.00 1.00 1.00 2.00 1.00 0.00 2.92 0.08
Final Sat.: 305 1395 1700 1700 0 1700 1700 3400 1700 0 4964 136





















Capacity Analysis Module:

Vol/Sat: 0.00 0.02 0.07 0.00 0.00 0.03 0.03 0.14 0.00 0.00 0.07 0.07
Crit Moves: **** **** **** ****

HCM Signalized Intersection Capacity Analysis

12: I-5 NB Ramps & Camino Las Ramblas

02/19/2021

													
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR	
Lane Configurations													
Traffic Volume (vph)	47	464	389	0	364	10	7	32	116	6	0	48	
Future Volume (vph)	47	464	389	0	364	10	7	32	116	6	0	48	
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	
Lane Util. Factor	1.00	0.95	1.00		0.91			1.00	1.00	1.00		1.00	
Frt	1.00	1.00	0.85		1.00			1.00	0.85	1.00		0.85	
Flt Protected	0.95	1.00	1.00		1.00			0.99	1.00	0.95		1.00	
Satd. Flow (prot)	1770	3539	1583		5064			1847	1583	1770		1583	
Flt Permitted	0.51	1.00	1.00		1.00			0.99	1.00	0.73		1.00	
Satd. Flow (perm)	951	3539	1583		5064			1847	1583	1360		1583	
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	
Adj. Flow (vph)	49	488	409	0	383	11	7	34	122	6	0	51	
RTOR Reduction (vph)	0	0	0	0	8	0	0	0	64	0	0	27	
Lane Group Flow (vph)	49	488	409	0	386	0	0	41	58	6	0	24	
Turn Type	Perm	NA	Free		NA		Perm	NA	Perm	Perm		Perm	
Protected Phases		4			8			2					
Permitted Phases	4		Free				2		2	6		6	
Actuated Green, G (s)	11.3	11.3	38.4		11.3			18.1	18.1	18.1		18.1	
Effective Green, g (s)	11.3	11.3	38.4		11.3			18.1	18.1	18.1		18.1	
Actuated g/C Ratio	0.29	0.29	1.00		0.29			0.47	0.47	0.47		0.47	
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)	279	1041	1583		1490			870	746	641		746	
v/s Ratio Prot		c0.14			0.08								
v/s Ratio Perm	0.05		c0.26					0.02	0.04	0.00		0.02	
v/c Ratio	0.18	0.47	0.26		0.26			0.05	0.08	0.01		0.03	
Uniform Delay, d1	10.1	11.1	0.0		10.4			5.5	5.6	5.4		5.4	
Progression Factor	1.00	1.00	1.00		1.00			1.00	1.00	1.00		1.00	
Incremental Delay, d2	0.3	0.3	0.4		0.1			0.1	0.2	0.0		0.1	
Delay (s)	10.4	11.4	0.4		10.4			5.6	5.8	5.4		5.5	
Level of Service	B	B	A		B			A	A	A		A	
Approach Delay (s)		6.6			10.4			5.7			5.5		
Approach LOS		A			B			A			A		
Intersection Summary													
HCM 2000 Control Delay			7.4									HCM 2000 Level of Service	A
HCM 2000 Volume to Capacity ratio			0.38										
Actuated Cycle Length (s)			38.4									Sum of lost time (s)	9.0
Intersection Capacity Utilization			34.2%									ICU Level of Service	A
Analysis Period (min)			15										

c Critical Lane Group

HCM 6th TWSC
 1: Island Way & Dana Point Harbor Drive

11/19/2020

Intersection						
Int Delay, s/veh	4.8					
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	296	38	201	352	31	168
Future Vol, veh/h	296	38	201	352	31	168
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	300	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	95	95	95	95	95	95
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	312	40	212	371	33	177

Major/Minor	Major1	Major2	Minor1	Minor2	Minor3
Conflicting Flow All	0	0	352	0	1127
Stage 1	-	-	-	-	332
Stage 2	-	-	-	-	795
Critical Hdwy	-	-	4.12	-	6.42
Critical Hdwy Stg 1	-	-	-	-	5.42
Critical Hdwy Stg 2	-	-	-	-	5.42
Follow-up Hdwy	-	-	2.218	-	3.518
Pot Cap-1 Maneuver	-	-	1207	-	226
Stage 1	-	-	-	-	727
Stage 2	-	-	-	-	445
Platoon blocked, %	-	-	-	-	-
Mov Cap-1 Maneuver	-	-	1207	-	186
Mov Cap-2 Maneuver	-	-	-	-	186
Stage 1	-	-	-	-	727
Stage 2	-	-	-	-	367

Approach	EB	WB	NB
HCM Control Delay, s	0	3.1	17.6
HCM LOS			C

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	493	-	-	1207	-
HCM Lane V/C Ratio	0.425	-	-	0.175	-
HCM Control Delay (s)	17.6	-	-	8.6	-
HCM Lane LOS	C	-	-	A	-
HCM 95th %tile Q(veh)	2.1	-	-	0.6	-

Level Of Service Computation Report

ICU 1(Loss as Cycle Length %) Method (Future Volume Alternative)

Intersection #2 Casitas Place/Dana Point Harbor Drive

Cycle (sec): 100 Critical Vol./Cap.(X): 0.297
Loss Time (sec): 5 Average Delay (sec/veh): xxxxxx
Optimal Cycle: 17 Level Of Service: A

Street Name: Casitas Place Dana Point Harbor Drive

Approach: North Bound South Bound East Bound West Bound

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

Control: Protected Protected Protected Prot+Permit

Rights: Include Include Include Include

Min. Green: 0 0 0 0 0 0 0 0 0 0 0 0

Y+R: 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0

Lanes: 1 0 0 0 1 0 0 0 0 0 0 0 1 1 0 1 0 2 0 0

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Volume Module:

Base Vol: 25 0 67 0 0 0 0 427 42 118 528 0

Growth Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00

Initial Bse: 25 0 67 0 0 0 0 427 42 118 528 0

Added Vol: 0 0 0 0 0 0 0 0 0 0 0 0

PasserByVol: 0 0 0 0 0 0 0 0 0 0 0 0

Initial Fut: 25 0 67 0 0 0 0 427 42 118 528 0

User Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00

PHF Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00

PHF Volume: 25 0 67 0 0 0 0 427 42 118 528 0

Reduct Vol: 0 0 0 0 0 0 0 0 0 0 0 0

Reduced Vol: 25 0 67 0 0 0 0 427 42 118 528 0

PCE Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00

MLF Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00

FinalVolume: 25 0 67 0 0 0 0 427 42 118 528 0

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Saturation Flow Module:

Sat/Lane: 1700 1700 1700 1700 1700 1700 1700 1700 1700 1700 1700 1700

Adjustment: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00

Lanes: 1.00 0.00 1.00 0.00 0.00 0.00 0.00 1.82 0.18 1.00 2.00 0.00

Final Sat.: 1700 0 1700 0 0 0 0 3096 304 1700 3400 0

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Capacity Analysis Module:

Vol/Sat: 0.01 0.00 0.04 0.00 0.00 0.00 0.00 0.14 0.14 0.07 0.16 0.00

Crit Moves: **** **** ****

Level Of Service Computation Report

ICU 1(Loss as Cycle Length %) Method (Future Volume Alternative)

Intersection #3 Golden Lantern/PCH

Cycle (sec): 100 Critical Vol./Cap.(X): 0.791
Loss Time (sec): 5 Average Delay (sec/veh): xxxxxx
Optimal Cycle: 50 Level Of Service: C

Street Name: Golden Lantern PCH

Approach: North Bound South Bound East Bound West Bound

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

Control: Protected Protected Protected Protected
Rights: Include Include Include Include
Min. Green: 0 0 0 0 0 0 0 0 0 0 0 0
Y+R: 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0
Lanes: 1 0 1 1 0 2 0 1 0 1 1 0 1 1 0 1 0 1 1 0

Volume Module:

Base Vol: 204 498 70 451 492 149 83 735 46 61 760 200
Growth Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
Initial Bse: 204 498 70 451 492 149 83 735 46 61 760 200
Added Vol: 0 0 0 0 0 0 0 0 0 0 0 0
PasserByVol: 0 0 0 0 0 0 0 0 0 0 0 0
Initial Fut: 204 498 70 451 492 149 83 735 46 61 760 200
User Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
PHF Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
PHF Volume: 204 498 70 451 492 149 83 735 46 61 760 200
Reduct Vol: 0 0 0 0 0 0 0 0 0 0 0 0
Reduced Vol: 204 498 70 451 492 149 83 735 46 61 760 200
PCE Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
MLF Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
FinalVolume: 204 498 70 451 492 149 83 735 46 61 760 200

Saturation Flow Module:

Sat/Lane: 1700 1700 1700 1700 1700 1700 1700 1700 1700 1700 1700 1700
Adjustment: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
Lanes: 1.00 1.75 0.25 2.00 1.00 1.00 1.00 1.88 0.12 1.00 1.58 0.42
Final Sat.: 1700 2981 419 3400 1700 1700 1700 3200 200 1700 2692 708

Capacity Analysis Module:

Vol/Sat: 0.12 0.17 0.17 0.13 0.29 0.09 0.05 0.23 0.23 0.04 0.28 0.28
Crit Moves: **** **** **** ****

Level Of Service Computation Report

ICU 1(Loss as Cycle Length %) Method (Future Volume Alternative)

Intersection #4 Golden Lantern/Del Prado Avenue

Cycle (sec): 100 Critical Vol./Cap.(X): 0.459
Loss Time (sec): 5 Average Delay (sec/veh): xxxxxx
Optimal Cycle: 22 Level Of Service: A

Street Name: Golden Lantern Del Prado Avenue

Approach: North Bound South Bound East Bound West Bound

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

Control: Protected Protected Prot+Permit Prot+Permit

Rights: Include Include Include Include

Min. Green: 0 0 0 0 0 0 0 0 0 0 0 0

Y+R: 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0

Lanes: 1 0 1 1 0 1 0 2 0 1 1 0 0 1 0 1 1 0 1

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Volume Module:

Base Vol: 79 418 69 227 341 123 51 114 85 26 101 28

Growth Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00

Initial Bse: 79 418 69 227 341 123 51 114 85 26 101 28

Added Vol: 0 0 0 0 0 0 0 0 0 0 0 0

PasserByVol: 0 0 0 0 0 0 0 0 0 0 0 0

Initial Fut: 79 418 69 227 341 123 51 114 85 26 101 28

User Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00

PHF Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00

PHF Volume: 79 418 69 227 341 123 51 114 85 26 101 28

Reduct Vol: 0 0 0 0 0 0 0 0 0 0 0 0

Reduced Vol: 79 418 69 227 341 123 51 114 85 26 101 28

PCE Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00

MLF Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00

FinalVolume: 79 418 69 227 341 123 51 114 85 26 101 28

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Saturation Flow Module:

Sat/Lane: 1700 1700 1700 1700 1700 1700 1700 1700 1700 1700 1700 1700

Adjustment: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00

Lanes: 1.00 1.72 0.28 1.00 2.00 1.00 1.00 0.57 0.43 1.00 1.00 1.00

Final Sat.: 1700 2918 482 1700 3400 1700 1700 974 726 1700 1700 1700

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Capacity Analysis Module:

Vol/Sat: 0.05 0.14 0.14 0.13 0.10 0.07 0.03 0.12 0.12 0.02 0.06 0.02

Crit Moves: **** **** **** ****

Level Of Service Computation Report

ICU 1(Loss as Cycle Length %) Method (Future Volume Alternative)

Intersection #5 Golden Lantern/Dana Point Harbor Drive

Cycle (sec): 100 Critical Vol./Cap.(X): 0.644
Loss Time (sec): 5 Average Delay (sec/veh): xxxxxx
Optimal Cycle: 32 Level Of Service: B

Street Name: Golden Lantern Dana Point Harbor Drive

Approach: North Bound South Bound East Bound West Bound

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

Control: Protected Protected Protected Protected

Rights: Ovl Ovl Include Include

Min. Green: 0 0 0 0 0 0 0 0 0 0 0 0

Y+R: 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0

Lanes: 1 0 1 0 1 1 0 1 0 1 1 0 1 0 1 1 0

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Volume Module:

Base Vol: 77 288 185 199 175 119 146 300 35 356 405 102

Growth Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00

Initial Bse: 77 288 185 199 175 119 146 300 35 356 405 102

Added Vol: 0 0 0 0 0 0 0 0 0 0 0 0

PasserByVol: 0 0 0 0 0 0 0 0 0 0 0 0

Initial Fut: 77 288 185 199 175 119 146 300 35 356 405 102

User Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00

PHF Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00

PHF Volume: 77 288 185 199 175 119 146 300 35 356 405 102

Reduct Vol: 0 0 0 0 0 0 0 0 0 0 0 0

Reduced Vol: 77 288 185 199 175 119 146 300 35 356 405 102

PCE Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00

MLF Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00

FinalVolume: 77 288 185 199 175 119 146 300 35 356 405 102

OvlAdjVol: 0 0

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Saturation Flow Module:

Sat/Lane: 1700 1700 1700 1700 1700 1700 1700 1700 1700 1700 1700 1700

Adjustment: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00

Lanes: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.79 0.21 1.00 1.60 0.40

Final Sat.: 1700 1700 1700 1700 1700 1700 1700 3045 355 1700 2716 684

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Capacity Analysis Module:

Vol/Sat: 0.05 0.17 0.11 0.12 0.10 0.07 0.09 0.10 0.10 0.21 0.15 0.15

OvlAdjV/S: 0.00 0.00

Crit Moves: **** **** **** ****

Level Of Service Computation Report

ICU 1(Loss as Cycle Length %) Method (Future Volume Alternative)

Intersection #6 Puerto Place/Dana Point Harbor Drive

Cycle (sec): 100 Critical Vol./Cap.(X): 0.321
Loss Time (sec): 5 Average Delay (sec/veh): xxxxxx
Optimal Cycle: 18 Level Of Service: A

Street Name: Puerto Place Dana Point Harbor Drive
Approach: North Bound South Bound East Bound West Bound
Movement: L - T - R L - T - R L - T - R L - T - R

Control: Protected Protected Protected Protected
Rights: Include Include Include Include
Min. Green: 0 0 0 0 0 0 0 0 0 0 0 0
Y+R: 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0
Lanes: 1 0 0 0 1 0 0 0 0 0 0 0 2 0 1 1 0 2 0 0

Volume Module:

Base Vol: 34 0 77 0 0 0 0 313 46 75 766 0
Growth Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
Initial Bse: 34 0 77 0 0 0 0 313 46 75 766 0
Added Vol: 0 0 0 0 0 0 0 0 0 0 0 0
PasserByVol: 0 0 0 0 0 0 0 0 0 0 0 0
Initial Fut: 34 0 77 0 0 0 0 313 46 75 766 0
User Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
PHF Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
PHF Volume: 34 0 77 0 0 0 0 313 46 75 766 0
Reduct Vol: 0 0 0 0 0 0 0 0 0 0 0 0
Reduced Vol: 34 0 77 0 0 0 0 313 46 75 766 0
PCE Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
MLF Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
FinalVolume: 34 0 77 0 0 0 0 313 46 75 766 0

Saturation Flow Module:

Sat/Lane: 1700 1700 1700 1700 1700 1700 1700 1700 1700 1700 1700 1700
Adjustment: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
Lanes: 1.00 0.00 1.00 0.00 0.00 0.00 0.00 2.00 1.00 1.00 2.00 0.00
Final Sat.: 1700 0 1700 0 0 0 0 3400 1700 1700 3400 0

Capacity Analysis Module:

Vol/Sat: 0.02 0.00 0.05 0.00 0.00 0.00 0.00 0.09 0.03 0.04 0.23 0.00
Crit Moves: ****

Level Of Service Computation Report

ICU 1(Loss as Cycle Length %) Method (Future Volume Alternative)

Intersection #7 Dana Point Harbor Drive/Park Lantern

Cycle (sec): 100 Critical Vol./Cap.(X): 0.269
Loss Time (sec): 5 Average Delay (sec/veh): xxxxxx
Optimal Cycle: 17 Level Of Service: A

Street Name: Dana Point Harbor Drive Park Landtern

Approach: North Bound South Bound East Bound West Bound

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

-----|-----|-----|-----|-----|

Control: Protected Protected Permitted Permitted

Rights: Include Include Include Include

Min. Green: 0 0 0 0 0 0 0 0 0 0 0 0

Y+R: 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0

Lanes: 1 0 2 0 1 1 0 1 1 0 0 0 1 0 0 1 0

-----|-----|-----|-----|-----|

Volume Module:

Base Vol: 5 474 37 88 517 39 15 0 13 22 0 32

Growth Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00

Initial Bse: 5 474 37 88 517 39 15 0 13 22 0 32

Added Vol: 0 0 0 0 0 0 0 0 0 0 0 0

PasserByVol: 0 0 0 0 0 0 0 0 0 0 0 0

Initial Fut: 5 474 37 88 517 39 15 0 13 22 0 32

User Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00

PHF Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00

PHF Volume: 5 474 37 88 517 39 15 0 13 22 0 32

Reduct Vol: 0 0 0 0 0 0 0 0 0 0 0 0

Reduced Vol: 5 474 37 88 517 39 15 0 13 22 0 32

PCE Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00

MLF Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00

FinalVolume: 5 474 37 88 517 39 15 0 13 22 0 32

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Saturation Flow Module:

Sat/Lane: 1700 1700 1700 1700 1700 1700 1700 1700 1700 1700 1700 1700

Adjustment: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00

Lanes: 1.00 2.00 1.00 1.00 1.86 0.14 0.54 0.00 0.46 1.00 0.00 1.00

Final Sat.: 1700 3400 1700 1700 3162 238 911 0 789 1700 0 1700

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Capacity Analysis Module:

Vol/Sat: 0.00 0.14 0.02 0.05 0.16 0.16 0.01 0.00 0.02 0.01 0.00 0.02

Crit Moves: **** **** **** ****

Level Of Service Computation Report

ICU 1(Loss as Cycle Length %) Method (Future Volume Alternative)

Intersection #8 Del Obispo Street-Dana Point Harbor Drive/PCH

Cycle (sec): 100 Critical Vol./Cap.(X): 0.560
Loss Time (sec): 5 Average Delay (sec/veh): xxxxxx
Optimal Cycle: 27 Level Of Service: A

Street Name:Del Obispo Street-Dana Point Harb PCH

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

Control: Protected Protected Protected Protected
Rights: Ovl Include Include Include
Min. Green: 0 0 0 0 0 0 0 0 0 0 0 0
Y+R: 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0
Lanes: 1 0 1 0 2 2 0 1 0 1 1 0 2 1 0

Volume Module:

Base Vol: 51 123 427 244 72 154 140 967 93 382 1207 241
Growth Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
Initial Bse: 51 123 427 244 72 154 140 967 93 382 1207 241
Added Vol: 0 0 0 0 0 0 0 0 0 0 0 0
PasserByVol: 0 0 0 0 0 0 0 0 0 0 0 0
Initial Fut: 51 123 427 244 72 154 140 967 93 382 1207 241
User Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
PHF Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
PHF Volume: 51 123 427 244 72 154 140 967 93 382 1207 241
Reduct Vol: 0 0 0 0 0 0 0 0 0 0 0 0
Reduced Vol: 51 123 427 244 72 154 140 967 93 382 1207 241
PCE Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
MLF Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
FinalVolume: 51 123 427 244 72 154 140 967 93 382 1207 241
OvlAdjVol: 45

Saturation Flow Module:

Sat/Lane: 1700 1700 1700 1700 1700 1700 1700 1700 1700 1700 1700 1700
Adjustment: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
Lanes: 1.00 1.00 2.00 2.00 1.00 1.00 1.00 2.74 0.26 2.00 2.50 0.50
Final Sat.: 1700 1700 3400 3400 1700 1700 1700 4653 447 3400 4251 849

Capacity Analysis Module:

Vol/Sat: 0.03 0.07 0.13 0.07 0.04 0.09 0.08 0.21 0.21 0.11 0.28 0.28
OvlAdjV/S: 0.01
Crit Moves: **** *

Level Of Service Computation Report

ICU 1(Loss as Cycle Length %) Method (Future Volume Alternative)

Intersection #9 Del Opisobo Street/Stonehill Drive

Cycle (sec): 100 Critical Vol./Cap.(X): 0.652
Loss Time (sec): 5 Average Delay (sec/veh): xxxxxx
Optimal Cycle: 33 Level Of Service: B

Street Name: Del Opisobo Street Stonehill Drive

Approach: North Bound South Bound East Bound West Bound

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

Control: Protected Protected Protected Protected

Rights: Include Include Include Include

Min. Green: 0 0 0 0 0 0 0 0 0 0 0 0

Y+R: 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0

Lanes: 1 0 1 1 0 1 0 1 1 0 1 0 2 0 1 1 0 2 0 1

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Volume Module:

Base Vol: 144 305 178 245 303 91 115 817 110 128 555 249

Growth Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00

Initial Bse: 144 305 178 245 303 91 115 817 110 128 555 249

Added Vol: 0 0 0 0 0 0 0 0 0 0 0 0

PasserByVol: 0 0 0 0 0 0 0 0 0 0 0 0

Initial Fut: 144 305 178 245 303 91 115 817 110 128 555 249

User Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00

PHF Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00

PHF Volume: 144 305 178 245 303 91 115 817 110 128 555 249

Reduct Vol: 0 0 0 0 0 0 0 0 0 0 0 0

Reduced Vol: 144 305 178 245 303 91 115 817 110 128 555 249

PCE Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00

MLF Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00

FinalVolume: 144 305 178 245 303 91 115 817 110 128 555 249

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Saturation Flow Module:

Sat/Lane: 1700 1700 1700 1700 1700 1700 1700 1700 1700 1700 1700 1700

Adjustment: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00

Lanes: 1.00 1.26 0.74 1.00 1.54 0.46 1.00 2.00 1.00 1.00 2.00 1.00

Final Sat.: 1700 2147 1253 1700 2615 785 1700 3400 1700 1700 3400 1700

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Capacity Analysis Module:

Vol/Sat: 0.08 0.14 0.14 0.14 0.12 0.12 0.07 0.24 0.06 0.08 0.16 0.15

Crit Moves: **** **** **** ****

Level Of Service Computation Report

ICU 1(Loss as Cycle Length %) Method (Future Volume Alternative)

Intersection #10 Camino Capistrano/Stonehill Drive

Cycle (sec): 100 Critical Vol./Cap.(X): 0.658

Loss Time (sec): 5 Average Delay (sec/veh): xxxxxx

Optimal Cycle: 33 Level Of Service: B

Street Name: Camino Capistrano Stonehill Drive

Approach: North Bound South Bound East Bound West Bound

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

Control: Split Phase Split Phase Split Phase Split Phase

Rights: Include Ovl Include Include

Min. Green: 0 0 0 0 0 0 0 0 0 0 0 0

Y+R: 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0

Lanes: 1 1 0 0 1 1 0 2 0 2 1 0 0 0 0 0

Volume Module:

Base Vol: 385 263 288 69 593 562 188 656 413 0 0 0

Growth Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00

Initial Bse: 385 263 288 69 593 562 188 656 413 0 0 0

Added Vol: 0 0 0 0 0 0 0 0 0 0 0 0

PasserByVol: 0 0 0 0 0 0 0 0 0 0 0 0

Initial Fut: 385 263 288 69 593 562 188 656 413 0 0 0

User Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00

PHF Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00

PHF Volume: 385 263 288 69 593 562 188 656 413 0 0 0

Reduct Vol: 0 0 0 0 0 0 0 0 0 0 0 0

Reduced Vol: 385 263 288 69 593 562 188 656 413 0 0 0

PCE Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00

MLF Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00

FinalVolume: 385 263 288 69 593 562 188 656 413 0 0 0

OvlAdjVol: 0

Saturation Flow Module:

Sat/Lane: 1700 1700 1700 1700 1700 1700 1700 1700 1700 1700 1700 1700

Adjustment: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00

Lanes: 1.19 0.81 1.00 1.00 2.00 2.00 1.00 2.00 1.00 0.00 0.00 0.00

Final Sat.: 2020 1380 1700 1700 3400 3400 1700 3400 1700 0 0 0

Capacity Analysis Module:

Vol/Sat: 0.19 0.19 0.17 0.04 0.17 0.17 0.11 0.19 0.24 0.00 0.00 0.00

OvlAdjV/S: 0.00

Crit Moves: **** **** ****

HCM 6th Signalized Intersection Summary
 10: Camino Capistrano & Stonehill Drive/I-5 NB Ramp

02/19/2021



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↶	↷	↷				↶	↷	↷	↶	↷	↷
Traffic Volume (veh/h)	188	656	413	0	0	0	385	263	288	69	593	562
Future Volume (veh/h)	188	656	413	0	0	0	385	263	288	69	593	562
Initial Q (Qb), veh	0	0	0				0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00				1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00				1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No					No			No		
Adj Sat Flow, veh/h/ln	1870	1870	1870				1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	198	691	0				341	367	303	73	624	592
Peak Hour Factor	0.95	0.95	0.95				0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	2	2	2				2	2	2	2	2	2
Cap, veh/h	438	874					546	573	485	429	856	1358
Arrive On Green	0.25	0.25	0.00				0.31	0.31	0.31	0.24	0.24	0.24
Sat Flow, veh/h	1781	3554	1585				1781	1870	1585	1781	3554	2790
Grp Volume(v), veh/h	198	691	0				341	367	303	73	624	592
Grp Sat Flow(s),veh/h/ln	1781	1777	1585				1781	1870	1585	1781	1777	1395
Q Serve(g_s), s	6.2	11.9	0.0				10.7	11.1	10.7	2.1	10.6	9.0
Cycle Q Clear(g_c), s	6.2	11.9	0.0				10.7	11.1	10.7	2.1	10.6	9.0
Prop In Lane	1.00		1.00				1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	438	874					546	573	485	429	856	1358
V/C Ratio(X)	0.45	0.79					0.63	0.64	0.62	0.17	0.73	0.44
Avail Cap(c_a), veh/h	505	1007					546	573	485	491	980	1455
HCM Platoon Ratio	1.00	1.00	1.00				1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	0.00				1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	20.9	23.0	0.0				19.4	19.5	19.4	19.6	22.8	10.9
Incr Delay (d2), s/veh	0.7	3.8	0.0				5.3	5.4	5.9	0.2	2.4	0.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0				0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.5	5.1	0.0				4.9	5.3	4.4	0.8	4.4	4.1
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	21.6	26.8	0.0				24.8	25.0	25.4	19.8	25.2	11.1
LnGrp LOS	C	C					C	C	C	B	C	B
Approach Vol, veh/h		889	A				1011				1289	
Approach Delay, s/veh		25.7					25.0				18.4	
Approach LOS		C					C				B	
Timer - Assigned Phs		2		4			6					
Phs Duration (G+Y+Rc), s		24.5		20.6			20.2					
Change Period (Y+Rc), s		4.5		4.5			4.5					
Max Green Setting (Gmax), s		20.0		18.5			18.0					
Max Q Clear Time (g_c+I1), s		13.1		13.9			12.6					
Green Ext Time (p_c), s		2.7		2.2			3.2					

Intersection Summary

HCM 6th Ctrl Delay	22.5
HCM 6th LOS	C

Notes

- User approved volume balancing among the lanes for turning movement.
- User approved changes to right turn type.
- Unsignalized Delay for [EBR] is excluded from calculations of the approach delay and intersection delay.

Level Of Service Computation Report

ICU 1(Loss as Cycle Length %) Method (Future Volume Alternative)

Intersection #11 I-5 SB Ramps/Camino Las Ramblas

Cycle (sec): 100 Critical Vol./Cap.(X): 0.251
Loss Time (sec): 5 Average Delay (sec/veh): xxxxxx
Optimal Cycle: 16 Level Of Service: A

Street Name: I-5 SB Ramps Camino Las Ramblas

Approach: North Bound South Bound East Bound West Bound

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

Control: Protected Protected Protected Protected

Rights: Include Ignore Ignore Ignore

Min. Green: 0 0 0 0 0 0 0 0 0 0 0 0

Y+R: 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0

Lanes: 0 0 0 0 0 2 0 0 0 1 0 0 2 0 1 0 0 1 0 1

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Volume Module:

Base Vol: 0 0 0 182 0 577 0 500 1151 0 113 109

Growth Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00

Initial Bse: 0 0 0 182 0 577 0 500 1151 0 113 109

Added Vol: 0 0 0 0 0 0 0 0 0 0 0 0

PasserByVol: 0 0 0 0 0 0 0 0 0 0 0 0

Initial Fut: 0 0 0 182 0 577 0 500 1151 0 113 109

User Adj: 1.00 1.00 1.00 1.00 1.00 0.00 1.00 1.00 0.00 1.00 1.00 0.00

PHF Adj: 1.00 1.00 1.00 1.00 1.00 0.00 1.00 1.00 0.00 1.00 1.00 0.00

PHF Volume: 0 0 0 182 0 0 0 500 0 0 113 0

Reduct Vol: 0 0 0 0 0 0 0 0 0 0 0 0

Reduced Vol: 0 0 0 182 0 0 0 500 0 0 113 0

PCE Adj: 1.00 1.00 1.00 1.00 1.00 0.00 1.00 1.00 0.00 1.00 1.00 0.00

MLF Adj: 1.00 1.00 1.00 1.00 1.00 0.00 1.00 1.00 0.00 1.00 1.00 0.00

FinalVolume: 0 0 0 182 0 0 0 500 0 0 113 0

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Saturation Flow Module:

Sat/Lane: 1700 1700 1700 1700 1700 1700 1700 1700 1700 1700 1700 1700

Adjustment: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00

Lanes: 0.00 0.00 0.00 2.00 0.00 1.00 0.00 2.00 1.00 0.00 1.00 1.00

Final Sat.: 0 0 0 3400 0 1700 0 3400 1700 0 1700 1700

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Capacity Analysis Module:

Vol/Sat: 0.00 0.00 0.00 0.05 0.00 0.00 0.00 0.15 0.00 0.00 0.07 0.00

Crit Moves: ****

Level Of Service Computation Report

ICU 1(Loss as Cycle Length %) Method (Future Volume Alternative)

Intersection #12 I-5 NB Ramps/Camino Las Ramblas

Cycle (sec): 100 Critical Vol./Cap.(X): 0.212
Loss Time (sec): 5 Average Delay (sec/veh): xxxxxx
Optimal Cycle: 16 Level Of Service: A

Street Name: I-5 NB Ramps Camino Las Ramblas

Approach: North Bound South Bound East Bound West Bound

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

Control: Permitted Permitted Permitted Permitted

Rights: Include Include Ignore Include

Min. Green: 0 0 0 0 0 0 0 0 0 0 0 0

Y+R: 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0

Lanes: 0 1 0 0 1 1 0 0 0 1 1 0 0 2 0 1 0 0 0 2 1 0

-----|-----|-----|-----|-----|

Volume Module:

Base Vol: 6 21 97 6 0 55 41 321 423 0 389 5

Growth Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00

Initial Bse: 6 21 97 6 0 55 41 321 423 0 389 5

Added Vol: 0 0 0 0 0 0 0 0 0 0 0 0

PasserByVol: 0 0 0 0 0 0 0 0 0 0 0 0

Initial Fut: 6 21 97 6 0 55 41 321 423 0 389 5

User Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 0.00 1.00 1.00 1.00

PHF Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 0.00 1.00 1.00 1.00

PHF Volume: 6 21 97 6 0 55 41 321 0 0 389 5

Reduct Vol: 0 0 0 0 0 0 0 0 0 0 0 0

Reduced Vol: 6 21 97 6 0 55 41 321 0 0 389 5

PCE Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 0.00 1.00 1.00 1.00

MLF Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 0.00 1.00 1.00 1.00

FinalVolume: 6 21 97 6 0 55 41 321 0 0 389 5

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Saturation Flow Module:

Sat/Lane: 1700 1700 1700 1700 1700 1700 1700 1700 1700 1700 1700 1700

Adjustment: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00

Lanes: 0.22 0.78 1.00 1.00 0.00 1.00 1.00 2.00 1.00 0.00 2.96 0.04

Final Sat.: 378 1322 1700 1700 0 1700 1700 3400 1700 0 5035 65

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Capacity Analysis Module:





















Vol/Sat: 0.00 0.02 0.06 0.00 0.00 0.03 0.02 0.09 0.00 0.00 0.08 0.08

Crit Moves: **** **** **** ****

HCM Signalized Intersection Capacity Analysis

12: I-5 NB Ramps & Camino Las Ramblas

02/19/2021

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	41	321	423	0	389	5	6	21	97	6	0	55
Future Volume (vph)	41	321	423	0	389	5	6	21	97	6	0	55
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
Lane Util. Factor	1.00	0.95	1.00		0.91			1.00	1.00	1.00		1.00
Frt	1.00	1.00	0.85		1.00			1.00	0.85	1.00		0.85
Flt Protected	0.95	1.00	1.00		1.00			0.99	1.00	0.95		1.00
Satd. Flow (prot)	1770	3539	1583		5076			1843	1583	1770		1583
Flt Permitted	0.50	1.00	1.00		1.00			0.99	1.00	0.74		1.00
Satd. Flow (perm)	932	3539	1583		5076			1843	1583	1377		1583
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	43	338	445	0	409	5	6	22	102	6	0	58
RTOR Reduction (vph)	0	0	0	0	4	0	0	0	51	0	0	29
Lane Group Flow (vph)	43	338	445	0	410	0	0	28	51	6	0	29
Turn Type	Perm	NA	Free		NA		Perm	NA	Perm	Perm		Perm
Protected Phases		4			8			2				
Permitted Phases	4		Free				2		2	6		6
Actuated Green, G (s)	9.1	9.1	36.2		9.1			18.1	18.1	18.1		18.1
Effective Green, g (s)	9.1	9.1	36.2		9.1			18.1	18.1	18.1		18.1
Actuated g/C Ratio	0.25	0.25	1.00		0.25			0.50	0.50	0.50		0.50
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)	234	889	1583		1276			921	791	688		791
v/s Ratio Prot		0.10			0.08							
v/s Ratio Perm	0.05		c0.28					0.02	0.03	0.00		0.02
v/c Ratio	0.18	0.38	0.28		0.32			0.03	0.06	0.01		0.04
Uniform Delay, d1	10.6	11.2	0.0		11.0			4.6	4.7	4.5		4.6
Progression Factor	1.00	1.00	1.00		1.00			1.00	1.00	1.00		1.00
Incremental Delay, d2	0.4	0.3	0.4		0.1			0.1	0.2	0.0		0.1
Delay (s)	11.0	11.5	0.4		11.2			4.7	4.8	4.6		4.7
Level of Service	B	B	A		B			A	A	A		A
Approach Delay (s)		5.5			11.2			4.8			4.7	
Approach LOS		A			B			A			A	
Intersection Summary												
HCM 2000 Control Delay			7.0							A		
HCM 2000 Volume to Capacity ratio			0.37									
Actuated Cycle Length (s)			36.2							9.0		
Intersection Capacity Utilization			29.4%							A		
ICU Level of Service												
Analysis Period (min)			15									

c Critical Lane Group

APPENDIX C

OPENING YEAR (2025) LOS WORKSHEETS

HCM 6th TWSC
 1: Island Way & Dana Point Harbor Drive

11/19/2020

Intersection						
Int Delay, s/veh	3.6					
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	170	27	121	171	18	86
Future Vol, veh/h	170	27	121	171	18	86
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	300	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	95	95	95	95	95	95
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	179	28	127	180	19	91

Major/Minor	Major1	Major2	Minor1		
Conflicting Flow All	0	0	207	0	627 193
Stage 1	-	-	-	-	193 -
Stage 2	-	-	-	-	434 -
Critical Hdwy	-	-	4.12	-	6.42 6.22
Critical Hdwy Stg 1	-	-	-	-	5.42 -
Critical Hdwy Stg 2	-	-	-	-	5.42 -
Follow-up Hdwy	-	-	2.218	-	3.518 3.318
Pot Cap-1 Maneuver	-	-	1364	-	447 849
Stage 1	-	-	-	-	840 -
Stage 2	-	-	-	-	653 -
Platoon blocked, %	-	-	-	-	-
Mov Cap-1 Maneuver	-	-	1364	-	405 849
Mov Cap-2 Maneuver	-	-	-	-	405 -
Stage 1	-	-	-	-	840 -
Stage 2	-	-	-	-	592 -

Approach	EB	WB	NB
HCM Control Delay, s	0	3.3	11
HCM LOS			B

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	714	-	-	1364	-
HCM Lane V/C Ratio	0.153	-	-	0.093	-
HCM Control Delay (s)	11	-	-	7.9	-
HCM Lane LOS	B	-	-	A	-
HCM 95th %tile Q(veh)	0.5	-	-	0.3	-

Level Of Service Computation Report

ICU 1(Loss as Cycle Length %) Method (Future Volume Alternative)

Intersection #2 Casitas Place/Dana Point Harbor Drive

Cycle (sec): 100 Critical Vol./Cap.(X): 0.177
Loss Time (sec): 5 Average Delay (sec/veh): xxxxxx
Optimal Cycle: 15 Level Of Service: A

Street Name: Casitas Place Dana Point Harbor Drive
Approach: North Bound South Bound East Bound West Bound
Movement: L - T - R L - T - R L - T - R L - T - R

Control: Protected Protected Protected Prot+Permit
Rights: Include Include Include Include
Min. Green: 0 0 0 0 0 0 0 0 0 0 0 0
Y+R: 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0
Lanes: 1 0 0 0 1 0 0 0 0 0 0 0 1 0 2 0 0

Volume Module:

Base Vol: 4 0 27 0 0 0 0 216 20 57 263 0
Growth Adj: 1.02 1.02 1.02 1.02 1.02 1.02 1.02 1.02 1.02 1.02 1.02 1.02
Initial Bse: 4 0 28 0 0 0 0 221 21 58 270 0
Added Vol: 0 0 0 0 0 0 0 0 0 0 0 0
Cm2,3,17,18: 0 0 0 0 0 0 0 0 -1 0 10 28 0
Initial Fut: 4 0 28 0 0 0 0 220 21 68 298 0
User Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
PHF Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
PHF Volume: 4 0 28 0 0 0 0 220 21 68 298 0
Reduct Vol: 0 0 0 0 0 0 0 0 0 0 0 0
Reduced Vol: 4 0 28 0 0 0 0 220 21 68 298 0
PCE Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
MLF Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
FinalVolume: 4 0 28 0 0 0 0 220 21 68 298 0

Saturation Flow Module:

Sat/Lane: 1700 1700 1700 1700 1700 1700 1700 1700 1700 1700 1700 1700
Adjustment: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
Lanes: 1.00 0.00 1.00 0.00 0.00 0.00 0.00 1.83 0.17 1.00 2.00 0.00
Final Sat.: 1700 0 1700 0 0 0 0 3111 289 1700 3400 0

Capacity Analysis Module:

Vol/Sat: 0.00 0.00 0.02 0.00 0.00 0.00 0.00 0.07 0.07 0.04 0.09 0.00
Crit Moves: ****

Level Of Service Computation Report

ICU 1(Loss as Cycle Length %) Method (Future Volume Alternative)

Intersection #3 Golden Lantern/PCH

Cycle (sec): 100 Critical Vol./Cap.(X): 0.637
Loss Time (sec): 5 Average Delay (sec/veh): xxxxxx
Optimal Cycle: 31 Level Of Service: B

Street Name: Golden Lantern PCH

Approach: North Bound South Bound East Bound West Bound

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

Control: Protected Protected Protected Protected

Rights: Include Include Include Include

Min. Green: 0 0 0 0 0 0 0 0 0 0 0 0

Y+R: 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0

Lanes: 1 0 1 1 0 2 0 1 0 1 1 0 1 0 1 1 0

Volume Module:

Base Vol: 42 96 13 247 194 91 36 583 29 49 1046 129
Growth Adj: 1.02 1.02 1.02 1.02 1.02 1.02 1.02 1.02 1.02 1.02 1.02 1.02
Initial Bse: 43 98 13 253 199 93 37 598 30 50 1072 132
Added Vol: 0 0 0 4 0 38 45 56 0 0 73 12
Cm2,3,17,18: 7 9 0 0 11 0 0 10 0 0 23 0
Initial Fut: 50 107 13 257 210 131 82 664 30 50 1168 144
User Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
PHF Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
PHF Volume: 50 107 13 257 210 131 82 664 30 50 1168 144
Reduct Vol: 0 0 0 0 0 0 0 0 0 0 0 0
Reduced Vol: 50 107 13 257 210 131 82 664 30 50 1168 144
PCE Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
MLF Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
FinalVolume: 50 107 13 257 210 131 82 664 30 50 1168 144

Saturation Flow Module:

Sat/Lane: 1700 1700 1700 1700 1700 1700 1700 1700 1700 1700 1700 1700
Adjustment: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
Lanes: 1.00 1.78 0.22 2.00 1.00 1.00 1.00 1.91 0.09 1.00 1.78 0.22
Final Sat.: 1700 3025 375 3400 1700 1700 1700 3254 146 1700 3026 374

Capacity Analysis Module:

Vol/Sat: 0.03 0.04 0.04 0.08 0.12 0.08 0.05 0.20 0.20 0.03 0.39 0.39
Crit Moves: **** **** **** ****

Level Of Service Computation Report

ICU 1(Loss as Cycle Length %) Method (Future Volume Alternative)

Intersection #4 Golden Lantern/Del Prado Avenue

Cycle (sec): 100 Critical Vol./Cap.(X): 0.238
Loss Time (sec): 5 Average Delay (sec/veh): xxxxxx
Optimal Cycle: 16 Level Of Service: A

Street Name: Golden Lantern Del Prado Avenue

Approach: North Bound South Bound East Bound West Bound

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

Control: Protected Protected Prot+Permit Prot+Permit

Rights: Include Include Include Include

Min. Green: 0 0 0 0 0 0 0 0 0 0 0 0

Y+R: 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0

Lanes: 1 0 1 1 0 1 0 2 0 1 1 0 0 1 0 1 1 0 1

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Volume Module:

Base Vol: 43 110 19 49 150 24 36 82 75 23 56 19

Growth Adj: 1.02 1.02 1.02 1.02 1.02 1.02 1.02 1.02 1.02 1.02 1.02 1.02

Initial Bse: 44 113 19 50 154 25 37 84 77 24 57 19

Added Vol: 0 0 0 0 0 0 0 0 0 0 0 0

Cm2,3,17,18: 0 17 0 0 3 0 0 0 12 0 0 0

Initial Fut: 44 130 19 50 157 25 37 84 89 24 57 19

User Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00

PHF Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00

PHF Volume: 44 130 19 50 157 25 37 84 89 24 57 19

Reduct Vol: 0 0 0 0 0 0 0 0 0 0 0 0

Reduced Vol: 44 130 19 50 157 25 37 84 89 24 57 19

PCE Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00

MLF Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00

FinalVolume: 44 130 19 50 157 25 37 84 89 24 57 19

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Saturation Flow Module:

Sat/Lane: 1700 1700 1700 1700 1700 1700 1700 1700 1700 1700 1700 1700

Adjustment: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00

Lanes: 1.00 1.74 0.26 1.00 2.00 1.00 1.00 0.49 0.51 1.00 1.00 1.00

Final Sat.: 1700 2956 444 1700 3400 1700 1700 826 874 1700 1700 1700

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Capacity Analysis Module:

Vol/Sat: 0.03 0.04 0.04 0.03 0.05 0.01 0.02 0.10 0.10 0.01 0.03 0.01

Crit Moves: **** **** **** ****

Level Of Service Computation Report

ICU 1(Loss as Cycle Length %) Method (Future Volume Alternative)

Intersection #5 Golden Lantern/Dana Point Harbor Drive

Cycle (sec): 100 Critical Vol./Cap.(X): 0.393
Loss Time (sec): 5 Average Delay (sec/veh): xxxxxx
Optimal Cycle: 20 Level Of Service: A

Street Name: Golden Lantern Dana Point Harbor Drive

Approach: North Bound South Bound East Bound West Bound

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

Control: Protected Protected Protected Protected

Rights: Include Include Include Include

Min. Green: 0 0 0 0 0 0 0 0 0 0 0 0

Y+R: 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0

Lanes: 1 0 1 1 0 1 0 1 1 0 1 0 1 1 0

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Volume Module:

Base Vol: 32 42 43 48 88 96 62 174 10 113 194 96

Growth Adj: 1.02 1.02 1.02 1.02 1.02 1.02 1.02 1.02 1.02 1.02 1.02 1.02

Initial Bse: 33 43 44 49 90 98 64 178 10 116 199 98

Added Vol: 0 0 0 0 0 0 0 0 0 0 0 0

Cm2,3,17,18: 0 14 130 3 12 0 0 2 0 145 44 5

Initial Fut: 33 57 174 52 102 98 64 180 10 261 243 103

User Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00

PHF Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00

PHF Volume: 33 57 174 52 102 98 64 180 10 261 243 103

Reduct Vol: 0 0 0 0 0 0 0 0 0 0 0 0

Reduced Vol: 33 57 174 52 102 98 64 180 10 261 243 103

PCE Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00

MLF Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00

FinalVolume: 33 57 174 52 102 98 64 180 10 261 243 103

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Saturation Flow Module:

Sat/Lane: 1700 1700 1700 1700 1700 1700 1700 1700 1700 1700 1700 1700

Adjustment: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00

Lanes: 1.00 1.00 1.00 1.00 1.02 0.98 1.00 1.89 0.11 1.00 1.40 0.60

Final Sat.: 1700 1700 1700 1700 1732 1668 1700 3217 183 1700 2385 1015

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Capacity Analysis Module:

Vol/Sat: 0.02 0.03 0.10 0.03 0.06 0.06 0.04 0.06 0.06 0.15 0.10 0.10

Crit Moves: **** **** **** ****

Level Of Service Computation Report

ICU 1(Loss as Cycle Length %) Method (Future Volume Alternative)

Intersection #6 Puerto Place/Dana Point Harbor Drive

Cycle (sec): 100 Critical Vol./Cap.(X): 0.254
Loss Time (sec): 5 Average Delay (sec/veh): xxxxxx
Optimal Cycle: 16 Level Of Service: A

Street Name: Puerto Place Dana Point Harbor Drive
Approach: North Bound South Bound East Bound West Bound
Movement: L - T - R L - T - R L - T - R L - T - R

Control: Protected Protected Protected Protected
Rights: Include Include Include Include
Min. Green: 0 0 0 0 0 0 0 0 0 0 0 0
Y+R: 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0
Lanes: 1 0 0 0 1 0 0 0 0 0 0 0 2 0 1 1 0 2 0 0

Volume Module:

Base Vol: 18 0 26 0 0 0 0 0 234 32 25 356 0
Growth Adj: 1.02 1.02 1.02 1.02 1.02 1.02 1.02 1.02 1.02 1.02 1.02 1.02 1.02
Initial Bse: 18 0 27 0 0 0 0 0 240 33 26 365 0
Added Vol: 0 0 0 0 0 0 0 0 0 0 0 0 0
Cm2,3,17,18: 5 0 43 0 0 0 0 0 131 3 31 189 0
Initial Fut: 23 0 70 0 0 0 0 0 371 36 57 554 0
User Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
PHF Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
PHF Volume: 23 0 70 0 0 0 0 0 371 36 57 554 0
Reduct Vol: 0 0 0 0 0 0 0 0 0 0 0 0 0
Reduced Vol: 23 0 70 0 0 0 0 0 371 36 57 554 0
PCE Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
MLF Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
FinalVolume: 23 0 70 0 0 0 0 0 371 36 57 554 0

Saturation Flow Module:

Sat/Lane: 1700 1700 1700 1700 1700 1700 1700 1700 1700 1700 1700 1700
Adjustment: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
Lanes: 1.00 0.00 1.00 0.00 0.00 0.00 0.00 2.00 1.00 1.00 2.00 0.00
Final Sat.: 1700 0 1700 0 0 0 0 3400 1700 1700 3400 0

Capacity Analysis Module:

Vol/Sat: 0.01 0.00 0.04 0.00 0.00 0.00 0.00 0.11 0.02 0.03 0.16 0.00
Crit Moves: ****

Level Of Service Computation Report

ICU 1(Loss as Cycle Length %) Method (Future Volume Alternative)

Intersection #7 Dana Point Harbor Drive/Park Lantern

Cycle (sec): 100 Critical Vol./Cap.(X): 0.297
Loss Time (sec): 5 Average Delay (sec/veh): xxxxxx
Optimal Cycle: 17 Level Of Service: A

Street Name: Dana Point Harbor Drive Park Landtern

Approach: North Bound South Bound East Bound West Bound

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

Control: Protected Protected Permitted Permitted

Rights: Include Include Include Include

Min. Green: 0 0 0 0 0 0 0 0 0 0 0 0 0

Y+R: 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0

Lanes: 1 0 2 0 1 1 0 1 1 0 0 0 1! 0 0 1 0 0 1 0

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Volume Module:

Base Vol: 12 212 10 18 444 36 32 0 8 4 0 12

Growth Adj: 1.02 1.02 1.02 1.02 1.02 1.02 1.02 1.02 1.02 1.02 1.02 1.02

Initial Bse: 12 217 10 18 455 37 33 0 8 4 0 12

Added Vol: 0 0 0 12 0 0 0 0 0 0 0 4

Cm2,3,17,18: 0 179 0 0 225 0 0 0 0 0 0 0

Initial Fut: 12 396 10 30 680 37 33 0 8 4 0 16

User Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00

PHF Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00

PHF Volume: 12 396 10 30 680 37 33 0 8 4 0 16

Reduct Vol: 0 0 0 0 0 0 0 0 0 0 0 0

Reduced Vol: 12 396 10 30 680 37 33 0 8 4 0 16

PCE Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00

MLF Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00

FinalVolume: 12 396 10 30 680 37 33 0 8 4 0 16

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Saturation Flow Module:

Sat/Lane: 1700 1700 1700 1700 1700 1700 1700 1700 1700 1700 1700 1700

Adjustment: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00

Lanes: 1.00 2.00 1.00 1.00 1.90 0.10 0.79 0.01 0.20 1.00 0.00 1.00

Final Sat.: 1700 3400 1700 1700 3225 175 1360 0 340 1700 0 1700

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Capacity Analysis Module:

Vol/Sat: 0.01 0.12 0.01 0.02 0.21 0.21 0.02 0.00 0.02 0.00 0.00 0.01

Crit Moves: **** **** **** ****

Level Of Service Computation Report

ICU 1(Loss as Cycle Length %) Method (Future Volume Alternative)

Intersection #8 Del Obispo Street-Dana Point Harbor Drive/PCH

Cycle (sec): 100 Critical Vol./Cap.(X): 0.647
Loss Time (sec): 5 Average Delay (sec/veh): xxxxxx
Optimal Cycle: 32 Level Of Service: B

Street Name:Del Obispo Street-Dana Point Harb PCH

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

Control: Protected Protected Protected Protected
Rights: Ovl Include Include Include
Min. Green: 0 0 0 0 0 0 0 0 0 0 0 0
Y+R: 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0
Lanes: 1 0 1 0 2 2 0 1 0 1 1 0 2 1 0

Volume Module:

Base Vol: 23 52 187 400 106 105 80 1011 61 328 1443 256
Growth Adj: 1.02 1.02 1.02 1.02 1.02 1.02 1.02 1.02 1.02 1.02 1.02 1.02
Initial Bse: 24 53 192 410 109 108 82 1036 63 336 1479 262
Added Vol: 0 2 2 19 5 19 8 52 0 7 67 13
Cm2,3,17,18: 0 28 151 16 11 23 10 0 0 214 0 4
Initial Fut: 24 83 345 445 125 150 100 1088 63 557 1546 279
User Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
PHF Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
PHF Volume: 24 83 345 445 125 150 100 1088 63 557 1546 279
Reduct Vol: 0 0 0 0 0 0 0 0 0 0 0 0
Reduced Vol: 24 83 345 445 125 150 100 1088 63 557 1546 279
PCE Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
MLF Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
FinalVolume: 24 83 345 445 125 150 100 1088 63 557 1546 279
OvlAdjVol: 0

Saturation Flow Module:

Sat/Lane: 1700 1700 1700 1700 1700 1700 1700 1700 1700 1700 1700 1700
Adjustment: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
Lanes: 1.00 1.00 2.00 2.00 1.00 1.00 1.00 2.84 0.16 2.00 2.54 0.46
Final Sat.: 1700 1700 3400 3400 1700 1700 1700 4823 277 3400 4319 781

Capacity Analysis Module:

Vol/Sat: 0.01 0.05 0.10 0.13 0.07 0.09 0.06 0.23 0.23 0.16 0.36 0.36
OvlAdjV/S: 0.00
Crit Moves: **** *

Level Of Service Computation Report

ICU 1(Loss as Cycle Length %) Method (Future Volume Alternative)

Intersection #9 Del Opisobo Street/Stonehill Drive

Cycle (sec): 100 Critical Vol./Cap.(X): 0.828
Loss Time (sec): 5 Average Delay (sec/veh): xxxxxx
Optimal Cycle: 59 Level Of Service: D

Street Name: Del Opisobo Street Stonehill Drive

Approach: North Bound South Bound East Bound West Bound

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

Control: Protected Protected Protected Protected

Rights: Include Include Include Include

Min. Green: 0 0 0 0 0 0 0 0 0 0 0 0

Y+R: 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0

Lanes: 1 0 1 1 0 1 0 1 1 0 1 0 2 0 1 1 0 2 0 1

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Volume Module:

Base Vol: 124 245 141 383 455 216 153 1086 119 76 516 224

Growth Adj: 1.02 1.02 1.02 1.02 1.02 1.02 1.02 1.02 1.02 1.02 1.02 1.02

Initial Bse: 127 251 145 393 466 221 157 1113 122 78 529 230

Added Vol: 0 21 3 35 42 0 0 0 0 1 0 51

Cm2,3,17,18: 6 12 43 2 12 0 0 24 2 9 20 1

Initial Fut: 133 284 191 430 520 221 157 1137 124 88 549 282

User Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00

PHF Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00

PHF Volume: 133 284 191 430 520 221 157 1137 124 88 549 282

Reduct Vol: 0 0 0 0 0 0 0 0 0 0 0 0

Reduced Vol: 133 284 191 430 520 221 157 1137 124 88 549 282

PCE Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00

MLF Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00

FinalVolume: 133 284 191 430 520 221 157 1137 124 88 549 282

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Saturation Flow Module:

Sat/Lane: 1700 1700 1700 1700 1700 1700 1700 1700 1700 1700 1700 1700

Adjustment: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00

Lanes: 1.00 1.20 0.80 1.00 1.40 0.60 1.00 2.00 1.00 1.00 2.00 1.00

Final Sat.: 1700 2035 1365 1700 2385 1015 1700 3400 1700 1700 3400 1700

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Capacity Analysis Module:

Vol/Sat: 0.08 0.14 0.14 0.25 0.22 0.22 0.09 0.33 0.07 0.05 0.16 0.17

Crit Moves: **** **** **** ****

Level Of Service Computation Report

ICU 1(Loss as Cycle Length %) Method (Future Volume Alternative)

Intersection #9 Del Opisobo Street/Stonehill Drive

Cycle (sec): 100 Critical Vol./Cap.(X): 0.741
 Loss Time (sec): 5 Average Delay (sec/veh): xxxxxx
 Optimal Cycle: 42 Level Of Service: C

Street Name:	Del Opisobo Street						Stonehill Drive					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Protected			Protected			Protected			Protected		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	1	0	1	1	0	1	1	0	2	1	0	2

Volume Module:

Base Vol:	124	245	141	383	455	216	153	1086	119	76	516	224
Growth Adj:	1.02	1.02	1.02	1.02	1.02	1.02	1.02	1.02	1.02	1.02	1.02	1.02
Initial Bse:	127	251	145	393	466	221	157	1113	122	78	529	230
Added Vol:	0	21	3	35	42	0	0	0	0	1	0	51
Cm2,3,17,18:	6	12	43	2	12	0	0	24	2	9	20	1
Initial Fut:	133	284	191	430	520	221	157	1137	124	88	549	282
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	133	284	191	430	520	221	157	1137	124	88	549	282
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	133	284	191	430	520	221	157	1137	124	88	549	282
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	133	284	191	430	520	221	157	1137	124	88	549	282

Saturation Flow Module:

Sat/Lane:	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700
Adjustment:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Lanes:	1.00	1.20	0.80	1.00	1.40	0.60	1.00	2.71	0.29	1.00	2.00	1.00
Final Sat.:	1700	2035	1365	1700	2385	1015	1700	4599	501	1700	3400	1700

Capacity Analysis Module:

Vol/Sat:	0.08	0.14	0.14	0.25	0.22	0.22	0.09	0.25	0.25	0.05	0.16	0.17
Crit Moves:	****			****			****			****		

Level Of Service Computation Report

ICU 1(Loss as Cycle Length %) Method (Future Volume Alternative)

Intersection #10 Camino Capistrano/Stonehill Drive

Cycle (sec): 100 Critical Vol./Cap.(X): 0.667
Loss Time (sec): 5 Average Delay (sec/veh): xxxxxx
Optimal Cycle: 34 Level Of Service: B

Street Name: Camino Capistrano Stonehill Drive

Approach: North Bound South Bound East Bound West Bound

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

Control: Split Phase Split Phase Split Phase Split Phase

Rights: Include Ovl Include Include

Min. Green: 0 0 0 0 0 0 0 0 0 0 0 0

Y+R: 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0

Lanes: 1 1 0 0 1 1 0 2 0 2 1 0 0 0 0 0

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Volume Module:

Base Vol: 281 274 254 54 287 595 281 1060 256 0 0 0

Growth Adj: 1.02 1.02 1.02 1.02 1.02 1.02 1.02 1.02 1.02 1.02 1.02 1.02

Initial Bse: 288 281 260 55 294 610 288 1087 262 0 0 0

Added Vol: 54 0 29 0 0 0 0 19 13 0 0 0

Cm2,3,17,18: 55 -6 -26 0 -39 75 33 65 45 0 0 0

Initial Fut: 397 275 263 55 255 685 321 1171 320 0 0 0

User Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00

PHF Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00

PHF Volume: 397 275 263 55 255 685 321 1171 320 0 0 0

Reduct Vol: 0 0 0 0 0 0 0 0 0 0 0 0

Reduced Vol: 397 275 263 55 255 685 321 1171 320 0 0 0

PCE Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00

MLF Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00

FinalVolume: 397 275 263 55 255 685 321 1171 320 0 0 0

OvlAdjVol: 0

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Saturation Flow Module:

Sat/Lane: 1700 1700 1700 1700 1700 1700 1700 1700 1700 1700 1700 1700

Adjustment: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00

Lanes: 1.18 0.82 1.00 1.00 2.00 2.00 1.00 2.00 1.00 0.00 0.00 0.00

Final Sat.: 2009 1391 1700 1700 3400 3400 1700 3400 1700 0 0 0

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Capacity Analysis Module:

Vol/Sat: 0.20 0.20 0.15 0.03 0.08 0.20 0.19 0.34 0.19 0.00 0.00 0.00

OvlAdjV/S: 0.00

Crit Moves: **** **** ****

HCM 6th Signalized Intersection Summary
 10: Camino Capistrano & Stonehill Drive/I-5 NB Ramp

02/19/2021



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↘	↑↑	↗				↘	↗	↗	↘	↑↑	↗↘
Traffic Volume (veh/h)	321	1171	320	0	0	0	397	275	263	55	255	685
Future Volume (veh/h)	321	1171	320	0	0	0	397	275	263	55	255	685
Initial Q (Qb), veh	0	0	0				0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00				1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00				1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No					No			No		
Adj Sat Flow, veh/h/ln	1870	1870	1870				1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	338	1233	0				354	379	277	58	268	721
Peak Hour Factor	0.95	0.95	0.95				0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	2	2	2				2	2	2	2	2	2
Cap, veh/h	675	1346					479	503	426	359	716	1619
Arrive On Green	0.38	0.38	0.00				0.27	0.27	0.27	0.20	0.20	0.20
Sat Flow, veh/h	1781	3554	1585				1781	1870	1585	1781	3554	2790
Grp Volume(v), veh/h	338	1233	0				354	379	277	58	268	721
Grp Sat Flow(s),veh/h/ln	1781	1777	1585				1781	1870	1585	1781	1777	1395
Q Serve(g_s), s	13.0	29.5	0.0				16.2	16.6	13.8	2.4	5.8	13.1
Cycle Q Clear(g_c), s	13.0	29.5	0.0				16.2	16.6	13.8	2.4	5.8	13.1
Prop In Lane	1.00		1.00				1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	675	1346					479	503	426	359	716	1619
V/C Ratio(X)	0.50	0.92					0.74	0.75	0.65	0.16	0.37	0.45
Avail Cap(c_a), veh/h	688	1373					479	503	426	359	716	1619
HCM Platoon Ratio	1.00	1.00	1.00				1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	0.00				1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	21.3	26.4	0.0				29.8	30.0	28.9	29.4	30.8	10.6
Incr Delay (d2), s/veh	0.6	9.8	0.0				9.9	10.1	7.5	1.0	1.5	0.9
Initial Q Delay(d3),s/veh	0.0	0.0	0.0				0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	5.3	13.6	0.0				8.1	8.7	6.0	1.1	2.6	8.1
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	21.9	36.2	0.0				39.7	40.0	36.5	30.4	32.3	11.5
LnGrp LOS	C	D					D	D	D	C	C	B
Approach Vol, veh/h		1571	A				1010			1047		
Approach Delay, s/veh		33.1					38.9			17.9		
Approach LOS		C					D			B		
Timer - Assigned Phs		2		4			6					
Phs Duration (G+Y+Rc), s		28.5		38.3			22.5					
Change Period (Y+Rc), s		4.5		4.5			4.5					
Max Green Setting (Gmax), s		24.0		34.5			18.0					
Max Q Clear Time (g_c+I1), s		18.6		31.5			15.1					
Green Ext Time (p_c), s		2.3		2.3			1.5					

Intersection Summary

HCM 6th Ctrl Delay	30.3
HCM 6th LOS	C

Notes

- User approved volume balancing among the lanes for turning movement.
- User approved changes to right turn type.
- Unsignalized Delay for [EBR] is excluded from calculations of the approach delay and intersection delay.

Level Of Service Computation Report

ICU 1(Loss as Cycle Length %) Method (Future Volume Alternative)

Intersection #11 I-5 SB Ramps/Camino Las Ramblas

Cycle (sec): 100 Critical Vol./Cap.(X): 0.305
Loss Time (sec): 5 Average Delay (sec/veh): xxxxxx
Optimal Cycle: 17 Level Of Service: A

Street Name: I-5 SB Ramps Camino Las Ramblas

Approach: North Bound South Bound East Bound West Bound

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

Control: Protected Protected Protected Protected

Rights: Include Ignore Ignore Ignore

Min. Green: 0 0 0 0 0 0 0 0 0 0 0 0

Y+R: 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0

Lanes: 0 0 0 0 0 2 0 0 0 1 0 0 2 0 1 0 0 1 0 1

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Volume Module:

Base Vol: 0 0 0 205 0 781 0 489 1039 0 174 135

Growth Adj: 1.02 1.02 1.02 1.02 1.02 1.02 1.02 1.02 1.02 1.02 1.02 1.02

Initial Bse: 0 0 0 210 0 801 0 501 1065 0 178 138

Added Vol: 0 0 0 0 0 35 0 22 70 0 35 0

Cm2,3,17,18: 0 0 0 0 0 22 0 132 0 0 28 0

Initial Fut: 0 0 0 210 0 858 0 655 1135 0 241 138

User Adj: 1.00 1.00 1.00 1.00 1.00 0.00 1.00 1.00 0.00 1.00 1.00 0.00

PHF Adj: 1.00 1.00 1.00 1.00 1.00 0.00 1.00 1.00 0.00 1.00 1.00 0.00

PHF Volume: 0 0 0 210 0 0 0 655 0 0 241 0

Reduct Vol: 0 0 0 0 0 0 0 0 0 0 0 0

Reduced Vol: 0 0 0 210 0 0 0 655 0 0 241 0

PCE Adj: 1.00 1.00 1.00 1.00 1.00 0.00 1.00 1.00 0.00 1.00 1.00 0.00

MLF Adj: 1.00 1.00 1.00 1.00 1.00 0.00 1.00 1.00 0.00 1.00 1.00 0.00

FinalVolume: 0 0 0 210 0 0 0 655 0 0 241 0

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Saturation Flow Module:

Sat/Lane: 1700 1700 1700 1700 1700 1700 1700 1700 1700 1700 1700 1700

Adjustment: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00

Lanes: 0.00 0.00 0.00 2.00 0.00 1.00 0.00 2.00 1.00 0.00 1.00 1.00

Final Sat.: 0 0 0 3400 0 1700 0 3400 1700 0 1700 1700

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Capacity Analysis Module:

Vol/Sat: 0.00 0.00 0.00 0.06 0.00 0.00 0.00 0.19 0.00 0.00 0.14 0.00

Crit Moves: ****

Level Of Service Computation Report

ICU 1(Loss as Cycle Length %) Method (Future Volume Alternative)

Intersection #12 I-5 NB Ramps/Camino Las Ramblas

Cycle (sec): 100 Critical Vol./Cap.(X): 0.293
Loss Time (sec): 5 Average Delay (sec/veh): xxxxxx
Optimal Cycle: 17 Level Of Service: A

Street Name: I-5 NB Ramps Camino Las Ramblas

Approach: North Bound South Bound East Bound West Bound

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

Control: Permitted Permitted Permitted Permitted

Rights: Include Include Ignore Include

Min. Green: 0 0 0 0 0 0 0 0 0 0 0 0

Y+R: 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0

Lanes: 0 1 0 0 1 1 0 0 0 1 1 0 0 2 0 1 0 0 0 2 1 0

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Volume Module:

Base Vol: 1 12 87 8 0 93 22 273 355 0 648 7

Growth Adj: 1.02 1.02 1.02 1.02 1.02 1.02 1.02 1.02 1.02 1.02 1.02 1.02

Initial Bse: 1 12 89 8 0 95 23 280 364 0 664 7

Added Vol: 35 0 0 0 0 0 0 0 22 0 1 0

Cm2,3,17,18: 35 0 0 0 0 0 0 0 132 0 0 0

Initial Fut: 71 12 89 8 0 95 23 280 518 0 665 7

User Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 0.00 1.00 1.00 1.00

PHF Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 0.00 1.00 1.00 1.00

PHF Volume: 71 12 89 8 0 95 23 280 0 0 665 7

Reduct Vol: 0 0 0 0 0 0 0 0 0 0 0 0

Reduced Vol: 71 12 89 8 0 95 23 280 0 0 665 7

PCE Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 0.00 1.00 1.00 1.00

MLF Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 0.00 1.00 1.00 1.00

FinalVolume: 71 12 89 8 0 95 23 280 0 0 665 7

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Saturation Flow Module:

Sat/Lane: 1700 1700 1700 1700 1700 1700 1700 1700 1700 1700 1700 1700

Adjustment: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00

Lanes: 0.85 0.15 1.00 1.00 0.00 1.00 1.00 2.00 1.00 0.00 2.97 0.03

Final Sat.: 1449 251 1700 1700 0 1700 1700 3400 1700 0 5046 54

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Capacity Analysis Module:

Vol/Sat: 0.04 0.05 0.05 0.00 0.00 0.06 0.01 0.08 0.00 0.00 0.13 0.13

Crit Moves: **** **** **** ****

HCM Signalized Intersection Capacity Analysis

12: I-5 NB Ramps & Camino Las Ramblas

02/19/2021



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	23	280	518	0	665	7	71	12	89	8	0	95
Future Volume (vph)	23	280	518	0	665	7	71	12	89	8	0	95
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
Lane Util. Factor	1.00	0.95	1.00		0.91			1.00	1.00	1.00		1.00
Frt	1.00	1.00	0.85		1.00			1.00	0.85	1.00		0.85
Flt Protected	0.95	1.00	1.00		1.00			0.96	1.00	0.95		1.00
Satd. Flow (prot)	1770	3539	1583		5078			1787	1583	1770		1583
Flt Permitted	0.37	1.00	1.00		1.00			0.96	1.00	0.70		1.00
Satd. Flow (perm)	689	3539	1583		5078			1787	1583	1304		1583
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	24	295	545	0	700	7	75	13	94	8	0	100
RTOR Reduction (vph)	0	0	0	0	3	0	0	0	51	0	0	54
Lane Group Flow (vph)	24	295	545	0	704	0	0	88	43	8	0	46
Turn Type	Perm	NA	Free		NA		Perm	NA	Perm	Perm		Perm
Protected Phases		4			8			2				
Permitted Phases	4		Free				2		2	6		6
Actuated Green, G (s)	12.3	12.3	39.4		12.3			18.1	18.1	18.1		18.1
Effective Green, g (s)	12.3	12.3	39.4		12.3			18.1	18.1	18.1		18.1
Actuated g/C Ratio	0.31	0.31	1.00		0.31			0.46	0.46	0.46		0.46
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)	215	1104	1583		1585			820	727	599		727
v/s Ratio Prot		0.08			0.14							
v/s Ratio Perm	0.03		c0.34					0.05	0.03	0.01		0.03
v/c Ratio	0.11	0.27	0.34		0.44			0.11	0.06	0.01		0.06
Uniform Delay, d1	9.7	10.2	0.0		10.8			6.1	5.9	5.8		5.9
Progression Factor	1.00	1.00	1.00		1.00			1.00	1.00	1.00		1.00
Incremental Delay, d2	0.2	0.1	0.6		0.2			0.3	0.2	0.0		0.2
Delay (s)	9.9	10.3	0.6		11.0			6.3	6.1	5.8		6.1
Level of Service	A	B	A		B			A	A	A		A
Approach Delay (s)		4.2			11.0			6.2			6.1	
Approach LOS		A			B			A			A	

Intersection Summary

HCM 2000 Control Delay	7.1	HCM 2000 Level of Service	A
HCM 2000 Volume to Capacity ratio	0.45		
Actuated Cycle Length (s)	39.4	Sum of lost time (s)	9.0
Intersection Capacity Utilization	37.8%	ICU Level of Service	A
Analysis Period (min)	15		

c Critical Lane Group

HCM 6th TWSC
 1: Island Way & Dana Point Harbor Drive

11/19/2020

Intersection						
Int Delay, s/veh	6.1					
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	130	43	147	123	41	205
Future Vol, veh/h	130	43	147	123	41	205
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	300	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	95	95	95	95	95	95
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	137	45	155	129	43	216

Major/Minor	Major1	Major2	Minor1		
Conflicting Flow All	0	0	182	0	599 160
Stage 1	-	-	-	-	160 -
Stage 2	-	-	-	-	439 -
Critical Hdwy	-	-	4.12	-	6.42 6.22
Critical Hdwy Stg 1	-	-	-	-	5.42 -
Critical Hdwy Stg 2	-	-	-	-	5.42 -
Follow-up Hdwy	-	-	2.218	-	3.518 3.318
Pot Cap-1 Maneuver	-	-	1393	-	465 885
Stage 1	-	-	-	-	869 -
Stage 2	-	-	-	-	650 -
Platoon blocked, %	-	-	-	-	-
Mov Cap-1 Maneuver	-	-	1393	-	413 885
Mov Cap-2 Maneuver	-	-	-	-	413 -
Stage 1	-	-	-	-	869 -
Stage 2	-	-	-	-	578 -

Approach	EB	WB	NB
HCM Control Delay, s	0	4.3	12.4
HCM LOS			B

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	743	-	-	1393	-
HCM Lane V/C Ratio	0.349	-	-	0.111	-
HCM Control Delay (s)	12.4	-	-	7.9	-
HCM Lane LOS	B	-	-	A	-
HCM 95th %tile Q(veh)	1.6	-	-	0.4	-

Level Of Service Computation Report

ICU 1(Loss as Cycle Length %) Method (Future Volume Alternative)

Intersection #2 Casitas Place/Dana Point Harbor Drive

Cycle (sec): 100 Critical Vol./Cap.(X): 0.238
Loss Time (sec): 5 Average Delay (sec/veh): xxxxxx
Optimal Cycle: 16 Level Of Service: A

Street Name: Casitas Place Dana Point Harbor Drive
Approach: North Bound South Bound East Bound West Bound
Movement: L - T - R L - T - R L - T - R L - T - R

Control: Protected Protected Protected Prot+Permit
Rights: Include Include Include Include
Min. Green: 0 0 0 0 0 0 0 0 0 0 0 0
Y+R: 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0
Lanes: 1 0 0 0 1 0 0 0 0 0 0 0 1 0 2 0 0

Volume Module:

Base Vol: 16 0 27 0 0 0 0 0 310 25 84 262 0
Growth Adj: 1.02 1.02 1.02 1.02 1.02 1.02 1.02 1.02 1.02 1.02 1.02 1.02 1.02
Initial Bse: 16 0 28 0 0 0 0 0 318 26 86 269 0
Added Vol: 0 0 0 0 0 0 0 0 0 0 0 0 0
Cm2,3,17,18: 0 0 0 0 0 0 0 0 17 0 26 0 0
Initial Fut: 16 0 28 0 0 0 0 0 335 26 112 269 0
User Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
PHF Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
PHF Volume: 16 0 28 0 0 0 0 0 335 26 112 269 0
Reduct Vol: 0 0 0 0 0 0 0 0 0 0 0 0 0
Reduced Vol: 16 0 28 0 0 0 0 0 335 26 112 269 0
PCE Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
MLF Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
FinalVolume: 16 0 28 0 0 0 0 0 335 26 112 269 0

Saturation Flow Module:

Sat/Lane: 1700 1700 1700 1700 1700 1700 1700 1700 1700 1700 1700 1700
Adjustment: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
Lanes: 1.00 0.00 1.00 0.00 0.00 0.00 0.00 1.86 0.14 1.00 2.00 0.00
Final Sat.: 1700 0 1700 0 0 0 0 0 3158 242 1700 3400 0

Capacity Analysis Module:

Vol/Sat: 0.01 0.00 0.02 0.00 0.00 0.00 0.00 0.11 0.11 0.07 0.08 0.00
Crit Moves: ****

Level Of Service Computation Report

ICU 1(Loss as Cycle Length %) Method (Future Volume Alternative)

Intersection #3 Golden Lantern/PCH

Cycle (sec): 100 Critical Vol./Cap.(X): 0.752
Loss Time (sec): 5 Average Delay (sec/veh): xxxxxx
Optimal Cycle: 44 Level Of Service: C

Street Name: Golden Lantern PCH

Approach: North Bound South Bound East Bound West Bound

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

Control: Protected Protected Protected Protected
Rights: Include Include Include Include
Min. Green: 0 0 0 0 0 0 0 0 0 0 0 0
Y+R: 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0
Lanes: 1 0 1 1 0 2 0 1 0 1 1 0 1 1 0

Volume Module:

Base Vol: 122 297 42 269 293 88 94 835 52 69 863 227
Growth Adj: 1.02 1.02 1.02 1.02 1.02 1.02 1.02 1.02 1.02 1.02 1.02 1.02
Initial Bse: 125 304 43 276 300 90 96 856 53 71 885 233
Added Vol: 0 0 0 13 0 52 42 80 0 0 75 9
Cm2,3,17,18: 9 11 0 0 14 0 0 22 0 0 13 0
Initial Fut: 134 315 43 289 314 142 138 958 53 71 973 242
User Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
PHF Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
PHF Volume: 134 315 43 289 314 142 138 958 53 71 973 242
Reduct Vol: 0 0 0 0 0 0 0 0 0 0 0 0
Reduced Vol: 134 315 43 289 314 142 138 958 53 71 973 242
PCE Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
MLF Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
FinalVolume: 134 315 43 289 314 142 138 958 53 71 973 242

Saturation Flow Module:

Sat/Lane: 1700 1700 1700 1700 1700 1700 1700 1700 1700 1700 1700 1700
Adjustment: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
Lanes: 1.00 1.76 0.24 2.00 1.00 1.00 1.00 1.89 0.11 1.00 1.60 0.40
Final Sat.: 1700 2992 408 3400 1700 1700 1700 3221 179 1700 2723 677

Capacity Analysis Module:

Vol/Sat: 0.08 0.11 0.11 0.08 0.18 0.08 0.08 0.30 0.30 0.04 0.36 0.36
Crit Moves: **** **** **** ****

Level Of Service Computation Report

ICU 1(Loss as Cycle Length %) Method (Future Volume Alternative)

Intersection #4 Golden Lantern/Del Prado Avenue

Cycle (sec): 100 Critical Vol./Cap.(X): 0.386
Loss Time (sec): 5 Average Delay (sec/veh): xxxxxx
Optimal Cycle: 20 Level Of Service: A

Street Name: Golden Lantern Del Prado Avenue

Approach: North Bound South Bound East Bound West Bound

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

Control: Protected Protected Prot+Permit Prot+Permit

Rights: Include Include Include Include

Min. Green: 0 0 0 0 0 0 0 0 0 0 0 0

Y+R: 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0

Lanes: 1 0 1 1 0 1 0 2 0 1 1 0 0 1 0 1 1 0 1

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Volume Module:

Base Vol: 47 249 41 136 203 73 58 129 97 29 115 32

Growth Adj: 1.02 1.02 1.02 1.02 1.02 1.02 1.02 1.02 1.02 1.02 1.02 1.02

Initial Bse: 48 255 42 139 208 75 59 132 99 30 118 33

Added Vol: 0 0 0 0 0 0 0 0 0 0 0 0

Cm2,3,17,18: 0 20 0 0 4 0 0 0 12 0 0 0

Initial Fut: 48 275 42 139 212 75 59 132 111 30 118 33

User Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00

PHF Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00

PHF Volume: 48 275 42 139 212 75 59 132 111 30 118 33

Reduct Vol: 0 0 0 0 0 0 0 0 0 0 0 0

Reduced Vol: 48 275 42 139 212 75 59 132 111 30 118 33

PCE Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00

MLF Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00

FinalVolume: 48 275 42 139 212 75 59 132 111 30 118 33

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Saturation Flow Module:

Sat/Lane: 1700 1700 1700 1700 1700 1700 1700 1700 1700 1700 1700 1700

Adjustment: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00

Lanes: 1.00 1.74 0.26 1.00 2.00 1.00 1.00 0.54 0.46 1.00 1.00 1.00

Final Sat.: 1700 2950 450 1700 3400 1700 1700 923 777 1700 1700 1700

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Capacity Analysis Module:

Vol/Sat: 0.03 0.09 0.09 0.08 0.06 0.04 0.03 0.14 0.14 0.02 0.07 0.02

Crit Moves: **** **** **** ****

Level Of Service Computation Report

ICU 1(Loss as Cycle Length %) Method (Future Volume Alternative)

Intersection #5 Golden Lantern/Dana Point Harbor Drive

Cycle (sec): 100 Critical Vol./Cap.(X): 0.543
Loss Time (sec): 5 Average Delay (sec/veh): xxxxxx
Optimal Cycle: 26 Level Of Service: A

Street Name: Golden Lantern Dana Point Harbor Drive

Approach: North Bound South Bound East Bound West Bound

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

Control: Protected Protected Protected Protected

Rights: Include Include Include Include

Min. Green: 0 0 0 0 0 0 0 0 0 0 0 0

Y+R: 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0

Lanes: 1 0 1 1 0 1 0 1 1 0 1 0 1 1 0

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Volume Module:

Base Vol: 20 92 135 192 81 101 125 174 15 123 228 89

Growth Adj: 1.02 1.02 1.02 1.02 1.02 1.02 1.02 1.02 1.02 1.02 1.02 1.02

Initial Bse: 21 94 138 197 83 104 128 178 15 126 234 91

Added Vol: 0 0 0 0 0 0 0 0 0 0 0 0

Cm2,3,17,18: 0 12 111 11 12 0 0 13 0 152 4 9

Initial Fut: 21 106 249 208 95 104 128 191 15 278 238 100

User Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00

PHF Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00

PHF Volume: 21 106 249 208 95 104 128 191 15 278 238 100

Reduct Vol: 0 0 0 0 0 0 0 0 0 0 0 0

Reduced Vol: 21 106 249 208 95 104 128 191 15 278 238 100

PCE Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00

MLF Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00

FinalVolume: 21 106 249 208 95 104 128 191 15 278 238 100

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Saturation Flow Module:

Sat/Lane: 1700 1700 1700 1700 1700 1700 1700 1700 1700 1700 1700 1700

Adjustment: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00

Lanes: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.85 0.15 1.00 1.41 0.59

Final Sat.: 1700 1700 1700 1700 1700 1700 1700 3147 253 1700 2392 1008

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Capacity Analysis Module:

Vol/Sat: 0.01 0.06 0.15 0.12 0.06 0.06 0.08 0.06 0.06 0.16 0.10 0.10

Crit Moves: **** **** **** ****

Level Of Service Computation Report

ICU 1(Loss as Cycle Length %) Method (Future Volume Alternative)

Intersection #6 Puerto Place/Dana Point Harbor Drive

Cycle (sec): 100 Critical Vol./Cap.(X): 0.411
Loss Time (sec): 5 Average Delay (sec/veh): xxxxxx
Optimal Cycle: 20 Level Of Service: A

Street Name: Puerto Place Dana Point Harbor Drive
Approach: North Bound South Bound East Bound West Bound
Movement: L - T - R L - T - R L - T - R L - T - R

Control: Protected Protected Protected Protected
Rights: Include Include Include Include
Min. Green: 0 0 0 0 0 0 0 0 0 0 0 0
Y+R: 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0
Lanes: 1 0 0 0 1 0 0 0 0 0 0 0 2 0 1 1 0 2 0 0

Volume Module:

Base Vol: 28 0 76 0 0 0 0 469 42 46 430 0
Growth Adj: 1.02 1.02 1.02 1.02 1.02 1.02 1.02 1.02 1.02 1.02 1.02 1.02
Initial Bse: 29 0 78 0 0 0 0 481 43 47 441 0
Added Vol: 0 0 0 0 0 0 0 0 0 0 0 0
Cm2,3,17,18: 9 0 83 0 0 0 0 124 11 103 157 0
Initial Fut: 38 0 161 0 0 0 0 605 54 150 598 0
User Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
PHF Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
PHF Volume: 38 0 161 0 0 0 0 605 54 150 598 0
Reduct Vol: 0 0 0 0 0 0 0 0 0 0 0 0
Reduced Vol: 38 0 161 0 0 0 0 605 54 150 598 0
PCE Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
MLF Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
FinalVolume: 38 0 161 0 0 0 0 605 54 150 598 0

Saturation Flow Module:

Sat/Lane: 1700 1700 1700 1700 1700 1700 1700 1700 1700 1700 1700 1700
Adjustment: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
Lanes: 1.00 0.00 1.00 0.00 0.00 0.00 0.00 2.00 1.00 1.00 2.00 0.00
Final Sat.: 1700 0 1700 0 0 0 0 3400 1700 1700 3400 0

Capacity Analysis Module:

Vol/Sat: 0.02 0.00 0.09 0.00 0.00 0.00 0.00 0.18 0.03 0.09 0.18 0.00
Crit Moves: ****

Level Of Service Computation Report

ICU 1(Loss as Cycle Length %) Method (Future Volume Alternative)

Intersection #7 Dana Point Harbor Drive/Park Lantern

Cycle (sec): 100 Critical Vol./Cap.(X): 0.351
Loss Time (sec): 5 Average Delay (sec/veh): xxxxxx
Optimal Cycle: 19 Level Of Service: A

Street Name: Dana Point Harbor Drive Park Landtern

Approach: North Bound South Bound East Bound West Bound

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

Control: Protected Protected Permitted Permitted

Rights: Include Include Include Include

Min. Green: 0 0 0 0 0 0 0 0 0 0 0 0

Y+R: 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0

Lanes: 1 0 2 0 1 1 0 1 1 0 0 0 1! 0 0 1 0 0 1 0

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Volume Module:

Base Vol: 6 497 22 54 363 37 45 0 13 17 1 28

Growth Adj: 1.02 1.02 1.02 1.02 1.02 1.02 1.02 1.02 1.02 1.02 1.02 1.02

Initial Bse: 6 509 23 55 372 38 46 0 13 17 1 29

Added Vol: 0 0 0 8 0 0 0 0 0 0 0 0 13

Cm2,3,17,18: 0 211 0 0 263 0 0 0 0 0 0 0 0

Initial Fut: 6 720 23 63 635 38 46 0 13 17 1 42

User Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00

PHF Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00

PHF Volume: 6 720 23 63 635 38 46 0 13 17 1 42

Reduct Vol: 0 0 0 0 0 0 0 0 0 0 0 0 0

Reduced Vol: 6 720 23 63 635 38 46 0 13 17 1 42

PCE Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00

MLF Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00

FinalVolume: 6 720 23 63 635 38 46 0 13 17 1 42

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Saturation Flow Module:

Sat/Lane: 1700 1700 1700 1700 1700 1700 1700 1700 1700 1700 1700 1700

Adjustment: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00

Lanes: 1.00 2.00 1.00 1.00 1.89 0.11 0.78 0.00 0.22 1.00 0.02 0.98

Final Sat.: 1700 3400 1700 1700 3208 192 1319 0 381 1700 41 1659

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Capacity Analysis Module:

Vol/Sat: 0.00 0.21 0.01 0.04 0.20 0.20 0.03 0.00 0.03 0.01 0.03 0.03

Crit Moves: **** **** **** ****

Level Of Service Computation Report

ICU 1(Loss as Cycle Length %) Method (Future Volume Alternative)

Intersection #8 Del Obispo Street-Dana Point Harbor Drive/PCH

Cycle (sec): 100 Critical Vol./Cap.(X): 0.666
Loss Time (sec): 5 Average Delay (sec/veh): xxxxxx
Optimal Cycle: 34 Level Of Service: B

Street Name:Del Obispo Street-Dana Point Harb PCH

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

Control: Protected Protected Protected Protected
Rights: Ovl Include Include Include
Min. Green: 0 0 0 0 0 0 0 0 0 0 0 0
Y+R: 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0
Lanes: 1 0 1 0 2 2 0 1 0 1 1 0 2 1 0

Volume Module:

Base Vol: 39 85 409 274 109 132 112 1090 71 435 1370 366
Growth Adj: 1.02 1.02 1.02 1.02 1.02 1.02 1.02 1.02 1.02 1.02 1.02 1.02
Initial Bse: 40 87 419 281 112 135 115 1117 73 446 1404 375
Added Vol: 0 5 7 13 4 15 21 71 0 4 69 42
Cm2,3,17,18: 0 33 177 9 14 13 22 0 0 250 0 16
Initial Fut: 40 125 603 303 130 163 158 1188 73 700 1473 433
User Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
PHF Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
PHF Volume: 40 125 603 303 130 163 158 1188 73 700 1473 433
Reduct Vol: 0 0 0 0 0 0 0 0 0 0 0 0
Reduced Vol: 40 125 603 303 130 163 158 1188 73 700 1473 433
PCE Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
MLF Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
FinalVolume: 40 125 603 303 130 163 158 1188 73 700 1473 433
OvlAdjVol: 0

Saturation Flow Module:

Sat/Lane: 1700 1700 1700 1700 1700 1700 1700 1700 1700 1700 1700 1700
Adjustment: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
Lanes: 1.00 1.00 2.00 2.00 1.00 1.00 1.00 2.83 0.17 2.00 2.32 0.68
Final Sat.: 1700 1700 3400 3400 1700 1700 1700 4806 294 3400 3941 1159

Capacity Analysis Module:

Vol/Sat: 0.02 0.07 0.18 0.09 0.08 0.10 0.09 0.25 0.25 0.21 0.37 0.37
OvlAdjV/S: 0.00
Crit Moves: ****

Level Of Service Computation Report

ICU 1(Loss as Cycle Length %) Method (Future Volume Alternative)

Intersection #9 Del Opisobo Street/Stonehill Drive

Cycle (sec): 100 Critical Vol./Cap.(X): 0.791
Loss Time (sec): 5 Average Delay (sec/veh): xxxxxx
Optimal Cycle: 50 Level Of Service: C

Street Name: Del Opisobo Street Stonehill Drive

Approach: North Bound South Bound East Bound West Bound

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

Control: Protected Protected Protected Protected

Rights: Include Include Include Include

Min. Green: 0 0 0 0 0 0 0 0 0 0 0 0

Y+R: 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0

Lanes: 1 0 1 1 0 1 0 1 1 0 1 0 2 0 1 1 0 2 0 1

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Volume Module:

Base Vol: 143 268 156 284 308 109 131 860 93 149 845 420

Growth Adj: 1.02 1.02 1.02 1.02 1.02 1.02 1.02 1.02 1.02 1.02 1.02 1.02

Initial Bse: 147 275 160 291 316 112 134 881 95 153 866 430

Added Vol: 0 68 1 65 28 0 0 1 0 3 0 34

Cm2,3,17,18: 3 13 35 1 17 0 0 14 6 22 17 1

Initial Fut: 150 356 196 357 361 112 134 896 101 178 883 465

User Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00

PHF Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00

PHF Volume: 150 356 196 357 361 112 134 896 101 178 883 465

Reduct Vol: 0 0 0 0 0 0 0 0 0 0 0 0

Reduced Vol: 150 356 196 357 361 112 134 896 101 178 883 465

PCE Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00

MLF Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00

FinalVolume: 150 356 196 357 361 112 134 897 101 178 883 466

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Saturation Flow Module:

Sat/Lane: 1700 1700 1700 1700 1700 1700 1700 1700 1700 1700 1700 1700

Adjustment: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00

Lanes: 1.00 1.29 0.71 1.00 1.53 0.47 1.00 2.00 1.00 1.00 2.00 1.00

Final Sat.: 1700 2192 1208 1700 2596 804 1700 3400 1700 1700 3400 1700

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Capacity Analysis Module:

Vol/Sat: 0.09 0.16 0.16 0.21 0.14 0.14 0.08 0.26 0.06 0.10 0.26 0.27

Crit Moves: **** **** **** ****

Level Of Service Computation Report

ICU 1(Loss as Cycle Length %) Method (Future Volume Alternative)

Intersection #9 Del Opisobo Street/Stonehill Drive

Cycle (sec): 100 Critical Vol./Cap.(X): 0.775
Loss Time (sec): 5 Average Delay (sec/veh): xxxxxx
Optimal Cycle: 47 Level Of Service: C

Street Name: Del Opisobo Street Stonehill Drive
Approach: North Bound South Bound East Bound West Bound
Movement: L - T - R L - T - R L - T - R L - T - R

Control: Protected Protected Protected Protected
Rights: Include Include Include Include
Min. Green: 0 0 0 0 0 0 0 0 0 0 0 0
Y+R: 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0
Lanes: 1 0 1 1 0 1 0 1 1 0 1 0 2 1 0 1 0 2 0 1

Volume Module:
Base Vol: 143 268 156 284 308 109 131 860 93 149 845 420
Growth Adj: 1.02 1.02 1.02 1.02 1.02 1.02 1.02 1.02 1.02 1.02 1.02 1.02
Initial Bse: 147 275 160 291 316 112 134 881 95 153 866 430
Added Vol: 0 68 1 65 28 0 0 1 0 3 0 34
Cm2,3,17,18: 3 13 35 1 17 0 0 14 6 22 17 1
Initial Fut: 150 356 196 357 361 112 134 896 101 178 883 465
User Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
PHF Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
PHF Volume: 150 356 196 357 361 112 134 896 101 178 883 465
Reduct Vol: 0 0 0 0 0 0 0 0 0 0 0 0
Reduced Vol: 150 356 196 357 361 112 134 896 101 178 883 465
PCE Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
MLF Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
FinalVolume: 150 356 196 357 361 112 134 897 101 178 883 466

Saturation Flow Module:
Sat/Lane: 1700 1700 1700 1700 1700 1700 1700 1700 1700 1700 1700 1700
Adjustment: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
Lanes: 1.00 1.29 0.71 1.00 1.53 0.47 1.00 2.70 0.30 1.00 2.00 1.00
Final Sat.: 1700 2192 1208 1700 2596 804 1700 4582 518 1700 3400 1700

Capacity Analysis Module:
Vol/Sat: 0.09 0.16 0.16 0.21 0.14 0.14 0.08 0.20 0.20 0.10 0.26 0.27
Crit Moves: **** **** **** ****

Level Of Service Computation Report

ICU 1(Loss as Cycle Length %) Method (Future Volume Alternative)

Intersection #10 Camino Capistrano/Stonehill Drive

Cycle (sec): 100 Critical Vol./Cap.(X): 0.759
Loss Time (sec): 5 Average Delay (sec/veh): xxxxxx
Optimal Cycle: 45 Level Of Service: C

Street Name: Camino Capistrano Stonehill Drive

Approach: North Bound South Bound East Bound West Bound

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

Control: Split Phase Split Phase Split Phase Split Phase

Rights: Include Ovl Include Include

Min. Green: 0 0 0 0 0 0 0 0 0 0 0 0

Y+R: 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0

Lanes: 1 1 0 0 1 1 0 2 0 2 1 0 0 0 0 0

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Volume Module:

Base Vol: 479 260 359 154 626 851 185 809 383 0 0 0

Growth Adj: 1.02 1.02 1.02 1.02 1.02 1.02 1.02 1.02 1.02 1.02 1.02 1.02

Initial Bse: 491 267 368 158 642 872 190 829 393 0 0 0

Added Vol: 31 0 17 0 0 0 0 15 54 0 0 0

Cm2,3,17,18: 33 -5 -21 0 -19 62 22 59 39 0 0 0

Initial Fut: 555 262 364 158 623 934 212 903 486 0 0 0

User Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00

PHF Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00

PHF Volume: 555 262 364 158 623 934 212 903 486 0 0 0

Reduct Vol: 0 0 0 0 0 0 0 0 0 0 0 0

Reduced Vol: 555 262 364 158 623 934 212 903 486 0 0 0

PCE Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00

MLF Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00

FinalVolume: 555 262 364 158 623 934 212 903 486 0 0 0

OvlAdjVol: 0

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Saturation Flow Module:

Sat/Lane: 1700 1700 1700 1700 1700 1700 1700 1700 1700 1700 1700 1700

Adjustment: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00

Lanes: 1.36 0.64 1.00 1.00 2.00 2.00 1.00 2.00 1.00 0.00 0.00 0.00

Final Sat.: 2311 1089 1700 1700 3400 3400 1700 3400 1700 0 0 0

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Capacity Analysis Module:

Vol/Sat: 0.24 0.24 0.21 0.09 0.18 0.27 0.12 0.27 0.29 0.00 0.00 0.00

OvlAdjV/S: 0.00

Crit Moves: **** **** ****

HCM 6th Signalized Intersection Summary
 10: Camino Capistrano & Stonehill Drive/I-5 NB Ramp

02/19/2021



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↶	↷↷	↷				↶	↷	↷	↶	↷↷	↷↷
Traffic Volume (veh/h)	212	903	486	0	0	0	555	262	364	158	623	934
Future Volume (veh/h)	212	903	486	0	0	0	555	262	364	158	623	934
Initial Q (Qb), veh	0	0	0				0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00				1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00				1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No					No			No		
Adj Sat Flow, veh/h/ln	1870	1870	1870				1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	223	951	0				430	492	383	166	656	983
Peak Hour Factor	0.95	0.95	0.95				0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	2	2	2				2	2	2	2	2	2
Cap, veh/h	519	1036					558	586	497	402	802	1443
Arrive On Green	0.29	0.29	0.00				0.31	0.31	0.31	0.23	0.23	0.23
Sat Flow, veh/h	1781	3554	1585				1781	1870	1585	1781	3554	2790
Grp Volume(v), veh/h	223	951	0				430	492	383	166	656	983
Grp Sat Flow(s),veh/h/ln	1781	1777	1585				1781	1870	1585	1781	1777	1395
Q Serve(g_s), s	8.1	20.6	0.0				17.4	19.5	17.4	6.3	14.0	18.0
Cycle Q Clear(g_c), s	8.1	20.6	0.0				17.4	19.5	17.4	6.3	14.0	18.0
Prop In Lane	1.00		1.00				1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	519	1036					558	586	497	402	802	1443
V/C Ratio(X)	0.43	0.92					0.77	0.84	0.77	0.41	0.82	0.68
Avail Cap(c_a), veh/h	525	1047					558	586	497	402	802	1443
HCM Platoon Ratio	1.00	1.00	1.00				1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	0.00				1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	22.9	27.3	0.0				24.8	25.5	24.8	26.4	29.3	13.6
Incr Delay (d2), s/veh	0.6	12.5	0.0				9.9	13.5	11.0	3.1	9.1	2.6
Initial Q Delay(d3),s/veh	0.0	0.0	0.0				0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	3.3	10.1	0.0				8.5	10.4	7.7	3.0	6.8	10.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	23.4	39.8	0.0				34.6	39.0	35.8	29.5	38.4	16.3
LnGrp LOS	C	D					C	D	D	C	D	B
Approach Vol, veh/h		1174	A				1305				1805	
Approach Delay, s/veh		36.7					36.6				25.5	
Approach LOS		D					D				C	
Timer - Assigned Phs		2		4			6					
Phs Duration (G+Y+Rc), s		29.5		27.7			22.5					
Change Period (Y+Rc), s		4.5		4.5			4.5					
Max Green Setting (Gmax), s		25.0		23.5			18.0					
Max Q Clear Time (g_c+I1), s		21.5		22.6			20.0					
Green Ext Time (p_c), s		2.0		0.6			0.0					

Intersection Summary

HCM 6th Ctrl Delay	32.0
HCM 6th LOS	C

Notes

- User approved volume balancing among the lanes for turning movement.
- User approved changes to right turn type.
- Unsignalized Delay for [EBR] is excluded from calculations of the approach delay and intersection delay.

Level Of Service Computation Report

ICU 1(Loss as Cycle Length %) Method (Future Volume Alternative)

Intersection #11 I-5 SB Ramps/Camino Las Ramblas

Cycle (sec): 100 Critical Vol./Cap.(X): 0.354
Loss Time (sec): 5 Average Delay (sec/veh): xxxxxx
Optimal Cycle: 19 Level Of Service: A

Street Name: I-5 SB Ramps Camino Las Ramblas

Approach: North Bound South Bound East Bound West Bound

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

Control: Protected Protected Protected Protected

Rights: Include Ignore Ignore Ignore

Min. Green: 0 0 0 0 0 0 0 0 0 0 0 0

Y+R: 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0

Lanes: 0 0 0 0 0 2 0 0 0 1 0 0 2 0 1 0 0 1 0 1

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Volume Module:

Base Vol: 0 0 0 309 0 816 0 536 1362 0 143 88

Growth Adj: 1.02 1.02 1.02 1.02 1.02 1.02 1.02 1.02 1.02 1.02 1.02 1.02

Initial Bse: 0 0 0 317 0 836 0 549 1396 0 147 90

Added Vol: 0 0 0 0 0 77 0 21 53 0 77 0

Cm2,3,17,18: 0 0 0 0 0 29 0 145 0 0 36 0

Initial Fut: 0 0 0 317 0 942 0 715 1449 0 260 90

User Adj: 1.00 1.00 1.00 1.00 1.00 0.00 1.00 1.00 0.00 1.00 1.00 0.00

PHF Adj: 1.00 1.00 1.00 1.00 1.00 0.00 1.00 1.00 0.00 1.00 1.00 0.00

PHF Volume: 0 0 0 317 0 0 0 715 0 0 260 0

Reduct Vol: 0 0 0 0 0 0 0 0 0 0 0 0

Reduced Vol: 0 0 0 317 0 0 0 715 0 0 260 0

PCE Adj: 1.00 1.00 1.00 1.00 1.00 0.00 1.00 1.00 0.00 1.00 1.00 0.00

MLF Adj: 1.00 1.00 1.00 1.00 1.00 0.00 1.00 1.00 0.00 1.00 1.00 0.00

FinalVolume: 0 0 0 317 0 0 0 715 0 0 260 0

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Saturation Flow Module:

Sat/Lane: 1700 1700 1700 1700 1700 1700 1700 1700 1700 1700 1700 1700

Adjustment: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00

Lanes: 0.00 0.00 0.00 2.00 0.00 1.00 0.00 2.00 1.00 0.00 1.00 1.00

Final Sat.: 0 0 0 3400 0 1700 0 3400 1700 0 1700 1700

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Capacity Analysis Module:

Vol/Sat: 0.00 0.00 0.00 0.09 0.00 0.00 0.00 0.21 0.00 0.00 0.15 0.00

Crit Moves: ****

Level Of Service Computation Report

ICU 1(Loss as Cycle Length %) Method (Future Volume Alternative)

Intersection #12 I-5 NB Ramps/Camino Las Ramblas

Cycle (sec): 100 Critical Vol./Cap.(X): 0.290
Loss Time (sec): 5 Average Delay (sec/veh): xxxxxx
Optimal Cycle: 17 Level Of Service: A

Street Name: I-5 NB Ramps Camino Las Ramblas
Approach: North Bound South Bound East Bound West Bound
Movement: L - T - R L - T - R L - T - R L - T - R

Control: Permitted Permitted Permitted Permitted
Rights: Include Include Ignore Include
Min. Green: 0 0 0 0 0 0 0 0 0 0 0 0
Y+R: 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0
Lanes: 0 1 0 0 1 1 0 0 0 1 1 0 0 2 0 1 0 0 2 1 0

Volume Module:

Base Vol: 7 32 116 6 0 48 47 464 389 0 364 10
Growth Adj: 1.02 1.02 1.02 1.02 1.02 1.02 1.02 1.02 1.02 1.02 1.02 1.02
Initial Bse: 7 33 119 6 0 49 48 476 399 0 373 10
Added Vol: 77 0 0 0 0 0 0 0 0 21 0 1 0
Cm2,3,17,18: 36 0 0 0 0 0 0 0 0 145 0 0 0
Initial Fut: 120 33 119 6 0 49 48 476 565 0 374 10
User Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 0.00 1.00 1.00 1.00
PHF Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 0.00 1.00 1.00 1.00
PHF Volume: 120 33 119 6 0 49 48 476 0 0 374 10
Reduct Vol: 0 0 0 0 0 0 0 0 0 0 0 0 0
Reduced Vol: 120 33 119 6 0 49 48 476 0 0 374 10
PCE Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 0.00 1.00 1.00 1.00
MLF Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 0.00 1.00 1.00 1.00
FinalVolume: 120 33 119 6 0 49 48 476 0 0 374 10

Saturation Flow Module:

Sat/Lane: 1700 1700 1700 1700 1700 1700 1700 1700 1700 1700 1700 1700
Adjustment: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
Lanes: 0.79 0.21 1.00 1.00 0.00 1.00 1.00 2.00 1.00 0.00 2.92 0.08
Final Sat.: 1335 365 1700 1700 0 1700 1700 3400 1700 0 4964 136

Capacity Analysis Module:

Vol/Sat: 0.07 0.09 0.07 0.00 0.00 0.03 0.03 0.14 0.00 0.00 0.08 0.08
Crit Moves: **** **** **** ****

HCM Signalized Intersection Capacity Analysis

12: I-5 NB Ramps & Camino Las Ramblas

02/19/2021

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	48	476	565	0	374	10	120	33	119	6	0	49
Future Volume (vph)	48	476	565	0	374	10	120	33	119	6	0	49
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
Lane Util. Factor	1.00	0.95	1.00		0.91			1.00	1.00	1.00		1.00
Frt	1.00	1.00	0.85		1.00			1.00	0.85	1.00		0.85
Flt Protected	0.95	1.00	1.00		1.00			0.96	1.00	0.95		1.00
Satd. Flow (prot)	1770	3539	1583		5065			1793	1583	1770		1583
Flt Permitted	0.51	1.00	1.00		1.00			0.96	1.00	0.66		1.00
Satd. Flow (perm)	941	3539	1583		5065			1793	1583	1220		1583
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	51	501	595	0	394	11	126	35	125	6	0	52
RTOR Reduction (vph)	0	0	0	0	8	0	0	0	66	0	0	28
Lane Group Flow (vph)	51	501	595	0	397	0	0	161	59	6	0	24
Turn Type	Perm	NA	Free		NA		Perm	NA	Perm	Perm		Perm
Protected Phases		4			8			2				
Permitted Phases	4		Free				2		2	6		6
Actuated Green, G (s)	11.4	11.4	38.5		11.4			18.1	18.1	18.1		18.1
Effective Green, g (s)	11.4	11.4	38.5		11.4			18.1	18.1	18.1		18.1
Actuated g/C Ratio	0.30	0.30	1.00		0.30			0.47	0.47	0.47		0.47
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)	278	1047	1583		1499			842	744	573		744
v/s Ratio Prot		0.14			0.08							
v/s Ratio Perm	0.05		c0.38					0.09	0.04	0.00		0.02
v/c Ratio	0.18	0.48	0.38		0.27			0.19	0.08	0.01		0.03
Uniform Delay, d1	10.1	11.1	0.0		10.3			5.9	5.6	5.4		5.5
Progression Factor	1.00	1.00	1.00		1.00			1.00	1.00	1.00		1.00
Incremental Delay, d2	0.3	0.3	0.7		0.1			0.5	0.2	0.0		0.1
Delay (s)	10.4	11.5	0.7		10.4			6.4	5.8	5.5		5.6
Level of Service	B	B	A		B			A	A	A		A
Approach Delay (s)		5.8			10.4			6.2			5.6	
Approach LOS		A			B			A			A	
Intersection Summary												
HCM 2000 Control Delay			6.9		HCM 2000 Level of Service			A				
HCM 2000 Volume to Capacity ratio			0.49									
Actuated Cycle Length (s)			38.5		Sum of lost time (s)			9.0				
Intersection Capacity Utilization			37.9%		ICU Level of Service			A				
Analysis Period (min)			15									

c Critical Lane Group

HCM 6th TWSC
 1: Island Way & Dana Point Harbor Drive

11/19/2020

Intersection						
Int Delay, s/veh	5.6					
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↔		↔	↑	↔	
Traffic Vol, veh/h	303	31	223	343	32	197
Future Vol, veh/h	303	31	223	343	32	197
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	300	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	95	95	95	95	95	95
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	319	33	235	361	34	207

Major/Minor	Major1	Major2	Minor1			
Conflicting Flow All	0	0	352	0	1167	336
Stage 1	-	-	-	-	336	-
Stage 2	-	-	-	-	831	-
Critical Hdwy	-	-	4.12	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	-	-	2.218	-	3.518	3.318
Pot Cap-1 Maneuver	-	-	1207	-	214	706
Stage 1	-	-	-	-	724	-
Stage 2	-	-	-	-	428	-
Platoon blocked, %	-	-	-	-	-	-
Mov Cap-1 Maneuver	-	-	1207	-	172	706
Mov Cap-2 Maneuver	-	-	-	-	172	-
Stage 1	-	-	-	-	724	-
Stage 2	-	-	-	-	345	-

Approach	EB	WB	NB
HCM Control Delay, s	0	3.4	19.1
HCM LOS			C

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	492	-	-	1207	-
HCM Lane V/C Ratio	0.49	-	-	0.194	-
HCM Control Delay (s)	19.1	-	-	8.7	-
HCM Lane LOS	C	-	-	A	-
HCM 95th %tile Q(veh)	2.7	-	-	0.7	-

Level Of Service Computation Report

ICU 1(Loss as Cycle Length %) Method (Future Volume Alternative)

Intersection #2 Casitas Place/Dana Point Harbor Drive

Cycle (sec): 100 Critical Vol./Cap.(X): 0.308
Loss Time (sec): 5 Average Delay (sec/veh): xxxxxx
Optimal Cycle: 18 Level Of Service: A

Street Name: Casitas Place Dana Point Harbor Drive
Approach: North Bound South Bound East Bound West Bound
Movement: L - T - R L - T - R L - T - R L - T - R

Control: Protected Protected Protected Prot+Permit
Rights: Include Include Include Include
Min. Green: 0 0 0 0 0 0 0 0 0 0 0 0
Y+R: 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0
Lanes: 1 0 0 0 1 0 0 0 0 0 0 0 1 0 2 0 0

Volume Module:

Base Vol: 25 0 67 0 0 0 0 427 42 118 528 0
Growth Adj: 1.02 1.02 1.02 1.02 1.02 1.02 1.02 1.02 1.02 1.02 1.02 1.02
Initial Bse: 26 0 69 0 0 0 0 438 43 121 541 0
Added Vol: 0 0 0 0 0 0 0 0 0 0 0 0
Cm2,3,17,18: 0 0 0 0 0 0 0 17 0 0 -1 0
Initial Fut: 26 0 69 0 0 0 0 455 43 121 540 0
User Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
PHF Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
PHF Volume: 26 0 69 0 0 0 0 455 43 121 540 0
Reduct Vol: 0 0 0 0 0 0 0 0 0 0 0 0
Reduced Vol: 26 0 69 0 0 0 0 455 43 121 540 0
PCE Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
MLF Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
FinalVolume: 26 0 69 0 0 0 0 455 43 121 540 0

Saturation Flow Module:

Sat/Lane: 1700 1700 1700 1700 1700 1700 1700 1700 1700 1700 1700 1700
Adjustment: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
Lanes: 1.00 0.00 1.00 0.00 0.00 0.00 0.00 1.83 0.17 1.00 2.00 0.00
Final Sat.: 1700 0 1700 0 0 0 0 3106 294 1700 3400 0

Capacity Analysis Module:

Vol/Sat: 0.02 0.00 0.04 0.00 0.00 0.00 0.00 0.15 0.15 0.07 0.16 0.00
Crit Moves: ****

Level Of Service Computation Report

ICU 1(Loss as Cycle Length %) Method (Future Volume Alternative)

Intersection #3 Golden Lantern/PCH

Cycle (sec): 100 Critical Vol./Cap.(X): 0.881
Loss Time (sec): 5 Average Delay (sec/veh): xxxxxx
Optimal Cycle: 77 Level Of Service: D

Street Name: Golden Lantern PCH

Approach: North Bound South Bound East Bound West Bound

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

Control: Protected Protected Protected Protected

Rights: Include Include Include Include

Min. Green: 0 0 0 0 0 0 0 0 0 0 0 0

Y+R: 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0

Lanes: 1 0 1 1 0 2 0 1 0 1 1 0 1 0 1 1 0

Volume Module:

Base Vol: 204 498 70 451 492 149 83 735 46 61 760 200
Growth Adj: 1.02 1.02 1.02 1.02 1.02 1.02 1.02 1.02 1.02 1.02 1.02 1.02
Initial Bse: 209 510 72 462 504 153 85 753 47 63 779 205
Added Vol: 0 0 0 11 0 52 45 74 0 0 83 16
Cm2,3,17,18: 5 9 0 0 11 0 0 30 0 0 23 0
Initial Fut: 214 519 72 473 515 205 130 857 47 63 885 221
User Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
PHF Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
PHF Volume: 214 519 72 473 515 205 130 857 47 63 885 221
Reduct Vol: 0 0 0 0 0 0 0 0 0 0 0 0
Reduced Vol: 214 519 72 473 515 205 130 857 47 63 885 221
PCE Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
MLF Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
FinalVolume: 214 519 72 473 515 205 130 857 47 63 885 221

Saturation Flow Module:

Sat/Lane: 1700 1700 1700 1700 1700 1700 1700 1700 1700 1700 1700 1700
Adjustment: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
Lanes: 1.00 1.76 0.24 2.00 1.00 1.00 1.00 1.90 0.10 1.00 1.60 0.40
Final Sat.: 1700 2987 413 3400 1700 1700 1700 3223 177 1700 2721 679

Capacity Analysis Module:

Vol/Sat: 0.13 0.17 0.17 0.14 0.30 0.12 0.08 0.27 0.27 0.04 0.33 0.33
Crit Moves: **** **** **** ****

Level Of Service Computation Report

ICU 1(Loss as Cycle Length %) Method (Future Volume Alternative)

Intersection #4 Golden Lantern/Del Prado Avenue

Cycle (sec): 100 Critical Vol./Cap.(X): 0.478
Loss Time (sec): 5 Average Delay (sec/veh): xxxxxx
Optimal Cycle: 23 Level Of Service: A

Street Name: Golden Lantern Del Prado Avenue

Approach: North Bound South Bound East Bound West Bound

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

Control: Protected Protected Prot+Permit Prot+Permit

Rights: Include Include Include Include

Min. Green: 0 0 0 0 0 0 0 0 0 0 0 0

Y+R: 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0

Lanes: 1 0 1 1 0 1 0 2 0 1 1 0 0 1 0 1 1 0 1

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Volume Module:

Base Vol: 79 418 69 227 341 123 51 114 85 26 101 28

Growth Adj: 1.02 1.02 1.02 1.02 1.02 1.02 1.02 1.02 1.02 1.02 1.02 1.02

Initial Bse: 81 428 71 233 350 126 52 117 87 27 104 29

Added Vol: 0 0 0 0 0 0 0 0 0 0 0 0

Cm2,3,17,18: 0 14 0 0 0 0 0 0 7 0 0 0

Initial Fut: 81 442 71 233 350 126 52 117 94 27 104 29

User Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00

PHF Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00

PHF Volume: 81 442 71 233 350 126 52 117 94 27 104 29

Reduct Vol: 0 0 0 0 0 0 0 0 0 0 0 0

Reduced Vol: 81 442 71 233 350 126 52 117 94 27 104 29

PCE Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00

MLF Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00

FinalVolume: 81 442 71 233 350 126 52 117 94 27 104 29

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Saturation Flow Module:

Sat/Lane: 1700 1700 1700 1700 1700 1700 1700 1700 1700 1700 1700 1700

Adjustment: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00

Lanes: 1.00 1.72 0.28 1.00 2.00 1.00 1.00 0.55 0.45 1.00 1.00 1.00

Final Sat.: 1700 2931 469 1700 3400 1700 1700 942 758 1700 1700 1700

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Capacity Analysis Module:

Vol/Sat: 0.05 0.15 0.15 0.14 0.10 0.07 0.03 0.12 0.12 0.02 0.06 0.02

Crit Moves: **** **** **** ****

Level Of Service Computation Report

ICU 1(Loss as Cycle Length %) Method (Future Volume Alternative)

Intersection #5 Golden Lantern/Dana Point Harbor Drive

Cycle (sec): 100 Critical Vol./Cap.(X): 0.757
Loss Time (sec): 5 Average Delay (sec/veh): xxxxxx
Optimal Cycle: 44 Level Of Service: C

Street Name: Golden Lantern Dana Point Harbor Drive

Approach: North Bound South Bound East Bound West Bound

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

Control: Protected Protected Protected Protected

Rights: Include Include Include Include

Min. Green: 0 0 0 0 0 0 0 0 0 0 0 0

Y+R: 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0

Lanes: 1 0 1 1 0 1 0 1 1 0 1 0 1 1 0

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Volume Module:

Base Vol: 77 288 185 199 175 119 146 300 35 356 405 102

Growth Adj: 1.02 1.02 1.02 1.02 1.02 1.02 1.02 1.02 1.02 1.02 1.02 1.02

Initial Bse: 79 295 190 204 179 122 150 308 36 365 415 105

Added Vol: 0 0 0 0 0 0 0 0 0 0 0 0

Cm2,3,17,18: 0 12 111 11 7 0 0 0 0 147 0 9

Initial Fut: 79 307 301 215 186 122 150 308 36 512 415 114

User Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00

PHF Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00

PHF Volume: 79 307 301 215 186 122 150 308 36 512 415 114

Reduct Vol: 0 0 0 0 0 0 0 0 0 0 0 0

Reduced Vol: 79 307 301 215 186 122 150 308 36 512 415 114

PCE Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00

MLF Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00

FinalVolume: 79 307 301 215 186 122 150 308 36 512 415 114

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Saturation Flow Module:

Sat/Lane: 1700 1700 1700 1700 1700 1700 1700 1700 1700 1700 1700 1700

Adjustment: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00

Lanes: 1.00 1.01 0.99 1.00 1.21 0.79 1.00 1.79 0.21 1.00 1.57 0.43

Final Sat.: 1700 1718 1682 1700 2055 1345 1700 3045 355 1700 2670 730

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Capacity Analysis Module:

Vol/Sat: 0.05 0.18 0.18 0.13 0.09 0.09 0.09 0.10 0.10 0.30 0.16 0.16

Crit Moves: **** **** **** ****

Level Of Service Computation Report

ICU 1(Loss as Cycle Length %) Method (Future Volume Alternative)

Intersection #6 Puerto Place/Dana Point Harbor Drive

Cycle (sec): 100 Critical Vol./Cap.(X): 0.414
Loss Time (sec): 5 Average Delay (sec/veh): xxxxxx
Optimal Cycle: 20 Level Of Service: A

Street Name: Puerto Place Dana Point Harbor Drive
Approach: North Bound South Bound East Bound West Bound
Movement: L - T - R L - T - R L - T - R L - T - R

Control: Protected Protected Protected Protected
Rights: Include Include Include Include
Min. Green: 0 0 0 0 0 0 0 0 0 0 0 0
Y+R: 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0
Lanes: 1 0 0 0 1 0 0 0 0 0 0 0 2 0 1 1 0 2 0 0

Volume Module:

Base Vol: 34 0 77 0 0 0 0 0 313 46 75 766 0
Growth Adj: 1.02 1.02 1.02 1.02 1.02 1.02 1.02 1.02 1.02 1.02 1.02 1.02 1.02
Initial Bse: 35 0 79 0 0 0 0 0 321 47 77 785 0
Added Vol: 0 0 0 0 0 0 0 0 0 0 0 0 0
Cm2,3,17,18: 9 0 83 0 0 0 0 0 102 11 103 130 0
Initial Fut: 44 0 162 0 0 0 0 0 423 58 180 915 0
User Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
PHF Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
PHF Volume: 44 0 162 0 0 0 0 0 423 58 180 915 0
Reduct Vol: 0 0 0 0 0 0 0 0 0 0 0 0 0
Reduced Vol: 44 0 162 0 0 0 0 0 423 58 180 915 0
PCE Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
MLF Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
FinalVolume: 44 0 162 0 0 0 0 0 423 58 180 915 0

Saturation Flow Module:

Sat/Lane: 1700 1700 1700 1700 1700 1700 1700 1700 1700 1700 1700 1700
Adjustment: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
Lanes: 1.00 0.00 1.00 0.00 0.00 0.00 0.00 2.00 1.00 1.00 2.00 0.00
Final Sat.: 1700 0 1700 0 0 0 0 3400 1700 1700 3400 0

Capacity Analysis Module:

Vol/Sat: 0.03 0.00 0.10 0.00 0.00 0.00 0.00 0.12 0.03 0.11 0.27 0.00
Crit Moves: ****

Level Of Service Computation Report

ICU 1(Loss as Cycle Length %) Method (Future Volume Alternative)

Intersection #7 Dana Point Harbor Drive/Park Lantern

Cycle (sec): 100 Critical Vol./Cap.(X): 0.344
Loss Time (sec): 5 Average Delay (sec/veh): xxxxxx
Optimal Cycle: 18 Level Of Service: A

Street Name: Dana Point Harbor Drive Park Landtern
Approach: North Bound South Bound East Bound West Bound
Movement: L - T - R L - T - R L - T - R L - T - R

Control: Protected Protected Permitted Permitted
Rights: Include Include Include Include
Min. Green: 0 0 0 0 0 0 0 0 0 0 0 0
Y+R: 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0
Lanes: 1 0 2 0 1 1 0 1 1 0 0 0 1 0 1 0

Volume Module:

Base Vol: 5 474 37 88 517 39 15 0 13 22 0 32
Growth Adj: 1.02 1.02 1.02 1.02 1.02 1.02 1.02 1.02 1.02 1.02 1.02 1.02
Initial Bse: 5 486 38 90 530 40 15 0 13 23 0 33
Added Vol: 0 0 0 11 0 0 0 0 0 0 0 11
Cm2,3,17,18: 0 193 0 0 242 0 0 0 0 0 0 0
Initial Fut: 5 679 38 101 772 40 15 0 13 23 0 44
User Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
PHF Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
PHF Volume: 5 679 38 101 772 40 15 0 13 23 0 44
Reduct Vol: 0 0 0 0 0 0 0 0 0 0 0 0
Reduced Vol: 5 679 38 101 772 40 15 0 13 23 0 44
PCE Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
MLF Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
FinalVolume: 5 679 38 101 772 40 15 0 13 23 0 44

Saturation Flow Module:

Sat/Lane: 1700 1700 1700 1700 1700 1700 1700 1700 1700 1700 1700 1700
Adjustment: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
Lanes: 1.00 2.00 1.00 1.00 1.90 0.10 0.54 0.00 0.46 1.00 0.00 1.00
Final Sat.: 1700 3400 1700 1700 3233 167 911 0 789 1700 0 1700

Capacity Analysis Module:

Vol/Sat: 0.00 0.20 0.02 0.06 0.24 0.24 0.01 0.00 0.02 0.01 0.00 0.03
Crit Moves: ****

Level Of Service Computation Report

ICU 1(Loss as Cycle Length %) Method (Future Volume Alternative)

Intersection #8 Del Obispo Street-Dana Point Harbor Drive/PCH

Cycle (sec): 100 Critical Vol./Cap.(X): 0.653
Loss Time (sec): 5 Average Delay (sec/veh): xxxxxx
Optimal Cycle: 33 Level Of Service: B

Street Name:Del Obispo Street-Dana Point Harb PCH

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

Control: Protected Protected Protected Protected
Rights: Ovl Include Include Include
Min. Green: 0 0 0 0 0 0 0 0 0 0 0 0
Y+R: 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0
Lanes: 1 0 1 0 2 2 0 1 0 1 1 0 2 1 0

Volume Module:

Base Vol: 51 123 427 244 72 154 140 967 93 382 1207 241
Growth Adj: 1.02 1.02 1.02 1.02 1.02 1.02 1.02 1.02 1.02 1.02 1.02 1.02
Initial Bse: 52 126 438 250 74 158 144 991 95 392 1237 247
Added Vol: 0 4 7 16 4 15 17 68 0 8 84 34
Cm2,3,17,18: 0 29 162 8 11 23 30 0 0 231 0 14
Initial Fut: 52 159 607 274 89 196 191 1059 95 631 1321 295
User Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
PHF Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
PHF Volume: 52 159 607 274 89 196 191 1059 95 631 1321 295
Reduct Vol: 0 0 0 0 0 0 0 0 0 0 0 0
Reduced Vol: 52 159 607 274 89 196 191 1059 95 631 1321 295
PCE Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
MLF Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
FinalVolume: 52 159 607 274 89 196 191 1059 95 631 1321 295
OvlAdjVol: 0

Saturation Flow Module:

Sat/Lane: 1700 1700 1700 1700 1700 1700 1700 1700 1700 1700 1700 1700
Adjustment: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
Lanes: 1.00 1.00 2.00 2.00 1.00 1.00 1.00 2.75 0.25 2.00 2.45 0.55
Final Sat.: 1700 1700 3400 3400 1700 1700 1700 4679 421 3400 4169 931

Capacity Analysis Module:

Vol/Sat: 0.03 0.09 0.18 0.08 0.05 0.12 0.11 0.23 0.23 0.19 0.32 0.32
OvlAdjV/S: 0.00
Crit Moves: **** *

Level Of Service Computation Report

ICU 1(Loss as Cycle Length %) Method (Future Volume Alternative)

Intersection #9 Del Opisobo Street/Stonehill Drive

Cycle (sec): 100 Critical Vol./Cap.(X): 0.778
Loss Time (sec): 5 Average Delay (sec/veh): xxxxxx
Optimal Cycle: 48 Level Of Service: C

Street Name: Del Opisobo Street Stonehill Drive

Approach: North Bound South Bound East Bound West Bound

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

Control: Protected Protected Protected Protected

Rights: Include Include Include Include

Min. Green: 0 0 0 0 0 0 0 0 0 0 0 0

Y+R: 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0

Lanes: 1 0 1 1 0 1 0 1 1 0 1 0 2 0 1 1 0 2 0 1

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Volume Module:

Base Vol: 144 305 178 245 303 91 115 817 110 128 555 249

Growth Adj: 1.02 1.02 1.02 1.02 1.02 1.02 1.02 1.02 1.02 1.02 1.02 1.02

Initial Bse: 148 313 182 251 311 93 118 837 113 131 569 255

Added Vol: 0 55 0 65 33 0 0 2 1 1 0 54

Cm2,3,17,18: 3 11 43 5 14 0 0 65 5 30 79 5

Initial Fut: 151 379 225 321 358 93 118 904 119 162 648 314

User Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00

PHF Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00

PHF Volume: 151 379 225 321 358 93 118 904 119 162 648 314

Reduct Vol: 0 0 0 0 0 0 0 0 0 0 0 0

Reduced Vol: 151 379 225 321 358 93 118 904 119 162 648 314

PCE Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00

MLF Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00

FinalVolume: 151 379 225 321 358 93 118 904 119 162 648 314

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Saturation Flow Module:

Sat/Lane: 1700 1700 1700 1700 1700 1700 1700 1700 1700 1700 1700 1700

Adjustment: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00

Lanes: 1.00 1.25 0.75 1.00 1.59 0.41 1.00 2.00 1.00 1.00 2.00 1.00

Final Sat.: 1700 2131 1269 1700 2697 703 1700 3400 1700 1700 3400 1700

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Capacity Analysis Module:

Vol/Sat: 0.09 0.18 0.18 0.19 0.13 0.13 0.07 0.27 0.07 0.10 0.19 0.18

Crit Moves: **** **** **** ****

Level Of Service Computation Report

ICU 1(Loss as Cycle Length %) Method (Future Volume Alternative)

Intersection #9 Del Opisobo Street/Stonehill Drive

Cycle (sec):	100	Critical Vol./Cap.(X):	0.713
Loss Time (sec):	5	Average Delay (sec/veh):	xxxxxx
Optimal Cycle:	39	Level Of Service:	C

Street Name:	Del Opisobo Street				Stonehill Drive										
Approach:	North Bound		South Bound		East Bound		West Bound								
Movement:	L - T - R	L - T - R	L - T - R	L - T - R	L - T - R	L - T - R	L - T - R								
Control:	Protected		Protected		Protected		Protected								
Rights:	Include		Include		Include		Include								
Min. Green:	0	0	0	0	0	0	0	0	0						
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0						
Lanes:	1	0	1	1	0	1	0	2	1	0	1	0	2	0	1

Volume Module:												
Base Vol:	144	305	178	245	303	91	115	817	110	128	555	249
Growth Adj:	1.02	1.02	1.02	1.02	1.02	1.02	1.02	1.02	1.02	1.02	1.02	1.02
Initial Bse:	148	313	182	251	311	93	118	837	113	131	569	255
Added Vol:	0	55	0	65	33	0	0	2	1	1	0	54
Cm2,3,17,18:	3	11	43	5	14	0	0	65	5	30	79	5
Initial Fut:	151	379	225	321	358	93	118	904	119	162	648	314
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	151	379	225	321	358	93	118	904	119	162	648	314
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	151	379	225	321	358	93	118	904	119	162	648	314
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	151	379	225	321	358	93	118	904	119	162	648	314

Saturation Flow Module:												
Sat/Lane:	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700
Adjustment:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Lanes:	1.00	1.25	0.75	1.00	1.59	0.41	1.00	2.65	0.35	1.00	2.00	1.00
Final Sat.:	1700	2131	1269	1700	2697	703	1700	4508	592	1700	3400	1700

Capacity Analysis Module:												
Vol/Sat:	0.09	0.18	0.18	0.19	0.13	0.13	0.07	0.20	0.20	0.10	0.19	0.18
Crit Moves:	****			****			****			****		

Level Of Service Computation Report

ICU 1(Loss as Cycle Length %) Method (Future Volume Alternative)

Intersection #10 Camino Capistrano/Stonehill Drive

Cycle (sec): 100 Critical Vol./Cap.(X): 0.837
Loss Time (sec): 5 Average Delay (sec/veh): xxxxxx
Optimal Cycle: 61 Level Of Service: D

Street Name: Camino Capistrano Stonehill Drive

Approach: North Bound South Bound East Bound West Bound

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

Control: Split Phase Split Phase Split Phase Split Phase
Rights: Include Ovl Include Include
Min. Green: 0 0 0 0 0 0 0 0 0 0 0 0
Y+R: 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0
Lanes: 1 1 0 0 1 1 0 2 0 2 1 0 0 0 0 0

Volume Module:

Base Vol: 385 263 288 69 593 562 188 656 413 0 0 0
Growth Adj: 1.02 1.02 1.02 1.02 1.02 1.02 1.02 1.02 1.02 1.02 1.02 1.02
Initial Bse: 395 270 295 71 608 576 193 672 423 0 0 0
Added Vol: 53 0 30 0 0 0 0 17 50 0 0 0
Cm2,3,17,18: 153 -23 -98 0 -88 216 65 192 181 0 0 0
Initial Fut: 601 247 227 71 520 792 258 881 654 0 0 0
User Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
PHF Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
PHF Volume: 601 247 227 71 520 792 258 881 654 0 0 0
Reduct Vol: 0 0 0 0 0 0 0 0 0 0 0 0
Reduced Vol: 601 247 227 71 520 792 258 881 654 0 0 0
PCE Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
MLF Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
FinalVolume: 601 247 227 71 520 792 258 881 654 0 0 0
OvlAdjVol: 0

Saturation Flow Module:

Sat/Lane: 1700 1700 1700 1700 1700 1700 1700 1700 1700 1700 1700 1700
Adjustment: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
Lanes: 1.42 0.58 1.00 1.00 2.00 2.00 1.00 2.00 1.00 0.00 0.00 0.00
Final Sat.: 2410 990 1700 1700 3400 3400 1700 3400 1700 0 0 0

Capacity Analysis Module:

Vol/Sat: 0.25 0.25 0.13 0.04 0.15 0.23 0.15 0.26 0.38 0.00 0.00 0.00
OvlAdjV/S: 0.00

Crit Moves: **** **** ****

HCM 6th Signalized Intersection Summary
 10: Camino Capistrano & Stonehill Drive/I-5 NB Ramp

02/19/2021



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↘	↑↑	↗				↘	↗	↗	↘	↑↑	↗↗
Traffic Volume (veh/h)	258	881	654	0	0	0	601	247	227	71	520	792
Future Volume (veh/h)	258	881	654	0	0	0	601	247	227	71	520	792
Initial Q (Qb), veh	0	0	0				0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00				1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00				1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No					No			No		
Adj Sat Flow, veh/h/ln	1870	1870	1870				1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	272	927	0				446	521	239	75	547	834
Peak Hour Factor	0.95	0.95	0.95				0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	2	2	2				2	2	2	2	2	2
Cap, veh/h	515	1028					560	588	498	403	805	1439
Arrive On Green	0.29	0.29	0.00				0.31	0.31	0.31	0.23	0.23	0.23
Sat Flow, veh/h	1781	3554	1585				1781	1870	1585	1781	3554	2790
Grp Volume(v), veh/h	272	927	0				446	521	239	75	547	834
Grp Sat Flow(s),veh/h/ln	1781	1777	1585				1781	1870	1585	1781	1777	1395
Q Serve(g_s), s	10.2	19.9	0.0				18.2	21.0	9.7	2.7	11.2	16.4
Cycle Q Clear(g_c), s	10.2	19.9	0.0				18.2	21.0	9.7	2.7	11.2	16.4
Prop In Lane	1.00		1.00				1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	515	1028					560	588	498	403	805	1439
V/C Ratio(X)	0.53	0.90					0.80	0.89	0.48	0.19	0.68	0.58
Avail Cap(c_a), veh/h	527	1050					560	588	498	403	805	1439
HCM Platoon Ratio	1.00	1.00	1.00				1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	0.00				1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	23.7	27.2	0.0				24.9	25.9	22.0	24.8	28.1	13.3
Incr Delay (d2), s/veh	0.9	10.6	0.0				11.2	17.7	3.3	1.0	4.6	1.7
Initial Q Delay(d3),s/veh	0.0	0.0	0.0				0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	4.3	9.6	0.0				9.0	11.7	3.9	1.2	5.1	8.3
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	24.6	37.7	0.0				36.1	43.6	25.3	25.9	32.7	15.0
LnGrp LOS	C	D					D	D	C	C	C	B
Approach Vol, veh/h		1199	A					1206			1456	
Approach Delay, s/veh		34.8						37.2			22.2	
Approach LOS		C						D			C	
Timer - Assigned Phs		2		4				6				
Phs Duration (G+Y+Rc), s		29.5		27.5				22.5				
Change Period (Y+Rc), s		4.5		4.5				4.5				
Max Green Setting (Gmax), s		25.0		23.5				18.0				
Max Q Clear Time (g_c+I1), s		23.0		21.9				18.4				
Green Ext Time (p_c), s		1.2		1.1				0.0				

Intersection Summary

HCM 6th Ctrl Delay	30.8
HCM 6th LOS	C

Notes

- User approved volume balancing among the lanes for turning movement.
- User approved changes to right turn type.
- Unsignalized Delay for [EBR] is excluded from calculations of the approach delay and intersection delay.

Level Of Service Computation Report

ICU 1(Loss as Cycle Length %) Method (Future Volume Alternative)

Intersection #11 I-5 SB Ramps/Camino Las Ramblas

Cycle (sec): 100 Critical Vol./Cap.(X): 0.302
Loss Time (sec): 5 Average Delay (sec/veh): xxxxxx
Optimal Cycle: 17 Level Of Service: A

Street Name: I-5 SB Ramps Camino Las Ramblas

Approach: North Bound South Bound East Bound West Bound

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

Control: Protected Protected Protected Protected

Rights: Include Ignore Ignore Ignore

Min. Green: 0 0 0 0 0 0 0 0 0 0 0 0

Y+R: 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0

Lanes: 0 0 0 0 0 2 0 0 0 1 0 0 2 0 1 0 0 1 0 1

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Volume Module:

Base Vol: 0 0 0 182 0 577 0 500 1151 0 113 109

Growth Adj: 1.02 1.02 1.02 1.02 1.02 1.02 1.02 1.02 1.02 1.02 1.02 1.02

Initial Bse: 0 0 0 187 0 591 0 513 1180 0 116 112

Added Vol: 0 0 0 0 0 73 0 20 66 0 72 0

Cm2,3,17,18: 0 0 0 0 0 50 0 138 0 0 24 0

Initial Fut: 0 0 0 187 0 714 0 671 1246 0 212 112

User Adj: 1.00 1.00 1.00 1.00 1.00 0.00 1.00 1.00 0.00 1.00 1.00 0.00

PHF Adj: 1.00 1.00 1.00 1.00 1.00 0.00 1.00 1.00 0.00 1.00 1.00 0.00

PHF Volume: 0 0 0 187 0 0 0 671 0 0 212 0

Reduct Vol: 0 0 0 0 0 0 0 0 0 0 0 0

Reduced Vol: 0 0 0 187 0 0 0 671 0 0 212 0

PCE Adj: 1.00 1.00 1.00 1.00 1.00 0.00 1.00 1.00 0.00 1.00 1.00 0.00

MLF Adj: 1.00 1.00 1.00 1.00 1.00 0.00 1.00 1.00 0.00 1.00 1.00 0.00

FinalVolume: 0 0 0 187 0 0 0 671 0 0 212 0

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Saturation Flow Module:

Sat/Lane: 1700 1700 1700 1700 1700 1700 1700 1700 1700 1700 1700 1700

Adjustment: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00

Lanes: 0.00 0.00 0.00 2.00 0.00 1.00 0.00 2.00 1.00 0.00 1.00 1.00

Final Sat.: 0 0 0 3400 0 1700 0 3400 1700 0 1700 1700

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Capacity Analysis Module:

Vol/Sat: 0.00 0.00 0.00 0.05 0.00 0.00 0.00 0.20 0.00 0.00 0.12 0.00

Crit Moves: **** **** ****

Level Of Service Computation Report

ICU 1(Loss as Cycle Length %) Method (Future Volume Alternative)

Intersection #12 I-5 NB Ramps/Camino Las Ramblas

Cycle (sec): 100 Critical Vol./Cap.(X): 0.247
Loss Time (sec): 5 Average Delay (sec/veh): xxxxxx
Optimal Cycle: 16 Level Of Service: A

Street Name: I-5 NB Ramps Camino Las Ramblas

Approach: North Bound South Bound East Bound West Bound

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

Control: Permitted Permitted Permitted Permitted
Rights: Include Include Ignore Include
Min. Green: 0 0 0 0 0 0 0 0 0 0 0 0
Y+R: 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0
Lanes: 0 1 0 0 1 1 0 0 0 1 1 0 0 2 0 1 0 0 2 1 0

Volume Module:

Base Vol: 6 21 97 6 0 55 41 321 423 0 389 5
Growth Adj: 1.02 1.02 1.02 1.02 1.02 1.02 1.02 1.02 1.02 1.02 1.02 1.02
Initial Bse: 6 22 99 6 0 56 42 329 434 0 399 5
Added Vol: 72 0 0 0 0 0 0 0 20 0 1 0
Cm2,3,17,18: 24 0 0 0 0 0 0 0 138 0 0 0
Initial Fut: 102 22 99 6 0 56 42 329 592 0 400 5
User Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 0.00 1.00 1.00 1.00
PHF Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 0.00 1.00 1.00 1.00
PHF Volume: 102 22 99 6 0 56 42 329 0 0 400 5
Reduct Vol: 0 0 0 0 0 0 0 0 0 0 0 0
Reduced Vol: 102 22 99 6 0 56 42 329 0 0 400 5
PCE Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 0.00 1.00 1.00 1.00
MLF Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 0.00 1.00 1.00 1.00
FinalVolume: 102 22 99 6 0 56 42 329 0 0 400 5

Saturation Flow Module:





















Sat/Lane: 1700 1700 1700 1700 1700 1700 1700 1700 1700 1700 1700 1700
Adjustment: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
Lanes: 0.83 0.17 1.00 1.00 0.00 1.00 1.00 2.00 1.00 0.00 2.96 0.04
Final Sat.: 1404 296 1700 1700 0 1700 1700 3400 1700 0 5035 65

Capacity Analysis Module:

Vol/Sat: 0.06 0.07 0.06 0.00 0.00 0.03 0.02 0.10 0.00 0.00 0.08 0.08
Crit Moves: ****

HCM Signalized Intersection Capacity Analysis
 12: I-5 NB Ramps & Camino Las Ramblas

02/19/2021

													
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR	
Lane Configurations													
Traffic Volume (vph)	42	329	592	0	400	5	102	22	99	6	0	56	
Future Volume (vph)	42	329	592	0	400	5	102	22	99	6	0	56	
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	
Lane Util. Factor	1.00	0.95	1.00		0.91			1.00	1.00	1.00		1.00	
Frt	1.00	1.00	0.85		1.00			1.00	0.85	1.00		0.85	
Flt Protected	0.95	1.00	1.00		1.00			0.96	1.00	0.95		1.00	
Satd. Flow (prot)	1770	3539	1583		5076			1789	1583	1770		1583	
Flt Permitted	0.49	1.00	1.00		1.00			0.96	1.00	0.67		1.00	
Satd. Flow (perm)	921	3539	1583		5076			1789	1583	1255		1583	
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	
Adj. Flow (vph)	44	346	623	0	421	5	107	23	104	6	0	59	
RTOR Reduction (vph)	0	0	0	0	3	0	0	0	52	0	0	30	
Lane Group Flow (vph)	44	346	623	0	423	0	0	130	52	6	0	29	
Turn Type	Perm	NA	Free		NA		Perm	NA	Perm	Perm		Perm	
Protected Phases		4			8			2					
Permitted Phases	4		Free				2		2	6		6	
Actuated Green, G (s)	9.2	9.2	36.3		9.2			18.1	18.1	18.1		18.1	
Effective Green, g (s)	9.2	9.2	36.3		9.2			18.1	18.1	18.1		18.1	
Actuated g/C Ratio	0.25	0.25	1.00		0.25			0.50	0.50	0.50		0.50	
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)	233	896	1583		1286			892	789	625		789	
v/s Ratio Prot		0.10			0.08								
v/s Ratio Perm	0.05		c0.39					0.07	0.03	0.00		0.02	
v/c Ratio	0.19	0.39	0.39		0.33			0.15	0.07	0.01		0.04	
Uniform Delay, d1	10.6	11.2	0.0		11.0			4.9	4.7	4.6		4.6	
Progression Factor	1.00	1.00	1.00		1.00			1.00	1.00	1.00		1.00	
Incremental Delay, d2	0.4	0.3	0.7		0.2			0.3	0.2	0.0		0.1	
Delay (s)	11.0	11.5	0.7		11.2			5.3	4.9	4.6		4.7	
Level of Service	B	B	A		B			A	A	A		A	
Approach Delay (s)		4.9			11.2			5.1			4.7		
Approach LOS		A			B			A			A		
Intersection Summary													
HCM 2000 Control Delay			6.4									HCM 2000 Level of Service	A
HCM 2000 Volume to Capacity ratio			0.52										
Actuated Cycle Length (s)			36.3									Sum of lost time (s)	9.0
Intersection Capacity Utilization			36.7%									ICU Level of Service	A
Analysis Period (min)			15										

c Critical Lane Group

APPENDIX D

EXISTING PLUS PROJECT LOS WORKSHEETS

HCM 6th TWSC
 1: Island Way & Dana Point Harbor Drive

11/19/2020

Intersection						
Int Delay, s/veh	3.7					
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	171	26	145	167	18	81
Future Vol, veh/h	171	26	145	167	18	81
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	300	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	95	95	95	95	95	95
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	180	27	153	176	19	85

Major/Minor	Major1	Major2	Minor1		
Conflicting Flow All	0	0	207	0	676 194
Stage 1	-	-	-	-	194 -
Stage 2	-	-	-	-	482 -
Critical Hdwy	-	-	4.12	-	6.42 6.22
Critical Hdwy Stg 1	-	-	-	-	5.42 -
Critical Hdwy Stg 2	-	-	-	-	5.42 -
Follow-up Hdwy	-	-	2.218	-	3.518 3.318
Pot Cap-1 Maneuver	-	-	1364	-	419 847
Stage 1	-	-	-	-	839 -
Stage 2	-	-	-	-	621 -
Platoon blocked, %	-	-	-	-	-
Mov Cap-1 Maneuver	-	-	1364	-	372 847
Mov Cap-2 Maneuver	-	-	-	-	372 -
Stage 1	-	-	-	-	839 -
Stage 2	-	-	-	-	551 -

Approach	EB	WB	NB
HCM Control Delay, s	0	3.7	11.2
HCM LOS			B

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	687	-	-	1364	-
HCM Lane V/C Ratio	0.152	-	-	0.112	-
HCM Control Delay (s)	11.2	-	-	8	-
HCM Lane LOS	B	-	-	A	-
HCM 95th %tile Q(veh)	0.5	-	-	0.4	-

Level Of Service Computation Report

ICU 1(Loss as Cycle Length %) Method (Future Volume Alternative)

Intersection #2 Casitas Place/Dana Point Harbor Drive

Cycle (sec): 100 Critical Vol./Cap.(X): 0.173
Loss Time (sec): 5 Average Delay (sec/veh): xxxxxx
Optimal Cycle: 15 Level Of Service: A

Street Name: Casitas Place Dana Point Harbor Drive

Approach: North Bound South Bound East Bound West Bound

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

Control: Protected Protected Protected Prot+Permit

Rights: Include Include Include Include

Min. Green: 0 0 0 0 0 0 0 0 0 0 0 0

Y+R: 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0

Lanes: 1 0 0 0 1 0 0 0 0 0 0 0 1 1 0 1 0 2 0 0

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Volume Module:

Base Vol: 4 0 27 0 0 0 0 216 20 57 263 0

Growth Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00

Initial Bse: 4 0 27 0 0 0 0 216 20 57 263 0

Added Vol: 0 0 -4 0 0 0 0 35 0 -6 50 0

PasserByVol: 0 0 0 0 0 0 0 0 0 0 0 0

Initial Fut: 4 0 23 0 0 0 0 251 20 51 313 0

User Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00

PHF Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00

PHF Volume: 4 0 23 0 0 0 0 251 20 51 313 0

Reduct Vol: 0 0 0 0 0 0 0 0 0 0 0 0

Reduced Vol: 4 0 23 0 0 0 0 251 20 51 313 0

PCE Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00

MLF Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00

FinalVolume: 4 0 23 0 0 0 0 251 20 51 313 0

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Saturation Flow Module:

Sat/Lane: 1700 1700 1700 1700 1700 1700 1700 1700 1700 1700 1700 1700

Adjustment: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00

Lanes: 1.00 0.00 1.00 0.00 0.00 0.00 0.00 1.85 0.15 1.00 2.00 0.00

Final Sat.: 1700 0 1700 0 0 0 0 3149 251 1700 3400 0

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Capacity Analysis Module:

Vol/Sat: 0.00 0.00 0.01 0.00 0.00 0.00 0.00 0.08 0.08 0.03 0.09 0.00

Crit Moves: **** **** ****

Level Of Service Computation Report

ICU 1(Loss as Cycle Length %) Method (Future Volume Alternative)

Intersection #3 Golden Lantern/PCH

Cycle (sec): 100 Critical Vol./Cap.(X): 0.559
Loss Time (sec): 5 Average Delay (sec/veh): xxxxxx
Optimal Cycle: 26 Level Of Service: A

Street Name: Golden Lantern PCH

Approach: North Bound South Bound East Bound West Bound

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

Control: Protected Protected Protected Protected

Rights: Include Include Include Include

Min. Green: 0 0 0 0 0 0 0 0 0 0 0 0

Y+R: 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0

Lanes: 1 0 1 1 0 2 0 1 0 1 1 0 1 1 0 1 0 1 1 0

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Volume Module:

Base Vol: 42 96 13 247 194 91 36 583 29 49 1046 129

Growth Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00

Initial Bse: 42 96 13 247 194 91 36 583 29 49 1046 129

Added Vol: 4 2 0 0 2 0 0 0 6 4 0 0

PasserByVol: 0 0 0 0 0 0 0 0 0 0 0 0

Initial Fut: 46 98 13 247 196 91 36 583 35 53 1046 129

User Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00

PHF Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00

PHF Volume: 46 98 13 247 196 91 36 583 35 53 1046 129

Reduct Vol: 0 0 0 0 0 0 0 0 0 0 0 0

Reduced Vol: 46 98 13 247 196 91 36 583 35 53 1046 129

PCE Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00

MLF Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00

FinalVolume: 46 98 13 247 196 91 36 583 35 53 1046 129

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Saturation Flow Module:

Sat/Lane: 1700 1700 1700 1700 1700 1700 1700 1700 1700 1700 1700 1700

Adjustment: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00

Lanes: 1.00 1.77 0.23 2.00 1.00 1.00 1.00 1.89 0.11 1.00 1.78 0.22

Final Sat.: 1700 3002 398 3400 1700 1700 1700 3207 193 1700 3027 373

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Capacity Analysis Module:

Vol/Sat: 0.03 0.03 0.03 0.07 0.12 0.05 0.02 0.18 0.18 0.03 0.35 0.35

Crit Moves: **** **** **** ****

Level Of Service Computation Report

ICU 1(Loss as Cycle Length %) Method (Future Volume Alternative)

Intersection #4 Golden Lantern/Del Prado Avenue

Cycle (sec): 100 Critical Vol./Cap.(X): 0.235
Loss Time (sec): 5 Average Delay (sec/veh): xxxxxx
Optimal Cycle: 16 Level Of Service: A

Street Name: Golden Lantern Del Prado Avenue

Approach: North Bound South Bound East Bound West Bound

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

Control: Protected Protected Prot+Permit Prot+Permit

Rights: Include Include Include Include

Min. Green: 0 0 0 0 0 0 0 0 0 0 0 0

Y+R: 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0

Lanes: 1 0 1 1 0 1 0 2 0 1 1 0 0 1 0 1 1 0 1

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Volume Module:

Base Vol: 43 110 19 49 150 24 36 82 75 23 56 19

Growth Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00

Initial Bse: 43 110 19 49 150 24 36 82 75 23 56 19

Added Vol: 4 6 0 0 13 0 0 0 6 0 0 0

PasserByVol: 0 0 0 0 0 0 0 0 0 0 0 0

Initial Fut: 47 116 19 49 163 24 36 82 81 23 56 19

User Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00

PHF Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00

PHF Volume: 47 116 19 49 163 24 36 82 81 23 56 19

Reduct Vol: 0 0 0 0 0 0 0 0 0 0 0 0

Reduced Vol: 47 116 19 49 163 24 36 82 81 23 56 19

PCE Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00

MLF Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00

FinalVolume: 47 116 19 49 163 24 36 82 81 23 56 19

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Saturation Flow Module:

Sat/Lane: 1700 1700 1700 1700 1700 1700 1700 1700 1700 1700 1700 1700

Adjustment: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00

Lanes: 1.00 1.72 0.28 1.00 2.00 1.00 1.00 0.50 0.50 1.00 1.00 1.00

Final Sat.: 1700 2921 479 1700 3400 1700 1700 855 845 1700 1700 1700

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Capacity Analysis Module:

Vol/Sat: 0.03 0.04 0.04 0.03 0.05 0.01 0.02 0.10 0.10 0.01 0.03 0.01

Crit Moves: **** **** **** ****

Level Of Service Computation Report

ICU 1(Loss as Cycle Length %) Method (Future Volume Alternative)

Intersection #5 Golden Lantern/Dana Point Harbor Drive

Cycle (sec): 100 Critical Vol./Cap.(X): 0.247
Loss Time (sec): 5 Average Delay (sec/veh): xxxxxx
Optimal Cycle: 16 Level Of Service: A

Street Name: Golden Lantern Dana Point Harbor Drive

Approach: North Bound South Bound East Bound West Bound

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

Control: Protected Protected Protected Protected

Rights: Ovl Ovl Include Include

Min. Green: 0 0 0 0 0 0 0 0 0 0 0 0

Y+R: 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0

Lanes: 1 0 1 0 1 1 0 1 0 1 1 0 1 0 1 0

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Volume Module:

Base Vol: 32 42 43 48 88 96 62 174 10 113 194 96

Growth Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00

Initial Bse: 32 42 43 48 88 96 62 174 10 113 194 96

Added Vol: 0 0 0 0 0 19 11 20 0 0 25 0

PasserByVol: 0 0 0 0 0 0 0 0 0 0 0 0

Initial Fut: 32 42 43 48 88 115 73 194 10 113 219 96

User Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00

PHF Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00

PHF Volume: 32 42 43 48 88 115 73 194 10 113 219 96

Reduct Vol: 0 0 0 0 0 0 0 0 0 0 0 0

Reduced Vol: 32 42 43 48 88 115 73 194 10 113 219 96

PCE Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00

MLF Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00

FinalVolume: 32 42 43 48 88 115 73 194 10 113 219 96

OvlAdjVol: 0 42

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Saturation Flow Module:

Sat/Lane: 1700 1700 1700 1700 1700 1700 1700 1700 1700 1700 1700 1700

Adjustment: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00

Lanes: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.90 0.10 1.00 1.39 0.61

Final Sat.: 1700 1700 1700 1700 1700 1700 1700 3233 167 1700 2364 1036

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Capacity Analysis Module:

Vol/Sat: 0.02 0.02 0.03 0.03 0.05 0.07 0.04 0.06 0.06 0.07 0.09 0.09

OvlAdjV/S: 0.00 0.02

Crit Moves: **** **** **** ****

Level Of Service Computation Report

ICU 1(Loss as Cycle Length %) Method (Future Volume Alternative)

Intersection #6 Puerto Place/Dana Point Harbor Drive

Cycle (sec): 100 Critical Vol./Cap.(X): 0.177
Loss Time (sec): 5 Average Delay (sec/veh): xxxxxx
Optimal Cycle: 15 Level Of Service: A

Street Name: Puerto Place Dana Point Harbor Drive
Approach: North Bound South Bound East Bound West Bound
Movement: L - T - R L - T - R L - T - R L - T - R

Control: Protected Protected Protected Protected
Rights: Include Include Include Include
Min. Green: 0 0 0 0 0 0 0 0 0 0 0 0
Y+R: 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0
Lanes: 1 0 0 0 1 0 0 0 0 0 0 0 2 0 1 1 0 2 0 0

Volume Module:

Base Vol: 18 0 26 0 0 0 0 234 32 25 356 0
Growth Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
Initial Bse: 18 0 26 0 0 0 0 234 32 25 356 0
Added Vol: 0 0 0 0 0 0 0 20 0 0 24 0
PasserByVol: 0 0 0 0 0 0 0 0 0 0 0 0
Initial Fut: 18 0 26 0 0 0 0 254 32 25 380 0
User Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
PHF Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
PHF Volume: 18 0 26 0 0 0 0 254 32 25 380 0
Reduct Vol: 0 0 0 0 0 0 0 0 0 0 0 0
Reduced Vol: 18 0 26 0 0 0 0 254 32 25 380 0
PCE Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
MLF Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
FinalVolume: 18 0 26 0 0 0 0 254 32 25 380 0

Saturation Flow Module:

Sat/Lane: 1700 1700 1700 1700 1700 1700 1700 1700 1700 1700 1700 1700
Adjustment: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
Lanes: 1.00 0.00 1.00 0.00 0.00 0.00 0.00 2.00 1.00 1.00 2.00 0.00
Final Sat.: 1700 0 1700 0 0 0 0 3400 1700 1700 3400 0

Capacity Analysis Module:

Vol/Sat: 0.01 0.00 0.02 0.00 0.00 0.00 0.00 0.07 0.02 0.01 0.11 0.00
Crit Moves: ****

Level Of Service Computation Report

ICU 1(Loss as Cycle Length %) Method (Future Volume Alternative)

Intersection #7 Dana Point Harbor Drive/Park Lantern

Cycle (sec): 100 Critical Vol./Cap.(X): 0.230
Loss Time (sec): 5 Average Delay (sec/veh): xxxxxx
Optimal Cycle: 16 Level Of Service: A

Street Name: Dana Point Harbor Drive Park Landtern

Approach: North Bound South Bound East Bound West Bound

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

Control: Protected Protected Permitted Permitted

Rights: Include Include Include Include

Min. Green: 0 0 0 0 0 0 0 0 0 0 0 0

Y+R: 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0

Lanes: 1 0 2 0 1 1 0 1 1 0 0 0 1! 0 0 1 0 0 1 0

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Volume Module:

Base Vol: 12 212 10 18 444 36 32 0 8 4 0 12

Growth Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00

Initial Bse: 12 212 10 18 444 36 32 0 8 4 0 12

Added Vol: 0 17 3 0 20 0 0 0 0 4 0 0

PasserByVol: 0 0 0 0 0 0 0 0 0 0 0 0

Initial Fut: 12 229 13 18 464 36 32 0 8 8 0 12

User Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00

PHF Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00

PHF Volume: 12 229 13 18 464 36 32 0 8 8 0 12

Reduct Vol: 0 0 0 0 0 0 0 0 0 0 0 0

Reduced Vol: 12 229 13 18 464 36 32 0 8 8 0 12

PCE Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00

MLF Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00

FinalVolume: 12 229 13 18 464 36 32 0 8 8 0 12

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Saturation Flow Module:

Sat/Lane: 1700 1700 1700 1700 1700 1700 1700 1700 1700 1700 1700 1700

Adjustment: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00

Lanes: 1.00 2.00 1.00 1.00 1.86 0.14 0.80 0.00 0.20 1.00 0.00 1.00

Final Sat.: 1700 3400 1700 1700 3155 245 1360 0 340 1700 0 1700

-----|-----|-----|-----|-----|-----|

Capacity Analysis Module:

Vol/Sat: 0.01 0.07 0.01 0.01 0.15 0.15 0.02 0.00 0.02 0.00 0.00 0.01

Crit Moves: **** **** **** ****

Level Of Service Computation Report

ICU 1(Loss as Cycle Length %) Method (Future Volume Alternative)

Intersection #8 Del Obispo Street-Dana Point Harbor Drive/PCH

Cycle (sec): 100 Critical Vol./Cap.(X): 0.581
Loss Time (sec): 5 Average Delay (sec/veh): xxxxxx
Optimal Cycle: 28 Level Of Service: A

Street Name:Del Obispo Street-Dana Point Harb PCH

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

Control: Protected Protected Protected Protected
Rights: Ovl Include Include Include
Min. Green: 0 0 0 0 0 0 0 0 0 0 0 0
Y+R: 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0
Lanes: 1 0 1 0 2 2 0 1 0 1 1 0 2 1 0

Volume Module:

Base Vol: 23 52 187 400 106 105 80 1011 61 328 1443 256
Growth Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
Initial Bse: 23 52 187 400 106 105 80 1011 61 328 1443 256
Added Vol: 0 3 14 0 2 0 0 0 0 18 4 0
PasserByVol: 0 0 0 0 0 0 0 0 0 0 0 0
Initial Fut: 23 55 201 400 108 105 80 1011 61 346 1447 256
User Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
PHF Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
PHF Volume: 23 55 201 400 108 105 80 1011 61 346 1447 256
Reduct Vol: 0 0 0 0 0 0 0 0 0 0 0 0
Reduced Vol: 23 55 201 400 108 105 80 1011 61 346 1447 256
PCE Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
MLF Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
FinalVolume: 23 55 201 400 108 105 80 1011 61 346 1447 256
OvlAdjVol: 0

Saturation Flow Module:

Sat/Lane: 1700 1700 1700 1700 1700 1700 1700 1700 1700 1700 1700 1700
Adjustment: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
Lanes: 1.00 1.00 2.00 2.00 1.00 1.00 1.00 2.83 0.17 2.00 2.55 0.45
Final Sat.: 1700 1700 3400 3400 1700 1700 1700 4810 290 3400 4333 767

Capacity Analysis Module:

Vol/Sat: 0.01 0.03 0.06 0.12 0.06 0.06 0.05 0.21 0.21 0.10 0.33 0.33
OvlAdjV/S: 0.00
Crit Moves: ****

Level Of Service Computation Report

ICU 1(Loss as Cycle Length %) Method (Future Volume Alternative)

Intersection #9 Del Opisobo Street/Stonehill Drive

Cycle (sec): 100 Critical Vol./Cap.(X): 0.754
 Loss Time (sec): 5 Average Delay (sec/veh): xxxxxx
 Optimal Cycle: 44 Level Of Service: C

Street Name: Del Opisobo Street Stonehill Drive
 Approach: North Bound South Bound East Bound West Bound
 Movement: L - T - R L - T - R L - T - R L - T - R

Control:	Protected			Protected			Protected			Protected						
Rights:	Include			Include			Include			Include						
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0				
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0				
Lanes:	1	0	1	1	0	1	1	0	2	0	1	1	0	2	0	1

Volume Module:

Base Vol:	124	245	141	383	455	216	153	1086	119	76	516	224
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	124	245	141	383	455	216	153	1086	119	76	516	224
Added Vol:	0	2	2	0	2	0	0	0	0	0	0	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	124	247	143	383	457	216	153	1086	119	76	516	224
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	124	247	143	383	457	216	153	1086	119	76	516	224
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	124	247	143	383	457	216	153	1086	119	76	516	224
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	124	247	143	383	457	216	153	1086	119	76	516	224

Saturation Flow Module:

Sat/Lane:	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700
Adjustment:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Lanes:	1.00	1.27	0.73	1.00	1.36	0.64	1.00	2.00	1.00	1.00	2.00	1.00
Final Sat.:	1700	2153	1247	1700	2309	1091	1700	3400	1700	1700	3400	1700

Capacity Analysis Module:

Vol/Sat:	0.07	0.11	0.11	0.23	0.20	0.20	0.09	0.32	0.07	0.04	0.15	0.13
Crit Moves:	****			****			****			****		

Level Of Service Computation Report

ICU 1(Loss as Cycle Length %) Method (Future Volume Alternative)

Intersection #10 Camino Capistrano/Stonehill Drive

Cycle (sec): 100 Critical Vol./Cap.(X): 0.610
Loss Time (sec): 5 Average Delay (sec/veh): xxxxxx
Optimal Cycle: 30 Level Of Service: B

Street Name: Camino Capistrano Stonehill Drive

Approach: North Bound South Bound East Bound West Bound

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

Control: Split Phase Split Phase Split Phase Split Phase

Rights: Include Ovl Include Include

Min. Green: 0 0 0 0 0 0 0 0 0 0 0 0

Y+R: 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0

Lanes: 1 1 0 0 1 1 0 2 0 2 1 0 2 0 0 0 0

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Volume Module:

Base Vol: 281 274 254 54 287 595 281 1060 256 0 0 0

Growth Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00

Initial Bse: 281 274 254 54 287 595 281 1060 256 0 0 0

Added Vol: 0 0 0 0 0 0 0 2 0 0 0 0

PasserByVol: 0 0 0 0 0 0 0 0 0 0 0 0

Initial Fut: 281 274 254 54 287 595 281 1062 256 0 0 0

User Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00

PHF Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00

PHF Volume: 281 274 254 54 287 595 281 1062 256 0 0 0

Reduct Vol: 0 0 0 0 0 0 0 0 0 0 0 0

Reduced Vol: 281 274 254 54 287 595 281 1062 256 0 0 0

PCE Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00

MLF Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00

FinalVolume: 281 274 254 54 287 595 281 1062 256 0 0 0

OvlAdjVol: 0

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Saturation Flow Module:

Sat/Lane: 1700 1700 1700 1700 1700 1700 1700 1700 1700 1700 1700 1700

Adjustment: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00

Lanes: 1.01 0.99 1.00 1.00 2.00 2.00 1.00 2.00 1.00 0.00 0.00 0.00

Final Sat.: 1721 1679 1700 1700 3400 3400 1700 3400 1700 0 0 0

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Capacity Analysis Module:

Vol/Sat: 0.16 0.16 0.15 0.03 0.08 0.17 0.17 0.31 0.15 0.00 0.00 0.00

OvlAdjV/S: 0.00

Crit Moves: **** **** ****

HCM 6th Signalized Intersection Summary
 10: Camino Capistrano & Stonehill Drive/I-5 NB Ramp

02/19/2021



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	281	1062	256	0	0	0	281	274	254	54	287	595
Future Volume (veh/h)	281	1062	256	0	0	0	281	274	254	54	287	595
Initial Q (Qb), veh	0	0	0				0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00				1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00				1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No					No			No		
Adj Sat Flow, veh/h/ln	1870	1870	1870				1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	296	1118	0				292	294	267	57	302	626
Peak Hour Factor	0.95	0.95	0.95				0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	2	2	2				2	2	2	2	2	2
Cap, veh/h	603	1203					428	450	381	428	855	1615
Arrive On Green	0.34	0.34	0.00				0.24	0.24	0.24	0.24	0.24	0.24
Sat Flow, veh/h	1781	3554	1585				1781	1870	1585	1781	3554	2790
Grp Volume(v), veh/h	296	1118	0				292	294	267	57	302	626
Grp Sat Flow(s),veh/h/ln	1781	1777	1585				1781	1870	1585	1781	1777	1395
Q Serve(g_s), s	9.9	22.7	0.0				11.1	10.6	11.5	1.9	5.3	9.1
Cycle Q Clear(g_c), s	9.9	22.7	0.0				11.1	10.6	11.5	1.9	5.3	9.1
Prop In Lane	1.00		1.00				1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	603	1203					428	450	381	428	855	1615
V/C Ratio(X)	0.49	0.93					0.68	0.65	0.70	0.13	0.35	0.39
Avail Cap(c_a), veh/h	607	1211					428	450	381	428	855	1615
HCM Platoon Ratio	1.00	1.00	1.00				1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	0.00				1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	19.6	23.9	0.0				25.8	25.6	25.9	22.3	23.6	8.5
Incr Delay (d2), s/veh	0.6	12.5	0.0				8.5	7.2	10.2	0.6	1.1	0.7
Initial Q Delay(d3),s/veh	0.0	0.0	0.0				0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	4.0	10.9	0.0				5.5	5.4	5.2	0.8	2.3	5.4
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	20.3	36.3	0.0				34.3	32.8	36.2	22.9	24.7	9.3
LnGrp LOS	C	D					C	C	D	C	C	A
Approach Vol, veh/h		1414	A					853			985	
Approach Delay, s/veh		33.0						34.4			14.8	
Approach LOS		C						C			B	
Timer - Assigned Phs		2		4				6				
Phs Duration (G+Y+Rc), s		22.5		29.8				22.5				
Change Period (Y+Rc), s		4.5		4.5				4.5				
Max Green Setting (Gmax), s		18.0		25.5				18.0				
Max Q Clear Time (g_c+I1), s		13.5		24.7				11.1				
Green Ext Time (p_c), s		1.6		0.6				2.8				

Intersection Summary

HCM 6th Ctrl Delay	27.8
HCM 6th LOS	C

Notes

- User approved volume balancing among the lanes for turning movement.
- User approved changes to right turn type.
- Unsignalized Delay for [EBR] is excluded from calculations of the approach delay and intersection delay.

Level Of Service Computation Report

ICU 1(Loss as Cycle Length %) Method (Future Volume Alternative)

Intersection #11 I-5 SB Ramps/Camino Las Ramblas

Cycle (sec): 100 Critical Vol./Cap.(X): 0.256
 Loss Time (sec): 5 Average Delay (sec/veh): xxxxxx
 Optimal Cycle: 16 Level Of Service: A

Street Name:	I-5 SB Ramps						Camino Las Ramblas														
Approach:	North Bound			South Bound			East Bound			West Bound											
Movement:	L	-	T	-	R	L	-	T	-	R	L	-	T	-	R	L	-	T	-	R	
Control:	Protected			Protected			Protected			Protected			Protected			Protected					
Rights:	Include			Ignore			Ignore			Ignore			Ignore			Ignore					
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	0	0	0	0	0	2	0	0	0	1	0	0	2	0	1	0	0	1	0	1	

Volume Module:

Base Vol:	0	0	0	205	0	781	0	489	1039	0	174	135
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	0	0	0	205	0	781	0	489	1039	0	174	135
Added Vol:	0	0	0	0	0	11	0	6	8	0	11	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	0	0	0	205	0	792	0	495	1047	0	185	135
User Adj:	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00	1.00	0.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00	1.00	0.00
PHF Volume:	0	0	0	205	0	0	0	495	0	0	185	0
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	0	0	0	205	0	0	0	495	0	0	185	0
PCE Adj:	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00	1.00	0.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00	1.00	0.00
FinalVolume:	0	0	0	205	0	0	0	495	0	0	185	0

Saturation Flow Module:

Sat/Lane:	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700
Adjustment:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Lanes:	0.00	0.00	0.00	2.00	0.00	1.00	0.00	2.00	1.00	0.00	1.00	1.00
Final Sat.:	0	0	0	3400	0	1700	0	3400	1700	0	1700	1700

Capacity Analysis Module:

Vol/Sat:	0.00	0.00	0.00	0.06	0.00	0.00	0.00	0.15	0.00	0.00	0.11	0.00
Crit Moves:				****				****				****

Level Of Service Computation Report

ICU 1(Loss as Cycle Length %) Method (Future Volume Alternative)

Intersection #12 I-5 NB Ramps/Camino Las Ramblas

Cycle (sec): 100 Critical Vol./Cap.(X): 0.253
 Loss Time (sec): 5 Average Delay (sec/veh): xxxxxx
 Optimal Cycle: 16 Level Of Service: A

Street Name:	I-5 NB Ramps						Camino Las Ramblas													
Approach:	North Bound			South Bound			East Bound			West Bound										
Movement:	L	-	T	-	R	L	-	T	-	R	L	-	T	-	R	L	-	T	-	R

Control:	Permitted						Permitted						Permitted							
Rights:	Include						Include						Ignore							
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0					
Lanes:	0	1	0	0	1	1	0	0	0	1	1	0	2	0	1	0	0	2	1	0

Volume Module:

Base Vol:	1	12	87	8	0	93	22	273	355	0	648	7
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	1	12	87	8	0	93	22	273	355	0	648	7
Added Vol:	11	0	0	0	0	0	0	0	6	0	0	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	12	12	87	8	0	93	22	273	361	0	648	7
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00
PHF Volume:	12	12	87	8	0	93	22	273	0	0	648	7
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	12	12	87	8	0	93	22	273	0	0	648	7
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00
FinalVolume:	12	12	87	8	0	93	22	273	0	0	648	7

Saturation Flow Module:





















Sat/Lane:	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700
Adjustment:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Lanes:	0.50	0.50	1.00	1.00	0.00	1.00	1.00	2.00	1.00	0.00	2.97	0.03
Final Sat.:	850	850	1700	1700	0	1700	1700	3400	1700	0	5045	55

Capacity Analysis Module:

Vol/Sat:	0.01	0.01	0.05	0.00	0.00	0.05	0.01	0.08	0.00	0.00	0.13	0.13
Crit Moves:	****					****	****				****	

HCM Signalized Intersection Capacity Analysis
 12: I-5 NB Ramps & Camino Las Ramblas

02/19/2021

													
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR	
Lane Configurations													
Traffic Volume (vph)	22	273	361	0	648	7	12	12	87	8	0	93	
Future Volume (vph)	22	273	361	0	648	7	12	12	87	8	0	93	
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	
Lane Util. Factor	1.00	0.95	1.00		0.91			1.00	1.00	1.00		1.00	
Frt	1.00	1.00	0.85		1.00			1.00	0.85	1.00		0.85	
Flt Protected	0.95	1.00	1.00		1.00			0.98	1.00	0.95		1.00	
Satd. Flow (prot)	1770	3539	1583		5078			1817	1583	1770		1583	
Flt Permitted	0.38	1.00	1.00		1.00			0.98	1.00	0.74		1.00	
Satd. Flow (perm)	705	3539	1583		5078			1817	1583	1379		1583	
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	
Adj. Flow (vph)	23	287	380	0	682	7	13	13	92	8	0	98	
RTOR Reduction (vph)	0	0	0	0	3	0	0	0	49	0	0	53	
Lane Group Flow (vph)	23	287	380	0	686	0	0	26	43	8	0	45	
Turn Type	Perm	NA	Free		NA		Perm	NA	Perm	Perm		Perm	
Protected Phases		4			8			2					
Permitted Phases	4		Free				2		2	6		6	
Actuated Green, G (s)	12.0	12.0	39.1		12.0			18.1	18.1	18.1		18.1	
Effective Green, g (s)	12.0	12.0	39.1		12.0			18.1	18.1	18.1		18.1	
Actuated g/C Ratio	0.31	0.31	1.00		0.31			0.46	0.46	0.46		0.46	
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)	216	1086	1583		1558			841	732	638		732	
v/s Ratio Prot		0.08			c0.14								
v/s Ratio Perm	0.03		c0.24					0.01	0.03	0.01		0.03	
v/c Ratio	0.11	0.26	0.24		0.44			0.03	0.06	0.01		0.06	
Uniform Delay, d1	9.7	10.2	0.0		10.9			5.7	5.8	5.7		5.8	
Progression Factor	1.00	1.00	1.00		1.00			1.00	1.00	1.00		1.00	
Incremental Delay, d2	0.2	0.1	0.4		0.2			0.1	0.2	0.0		0.2	
Delay (s)	9.9	10.4	0.4		11.1			5.8	5.9	5.7		6.0	
Level of Service	A	B	A		B			A	A	A		A	
Approach Delay (s)		4.8			11.1			5.9			5.9		
Approach LOS		A			B			A			A		
Intersection Summary													
HCM 2000 Control Delay			7.7									HCM 2000 Level of Service	A
HCM 2000 Volume to Capacity ratio			0.36										
Actuated Cycle Length (s)			39.1									Sum of lost time (s)	9.0
Intersection Capacity Utilization			33.9%									ICU Level of Service	A
Analysis Period (min)			15										

c Critical Lane Group

HCM 6th TWSC
 1: Island Way & Dana Point Harbor Drive

11/19/2020

Intersection						
Int Delay, s/veh	5.9					
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	136	42	175	139	40	176
Future Vol, veh/h	136	42	175	139	40	176
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	300	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	95	95	95	95	95	95
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	143	44	184	146	42	185

Major/Minor	Major1	Major2	Minor1		
Conflicting Flow All	0	0	187	0	679
Stage 1	-	-	-	-	165
Stage 2	-	-	-	-	514
Critical Hdwy	-	-	4.12	-	6.42
Critical Hdwy Stg 1	-	-	-	-	5.42
Critical Hdwy Stg 2	-	-	-	-	5.42
Follow-up Hdwy	-	-	2.218	-	3.518
Pot Cap-1 Maneuver	-	-	1387	-	417
Stage 1	-	-	-	-	864
Stage 2	-	-	-	-	600
Platoon blocked, %	-	-	-	-	-
Mov Cap-1 Maneuver	-	-	1387	-	362
Mov Cap-2 Maneuver	-	-	-	-	362
Stage 1	-	-	-	-	864
Stage 2	-	-	-	-	520

Approach	EB	WB	NB
HCM Control Delay, s	0	4.5	12.7
HCM LOS			B

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	695	-	-	1387	-
HCM Lane V/C Ratio	0.327	-	-	0.133	-
HCM Control Delay (s)	12.7	-	-	8	-
HCM Lane LOS	B	-	-	A	-
HCM 95th %tile Q(veh)	1.4	-	-	0.5	-

Level Of Service Computation Report

ICU 1(Loss as Cycle Length %) Method (Future Volume Alternative)

Intersection #2 Casitas Place/Dana Point Harbor Drive

Cycle (sec): 100 Critical Vol./Cap.(X): 0.219
 Loss Time (sec): 5 Average Delay (sec/veh): xxxxxx
 Optimal Cycle: 16 Level Of Service: A

Street Name: Casitas Place Dana Point Harbor Drive

Approach: North Bound South Bound East Bound West Bound

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

Control:	Protected			Protected			Protected			Prot+Permit		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	1	0	0	0	0	0	0	0	1	1	0	2

Volume Module:

Base Vol:	16	0	27	0	0	0	0	310	25	84	262	0
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	16	0	27	0	0	0	0	310	25	84	262	0
Added Vol:	0	0	-7	0	0	0	0	50	0	-6	49	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	16	0	20	0	0	0	0	360	25	78	311	0
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	16	0	20	0	0	0	0	360	25	78	311	0
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	16	0	20	0	0	0	0	360	25	78	311	0
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	16	0	20	0	0	0	0	360	25	78	311	0

Saturation Flow Module:

Sat/Lane:	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700
Adjustment:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Lanes:	1.00	0.00	1.00	0.00	0.00	0.00	0.00	1.87	0.13	1.00	2.00	0.00
Final Sat.:	1700	0	1700	0	0	0	0	3179	221	1700	3400	0

Capacity Analysis Module:

Vol/Sat:	0.01	0.00	0.01	0.00	0.00	0.00	0.00	0.11	0.11	0.05	0.09	0.00
Crit Moves:	****						****			****		

Level Of Service Computation Report

ICU 1(Loss as Cycle Length %) Method (Future Volume Alternative)

Intersection #3 Golden Lantern/PCH

Cycle (sec): 100 Critical Vol./Cap.(X): 0.675
Loss Time (sec): 5 Average Delay (sec/veh): xxxxxx
Optimal Cycle: 35 Level Of Service: B

Street Name: Golden Lantern PCH

Approach: North Bound South Bound East Bound West Bound

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

Control: Protected Protected Protected Protected
Rights: Include Include Include Include
Min. Green: 0 0 0 0 0 0 0 0 0 0 0 0
Y+R: 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0
Lanes: 1 0 1 1 0 2 0 1 0 1 1 0 1 1 0 1 0 1 1 0

Volume Module:

Base Vol: 122 297 42 269 293 88 94 835 52 69 863 227
Growth Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
Initial Bse: 122 297 42 269 293 88 94 835 52 69 863 227
Added Vol: 6 2 0 0 2 0 0 0 6 4 0 0
PasserByVol: 0 0 0 0 0 0 0 0 0 0 0 0
Initial Fut: 128 299 42 269 295 88 94 835 58 73 863 227
User Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
PHF Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
PHF Volume: 128 299 42 269 295 88 94 835 58 73 863 227
Reduct Vol: 0 0 0 0 0 0 0 0 0 0 0 0
Reduced Vol: 128 299 42 269 295 88 94 835 58 73 863 227
PCE Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
MLF Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
FinalVolume: 128 299 42 269 295 88 94 835 58 73 863 227

Saturation Flow Module:

Sat/Lane: 1700 1700 1700 1700 1700 1700 1700 1700 1700 1700 1700 1700
Adjustment: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
Lanes: 1.00 1.75 0.25 2.00 1.00 1.00 1.00 1.87 0.13 1.00 1.58 0.42
Final Sat.: 1700 2981 419 3400 1700 1700 1700 3179 221 1700 2692 708

Capacity Analysis Module:

Vol/Sat: 0.08 0.10 0.10 0.08 0.17 0.05 0.06 0.26 0.26 0.04 0.32 0.32
Crit Moves: **** **** **** ****

Level Of Service Computation Report

ICU 1(Loss as Cycle Length %) Method (Future Volume Alternative)

Intersection #4 Golden Lantern/Del Prado Avenue

Cycle (sec): 100 Critical Vol./Cap.(X): 0.371
 Loss Time (sec): 5 Average Delay (sec/veh): xxxxxx
 Optimal Cycle: 19 Level Of Service: A

Street Name: Golden Lantern Del Prado Avenue

Approach: North Bound South Bound East Bound West Bound

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

Control:	Protected			Protected			Prot+Permit			Prot+Permit		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	1	0	1	1	0	1	1	0	0	1	0	1

Volume Module:

Base Vol:	47	249	41	136	203	73	58	129	97	29	115	32
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	47	249	41	136	203	73	58	129	97	29	115	32
Added Vol:	6	8	0	0	12	0	0	0	6	0	0	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	53	257	41	136	215	73	58	129	103	29	115	32
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	53	257	41	136	215	73	58	129	103	29	115	32
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	53	257	41	136	215	73	58	129	103	29	115	32
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	53	257	41	136	215	73	58	129	103	29	115	32

Saturation Flow Module:

Sat/Lane:	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700
Adjustment:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Lanes:	1.00	1.72	0.28	1.00	2.00	1.00	1.00	0.56	0.44	1.00	1.00	1.00
Final Sat.:	1700	2932	468	1700	3400	1700	1700	945	755	1700	1700	1700

Capacity Analysis Module:

Vol/Sat:	0.03	0.09	0.09	0.08	0.06	0.04	0.03	0.14	0.14	0.02	0.07	0.02
Crit Moves:	****			****			****			****		

Level Of Service Computation Report

ICU 1(Loss as Cycle Length %) Method (Future Volume Alternative)

Intersection #5 Golden Lantern/Dana Point Harbor Drive

Cycle (sec): 100 Critical Vol./Cap.(X): 0.400
Loss Time (sec): 5 Average Delay (sec/veh): xxxxxx
Optimal Cycle: 20 Level Of Service: A

Street Name: Golden Lantern Dana Point Harbor Drive

Approach: North Bound South Bound East Bound West Bound

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

Control: Protected Protected Protected Protected
Rights: Ovl Ovl Include Include
Min. Green: 0 0 0 0 0 0 0 0 0 0 0 0
Y+R: 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0
Lanes: 1 0 1 0 1 1 0 1 0 1 1 0

Volume Module:

Base Vol: 20 92 135 192 81 101 125 174 15 123 228 89
Growth Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
Initial Bse: 20 92 135 192 81 101 125 174 15 123 228 89
Added Vol: 0 0 0 0 0 18 15 28 0 0 24 0
PasserByVol: 0 0 0 0 0 0 0 0 0 0 0 0
Initial Fut: 20 92 135 192 81 119 140 202 15 123 252 89
User Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
PHF Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
PHF Volume: 20 92 135 192 81 119 140 202 15 123 252 89
Reduct Vol: 0 0 0 0 0 0 0 0 0 0 0 0
Reduced Vol: 20 92 135 192 81 119 140 202 15 123 252 89
PCE Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
MLF Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
FinalVolume: 20 92 135 192 81 119 140 202 15 123 252 89
OvlAdjVol: 12 0

Saturation Flow Module:

Sat/Lane: 1700 1700 1700 1700 1700 1700 1700 1700 1700 1700 1700 1700
Adjustment: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
Lanes: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.86 0.14 1.00 1.48 0.52
Final Sat.: 1700 1700 1700 1700 1700 1700 1700 3165 235 1700 2513 887

Capacity Analysis Module:

Vol/Sat: 0.01 0.05 0.08 0.11 0.05 0.07 0.08 0.06 0.06 0.07 0.10 0.10
OvlAdjV/S: 0.01 0.00
Crit Moves: **** *

Level Of Service Computation Report

ICU 1(Loss as Cycle Length %) Method (Future Volume Alternative)

Intersection #6 Puerto Place/Dana Point Harbor Drive

Cycle (sec): 100 Critical Vol./Cap.(X): 0.268
Loss Time (sec): 5 Average Delay (sec/veh): xxxxxx
Optimal Cycle: 17 Level Of Service: A

Street Name: Puerto Place Dana Point Harbor Drive
Approach: North Bound South Bound East Bound West Bound
Movement: L - T - R L - T - R L - T - R L - T - R

Control: Protected Protected Protected Protected
Rights: Include Include Include Include
Min. Green: 0 0 0 0 0 0 0 0 0 0 0 0
Y+R: 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0
Lanes: 1 0 0 0 1 0 0 0 0 0 0 2 0 1 1 0 2 0 0

Volume Module:

Base Vol: 28 0 76 0 0 0 0 469 42 46 430 0
Growth Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
Initial Bse: 28 0 76 0 0 0 0 469 42 46 430 0
Added Vol: 0 0 0 0 0 0 0 28 0 0 24 0
PasserByVol: 0 0 0 0 0 0 0 0 0 0 0 0
Initial Fut: 28 0 76 0 0 0 0 497 42 46 454 0
User Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
PHF Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
PHF Volume: 28 0 76 0 0 0 0 497 42 46 454 0
Reduct Vol: 0 0 0 0 0 0 0 0 0 0 0 0
Reduced Vol: 28 0 76 0 0 0 0 497 42 46 454 0
PCE Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
MLF Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
FinalVolume: 28 0 76 0 0 0 0 497 42 46 454 0

Saturation Flow Module:

Sat/Lane: 1700 1700 1700 1700 1700 1700 1700 1700 1700 1700 1700 1700
Adjustment: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
Lanes: 1.00 0.00 1.00 0.00 0.00 0.00 0.00 2.00 1.00 1.00 2.00 0.00
Final Sat.: 1700 0 1700 0 0 0 0 3400 1700 1700 3400 0

Capacity Analysis Module:

Vol/Sat: 0.02 0.00 0.04 0.00 0.00 0.00 0.00 0.15 0.02 0.03 0.13 0.00
Crit Moves: ****

Level Of Service Computation Report

ICU 1(Loss as Cycle Length %) Method (Future Volume Alternative)

Intersection #7 Dana Point Harbor Drive/Park Lantern

Cycle (sec): 100 Critical Vol./Cap.(X): 0.279
Loss Time (sec): 5 Average Delay (sec/veh): xxxxxx
Optimal Cycle: 17 Level Of Service: A

Street Name: Dana Point Harbor Drive Park Landtern

Approach: North Bound South Bound East Bound West Bound

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

Control: Protected Protected Permitted Permitted

Rights: Include Include Include Include

Min. Green: 0 0 0 0 0 0 0 0 0 0 0 0

Y+R: 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0

Lanes: 1 0 2 0 1 1 0 1 1 0 0 0 1! 0 0 1 0 0 1 0

-----|-----|-----|-----|-----|-----|-----|-----|

Volume Module:

Table with 13 columns and 14 rows: Base Vol, Growth Adj, Initial Bse, Added Vol, PasserByVol, Initial Fut, User Adj, PHF Adj, PHF Volume, Reduct Vol, Reduced Vol, PCE Adj, MLF Adj, FinalVolume.

-----|-----|-----|-----|-----|-----|-----|-----|

Saturation Flow Module:

Table with 13 columns and 4 rows: Sat/Lane, Adjustment, Lanes, Final Sat..

-----|-----|-----|-----|-----|-----|-----|-----|

Capacity Analysis Module:

Table with 13 columns and 2 rows: Vol/Sat, Crit Moves.

Level Of Service Computation Report

ICU 1(Loss as Cycle Length %) Method (Future Volume Alternative)

Intersection #8 Del Obispo Street-Dana Point Harbor Drive/PCH

Cycle (sec): 100 Critical Vol./Cap.(X): 0.591
 Loss Time (sec): 5 Average Delay (sec/veh): xxxxxx
 Optimal Cycle: 28 Level Of Service: A

Street Name:Del Obispo Street-Dana Point Harb PCH

Approach: North Bound South Bound East Bound West Bound

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

Control:	Protected			Protected			Protected			Protected					
Rights:	Ovl			Include			Include			Include					
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0			
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0			
Lanes:	1	0	1	0	2	2	0	1	0	1	1	0	2	1	0

Volume Module:

Base Vol:	39	85	409	274	109	132	112	1090	71	435	1370	366
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	39	85	409	274	109	132	112	1090	71	435	1370	366
Added Vol:	0	5	19	0	2	0	0	0	0	17	4	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	39	90	428	274	111	132	112	1090	71	452	1374	366
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	39	90	428	274	111	132	112	1090	71	452	1374	366
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	39	90	428	274	111	132	112	1090	71	452	1374	366
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	39	90	428	274	111	132	112	1090	71	452	1374	366
OvlAdjVol:	0											

Saturation Flow Module:

Sat/Lane:	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700
Adjustment:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Lanes:	1.00	1.00	2.00	2.00	1.00	1.00	1.00	2.82	0.18	2.00	2.37	0.63
Final Sat.:	1700	1700	3400	3400	1700	1700	1700	4788	312	3400	4027	1073

Capacity Analysis Module:

Vol/Sat:	0.02	0.05	0.13	0.08	0.07	0.08	0.07	0.23	0.23	0.13	0.34	0.34
OvlAdjV/S:	0.00											
Crit Moves:	****			****			****			****		

Level Of Service Computation Report

ICU 1(Loss as Cycle Length %) Method (Future Volume Alternative)

Intersection #9 Del Opisobo Street/Stonehill Drive

Cycle (sec): 100 Critical Vol./Cap.(X): 0.684
 Loss Time (sec): 5 Average Delay (sec/veh): xxxxxx
 Optimal Cycle: 36 Level Of Service: B

Street Name:	Del Opisobo Street						Stonehill Drive									
Approach:	North Bound			South Bound			East Bound			West Bound						
Movement:	L	T	R	L	T	R	L	T	R	L	T	R				
Control:	Protected			Protected			Protected			Protected						
Rights:	Include			Include			Include			Include						
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0				
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0				
Lanes:	1	0	1	1	0	1	1	0	2	0	1	1	0	2	0	1

Volume Module:

Base Vol:	143	268	156	284	308	109	131	860	93	149	845	420
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	143	268	156	284	308	109	131	860	93	149	845	420
Added Vol:	0	2	3	0	2	0	0	0	0	0	0	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	143	270	159	284	310	109	131	860	93	149	845	420
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	143	270	159	284	310	109	131	860	93	149	845	420
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	143	270	159	284	310	109	131	860	93	149	845	420
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	143	270	159	284	310	109	131	860	93	149	845	420

Saturation Flow Module:

Sat/Lane:	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700
Adjustment:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Lanes:	1.00	1.26	0.74	1.00	1.48	0.52	1.00	2.00	1.00	1.00	2.00	1.00
Final Sat.:	1700	2140	1260	1700	2516	884	1700	3400	1700	1700	3400	1700

Capacity Analysis Module:

Vol/Sat:	0.08	0.13	0.13	0.17	0.12	0.12	0.08	0.25	0.05	0.09	0.25	0.25
Crit Moves:	****			****			****			****		

Level Of Service Computation Report

ICU 1(Loss as Cycle Length %) Method (Future Volume Alternative)

Intersection #10 Camino Capistrano/Stonehill Drive

Cycle (sec): 100 Critical Vol./Cap.(X): 0.690
Loss Time (sec): 5 Average Delay (sec/veh): xxxxxx
Optimal Cycle: 36 Level Of Service: B

Street Name: Camino Capistrano Stonehill Drive

Approach: North Bound South Bound East Bound West Bound

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

Control: Split Phase Split Phase Split Phase Split Phase

Rights: Include Ovl Include Include

Min. Green: 0 0 0 0 0 0 0 0 0 0 0 0

Y+R: 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0

Lanes: 1 1 0 0 1 1 0 2 0 2 1 0 2 0 1 0 0 0 0 0

-----|-----|-----|-----|-----|

Volume Module:

Base Vol: 479 260 359 154 626 851 185 809 383 0 0 0

Growth Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00

Initial Bse: 479 260 359 154 626 851 185 809 383 0 0 0

Added Vol: 0 0 0 0 0 0 0 3 0 0 0 0

PasserByVol: 0 0 0 0 0 0 0 0 0 0 0 0

Initial Fut: 479 260 359 154 626 851 185 812 383 0 0 0

User Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00

PHF Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00

PHF Volume: 479 260 359 154 626 851 185 812 383 0 0 0

Reduct Vol: 0 0 0 0 0 0 0 0 0 0 0 0

Reduced Vol: 479 260 359 154 626 851 185 812 383 0 0 0

PCE Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00

MLF Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00

FinalVolume: 479 260 359 154 626 851 185 812 383 0 0 0

OvlAdjVol: 39

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Saturation Flow Module:

Sat/Lane: 1700 1700 1700 1700 1700 1700 1700 1700 1700 1700 1700 1700

Adjustment: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00

Lanes: 1.30 0.70 1.00 1.00 2.00 2.00 1.00 2.00 1.00 0.00 0.00 0.00

Final Sat.: 2204 1196 1700 1700 3400 3400 1700 3400 1700 0 0 0

-----|-----|-----|-----|-----|

Capacity Analysis Module:

Vol/Sat: 0.22 0.22 0.21 0.09 0.18 0.25 0.11 0.24 0.23 0.00 0.00 0.00

OvlAdjV/S: 0.01

Crit Moves: **** **** ****

HCM 6th Signalized Intersection Summary
 10: Camino Capistrano & Stonehill Drive/I-5 NB Ramp

02/19/2021



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↘	↑↑	↗				↘	↗	↗	↘	↑↑	↗↘
Traffic Volume (veh/h)	185	812	383	0	0	0	479	260	356	154	626	851
Future Volume (veh/h)	185	812	383	0	0	0	479	260	356	154	626	851
Initial Q (Qb), veh	0	0	0				0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00				1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00				1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No					No			No		
Adj Sat Flow, veh/h/ln	1870	1870	1870				1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	195	855	0				389	435	375	162	659	896
Peak Hour Factor	0.95	0.95	0.95				0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	2	2	2				2	2	2	2	2	2
Cap, veh/h	473	943					476	500	423	476	949	1486
Arrive On Green	0.27	0.27	0.00				0.27	0.27	0.27	0.27	0.27	0.27
Sat Flow, veh/h	1781	3554	1585				1781	1870	1585	1781	3554	2790
Grp Volume(v), veh/h	195	855	0				389	435	375	162	659	896
Grp Sat Flow(s),veh/h/ln	1781	1777	1585				1781	1870	1585	1781	1777	1395
Q Serve(g_s), s	6.1	15.7	0.0				13.8	15.0	15.3	4.9	11.2	14.9
Cycle Q Clear(g_c), s	6.1	15.7	0.0				13.8	15.0	15.3	4.9	11.2	14.9
Prop In Lane	1.00		1.00				1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	473	943					476	500	423	476	949	1486
V/C Ratio(X)	0.41	0.91					0.82	0.87	0.89	0.34	0.69	0.60
Avail Cap(c_a), veh/h	476	949					476	500	423	476	949	1486
HCM Platoon Ratio	1.00	1.00	1.00				1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	0.00				1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	20.4	23.9	0.0				23.2	23.6	23.7	19.9	22.2	10.8
Incr Delay (d2), s/veh	0.6	12.1	0.0				14.4	18.4	22.8	1.9	4.2	1.8
Initial Q Delay(d3),s/veh	0.0	0.0	0.0				0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.5	7.7	0.0				7.3	8.7	8.0	2.2	4.9	7.5
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	21.0	36.0	0.0				37.6	42.0	46.5	21.9	26.4	12.7
LnGrp LOS	C	D					D	D	D	C	C	B
Approach Vol, veh/h		1050	A				1199				1717	
Approach Delay, s/veh		33.2					42.0				18.8	
Approach LOS		C					D				B	
Timer - Assigned Phs		2		4			6					
Phs Duration (G+Y+Rc), s		22.5		22.4			22.5					
Change Period (Y+Rc), s		4.5		4.5			4.5					
Max Green Setting (Gmax), s		18.0		18.0			18.0					
Max Q Clear Time (g_c+I1), s		17.3		17.7			16.9					
Green Ext Time (p_c), s		0.4		0.2			0.9					

Intersection Summary

HCM 6th Ctrl Delay	29.6
HCM 6th LOS	C

Notes

- User approved volume balancing among the lanes for turning movement.
- User approved changes to right turn type.
- Unsignalized Delay for [EBR] is excluded from calculations of the approach delay and intersection delay.

Level Of Service Computation Report

ICU 1(Loss as Cycle Length %) Method (Future Volume Alternative)

Intersection #11 I-5 SB Ramps/Camino Las Ramblas

Cycle (sec): 100 Critical Vol./Cap.(X): 0.301
Loss Time (sec): 5 Average Delay (sec/veh): xxxxxx
Optimal Cycle: 17 Level Of Service: A

Street Name: I-5 SB Ramps Camino Las Ramblas

Approach: North Bound South Bound East Bound West Bound

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

Control: Protected Protected Protected Protected

Rights: Include Ignore Ignore Ignore

Min. Green: 0 0 0 0 0 0 0 0 0 0 0 0

Y+R: 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0

Lanes: 0 0 0 0 0 2 0 0 0 1 0 0 2 0 1 0 0 1 0 1

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Volume Module:

Base Vol: 0 0 0 309 0 816 0 536 1362 0 143 88

Growth Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00

Initial Bse: 0 0 0 309 0 816 0 536 1362 0 143 88

Added Vol: 0 0 0 0 0 11 0 8 11 0 11 0

PasserByVol: 0 0 0 0 0 0 0 0 0 0 0 0

Initial Fut: 0 0 0 309 0 827 0 544 1373 0 154 88

User Adj: 1.00 1.00 1.00 1.00 1.00 0.00 1.00 1.00 0.00 1.00 1.00 0.00

PHF Adj: 1.00 1.00 1.00 1.00 1.00 0.00 1.00 1.00 0.00 1.00 1.00 0.00

PHF Volume: 0 0 0 309 0 0 0 544 0 0 154 0

Reduct Vol: 0 0 0 0 0 0 0 0 0 0 0 0

Reduced Vol: 0 0 0 309 0 0 0 544 0 0 154 0

PCE Adj: 1.00 1.00 1.00 1.00 1.00 0.00 1.00 1.00 0.00 1.00 1.00 0.00

MLF Adj: 1.00 1.00 1.00 1.00 1.00 0.00 1.00 1.00 0.00 1.00 1.00 0.00

FinalVolume: 0 0 0 309 0 0 0 544 0 0 154 0

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Saturation Flow Module:

Sat/Lane: 1700 1700 1700 1700 1700 1700 1700 1700 1700 1700 1700 1700

Adjustment: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00

Lanes: 0.00 0.00 0.00 2.00 0.00 1.00 0.00 2.00 1.00 0.00 1.00 1.00

Final Sat.: 0 0 0 3400 0 1700 0 3400 1700 0 1700 1700

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Capacity Analysis Module:

Vol/Sat: 0.00 0.00 0.00 0.09 0.00 0.00 0.00 0.16 0.00 0.00 0.09 0.00

Crit Moves: **** **** ****

Level Of Service Computation Report

ICU 1(Loss as Cycle Length %) Method (Future Volume Alternative)

Intersection #12 I-5 NB Ramps/Camino Las Ramblas

Cycle (sec): 100 Critical Vol./Cap.(X): 0.258
 Loss Time (sec): 5 Average Delay (sec/veh): xxxxxx
 Optimal Cycle: 16 Level Of Service: A

Street Name: I-5 NB Ramps Camino Las Ramblas

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

Control:	Permitted			Permitted			Permitted			Permitted										
Rights:	Include			Include			Ignore			Include										
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0								
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0								
Lanes:	0	1	0	0	1	1	0	0	0	1	1	0	2	0	1	0	0	2	1	0

Volume Module:

Base Vol:	7	32	116	6	0	48	47	464	389	0	364	10
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	7	32	116	6	0	48	47	464	389	0	364	10
Added Vol:	11	0	0	0	0	0	0	0	8	0	0	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	18	32	116	6	0	48	47	464	397	0	364	10
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00
PHF Volume:	18	32	116	6	0	48	47	464	0	0	364	10
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	18	32	116	6	0	48	47	464	0	0	364	10
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00
FinalVolume:	18	32	116	6	0	48	47	464	0	0	364	10

Saturation Flow Module:

Sat/Lane:	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700
Adjustment:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Lanes:	0.36	0.64	1.00	1.00	0.00	1.00	1.00	2.00	1.00	0.00	2.92	0.08
Final Sat.:	612	1088	1700	1700	0	1700	1700	3400	1700	0	4964	136





















Capacity Analysis Module:

Vol/Sat:	0.01	0.03	0.07	0.00	0.00	0.03	0.03	0.14	0.00	0.00	0.07	0.07
Crit Moves:		****	****					****		****		

HCM Signalized Intersection Capacity Analysis

12: I-5 NB Ramps & Camino Las Ramblas

02/19/2021

													
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR	
Lane Configurations													
Traffic Volume (vph)	47	464	397	0	364	10	18	32	116	6	0	48	
Future Volume (vph)	47	464	397	0	364	10	18	32	116	6	0	48	
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	
Lane Util. Factor	1.00	0.95	1.00		0.91			1.00	1.00	1.00		1.00	
Frt	1.00	1.00	0.85		1.00			1.00	0.85	1.00		0.85	
Flt Protected	0.95	1.00	1.00		1.00			0.98	1.00	0.95		1.00	
Satd. Flow (prot)	1770	3539	1583		5064			1830	1583	1770		1583	
Flt Permitted	0.51	1.00	1.00		1.00			0.98	1.00	0.72		1.00	
Satd. Flow (perm)	951	3539	1583		5064			1830	1583	1346		1583	
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	
Adj. Flow (vph)	49	488	418	0	383	11	19	34	122	6	0	51	
RTOR Reduction (vph)	0	0	0	0	8	0	0	0	64	0	0	27	
Lane Group Flow (vph)	49	488	418	0	386	0	0	53	58	6	0	24	
Turn Type	Perm	NA	Free		NA		Perm	NA	Perm	Perm		Perm	
Protected Phases		4			8			2					
Permitted Phases	4		Free				2		2	6		6	
Actuated Green, G (s)	11.3	11.3	38.4		11.3			18.1	18.1	18.1		18.1	
Effective Green, g (s)	11.3	11.3	38.4		11.3			18.1	18.1	18.1		18.1	
Actuated g/C Ratio	0.29	0.29	1.00		0.29			0.47	0.47	0.47		0.47	
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)	279	1041	1583		1490			862	746	634		746	
v/s Ratio Prot		c0.14			0.08								
v/s Ratio Perm	0.05		c0.26					0.03	0.04	0.00		0.02	
v/c Ratio	0.18	0.47	0.26		0.26			0.06	0.08	0.01		0.03	
Uniform Delay, d1	10.1	11.1	0.0		10.4			5.5	5.6	5.4		5.4	
Progression Factor	1.00	1.00	1.00		1.00			1.00	1.00	1.00		1.00	
Incremental Delay, d2	0.3	0.3	0.4		0.1			0.1	0.2	0.0		0.1	
Delay (s)	10.4	11.4	0.4		10.4			5.7	5.8	5.4		5.5	
Level of Service	B	B	A		B			A	A	A		A	
Approach Delay (s)		6.6			10.4			5.7			5.5		
Approach LOS		A			B			A			A		
Intersection Summary													
HCM 2000 Control Delay			7.4									HCM 2000 Level of Service	A
HCM 2000 Volume to Capacity ratio			0.38										
Actuated Cycle Length (s)			38.4									Sum of lost time (s)	9.0
Intersection Capacity Utilization			34.2%									ICU Level of Service	A
Analysis Period (min)			15										

c Critical Lane Group

HCM 6th TWSC
1: Island Way & Dana Point Harbor Drive

11/19/2020

Intersection						
Int Delay, s/veh	5.7					
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↑		↑	↑	↑	↑
Traffic Vol, veh/h	297	38	271	353	31	168
Future Vol, veh/h	297	38	271	353	31	168
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	300	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	95	95	95	95	95	95
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	313	40	285	372	33	177

Major/Minor	Major1	Major2	Minor1		
Conflicting Flow All	0	0	353	0	1275 333
Stage 1	-	-	-	-	333 -
Stage 2	-	-	-	-	942 -
Critical Hdwy	-	-	4.12	-	6.42 6.22
Critical Hdwy Stg 1	-	-	-	-	5.42 -
Critical Hdwy Stg 2	-	-	-	-	5.42 -
Follow-up Hdwy	-	-	2.218	-	3.518 3.318
Pot Cap-1 Maneuver	-	-	1206	-	184 709
Stage 1	-	-	-	-	726 -
Stage 2	-	-	-	-	379 -
Platoon blocked, %	-	-	-	-	-
Mov Cap-1 Maneuver	-	-	1206	-	141 709
Mov Cap-2 Maneuver	-	-	-	-	141 -
Stage 1	-	-	-	-	726 -
Stage 2	-	-	-	-	290 -

Approach	EB	WB	NB
HCM Control Delay, s	0	3.9	20.7
HCM LOS			C

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	436	-	-	1206	-
HCM Lane V/C Ratio	0.48	-	-	0.237	-
HCM Control Delay (s)	20.7	-	-	8.9	-
HCM Lane LOS	C	-	-	A	-
HCM 95th %tile Q(veh)	2.5	-	-	0.9	-

Level Of Service Computation Report

ICU 1(Loss as Cycle Length %) Method (Future Volume Alternative)

Intersection #2 Casitas Place/Dana Point Harbor Drive

Cycle (sec): 100 Critical Vol./Cap.(X): 0.305
Loss Time (sec): 5 Average Delay (sec/veh): xxxxxx
Optimal Cycle: 17 Level Of Service: A

Street Name: Casitas Place Dana Point Harbor Drive
Approach: North Bound South Bound East Bound West Bound
Movement: L - T - R L - T - R L - T - R L - T - R

Control: Protected Protected Protected Prot+Permit
Rights: Include Include Include Include
Min. Green: 0 0 0 0 0 0 0 0 0 0 0 0
Y+R: 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0
Lanes: 1 0 0 0 1 0 0 0 0 0 0 0 1 0 2 0 0

Volume Module:

Base Vol: 25 0 67 0 0 0 0 427 42 118 528 0
Growth Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
Initial Bse: 25 0 67 0 0 0 0 427 42 118 528 0
Added Vol: 0 0 -7 0 0 0 0 53 0 -6 71 0
PasserByVol: 0 0 0 0 0 0 0 0 0 0 0 0
Initial Fut: 25 0 60 0 0 0 0 480 42 112 599 0
User Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
PHF Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
PHF Volume: 25 0 60 0 0 0 0 480 42 112 599 0
Reduct Vol: 0 0 0 0 0 0 0 0 0 0 0 0
Reduced Vol: 25 0 60 0 0 0 0 480 42 112 599 0
PCE Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
MLF Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
FinalVolume: 25 0 60 0 0 0 0 480 42 112 599 0

Saturation Flow Module:

Sat/Lane: 1700 1700 1700 1700 1700 1700 1700 1700 1700 1700 1700 1700
Adjustment: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
Lanes: 1.00 0.00 1.00 0.00 0.00 0.00 0.00 1.84 0.16 1.00 2.00 0.00
Final Sat.: 1700 0 1700 0 0 0 0 3126 274 1700 3400 0

Capacity Analysis Module:

Vol/Sat: 0.01 0.00 0.04 0.00 0.00 0.00 0.00 0.15 0.15 0.07 0.18 0.00
Crit Moves: ****

Level Of Service Computation Report

ICU 1(Loss as Cycle Length %) Method (Future Volume Alternative)

Intersection #3 Golden Lantern/PCH

Cycle (sec): 100 Critical Vol./Cap.(X): 0.796
Loss Time (sec): 5 Average Delay (sec/veh): xxxxxx
Optimal Cycle: 51 Level Of Service: C

Street Name: Golden Lantern PCH

Approach: North Bound South Bound East Bound West Bound

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

Control: Protected Protected Protected Protected
Rights: Include Include Include Include
Min. Green: 0 0 0 0 0 0 0 0 0 0 0 0
Y+R: 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0
Lanes: 1 0 1 1 0 2 0 1 0 1 1 0 1 1 0 1 0 1 1 0

Volume Module:

Base Vol: 204 498 70 451 492 149 83 735 46 61 760 200
Growth Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
Initial Bse: 204 498 70 451 492 149 83 735 46 61 760 200
Added Vol: 6 2 0 0 3 0 0 0 9 7 0 0
PasserByVol: 0 0 0 0 0 0 0 0 0 0 0 0
Initial Fut: 210 500 70 451 495 149 83 735 55 68 760 200
User Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
PHF Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
PHF Volume: 210 500 70 451 495 149 83 735 55 68 760 200
Reduct Vol: 0 0 0 0 0 0 0 0 0 0 0 0
Reduced Vol: 210 500 70 451 495 149 83 735 55 68 760 200
PCE Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
MLF Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
FinalVolume: 210 500 70 451 495 149 83 735 55 68 760 200

Saturation Flow Module:

Sat/Lane: 1700 1700 1700 1700 1700 1700 1700 1700 1700 1700 1700 1700
Adjustment: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
Lanes: 1.00 1.75 0.25 2.00 1.00 1.00 1.00 1.86 0.14 1.00 1.58 0.42
Final Sat.: 1700 2982 418 3400 1700 1700 1700 3163 237 1700 2692 708

Capacity Analysis Module:

Vol/Sat: 0.12 0.17 0.17 0.13 0.29 0.09 0.05 0.23 0.23 0.04 0.28 0.28
Crit Moves: **** **** **** ****

Level Of Service Computation Report

ICU 1(Loss as Cycle Length %) Method (Future Volume Alternative)

 Intersection #4 Golden Lantern/Del Prado Avenue

Cycle (sec): 100 Critical Vol./Cap.(X): 0.467
 Loss Time (sec): 5 Average Delay (sec/veh): xxxxxx
 Optimal Cycle: 22 Level Of Service: A

Street Name:	Golden Lantern						Del Prado Avenue													
Approach:	North Bound			South Bound			East Bound			West Bound										
Movement:	L	-	T	-	R	L	-	T	-	R	L	-	T	-	R	L	-	T	-	R
Control:	Protected			Protected			Prot+Permit			Prot+Permit										
Rights:	Include			Include			Include			Include										
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0								
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0								
Lanes:	1	0	1	1	0	1	0	2	0	1	1	0	0	1	0	1	0	1	0	1

Volume Module:

Base Vol:	79	418	69	227	341	123	51	114	85	26	101	28
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	79	418	69	227	341	123	51	114	85	26	101	28
Added Vol:	6	9	0	0	19	0	0	0	9	0	0	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	85	427	69	227	360	123	51	114	94	26	101	28
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	85	427	69	227	360	123	51	114	94	26	101	28
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	85	427	69	227	360	123	51	114	94	26	101	28
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	85	427	69	227	360	123	51	114	94	26	101	28

Saturation Flow Module:

Sat/Lane:	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700
Adjustment:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Lanes:	1.00	1.72	0.28	1.00	2.00	1.00	1.00	0.55	0.45	1.00	1.00	1.00
Final Sat.:	1700	2927	473	1700	3400	1700	1700	932	768	1700	1700	1700

Capacity Analysis Module:

Vol/Sat:	0.05	0.15	0.15	0.13	0.11	0.07	0.03	0.12	0.12	0.02	0.06	0.02
Crit Moves:	****			****			****			****		

Level Of Service Computation Report

ICU 1(Loss as Cycle Length %) Method (Future Volume Alternative)

Intersection #5 Golden Lantern/Dana Point Harbor Drive

Cycle (sec): 100 Critical Vol./Cap.(X): 0.653
Loss Time (sec): 5 Average Delay (sec/veh): xxxxxx
Optimal Cycle: 33 Level Of Service: B

Street Name: Golden Lantern Dana Point Harbor Drive

Approach: North Bound South Bound East Bound West Bound

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

Control: Protected Protected Protected Protected

Rights: Ovl Ovl Include Include

Min. Green: 0 0 0 0 0 0 0 0 0 0 0 0

Y+R: 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0

Lanes: 1 0 1 0 1 1 0 1 0 1 1 0 1 0 1 0

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Volume Module:

Base Vol: 77 288 185 199 175 119 146 300 35 356 405 102

Growth Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00

Initial Bse: 77 288 185 199 175 119 146 300 35 356 405 102

Added Vol: 0 0 0 0 0 28 16 30 0 0 36 0

PasserByVol: 0 0 0 0 0 0 0 0 0 0 0 0

Initial Fut: 77 288 185 199 175 147 162 330 35 356 441 102

User Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00

PHF Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00

PHF Volume: 77 288 185 199 175 147 162 330 35 356 441 102

Reduct Vol: 0 0 0 0 0 0 0 0 0 0 0 0

Reduced Vol: 77 288 185 199 175 147 162 330 35 356 441 102

PCE Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00

MLF Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00

FinalVolume: 77 288 185 199 175 147 162 330 35 356 441 102

OvlAdjVol: 0 0

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Saturation Flow Module:

Sat/Lane: 1700 1700 1700 1700 1700 1700 1700 1700 1700 1700 1700 1700

Adjustment: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00

Lanes: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.81 0.19 1.00 1.62 0.38

Final Sat.: 1700 1700 1700 1700 1700 1700 1700 3074 326 1700 2761 639

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Capacity Analysis Module:

Vol/Sat: 0.05 0.17 0.11 0.12 0.10 0.09 0.10 0.11 0.11 0.21 0.16 0.16

OvlAdjV/S: 0.00 0.00

Crit Moves: **** **** **** ****

Level Of Service Computation Report

ICU 1(Loss as Cycle Length %) Method (Future Volume Alternative)

Intersection #6 Puerto Place/Dana Point Harbor Drive

Cycle (sec): 100 Critical Vol./Cap.(X): 0.331
Loss Time (sec): 5 Average Delay (sec/veh): xxxxxx
Optimal Cycle: 18 Level Of Service: A

Street Name: Puerto Place Dana Point Harbor Drive
Approach: North Bound South Bound East Bound West Bound
Movement: L - T - R L - T - R L - T - R L - T - R

Control: Protected Protected Protected Protected
Rights: Include Include Include Include
Min. Green: 0 0 0 0 0 0 0 0 0 0 0 0
Y+R: 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0
Lanes: 1 0 0 0 1 0 0 0 0 0 0 0 2 0 1 1 0 2 0 0

Volume Module:

Base Vol: 34 0 77 0 0 0 0 313 46 75 766 0
Growth Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
Initial Bse: 34 0 77 0 0 0 0 313 46 75 766 0
Added Vol: 0 0 0 0 0 0 0 30 0 0 36 0
PasserByVol: 0 0 0 0 0 0 0 0 0 0 0 0
Initial Fut: 34 0 77 0 0 0 0 343 46 75 802 0
User Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
PHF Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
PHF Volume: 34 0 77 0 0 0 0 343 46 75 802 0
Reduct Vol: 0 0 0 0 0 0 0 0 0 0 0 0
Reduced Vol: 34 0 77 0 0 0 0 343 46 75 802 0
PCE Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
MLF Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
FinalVolume: 34 0 77 0 0 0 0 343 46 75 802 0

Saturation Flow Module:

Sat/Lane: 1700 1700 1700 1700 1700 1700 1700 1700 1700 1700 1700 1700
Adjustment: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
Lanes: 1.00 0.00 1.00 0.00 0.00 0.00 0.00 2.00 1.00 1.00 2.00 0.00
Final Sat.: 1700 0 1700 0 0 0 0 3400 1700 1700 3400 0

Capacity Analysis Module:

Vol/Sat: 0.02 0.00 0.05 0.00 0.00 0.00 0.00 0.10 0.03 0.04 0.24 0.00
Crit Moves: ****

Level Of Service Computation Report

ICU 1(Loss as Cycle Length %) Method (Future Volume Alternative)

Intersection #7 Dana Point Harbor Drive/Park Lantern

Cycle (sec): 100 Critical Vol./Cap.(X): 0.282
Loss Time (sec): 5 Average Delay (sec/veh): xxxxxx
Optimal Cycle: 17 Level Of Service: A

Street Name: Dana Point Harbor Drive Park Landtern

Approach: North Bound South Bound East Bound West Bound

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

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Control: Protected Protected Permitted Permitted

Rights: Include Include Include Include

Min. Green: 0 0 0 0 0 0 0 0 0 0 0 0

Y+R: 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0

Lanes: 1 0 2 0 1 1 0 1 1 0 0 0 1! 0 0 1 0 0 1 0

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Volume Module:

Base Vol: 5 474 37 88 517 39 15 0 13 22 0 32

Growth Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00

Initial Bse: 5 474 37 88 517 39 15 0 13 22 0 32

Added Vol: 0 25 5 0 29 0 0 0 0 7 0 0

PasserByVol: 0 0 0 0 0 0 0 0 0 0 0 0

Initial Fut: 5 499 42 88 546 39 15 0 13 29 0 32

User Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00

PHF Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00

PHF Volume: 5 499 42 88 546 39 15 0 13 29 0 32

Reduct Vol: 0 0 0 0 0 0 0 0 0 0 0 0

Reduced Vol: 5 499 42 88 546 39 15 0 13 29 0 32

PCE Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00

MLF Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00

FinalVolume: 5 499 42 88 546 39 15 0 13 29 0 32

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Saturation Flow Module:

Sat/Lane: 1700 1700 1700 1700 1700 1700 1700 1700 1700 1700 1700 1700

Adjustment: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00

Lanes: 1.00 2.00 1.00 1.00 1.87 0.13 0.54 0.00 0.46 1.00 0.00 1.00

Final Sat.: 1700 3400 1700 1700 3173 227 911 0 789 1700 0 1700

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Capacity Analysis Module:

Vol/Sat: 0.00 0.15 0.02 0.05 0.17 0.17 0.01 0.00 0.02 0.02 0.00 0.02

Crit Moves: **** **** **** ****

Level Of Service Computation Report

ICU 1(Loss as Cycle Length %) Method (Future Volume Alternative)

Intersection #8 Del Obispo Street-Dana Point Harbor Drive/PCH

Cycle (sec): 100 Critical Vol./Cap.(X): 0.565
Loss Time (sec): 5 Average Delay (sec/veh): xxxxxx
Optimal Cycle: 27 Level Of Service: A

Street Name:Del Obispo Street-Dana Point Harb PCH

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

Control: Protected Protected Protected Protected
Rights: Ovl Include Include Include
Min. Green: 0 0 0 0 0 0 0 0 0 0 0 0
Y+R: 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0
Lanes: 1 0 1 0 2 2 0 1 0 1 1 0 2 1 0

Volume Module:

Base Vol: 51 123 427 244 72 154 140 967 93 382 1207 241
Growth Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
Initial Bse: 51 123 427 244 72 154 140 967 93 382 1207 241
Added Vol: 0 5 20 0 3 0 0 0 0 26 7 0
PasserByVol: 0 0 0 0 0 0 0 0 0 0 0 0
Initial Fut: 51 128 447 244 75 154 140 967 93 408 1214 241
User Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
PHF Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
PHF Volume: 51 128 447 244 75 154 140 967 93 408 1214 241
Reduct Vol: 0 0 0 0 0 0 0 0 0 0 0 0
Reduced Vol: 51 128 447 244 75 154 140 967 93 408 1214 241
PCE Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
MLF Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
FinalVolume: 51 128 447 244 75 154 140 967 93 408 1214 241
OvlAdjVol: 39

Saturation Flow Module:

Sat/Lane: 1700 1700 1700 1700 1700 1700 1700 1700 1700 1700 1700 1700
Adjustment: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
Lanes: 1.00 1.00 2.00 2.00 1.00 1.00 1.00 2.74 0.26 2.00 2.50 0.50
Final Sat.: 1700 1700 3400 3400 1700 1700 1700 4653 447 3400 4255 845

Capacity Analysis Module:

Vol/Sat: 0.03 0.08 0.13 0.07 0.04 0.09 0.08 0.21 0.21 0.12 0.29 0.29
OvlAdjV/S: 0.01
Crit Moves: ****

Level Of Service Computation Report

ICU 1(Loss as Cycle Length %) Method (Future Volume Alternative)

Intersection #9 Del Opisobo Street/Stonehill Drive

Cycle (sec): 100 Critical Vol./Cap.(X): 0.653
Loss Time (sec): 5 Average Delay (sec/veh): xxxxxx
Optimal Cycle: 33 Level Of Service: B

Street Name: Del Opisobo Street Stonehill Drive

Approach: North Bound South Bound East Bound West Bound

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

Control: Protected Protected Protected Protected

Rights: Include Include Include Include

Min. Green: 0 0 0 0 0 0 0 0 0 0 0 0

Y+R: 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0

Lanes: 1 0 1 1 0 1 0 1 1 0 1 0 2 0 1 1 0 2 0 1

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Volume Module:

Base Vol: 144 305 178 245 303 91 115 817 110 128 555 249

Growth Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00

Initial Bse: 144 305 178 245 303 91 115 817 110 128 555 249

Added Vol: 0 2 3 0 3 0 0 0 0 0 0 0

PasserByVol: 0 0 0 0 0 0 0 0 0 0 0 0

Initial Fut: 144 307 181 245 306 91 115 817 110 128 555 249

User Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00

PHF Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00

PHF Volume: 144 307 181 245 306 91 115 817 110 128 555 249

Reduct Vol: 0 0 0 0 0 0 0 0 0 0 0 0

Reduced Vol: 144 307 181 245 306 91 115 817 110 128 555 249

PCE Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00

MLF Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00

FinalVolume: 144 307 181 245 306 91 115 817 110 128 555 249

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Saturation Flow Module:

Sat/Lane: 1700 1700 1700 1700 1700 1700 1700 1700 1700 1700 1700 1700

Adjustment: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00

Lanes: 1.00 1.26 0.74 1.00 1.54 0.46 1.00 2.00 1.00 1.00 2.00 1.00

Final Sat.: 1700 2139 1261 1700 2621 779 1700 3400 1700 1700 3400 1700

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Capacity Analysis Module:

Vol/Sat: 0.08 0.14 0.14 0.14 0.12 0.12 0.07 0.24 0.06 0.08 0.16 0.15

Crit Moves: **** **** **** ****

Level Of Service Computation Report

ICU 1(Loss as Cycle Length %) Method (Future Volume Alternative)

Intersection #10 Camino Capistrano/Stonehill Drive

Cycle (sec): 100 Critical Vol./Cap.(X): 0.658
Loss Time (sec): 5 Average Delay (sec/veh): xxxxxx
Optimal Cycle: 33 Level Of Service: B

Street Name: Camino Capistrano Stonehill Drive

Approach: North Bound South Bound East Bound West Bound

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

Control: Split Phase Split Phase Split Phase Split Phase
Rights: Include Ovl Include Include
Min. Green: 0 0 0 0 0 0 0 0 0 0 0 0
Y+R: 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0
Lanes: 1 1 0 0 1 1 0 2 0 2 1 0 0 0 0 0

Volume Module:

Base Vol: 385 263 288 69 593 562 188 656 413 0 0 0
Growth Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
Initial Bse: 385 263 288 69 593 562 188 656 413 0 0 0
Added Vol: 0 0 0 0 0 0 0 3 0 0 0 0
PasserByVol: 0 0 0 0 0 0 0 0 0 0 0 0
Initial Fut: 385 263 288 69 593 562 188 659 413 0 0 0
User Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
PHF Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
PHF Volume: 385 263 288 69 593 562 188 659 413 0 0 0
Reduct Vol: 0 0 0 0 0 0 0 0 0 0 0 0
Reduced Vol: 385 263 288 69 593 562 188 659 413 0 0 0
PCE Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
MLF Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
FinalVolume: 385 263 288 69 593 562 188 659 413 0 0 0
OvlAdjVol: 0

Saturation Flow Module:

Sat/Lane: 1700 1700 1700 1700 1700 1700 1700 1700 1700 1700 1700 1700
Adjustment: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
Lanes: 1.19 0.81 1.00 1.00 2.00 2.00 1.00 2.00 1.00 0.00 0.00 0.00
Final Sat.: 2020 1380 1700 1700 3400 3400 1700 3400 1700 0 0 0

Capacity Analysis Module:

Vol/Sat: 0.19 0.19 0.17 0.04 0.17 0.17 0.11 0.19 0.24 0.00 0.00 0.00
OvlAdjV/S: 0.00

Crit Moves: **** **** ****

HCM 6th Signalized Intersection Summary
 10: Camino Capistrano & Stonehill Drive/I-5 NB Ramp

02/19/2021



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	188	659	413	0	0	0	385	263	288	69	593	562
Future Volume (veh/h)	188	659	413	0	0	0	385	263	288	69	593	562
Initial Q (Qb), veh	0	0	0				0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00				1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00				1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No					No			No		
Adj Sat Flow, veh/h/ln	1870	1870	1870				1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	198	694	0				341	367	303	73	624	592
Peak Hour Factor	0.95	0.95	0.95				0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	2	2	2				2	2	2	2	2	2
Cap, veh/h	431	860					524	551	467	472	941	1414
Arrive On Green	0.24	0.24	0.00				0.29	0.29	0.29	0.26	0.26	0.26
Sat Flow, veh/h	1781	3554	1585				1781	1870	1585	1781	3554	2790
Grp Volume(v), veh/h	198	694	0				341	367	303	73	624	592
Grp Sat Flow(s),veh/h/ln	1781	1777	1585				1781	1870	1585	1781	1777	1395
Q Serve(g_s), s	6.4	12.5	0.0				11.4	11.7	11.3	2.1	10.6	9.0
Cycle Q Clear(g_c), s	6.4	12.5	0.0				11.4	11.7	11.3	2.1	10.6	9.0
Prop In Lane	1.00		1.00				1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	431	860					524	551	467	472	941	1414
V/C Ratio(X)	0.46	0.81					0.65	0.67	0.65	0.15	0.66	0.42
Avail Cap(c_a), veh/h	485	968					524	551	467	472	941	1414
HCM Platoon Ratio	1.00	1.00	1.00				1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	0.00				1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	22.0	24.3	0.0				20.9	21.0	20.9	19.1	22.3	10.5
Incr Delay (d2), s/veh	0.8	4.6	0.0				6.1	6.3	6.8	0.7	3.7	0.9
Initial Q Delay(d3),s/veh	0.0	0.0	0.0				0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.6	5.5	0.0				5.3	5.7	4.8	0.9	4.6	4.3
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	22.7	28.9	0.0				27.1	27.3	27.8	19.8	25.9	11.4
LnGrp LOS	C	C					C	C	C	B	C	B
Approach Vol, veh/h		892	A				1011				1289	
Approach Delay, s/veh		27.5					27.4				18.9	
Approach LOS		C					C				B	
Timer - Assigned Phs		2		4			6					
Phs Duration (G+Y+Rc), s		24.5		20.9			22.5					
Change Period (Y+Rc), s		4.5		4.5			4.5					
Max Green Setting (Gmax), s		20.0		18.5			18.0					
Max Q Clear Time (g_c+I1), s		13.7		14.5			12.6					
Green Ext Time (p_c), s		2.5		1.9			3.1					

Intersection Summary

HCM 6th Ctrl Delay	24.0
HCM 6th LOS	C

Notes

- User approved volume balancing among the lanes for turning movement.
- User approved changes to right turn type.
- Unsignalized Delay for [EBR] is excluded from calculations of the approach delay and intersection delay.

Level Of Service Computation Report

ICU 1(Loss as Cycle Length %) Method (Future Volume Alternative)

Intersection #11 I-5 SB Ramps/Camino Las Ramblas

Cycle (sec): 100 Critical Vol./Cap.(X): 0.253
 Loss Time (sec): 5 Average Delay (sec/veh): xxxxxx
 Optimal Cycle: 16 Level Of Service: A

Street Name:	I-5 SB Ramps						Camino Las Ramblas														
Approach:	North Bound			South Bound			East Bound			West Bound											
Movement:	L	-	T	-	R	L	-	T	-	R	L	-	T	-	R	L	-	T	-	R	
Control:	Protected			Protected			Protected			Protected			Protected			Protected					
Rights:	Include			Ignore			Ignore			Ignore			Ignore			Ignore					
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	0	0	0	0	0	2	0	0	0	1	0	0	2	0	1	0	0	1	0	1	

Volume Module:

Base Vol:	0	0	0	182	0	577	0	500	1151	0	113	109
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	0	0	0	182	0	577	0	500	1151	0	113	109
Added Vol:	0	0	0	0	0	16	0	9	12	0	16	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	0	0	0	182	0	593	0	509	1163	0	129	109
User Adj:	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00	1.00	0.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00	1.00	0.00
PHF Volume:	0	0	0	182	0	0	0	509	0	0	129	0
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	0	0	0	182	0	0	0	509	0	0	129	0
PCE Adj:	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00	1.00	0.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00	1.00	0.00
FinalVolume:	0	0	0	182	0	0	0	509	0	0	129	0

Saturation Flow Module:

Sat/Lane:	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700
Adjustment:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Lanes:	0.00	0.00	0.00	2.00	0.00	1.00	0.00	2.00	1.00	0.00	1.00	1.00
Final Sat.:	0	0	0	3400	0	1700	0	3400	1700	0	1700	1700

Capacity Analysis Module:

Vol/Sat:	0.00	0.00	0.00	0.05	0.00	0.00	0.00	0.15	0.00	0.00	0.08	0.00
Crit Moves:				****				****				****

Level Of Service Computation Report

ICU 1(Loss as Cycle Length %) Method (Future Volume Alternative)

Intersection #12 I-5 NB Ramps/Camino Las Ramblas

Cycle (sec): 100 Critical Vol./Cap.(X): 0.212
 Loss Time (sec): 5 Average Delay (sec/veh): xxxxxx
 Optimal Cycle: 16 Level Of Service: A

Street Name: I-5 NB Ramps Camino Las Ramblas
 Approach: North Bound South Bound East Bound West Bound
 Movement: L - T - R L - T - R L - T - R L - T - R

Control:	Permitted			Permitted			Permitted			Permitted										
Rights:	Include			Include			Ignore			Include										
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0								
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0								
Lanes:	0	1	0	0	1	1	0	0	0	1	1	0	2	0	1	0	0	2	1	0

Volume Module:

Base Vol:	6	21	97	6	0	55	41	321	423	0	389	5
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	6	21	97	6	0	55	41	321	423	0	389	5
Added Vol:	16	0	0	0	0	0	0	0	9	0	0	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	22	21	97	6	0	55	41	321	432	0	389	5
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00
PHF Volume:	22	21	97	6	0	55	41	321	0	0	389	5
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	22	21	97	6	0	55	41	321	0	0	389	5
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00
FinalVolume:	22	21	97	6	0	55	41	321	0	0	389	5

Saturation Flow Module:





















Sat/Lane:	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700
Adjustment:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Lanes:	0.51	0.49	1.00	1.00	0.00	1.00	1.00	2.00	1.00	0.00	2.96	0.04
Final Sat.:	870	830	1700	1700	0	1700	1700	3400	1700	0	5035	65

Capacity Analysis Module:

Vol/Sat:	0.01	0.03	0.06	0.00	0.00	0.03	0.02	0.09	0.00	0.00	0.08	0.08
Crit Moves:		****	****				****			****		

HCM Signalized Intersection Capacity Analysis
 12: I-5 NB Ramps & Camino Las Ramblas

02/19/2021

													
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR	
Lane Configurations													
Traffic Volume (vph)	41	321	423	0	389	5	22	21	97	6	0	55	
Future Volume (vph)	41	321	423	0	389	5	22	21	97	6	0	55	
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	
Lane Util. Factor	1.00	0.95	1.00		0.91			1.00	1.00	1.00		1.00	
Frt	1.00	1.00	0.85		1.00			1.00	0.85	1.00		0.85	
Flt Protected	0.95	1.00	1.00		1.00			0.98	1.00	0.95		1.00	
Satd. Flow (prot)	1770	3539	1583		5076			1816	1583	1770		1583	
Flt Permitted	0.50	1.00	1.00		1.00			0.98	1.00	0.73		1.00	
Satd. Flow (perm)	932	3539	1583		5076			1816	1583	1356		1583	
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	
Adj. Flow (vph)	43	338	445	0	409	5	23	22	102	6	0	58	
RTOR Reduction (vph)	0	0	0	0	4	0	0	0	51	0	0	29	
Lane Group Flow (vph)	43	338	445	0	410	0	0	45	51	6	0	29	
Turn Type	Perm	NA	Free		NA		Perm	NA	Perm	Perm		Perm	
Protected Phases		4			8			2					
Permitted Phases	4		Free				2		2	6		6	
Actuated Green, G (s)	9.1	9.1	36.2		9.1			18.1	18.1	18.1		18.1	
Effective Green, g (s)	9.1	9.1	36.2		9.1			18.1	18.1	18.1		18.1	
Actuated g/C Ratio	0.25	0.25	1.00		0.25			0.50	0.50	0.50		0.50	
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)	234	889	1583		1276			908	791	678		791	
v/s Ratio Prot		0.10			0.08								
v/s Ratio Perm	0.05		c0.28					0.02	0.03	0.00		0.02	
v/c Ratio	0.18	0.38	0.28		0.32			0.05	0.06	0.01		0.04	
Uniform Delay, d1	10.6	11.2	0.0		11.0			4.6	4.7	4.5		4.6	
Progression Factor	1.00	1.00	1.00		1.00			1.00	1.00	1.00		1.00	
Incremental Delay, d2	0.4	0.3	0.4		0.1			0.1	0.2	0.0		0.1	
Delay (s)	11.0	11.5	0.4		11.2			4.7	4.8	4.6		4.7	
Level of Service	B	B	A		B			A	A	A		A	
Approach Delay (s)		5.5			11.2			4.8			4.7		
Approach LOS		A			B			A			A		
Intersection Summary													
HCM 2000 Control Delay			7.0									HCM 2000 Level of Service	A
HCM 2000 Volume to Capacity ratio			0.37										
Actuated Cycle Length (s)			36.2									Sum of lost time (s)	9.0
Intersection Capacity Utilization			32.0%									ICU Level of Service	A
Analysis Period (min)			15										

c Critical Lane Group

APPENDIX E

OPENING YEAR (2025) PLUS PROJECT LOS WORKSHEETS

HCM 6th TWSC
 1: Island Way & Dana Point Harbor Drive

11/19/2020

Intersection						
Int Delay, s/veh	4					
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	171	27	170	172	18	86
Future Vol, veh/h	171	27	170	172	18	86
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	300	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	95	95	95	95	95	95
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	180	28	179	181	19	91

Major/Minor	Major1	Major2	Minor1		
Conflicting Flow All	0	0	208	0	733 194
Stage 1	-	-	-	-	194 -
Stage 2	-	-	-	-	539 -
Critical Hdwy	-	-	4.12	-	6.42 6.22
Critical Hdwy Stg 1	-	-	-	-	5.42 -
Critical Hdwy Stg 2	-	-	-	-	5.42 -
Follow-up Hdwy	-	-	2.218	-	3.518 3.318
Pot Cap-1 Maneuver	-	-	1363	-	388 847
Stage 1	-	-	-	-	839 -
Stage 2	-	-	-	-	585 -
Platoon blocked, %	-	-	-	-	-
Mov Cap-1 Maneuver	-	-	1363	-	337 847
Mov Cap-2 Maneuver	-	-	-	-	337 -
Stage 1	-	-	-	-	839 -
Stage 2	-	-	-	-	508 -

Approach	EB	WB	NB
HCM Control Delay, s	0	4	11.4
HCM LOS			B

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	671	-	-	1363	-
HCM Lane V/C Ratio	0.163	-	-	0.131	-
HCM Control Delay (s)	11.4	-	-	8	-
HCM Lane LOS	B	-	-	A	-
HCM 95th %tile Q(veh)	0.6	-	-	0.5	-

Level Of Service Computation Report

ICU 1(Loss as Cycle Length %) Method (Future Volume Alternative)

Intersection #2 Casitas Place/Dana Point Harbor Drive

Cycle (sec): 100 Critical Vol./Cap.(X): 0.182
Loss Time (sec): 5 Average Delay (sec/veh): xxxxxx
Optimal Cycle: 15 Level Of Service: A

Street Name: Casitas Place Dana Point Harbor Drive

Approach: North Bound South Bound East Bound West Bound

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

Control: Protected Protected Protected Prot+Permit

Rights: Include Include Include Include

Min. Green: 0 0 0 0 0 0 0 0 0 0 0 0

Y+R: 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0

Lanes: 1 0 0 0 1 0 0 0 0 0 0 0 1 0 2 0 0

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Volume Module:

Base Vol: 4 0 27 0 0 0 0 216 20 57 263 0

Growth Adj: 1.02 1.02 1.02 1.02 1.02 1.02 1.02 1.02 1.02 1.02 1.02 1.02

Initial Bse: 4 0 28 0 0 0 0 221 21 58 270 0

Added Vol: 0 0 -4 0 0 0 0 35 0 -6 50 0

Cm2,3,17,18: 0 0 0 0 0 0 0 -1 0 10 28 0

Initial Fut: 4 0 24 0 0 0 0 255 21 62 348 0

User Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00

PHF Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00

PHF Volume: 4 0 24 0 0 0 0 255 21 62 348 0

Reduct Vol: 0 0 0 0 0 0 0 0 0 0 0 0

Reduced Vol: 4 0 24 0 0 0 0 255 21 62 348 0

PCE Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00

MLF Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00

FinalVolume: 4 0 24 0 0 0 0 255 21 62 348 0

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Saturation Flow Module:

Sat/Lane: 1700 1700 1700 1700 1700 1700 1700 1700 1700 1700 1700 1700

Adjustment: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00

Lanes: 1.00 0.00 1.00 0.00 0.00 0.00 0.00 1.85 0.15 1.00 2.00 0.00

Final Sat.: 1700 0 1700 0 0 0 0 3147 253 1700 3400 0

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Capacity Analysis Module:

Vol/Sat: 0.00 0.00 0.01 0.00 0.00 0.00 0.00 0.08 0.08 0.04 0.10 0.00

Crit Moves: **** **** ****

Level Of Service Computation Report

ICU 1(Loss as Cycle Length %) Method (Future Volume Alternative)

Intersection #3 Golden Lantern/PCH

Cycle (sec): 100 Critical Vol./Cap.(X): 0.641
Loss Time (sec): 5 Average Delay (sec/veh): xxxxxx
Optimal Cycle: 32 Level Of Service: B

Street Name: Golden Lantern PCH

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

Control: Protected Protected Protected Protected
Rights: Include Include Include Include
Min. Green: 0 0 0 0 0 0 0 0 0 0 0 0
Y+R: 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0
Lanes: 1 0 1 1 0 2 0 1 0 1 1 0 1 1 0 1 0 1 1 0

Volume Module:

Base Vol: 42 96 13 247 194 91 36 583 29 49 1046 129
Growth Adj: 1.02 1.02 1.02 1.02 1.02 1.02 1.02 1.02 1.02 1.02 1.02 1.02
Initial Bse: 43 98 13 253 199 93 37 598 30 50 1072 132
Added Vol: 4 2 0 4 2 38 45 56 6 4 73 12
Cm2,3,17,18: 7 9 0 0 11 0 0 10 0 0 23 0
Initial Fut: 54 109 13 257 212 131 82 664 36 54 1168 144
User Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
PHF Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
PHF Volume: 54 109 13 257 212 131 82 664 36 54 1168 144
Reduct Vol: 0 0 0 0 0 0 0 0 0 0 0 0
Reduced Vol: 54 109 13 257 212 131 82 664 36 54 1168 144
PCE Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
MLF Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
FinalVolume: 54 109 13 257 212 131 82 664 36 54 1168 144

Saturation Flow Module:

Sat/Lane: 1700 1700 1700 1700 1700 1700 1700 1700 1700 1700 1700 1700
Adjustment: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
Lanes: 1.00 1.78 0.22 2.00 1.00 1.00 1.00 1.90 0.10 1.00 1.78 0.22
Final Sat.: 1700 3031 369 3400 1700 1700 1700 3226 174 1700 3026 374

Capacity Analysis Module:

Vol/Sat: 0.03 0.04 0.04 0.08 0.12 0.08 0.05 0.21 0.21 0.03 0.39 0.39
Crit Moves: **** **** **** ****

Level Of Service Computation Report

ICU 1(Loss as Cycle Length %) Method (Future Volume Alternative)

Intersection #4 Golden Lantern/Del Prado Avenue

Cycle (sec): 100 Critical Vol./Cap.(X): 0.247
Loss Time (sec): 5 Average Delay (sec/veh): xxxxxx
Optimal Cycle: 16 Level Of Service: A

Street Name: Golden Lantern Del Prado Avenue
Approach: North Bound South Bound East Bound West Bound
Movement: L - T - R L - T - R L - T - R L - T - R

Control: Protected Protected Prot+Permit Prot+Permit
Rights: Include Include Include Include
Min. Green: 0 0 0 0 0 0 0 0 0 0 0 0
Y+R: 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0
Lanes: 1 0 1 1 0 1 0 2 0 1 1 0 1 0 1 0 1

Volume Module:

Base Vol: 43 110 19 49 150 24 36 82 75 23 56 19
Growth Adj: 1.02 1.02 1.02 1.02 1.02 1.02 1.02 1.02 1.02 1.02 1.02 1.02
Initial Bse: 44 113 19 50 154 25 37 84 77 24 57 19
Added Vol: 4 6 0 0 13 0 0 0 6 0 0 0
Cm2,3,17,18: 0 17 0 0 3 0 0 0 12 0 0 0
Initial Fut: 48 136 19 50 170 25 37 84 95 24 57 19
User Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
PHF Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
PHF Volume: 48 136 19 50 170 25 37 84 95 24 57 19
Reduct Vol: 0 0 0 0 0 0 0 0 0 0 0 0
Reduced Vol: 48 136 19 50 170 25 37 84 95 24 57 19
PCE Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
MLF Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
FinalVolume: 48 136 19 50 170 25 37 84 95 24 57 19

Saturation Flow Module:

Sat/Lane: 1700 1700 1700 1700 1700 1700 1700 1700 1700 1700 1700 1700
Adjustment: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
Lanes: 1.00 1.75 0.25 1.00 2.00 1.00 1.00 0.47 0.53 1.00 1.00 1.00
Final Sat.: 1700 2973 427 1700 3400 1700 1700 799 901 1700 1700 1700

Capacity Analysis Module:

Vol/Sat: 0.03 0.05 0.05 0.03 0.05 0.01 0.02 0.11 0.11 0.01 0.03 0.01
Crit Moves: **** **** **** ****

Level Of Service Computation Report

ICU 1(Loss as Cycle Length %) Method (Future Volume Alternative)

Intersection #5 Golden Lantern/Dana Point Harbor Drive

Cycle (sec): 100 Critical Vol./Cap.(X): 0.398
Loss Time (sec): 5 Average Delay (sec/veh): xxxxxx
Optimal Cycle: 20 Level Of Service: A

Street Name: Golden Lantern Dana Point Harbor Drive

Approach: North Bound South Bound East Bound West Bound

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

Control: Protected Protected Protected Protected

Rights: Include Include Include Include

Min. Green: 0 0 0 0 0 0 0 0 0 0 0 0

Y+R: 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0

Lanes: 1 0 1 1 0 1 0 1 1 0 1 0 1 1 0

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Volume Module:

Base Vol: 32 42 43 48 88 96 62 174 10 113 194 96

Growth Adj: 1.02 1.02 1.02 1.02 1.02 1.02 1.02 1.02 1.02 1.02 1.02 1.02

Initial Bse: 33 43 44 49 90 98 64 178 10 116 199 98

Added Vol: 0 0 0 0 0 19 11 20 0 0 25 0

Cm2,3,17,18: 0 14 130 3 12 0 0 2 0 145 44 5

Initial Fut: 33 57 174 52 102 117 75 200 10 261 268 103

User Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00

PHF Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00

PHF Volume: 33 57 174 52 102 117 75 200 10 261 268 103

Reduct Vol: 0 0 0 0 0 0 0 0 0 0 0 0

Reduced Vol: 33 57 174 52 102 117 75 200 10 261 268 103

PCE Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00

MLF Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00

FinalVolume: 33 57 174 52 102 117 75 200 10 261 268 103

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Saturation Flow Module:

Sat/Lane: 1700 1700 1700 1700 1700 1700 1700 1700 1700 1700 1700 1700

Adjustment: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00

Lanes: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.90 0.10 1.00 1.44 0.56

Final Sat.: 1700 1700 1700 1700 1700 1700 1700 3235 165 1700 2453 947

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Capacity Analysis Module:

Vol/Sat: 0.02 0.03 0.10 0.03 0.06 0.07 0.04 0.06 0.06 0.15 0.11 0.11

Crit Moves: **** **** **** ****

Level Of Service Computation Report

ICU 1(Loss as Cycle Length %) Method (Future Volume Alternative)

Intersection #6 Puerto Place/Dana Point Harbor Drive

Cycle (sec): 100 Critical Vol./Cap.(X): 0.261
Loss Time (sec): 5 Average Delay (sec/veh): xxxxxx
Optimal Cycle: 16 Level Of Service: A

Street Name: Puerto Place Dana Point Harbor Drive

Approach: North Bound South Bound East Bound West Bound

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

Control: Protected Protected Protected Protected
Rights: Include Include Include Include
Min. Green: 0 0 0 0 0 0 0 0 0 0 0 0
Y+R: 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0
Lanes: 1 0 0 0 1 0 0 0 0 0 0 2 0 1 1 0 2 0 0

Volume Module:

Base Vol: 18 0 26 0 0 0 0 234 32 25 356 0
Growth Adj: 1.02 1.02 1.02 1.02 1.02 1.02 1.02 1.02 1.02 1.02 1.02 1.02
Initial Bse: 18 0 27 0 0 0 0 240 33 26 365 0
Added Vol: 0 0 0 0 0 0 0 20 0 0 24 0
Cm2,3,17,18: 5 0 43 0 0 0 0 131 3 31 189 0
Initial Fut: 23 0 70 0 0 0 0 391 36 57 578 0
User Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
PHF Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
PHF Volume: 23 0 70 0 0 0 0 391 36 57 578 0
Reduct Vol: 0 0 0 0 0 0 0 0 0 0 0 0
Reduced Vol: 23 0 70 0 0 0 0 391 36 57 578 0
PCE Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
MLF Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
FinalVolume: 23 0 70 0 0 0 0 391 36 57 578 0

Saturation Flow Module:

Sat/Lane: 1700 1700 1700 1700 1700 1700 1700 1700 1700 1700 1700 1700
Adjustment: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
Lanes: 1.00 0.00 1.00 0.00 0.00 0.00 0.00 2.00 1.00 1.00 2.00 0.00
Final Sat.: 1700 0 1700 0 0 0 0 3400 1700 1700 3400 0

Capacity Analysis Module:

Vol/Sat: 0.01 0.00 0.04 0.00 0.00 0.00 0.00 0.11 0.02 0.03 0.17 0.00
Crit Moves: ****

Level Of Service Computation Report

ICU 1(Loss as Cycle Length %) Method (Future Volume Alternative)

Intersection #7 Dana Point Harbor Drive/Park Lantern

Cycle (sec): 100 Critical Vol./Cap.(X): 0.303
Loss Time (sec): 5 Average Delay (sec/veh): xxxxxx
Optimal Cycle: 17 Level Of Service: A

Street Name: Dana Point Harbor Drive Park Landtern
Approach: North Bound South Bound East Bound West Bound
Movement: L - T - R L - T - R L - T - R L - T - R

Control: Protected Protected Permitted Permitted
Rights: Include Include Include Include
Min. Green: 0 0 0 0 0 0 0 0 0 0 0 0
Y+R: 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0
Lanes: 1 0 2 0 1 1 0 1 1 0 0 0 1 0 1 0

Volume Module:

Base Vol: 12 212 10 18 444 36 32 0 8 4 0 12
Growth Adj: 1.02 1.02 1.02 1.02 1.02 1.02 1.02 1.02 1.02 1.02 1.02 1.02
Initial Bse: 12 217 10 18 455 37 33 0 8 4 0 12
Added Vol: 0 17 3 12 20 0 0 0 0 4 0 4
Cm2,3,17,18: 0 179 0 0 225 0 0 0 0 0 0 0
Initial Fut: 12 413 13 30 700 37 33 0 8 8 0 16
User Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
PHF Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
PHF Volume: 12 413 13 30 700 37 33 0 8 8 0 16
Reduct Vol: 0 0 0 0 0 0 0 0 0 0 0 0
Reduced Vol: 12 413 13 30 700 37 33 0 8 8 0 16
PCE Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
MLF Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
FinalVolume: 12 413 13 30 700 37 33 0 8 8 0 16

Saturation Flow Module:

Sat/Lane: 1700 1700 1700 1700 1700 1700 1700 1700 1700 1700 1700 1700
Adjustment: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
Lanes: 1.00 2.00 1.00 1.00 1.90 0.10 0.79 0.01 0.20 1.00 0.00 1.00
Final Sat.: 1700 3400 1700 1700 3230 170 1360 0 340 1700 0 1700

Capacity Analysis Module:

Vol/Sat: 0.01 0.12 0.01 0.02 0.22 0.22 0.02 0.00 0.02 0.00 0.00 0.01
Crit Moves: **** **** **** ****

Level Of Service Computation Report

ICU 1(Loss as Cycle Length %) Method (Future Volume Alternative)

Intersection #8 Del Obispo Street-Dana Point Harbor Drive/PCH

Cycle (sec): 100 Critical Vol./Cap.(X): 0.650
Loss Time (sec): 5 Average Delay (sec/veh): xxxxxx
Optimal Cycle: 32 Level Of Service: B

Street Name:Del Obispo Street-Dana Point Harb PCH

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

Control: Protected Protected Protected Protected
Rights: Ovl Include Include Include
Min. Green: 0 0 0 0 0 0 0 0 0 0 0 0
Y+R: 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0
Lanes: 1 0 1 0 2 2 0 1 0 1 1 0 2 1 0

Volume Module:

Base Vol: 23 52 187 400 106 105 80 1011 61 328 1443 256
Growth Adj: 1.02 1.02 1.02 1.02 1.02 1.02 1.02 1.02 1.02 1.02 1.02 1.02
Initial Bse: 24 53 192 410 109 108 82 1036 63 336 1479 262
Added Vol: 0 6 15 19 7 19 8 52 0 25 71 13
Cm2,3,17,18: 0 28 151 16 11 23 10 0 0 214 0 4
Initial Fut: 24 87 358 445 127 150 100 1088 63 575 1550 279
User Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
PHF Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
PHF Volume: 24 87 358 445 127 150 100 1088 63 575 1550 279
Reduct Vol: 0 0 0 0 0 0 0 0 0 0 0 0
Reduced Vol: 24 87 358 445 127 150 100 1088 63 575 1550 279
PCE Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
MLF Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
FinalVolume: 24 87 358 445 127 150 100 1088 63 575 1550 279
OvlAdjVol: 0

Saturation Flow Module:

Sat/Lane: 1700 1700 1700 1700 1700 1700 1700 1700 1700 1700 1700 1700
Adjustment: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
Lanes: 1.00 1.00 2.00 2.00 1.00 1.00 1.00 2.84 0.16 2.00 2.54 0.46
Final Sat.: 1700 1700 3400 3400 1700 1700 1700 4823 277 3400 4321 779

Capacity Analysis Module:

Vol/Sat: 0.01 0.05 0.11 0.13 0.07 0.09 0.06 0.23 0.23 0.17 0.36 0.36
OvlAdjV/S: 0.00
Crit Moves: ****

Level Of Service Computation Report

ICU 1(Loss as Cycle Length %) Method (Future Volume Alternative)

Intersection #9 Del Opisobo Street/Stonehill Drive

Cycle (sec): 100 Critical Vol./Cap.(X): 0.829
Loss Time (sec): 5 Average Delay (sec/veh): xxxxxx
Optimal Cycle: 59 Level Of Service: D

Street Name: Del Opisobo Street Stonehill Drive

Approach: North Bound South Bound East Bound West Bound

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

Control: Protected Protected Protected Protected

Rights: Include Include Include Include

Min. Green: 0 0 0 0 0 0 0 0 0 0 0 0

Y+R: 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0

Lanes: 1 0 1 1 0 1 0 1 1 0 1 0 2 0 1 1 0 2 0 1

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Volume Module:

Base Vol: 124 245 141 383 455 216 153 1086 119 76 516 224

Growth Adj: 1.02 1.02 1.02 1.02 1.02 1.02 1.02 1.02 1.02 1.02 1.02 1.02

Initial Bse: 127 251 145 393 466 221 157 1113 122 78 529 230

Added Vol: 0 22 4 35 44 0 0 0 0 1 0 51

Cm2,3,17,18: 6 12 43 2 12 0 0 24 2 9 20 1

Initial Fut: 133 285 192 430 522 221 157 1137 124 88 549 282

User Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00

PHF Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00

PHF Volume: 133 285 192 430 522 221 157 1137 124 88 549 282

Reduct Vol: 0 0 0 0 0 0 0 0 0 0 0 0

Reduced Vol: 133 285 192 430 522 221 157 1137 124 88 549 282

PCE Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00

MLF Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00

FinalVolume: 133 285 192 430 522 221 157 1137 124 88 549 282

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Saturation Flow Module:

Sat/Lane: 1700 1700 1700 1700 1700 1700 1700 1700 1700 1700 1700 1700

Adjustment: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00

Lanes: 1.00 1.20 0.80 1.00 1.40 0.60 1.00 2.00 1.00 1.00 2.00 1.00

Final Sat.: 1700 2034 1366 1700 2388 1012 1700 3400 1700 1700 3400 1700

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Capacity Analysis Module:

Vol/Sat: 0.08 0.14 0.14 0.25 0.22 0.22 0.09 0.33 0.07 0.05 0.16 0.17

Crit Moves: **** **** **** ****

Level Of Service Computation Report

ICU 1(Loss as Cycle Length %) Method (Future Volume Alternative)

Intersection #9 Del Opisobo Street/Stonehill Drive

Cycle (sec): 100 Critical Vol./Cap.(X): 0.742
 Loss Time (sec): 5 Average Delay (sec/veh): xxxxxx
 Optimal Cycle: 42 Level Of Service: C

Street Name:	Del Opisobo Street						Stonehill Drive					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Protected			Protected			Protected			Protected		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	1	0	1	1	0	1	1	0	2	1	0	2

Volume Module:

Base Vol:	124	245	141	383	455	216	153	1086	119	76	516	224
Growth Adj:	1.02	1.02	1.02	1.02	1.02	1.02	1.02	1.02	1.02	1.02	1.02	1.02
Initial Bse:	127	251	145	393	466	221	157	1113	122	78	529	230
Added Vol:	0	22	4	35	44	0	0	0	0	1	0	51
Cm2,3,17,18:	6	12	43	2	12	0	0	24	2	9	20	1
Initial Fut:	133	285	192	430	522	221	157	1137	124	88	549	282
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	133	285	192	430	522	221	157	1137	124	88	549	282
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	133	285	192	430	522	221	157	1137	124	88	549	282
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	133	285	192	430	522	221	157	1137	124	88	549	282

Saturation Flow Module:

Sat/Lane:	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700
Adjustment:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Lanes:	1.00	1.20	0.80	1.00	1.40	0.60	1.00	2.71	0.29	1.00	2.00	1.00
Final Sat.:	1700	2034	1366	1700	2388	1012	1700	4599	501	1700	3400	1700

Capacity Analysis Module:

Vol/Sat:	0.08	0.14	0.14	0.25	0.22	0.22	0.09	0.25	0.25	0.05	0.16	0.17
Crit Moves:	****			****			****			****		

Level Of Service Computation Report

ICU 1(Loss as Cycle Length %) Method (Future Volume Alternative)

Intersection #10 Camino Capistrano/Stonehill Drive

Cycle (sec): 100 Critical Vol./Cap.(X): 0.668

Loss Time (sec): 5 Average Delay (sec/veh): xxxxxx

Optimal Cycle: 34 Level Of Service: B

Street Name: Camino Capistrano Stonehill Drive

Approach: North Bound South Bound East Bound West Bound

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

Control: Split Phase Split Phase Split Phase Split Phase

Rights: Include Ovl Include Include

Min. Green: 0 0 0 0 0 0 0 0 0 0 0 0

Y+R: 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0

Lanes: 1 1 0 0 1 1 0 2 0 2 1 0 2 0 0 0

Volume Module:

Base Vol: 281 274 254 54 287 595 281 1060 256 0 0 0

Growth Adj: 1.02 1.02 1.02 1.02 1.02 1.02 1.02 1.02 1.02 1.02 1.02 1.02

Initial Bse: 288 281 260 55 294 610 288 1087 262 0 0 0

Added Vol: 54 0 29 0 0 0 0 21 13 0 0 0

Cm2,3,17,18: 55 -6 -26 0 -39 75 33 65 45 0 0 0

Initial Fut: 397 275 263 55 255 685 321 1173 320 0 0 0

User Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00

PHF Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00

PHF Volume: 397 275 263 55 255 685 321 1173 320 0 0 0

Reduct Vol: 0 0 0 0 0 0 0 0 0 0 0 0

Reduced Vol: 397 275 263 55 255 685 321 1173 320 0 0 0

PCE Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00

MLF Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00

FinalVolume: 397 275 263 55 255 685 321 1173 320 0 0 0

OvlAdjVol: 0

Saturation Flow Module:

Sat/Lane: 1700 1700 1700 1700 1700 1700 1700 1700 1700 1700 1700 1700

Adjustment: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00

Lanes: 1.18 0.82 1.00 1.00 2.00 2.00 1.00 2.00 1.00 0.00 0.00 0.00

Final Sat.: 2009 1391 1700 1700 3400 3400 1700 3400 1700 0 0 0

Capacity Analysis Module:

Vol/Sat: 0.20 0.20 0.15 0.03 0.08 0.20 0.19 0.34 0.19 0.00 0.00 0.00

OvlAdjV/S: 0.00

Crit Moves: **** **** ****

HCM 6th Signalized Intersection Summary
 10: Camino Capistrano & Stonehill Drive/I-5 NB Ramp

02/19/2021



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↘	↑↑	↗				↘	↗	↗	↘	↑↑	↗↘
Traffic Volume (veh/h)	321	1173	320	0	0	0	397	275	263	55	255	685
Future Volume (veh/h)	321	1173	320	0	0	0	397	275	263	55	255	685
Initial Q (Qb), veh	0	0	0				0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00				1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00				1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No					No			No		
Adj Sat Flow, veh/h/ln	1870	1870	1870				1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	338	1235	0				354	379	277	58	268	721
Peak Hour Factor	0.95	0.95	0.95				0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	2	2	2				2	2	2	2	2	2
Cap, veh/h	675	1346					478	502	426	359	716	1619
Arrive On Green	0.38	0.38	0.00				0.27	0.27	0.27	0.20	0.20	0.20
Sat Flow, veh/h	1781	3554	1585				1781	1870	1585	1781	3554	2790
Grp Volume(v), veh/h	338	1235	0				354	379	277	58	268	721
Grp Sat Flow(s),veh/h/ln	1781	1777	1585				1781	1870	1585	1781	1777	1395
Q Serve(g_s), s	13.0	29.6	0.0				16.2	16.6	13.8	2.4	5.8	13.1
Cycle Q Clear(g_c), s	13.0	29.6	0.0				16.2	16.6	13.8	2.4	5.8	13.1
Prop In Lane	1.00		1.00				1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	675	1346					478	502	426	359	716	1619
V/C Ratio(X)	0.50	0.92					0.74	0.75	0.65	0.16	0.37	0.45
Avail Cap(c_a), veh/h	688	1372					478	502	426	359	716	1619
HCM Platoon Ratio	1.00	1.00	1.00				1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	0.00				1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	21.3	26.4	0.0				29.8	30.0	29.0	29.4	30.8	10.6
Incr Delay (d2), s/veh	0.6	9.9	0.0				9.9	10.1	7.5	1.0	1.5	0.9
Initial Q Delay(d3),s/veh	0.0	0.0	0.0				0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	5.3	13.7	0.0				8.1	8.7	6.0	1.1	2.6	8.1
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	21.9	36.3	0.0				39.7	40.1	36.5	30.4	32.3	11.5
LnGrp LOS	C	D					D	D	D	C	C	B
Approach Vol, veh/h		1573	A				1010				1047	
Approach Delay, s/veh		33.2					38.9				17.9	
Approach LOS		C					D				B	
Timer - Assigned Phs		2		4			6					
Phs Duration (G+Y+Rc), s		28.5		38.3			22.5					
Change Period (Y+Rc), s		4.5		4.5			4.5					
Max Green Setting (Gmax), s		24.0		34.5			18.0					
Max Q Clear Time (g_c+I1), s		18.6		31.6			15.1					
Green Ext Time (p_c), s		2.3		2.3			1.5					

Intersection Summary

HCM 6th Ctrl Delay	30.4
HCM 6th LOS	C

Notes

- User approved volume balancing among the lanes for turning movement.
- User approved changes to right turn type.
- Unsignalized Delay for [EBR] is excluded from calculations of the approach delay and intersection delay.

Level Of Service Computation Report

ICU 1(Loss as Cycle Length %) Method (Future Volume Alternative)

Intersection #11 I-5 SB Ramps/Camino Las Ramblas

Cycle (sec): 100 Critical Vol./Cap.(X): 0.306
Loss Time (sec): 5 Average Delay (sec/veh): xxxxxx
Optimal Cycle: 17 Level Of Service: A

Street Name: I-5 SB Ramps Camino Las Ramblas

Approach: North Bound South Bound East Bound West Bound

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

Control: Protected Protected Protected Protected

Rights: Include Ignore Ignore Ignore

Min. Green: 0 0 0 0 0 0 0 0 0 0 0 0

Y+R: 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0

Lanes: 0 0 0 0 0 2 0 0 0 1 0 0 2 0 1 0 0 1 0 1

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Volume Module:

Base Vol: 0 0 0 205 0 781 0 489 1039 0 174 135

Growth Adj: 1.02 1.02 1.02 1.02 1.02 1.02 1.02 1.02 1.02 1.02 1.02 1.02

Initial Bse: 0 0 0 210 0 801 0 501 1065 0 178 138

Added Vol: 0 0 0 0 0 46 0 28 78 0 46 0

Cm2,3,17,18: 0 0 0 0 0 22 0 132 0 0 28 0

Initial Fut: 0 0 0 210 0 869 0 661 1143 0 252 138

User Adj: 1.00 1.00 1.00 1.00 1.00 0.00 1.00 1.00 0.00 1.00 1.00 0.00

PHF Adj: 1.00 1.00 1.00 1.00 1.00 0.00 1.00 1.00 0.00 1.00 1.00 0.00

PHF Volume: 0 0 0 210 0 0 0 661 0 0 252 0

Reduct Vol: 0 0 0 0 0 0 0 0 0 0 0 0

Reduced Vol: 0 0 0 210 0 0 0 661 0 0 252 0

PCE Adj: 1.00 1.00 1.00 1.00 1.00 0.00 1.00 1.00 0.00 1.00 1.00 0.00

MLF Adj: 1.00 1.00 1.00 1.00 1.00 0.00 1.00 1.00 0.00 1.00 1.00 0.00

FinalVolume: 0 0 0 210 0 0 0 661 0 0 252 0

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Saturation Flow Module:

Sat/Lane: 1700 1700 1700 1700 1700 1700 1700 1700 1700 1700 1700 1700

Adjustment: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00

Lanes: 0.00 0.00 0.00 2.00 0.00 1.00 0.00 2.00 1.00 0.00 1.00 1.00

Final Sat.: 0 0 0 3400 0 1700 0 3400 1700 0 1700 1700

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Capacity Analysis Module:

Vol/Sat: 0.00 0.00 0.00 0.06 0.00 0.00 0.00 0.19 0.00 0.00 0.15 0.00

Crit Moves: **** **** ****

Level Of Service Computation Report

ICU 1(Loss as Cycle Length %) Method (Future Volume Alternative)

Intersection #12 I-5 NB Ramps/Camino Las Ramblas

Cycle (sec): 100 Critical Vol./Cap.(X): 0.299
Loss Time (sec): 5 Average Delay (sec/veh): xxxxxx
Optimal Cycle: 17 Level Of Service: A

Street Name: I-5 NB Ramps Camino Las Ramblas
Approach: North Bound South Bound East Bound West Bound
Movement: L - T - R L - T - R L - T - R L - T - R

Control: Permitted Permitted Permitted Permitted
Rights: Include Include Ignore Include
Min. Green: 0 0 0 0 0 0 0 0 0 0 0 0
Y+R: 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0
Lanes: 0 1 0 0 1 1 0 0 0 1 1 0 0 2 0 1 0 0 2 1 0

Volume Module:

Base Vol: 1 12 87 8 0 93 22 273 355 0 648 7
Growth Adj: 1.02 1.02 1.02 1.02 1.02 1.02 1.02 1.02 1.02 1.02 1.02 1.02
Initial Bse: 1 12 89 8 0 95 23 280 364 0 664 7
Added Vol: 46 0 0 0 0 0 0 0 28 0 1 0
Cm2,3,17,18: 35 0 0 0 0 0 0 0 132 0 0 0
Initial Fut: 82 12 89 8 0 95 23 280 524 0 665 7
User Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 0.00 1.00 1.00 1.00
PHF Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 0.00 1.00 1.00 1.00
PHF Volume: 82 12 89 8 0 95 23 280 0 0 665 7
Reduct Vol: 0 0 0 0 0 0 0 0 0 0 0 0
Reduced Vol: 82 12 89 8 0 95 23 280 0 0 665 7
PCE Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 0.00 1.00 1.00 1.00
MLF Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 0.00 1.00 1.00 1.00
FinalVolume: 82 12 89 8 0 95 23 280 0 0 665 7

Saturation Flow Module:

Sat/Lane: 1700 1700 1700 1700 1700 1700 1700 1700 1700 1700 1700 1700
Adjustment: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
Lanes: 0.87 0.13 1.00 1.00 0.00 1.00 1.00 2.00 1.00 0.00 2.97 0.03
Final Sat.: 1478 222 1700 1700 0 1700 1700 3400 1700 0 5046 54

Capacity Analysis Module:

Vol/Sat: 0.05 0.06 0.05 0.00 0.00 0.06 0.01 0.08 0.00 0.00 0.13 0.13
Crit Moves: **** **** **** ****

HCM Signalized Intersection Capacity Analysis

12: I-5 NB Ramps & Camino Las Ramlas

02/19/2021



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	23	280	524	0	665	7	82	12	89	8	0	95
Future Volume (vph)	23	280	524	0	665	7	82	12	89	8	0	95
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
Lane Util. Factor	1.00	0.95	1.00		0.91			1.00	1.00	1.00		1.00
Frt	1.00	1.00	0.85		1.00			1.00	0.85	1.00		0.85
Flt Protected	0.95	1.00	1.00		1.00			0.96	1.00	0.95		1.00
Satd. Flow (prot)	1770	3539	1583		5078			1785	1583	1770		1583
Flt Permitted	0.37	1.00	1.00		1.00			0.96	1.00	0.69		1.00
Satd. Flow (perm)	689	3539	1583		5078			1785	1583	1291		1583
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	24	295	552	0	700	7	86	13	94	8	0	100
RTOR Reduction (vph)	0	0	0	0	3	0	0	0	51	0	0	54
Lane Group Flow (vph)	24	295	552	0	704	0	0	99	43	8	0	46
Turn Type	Perm	NA	Free		NA		Perm	NA	Perm	Perm		Perm
Protected Phases		4			8			2				
Permitted Phases	4		Free				2		2	6		6
Actuated Green, G (s)	12.3	12.3	39.4		12.3			18.1	18.1	18.1		18.1
Effective Green, g (s)	12.3	12.3	39.4		12.3			18.1	18.1	18.1		18.1
Actuated g/C Ratio	0.31	0.31	1.00		0.31			0.46	0.46	0.46		0.46
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)	215	1104	1583		1585			820	727	593		727
v/s Ratio Prot		0.08			0.14							
v/s Ratio Perm	0.03		c0.35					0.06	0.03	0.01		0.03
v/c Ratio	0.11	0.27	0.35		0.44			0.12	0.06	0.01		0.06
Uniform Delay, d1	9.7	10.2	0.0		10.8			6.1	5.9	5.8		5.9
Progression Factor	1.00	1.00	1.00		1.00			1.00	1.00	1.00		1.00
Incremental Delay, d2	0.2	0.1	0.6		0.2			0.3	0.2	0.0		0.2
Delay (s)	9.9	10.3	0.6		11.0			6.4	6.1	5.8		6.1
Level of Service	A	B	A		B			A	A	A		A
Approach Delay (s)		4.1			11.0			6.2			6.1	
Approach LOS		A			B			A			A	

Intersection Summary

HCM 2000 Control Delay	7.1	HCM 2000 Level of Service	A
HCM 2000 Volume to Capacity ratio	0.45		
Actuated Cycle Length (s)	39.4	Sum of lost time (s)	9.0
Intersection Capacity Utilization	38.5%	ICU Level of Service	A
Analysis Period (min)	15		

c Critical Lane Group

HCM 6th TWSC
 1: Island Way & Dana Point Harbor Drive

11/19/2020

Intersection						
Int Delay, s/veh	6.5					
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↑		↑	↑	↑	↑
Traffic Vol, veh/h	131	43	195	124	41	205
Future Vol, veh/h	131	43	195	124	41	205
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	300	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	95	95	95	95	95	95
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	138	45	205	131	43	216

Major/Minor	Major1	Major2	Minor1		
Conflicting Flow All	0	0	183	0	702 161
Stage 1	-	-	-	-	161 -
Stage 2	-	-	-	-	541 -
Critical Hdwy	-	-	4.12	-	6.42 6.22
Critical Hdwy Stg 1	-	-	-	-	5.42 -
Critical Hdwy Stg 2	-	-	-	-	5.42 -
Follow-up Hdwy	-	-	2.218	-	3.518 3.318
Pot Cap-1 Maneuver	-	-	1392	-	404 884
Stage 1	-	-	-	-	868 -
Stage 2	-	-	-	-	583 -
Platoon blocked, %	-	-	-	-	-
Mov Cap-1 Maneuver	-	-	1392	-	345 884
Mov Cap-2 Maneuver	-	-	-	-	345 -
Stage 1	-	-	-	-	868 -
Stage 2	-	-	-	-	497 -

Approach	EB	WB	NB
HCM Control Delay, s	0	4.9	13.1
HCM LOS			B

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	701	-	-	1392	-
HCM Lane V/C Ratio	0.369	-	-	0.147	-
HCM Control Delay (s)	13.1	-	-	8	-
HCM Lane LOS	B	-	-	A	-
HCM 95th %tile Q(veh)	1.7	-	-	0.5	-

Level Of Service Computation Report

ICU 1(Loss as Cycle Length %) Method (Future Volume Alternative)

Intersection #2 Casitas Place/Dana Point Harbor Drive

Cycle (sec): 100 Critical Vol./Cap.(X): 0.243
Loss Time (sec): 5 Average Delay (sec/veh): xxxxxx
Optimal Cycle: 16 Level Of Service: A

Street Name: Casitas Place Dana Point Harbor Drive

Approach: North Bound South Bound East Bound West Bound

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

Control: Protected Protected Protected Prot+Permit

Rights: Include Include Include Include

Min. Green: 0 0 0 0 0 0 0 0 0 0 0 0

Y+R: 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0

Lanes: 1 0 0 0 1 0 0 0 0 0 0 0 1 1 0 1 0 2 0 0

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Volume Module:

Base Vol: 16 0 27 0 0 0 0 0 310 25 84 262 0

Growth Adj: 1.02 1.02 1.02 1.02 1.02 1.02 1.02 1.02 1.02 1.02 1.02 1.02 1.02

Initial Bse: 16 0 28 0 0 0 0 0 318 26 86 269 0

Added Vol: 0 0 -7 0 0 0 0 0 50 0 -6 49 0

Cm2,3,17,18: 0 0 0 0 0 0 0 0 17 0 26 0 0

Initial Fut: 16 0 21 0 0 0 0 0 385 26 106 318 0

User Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00

PHF Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00

PHF Volume: 16 0 21 0 0 0 0 0 385 26 106 318 0

Reduct Vol: 0 0 0 0 0 0 0 0 0 0 0 0 0

Reduced Vol: 16 0 21 0 0 0 0 0 385 26 106 318 0

PCE Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00

MLF Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00

FinalVolume: 16 0 21 0 0 0 0 0 385 26 106 318 0

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Saturation Flow Module:

Sat/Lane: 1700 1700 1700 1700 1700 1700 1700 1700 1700 1700 1700 1700

Adjustment: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00

Lanes: 1.00 0.00 1.00 0.00 0.00 0.00 0.00 1.88 0.12 1.00 2.00 0.00

Final Sat.: 1700 0 1700 0 0 0 0 0 3188 212 1700 3400 0

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Capacity Analysis Module:

Vol/Sat: 0.01 0.00 0.01 0.00 0.00 0.00 0.00 0.12 0.12 0.06 0.09 0.00

Crit Moves: **** **** ****

Level Of Service Computation Report

ICU 1(Loss as Cycle Length %) Method (Future Volume Alternative)

Intersection #3 Golden Lantern/PCH

Cycle (sec): 100 Critical Vol./Cap.(X): 0.757
Loss Time (sec): 5 Average Delay (sec/veh): xxxxxx
Optimal Cycle: 44 Level Of Service: C

Street Name: Golden Lantern PCH

Approach: North Bound South Bound East Bound West Bound

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

Control: Protected Protected Protected Protected
Rights: Include Include Include Include
Min. Green: 0 0 0 0 0 0 0 0 0 0 0 0
Y+R: 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0
Lanes: 1 0 1 1 0 2 0 1 0 1 1 0 1 1 0 1 0 1 1 0

Volume Module:

Base Vol: 122 297 42 269 293 88 94 835 52 69 863 227
Growth Adj: 1.02 1.02 1.02 1.02 1.02 1.02 1.02 1.02 1.02 1.02 1.02 1.02
Initial Bse: 125 304 43 276 300 90 96 856 53 71 885 233
Added Vol: 6 2 0 13 2 52 42 80 6 4 75 9
Cm2,3,17,18: 9 11 0 0 14 0 0 22 0 0 13 0
Initial Fut: 140 317 43 289 316 142 138 958 59 75 973 242
User Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
PHF Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
PHF Volume: 140 317 43 289 316 142 138 958 59 75 973 242
Reduct Vol: 0 0 0 0 0 0 0 0 0 0 0 0
Reduced Vol: 140 317 43 289 316 142 138 958 59 75 973 242
PCE Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
MLF Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
FinalVolume: 140 317 43 289 316 142 138 958 59 75 973 242

Saturation Flow Module:

Sat/Lane: 1700 1700 1700 1700 1700 1700 1700 1700 1700 1700 1700 1700
Adjustment: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
Lanes: 1.00 1.76 0.24 2.00 1.00 1.00 1.00 1.88 0.12 1.00 1.60 0.40
Final Sat.: 1700 2994 406 3400 1700 1700 1700 3202 198 1700 2723 677

Capacity Analysis Module:

Vol/Sat: 0.08 0.11 0.11 0.08 0.19 0.08 0.08 0.30 0.30 0.04 0.36 0.36
Crit Moves: **** **** **** ****

Level Of Service Computation Report

ICU 1(Loss as Cycle Length %) Method (Future Volume Alternative)

Intersection #4 Golden Lantern/Del Prado Avenue

Cycle (sec): 100 Critical Vol./Cap.(X): 0.392
Loss Time (sec): 5 Average Delay (sec/veh): xxxxxx
Optimal Cycle: 20 Level Of Service: A

Street Name: Golden Lantern Del Prado Avenue

Approach: North Bound South Bound East Bound West Bound

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

Control: Protected Protected Prot+Permit Prot+Permit

Rights: Include Include Include Include

Min. Green: 0 0 0 0 0 0 0 0 0 0 0 0

Y+R: 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0

Lanes: 1 0 1 1 0 1 0 2 0 1 1 0 0 1 0 1

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Volume Module:

Base Vol: 47 249 41 136 203 73 58 129 97 29 115 32

Growth Adj: 1.02 1.02 1.02 1.02 1.02 1.02 1.02 1.02 1.02 1.02 1.02 1.02

Initial Bse: 48 255 42 139 208 75 59 132 99 30 118 33

Added Vol: 6 8 0 0 12 0 0 0 6 0 0 0

Cm2,3,17,18: 0 20 0 0 4 0 0 0 12 0 0 0

Initial Fut: 54 283 42 139 224 75 59 132 117 30 118 33

User Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00

PHF Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00

PHF Volume: 54 283 42 139 224 75 59 132 117 30 118 33

Reduct Vol: 0 0 0 0 0 0 0 0 0 0 0 0

Reduced Vol: 54 283 42 139 224 75 59 132 117 30 118 33

PCE Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00

MLF Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00

FinalVolume: 54 283 42 139 224 75 59 132 117 30 118 33

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Saturation Flow Module:

Sat/Lane: 1700 1700 1700 1700 1700 1700 1700 1700 1700 1700 1700 1700

Adjustment: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00

Lanes: 1.00 1.74 0.26 1.00 2.00 1.00 1.00 0.53 0.47 1.00 1.00 1.00

Final Sat.: 1700 2961 439 1700 3400 1700 1700 900 800 1700 1700 1700

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Capacity Analysis Module:

Vol/Sat: 0.03 0.10 0.10 0.08 0.07 0.04 0.03 0.15 0.15 0.02 0.07 0.02

Crit Moves: **** **** **** ****

Level Of Service Computation Report

ICU 1(Loss as Cycle Length %) Method (Future Volume Alternative)

Intersection #5 Golden Lantern/Dana Point Harbor Drive

Cycle (sec): 100 Critical Vol./Cap.(X): 0.552
Loss Time (sec): 5 Average Delay (sec/veh): xxxxxx
Optimal Cycle: 26 Level Of Service: A

Street Name: Golden Lantern Dana Point Harbor Drive

Approach: North Bound South Bound East Bound West Bound

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

Control: Protected Protected Protected Protected

Rights: Include Include Include Include

Min. Green: 0 0 0 0 0 0 0 0 0 0 0 0

Y+R: 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0

Lanes: 1 0 1 1 0 1 0 1 1 0 1 0 1 1 0

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Volume Module:

Base Vol: 20 92 135 192 81 101 125 174 15 123 228 89

Growth Adj: 1.02 1.02 1.02 1.02 1.02 1.02 1.02 1.02 1.02 1.02 1.02 1.02

Initial Bse: 21 94 138 197 83 104 128 178 15 126 234 91

Added Vol: 0 0 0 0 0 18 15 28 0 0 24 0

Cm2,3,17,18: 0 12 111 11 12 0 0 13 0 152 4 9

Initial Fut: 21 106 249 208 95 122 143 219 15 278 262 100

User Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00

PHF Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00

PHF Volume: 21 106 249 208 95 122 143 219 15 278 262 100

Reduct Vol: 0 0 0 0 0 0 0 0 0 0 0 0

Reduced Vol: 21 106 249 208 95 122 143 219 15 278 262 100

PCE Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00

MLF Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00

FinalVolume: 21 106 249 208 95 122 143 219 15 278 262 100

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Saturation Flow Module:

Sat/Lane: 1700 1700 1700 1700 1700 1700 1700 1700 1700 1700 1700 1700

Adjustment: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00

Lanes: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.87 0.13 1.00 1.45 0.55

Final Sat.: 1700 1700 1700 1700 1700 1700 1700 3177 223 1700 2458 942

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Capacity Analysis Module:

Vol/Sat: 0.01 0.06 0.15 0.12 0.06 0.07 0.08 0.07 0.07 0.16 0.11 0.11

Crit Moves: **** **** **** ****

Level Of Service Computation Report

ICU 1(Loss as Cycle Length %) Method (Future Volume Alternative)

Intersection #6 Puerto Place/Dana Point Harbor Drive

Cycle (sec): 100 Critical Vol./Cap.(X): 0.419
Loss Time (sec): 5 Average Delay (sec/veh): xxxxxx
Optimal Cycle: 21 Level Of Service: A

Street Name: Puerto Place Dana Point Harbor Drive

Approach: North Bound South Bound East Bound West Bound

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

Control: Protected Protected Protected Protected
Rights: Include Include Include Include
Min. Green: 0 0 0 0 0 0 0 0 0 0 0 0
Y+R: 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0
Lanes: 1 0 0 0 1 0 0 0 0 0 0 0 2 0 1 1 0 2 0 0

Volume Module:

Base Vol: 28 0 76 0 0 0 0 469 42 46 430 0
Growth Adj: 1.02 1.02 1.02 1.02 1.02 1.02 1.02 1.02 1.02 1.02 1.02 1.02
Initial Bse: 29 0 78 0 0 0 0 481 43 47 441 0
Added Vol: 0 0 0 0 0 0 0 28 0 0 24 0
Cm2,3,17,18: 9 0 83 0 0 0 0 124 11 103 157 0
Initial Fut: 38 0 161 0 0 0 0 633 54 150 622 0
User Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
PHF Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
PHF Volume: 38 0 161 0 0 0 0 633 54 150 622 0
Reduct Vol: 0 0 0 0 0 0 0 0 0 0 0 0
Reduced Vol: 38 0 161 0 0 0 0 633 54 150 622 0
PCE Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
MLF Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
FinalVolume: 38 0 161 0 0 0 0 633 54 150 622 0

Saturation Flow Module:

Sat/Lane: 1700 1700 1700 1700 1700 1700 1700 1700 1700 1700 1700 1700
Adjustment: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
Lanes: 1.00 0.00 1.00 0.00 0.00 0.00 0.00 2.00 1.00 1.00 2.00 0.00
Final Sat.: 1700 0 1700 0 0 0 0 3400 1700 1700 3400 0

Capacity Analysis Module:

Vol/Sat: 0.02 0.00 0.09 0.00 0.00 0.00 0.00 0.19 0.03 0.09 0.18 0.00
Crit Moves: ****

Level Of Service Computation Report

ICU 1(Loss as Cycle Length %) Method (Future Volume Alternative)

Intersection #7 Dana Point Harbor Drive/Park Lantern

Cycle (sec): 100 Critical Vol./Cap.(X): 0.358
Loss Time (sec): 5 Average Delay (sec/veh): xxxxxx
Optimal Cycle: 19 Level Of Service: A

Street Name: Dana Point Harbor Drive Park Landtern

Approach: North Bound South Bound East Bound West Bound

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

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Control: Protected Protected Permitted Permitted

Rights: Include Include Include Include

Min. Green: 0 0 0 0 0 0 0 0 0 0 0 0

Y+R: 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0

Lanes: 1 0 2 0 1 1 0 1 1 0 0 0 1 0 1 0

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Volume Module:

Base Vol: 6 497 22 54 363 37 45 0 13 17 1 28

Growth Adj: 1.02 1.02 1.02 1.02 1.02 1.02 1.02 1.02 1.02 1.02 1.02 1.02

Initial Bse: 6 509 23 55 372 38 46 0 13 17 1 29

Added Vol: 0 24 4 8 19 0 0 0 0 4 0 13

Cm2,3,17,18: 0 211 0 0 263 0 0 0 0 0 0 0

Initial Fut: 6 744 27 63 654 38 46 0 13 21 1 42

User Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00

PHF Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00

PHF Volume: 6 744 27 63 654 38 46 0 13 21 1 42

Reduct Vol: 0 0 0 0 0 0 0 0 0 0 0 0

Reduced Vol: 6 744 27 63 654 38 46 0 13 21 1 42

PCE Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00

MLF Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00

FinalVolume: 6 744 27 63 654 38 46 0 13 21 1 42

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Saturation Flow Module:

Sat/Lane: 1700 1700 1700 1700 1700 1700 1700 1700 1700 1700 1700 1700

Adjustment: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00

Lanes: 1.00 2.00 1.00 1.00 1.89 0.11 0.78 0.00 0.22 1.00 0.02 0.98

Final Sat.: 1700 3400 1700 1700 3214 186 1319 0 381 1700 41 1659

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Capacity Analysis Module:

Vol/Sat: 0.00 0.22 0.02 0.04 0.20 0.20 0.03 0.00 0.03 0.01 0.03 0.03

Crit Moves: **** **** **** ****

Level Of Service Computation Report

ICU 1(Loss as Cycle Length %) Method (Future Volume Alternative)

Intersection #8 Del Obispo Street-Dana Point Harbor Drive/PCH

Cycle (sec): 100 Critical Vol./Cap.(X): 0.674
Loss Time (sec): 5 Average Delay (sec/veh): xxxxxx
Optimal Cycle: 35 Level Of Service: B

Street Name:Del Obispo Street-Dana Point Harb PCH

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

Control: Protected Protected Protected Protected
Rights: Ovl Include Include Include
Min. Green: 0 0 0 0 0 0 0 0 0 0 0 0
Y+R: 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0
Lanes: 1 0 1 0 2 2 0 1 0 1 1 0 2 1 0

Volume Module:

Base Vol: 39 85 409 274 109 132 112 1090 71 435 1370 366
Growth Adj: 1.02 1.02 1.02 1.02 1.02 1.02 1.02 1.02 1.02 1.02 1.02 1.02
Initial Bse: 40 87 419 281 112 135 115 1117 73 446 1404 375
Added Vol: 0 10 26 13 6 15 21 71 0 22 73 42
Cm2,3,17,18: 0 33 177 9 14 13 22 0 0 250 0 16
Initial Fut: 40 130 622 303 132 163 158 1188 73 718 1477 433
User Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
PHF Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
PHF Volume: 40 130 622 303 132 163 158 1188 73 718 1477 433
Reduct Vol: 0 0 0 0 0 0 0 0 0 0 0 0
Reduced Vol: 40 130 622 303 132 163 158 1188 73 718 1477 433
PCE Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
MLF Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
FinalVolume: 40 130 622 303 132 163 158 1188 73 718 1477 433
OvlAdjVol: 0

Saturation Flow Module:

Sat/Lane: 1700 1700 1700 1700 1700 1700 1700 1700 1700 1700 1700 1700
Adjustment: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
Lanes: 1.00 1.00 2.00 2.00 1.00 1.00 1.00 2.83 0.17 2.00 2.32 0.68
Final Sat.: 1700 1700 3400 3400 1700 1700 1700 4806 294 3400 3944 1156

Capacity Analysis Module:

Vol/Sat: 0.02 0.08 0.18 0.09 0.08 0.10 0.09 0.25 0.25 0.21 0.37 0.37
OvlAdjV/S: 0.00
Crit Moves: ****

Level Of Service Computation Report

ICU 1(Loss as Cycle Length %) Method (Future Volume Alternative)

Intersection #9 Del Opisobo Street/Stonehill Drive

Cycle (sec): 100 Critical Vol./Cap.(X): 0.792
Loss Time (sec): 5 Average Delay (sec/veh): xxxxxx
Optimal Cycle: 50 Level Of Service: C

Street Name: Del Opisobo Street Stonehill Drive

Approach: North Bound South Bound East Bound West Bound

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

Control: Protected Protected Protected Protected

Rights: Include Include Include Include

Min. Green: 0 0 0 0 0 0 0 0 0 0 0 0

Y+R: 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0

Lanes: 1 0 1 1 0 1 0 1 1 0 1 0 2 0 1 1 0 2 0 1

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Volume Module:

Base Vol: 143 268 156 284 308 109 131 860 93 149 845 420

Growth Adj: 1.02 1.02 1.02 1.02 1.02 1.02 1.02 1.02 1.02 1.02 1.02 1.02

Initial Bse: 147 275 160 291 316 112 134 881 95 153 866 430

Added Vol: 0 70 3 65 30 0 0 1 0 3 0 34

Cm2,3,17,18: 3 13 35 1 17 0 0 14 6 22 17 1

Initial Fut: 150 358 198 357 363 112 134 896 101 178 883 465

User Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00

PHF Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00

PHF Volume: 150 358 198 357 363 112 134 896 101 178 883 465

Reduct Vol: 0 0 0 0 0 0 0 0 0 0 0 0

Reduced Vol: 150 358 198 357 363 112 134 896 101 178 883 465

PCE Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00

MLF Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00

FinalVolume: 150 358 198 357 363 112 134 897 101 178 883 466

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Saturation Flow Module:

Sat/Lane: 1700 1700 1700 1700 1700 1700 1700 1700 1700 1700 1700 1700

Adjustment: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00

Lanes: 1.00 1.29 0.71 1.00 1.53 0.47 1.00 2.00 1.00 1.00 2.00 1.00

Final Sat.: 1700 2189 1211 1700 2599 801 1700 3400 1700 1700 3400 1700

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Capacity Analysis Module:

Vol/Sat: 0.09 0.16 0.16 0.21 0.14 0.14 0.08 0.26 0.06 0.10 0.26 0.27

Crit Moves: **** **** **** ****

Level Of Service Computation Report

ICU 1(Loss as Cycle Length %) Method (Future Volume Alternative)

Intersection #9 Del Opisobo Street/Stonehill Drive

Cycle (sec): 100 Critical Vol./Cap.(X): 0.776
Loss Time (sec): 5 Average Delay (sec/veh): xxxxxx
Optimal Cycle: 47 Level Of Service: C

Table with columns for Street Name (Del Opisobo Street, Stonehill Drive), Approach (North Bound, South Bound, East Bound, West Bound), Movement (L, T, R), Control, Rights, Min. Green, Y+R, and Lanes.

Volume Module table with columns for Base Vol, Growth Adj, Initial Bse, Added Vol, Cm2,3,17,18, Initial Fut, User Adj, PHF Adj, PHF Volume, Reduct Vol, Reduced Vol, PCE Adj, MLF Adj, and Final Volume.

Saturation Flow Module table with columns for Sat/Lane, Adjustment, Lanes, and Final Sat.

Capacity Analysis Module table with columns for Vol/Sat and Crit Moves.

Level Of Service Computation Report

ICU 1(Loss as Cycle Length %) Method (Future Volume Alternative)

Intersection #10 Camino Capistrano/Stonehill Drive

Cycle (sec): 100 Critical Vol./Cap.(X): 0.759
Loss Time (sec): 5 Average Delay (sec/veh): xxxxxx
Optimal Cycle: 45 Level Of Service: C

Street Name: Camino Capistrano Stonehill Drive

Approach: North Bound South Bound East Bound West Bound

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

Control: Split Phase Split Phase Split Phase Split Phase

Rights: Include Ovl Include Include

Min. Green: 0 0 0 0 0 0 0 0 0 0 0 0

Y+R: 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0

Lanes: 1 1 0 0 1 1 0 2 0 2 1 0 0 0 0 0

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Volume Module:

Base Vol: 479 260 359 154 626 851 185 809 383 0 0 0

Growth Adj: 1.02 1.02 1.02 1.02 1.02 1.02 1.02 1.02 1.02 1.02 1.02 1.02

Initial Bse: 491 267 368 158 642 872 190 829 393 0 0 0

Added Vol: 31 0 17 0 0 0 0 18 54 0 0 0

Cm2,3,17,18: 33 -5 -21 0 -19 62 22 59 39 0 0 0

Initial Fut: 555 262 364 158 623 934 212 906 486 0 0 0

User Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00

PHF Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00

PHF Volume: 555 262 364 158 623 934 212 906 486 0 0 0

Reduct Vol: 0 0 0 0 0 0 0 0 0 0 0 0

Reduced Vol: 555 262 364 158 623 934 212 906 486 0 0 0

PCE Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00

MLF Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00

FinalVolume: 555 262 364 158 623 934 212 906 486 0 0 0

OvlAdjVol: 0

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Saturation Flow Module:

Sat/Lane: 1700 1700 1700 1700 1700 1700 1700 1700 1700 1700 1700 1700

Adjustment: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00

Lanes: 1.36 0.64 1.00 1.00 2.00 2.00 1.00 2.00 1.00 0.00 0.00 0.00

Final Sat.: 2311 1089 1700 1700 3400 3400 1700 3400 1700 0 0 0

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Capacity Analysis Module:

Vol/Sat: 0.24 0.24 0.21 0.09 0.18 0.27 0.12 0.27 0.29 0.00 0.00 0.00

OvlAdjV/S: 0.00

Crit Moves: **** **** ****

HCM 6th Signalized Intersection Summary
 10: Camino Capistrano & Stonehill Drive/I-5 NB Ramp

02/19/2021



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↶	↷	↷				↶	↷	↷	↶	↷	↷
Traffic Volume (veh/h)	212	906	486	0	0	0	555	262	364	158	623	934
Future Volume (veh/h)	212	906	486	0	0	0	555	262	364	158	623	934
Initial Q (Qb), veh	0	0	0				0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00				1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00				1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No					No			No		
Adj Sat Flow, veh/h/ln	1870	1870	1870				1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	223	954	0				430	492	383	166	656	983
Peak Hour Factor	0.95	0.95	0.95				0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	2	2	2				2	2	2	2	2	2
Cap, veh/h	520	1037					558	586	497	402	802	1443
Arrive On Green	0.29	0.29	0.00				0.31	0.31	0.31	0.23	0.23	0.23
Sat Flow, veh/h	1781	3554	1585				1781	1870	1585	1781	3554	2790
Grp Volume(v), veh/h	223	954	0				430	492	383	166	656	983
Grp Sat Flow(s),veh/h/ln	1781	1777	1585				1781	1870	1585	1781	1777	1395
Q Serve(g_s), s	8.1	20.7	0.0				17.4	19.5	17.5	6.3	14.0	18.0
Cycle Q Clear(g_c), s	8.1	20.7	0.0				17.4	19.5	17.5	6.3	14.0	18.0
Prop In Lane	1.00		1.00				1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	520	1037					558	586	497	402	802	1443
V/C Ratio(X)	0.43	0.92					0.77	0.84	0.77	0.41	0.82	0.68
Avail Cap(c_a), veh/h	525	1047					558	586	497	402	802	1443
HCM Platoon Ratio	1.00	1.00	1.00				1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	0.00				1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	22.9	27.4	0.0				24.8	25.5	24.8	26.4	29.3	13.6
Incr Delay (d2), s/veh	0.6	12.7	0.0				9.9	13.5	11.0	3.1	9.1	2.6
Initial Q Delay(d3),s/veh	0.0	0.0	0.0				0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	3.3	10.2	0.0				8.5	10.4	7.7	3.0	6.8	10.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	23.4	40.1	0.0				34.7	39.0	35.8	29.5	38.4	16.3
LnGrp LOS	C	D					C	D	D	C	D	B
Approach Vol, veh/h		1177	A				1305			1805		
Approach Delay, s/veh		36.9					36.6			25.5		
Approach LOS		D					D			C		
Timer - Assigned Phs		2		4		6						
Phs Duration (G+Y+Rc), s		29.5		27.8		22.5						
Change Period (Y+Rc), s		4.5		4.5		4.5						
Max Green Setting (Gmax), s		25.0		23.5		18.0						
Max Q Clear Time (g_c+I1), s		21.5		22.7		20.0						
Green Ext Time (p_c), s		2.0		0.5		0.0						

Intersection Summary

HCM 6th Ctrl Delay	32.0
HCM 6th LOS	C

Notes

- User approved volume balancing among the lanes for turning movement.
- User approved changes to right turn type.
- Unsignalized Delay for [EBR] is excluded from calculations of the approach delay and intersection delay.

Level Of Service Computation Report

ICU 1(Loss as Cycle Length %) Method (Future Volume Alternative)

Intersection #11 I-5 SB Ramps/Camino Las Ramblas

Cycle (sec): 100 Critical Vol./Cap.(X): 0.356
Loss Time (sec): 5 Average Delay (sec/veh): xxxxxx
Optimal Cycle: 19 Level Of Service: A

Street Name: I-5 SB Ramps Camino Las Ramblas
Approach: North Bound South Bound East Bound West Bound
Movement: L - T - R L - T - R L - T - R L - T - R

Control: Protected Protected Protected Protected
Rights: Include Ignore Ignore Ignore
Min. Green: 0 0 0 0 0 0 0 0 0 0 0 0
Y+R: 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0
Lanes: 0 0 0 0 0 2 0 0 0 1 0 0 2 0 1 0 0 1 0 1

Volume Module:

Base Vol: 0 0 0 309 0 816 0 536 1362 0 143 88
Growth Adj: 1.02 1.02 1.02 1.02 1.02 1.02 1.02 1.02 1.02 1.02 1.02 1.02
Initial Bse: 0 0 0 317 0 836 0 549 1396 0 147 90
Added Vol: 0 0 0 0 0 88 0 29 64 0 88 0
Cm2,3,17,18: 0 0 0 0 0 29 0 145 0 0 36 0
Initial Fut: 0 0 0 317 0 953 0 723 1460 0 271 90
User Adj: 1.00 1.00 1.00 1.00 1.00 0.00 1.00 1.00 0.00 1.00 1.00 0.00
PHF Adj: 1.00 1.00 1.00 1.00 1.00 0.00 1.00 1.00 0.00 1.00 1.00 0.00
PHF Volume: 0 0 0 317 0 0 0 723 0 0 271 0
Reduct Vol: 0 0 0 0 0 0 0 0 0 0 0 0
Reduced Vol: 0 0 0 317 0 0 0 723 0 0 271 0
PCE Adj: 1.00 1.00 1.00 1.00 1.00 0.00 1.00 1.00 0.00 1.00 1.00 0.00
MLF Adj: 1.00 1.00 1.00 1.00 1.00 0.00 1.00 1.00 0.00 1.00 1.00 0.00
FinalVolume: 0 0 0 317 0 0 0 723 0 0 271 0

Saturation Flow Module:

Sat/Lane: 1700 1700 1700 1700 1700 1700 1700 1700 1700 1700 1700 1700
Adjustment: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
Lanes: 0.00 0.00 0.00 2.00 0.00 1.00 0.00 2.00 1.00 0.00 1.00 1.00
Final Sat.: 0 0 0 3400 0 1700 0 3400 1700 0 1700 1700

Capacity Analysis Module:

Vol/Sat: 0.00 0.00 0.00 0.09 0.00 0.00 0.00 0.21 0.00 0.00 0.16 0.00
Crit Moves: ****

Level Of Service Computation Report

ICU 1(Loss as Cycle Length %) Method (Future Volume Alternative)

Intersection #12 I-5 NB Ramps/Camino Las Ramblas

Cycle (sec): 100 Critical Vol./Cap.(X): 0.296
Loss Time (sec): 5 Average Delay (sec/veh): xxxxxx
Optimal Cycle: 17 Level Of Service: A

Street Name: I-5 NB Ramps Camino Las Ramblas

Table with columns for Approach (North Bound, South Bound, East Bound, West Bound) and Movement (L, T, R). Rows include Control, Rights, Min. Green, Y+R, and Lanes.

Volume Module table with columns for Base Vol, Growth Adj, Initial Bse, Added Vol, Cm2,3,17,18, Initial Fut, User Adj, PHF Adj, PHF Volume, Reduct Vol, Reduced Vol, PCE Adj, MLF Adj, and Final Volume.





















Saturation Flow Module table with columns for Sat/Lane, Adjustment, Lanes, and Final Sat.

Capacity Analysis Module table with columns for Vol/Sat and Crit Moves.

HCM Signalized Intersection Capacity Analysis

12: I-5 NB Ramps & Camino Las Ramblas

02/19/2021

													
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR	
Lane Configurations													
Traffic Volume (vph)	48	476	573	0	374	10	131	33	119	6	0	49	
Future Volume (vph)	48	476	573	0	374	10	131	33	119	6	0	49	
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	
Lane Util. Factor	1.00	0.95	1.00		0.91			1.00	1.00	1.00		1.00	
Frt	1.00	1.00	0.85		1.00			1.00	0.85	1.00		0.85	
Flt Protected	0.95	1.00	1.00		1.00			0.96	1.00	0.95		1.00	
Satd. Flow (prot)	1770	3539	1583		5065			1791	1583	1770		1583	
Flt Permitted	0.51	1.00	1.00		1.00			0.96	1.00	0.65		1.00	
Satd. Flow (perm)	941	3539	1583		5065			1791	1583	1207		1583	
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	
Adj. Flow (vph)	51	501	603	0	394	11	138	35	125	6	0	52	
RTOR Reduction (vph)	0	0	0	0	8	0	0	0	66	0	0	28	
Lane Group Flow (vph)	51	501	603	0	397	0	0	173	59	6	0	24	
Turn Type	Perm	NA	Free		NA		Perm	NA	Perm	Perm		Perm	
Protected Phases		4			8			2					
Permitted Phases	4		Free				2		2	6		6	
Actuated Green, G (s)	11.4	11.4	38.5		11.4			18.1	18.1	18.1		18.1	
Effective Green, g (s)	11.4	11.4	38.5		11.4			18.1	18.1	18.1		18.1	
Actuated g/C Ratio	0.30	0.30	1.00		0.30			0.47	0.47	0.47		0.47	
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)	278	1047	1583		1499			842	744	567		744	
v/s Ratio Prot		0.14			0.08								
v/s Ratio Perm	0.05		c0.38					0.10	0.04	0.00		0.02	
v/c Ratio	0.18	0.48	0.38		0.27			0.21	0.08	0.01		0.03	
Uniform Delay, d1	10.1	11.1	0.0		10.3			6.0	5.6	5.4		5.5	
Progression Factor	1.00	1.00	1.00		1.00			1.00	1.00	1.00		1.00	
Incremental Delay, d2	0.3	0.3	0.7		0.1			0.6	0.2	0.0		0.1	
Delay (s)	10.4	11.5	0.7		10.4			6.5	5.8	5.5		5.6	
Level of Service	B	B	A		B			A	A	A		A	
Approach Delay (s)		5.8			10.4			6.2			5.6		
Approach LOS		A			B			A			A		
Intersection Summary													
HCM 2000 Control Delay			6.8									HCM 2000 Level of Service	A
HCM 2000 Volume to Capacity ratio			0.50										
Actuated Cycle Length (s)			38.5									Sum of lost time (s)	9.0
Intersection Capacity Utilization			38.5%									ICU Level of Service	A
Analysis Period (min)			15										

c Critical Lane Group

HCM 6th TWSC
 1: Island Way & Dana Point Harbor Drive

11/19/2020

Intersection						
Int Delay, s/veh	6.6					
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↶		↷	↶	↷	
Traffic Vol, veh/h	304	31	293	344	32	197
Future Vol, veh/h	304	31	293	344	32	197
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	300	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	95	95	95	95	95	95
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	320	33	308	362	34	207

Major/Minor	Major1	Major2	Minor1		
Conflicting Flow All	0	0	353	0	1315 337
Stage 1	-	-	-	-	337 -
Stage 2	-	-	-	-	978 -
Critical Hdwy	-	-	4.12	-	6.42 6.22
Critical Hdwy Stg 1	-	-	-	-	5.42 -
Critical Hdwy Stg 2	-	-	-	-	5.42 -
Follow-up Hdwy	-	-	2.218	-	3.518 3.318
Pot Cap-1 Maneuver	-	-	1206	-	174 705
Stage 1	-	-	-	-	723 -
Stage 2	-	-	-	-	364 -
Platoon blocked, %	-	-	-	-	-
Mov Cap-1 Maneuver	-	-	1206	-	130 705
Mov Cap-2 Maneuver	-	-	-	-	130 -
Stage 1	-	-	-	-	723 -
Stage 2	-	-	-	-	271 -

Approach	EB	WB	NB
HCM Control Delay, s	0	4.1	23
HCM LOS			C

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	436	-	-	1206	-
HCM Lane V/C Ratio	0.553	-	-	0.256	-
HCM Control Delay (s)	23	-	-	9	-
HCM Lane LOS	C	-	-	A	-
HCM 95th %tile Q(veh)	3.3	-	-	1	-

Level Of Service Computation Report

ICU 1(Loss as Cycle Length %) Method (Future Volume Alternative)

Intersection #2 Casitas Place/Dana Point Harbor Drive

Cycle (sec): 100 Critical Vol./Cap.(X): 0.316
Loss Time (sec): 5 Average Delay (sec/veh): xxxxxx
Optimal Cycle: 18 Level Of Service: A

Street Name: Casitas Place Dana Point Harbor Drive
Approach: North Bound South Bound East Bound West Bound
Movement: L - T - R L - T - R L - T - R L - T - R

Control: Protected Protected Protected Prot+Permit
Rights: Include Include Include Include
Min. Green: 0 0 0 0 0 0 0 0 0 0 0 0
Y+R: 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0
Lanes: 1 0 0 0 1 0 0 0 0 0 0 0 1 0 2 0 0

Volume Module:

Base Vol: 25 0 67 0 0 0 0 427 42 118 528 0
Growth Adj: 1.02 1.02 1.02 1.02 1.02 1.02 1.02 1.02 1.02 1.02 1.02 1.02
Initial Bse: 26 0 69 0 0 0 0 438 43 121 541 0
Added Vol: 0 0 -7 0 0 0 0 53 0 -6 71 0
Cm2,3,17,18: 0 0 0 0 0 0 0 17 0 0 -1 0
Initial Fut: 26 0 62 0 0 0 0 508 43 115 611 0
User Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
PHF Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
PHF Volume: 26 0 62 0 0 0 0 508 43 115 611 0
Reduct Vol: 0 0 0 0 0 0 0 0 0 0 0 0
Reduced Vol: 26 0 62 0 0 0 0 508 43 115 611 0
PCE Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
MLF Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
FinalVolume: 26 0 62 0 0 0 0 508 43 115 611 0

Saturation Flow Module:

Sat/Lane: 1700 1700 1700 1700 1700 1700 1700 1700 1700 1700 1700 1700
Adjustment: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
Lanes: 1.00 0.00 1.00 0.00 0.00 0.00 0.00 1.84 0.16 1.00 2.00 0.00
Final Sat.: 1700 0 1700 0 0 0 0 3134 266 1700 3400 0

Capacity Analysis Module:

Vol/Sat: 0.02 0.00 0.04 0.00 0.00 0.00 0.00 0.16 0.16 0.07 0.18 0.00
Crit Moves: ****

Level Of Service Computation Report

ICU 1(Loss as Cycle Length %) Method (Future Volume Alternative)

Intersection #3 Golden Lantern/PCH

Cycle (sec): 100 Critical Vol./Cap.(X): 0.886
Loss Time (sec): 5 Average Delay (sec/veh): xxxxxx
Optimal Cycle: 79 Level Of Service: D

Street Name: Golden Lantern PCH

Approach: North Bound South Bound East Bound West Bound

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

Control: Protected Protected Protected Protected

Rights: Include Include Include Include

Min. Green: 0 0 0 0 0 0 0 0 0 0 0 0

Y+R: 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0

Lanes: 1 0 1 1 0 2 0 1 0 1 1 0 1 1 0 1 0 1 1 0

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Volume Module:

Base Vol: 204 498 70 451 492 149 83 735 46 61 760 200

Growth Adj: 1.02 1.02 1.02 1.02 1.02 1.02 1.02 1.02 1.02 1.02 1.02 1.02

Initial Bse: 209 510 72 462 504 153 85 753 47 63 779 205

Added Vol: 6 2 0 11 3 52 45 74 9 7 83 16

Cm2,3,17,18: 5 9 0 0 11 0 0 30 0 0 23 0

Initial Fut: 220 521 72 473 518 205 130 857 56 70 885 221

User Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00

PHF Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00

PHF Volume: 220 521 72 473 518 205 130 857 56 70 885 221

Reduct Vol: 0 0 0 0 0 0 0 0 0 0 0 0

Reduced Vol: 220 521 72 473 518 205 130 857 56 70 885 221

PCE Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00

MLF Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00

FinalVolume: 220 521 72 473 518 205 130 857 56 70 885 221

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Saturation Flow Module:

Sat/Lane: 1700 1700 1700 1700 1700 1700 1700 1700 1700 1700 1700 1700

Adjustment: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00

Lanes: 1.00 1.76 0.24 2.00 1.00 1.00 1.00 1.88 0.12 1.00 1.60 0.40

Final Sat.: 1700 2989 411 3400 1700 1700 1700 3191 209 1700 2721 679

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Capacity Analysis Module:

Vol/Sat: 0.13 0.17 0.17 0.14 0.30 0.12 0.08 0.27 0.27 0.04 0.33 0.33

Crit Moves: **** **** **** ****

Level Of Service Computation Report

ICU 1(Loss as Cycle Length %) Method (Future Volume Alternative)

Intersection #4 Golden Lantern/Del Prado Avenue

Cycle (sec): 100 Critical Vol./Cap.(X): 0.486
 Loss Time (sec): 5 Average Delay (sec/veh): xxxxxx
 Optimal Cycle: 23 Level Of Service: A

Street Name: Golden Lantern Del Prado Avenue

Approach: North Bound South Bound East Bound West Bound

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

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Control: Protected Protected Prot+Permit Prot+Permit

Rights: Include Include Include Include

Min. Green: 0 0 0 0 0 0 0 0 0 0 0 0

Y+R: 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0

Lanes: 1 0 1 1 0 1 0 2 0 1 1 0 1 0 1 0 1

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Volume Module:

Base Vol: 79 418 69 227 341 123 51 114 85 26 101 28

Growth Adj: 1.02 1.02 1.02 1.02 1.02 1.02 1.02 1.02 1.02 1.02 1.02 1.02

Initial Bse: 81 428 71 233 350 126 52 117 87 27 104 29

Added Vol: 6 9 0 0 19 0 0 0 9 0 0 0

Cm2,3,17,18: 0 14 0 0 0 0 0 0 7 0 0 0

Initial Fut: 87 451 71 233 369 126 52 117 103 27 104 29

User Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00

PHF Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00

PHF Volume: 87 451 71 233 369 126 52 117 103 27 104 29

Reduct Vol: 0 0 0 0 0 0 0 0 0 0 0 0

Reduced Vol: 87 451 71 233 369 126 52 117 103 27 104 29

PCE Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00

MLF Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00

FinalVolume: 87 451 71 233 369 126 52 117 103 27 104 29

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Saturation Flow Module:

Sat/Lane: 1700 1700 1700 1700 1700 1700 1700 1700 1700 1700 1700 1700

Adjustment: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00

Lanes: 1.00 1.73 0.27 1.00 2.00 1.00 1.00 0.53 0.47 1.00 1.00 1.00

Final Sat.: 1700 2939 461 1700 3400 1700 1700 903 797 1700 1700 1700

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Capacity Analysis Module:

Vol/Sat: 0.05 0.15 0.15 0.14 0.11 0.07 0.03 0.13 0.13 0.02 0.06 0.02

Crit Moves: **** **** **** ****

Level Of Service Computation Report

ICU 1(Loss as Cycle Length %) Method (Future Volume Alternative)

Intersection #5 Golden Lantern/Dana Point Harbor Drive

Cycle (sec): 100 Critical Vol./Cap.(X): 0.766
Loss Time (sec): 5 Average Delay (sec/veh): xxxxxx
Optimal Cycle: 46 Level Of Service: C

Street Name: Golden Lantern Dana Point Harbor Drive
Approach: North Bound South Bound East Bound West Bound
Movement: L - T - R L - T - R L - T - R L - T - R

Control: Protected Protected Protected Protected
Rights: Include Include Include Include
Min. Green: 0 0 0 0 0 0 0 0 0 0 0 0
Y+R: 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0
Lanes: 1 0 1 1 0 1 0 1 1 0 1 0 1 1 0

Volume Module:

Base Vol: 77 288 185 199 175 119 146 300 35 356 405 102
Growth Adj: 1.02 1.02 1.02 1.02 1.02 1.02 1.02 1.02 1.02 1.02 1.02 1.02
Initial Bse: 79 295 190 204 179 122 150 308 36 365 415 105
Added Vol: 0 0 0 0 0 28 16 30 0 0 36 0
Cm2,3,17,18: 0 12 111 11 7 0 0 0 0 147 0 9
Initial Fut: 79 307 301 215 186 150 166 338 36 512 451 114
User Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
PHF Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
PHF Volume: 79 307 301 215 186 150 166 338 36 512 451 114
Reduct Vol: 0 0 0 0 0 0 0 0 0 0 0 0
Reduced Vol: 79 307 301 215 186 150 166 338 36 512 451 114
PCE Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
MLF Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
FinalVolume: 79 307 301 215 186 150 166 338 36 512 451 114

Saturation Flow Module:

Sat/Lane: 1700 1700 1700 1700 1700 1700 1700 1700 1700 1700 1700 1700
Adjustment: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
Lanes: 1.00 1.01 0.99 1.00 1.11 0.89 1.00 1.81 0.19 1.00 1.60 0.40
Final Sat.: 1700 1718 1682 1700 1884 1516 1700 3073 327 1700 2716 684

Capacity Analysis Module:

Vol/Sat: 0.05 0.18 0.18 0.13 0.10 0.10 0.10 0.11 0.11 0.30 0.17 0.17
Crit Moves: ****

Level Of Service Computation Report

ICU 1(Loss as Cycle Length %) Method (Future Volume Alternative)

Intersection #6 Puerto Place/Dana Point Harbor Drive

Cycle (sec): 100 Critical Vol./Cap.(X): 0.425
Loss Time (sec): 5 Average Delay (sec/veh): xxxxxx
Optimal Cycle: 21 Level Of Service: A

Street Name: Puerto Place Dana Point Harbor Drive
Approach: North Bound South Bound East Bound West Bound
Movement: L - T - R L - T - R L - T - R L - T - R

Control: Protected Protected Protected Protected
Rights: Include Include Include Include
Min. Green: 0 0 0 0 0 0 0 0 0 0 0 0
Y+R: 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0
Lanes: 1 0 0 0 1 0 0 0 0 0 0 0 2 0 1 1 0 2 0 0

Volume Module:

Base Vol: 34 0 77 0 0 0 0 313 46 75 766 0
Growth Adj: 1.02 1.02 1.02 1.02 1.02 1.02 1.02 1.02 1.02 1.02 1.02 1.02
Initial Bse: 35 0 79 0 0 0 0 321 47 77 785 0
Added Vol: 0 0 0 0 0 0 0 30 0 0 36 0
Cm2,3,17,18: 9 0 83 0 0 0 0 102 11 103 130 0
Initial Fut: 44 0 162 0 0 0 0 453 58 180 951 0
User Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
PHF Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
PHF Volume: 44 0 162 0 0 0 0 453 58 180 951 0
Reduct Vol: 0 0 0 0 0 0 0 0 0 0 0 0
Reduced Vol: 44 0 162 0 0 0 0 453 58 180 951 0
PCE Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
MLF Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
FinalVolume: 44 0 162 0 0 0 0 453 58 180 951 0

Saturation Flow Module:

Sat/Lane: 1700 1700 1700 1700 1700 1700 1700 1700 1700 1700 1700 1700
Adjustment: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
Lanes: 1.00 0.00 1.00 0.00 0.00 0.00 0.00 2.00 1.00 1.00 2.00 0.00
Final Sat.: 1700 0 1700 0 0 0 0 3400 1700 1700 3400 0

Capacity Analysis Module:

Vol/Sat: 0.03 0.00 0.10 0.00 0.00 0.00 0.00 0.13 0.03 0.11 0.28 0.00
Crit Moves: ****

Level Of Service Computation Report

ICU 1(Loss as Cycle Length %) Method (Future Volume Alternative)

Intersection #7 Dana Point Harbor Drive/Park Lantern

Cycle (sec): 100 Critical Vol./Cap.(X): 0.351
Loss Time (sec): 5 Average Delay (sec/veh): xxxxxx
Optimal Cycle: 19 Level Of Service: A

Street Name: Dana Point Harbor Drive Park Landtern

Approach: North Bound South Bound East Bound West Bound

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

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Control: Protected Protected Permitted Permitted

Rights: Include Include Include Include

Min. Green: 0 0 0 0 0 0 0 0 0 0 0 0

Y+R: 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0

Lanes: 1 0 2 0 1 1 0 1 1 0 0 0 1 0 1 0

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Volume Module:

Base Vol: 5 474 37 88 517 39 15 0 13 22 0 32

Growth Adj: 1.02 1.02 1.02 1.02 1.02 1.02 1.02 1.02 1.02 1.02 1.02 1.02

Initial Bse: 5 486 38 90 530 40 15 0 13 23 0 33

Added Vol: 0 25 5 11 29 0 0 0 0 7 0 11

Cm2,3,17,18: 0 193 0 0 242 0 0 0 0 0 0 0

Initial Fut: 5 704 43 101 801 40 15 0 13 30 0 44

User Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00

PHF Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00

PHF Volume: 5 704 43 101 801 40 15 0 13 30 0 44

Reduct Vol: 0 0 0 0 0 0 0 0 0 0 0 0

Reduced Vol: 5 704 43 101 801 40 15 0 13 30 0 44

PCE Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00

MLF Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00

FinalVolume: 5 704 43 101 801 40 15 0 13 30 0 44

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Saturation Flow Module:

Sat/Lane: 1700 1700 1700 1700 1700 1700 1700 1700 1700 1700 1700 1700

Adjustment: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00

Lanes: 1.00 2.00 1.00 1.00 1.90 0.10 0.54 0.00 0.46 1.00 0.00 1.00

Final Sat.: 1700 3400 1700 1700 3238 162 911 0 789 1700 0 1700

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Capacity Analysis Module:

Vol/Sat: 0.00 0.21 0.03 0.06 0.25 0.25 0.01 0.00 0.02 0.02 0.00 0.03

Crit Moves: **** **** **** ****

Level Of Service Computation Report

ICU 1(Loss as Cycle Length %) Method (Future Volume Alternative)

Intersection #8 Del Obispo Street-Dana Point Harbor Drive/PCH

Cycle (sec): 100 Critical Vol./Cap.(X): 0.657
Loss Time (sec): 5 Average Delay (sec/veh): xxxxxx
Optimal Cycle: 33 Level Of Service: B

Street Name:Del Obispo Street-Dana Point Harb PCH

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

Control: Protected Protected Protected Protected
Rights: Ovl Include Include Include
Min. Green: 0 0 0 0 0 0 0 0 0 0 0 0
Y+R: 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0
Lanes: 1 0 1 0 2 2 0 1 0 1 1 0 2 1 0

Volume Module:

Base Vol: 51 123 427 244 72 154 140 967 93 382 1207 241
Growth Adj: 1.02 1.02 1.02 1.02 1.02 1.02 1.02 1.02 1.02 1.02 1.02 1.02
Initial Bse: 52 126 438 250 74 158 144 991 95 392 1237 247
Added Vol: 0 9 27 16 7 15 17 68 0 34 91 34
Cm2,3,17,18: 0 29 162 8 11 23 30 0 0 231 0 14
Initial Fut: 52 164 627 274 92 196 191 1059 95 657 1328 295
User Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
PHF Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
PHF Volume: 52 164 627 274 92 196 191 1059 95 657 1328 295
Reduct Vol: 0 0 0 0 0 0 0 0 0 0 0 0
Reduced Vol: 52 164 627 274 92 196 191 1059 95 657 1328 295
PCE Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
MLF Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
FinalVolume: 52 164 627 274 92 196 191 1059 95 657 1328 295
OvlAdjVol: 0

Saturation Flow Module:

Sat/Lane: 1700 1700 1700 1700 1700 1700 1700 1700 1700 1700 1700 1700
Adjustment: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
Lanes: 1.00 1.00 2.00 2.00 1.00 1.00 1.00 2.75 0.25 2.00 2.45 0.55
Final Sat.: 1700 1700 3400 3400 1700 1700 1700 4679 421 3400 4173 927

Capacity Analysis Module:

Vol/Sat: 0.03 0.10 0.18 0.08 0.05 0.12 0.11 0.23 0.23 0.19 0.32 0.32
OvlAdjV/S: 0.00
Crit Moves: **** *

Level Of Service Computation Report

ICU 1(Loss as Cycle Length %) Method (Future Volume Alternative)

Intersection #9 Del Opisobo Street/Stonehill Drive

Cycle (sec): 100 Critical Vol./Cap.(X): 0.780
 Loss Time (sec): 5 Average Delay (sec/veh): xxxxxx
 Optimal Cycle: 48 Level Of Service: C

Street Name: Del Opisobo Street Stonehill Drive

Approach: North Bound South Bound East Bound West Bound

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

Control:	Protected			Protected			Protected			Protected						
Rights:	Include			Include			Include			Include						
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0				
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0				
Lanes:	1	0	1	1	0	1	1	0	2	0	1	1	0	2	0	1

Volume Module:

Base Vol:	144	305	178	245	303	91	115	817	110	128	555	249
Growth Adj:	1.02	1.02	1.02	1.02	1.02	1.02	1.02	1.02	1.02	1.02	1.02	1.02
Initial Bse:	148	313	182	251	311	93	118	837	113	131	569	255
Added Vol:	0	58	3	65	36	0	0	2	1	1	0	54
Cm2,3,17,18:	3	11	43	5	14	0	0	65	5	30	79	5
Initial Fut:	151	382	228	321	361	93	118	904	119	162	648	314
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	151	382	228	321	361	93	118	904	119	162	648	314
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	151	382	228	321	361	93	118	904	119	162	648	314
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Final Volume:	151	382	228	321	361	93	118	904	119	162	648	314

Saturation Flow Module:

Sat/Lane:	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700
Adjustment:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Lanes:	1.00	1.25	0.75	1.00	1.59	0.41	1.00	2.00	1.00	1.00	2.00	1.00
Final Sat.:	1700	2127	1273	1700	2701	699	1700	3400	1700	1700	3400	1700

Capacity Analysis Module:

Vol/Sat:	0.09	0.18	0.18	0.19	0.13	0.13	0.07	0.27	0.07	0.10	0.19	0.18
Crit Moves:	****			****			****			****		

Level Of Service Computation Report

ICU 1(Loss as Cycle Length %) Method (Future Volume Alternative)

Intersection #9 Del Opisobo Street/Stonehill Drive

Cycle (sec): 100 Critical Vol./Cap.(X): 0.714
Loss Time (sec): 5 Average Delay (sec/veh): xxxxxx
Optimal Cycle: 39 Level Of Service: C

Table with columns for Street Name (Del Opisobo Street, Stonehill Drive), Approach (North Bound, South Bound, East Bound, West Bound), Movement (L, T, R), Control, Rights, Min. Green, Y+R, and Lanes.

Volume Module table with columns for various volume metrics (Base Vol, Growth Adj, Initial Bse, Added Vol, Cm2,3,17,18, Initial Fut, User Adj, PHF Adj, PHF Volume, Reduct Vol, Reduced Vol, PCE Adj, MLF Adj, FinalVolume) and values for four approaches.

Saturation Flow Module table with columns for Sat/Lane, Adjustment, Lanes, and Final Sat. values for four approaches.

Capacity Analysis Module table with columns for Vol/Sat and Crit Moves values for four approaches.

Level Of Service Computation Report

ICU 1(Loss as Cycle Length %) Method (Future Volume Alternative)

Intersection #10 Camino Capistrano/Stonehill Drive

Cycle (sec): 100 Critical Vol./Cap.(X): 0.837
Loss Time (sec): 5 Average Delay (sec/veh): xxxxxx
Optimal Cycle: 61 Level Of Service: D

Street Name: Camino Capistrano Stonehill Drive

Approach: North Bound South Bound East Bound West Bound

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

Control: Split Phase Split Phase Split Phase Split Phase

Rights: Include Ovl Include Include

Min. Green: 0 0 0 0 0 0 0 0 0 0 0 0

Y+R: 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0

Lanes: 1 1 0 0 1 1 0 2 0 2 1 0 2 0 0 0 0

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Volume Module:

Base Vol: 385 263 288 69 593 562 188 656 413 0 0 0

Growth Adj: 1.02 1.02 1.02 1.02 1.02 1.02 1.02 1.02 1.02 1.02 1.02 1.02

Initial Bse: 395 270 295 71 608 576 193 672 423 0 0 0

Added Vol: 53 0 30 0 0 0 0 20 50 0 0 0

Cm2,3,17,18: 153 -23 -98 0 -88 216 65 192 181 0 0 0

Initial Fut: 601 247 227 71 520 792 258 884 654 0 0 0

User Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00

PHF Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00

PHF Volume: 601 247 227 71 520 792 258 884 654 0 0 0

Reduct Vol: 0 0 0 0 0 0 0 0 0 0 0 0

Reduced Vol: 601 247 227 71 520 792 258 884 654 0 0 0

PCE Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00

MLF Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00

FinalVolume: 601 247 227 71 520 792 258 884 654 0 0 0

OvlAdjVol: 0

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Saturation Flow Module:

Sat/Lane: 1700 1700 1700 1700 1700 1700 1700 1700 1700 1700 1700 1700

Adjustment: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00

Lanes: 1.42 0.58 1.00 1.00 2.00 2.00 1.00 2.00 1.00 0.00 0.00 0.00

Final Sat.: 2410 990 1700 1700 3400 3400 1700 3400 1700 0 0 0

-----|-----|-----|-----|-----|-----|-----|

Capacity Analysis Module:

Vol/Sat: 0.25 0.25 0.13 0.04 0.15 0.23 0.15 0.26 0.38 0.00 0.00 0.00

OvlAdjV/S: 0.00

Crit Moves: **** **** ****

HCM 6th Signalized Intersection Summary
 10: Camino Capistrano & Stonehill Drive/I-5 NB Ramp

02/19/2021



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	258	884	654	0	0	0	601	247	227	71	520	792
Future Volume (veh/h)	258	884	654	0	0	0	601	247	227	71	520	792
Initial Q (Qb), veh	0	0	0				0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00				1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00				1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No					No			No		
Adj Sat Flow, veh/h/ln	1870	1870	1870				1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	272	931	0				446	521	239	75	547	834
Peak Hour Factor	0.95	0.95	0.95				0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	2	2	2				2	2	2	2	2	2
Cap, veh/h	516	1030					560	588	498	403	804	1439
Arrive On Green	0.29	0.29	0.00				0.31	0.31	0.31	0.23	0.23	0.23
Sat Flow, veh/h	1781	3554	1585				1781	1870	1585	1781	3554	2790
Grp Volume(v), veh/h	272	931	0				446	521	239	75	547	834
Grp Sat Flow(s),veh/h/ln	1781	1777	1585				1781	1870	1585	1781	1777	1395
Q Serve(g_s), s	10.2	20.1	0.0				18.2	21.1	9.7	2.7	11.2	16.4
Cycle Q Clear(g_c), s	10.2	20.1	0.0				18.2	21.1	9.7	2.7	11.2	16.4
Prop In Lane	1.00		1.00				1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	516	1030					560	588	498	403	804	1439
V/C Ratio(X)	0.53	0.90					0.80	0.89	0.48	0.19	0.68	0.58
Avail Cap(c_a), veh/h	526	1050					560	588	498	403	804	1439
HCM Platoon Ratio	1.00	1.00	1.00				1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	0.00				1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	23.7	27.2	0.0				24.9	25.9	22.0	24.9	28.1	13.3
Incr Delay (d2), s/veh	0.9	10.9	0.0				11.2	17.7	3.3	1.0	4.6	1.7
Initial Q Delay(d3),s/veh	0.0	0.0	0.0				0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	4.3	9.6	0.0				9.0	11.8	3.9	1.2	5.1	8.3
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	24.6	38.0	0.0				36.2	43.7	25.3	25.9	32.8	15.0
LnGrp LOS	C	D					D	D	C	C	C	B
Approach Vol, veh/h		1203	A				1206				1456	
Approach Delay, s/veh		35.0					37.2				22.2	
Approach LOS		D					D				C	
Timer - Assigned Phs		2		4			6					
Phs Duration (G+Y+Rc), s		29.5		27.5			22.5					
Change Period (Y+Rc), s		4.5		4.5			4.5					
Max Green Setting (Gmax), s		25.0		23.5			18.0					
Max Q Clear Time (g_c+I1), s		23.1		22.1			18.4					
Green Ext Time (p_c), s		1.2		1.0			0.0					

Intersection Summary

HCM 6th Ctrl Delay	30.9
HCM 6th LOS	C

Notes

- User approved volume balancing among the lanes for turning movement.
- User approved changes to right turn type.
- Unsignalized Delay for [EBR] is excluded from calculations of the approach delay and intersection delay.

Level Of Service Computation Report

ICU 1(Loss as Cycle Length %) Method (Future Volume Alternative)

Intersection #11 I-5 SB Ramps/Camino Las Ramblas

Cycle (sec): 100 Critical Vol./Cap.(X): 0.305
 Loss Time (sec): 5 Average Delay (sec/veh): xxxxxx
 Optimal Cycle: 17 Level Of Service: A

Street Name: I-5 SB Ramps Camino Las Ramblas
 Approach: North Bound South Bound East Bound West Bound
 Movement: L - T - R L - T - R L - T - R L - T - R

Control:	Protected			Protected			Protected			Protected		
Rights:	Include			Ignore			Ignore			Ignore		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	0	0	0	2	0	0	0	0	2	0	0	1

Volume Module:

Base Vol:	0	0	0	182	0	577	0	500	1151	0	113	109
Growth Adj:	1.02	1.02	1.02	1.02	1.02	1.02	1.02	1.02	1.02	1.02	1.02	1.02
Initial Bse:	0	0	0	187	0	591	0	513	1180	0	116	112
Added Vol:	0	0	0	0	0	90	0	29	78	0	89	0
Cm2,3,17,18:	0	0	0	0	0	50	0	138	0	0	24	0
Initial Fut:	0	0	0	187	0	731	0	680	1258	0	229	112
User Adj:	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00	1.00	0.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00	1.00	0.00
PHF Volume:	0	0	0	187	0	0	0	680	0	0	229	0
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	0	0	0	187	0	0	0	680	0	0	229	0
PCE Adj:	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00	1.00	0.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00	1.00	0.00
Final Volume:	0	0	0	187	0	0	0	680	0	0	229	0

Saturation Flow Module:

Sat/Lane:	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700
Adjustment:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Lanes:	0.00	0.00	0.00	2.00	0.00	1.00	0.00	2.00	1.00	0.00	1.00	1.00
Final Sat.:	0	0	0	3400	0	1700	0	3400	1700	0	1700	1700

Capacity Analysis Module:

Vol/Sat:	0.00	0.00	0.00	0.05	0.00	0.00	0.00	0.20	0.00	0.00	0.13	0.00
Crit Moves:				****				****		****		

Level Of Service Computation Report

ICU 1(Loss as Cycle Length %) Method (Future Volume Alternative)

Intersection #12 I-5 NB Ramps/Camino Las Ramblas

Cycle (sec): 100 Critical Vol./Cap.(X): 0.257
Loss Time (sec): 5 Average Delay (sec/veh): xxxxxx
Optimal Cycle: 16 Level Of Service: A

Street Name: I-5 NB Ramps Camino Las Ramblas
Approach: North Bound South Bound East Bound West Bound
Movement: L - T - R L - T - R L - T - R L - T - R

Control: Permitted Permitted Permitted Permitted
Rights: Include Include Ignore Include
Min. Green: 0 0 0 0 0 0 0 0 0 0 0 0
Y+R: 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0
Lanes: 0 1 0 0 1 1 0 0 0 1 1 0 0 2 0 1 0 0 2 1 0

Volume Module:

Base Vol: 6 21 97 6 0 55 41 321 423 0 389 5
Growth Adj: 1.02 1.02 1.02 1.02 1.02 1.02 1.02 1.02 1.02 1.02 1.02 1.02
Initial Bse: 6 22 99 6 0 56 42 329 434 0 399 5
Added Vol: 89 0 0 0 0 0 0 0 29 0 1 0
Cm2,3,17,18: 24 0 0 0 0 0 0 0 138 0 0 0
Initial Fut: 119 22 99 6 0 56 42 329 601 0 400 5
User Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 0.00 1.00 1.00 1.00
PHF Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 0.00 1.00 1.00 1.00
PHF Volume: 119 22 99 6 0 56 42 329 0 0 400 5
Reduct Vol: 0 0 0 0 0 0 0 0 0 0 0 0
Reduced Vol: 119 22 99 6 0 56 42 329 0 0 400 5
PCE Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 0.00 1.00 1.00 1.00
MLF Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 0.00 1.00 1.00 1.00
FinalVolume: 119 22 99 6 0 56 42 329 0 0 400 5

Saturation Flow Module:

Sat/Lane: 1700 1700 1700 1700 1700 1700 1700 1700 1700 1700 1700 1700
Adjustment: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
Lanes: 0.85 0.15 1.00 1.00 0.00 1.00 1.00 2.00 1.00 0.00 2.96 0.04
Final Sat.: 1440 260 1700 1700 0 1700 1700 3400 1700 0 5035 65





















Capacity Analysis Module:

Vol/Sat: 0.07 0.08 0.06 0.00 0.00 0.03 0.02 0.10 0.00 0.00 0.08 0.08
Crit Moves: ****

HCM Signalized Intersection Capacity Analysis

12: I-5 NB Ramps & Camino Las Ramblas

02/19/2021

													
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR	
Lane Configurations													
Traffic Volume (vph)	42	329	601	0	400	5	119	22	99	6	0	56	
Future Volume (vph)	42	329	601	0	400	5	119	22	99	6	0	56	
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	
Lane Util. Factor	1.00	0.95	1.00		0.91			1.00	1.00	1.00		1.00	
Frt	1.00	1.00	0.85		1.00			1.00	0.85	1.00		0.85	
Flt Protected	0.95	1.00	1.00		1.00			0.96	1.00	0.95		1.00	
Satd. Flow (prot)	1770	3539	1583		5076			1787	1583	1770		1583	
Flt Permitted	0.49	1.00	1.00		1.00			0.96	1.00	0.66		1.00	
Satd. Flow (perm)	921	3539	1583		5076			1787	1583	1235		1583	
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	
Adj. Flow (vph)	44	346	633	0	421	5	125	23	104	6	0	59	
RTOR Reduction (vph)	0	0	0	0	3	0	0	0	52	0	0	30	
Lane Group Flow (vph)	44	346	633	0	423	0	0	148	52	6	0	29	
Turn Type	Perm	NA	Free		NA		Perm	NA	Perm	Perm		Perm	
Protected Phases		4			8			2					
Permitted Phases	4		Free				2		2	6		6	
Actuated Green, G (s)	9.2	9.2	36.3		9.2			18.1	18.1	18.1		18.1	
Effective Green, g (s)	9.2	9.2	36.3		9.2			18.1	18.1	18.1		18.1	
Actuated g/C Ratio	0.25	0.25	1.00		0.25			0.50	0.50	0.50		0.50	
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)	233	896	1583		1286			891	789	615		789	
v/s Ratio Prot		0.10			0.08								
v/s Ratio Perm	0.05		c0.40					0.08	0.03	0.00		0.02	
v/c Ratio	0.19	0.39	0.40		0.33			0.17	0.07	0.01		0.04	
Uniform Delay, d1	10.6	11.2	0.0		11.0			5.0	4.7	4.6		4.6	
Progression Factor	1.00	1.00	1.00		1.00			1.00	1.00	1.00		1.00	
Incremental Delay, d2	0.4	0.3	0.8		0.2			0.4	0.2	0.0		0.1	
Delay (s)	11.0	11.5	0.8		11.2			5.4	4.9	4.6		4.7	
Level of Service	B	B	A		B			A	A	A		A	
Approach Delay (s)		4.8			11.2			5.2			4.7		
Approach LOS		A			B			A			A		
Intersection Summary													
HCM 2000 Control Delay			6.4									HCM 2000 Level of Service	A
HCM 2000 Volume to Capacity ratio			0.53										
Actuated Cycle Length (s)			36.3									Sum of lost time (s)	9.0
Intersection Capacity Utilization			37.7%									ICU Level of Service	A
Analysis Period (min)			15										



















c Critical Lane Group

APPENDIX F

QUEUEING WORKSHEETS

Lanes, Volumes, Timings
 2: Casitas Place & Dana Point Harbor Dr

02/19/2021

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	0	251	20	51	313	0	4	0	23	0	0	0
Future Volume (vph)	0	251	20	51	313	0	4	0	23	0	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0		225	180		0	0		0	0		0
Storage Lanes	0		1	1		0	1		1	0		0
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	1.00	1.00	1.00	0.95	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt			0.850						0.850			
Flt Protected				0.950			0.950					
Satd. Flow (prot)	0	1863	1583	1770	3539	0	1770	0	1583	0	0	0
Flt Permitted				0.351			0.950					
Satd. Flow (perm)	0	1863	1583	654	3539	0	1770	0	1583	0	0	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			109						109			
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		850			313			237			171	
Travel Time (s)		19.3			7.1			5.4			3.9	
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	0	264	21	54	329	0	4	0	24	0	0	0
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	264	21	54	329	0	4	0	24	0	0	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway 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
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors		2	1	1	2		1		1			
Detector Template		Thru	Right	Left	Thru		Left		Right			
Leading Detector (ft)		100	20	20	100		20		20			
Trailing Detector (ft)		0	0	0	0		0		0			
Detector 1 Position(ft)		0	0	0	0		0		0			
Detector 1 Size(ft)		6	20	20	6		20		20			
Detector 1 Type		Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex		Cl+Ex		Cl+Ex			
Detector 1 Channel												
Detector 1 Extend (s)		0.0	0.0	0.0	0.0		0.0		0.0			
Detector 1 Queue (s)		0.0	0.0	0.0	0.0		0.0		0.0			
Detector 1 Delay (s)		0.0	0.0	0.0	0.0		0.0		0.0			
Detector 2 Position(ft)		94			94							
Detector 2 Size(ft)		6			6							
Detector 2 Type		Cl+Ex			Cl+Ex							
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0							
Turn Type		NA	Perm	pm+pt	NA		Perm		Perm			
Protected Phases		4		3		8						
Permitted Phases			4		8		2		2			

Lanes, Volumes, Timings
 2: Casitas Place & Dana Point Harbor Dr

02/19/2021

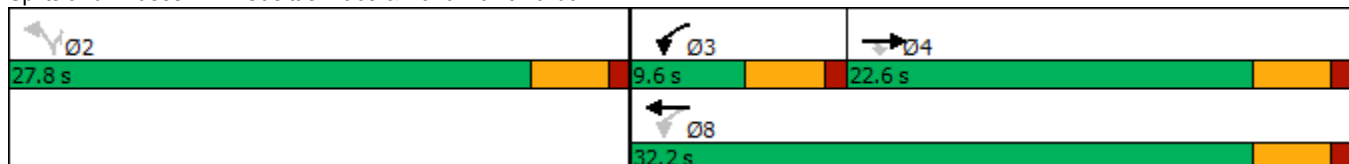


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Detector Phase		4	4	3	8		2		2			
Switch Phase												
Minimum Initial (s)		5.0	5.0	5.0	5.0		5.0		5.0			
Minimum Split (s)		22.5	22.5	9.5	22.5		22.5		22.5			
Total Split (s)		22.6	22.6	9.6	32.2		27.8		27.8			
Total Split (%)		37.7%	37.7%	16.0%	53.7%		46.3%		46.3%			
Maximum Green (s)		18.1	18.1	5.1	27.7		23.3		23.3			
Yellow Time (s)		3.5	3.5	3.5	3.5		3.5		3.5			
All-Red Time (s)		1.0	1.0	1.0	1.0		1.0		1.0			
Lost Time Adjust (s)		0.0	0.0	0.0	0.0		0.0		0.0			
Total Lost Time (s)		4.5	4.5	4.5	4.5		4.5		4.5			
Lead/Lag		Lag	Lag	Lead								
Lead-Lag Optimize?		Yes	Yes	Yes								
Vehicle Extension (s)		3.0	3.0	3.0	3.0		3.0		3.0			
Recall Mode		None	None	None	None		Max		Max			
Walk Time (s)		7.0	7.0		7.0		7.0		7.0			
Flash Dont Walk (s)		11.0	11.0		11.0		11.0		11.0			
Pedestrian Calls (#/hr)		0	0		0		0		0			
Act Effct Green (s)		12.3	12.3	17.5	17.5		24.0		24.0			
Actuated g/C Ratio		0.24	0.24	0.35	0.35		0.47		0.47			
v/c Ratio		0.58	0.04	0.16	0.27		0.00		0.03			
Control Delay		23.2	0.2	10.7	11.5		10.8		0.1			
Queue Delay		0.0	0.0	0.0	0.0		0.0		0.0			
Total Delay		23.2	0.2	10.7	11.5		10.8		0.1			
LOS		C	A	B	B		B		A			
Approach Delay		21.5			11.4			1.6				
Approach LOS		C			B			A				

Intersection Summary

Area Type:	Other
Cycle Length:	60
Actuated Cycle Length:	50.7
Natural Cycle:	55
Control Type:	Actuated-Uncoordinated
Maximum v/c Ratio:	0.58
Intersection Signal Delay:	15.2
Intersection LOS:	B
Intersection Capacity Utilization:	31.5%
ICU Level of Service:	A
Analysis Period (min):	15

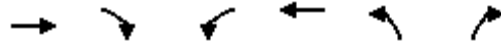
Splits and Phases: 2: Casitas Place & Dana Point Harbor Dr



Queues

2: Casitas Place & Dana Point Harbor Dr

02/19/2021



Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Group Flow (vph)	264	21	54	329	4	24
v/c Ratio	0.58	0.04	0.16	0.27	0.00	0.03
Control Delay	23.2	0.2	10.7	11.5	10.8	0.1
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	23.2	0.2	10.7	11.5	10.8	0.1
Queue Length 50th (ft)	77	0	10	34	1	0
Queue Length 95th (ft)	137	0	26	56	6	0
Internal Link Dist (ft)	770			233		
Turn Bay Length (ft)	225		180			
Base Capacity (vph)	684	650	340	1990	837	806
Starvation Cap Reductn	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.39	0.03	0.16	0.17	0.00	0.03

Intersection Summary

Level Of Service Computation Report

ICU 1(Loss as Cycle Length %) Method (Future Volume Alternative)

Intersection #2 Casitas Place/Dana Point Harbor Drive

Cycle (sec): 100 Critical Vol./Cap.(X): 0.173
Loss Time (sec): 5 Average Delay (sec/veh): xxxxxx
Optimal Cycle: 15 Level Of Service: A

Street Name: Casitas Place Dana Point Harbor Drive
Approach: North Bound South Bound East Bound West Bound
Movement: L - T - R L - T - R L - T - R L - T - R
Control: Protected Protected Protected Protected
Rights: Include Include Include Include
Min. Green: 0 0 0 0 0 0 0 0 0 0 0 0
Y+R: 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0
Lanes: 1 0 0 0 1 0 0 0 0 0 0 0 1 1 0 1 0 2 0 0













Volume Module:
Base Vol: 4 0 27 0 0 0 0 216 20 57 263 0
Growth Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
Initial Bse: 4 0 27 0 0 0 0 216 20 57 263 0
Added Vol: 0 0 -4 0 0 0 0 35 0 -6 50 0
PasserByVol: 0 0 0 0 0 0 0 0 0 0 0 0
Initial Fut: 4 0 23 0 0 0 0 251 20 51 313 0
User Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
PHF Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
PHF Volume: 4 0 23 0 0 0 0 251 20 51 313 0
Reduct Vol: 0 0 0 0 0 0 0 0 0 0 0 0
Reduced Vol: 4 0 23 0 0 0 0 251 20 51 313 0
PCE Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
MLF Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
FinalVolume: 4 0 23 0 0 0 0 251 20 51 313 0

Saturation Flow Module:
Sat/Lane: 1700 1700 1700 1700 1700 1700 1700 1700 1700 1700 1700 1700
Adjustment: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
Lanes: 1.00 0.00 1.00 0.00 0.00 0.00 0.00 1.85 0.15 1.00 2.00 0.00
Final Sat.: 1700 0 1700 0 0 0 0 3149 251 1700 3400 0

Capacity Analysis Module:
Vol/Sat: 0.00 0.00 0.01 0.00 0.00 0.00 0.00 0.08 0.08 0.03 0.09 0.00
Crit Moves: **** **** ****

Lanes, Volumes, Timings
2: Casitas Place & Dana Point Harbor Dr

02/19/2021

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↑	↗	↖	↑↑		↖		↗			
Traffic Volume (vph)	0	251	20	51	313	0	4	0	23	0	0	0
Future Volume (vph)	0	251	20	51	313	0	4	0	23	0	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0		225	180		0	0		0	0		0
Storage Lanes	0		1	1		0	1		1	0		0
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	1.00	1.00	1.00	0.95	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt			0.850						0.850			
Flt Protected				0.950			0.950					
Satd. Flow (prot)	0	1863	1583	1770	3539	0	1770	0	1583	0	0	0
Flt Permitted				0.950			0.950					
Satd. Flow (perm)	0	1863	1583	1770	3539	0	1770	0	1583	0	0	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			109						109			
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		850			313			237			171	
Travel Time (s)		19.3			7.1			5.4			3.9	
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	0	264	21	54	329	0	4	0	24	0	0	0
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	264	21	54	329	0	4	0	24	0	0	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway 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
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors		2	1	1	2		1		1			
Detector Template		Thru	Right	Left	Thru		Left		Right			
Leading Detector (ft)		100	20	20	100		20		20			
Trailing Detector (ft)		0	0	0	0		0		0			
Detector 1 Position(ft)		0	0	0	0		0		0			
Detector 1 Size(ft)		6	20	20	6		20		20			
Detector 1 Type		Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex		Cl+Ex		Cl+Ex			
Detector 1 Channel												
Detector 1 Extend (s)		0.0	0.0	0.0	0.0		0.0		0.0			
Detector 1 Queue (s)		0.0	0.0	0.0	0.0		0.0		0.0			
Detector 1 Delay (s)		0.0	0.0	0.0	0.0		0.0		0.0			
Detector 2 Position(ft)		94			94							
Detector 2 Size(ft)		6			6							
Detector 2 Type		Cl+Ex			Cl+Ex							
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0							
Turn Type		NA	Perm	Prot	NA		Perm		Perm			
Protected Phases		4		3		8						
Permitted Phases		4						2		2		

Lanes, Volumes, Timings
 2: Casitas Place & Dana Point Harbor Dr

02/19/2021

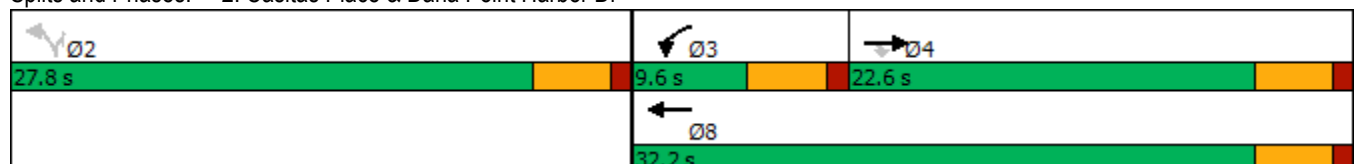


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Detector Phase		4	4	3	8		2		2			
Switch Phase												
Minimum Initial (s)		5.0	5.0	5.0	5.0		5.0		5.0			
Minimum Split (s)		22.5	22.5	9.5	22.5		22.5		22.5			
Total Split (s)		22.6	22.6	9.6	32.2		27.8		27.8			
Total Split (%)		37.7%	37.7%	16.0%	53.7%		46.3%		46.3%			
Maximum Green (s)		18.1	18.1	5.1	27.7		23.3		23.3			
Yellow Time (s)		3.5	3.5	3.5	3.5		3.5		3.5			
All-Red Time (s)		1.0	1.0	1.0	1.0		1.0		1.0			
Lost Time Adjust (s)		0.0	0.0	0.0	0.0		0.0		0.0			
Total Lost Time (s)		4.5	4.5	4.5	4.5		4.5		4.5			
Lead/Lag		Lag	Lag	Lead								
Lead-Lag Optimize?		Yes	Yes	Yes								
Vehicle Extension (s)		3.0	3.0	3.0	3.0		3.0		3.0			
Recall Mode		None	None	None	None		Max		Max			
Walk Time (s)		7.0	7.0		7.0		7.0		7.0			
Flash Dont Walk (s)		11.0	11.0		11.0		11.0		11.0			
Pedestrian Calls (#/hr)		0	0		0		0		0			
Act Effct Green (s)		12.3	12.3	5.2	17.5		24.0		24.0			
Actuated g/C Ratio		0.24	0.24	0.10	0.35		0.47		0.47			
v/c Ratio		0.58	0.04	0.30	0.27		0.00		0.03			
Control Delay		23.2	0.2	29.0	11.5		10.8		0.1			
Queue Delay		0.0	0.0	0.0	0.0		0.0		0.0			
Total Delay		23.2	0.2	29.0	11.5		10.8		0.1			
LOS		C	A	C	B		B		A			
Approach Delay		21.5			14.0			1.6				
Approach LOS		C			B			A				

Intersection Summary

Area Type:	Other
Cycle Length:	60
Actuated Cycle Length:	50.7
Natural Cycle:	55
Control Type:	Actuated-Uncoordinated
Maximum v/c Ratio:	0.58
Intersection Signal Delay:	16.6
Intersection LOS:	B
Intersection Capacity Utilization:	31.5%
ICU Level of Service:	A
Analysis Period (min):	15

Splits and Phases: 2: Casitas Place & Dana Point Harbor Dr



Queues

2: Casitas Place & Dana Point Harbor Dr

02/19/2021



Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Group Flow (vph)	264	21	54	329	4	24
v/c Ratio	0.58	0.04	0.30	0.27	0.00	0.03
Control Delay	23.2	0.2	29.0	11.5	10.8	0.1
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	23.2	0.2	29.0	11.5	10.8	0.1
Queue Length 50th (ft)	77	0	17	34	1	0
Queue Length 95th (ft)	137	0	49	56	6	0
Internal Link Dist (ft)	770			233		
Turn Bay Length (ft)	225		180			
Base Capacity (vph)	684	650	183	1990	837	806
Starvation Cap Reductn	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.39	0.03	0.30	0.17	0.00	0.03

Intersection Summary

Level Of Service Computation Report

ICU 1(Loss as Cycle Length %) Method (Future Volume Alternative)

Intersection #2 Casitas Place/Dana Point Harbor Drive

Cycle (sec): 100 Critical Vol./Cap.(X): 0.483
Loss Time (sec): 36 Average Delay (sec/veh): xxxxxx
Optimal Cycle: 64 Level Of Service: A

Table with columns for Street Name, Approach, Movement, Control, Rights, Min. Green, Y+R, and Lanes. Rows include Casitas Place and Dana Point Harbor Drive with various approach and movement details.

Volume Module table showing Base Vol, Growth Adj, Initial Bse, Added Vol, PasserByVol, Initial Fut, User Adj, PHF Adj, PHF Volume, Reduct Vol, Reduced Vol, PCE Adj, MLF Adj, and FinalVolume.

Saturation Flow Module table showing Sat/Lane, Adjustment, Lanes, and Final Sat. values.

Capacity Analysis Module table showing Vol/Sat and Crit Moves values.

Lanes, Volumes, Timings
 2: Casitas Place & Dana Point Harbor Dr

02/19/2021



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↑	↗	↖	↑↑		↖		↗			
Traffic Volume (vph)	0	251	20	51	313	0	4	0	23	0	0	0
Future Volume (vph)	0	251	20	51	313	0	4	0	23	0	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0		225	180		0	0		0	0		0
Storage Lanes	0		1	1		0	1		1	0		0
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	1.00	1.00	1.00	0.95	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt			0.850						0.850			
Flt Protected				0.950			0.950					
Satd. Flow (prot)	0	1863	1583	1770	3539	0	1770	0	1583	0	0	0
Flt Permitted				0.292			0.950					
Satd. Flow (perm)	0	1863	1583	544	3539	0	1770	0	1583	0	0	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			139						139			
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		850			313			237			171	
Travel Time (s)		19.3			7.1			5.4			3.9	
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	0	264	21	54	329	0	4	0	24	0	0	0
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	264	21	54	329	0	4	0	24	0	0	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway 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
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors		2	1	1	2		1		1			
Detector Template		Thru	Right	Left	Thru		Left		Right			
Leading Detector (ft)		100	20	20	100		20		20			
Trailing Detector (ft)		0	0	0	0		0		0			
Detector 1 Position(ft)		0	0	0	0		0		0			
Detector 1 Size(ft)		6	20	20	6		20		20			
Detector 1 Type		Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex		Cl+Ex		Cl+Ex			
Detector 1 Channel												
Detector 1 Extend (s)		0.0	0.0	0.0	0.0		0.0		0.0			
Detector 1 Queue (s)		0.0	0.0	0.0	0.0		0.0		0.0			
Detector 1 Delay (s)		0.0	0.0	0.0	0.0		0.0		0.0			
Detector 2 Position(ft)		94			94							
Detector 2 Size(ft)		6			6							
Detector 2 Type		Cl+Ex			Cl+Ex							
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0							
Turn Type		NA	Perm	pm+pt	NA		Perm		Perm			
Protected Phases		4		3		8						
Permitted Phases			4		8		2		2			

Lane Group	Ø9
Lane Configurations	
Traffic Volume (vph)	
Future Volume (vph)	
Ideal Flow (vphpl)	
Storage Length (ft)	
Storage Lanes	
Taper Length (ft)	
Lane Util. Factor	
Frt	
Flt Protected	
Satd. Flow (prot)	
Flt Permitted	
Satd. Flow (perm)	
Right Turn on Red	
Satd. Flow (RTOR)	
Link Speed (mph)	
Link Distance (ft)	
Travel Time (s)	
Peak Hour Factor	
Adj. Flow (vph)	
Shared Lane Traffic (%)	
Lane Group Flow (vph)	
Enter Blocked Intersection	
Lane Alignment	
Median Width(ft)	
Link Offset(ft)	
Crosswalk Width(ft)	
Two way Left Turn Lane	
Headway Factor	
Turning Speed (mph)	
Number of Detectors	
Detector Template	
Leading Detector (ft)	
Trailing Detector (ft)	
Detector 1 Position(ft)	
Detector 1 Size(ft)	
Detector 1 Type	
Detector 1 Channel	
Detector 1 Extend (s)	
Detector 1 Queue (s)	
Detector 1 Delay (s)	
Detector 2 Position(ft)	
Detector 2 Size(ft)	
Detector 2 Type	
Detector 2 Channel	
Detector 2 Extend (s)	
Turn Type	
Protected Phases	9
Permitted Phases	

Lanes, Volumes, Timings
2: Casitas Place & Dana Point Harbor Dr

02/19/2021

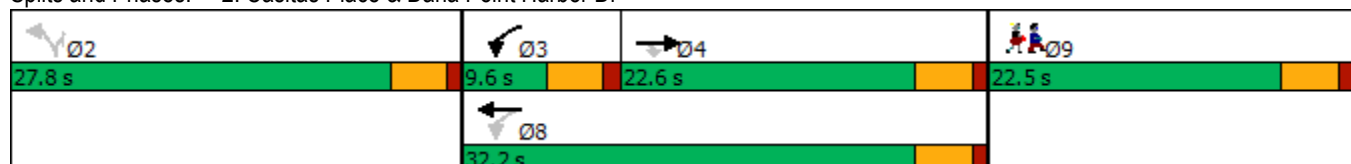


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Detector Phase		4	4	3	8		2		2			
Switch Phase												
Minimum Initial (s)		5.0	5.0	5.0	5.0		5.0		5.0			
Minimum Split (s)		22.5	22.5	9.5	22.5		22.5		22.5			
Total Split (s)		22.6	22.6	9.6	32.2		27.8		27.8			
Total Split (%)		27.4%	27.4%	11.6%	39.0%		33.7%		33.7%			
Maximum Green (s)		18.1	18.1	5.1	27.7		23.3		23.3			
Yellow Time (s)		3.5	3.5	3.5	3.5		3.5		3.5			
All-Red Time (s)		1.0	1.0	1.0	1.0		1.0		1.0			
Lost Time Adjust (s)		0.0	0.0	0.0	0.0		0.0		0.0			
Total Lost Time (s)		4.5	4.5	4.5	4.5		4.5		4.5			
Lead/Lag		Lag	Lag	Lead								
Lead-Lag Optimize?		Yes	Yes	Yes								
Vehicle Extension (s)		3.0	3.0	3.0	3.0		3.0		3.0			
Recall Mode		None	None	None	None		Max		Max			
Walk Time (s)												
Flash Dont Walk (s)												
Pedestrian Calls (#/hr)												
Act Effct Green (s)		14.1	14.1	18.7	18.7		26.1		26.1			
Actuated g/C Ratio		0.21	0.21	0.28	0.28		0.40		0.40			
v/c Ratio		0.66	0.05	0.21	0.33		0.01		0.03			
Control Delay		35.7	0.2	20.6	19.9		21.2		0.1			
Queue Delay		0.0	0.0	0.0	0.0		0.0		0.0			
Total Delay		35.7	0.2	20.6	19.9		21.2		0.1			
LOS		D	A	C	B		C		A			
Approach Delay		33.1			20.0			3.1				
Approach LOS		C			B			A				

Intersection Summary

Area Type:	Other
Cycle Length:	82.5
Actuated Cycle Length:	65.7
Natural Cycle:	80
Control Type:	Actuated-Uncoordinated
Maximum v/c Ratio:	0.66
Intersection Signal Delay:	24.7
Intersection LOS:	C
Intersection Capacity Utilization:	31.5%
ICU Level of Service:	A
Analysis Period (min):	15

Splits and Phases: 2: Casitas Place & Dana Point Harbor Dr



Lane Group	Ø9
Detector Phase	
Switch Phase	
Minimum Initial (s)	5.0
Minimum Split (s)	22.5
Total Split (s)	22.5
Total Split (%)	27%
Maximum Green (s)	18.0
Yellow Time (s)	3.5
All-Red Time (s)	1.0
Lost Time Adjust (s)	
Total Lost Time (s)	
Lead/Lag	
Lead-Lag Optimize?	
Vehicle Extension (s)	3.0
Recall Mode	None
Walk Time (s)	7.0
Flash Dont Walk (s)	11.0
Pedestrian Calls (#/hr)	45
Act Effct Green (s)	
Actuated g/C Ratio	
v/c Ratio	
Control Delay	
Queue Delay	
Total Delay	
LOS	
Approach Delay	
Approach LOS	
Intersection Summary	

Queues

2: Casitas Place & Dana Point Harbor Dr

02/19/2021





















Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Group Flow (vph)	264	21	54	329	4	24
v/c Ratio	0.66	0.05	0.21	0.33	0.01	0.03
Control Delay	35.7	0.2	20.6	19.9	21.2	0.1
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	35.7	0.2	20.6	19.9	21.2	0.1
Queue Length 50th (ft)	125	0	19	64	1	0
Queue Length 95th (ft)	205	0	44	97	9	0
Internal Link Dist (ft)	770			233		
Turn Bay Length (ft)		225	180			
Base Capacity (vph)	574	584	261	1669	702	711
Starvation Cap Reductn	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.46	0.04	0.21	0.20	0.01	0.03

Intersection Summary

Lanes, Volumes, Timings
 2: Casitas Place & Dana Point Harbor Dr

02/19/2021

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	0	360	25	78	311	0	16	0	20	0	0	0
Future Volume (vph)	0	360	25	78	311	0	16	0	20	0	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0		225	180		0	0		0	0		0
Storage Lanes	0		1	1		0	1		1	0		0
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	1.00	1.00	1.00	0.95	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor			0.93	0.98			0.95		0.93			
Frt			0.850						0.850			
Flt Protected				0.950			0.950					
Satd. Flow (prot)	0	1863	1583	1770	3539	0	1770	0	1583	0	0	0
Flt Permitted				0.246			0.950					
Satd. Flow (perm)	0	1863	1474	449	3539	0	1681	0	1474	0	0	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			109						109			
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		850			313			237			171	
Travel Time (s)		19.3			7.1			5.4			3.9	
Confl. Peds. (#/hr)	30		30	30		30	30		30	30		30
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	0	379	26	82	327	0	17	0	21	0	0	0
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	379	26	82	327	0	17	0	21	0	0	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway 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
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors		2	1	1	2		1		1			
Detector Template		Thru	Right	Left	Thru		Left		Right			
Leading Detector (ft)		100	20	20	100		20		20			
Trailing Detector (ft)		0	0	0	0		0		0			
Detector 1 Position(ft)		0	0	0	0		0		0			
Detector 1 Size(ft)		6	20	20	6		20		20			
Detector 1 Type		Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex		Cl+Ex		Cl+Ex			
Detector 1 Channel												
Detector 1 Extend (s)		0.0	0.0	0.0	0.0		0.0		0.0			
Detector 1 Queue (s)		0.0	0.0	0.0	0.0		0.0		0.0			
Detector 1 Delay (s)		0.0	0.0	0.0	0.0		0.0		0.0			
Detector 2 Position(ft)		94			94							
Detector 2 Size(ft)		6			6							
Detector 2 Type		Cl+Ex			Cl+Ex							
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0							
Turn Type		NA	Perm	pm+pt	NA		Perm		Perm			

Lanes, Volumes, Timings
2: Casitas Place & Dana Point Harbor Dr

02/19/2021

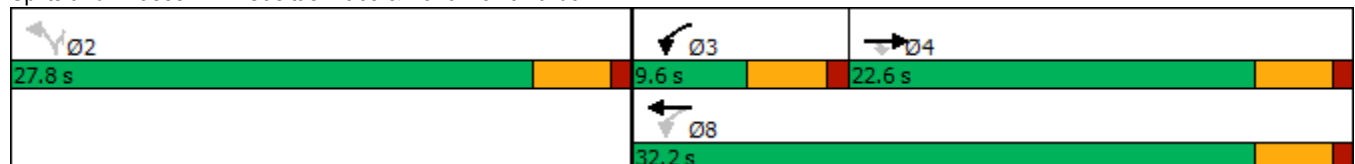


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Protected Phases		4		3	8							
Permitted Phases			4	8			2		2			
Detector Phase		4	4	3	8		2		2			
Switch Phase												
Minimum Initial (s)		5.0	5.0	5.0	5.0		5.0		5.0			
Minimum Split (s)		22.5	22.5	9.5	22.5		22.5		22.5			
Total Split (s)		22.6	22.6	9.6	32.2		27.8		27.8			
Total Split (%)		37.7%	37.7%	16.0%	53.7%		46.3%		46.3%			
Maximum Green (s)		18.1	18.1	5.1	27.7		23.3		23.3			
Yellow Time (s)		3.5	3.5	3.5	3.5		3.5		3.5			
All-Red Time (s)		1.0	1.0	1.0	1.0		1.0		1.0			
Lost Time Adjust (s)		0.0	0.0	0.0	0.0		0.0		0.0			
Total Lost Time (s)		4.5	4.5	4.5	4.5		4.5		4.5			
Lead/Lag		Lag	Lag	Lead								
Lead-Lag Optimize?		Yes	Yes	Yes								
Vehicle Extension (s)		3.0	3.0	3.0	3.0		3.0		3.0			
Recall Mode		None	None	None	None		Max		Max			
Walk Time (s)		7.0	7.0		7.0		7.0		7.0			
Flash Dont Walk (s)		11.0	11.0		11.0		11.0		11.0			
Pedestrian Calls (#/hr)		20	20		20		20		20			
Act Effct Green (s)		15.2	15.2	20.3	20.3		23.9		23.9			
Actuated g/C Ratio		0.28	0.28	0.38	0.38		0.45		0.45			
v/c Ratio		0.72	0.05	0.27	0.24		0.02		0.03			
Control Delay		26.6	0.2	11.9	10.9		11.5		0.1			
Queue Delay		0.0	0.0	0.0	0.0		0.0		0.0			
Total Delay		26.6	0.2	11.9	10.9		11.5		0.1			
LOS		C	A	B	B		B		A			
Approach Delay		24.9			11.1			5.2				
Approach LOS		C			B			A				

Intersection Summary

Area Type:	Other
Cycle Length:	60
Actuated Cycle Length:	53.4
Natural Cycle:	55
Control Type:	Actuated-Uncoordinated
Maximum v/c Ratio:	0.72
Intersection Signal Delay:	17.4
Intersection LOS:	B
Intersection Capacity Utilization:	41.4%
ICU Level of Service:	A
Analysis Period (min):	15

Splits and Phases: 2: Casitas Place & Dana Point Harbor Dr



Queues

2: Casitas Place & Dana Point Harbor Dr

02/19/2021



Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Group Flow (vph)	379	26	82	327	17	21
v/c Ratio	0.72	0.05	0.27	0.24	0.02	0.03
Control Delay	26.6	0.2	11.9	10.9	11.5	0.1
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	26.6	0.2	11.9	10.9	11.5	0.1
Queue Length 50th (ft)	119	0	16	34	4	0
Queue Length 95th (ft)	#203	0	36	56	14	0
Internal Link Dist (ft)	770			233		
Turn Bay Length (ft)		225	180			
Base Capacity (vph)	646	582	299	1879	751	718
Starvation Cap Reductn	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.59	0.04	0.27	0.17	0.02	0.03

Intersection Summary

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

Level Of Service Computation Report

ICU 1(Loss as Cycle Length %) Method (Future Volume Alternative)

Intersection #2 Casitas Place/Dana Point Harbor Drive

Cycle (sec): 100 Critical Vol./Cap.(X): 0.219
Loss Time (sec): 5 Average Delay (sec/veh): xxxxxx
Optimal Cycle: 16 Level Of Service: A

Street Name: Casitas Place Dana Point Harbor Drive
Approach: North Bound South Bound East Bound West Bound
Movement: L - T - R L - T - R L - T - R L - T - R
Control: Protected Protected Protected Protected
Rights: Include Include Include Include
Min. Green: 0 0 0 0 0 0 0 0 0 0 0 0
Y+R: 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0
Lanes: 1 0 0 0 1 0 0 0 0 0 0 0 1 1 0 1 0 2 0 0



















Volume Module:
Base Vol: 16 0 27 0 0 0 0 310 25 84 262 0
Growth Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
Initial Bse: 16 0 27 0 0 0 0 310 25 84 262 0
Added Vol: 0 0 -7 0 0 0 0 50 0 -6 49 0
PasserByVol: 0 0 0 0 0 0 0 0 0 0 0 0
Initial Fut: 16 0 20 0 0 0 0 360 25 78 311 0
User Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
PHF Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
PHF Volume: 16 0 20 0 0 0 0 360 25 78 311 0
Reduct Vol: 0 0 0 0 0 0 0 0 0 0 0 0
Reduced Vol: 16 0 20 0 0 0 0 360 25 78 311 0
PCE Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
MLF Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
FinalVolume: 16 0 20 0 0 0 0 360 25 78 311 0

Saturation Flow Module:
Sat/Lane: 1700 1700 1700 1700 1700 1700 1700 1700 1700 1700 1700 1700
Adjustment: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
Lanes: 1.00 0.00 1.00 0.00 0.00 0.00 0.00 1.87 0.13 1.00 2.00 0.00
Final Sat.: 1700 0 1700 0 0 0 0 3179 221 1700 3400 0

Capacity Analysis Module:
Vol/Sat: 0.01 0.00 0.01 0.00 0.00 0.00 0.00 0.11 0.11 0.05 0.09 0.00
Crit Moves: **** **** ****

Lanes, Volumes, Timings
 2: Casitas Place & Dana Point Harbor Dr

02/19/2021

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	0	360	25	78	311	0	16	0	20	0	0	0
Future Volume (vph)	0	360	25	78	311	0	16	0	20	0	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0		225	180		0	0		0	0		0
Storage Lanes	0		1	1		0	1		1	0		0
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	1.00	1.00	1.00	0.95	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor			0.94	0.97			0.95		0.94			
Flt			0.850						0.850			
Flt Protected				0.950			0.950					
Satd. Flow (prot)	0	1863	1583	1770	3539	0	1770	0	1583	0	0	0
Flt Permitted				0.950			0.950					
Satd. Flow (perm)	0	1863	1481	1722	3539	0	1689	0	1481	0	0	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			119			119			119			
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		850			313			237			171	
Travel Time (s)		19.3			7.1			5.4			3.9	
Confl. Peds. (#/hr)	30		30	30		30	30		30	30		30
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	0	379	26	82	327	0	17	0	21	0	0	0
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	379	26	82	327	0	17	0	21	0	0	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway 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
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors		2	1	1	2		1		1			
Detector Template		Thru	Right	Left	Thru		Left		Right			
Leading Detector (ft)		100	20	20	100		20		20			
Trailing Detector (ft)		0	0	0	0		0		0			
Detector 1 Position(ft)		0	0	0	0		0		0			
Detector 1 Size(ft)		6	20	20	6		20		20			
Detector 1 Type		Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex		Cl+Ex		Cl+Ex			
Detector 1 Channel												
Detector 1 Extend (s)		0.0	0.0	0.0	0.0		0.0		0.0			
Detector 1 Queue (s)		0.0	0.0	0.0	0.0		0.0		0.0			
Detector 1 Delay (s)		0.0	0.0	0.0	0.0		0.0		0.0			
Detector 2 Position(ft)		94			94							
Detector 2 Size(ft)		6			6							
Detector 2 Type		Cl+Ex			Cl+Ex							
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0							
Turn Type		NA	Perm	Prot	NA		Perm		Perm			

Lanes, Volumes, Timings
 2: Casitas Place & Dana Point Harbor Dr

02/19/2021

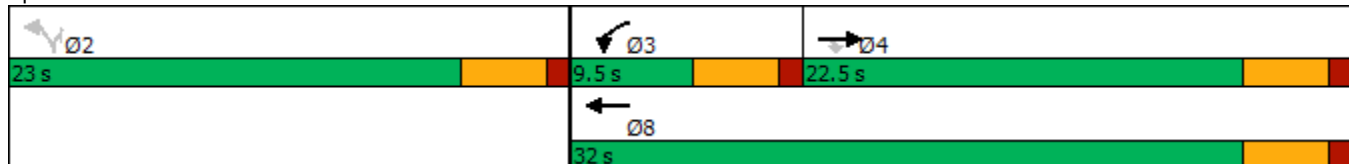


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Protected Phases		4		3	8							
Permitted Phases			4				2		2			
Detector Phase		4	4	3	8		2		2			
Switch Phase												
Minimum Initial (s)		5.0	5.0	5.0	5.0		5.0		5.0			
Minimum Split (s)		22.5	22.5	9.5	22.5		22.5		22.5			
Total Split (s)		22.5	22.5	9.5	32.0		23.0		23.0			
Total Split (%)		40.9%	40.9%	17.3%	58.2%		41.8%		41.8%			
Maximum Green (s)		18.0	18.0	5.0	27.5		18.5		18.5			
Yellow Time (s)		3.5	3.5	3.5	3.5		3.5		3.5			
All-Red Time (s)		1.0	1.0	1.0	1.0		1.0		1.0			
Lost Time Adjust (s)		0.0	0.0	0.0	0.0		0.0		0.0			
Total Lost Time (s)		4.5	4.5	4.5	4.5		4.5		4.5			
Lead/Lag		Lag	Lag	Lead								
Lead-Lag Optimize?		Yes	Yes	Yes								
Vehicle Extension (s)		3.0	3.0	3.0	3.0		3.0		3.0			
Recall Mode		None	None	None	None		Max		Max			
Walk Time (s)		7.0	7.0		7.0		7.0		7.0			
Flash Dont Walk (s)		11.0	11.0		11.0		11.0		11.0			
Pedestrian Calls (#/hr)		20	20		20		20		20			
Act Effct Green (s)		14.0	14.0	5.2	19.0		19.1		19.1			
Actuated g/C Ratio		0.30	0.30	0.11	0.40		0.40		0.40			
v/c Ratio		0.69	0.05	0.43	0.23		0.02		0.03			
Control Delay		22.8	0.2	31.5	8.9		12.3		0.1			
Queue Delay		0.0	0.0	0.0	0.0		0.0		0.0			
Total Delay		22.8	0.2	31.5	8.9		12.3		0.1			
LOS		C	A	C	A		B		A			
Approach Delay		21.3			13.4			5.6				
Approach LOS		C			B			A				

Intersection Summary

Area Type:	Other
Cycle Length:	55
Actuated Cycle Length:	47.4
Natural Cycle:	55
Control Type:	Actuated-Uncoordinated
Maximum v/c Ratio:	0.69
Intersection Signal Delay:	16.8
Intersection LOS:	B
Intersection Capacity Utilization:	41.4%
ICU Level of Service:	A
Analysis Period (min):	15

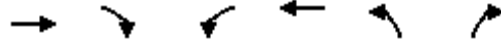
Splits and Phases: 2: Casitas Place & Dana Point Harbor Dr



Queues

2: Casitas Place & Dana Point Harbor Dr

02/19/2021



Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Group Flow (vph)	379	26	82	327	17	21
v/c Ratio	0.69	0.05	0.43	0.23	0.02	0.03
Control Delay	22.8	0.2	31.5	8.9	12.3	0.1
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	22.8	0.2	31.5	8.9	12.3	0.1
Queue Length 50th (ft)	103	0	25	28	3	0
Queue Length 95th (ft)	179	0	#73	46	14	0
Internal Link Dist (ft)	770			233		
Turn Bay Length (ft)		225	180			
Base Capacity (vph)	730	653	192	2121	681	668
Starvation Cap Reductn	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.52	0.04	0.43	0.15	0.02	0.03

Intersection Summary

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

Level Of Service Computation Report

ICU 1(Loss as Cycle Length %) Method (Future Volume Alternative)

Intersection #2 Casitas Place/Dana Point Harbor Drive

Cycle (sec): 100 Critical Vol./Cap.(X): 0.529
Loss Time (sec): 36 Average Delay (sec/veh): xxxxxx
Optimal Cycle: 68 Level Of Service: A

Table with columns for Street Name, Approach, Movement, Control, Rights, Min. Green, Y+R, and Lanes. Rows include Casitas Place and Dana Point Harbor Drive with various traffic movements and control settings.



















Volume Module table showing traffic volume data including Base Vol, Growth Adj, Initial Bse, Added Vol, PasserByVol, Initial Fut, User Adj, PHF Adj, PHF Volume, Reduct Vol, Reduced Vol, PCE Adj, MLF Adj, and FinalVolume.

Saturation Flow Module table showing Sat/Lane, Adjustment, Lanes, and Final Sat. values for different traffic movements.

Capacity Analysis Module table showing Vol/Sat and Crit Moves for various traffic movements.

Lanes, Volumes, Timings
2: Casitas Place & Dana Point Harbor Dr

02/19/2021

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	0	360	25	78	311	0	16	0	20	0	0	0
Future Volume (vph)	0	360	25	78	311	0	16	0	20	0	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0		225	180		0	0		0	0		0
Storage Lanes	0		1	1		0	1		1	0		0
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	1.00	1.00	1.00	0.95	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor			0.92	0.98			0.94		0.92			
Frt			0.850						0.850			
Flt Protected				0.950			0.950					
Satd. Flow (prot)	0	1863	1583	1770	3539	0	1770	0	1583	0	0	0
Flt Permitted				0.202			0.950					
Satd. Flow (perm)	0	1863	1461	370	3539	0	1655	0	1451	0	0	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			143						143			
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		850			313			237			171	
Travel Time (s)		19.3			7.1			5.4			3.9	
Confl. Peds. (#/hr)	30		30	30		30	30		30	30		30
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	0	379	26	82	327	0	17	0	21	0	0	0
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	379	26	82	327	0	17	0	21	0	0	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway 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
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors		2	1	1	2		1		1			
Detector Template		Thru	Right	Left	Thru		Left		Right			
Leading Detector (ft)		100	20	20	100		20		20			
Trailing Detector (ft)		0	0	0	0		0		0			
Detector 1 Position(ft)		0	0	0	0		0		0			
Detector 1 Size(ft)		6	20	20	6		20		20			
Detector 1 Type		Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex		Cl+Ex		Cl+Ex			
Detector 1 Channel												
Detector 1 Extend (s)		0.0	0.0	0.0	0.0		0.0		0.0			
Detector 1 Queue (s)		0.0	0.0	0.0	0.0		0.0		0.0			
Detector 1 Delay (s)		0.0	0.0	0.0	0.0		0.0		0.0			
Detector 2 Position(ft)		94			94							
Detector 2 Size(ft)		6			6							
Detector 2 Type		Cl+Ex			Cl+Ex							
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0							
Turn Type		NA	Perm	pm+pt	NA		Perm		Perm			

Lane Group	Ø9
Lane Configurations	
Traffic Volume (vph)	
Future Volume (vph)	
Ideal Flow (vphpl)	
Storage Length (ft)	
Storage Lanes	
Taper Length (ft)	
Lane Util. Factor	
Ped Bike Factor	
Frt	
Flt Protected	
Satd. Flow (prot)	
Flt Permitted	
Satd. Flow (perm)	
Right Turn on Red	
Satd. Flow (RTOR)	
Link Speed (mph)	
Link Distance (ft)	
Travel Time (s)	
Confl. Peds. (#/hr)	
Peak Hour Factor	
Adj. Flow (vph)	
Shared Lane Traffic (%)	
Lane Group Flow (vph)	
Enter Blocked Intersection	
Lane Alignment	
Median Width(ft)	
Link Offset(ft)	
Crosswalk Width(ft)	
Two way Left Turn Lane	
Headway Factor	
Turning Speed (mph)	
Number of Detectors	
Detector Template	
Leading Detector (ft)	
Trailing Detector (ft)	
Detector 1 Position(ft)	
Detector 1 Size(ft)	
Detector 1 Type	
Detector 1 Channel	
Detector 1 Extend (s)	
Detector 1 Queue (s)	
Detector 1 Delay (s)	
Detector 2 Position(ft)	
Detector 2 Size(ft)	
Detector 2 Type	
Detector 2 Channel	
Detector 2 Extend (s)	
Turn Type	

Lanes, Volumes, Timings
 2: Casitas Place & Dana Point Harbor Dr

02/19/2021

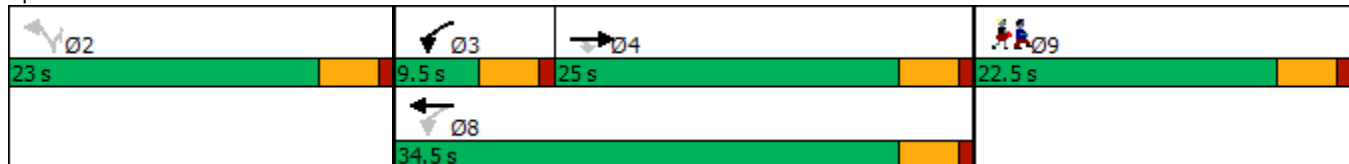


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Protected Phases		4		3	8							
Permitted Phases			4	8			2		2			
Detector Phase		4	4	3	8		2		2			
Switch Phase												
Minimum Initial (s)		5.0	5.0	5.0	5.0		5.0		5.0			
Minimum Split (s)		22.5	22.5	9.5	22.5		22.5		22.5			
Total Split (s)		25.0	25.0	9.5	34.5		23.0		23.0			
Total Split (%)		31.3%	31.3%	11.9%	43.1%		28.8%		28.8%			
Maximum Green (s)		20.5	20.5	5.0	30.0		18.5		18.5			
Yellow Time (s)		3.5	3.5	3.5	3.5		3.5		3.5			
All-Red Time (s)		1.0	1.0	1.0	1.0		1.0		1.0			
Lost Time Adjust (s)		0.0	0.0	0.0	0.0		0.0		0.0			
Total Lost Time (s)		4.5	4.5	4.5	4.5		4.5		4.5			
Lead/Lag		Lag	Lag	Lead								
Lead-Lag Optimize?		Yes	Yes	Yes								
Vehicle Extension (s)		3.0	3.0	3.0	3.0		3.0		3.0			
Recall Mode		None	None	None	None		Max		Max			
Walk Time (s)												
Flash Dont Walk (s)												
Pedestrian Calls (#/hr)												
Act Effct Green (s)		17.3	17.3	24.4	24.4		20.4		20.4			
Actuated g/C Ratio		0.26	0.26	0.37	0.37		0.31		0.31			
v/c Ratio		0.78	0.05	0.32	0.25		0.03		0.04			
Control Delay		37.9	0.2	19.2	16.1		24.3		0.1			
Queue Delay		0.0	0.0	0.0	0.0		0.0		0.0			
Total Delay		37.9	0.2	19.2	16.1		24.3		0.1			
LOS		D	A	B	B		C		A			
Approach Delay		35.5			16.7			11.0				
Approach LOS		D			B			B				

Intersection Summary

Area Type:	Other
Cycle Length:	80
Actuated Cycle Length:	65.8
Natural Cycle:	80
Control Type:	Actuated-Uncoordinated
Maximum v/c Ratio:	0.78
Intersection Signal Delay:	25.4
Intersection LOS:	C
Intersection Capacity Utilization:	38.7%
ICU Level of Service:	A
Analysis Period (min):	15

Splits and Phases: 2: Casitas Place & Dana Point Harbor Dr



Lane Group	Ø9
Protected Phases	9
Permitted Phases	
Detector Phase	
Switch Phase	
Minimum Initial (s)	5.0
Minimum Split (s)	22.5
Total Split (s)	22.5
Total Split (%)	28%
Maximum Green (s)	18.0
Yellow Time (s)	3.5
All-Red Time (s)	1.0
Lost Time Adjust (s)	
Total Lost Time (s)	
Lead/Lag	
Lead-Lag Optimize?	
Vehicle Extension (s)	3.0
Recall Mode	None
Walk Time (s)	7.0
Flash Dont Walk (s)	11.0
Pedestrian Calls (#/hr)	45
Act Effct Green (s)	
Actuated g/C Ratio	
v/c Ratio	
Control Delay	
Queue Delay	
Total Delay	
LOS	
Approach Delay	
Approach LOS	
Intersection Summary	

Queues

2: Casitas Place & Dana Point Harbor Dr

02/19/2021





















Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Group Flow (vph)	379	26	82	327	17	21
v/c Ratio	0.78	0.05	0.32	0.25	0.03	0.04
Control Delay	37.9	0.2	19.2	16.1	24.3	0.1
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	37.9	0.2	19.2	16.1	24.3	0.1
Queue Length 50th (ft)	177	0	26	57	7	0
Queue Length 95th (ft)	#313	0	55	87	22	0
Internal Link Dist (ft)	770			233		
Turn Bay Length (ft)		225	180			
Base Capacity (vph)	638	594	254	1775	511	547
Starvation Cap Reductn	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.59	0.04	0.32	0.18	0.03	0.04

Intersection Summary

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

Lanes, Volumes, Timings
2: Casitas Place & Dana Point Harbor Dr

02/19/2021

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	0	480	42	112	599	0	25	0	60	0	0	0
Future Volume (vph)	0	480	42	112	599	0	25	0	60	0	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0		225	180		0	0		0	0		0
Storage Lanes	0		1	1		0	1		1	0		0
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	1.00	1.00	1.00	0.95	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor			0.88	0.97			0.90		0.88			
Flt			0.850						0.850			
Flt Protected				0.950			0.950					
Satd. Flow (prot)	0	1863	1583	1770	3539	0	1770	0	1583	0	0	0
Flt Permitted				0.184			0.950					
Satd. Flow (perm)	0	1863	1397	333	3539	0	1593	0	1397	0	0	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			109						109			
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		850			313			237			171	
Travel Time (s)		19.3			7.1			5.4			3.9	
Confl. Peds. (#/hr)	60		60	60		60	60		60	60		60
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	0	505	44	118	631	0	26	0	63	0	0	0
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	505	44	118	631	0	26	0	63	0	0	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway 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
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors		2	1	1	2		1		1			
Detector Template		Thru	Right	Left	Thru		Left		Right			
Leading Detector (ft)		100	20	20	100		20		20			
Trailing Detector (ft)		0	0	0	0		0		0			
Detector 1 Position(ft)		0	0	0	0		0		0			
Detector 1 Size(ft)		6	20	20	6		20		20			
Detector 1 Type		Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex		Cl+Ex		Cl+Ex			
Detector 1 Channel												
Detector 1 Extend (s)		0.0	0.0	0.0	0.0		0.0		0.0			
Detector 1 Queue (s)		0.0	0.0	0.0	0.0		0.0		0.0			
Detector 1 Delay (s)		0.0	0.0	0.0	0.0		0.0		0.0			
Detector 2 Position(ft)		94		94								
Detector 2 Size(ft)		6		6								
Detector 2 Type		Cl+Ex		Cl+Ex								
Detector 2 Channel												
Detector 2 Extend (s)		0.0		0.0								
Turn Type		NA	Perm	pm+pt	NA		Perm		Perm			

Lanes, Volumes, Timings
 2: Casitas Place & Dana Point Harbor Dr

02/19/2021

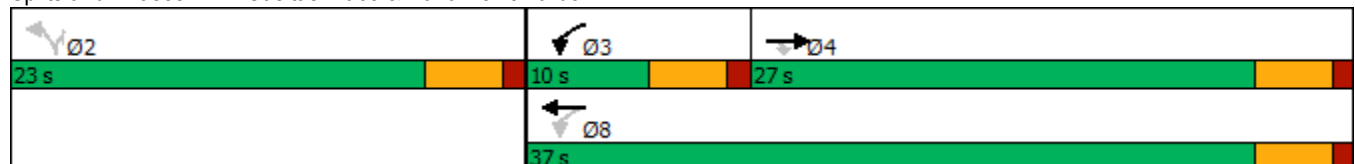


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Protected Phases		4		3	8							
Permitted Phases			4	8			2		2			
Detector Phase		4	4	3	8		2		2			
Switch Phase												
Minimum Initial (s)		5.0	5.0	5.0	5.0		5.0		5.0			
Minimum Split (s)		22.5	22.5	9.5	22.5		22.5		22.5			
Total Split (s)		27.0	27.0	10.0	37.0		23.0		23.0			
Total Split (%)		45.0%	45.0%	16.7%	61.7%		38.3%		38.3%			
Maximum Green (s)		22.5	22.5	5.5	32.5		18.5		18.5			
Yellow Time (s)		3.5	3.5	3.5	3.5		3.5		3.5			
All-Red Time (s)		1.0	1.0	1.0	1.0		1.0		1.0			
Lost Time Adjust (s)		0.0	0.0	0.0	0.0		0.0		0.0			
Total Lost Time (s)		4.5	4.5	4.5	4.5		4.5		4.5			
Lead/Lag		Lag	Lag	Lead								
Lead-Lag Optimize?		Yes	Yes	Yes								
Vehicle Extension (s)		3.0	3.0	3.0	3.0		3.0		3.0			
Recall Mode		None	None	None	None		Max		Max			
Walk Time (s)		7.0	7.0		7.0		7.0		7.0			
Flash Dont Walk (s)		11.0	11.0		11.0		11.0		11.0			
Pedestrian Calls (#/hr)		20	20		20		20		20			
Act Effct Green (s)		18.7	18.7	26.2	26.2		19.0		19.0			
Actuated g/C Ratio		0.34	0.34	0.48	0.48		0.35		0.35			
v/c Ratio		0.79	0.08	0.38	0.37		0.05		0.11			
Control Delay		26.9	0.3	10.6	9.0		14.9		1.9			
Queue Delay		0.0	0.0	0.0	0.0		0.0		0.0			
Total Delay		26.9	0.3	10.6	9.0		14.9		1.9			
LOS		C	A	B	A		B		A			
Approach Delay		24.7			9.2			5.7				
Approach LOS		C			A			A				

Intersection Summary

Area Type:	Other
Cycle Length:	60
Actuated Cycle Length:	54.5
Natural Cycle:	60
Control Type:	Actuated-Uncoordinated
Maximum v/c Ratio:	0.79
Intersection Signal Delay:	15.1
Intersection LOS:	B
Intersection Capacity Utilization:	47.8%
ICU Level of Service:	A
Analysis Period (min):	15

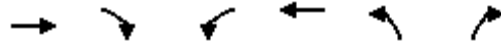
Splits and Phases: 2: Casitas Place & Dana Point Harbor Dr



Queues

2: Casitas Place & Dana Point Harbor Dr

02/19/2021



Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Group Flow (vph)	505	44	118	631	26	63
v/c Ratio	0.79	0.08	0.38	0.37	0.05	0.11
Control Delay	26.9	0.3	10.6	9.0	14.9	1.9
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	26.9	0.3	10.6	9.0	14.9	1.9
Queue Length 50th (ft)	152	0	19	60	6	0
Queue Length 95th (ft)	#260	2	40	88	21	10
Internal Link Dist (ft)	770			233		
Turn Bay Length (ft)		225	180			
Base Capacity (vph)	791	656	309	2171	556	559
Starvation Cap Reductn	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.64	0.07	0.38	0.29	0.05	0.11

Intersection Summary

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

Level Of Service Computation Report

ICU 1(Loss as Cycle Length %) Method (Future Volume Alternative)

Intersection #2 Casitas Place/Dana Point Harbor Drive

Cycle (sec): 100 Critical Vol./Cap.(X): 0.305
Loss Time (sec): 5 Average Delay (sec/veh): xxxxxx
Optimal Cycle: 17 Level Of Service: A

Street Name: Casitas Place Dana Point Harbor Drive
Approach: North Bound South Bound East Bound West Bound
Movement: L - T - R L - T - R L - T - R L - T - R

Control: Protected Protected Protected Protected
Rights: Include Include Include Include
Min. Green: 0 0 0 0 0 0 0 0 0 0 0 0
Y+R: 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0
Lanes: 1 0 0 0 1 0 0 0 0 0 0 0 1 1 0 1 0 2 0 0



















Volume Module:
Base Vol: 25 0 67 0 0 0 0 427 42 118 528 0
Growth Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
Initial Bse: 25 0 67 0 0 0 0 427 42 118 528 0
Added Vol: 0 0 -7 0 0 0 0 53 0 -6 71 0
PasserByVol: 0 0 0 0 0 0 0 0 0 0 0 0
Initial Fut: 25 0 60 0 0 0 0 480 42 112 599 0
User Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
PHF Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
PHF Volume: 25 0 60 0 0 0 0 480 42 112 599 0
Reduct Vol: 0 0 0 0 0 0 0 0 0 0 0 0
Reduced Vol: 25 0 60 0 0 0 0 480 42 112 599 0
PCE Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
MLF Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
FinalVolume: 25 0 60 0 0 0 0 480 42 112 599 0

Saturation Flow Module:
Sat/Lane: 1700 1700 1700 1700 1700 1700 1700 1700 1700 1700 1700 1700
Adjustment: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
Lanes: 1.00 0.00 1.00 0.00 0.00 0.00 0.00 1.84 0.16 1.00 2.00 0.00
Final Sat.: 1700 0 1700 0 0 0 0 3126 274 1700 3400 0

Capacity Analysis Module:
Vol/Sat: 0.01 0.00 0.04 0.00 0.00 0.00 0.00 0.15 0.15 0.07 0.18 0.00
Crit Moves: **** **** ****

Lanes, Volumes, Timings
 2: Casitas Place & Dana Point Harbor Dr

02/19/2021

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	0	480	42	112	599	0	25	0	60	0	0	0
Future Volume (vph)	0	480	42	112	599	0	25	0	60	0	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0		225	180		0	0		0	0		0
Storage Lanes	0		1	1		0	1		1	0		0
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	1.00	1.00	1.00	0.95	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor			0.88	0.95			0.90		0.88			
Frt			0.850						0.850			
Flt Protected				0.950			0.950					
Satd. Flow (prot)	0	1863	1583	1770	3539	0	1770	0	1583	0	0	0
Flt Permitted				0.950			0.950					
Satd. Flow (perm)	0	1863	1397	1682	3539	0	1593	0	1397	0	0	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			109						109			
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		850			313			237			171	
Travel Time (s)		19.3			7.1			5.4			3.9	
Confl. Peds. (#/hr)	60		60	60		60	60		60	60		60
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	0	505	44	118	631	0	26	0	63	0	0	0
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	505	44	118	631	0	26	0	63	0	0	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway 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
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors		2	1	1	2		1		1			
Detector Template		Thru	Right	Left	Thru		Left		Right			
Leading Detector (ft)		100	20	20	100		20		20			
Trailing Detector (ft)		0	0	0	0		0		0			
Detector 1 Position(ft)		0	0	0	0		0		0			
Detector 1 Size(ft)		6	20	20	6		20		20			
Detector 1 Type		Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex		Cl+Ex		Cl+Ex			
Detector 1 Channel												
Detector 1 Extend (s)		0.0	0.0	0.0	0.0		0.0		0.0			
Detector 1 Queue (s)		0.0	0.0	0.0	0.0		0.0		0.0			
Detector 1 Delay (s)		0.0	0.0	0.0	0.0		0.0		0.0			
Detector 2 Position(ft)		94			94							
Detector 2 Size(ft)		6			6							
Detector 2 Type		Cl+Ex			Cl+Ex							
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0							
Turn Type		NA	Perm	Prot	NA		Perm		Perm			

Lanes, Volumes, Timings
 2: Casitas Place & Dana Point Harbor Dr

02/19/2021

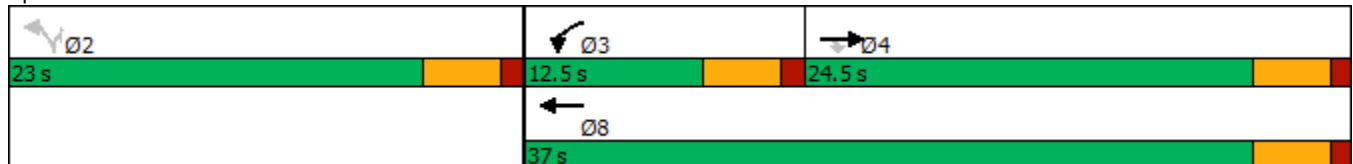


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Protected Phases		4		3	8							
Permitted Phases			4				2		2			
Detector Phase		4	4	3	8		2		2			
Switch Phase												
Minimum Initial (s)		5.0	5.0	5.0	5.0		5.0		5.0			
Minimum Split (s)		22.5	22.5	9.5	22.5		22.5		22.5			
Total Split (s)		24.5	24.5	12.5	37.0		23.0		23.0			
Total Split (%)		40.8%	40.8%	20.8%	61.7%		38.3%		38.3%			
Maximum Green (s)		20.0	20.0	8.0	32.5		18.5		18.5			
Yellow Time (s)		3.5	3.5	3.5	3.5		3.5		3.5			
All-Red Time (s)		1.0	1.0	1.0	1.0		1.0		1.0			
Lost Time Adjust (s)		0.0	0.0	0.0	0.0		0.0		0.0			
Total Lost Time (s)		4.5	4.5	4.5	4.5		4.5		4.5			
Lead/Lag		Lag	Lag	Lead								
Lead-Lag Optimize?		Yes	Yes	Yes								
Vehicle Extension (s)		3.0	3.0	3.0	3.0		3.0		3.0			
Recall Mode		None	None	None	None		Max		Max			
Walk Time (s)		7.0	7.0		7.0		7.0		7.0			
Flash Dont Walk (s)		11.0	11.0		11.0		11.0		11.0			
Pedestrian Calls (#/hr)		20	20		20		20		20			
Act Effct Green (s)		18.0	18.0	7.5	27.3		19.0		19.0			
Actuated g/C Ratio		0.32	0.32	0.13	0.49		0.34		0.34			
v/c Ratio		0.84	0.08	0.49	0.36		0.05		0.11			
Control Delay		33.0	0.4	31.9	8.8		15.0		1.9			
Queue Delay		0.0	0.0	0.0	0.0		0.0		0.0			
Total Delay		33.0	0.4	31.9	8.8		15.0		1.9			
LOS		C	A	C	A		B		A			
Approach Delay		30.4			12.4			5.7				
Approach LOS		C			B			A				

Intersection Summary

Area Type:	Other
Cycle Length:	60
Actuated Cycle Length:	55.6
Natural Cycle:	60
Control Type:	Actuated-Uncoordinated
Maximum v/c Ratio:	0.84
Intersection Signal Delay:	19.1
Intersection LOS:	B
Intersection Capacity Utilization:	47.8%
ICU Level of Service:	A
Analysis Period (min):	15

Splits and Phases: 2: Casitas Place & Dana Point Harbor Dr



Queues

2: Casitas Place & Dana Point Harbor Dr

02/19/2021



Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Group Flow (vph)	505	44	118	631	26	63
v/c Ratio	0.84	0.08	0.49	0.36	0.05	0.11
Control Delay	33.0	0.4	31.9	8.8	15.0	1.9
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	33.0	0.4	31.9	8.8	15.0	1.9
Queue Length 50th (ft)	164	0	40	60	7	0
Queue Length 95th (ft)	#313	2	84	88	21	10
Internal Link Dist (ft)	770			233		
Turn Bay Length (ft)		225	180			
Base Capacity (vph)	689	585	262	2128	545	550
Starvation Cap Reductn	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.73	0.08	0.45	0.30	0.05	0.11

Intersection Summary

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

Level Of Service Computation Report

ICU 1(Loss as Cycle Length %) Method (Future Volume Alternative)

Intersection #2 Casitas Place/Dana Point Harbor Drive

Cycle (sec): 100 Critical Vol./Cap.(X): 0.615
 Loss Time (sec): 36 Average Delay (sec/veh): xxxxxx
 Optimal Cycle: 76 Level Of Service: B

Street Name:	Casitas Place						Dana Point Harbor Drive					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Protected			Protected			Protected			Prot+Permit		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	1	0	0	0	0	0	0	0	1	1	0	0

Volume Module:

Base Vol:	25	0	67	0	0	0	0	427	42	118	528	0
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	25	0	67	0	0	0	0	427	42	118	528	0
Added Vol:	0	0	-7	0	0	0	0	53	0	-6	71	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	25	0	60	0	0	0	0	480	42	112	599	0
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	25	0	60	0	0	0	0	480	42	112	599	0
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	25	0	60	0	0	0	0	480	42	112	599	0
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	25	0	60	0	0	0	0	480	42	112	599	0

Saturation Flow Module:



















Sat/Lane:	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700
Adjustment:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Lanes:	1.00	0.00	1.00	0.00	0.00	0.00	0.00	1.84	0.16	1.00	2.00	0.00
Final Sat.:	1700	0	1700	0	0	0	0	3126	274	1700	3400	0

Capacity Analysis Module:

Vol/Sat:	0.01	0.00	0.04	0.00	0.00	0.00	0.00	0.15	0.15	0.07	0.18	0.00
Crit Moves:	****						****			****		

Lanes, Volumes, Timings
 2: Casitas Place & Dana Point Harbor Dr

02/19/2021

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	0	480	42	112	599	0	25	0	60	0	0	0
Future Volume (vph)	0	480	42	112	599	0	25	0	60	0	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0		225	180		0	0		0	0		0
Storage Lanes	0		1	1		0	1		1	0		0
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	1.00	1.00	1.00	0.95	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor			0.86	0.98			0.87		0.85			
Frt			0.850						0.850			
Flt Protected				0.950			0.950					
Satd. Flow (prot)	0	1863	1583	1770	3539	0	1770	0	1583	0	0	0
Flt Permitted				0.160			0.950					
Satd. Flow (perm)	0	1863	1361	291	3539	0	1540	0	1350	0	0	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			143						143			
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		850			313			237			171	
Travel Time (s)		19.3			7.1			5.4			3.9	
Confl. Peds. (#/hr)	60		60	60		60	60		60	60		60
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	0	505	44	118	631	0	26	0	63	0	0	0
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	505	44	118	631	0	26	0	63	0	0	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway 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
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors		2	1	1	2		1		1			
Detector Template		Thru	Right	Left	Thru		Left		Right			
Leading Detector (ft)		100	20	20	100		20		20			
Trailing Detector (ft)		0	0	0	0		0		0			
Detector 1 Position(ft)		0	0	0	0		0		0			
Detector 1 Size(ft)		6	20	20	6		20		20			
Detector 1 Type		Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex		Cl+Ex		Cl+Ex			
Detector 1 Channel												
Detector 1 Extend (s)		0.0	0.0	0.0	0.0		0.0		0.0			
Detector 1 Queue (s)		0.0	0.0	0.0	0.0		0.0		0.0			
Detector 1 Delay (s)		0.0	0.0	0.0	0.0		0.0		0.0			
Detector 2 Position(ft)		94			94							
Detector 2 Size(ft)		6			6							
Detector 2 Type		Cl+Ex			Cl+Ex							
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0							
Turn Type		NA	Perm	pm+pt	NA		Perm		Perm			

Lane Group	Ø9
Lane Configurations	
Traffic Volume (vph)	
Future Volume (vph)	
Ideal Flow (vphpl)	
Storage Length (ft)	
Storage Lanes	
Taper Length (ft)	
Lane Util. Factor	
Ped Bike Factor	
Frt	
Flt Protected	
Satd. Flow (prot)	
Flt Permitted	
Satd. Flow (perm)	
Right Turn on Red	
Satd. Flow (RTOR)	
Link Speed (mph)	
Link Distance (ft)	
Travel Time (s)	
Confl. Peds. (#/hr)	
Peak Hour Factor	
Adj. Flow (vph)	
Shared Lane Traffic (%)	
Lane Group Flow (vph)	
Enter Blocked Intersection	
Lane Alignment	
Median Width(ft)	
Link Offset(ft)	
Crosswalk Width(ft)	
Two way Left Turn Lane	
Headway Factor	
Turning Speed (mph)	
Number of Detectors	
Detector Template	
Leading Detector (ft)	
Trailing Detector (ft)	
Detector 1 Position(ft)	
Detector 1 Size(ft)	
Detector 1 Type	
Detector 1 Channel	
Detector 1 Extend (s)	
Detector 1 Queue (s)	
Detector 1 Delay (s)	
Detector 2 Position(ft)	
Detector 2 Size(ft)	
Detector 2 Type	
Detector 2 Channel	
Detector 2 Extend (s)	
Turn Type	

Lanes, Volumes, Timings
 2: Casitas Place & Dana Point Harbor Dr

02/19/2021

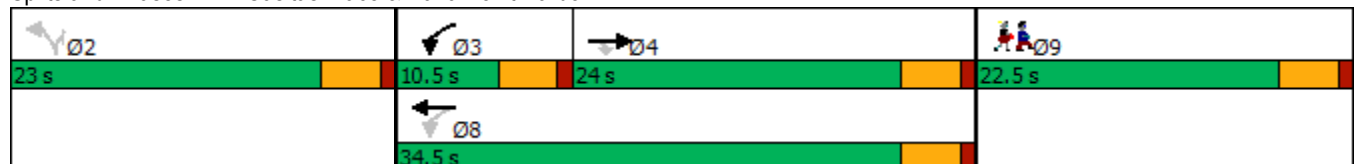


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Protected Phases		4		3	8							
Permitted Phases			4	8			2		2			
Detector Phase		4	4	3	8		2		2			
Switch Phase												
Minimum Initial (s)		5.0	5.0	5.0	5.0		5.0		5.0			
Minimum Split (s)		22.5	22.5	9.5	22.5		22.5		22.5			
Total Split (s)		24.0	24.0	10.5	34.5		23.0		23.0			
Total Split (%)		30.0%	30.0%	13.1%	43.1%		28.8%		28.8%			
Maximum Green (s)		19.5	19.5	6.0	30.0		18.5		18.5			
Yellow Time (s)		3.5	3.5	3.5	3.5		3.5		3.5			
All-Red Time (s)		1.0	1.0	1.0	1.0		1.0		1.0			
Lost Time Adjust (s)		0.0	0.0	0.0	0.0		0.0		0.0			
Total Lost Time (s)		4.5	4.5	4.5	4.5		4.5		4.5			
Lead/Lag		Lag	Lag	Lead								
Lead-Lag Optimize?		Yes	Yes	Yes								
Vehicle Extension (s)		3.0	3.0	3.0	3.0		3.0		3.0			
Recall Mode		None	None	None	None		Max		Max			
Walk Time (s)												
Flash Dont Walk (s)												
Pedestrian Calls (#/hr)												
Act Effct Green (s)		20.5	20.5	28.4	28.4		19.4		19.4			
Actuated g/C Ratio		0.30	0.30	0.41	0.41		0.28		0.28			
v/c Ratio		0.91	0.09	0.46	0.43		0.06		0.13			
Control Delay		52.8	0.3	22.1	17.4		24.4		0.6			
Queue Delay		0.0	0.0	0.0	0.0		0.0		0.0			
Total Delay		52.8	0.3	22.1	17.4		24.4		0.6			
LOS		D	A	C	B		C		A			
Approach Delay		48.6			18.2			7.5				
Approach LOS		D			B			A				

Intersection Summary

Area Type:	Other
Cycle Length:	80
Actuated Cycle Length:	68.9
Natural Cycle:	80
Control Type:	Actuated-Uncoordinated
Maximum v/c Ratio:	0.91
Intersection Signal Delay:	29.5
Intersection LOS:	C
Intersection Capacity Utilization:	46.9%
ICU Level of Service:	A
Analysis Period (min):	15

Splits and Phases: 2: Casitas Place & Dana Point Harbor Dr

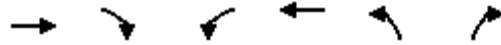


Lane Group	Ø9
Protected Phases	9
Permitted Phases	
Detector Phase	
Switch Phase	
Minimum Initial (s)	5.0
Minimum Split (s)	22.5
Total Split (s)	22.5
Total Split (%)	28%
Maximum Green (s)	18.0
Yellow Time (s)	3.5
All-Red Time (s)	1.0
Lost Time Adjust (s)	
Total Lost Time (s)	
Lead/Lag	
Lead-Lag Optimize?	
Vehicle Extension (s)	3.0
Recall Mode	None
Walk Time (s)	7.0
Flash Dont Walk (s)	11.0
Pedestrian Calls (#/hr)	45
Act Effct Green (s)	
Actuated g/C Ratio	
v/c Ratio	
Control Delay	
Queue Delay	
Total Delay	
LOS	
Approach Delay	
Approach LOS	
Intersection Summary	

Queues

2: Casitas Place & Dana Point Harbor Dr

02/19/2021



Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Group Flow (vph)	505	44	118	631	26	63
v/c Ratio	0.91	0.09	0.46	0.43	0.06	0.13
Control Delay	52.8	0.3	22.1	17.4	24.4	0.6
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	52.8	0.3	22.1	17.4	24.4	0.6
Queue Length 50th (ft)	~294	0	39	123	10	0
Queue Length 95th (ft)	#476	0	75	171	30	0
Internal Link Dist (ft)	770			233		
Turn Bay Length (ft)		225	180			
Base Capacity (vph)	553	504	255	1617	434	483
Starvation Cap Reductn	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.91	0.09	0.46	0.39	0.06	0.13













Intersection Summary

~ 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.

Lanes, Volumes, Timings
 2: Casitas Place & Dana Point Harbor Dr

02/19/2021

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↑	↗	↖	↑↑		↖		↗			
Traffic Volume (vph)	0	251	20	51	313	0	4	0	23	0	0	0
Future Volume (vph)	0	251	20	51	313	0	4	0	23	0	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0		225	180		0	0		0	0		0
Storage Lanes	0		1	1		0	1		1	0		0
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	1.00	1.00	1.00	0.95	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt			0.850						0.850			
Flt Protected				0.950			0.950					
Satd. Flow (prot)	0	1863	1583	1770	3539	0	1770	0	1583	0	0	0
Flt Permitted				0.351			0.950					
Satd. Flow (perm)	0	1863	1583	654	3539	0	1770	0	1583	0	0	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			109						109			
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		850			313			237			171	
Travel Time (s)		19.3			7.1			5.4			3.9	
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	0	264	21	54	329	0	4	0	24	0	0	0
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	264	21	54	329	0	4	0	24	0	0	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway 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
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors		2	1	1	2		1		1			
Detector Template		Thru	Right	Left	Thru		Left		Right			
Leading Detector (ft)		100	20	20	100		20		20			
Trailing Detector (ft)		0	0	0	0		0		0			
Detector 1 Position(ft)		0	0	0	0		0		0			
Detector 1 Size(ft)		6	20	20	6		20		20			
Detector 1 Type		Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex		Cl+Ex		Cl+Ex			
Detector 1 Channel												
Detector 1 Extend (s)		0.0	0.0	0.0	0.0		0.0		0.0			
Detector 1 Queue (s)		0.0	0.0	0.0	0.0		0.0		0.0			
Detector 1 Delay (s)		0.0	0.0	0.0	0.0		0.0		0.0			
Detector 2 Position(ft)		94			94							
Detector 2 Size(ft)		6			6							
Detector 2 Type		Cl+Ex			Cl+Ex							
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0							
Turn Type		NA	Perm	pm+pt	NA		Perm		Perm			
Protected Phases		4		3		8						
Permitted Phases			4		8		2		2			

Lanes, Volumes, Timings
2: Casitas Place & Dana Point Harbor Dr

02/19/2021

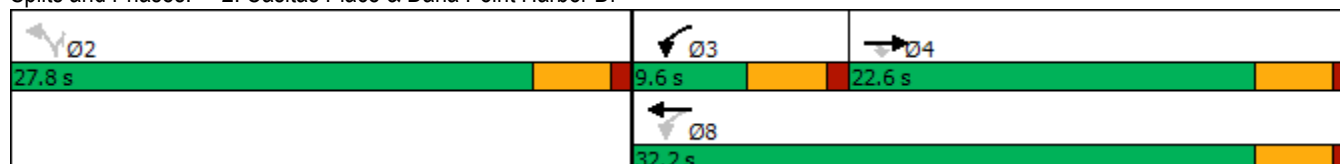


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Detector Phase		4	4	3	8		2		2			
Switch Phase												
Minimum Initial (s)		5.0	5.0	5.0	5.0		5.0		5.0			
Minimum Split (s)		22.5	22.5	9.5	22.5		22.5		22.5			
Total Split (s)		22.6	22.6	9.6	32.2		27.8		27.8			
Total Split (%)		37.7%	37.7%	16.0%	53.7%		46.3%		46.3%			
Maximum Green (s)		18.1	18.1	5.1	27.7		23.3		23.3			
Yellow Time (s)		3.5	3.5	3.5	3.5		3.5		3.5			
All-Red Time (s)		1.0	1.0	1.0	1.0		1.0		1.0			
Lost Time Adjust (s)		0.0	0.0	0.0	0.0		0.0		0.0			
Total Lost Time (s)		4.5	4.5	4.5	4.5		4.5		4.5			
Lead/Lag		Lag	Lag	Lead								
Lead-Lag Optimize?		Yes	Yes	Yes								
Vehicle Extension (s)		3.0	3.0	3.0	3.0		3.0		3.0			
Recall Mode		None	None	None	None		Max		Max			
Walk Time (s)		7.0	7.0		7.0		7.0		7.0			
Flash Dont Walk (s)		11.0	11.0		11.0		11.0		11.0			
Pedestrian Calls (#/hr)		0	0		0		0		0			
Act Effct Green (s)		12.3	12.3	17.5	17.5		24.0		24.0			
Actuated g/C Ratio		0.24	0.24	0.35	0.35		0.47		0.47			
v/c Ratio		0.58	0.04	0.16	0.27		0.00		0.03			
Control Delay		23.2	0.2	10.7	11.5		10.8		0.1			
Queue Delay		0.0	0.0	0.0	0.0		0.0		0.0			
Total Delay		23.2	0.2	10.7	11.5		10.8		0.1			
LOS		C	A	B	B		B		A			
Approach Delay		21.5			11.4			1.6				
Approach LOS		C			B			A				

Intersection Summary

Area Type:	Other
Cycle Length:	60
Actuated Cycle Length:	50.7
Natural Cycle:	55
Control Type:	Actuated-Uncoordinated
Maximum v/c Ratio:	0.58
Intersection Signal Delay:	15.2
Intersection LOS:	B
Intersection Capacity Utilization:	31.5%
ICU Level of Service:	A
Analysis Period (min):	15

Splits and Phases: 2: Casitas Place & Dana Point Harbor Dr



Queues

2: Casitas Place & Dana Point Harbor Dr

02/19/2021



Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Group Flow (vph)	264	21	54	329	4	24
v/c Ratio	0.58	0.04	0.16	0.27	0.00	0.03
Control Delay	23.2	0.2	10.7	11.5	10.8	0.1
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	23.2	0.2	10.7	11.5	10.8	0.1
Queue Length 50th (ft)	77	0	10	34	1	0
Queue Length 95th (ft)	137	0	26	56	6	0
Internal Link Dist (ft)	770			233		
Turn Bay Length (ft)	225		180			
Base Capacity (vph)	684	650	340	1990	837	806
Starvation Cap Reductn	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.39	0.03	0.16	0.17	0.00	0.03
Intersection Summary						

Level Of Service Computation Report

ICU 1(Loss as Cycle Length %) Method (Future Volume Alternative)

Intersection #2 Casitas Place/Dana Point Harbor Drive

Cycle (sec): 100 Critical Vol./Cap.(X): 0.182
Loss Time (sec): 5 Average Delay (sec/veh): xxxxxx
Optimal Cycle: 15 Level Of Service: A

Table with columns for Street Name, Approach, Movement, Control, Rights, Min. Green, Y+R, and Lanes. Rows include Casitas Place and Dana Point Harbor Drive with various traffic movements and control settings.



















Volume Module table showing Base Vol, Growth Adj, Initial Bse, Added Vol, Cm2,3,17,18, Initial Fut, User Adj, PHF Adj, PHF Volume, Reduct Vol, Reduced Vol, PCE Adj, MLF Adj, and Final Volume across different approaches.

Saturation Flow Module table showing Sat/Lane, Adjustment, Lanes, and Final Sat. values for different approaches.

Capacity Analysis Module table showing Vol/Sat and Crit Moves values for different approaches.

Lanes, Volumes, Timings
 2: Casitas Place & Dana Point Harbor Dr

02/19/2021

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	0	251	20	51	313	0	4	0	23	0	0	0
Future Volume (vph)	0	251	20	51	313	0	4	0	23	0	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0		225	180		0	0		0	0		0
Storage Lanes	0		1	1		0	1		1	0		0
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	1.00	1.00	1.00	0.95	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt			0.850						0.850			
Flt Protected				0.950			0.950					
Satd. Flow (prot)	0	1863	1583	1770	3539	0	1770	0	1583	0	0	0
Flt Permitted				0.950			0.950					
Satd. Flow (perm)	0	1863	1583	1770	3539	0	1770	0	1583	0	0	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			109						109			
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		850			313			237			171	
Travel Time (s)		19.3			7.1			5.4			3.9	
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	0	264	21	54	329	0	4	0	24	0	0	0
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	264	21	54	329	0	4	0	24	0	0	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway 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
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors		2	1	1	2		1		1			
Detector Template		Thru	Right	Left	Thru		Left		Right			
Leading Detector (ft)		100	20	20	100		20		20			
Trailing Detector (ft)		0	0	0	0		0		0			
Detector 1 Position(ft)		0	0	0	0		0		0			
Detector 1 Size(ft)		6	20	20	6		20		20			
Detector 1 Type		Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex		Cl+Ex		Cl+Ex			
Detector 1 Channel												
Detector 1 Extend (s)		0.0	0.0	0.0	0.0		0.0		0.0			
Detector 1 Queue (s)		0.0	0.0	0.0	0.0		0.0		0.0			
Detector 1 Delay (s)		0.0	0.0	0.0	0.0		0.0		0.0			
Detector 2 Position(ft)		94			94							
Detector 2 Size(ft)		6			6							
Detector 2 Type		Cl+Ex			Cl+Ex							
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0							
Turn Type		NA	Perm	Prot	NA		Perm		Perm			
Protected Phases		4		3		8						
Permitted Phases		4						2		2		

Lanes, Volumes, Timings
 2: Casitas Place & Dana Point Harbor Dr

02/19/2021

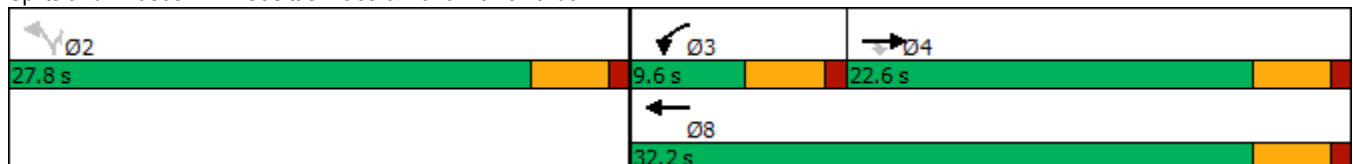


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Detector Phase		4	4	3	8		2		2			
Switch Phase												
Minimum Initial (s)		5.0	5.0	5.0	5.0		5.0		5.0			
Minimum Split (s)		22.5	22.5	9.5	22.5		22.5		22.5			
Total Split (s)		22.6	22.6	9.6	32.2		27.8		27.8			
Total Split (%)		37.7%	37.7%	16.0%	53.7%		46.3%		46.3%			
Maximum Green (s)		18.1	18.1	5.1	27.7		23.3		23.3			
Yellow Time (s)		3.5	3.5	3.5	3.5		3.5		3.5			
All-Red Time (s)		1.0	1.0	1.0	1.0		1.0		1.0			
Lost Time Adjust (s)		0.0	0.0	0.0	0.0		0.0		0.0			
Total Lost Time (s)		4.5	4.5	4.5	4.5		4.5		4.5			
Lead/Lag		Lag	Lag	Lead								
Lead-Lag Optimize?		Yes	Yes	Yes								
Vehicle Extension (s)		3.0	3.0	3.0	3.0		3.0		3.0			
Recall Mode		None	None	None	None		Max		Max			
Walk Time (s)		7.0	7.0		7.0		7.0		7.0			
Flash Dont Walk (s)		11.0	11.0		11.0		11.0		11.0			
Pedestrian Calls (#/hr)		0	0		0		0		0			
Act Effct Green (s)		12.3	12.3	5.2	17.5		24.0		24.0			
Actuated g/C Ratio		0.24	0.24	0.10	0.35		0.47		0.47			
v/c Ratio		0.58	0.04	0.30	0.27		0.00		0.03			
Control Delay		23.2	0.2	29.0	11.5		10.8		0.1			
Queue Delay		0.0	0.0	0.0	0.0		0.0		0.0			
Total Delay		23.2	0.2	29.0	11.5		10.8		0.1			
LOS		C	A	C	B		B		A			
Approach Delay		21.5			14.0			1.6				
Approach LOS		C			B			A				

Intersection Summary

Area Type:	Other
Cycle Length:	60
Actuated Cycle Length:	50.7
Natural Cycle:	55
Control Type:	Actuated-Uncoordinated
Maximum v/c Ratio:	0.58
Intersection Signal Delay:	16.6
Intersection LOS:	B
Intersection Capacity Utilization:	31.5%
ICU Level of Service:	A
Analysis Period (min):	15

Splits and Phases: 2: Casitas Place & Dana Point Harbor Dr



Queues

2: Casitas Place & Dana Point Harbor Dr

02/19/2021



Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Group Flow (vph)	264	21	54	329	4	24
v/c Ratio	0.58	0.04	0.30	0.27	0.00	0.03
Control Delay	23.2	0.2	29.0	11.5	10.8	0.1
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	23.2	0.2	29.0	11.5	10.8	0.1
Queue Length 50th (ft)	77	0	17	34	1	0
Queue Length 95th (ft)	137	0	49	56	6	0
Internal Link Dist (ft)	770			233		
Turn Bay Length (ft)	225		180			
Base Capacity (vph)	684	650	183	1990	837	806
Starvation Cap Reductn	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.39	0.03	0.30	0.17	0.00	0.03

Intersection Summary

Level Of Service Computation Report

ICU 1(Loss as Cycle Length %) Method (Future Volume Alternative)

Intersection #2 Casitas Place/Dana Point Harbor Drive

Cycle (sec): 100 Critical Vol./Cap.(X): 0.492
Loss Time (sec): 36 Average Delay (sec/veh): xxxxxx
Optimal Cycle: 65 Level Of Service: A

Table with columns for Street Name, Approach, Movement, Control, Rights, Min. Green, Y+R, and Lanes. Rows include Casitas Place and Dana Point Harbor Drive with various movement details.



















Volume Module table showing Base Vol, Growth Adj, Initial Bse, Added Vol, Cm2,3,17,18, Initial Fut, User Adj, PHF Adj, PHF Volume, Reduct Vol, Reduced Vol, PCE Adj, MLF Adj, and Final Volume.

Saturation Flow Module table showing Sat/Lane, Adjustment, Lanes, and Final Sat.

Capacity Analysis Module table showing Vol/Sat and Crit Moves.

Lanes, Volumes, Timings
 2: Casitas Place & Dana Point Harbor Dr

02/19/2021

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	0	251	20	51	313	0	4	0	23	0	0	0
Future Volume (vph)	0	251	20	51	313	0	4	0	23	0	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0		225	180		0	0		0	0		0
Storage Lanes	0		1	1		0	1		1	0		0
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	1.00	1.00	1.00	0.95	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt			0.850						0.850			
Flt Protected				0.950			0.950					
Satd. Flow (prot)	0	1863	1583	1770	3539	0	1770	0	1583	0	0	0
Flt Permitted				0.292			0.950					
Satd. Flow (perm)	0	1863	1583	544	3539	0	1770	0	1583	0	0	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			139						139			
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		850			313			237			171	
Travel Time (s)		19.3			7.1			5.4			3.9	
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	0	264	21	54	329	0	4	0	24	0	0	0
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	264	21	54	329	0	4	0	24	0	0	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway 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
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors		2	1	1	2		1		1			
Detector Template		Thru	Right	Left	Thru		Left		Right			
Leading Detector (ft)		100	20	20	100		20		20			
Trailing Detector (ft)		0	0	0	0		0		0			
Detector 1 Position(ft)		0	0	0	0		0		0			
Detector 1 Size(ft)		6	20	20	6		20		20			
Detector 1 Type		Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex		Cl+Ex		Cl+Ex			
Detector 1 Channel												
Detector 1 Extend (s)		0.0	0.0	0.0	0.0		0.0		0.0			
Detector 1 Queue (s)		0.0	0.0	0.0	0.0		0.0		0.0			
Detector 1 Delay (s)		0.0	0.0	0.0	0.0		0.0		0.0			
Detector 2 Position(ft)		94			94							
Detector 2 Size(ft)		6			6							
Detector 2 Type		Cl+Ex			Cl+Ex							
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0							
Turn Type		NA	Perm	pm+pt	NA		Perm		Perm			
Protected Phases		4		3		8						
Permitted Phases			4		8		2		2			

Lane Group	Ø9
Lane Configurations	
Traffic Volume (vph)	
Future Volume (vph)	
Ideal Flow (vphpl)	
Storage Length (ft)	
Storage Lanes	
Taper Length (ft)	
Lane Util. Factor	
Frt	
Flt Protected	
Satd. Flow (prot)	
Flt Permitted	
Satd. Flow (perm)	
Right Turn on Red	
Satd. Flow (RTOR)	
Link Speed (mph)	
Link Distance (ft)	
Travel Time (s)	
Peak Hour Factor	
Adj. Flow (vph)	
Shared Lane Traffic (%)	
Lane Group Flow (vph)	
Enter Blocked Intersection	
Lane Alignment	
Median Width(ft)	
Link Offset(ft)	
Crosswalk Width(ft)	
Two way Left Turn Lane	
Headway Factor	
Turning Speed (mph)	
Number of Detectors	
Detector Template	
Leading Detector (ft)	
Trailing Detector (ft)	
Detector 1 Position(ft)	
Detector 1 Size(ft)	
Detector 1 Type	
Detector 1 Channel	
Detector 1 Extend (s)	
Detector 1 Queue (s)	
Detector 1 Delay (s)	
Detector 2 Position(ft)	
Detector 2 Size(ft)	
Detector 2 Type	
Detector 2 Channel	
Detector 2 Extend (s)	
Turn Type	
Protected Phases	9
Permitted Phases	

Lanes, Volumes, Timings
 2: Casitas Place & Dana Point Harbor Dr

02/19/2021

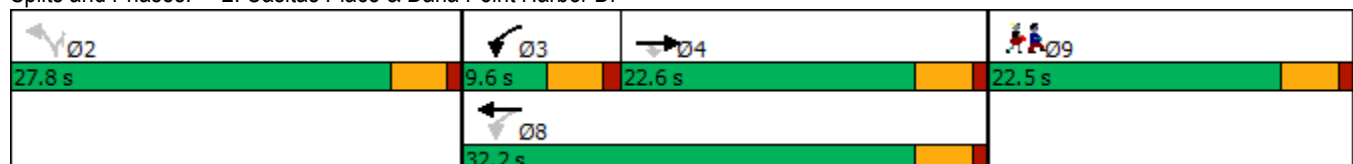


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Detector Phase		4	4	3	8		2		2			
Switch Phase												
Minimum Initial (s)		5.0	5.0	5.0	5.0		5.0		5.0			
Minimum Split (s)		22.5	22.5	9.5	22.5		22.5		22.5			
Total Split (s)		22.6	22.6	9.6	32.2		27.8		27.8			
Total Split (%)		27.4%	27.4%	11.6%	39.0%		33.7%		33.7%			
Maximum Green (s)		18.1	18.1	5.1	27.7		23.3		23.3			
Yellow Time (s)		3.5	3.5	3.5	3.5		3.5		3.5			
All-Red Time (s)		1.0	1.0	1.0	1.0		1.0		1.0			
Lost Time Adjust (s)		0.0	0.0	0.0	0.0		0.0		0.0			
Total Lost Time (s)		4.5	4.5	4.5	4.5		4.5		4.5			
Lead/Lag		Lag	Lag	Lead								
Lead-Lag Optimize?		Yes	Yes	Yes								
Vehicle Extension (s)		3.0	3.0	3.0	3.0		3.0		3.0			
Recall Mode		None	None	None	None		Max		Max			
Walk Time (s)												
Flash Dont Walk (s)												
Pedestrian Calls (#/hr)												
Act Effct Green (s)		14.1	14.1	18.7	18.7		26.1		26.1			
Actuated g/C Ratio		0.21	0.21	0.28	0.28		0.40		0.40			
v/c Ratio		0.66	0.05	0.21	0.33		0.01		0.03			
Control Delay		35.7	0.2	20.6	19.9		21.2		0.1			
Queue Delay		0.0	0.0	0.0	0.0		0.0		0.0			
Total Delay		35.7	0.2	20.6	19.9		21.2		0.1			
LOS		D	A	C	B		C		A			
Approach Delay		33.1			20.0			3.1				
Approach LOS		C			B			A				

Intersection Summary

Area Type:	Other
Cycle Length:	82.5
Actuated Cycle Length:	65.7
Natural Cycle:	80
Control Type:	Actuated-Uncoordinated
Maximum v/c Ratio:	0.66
Intersection Signal Delay:	24.7
Intersection LOS:	C
Intersection Capacity Utilization:	31.5%
ICU Level of Service:	A
Analysis Period (min):	15

Splits and Phases: 2: Casitas Place & Dana Point Harbor Dr



Lane Group	Ø9
Detector Phase	
Switch Phase	
Minimum Initial (s)	5.0
Minimum Split (s)	22.5
Total Split (s)	22.5
Total Split (%)	27%
Maximum Green (s)	18.0
Yellow Time (s)	3.5
All-Red Time (s)	1.0
Lost Time Adjust (s)	
Total Lost Time (s)	
Lead/Lag	
Lead-Lag Optimize?	
Vehicle Extension (s)	3.0
Recall Mode	None
Walk Time (s)	7.0
Flash Dont Walk (s)	11.0
Pedestrian Calls (#/hr)	45
Act Effct Green (s)	
Actuated g/C Ratio	
v/c Ratio	
Control Delay	
Queue Delay	
Total Delay	
LOS	
Approach Delay	
Approach LOS	
Intersection Summary	

Queues

2: Casitas Place & Dana Point Harbor Dr

02/19/2021





















Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Group Flow (vph)	264	21	54	329	4	24
v/c Ratio	0.66	0.05	0.21	0.33	0.01	0.03
Control Delay	35.7	0.2	20.6	19.9	21.2	0.1
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	35.7	0.2	20.6	19.9	21.2	0.1
Queue Length 50th (ft)	125	0	19	64	1	0
Queue Length 95th (ft)	205	0	44	97	9	0
Internal Link Dist (ft)	770			233		
Turn Bay Length (ft)		225	180			
Base Capacity (vph)	574	584	261	1669	702	711
Starvation Cap Reductn	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.46	0.04	0.21	0.20	0.01	0.03

Intersection Summary

Lanes, Volumes, Timings
2: Casitas Place & Dana Point Harbor Dr

02/19/2021

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	0	385	26	106	318	0	16	0	21	0	0	0
Future Volume (vph)	0	385	26	106	318	0	16	0	21	0	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0		225	180		0	0		0	0		0
Storage Lanes	0		1	1		0	1		1	0		0
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	1.00	1.00	1.00	0.95	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor			0.93	0.98			0.95		0.93			
Frt			0.850						0.850			
Flt Protected				0.950			0.950					
Satd. Flow (prot)	0	1863	1583	1770	3539	0	1770	0	1583	0	0	0
Flt Permitted				0.239			0.950					
Satd. Flow (perm)	0	1863	1474	437	3539	0	1681	0	1474	0	0	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			109						109			
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		850			313			237			171	
Travel Time (s)		19.3			7.1			5.4			3.9	
Confl. Peds. (#/hr)	30		30	30		30	30		30	30		30
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	0	405	27	112	335	0	17	0	22	0	0	0
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	405	27	112	335	0	17	0	22	0	0	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway 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
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors		2	1	1	2		1		1			
Detector Template		Thru	Right	Left	Thru		Left		Right			
Leading Detector (ft)		100	20	20	100		20		20			
Trailing Detector (ft)		0	0	0	0		0		0			
Detector 1 Position(ft)		0	0	0	0		0		0			
Detector 1 Size(ft)		6	20	20	6		20		20			
Detector 1 Type		Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex		Cl+Ex		Cl+Ex			
Detector 1 Channel												
Detector 1 Extend (s)		0.0	0.0	0.0	0.0		0.0		0.0			
Detector 1 Queue (s)		0.0	0.0	0.0	0.0		0.0		0.0			
Detector 1 Delay (s)		0.0	0.0	0.0	0.0		0.0		0.0			
Detector 2 Position(ft)		94			94							
Detector 2 Size(ft)		6			6							
Detector 2 Type		Cl+Ex			Cl+Ex							
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0							
Turn Type		NA	Perm	pm+pt	NA		Perm		Perm			

Lanes, Volumes, Timings
 2: Casitas Place & Dana Point Harbor Dr

02/19/2021

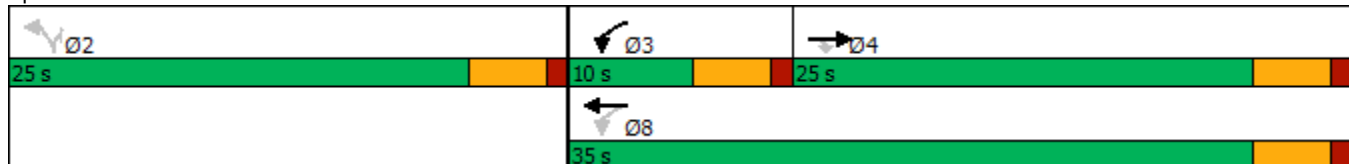


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Protected Phases		4		3	8							
Permitted Phases			4	8			2		2			
Detector Phase		4	4	3	8		2		2			
Switch Phase												
Minimum Initial (s)		5.0	5.0	5.0	5.0		5.0		5.0			
Minimum Split (s)		22.5	22.5	9.5	22.5		22.5		22.5			
Total Split (s)		25.0	25.0	10.0	35.0		25.0		25.0			
Total Split (%)		41.7%	41.7%	16.7%	58.3%		41.7%		41.7%			
Maximum Green (s)		20.5	20.5	5.5	30.5		20.5		20.5			
Yellow Time (s)		3.5	3.5	3.5	3.5		3.5		3.5			
All-Red Time (s)		1.0	1.0	1.0	1.0		1.0		1.0			
Lost Time Adjust (s)		0.0	0.0	0.0	0.0		0.0		0.0			
Total Lost Time (s)		4.5	4.5	4.5	4.5		4.5		4.5			
Lead/Lag		Lag	Lag	Lead								
Lead-Lag Optimize?		Yes	Yes	Yes								
Vehicle Extension (s)		3.0	3.0	3.0	3.0		3.0		3.0			
Recall Mode		None	None	None	None		Max		Max			
Walk Time (s)		7.0	7.0		7.0		7.0		7.0			
Flash Dont Walk (s)		11.0	11.0		11.0		11.0		11.0			
Pedestrian Calls (#/hr)		20	20		20		20		20			
Act Effct Green (s)		16.1	16.1	23.6	23.6		21.1		21.1			
Actuated g/C Ratio		0.30	0.30	0.44	0.44		0.39		0.39			
v/c Ratio		0.73	0.05	0.34	0.22		0.03		0.03			
Control Delay		25.8	0.2	10.9	9.0		13.2		0.1			
Queue Delay		0.0	0.0	0.0	0.0		0.0		0.0			
Total Delay		25.8	0.2	10.9	9.0		13.2		0.1			
LOS		C	A	B	A		B		A			
Approach Delay		24.2			9.5			5.8				
Approach LOS		C			A			A				

Intersection Summary

Area Type:	Other
Cycle Length:	60
Actuated Cycle Length:	53.9
Natural Cycle:	55
Control Type:	Actuated-Uncoordinated
Maximum v/c Ratio:	0.73
Intersection Signal Delay:	16.2
Intersection LOS:	B
Intersection Capacity Utilization:	42.8%
ICU Level of Service:	A
Analysis Period (min):	15

Splits and Phases: 2: Casitas Place & Dana Point Harbor Dr



Queues

2: Casitas Place & Dana Point Harbor Dr

02/19/2021



Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Group Flow (vph)	405	27	112	335	17	22
v/c Ratio	0.73	0.05	0.34	0.22	0.03	0.03
Control Delay	25.8	0.2	10.9	9.0	13.2	0.1
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	25.8	0.2	10.9	9.0	13.2	0.1
Queue Length 50th (ft)	121	0	19	31	4	0
Queue Length 95th (ft)	204	0	42	51	15	0
Internal Link Dist (ft)	770			233		
Turn Bay Length (ft)		225	180			
Base Capacity (vph)	727	642	331	2057	656	642
Starvation Cap Reductn	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.56	0.04	0.34	0.16	0.03	0.03

Intersection Summary

Level Of Service Computation Report

ICU 1(Loss as Cycle Length %) Method (Future Volume Alternative)

Intersection #2 Casitas Place/Dana Point Harbor Drive

Cycle (sec): 100 Critical Vol./Cap.(X): 0.243
Loss Time (sec): 5 Average Delay (sec/veh): xxxxxx
Optimal Cycle: 16 Level Of Service: A

Table with columns for Street Name, Approach, Movement, Control, Rights, Min. Green, Y+R, and Lanes. Rows include Casitas Place and Dana Point Harbor Drive with various traffic movements and control settings.



















Volume Module table showing traffic volume data including Base Vol, Growth Adj, Initial Bse, Added Vol, Cm2,3,17,18, Initial Fut, User Adj, PHF Adj, PHF Volume, Reduct Vol, Reduced Vol, PCE Adj, MLF Adj, and Final Volume.

Saturation Flow Module table showing Sat/Lane, Adjustment, Lanes, and Final Sat. values for different traffic movements.

Capacity Analysis Module table showing Vol/Sat and Crit Moves for different traffic movements.

Lanes, Volumes, Timings
 2: Casitas Place & Dana Point Harbor Dr

02/19/2021

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	0	385	26	106	318	0	16	0	21	0	0	0
Future Volume (vph)	0	385	26	106	318	0	16	0	21	0	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0		225	180		0	0		0	0		0
Storage Lanes	0		1	1		0	1		1	0		0
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	1.00	1.00	1.00	0.95	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor			0.93	0.97			0.95		0.93			
Frt			0.850						0.850			
Flt Protected				0.950			0.950					
Satd. Flow (prot)	0	1863	1583	1770	3539	0	1770	0	1583	0	0	0
Flt Permitted				0.950			0.950					
Satd. Flow (perm)	0	1863	1474	1719	3539	0	1681	0	1474	0	0	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			109						109			
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		850			313			237			171	
Travel Time (s)		19.3			7.1			5.4			3.9	
Confl. Peds. (#/hr)	30		30	30		30	30		30	30		30
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	0	405	27	112	335	0	17	0	22	0	0	0
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	405	27	112	335	0	17	0	22	0	0	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway 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
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors		2	1	1	2		1		1			
Detector Template		Thru	Right	Left	Thru		Left		Right			
Leading Detector (ft)		100	20	20	100		20		20			
Trailing Detector (ft)		0	0	0	0		0		0			
Detector 1 Position(ft)		0	0	0	0		0		0			
Detector 1 Size(ft)		6	20	20	6		20		20			
Detector 1 Type		Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex		Cl+Ex		Cl+Ex			
Detector 1 Channel												
Detector 1 Extend (s)		0.0	0.0	0.0	0.0		0.0		0.0			
Detector 1 Queue (s)		0.0	0.0	0.0	0.0		0.0		0.0			
Detector 1 Delay (s)		0.0	0.0	0.0	0.0		0.0		0.0			
Detector 2 Position(ft)		94			94							
Detector 2 Size(ft)		6			6							
Detector 2 Type		Cl+Ex			Cl+Ex							
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0							
Turn Type		NA	Perm	Prot	NA		Perm		Perm			

Lanes, Volumes, Timings
2: Casitas Place & Dana Point Harbor Dr

02/19/2021

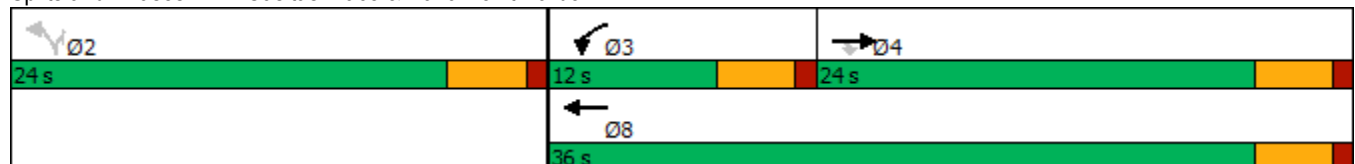


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Protected Phases		4		3	8							
Permitted Phases			4				2		2			
Detector Phase		4	4	3	8		2		2			
Switch Phase												
Minimum Initial (s)		5.0	5.0	5.0	5.0		5.0		5.0			
Minimum Split (s)		22.5	22.5	9.5	22.5		22.5		22.5			
Total Split (s)		24.0	24.0	12.0	36.0		24.0		24.0			
Total Split (%)		40.0%	40.0%	20.0%	60.0%		40.0%		40.0%			
Maximum Green (s)		19.5	19.5	7.5	31.5		19.5		19.5			
Yellow Time (s)		3.5	3.5	3.5	3.5		3.5		3.5			
All-Red Time (s)		1.0	1.0	1.0	1.0		1.0		1.0			
Lost Time Adjust (s)		0.0	0.0	0.0	0.0		0.0		0.0			
Total Lost Time (s)		4.5	4.5	4.5	4.5		4.5		4.5			
Lead/Lag		Lag	Lag	Lead								
Lead-Lag Optimize?		Yes	Yes	Yes								
Vehicle Extension (s)		3.0	3.0	3.0	3.0		3.0		3.0			
Recall Mode		None	None	None	None		Max		Max			
Walk Time (s)		7.0	7.0		7.0		7.0		7.0			
Flash Dont Walk (s)		11.0	11.0		11.0		11.0		11.0			
Pedestrian Calls (#/hr)		20	20		20		20		20			
Act Effct Green (s)		15.8	15.8	7.2	24.7		20.1		20.1			
Actuated g/C Ratio		0.29	0.29	0.13	0.46		0.37		0.37			
v/c Ratio		0.74	0.05	0.48	0.21		0.03		0.04			
Control Delay		27.3	0.2	31.5	8.3		13.9		0.1			
Queue Delay		0.0	0.0	0.0	0.0		0.0		0.0			
Total Delay		27.3	0.2	31.5	8.3		13.9		0.1			
LOS		C	A	C	A		B		A			
Approach Delay		25.6			14.1			6.1				
Approach LOS		C			B			A				

Intersection Summary

Area Type:	Other
Cycle Length:	60
Actuated Cycle Length:	54.1
Natural Cycle:	60
Control Type:	Actuated-Uncoordinated
Maximum v/c Ratio:	0.74
Intersection Signal Delay:	19.2
Intersection LOS:	B
Intersection Capacity Utilization:	42.8%
ICU Level of Service:	A
Analysis Period (min):	15

Splits and Phases: 2: Casitas Place & Dana Point Harbor Dr



Queues

2: Casitas Place & Dana Point Harbor Dr

02/19/2021



Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Group Flow (vph)	405	27	112	335	17	22
v/c Ratio	0.74	0.05	0.48	0.21	0.03	0.04
Control Delay	27.3	0.2	31.5	8.3	13.9	0.1
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	27.3	0.2	31.5	8.3	13.9	0.1
Queue Length 50th (ft)	124	0	37	30	4	0
Queue Length 95th (ft)	210	0	#82	49	16	0
Internal Link Dist (ft)	770			233		
Turn Bay Length (ft)		225	180			
Base Capacity (vph)	692	615	253	2123	624	615
Starvation Cap Reductn	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.59	0.04	0.44	0.16	0.03	0.04

Intersection Summary

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

Level Of Service Computation Report

ICU 1(Loss as Cycle Length %) Method (Future Volume Alternative)

Intersection #2 Casitas Place/Dana Point Harbor Drive

Cycle (sec): 100 Critical Vol./Cap.(X): 0.553
 Loss Time (sec): 36 Average Delay (sec/veh): xxxxxx
 Optimal Cycle: 70 Level Of Service: A

Street Name:	Casitas Place						Dana Point Harbor Drive					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Protected			Protected			Protected			Prot+Permit		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	1	0	0	0	0	0	0	0	1	1	0	0

Volume Module:

Base Vol:	16	0	27	0	0	0	0	310	25	84	262	0
Growth Adj:	1.02	1.02	1.02	1.02	1.02	1.02	1.02	1.02	1.02	1.02	1.02	1.02
Initial Bse:	16	0	28	0	0	0	0	318	26	86	269	0
Added Vol:	0	0	-7	0	0	0	0	50	0	-6	49	0
Cm2,3,17,18:	0	0	0	0	0	0	0	17	0	26	0	0
Initial Fut:	16	0	21	0	0	0	0	385	26	106	318	0
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	16	0	21	0	0	0	0	385	26	106	318	0
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	16	0	21	0	0	0	0	385	26	106	318	0
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	16	0	21	0	0	0	0	385	26	106	318	0

Saturation Flow Module:



















Sat/Lane:	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700
Adjustment:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Lanes:	1.00	0.00	1.00	0.00	0.00	0.00	0.00	1.88	0.12	1.00	2.00	0.00
Final Sat.:	1700	0	1700	0	0	0	0	3188	212	1700	3400	0

Capacity Analysis Module:

Vol/Sat:	0.01	0.00	0.01	0.00	0.00	0.00	0.00	0.12	0.12	0.06	0.09	0.00
Crit Moves:	****						****			****		

Lanes, Volumes, Timings
 2: Casitas Place & Dana Point Harbor Dr

02/19/2021

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	0	385	26	106	318	0	16	0	21	0	0	0
Future Volume (vph)	0	385	26	106	318	0	16	0	21	0	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0		225	180		0	0		0	0		0
Storage Lanes	0		1	1		0	1		1	0		0
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	1.00	1.00	1.00	0.95	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor			0.92	0.98			0.94		0.92			
Frt			0.850						0.850			
Flt Protected				0.950			0.950					
Satd. Flow (prot)	0	1863	1583	1770	3539	0	1770	0	1583	0	0	0
Flt Permitted				0.173			0.950					
Satd. Flow (perm)	0	1863	1453	317	3539	0	1657	0	1453	0	0	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			139						139			
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		850			313			237			171	
Travel Time (s)		19.3			7.1			5.4			3.9	
Confl. Peds. (#/hr)	30		30	30		30	30		30	30		30
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	0	405	27	112	335	0	17	0	22	0	0	0
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	405	27	112	335	0	17	0	22	0	0	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway 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
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors		2	1	1	2		1		1			
Detector Template		Thru	Right	Left	Thru		Left		Right			
Leading Detector (ft)		100	20	20	100		20		20			
Trailing Detector (ft)		0	0	0	0		0		0			
Detector 1 Position(ft)		0	0	0	0		0		0			
Detector 1 Size(ft)		6	20	20	6		20		20			
Detector 1 Type		Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex		Cl+Ex		Cl+Ex			
Detector 1 Channel												
Detector 1 Extend (s)		0.0	0.0	0.0	0.0		0.0		0.0			
Detector 1 Queue (s)		0.0	0.0	0.0	0.0		0.0		0.0			
Detector 1 Delay (s)		0.0	0.0	0.0	0.0		0.0		0.0			
Detector 2 Position(ft)		94			94							
Detector 2 Size(ft)		6			6							
Detector 2 Type		Cl+Ex			Cl+Ex							
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0							
Turn Type		NA	Perm	pm+pt	NA		Perm		Perm			

Lane Group	Ø9
Lane Configurations	
Traffic Volume (vph)	
Future Volume (vph)	
Ideal Flow (vphpl)	
Storage Length (ft)	
Storage Lanes	
Taper Length (ft)	
Lane Util. Factor	
Ped Bike Factor	
Frt	
Flt Protected	
Satd. Flow (prot)	
Flt Permitted	
Satd. Flow (perm)	
Right Turn on Red	
Satd. Flow (RTOR)	
Link Speed (mph)	
Link Distance (ft)	
Travel Time (s)	
Confl. Peds. (#/hr)	
Peak Hour Factor	
Adj. Flow (vph)	
Shared Lane Traffic (%)	
Lane Group Flow (vph)	
Enter Blocked Intersection	
Lane Alignment	
Median Width(ft)	
Link Offset(ft)	
Crosswalk Width(ft)	
Two way Left Turn Lane	
Headway Factor	
Turning Speed (mph)	
Number of Detectors	
Detector Template	
Leading Detector (ft)	
Trailing Detector (ft)	
Detector 1 Position(ft)	
Detector 1 Size(ft)	
Detector 1 Type	
Detector 1 Channel	
Detector 1 Extend (s)	
Detector 1 Queue (s)	
Detector 1 Delay (s)	
Detector 2 Position(ft)	
Detector 2 Size(ft)	
Detector 2 Type	
Detector 2 Channel	
Detector 2 Extend (s)	
Turn Type	

Lanes, Volumes, Timings
 2: Casitas Place & Dana Point Harbor Dr

02/19/2021

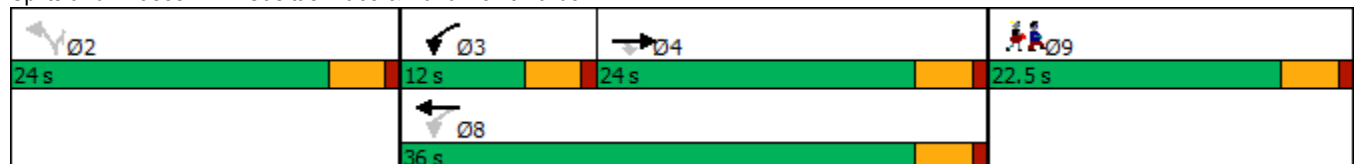


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Protected Phases		4		3	8							
Permitted Phases			4	8			2		2			
Detector Phase		4	4	3	8		2		2			
Switch Phase												
Minimum Initial (s)		5.0	5.0	5.0	5.0		5.0		5.0			
Minimum Split (s)		22.5	22.5	9.5	22.5		22.5		22.5			
Total Split (s)		24.0	24.0	12.0	36.0		24.0		24.0			
Total Split (%)		29.1%	29.1%	14.5%	43.6%		29.1%		29.1%			
Maximum Green (s)		19.5	19.5	7.5	31.5		19.5		19.5			
Yellow Time (s)		3.5	3.5	3.5	3.5		3.5		3.5			
All-Red Time (s)		1.0	1.0	1.0	1.0		1.0		1.0			
Lost Time Adjust (s)		0.0	0.0	0.0	0.0		0.0		0.0			
Total Lost Time (s)		4.5	4.5	4.5	4.5		4.5		4.5			
Lead/Lag		Lag	Lag	Lead								
Lead-Lag Optimize?		Yes	Yes	Yes								
Vehicle Extension (s)		3.0	3.0	3.0	3.0		3.0		3.0			
Recall Mode		None	None	None	None		Max		Max			
Walk Time (s)												
Flash Dont Walk (s)												
Pedestrian Calls (#/hr)												
Act Effct Green (s)		18.7	18.7	27.4	27.4		21.0		21.0			
Actuated g/C Ratio		0.27	0.27	0.39	0.39		0.30		0.30			
v/c Ratio		0.81	0.05	0.40	0.24		0.03		0.04			
Control Delay		42.7	0.2	20.4	16.0		24.8		0.1			
Queue Delay		0.0	0.0	0.0	0.0		0.0		0.0			
Total Delay		42.7	0.2	20.4	16.0		24.8		0.1			
LOS		D	A	C	B		C		A			
Approach Delay		40.0			17.1			10.9				
Approach LOS		D			B			B				

Intersection Summary

Area Type:	Other
Cycle Length:	82.5
Actuated Cycle Length:	69.5
Natural Cycle:	80
Control Type:	Actuated-Uncoordinated
Maximum v/c Ratio:	0.81
Intersection Signal Delay:	27.6
Intersection LOS:	C
Intersection Capacity Utilization:	41.6%
ICU Level of Service:	A
Analysis Period (min):	15

Splits and Phases: 2: Casitas Place & Dana Point Harbor Dr



Lane Group	Ø9
Protected Phases	9
Permitted Phases	
Detector Phase	
Switch Phase	
Minimum Initial (s)	5.0
Minimum Split (s)	22.5
Total Split (s)	22.5
Total Split (%)	27%
Maximum Green (s)	18.0
Yellow Time (s)	3.5
All-Red Time (s)	1.0
Lost Time Adjust (s)	
Total Lost Time (s)	
Lead/Lag	
Lead-Lag Optimize?	
Vehicle Extension (s)	3.0
Recall Mode	None
Walk Time (s)	7.0
Flash Dont Walk (s)	11.0
Pedestrian Calls (#/hr)	45
Act Effct Green (s)	
Actuated g/C Ratio	
v/c Ratio	
Control Delay	
Queue Delay	
Total Delay	
LOS	
Approach Delay	
Approach LOS	
Intersection Summary	

Queues

2: Casitas Place & Dana Point Harbor Dr

02/19/2021





















Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Group Flow (vph)	405	27	112	335	17	22
v/c Ratio	0.81	0.05	0.40	0.24	0.03	0.04
Control Delay	42.7	0.2	20.4	16.0	24.8	0.1
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	42.7	0.2	20.4	16.0	24.8	0.1
Queue Length 50th (ft)	205	0	37	61	7	0
Queue Length 95th (ft)	#373	0	72	91	23	0
Internal Link Dist (ft)	770			233		
Turn Bay Length (ft)		225	180			
Base Capacity (vph)	563	535	294	1727	500	535
Starvation Cap Reductn	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.72	0.05	0.38	0.19	0.03	0.04

Intersection Summary

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

Lanes, Volumes, Timings
 2: Casitas Place & Dana Point Harbor Dr

02/19/2021

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	0	508	43	115	611	0	26	0	62	0	0	0
Future Volume (vph)	0	508	43	115	611	0	26	0	62	0	0	0
Ideal Flow (vphp)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0		225	180		0	0		0	0		0
Storage Lanes	0		1	1		0	1		1	0		0
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	1.00	1.00	1.00	0.95	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor			0.88	0.97			0.90		0.88			
Frt			0.850						0.850			
Flt Protected				0.950			0.950					
Satd. Flow (prot)	0	1863	1583	1770	3539	0	1770	0	1583	0	0	0
Flt Permitted				0.167			0.950					
Satd. Flow (perm)	0	1863	1397	303	3539	0	1593	0	1397	0	0	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			109						109			
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		850			313			237			171	
Travel Time (s)		19.3			7.1			5.4			3.9	
Confl. Peds. (#/hr)	60		60	60		60	60		60	60		60
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	0	535	45	121	643	0	27	0	65	0	0	0
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	535	45	121	643	0	27	0	65	0	0	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway 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
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors		2	1	1	2		1		1			
Detector Template		Thru	Right	Left	Thru		Left		Right			
Leading Detector (ft)		100	20	20	100		20		20			
Trailing Detector (ft)		0	0	0	0		0		0			
Detector 1 Position(ft)		0	0	0	0		0		0			
Detector 1 Size(ft)		6	20	20	6		20		20			
Detector 1 Type		Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex		Cl+Ex		Cl+Ex			
Detector 1 Channel												
Detector 1 Extend (s)		0.0	0.0	0.0	0.0		0.0		0.0			
Detector 1 Queue (s)		0.0	0.0	0.0	0.0		0.0		0.0			
Detector 1 Delay (s)		0.0	0.0	0.0	0.0		0.0		0.0			
Detector 2 Position(ft)		94			94							
Detector 2 Size(ft)		6			6							
Detector 2 Type		Cl+Ex			Cl+Ex							
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0							
Turn Type		NA	Perm	pm+pt	NA		Perm		Perm			

Lanes, Volumes, Timings
 2: Casitas Place & Dana Point Harbor Dr

02/19/2021

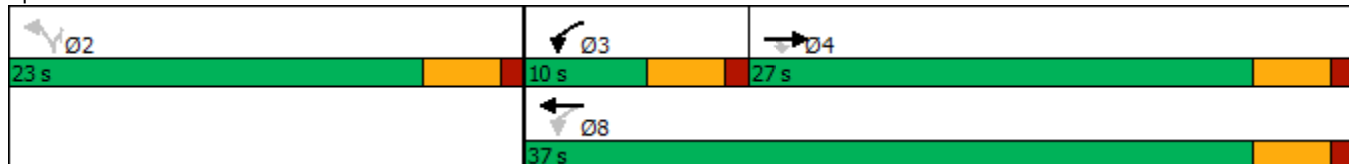


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Protected Phases		4		3	8							
Permitted Phases			4	8			2		2			
Detector Phase		4	4	3	8		2		2			
Switch Phase												
Minimum Initial (s)		5.0	5.0	5.0	5.0		5.0		5.0			
Minimum Split (s)		22.5	22.5	9.5	22.5		22.5		22.5			
Total Split (s)		27.0	27.0	10.0	37.0		23.0		23.0			
Total Split (%)		45.0%	45.0%	16.7%	61.7%		38.3%		38.3%			
Maximum Green (s)		22.5	22.5	5.5	32.5		18.5		18.5			
Yellow Time (s)		3.5	3.5	3.5	3.5		3.5		3.5			
All-Red Time (s)		1.0	1.0	1.0	1.0		1.0		1.0			
Lost Time Adjust (s)		0.0	0.0	0.0	0.0		0.0		0.0			
Total Lost Time (s)		4.5	4.5	4.5	4.5		4.5		4.5			
Lead/Lag		Lag	Lag	Lead								
Lead-Lag Optimize?		Yes	Yes	Yes								
Vehicle Extension (s)		3.0	3.0	3.0	3.0		3.0		3.0			
Recall Mode		None	None	None	None		Max		Max			
Walk Time (s)		7.0	7.0		7.0		7.0		7.0			
Flash Dont Walk (s)		11.0	11.0		11.0		11.0		11.0			
Pedestrian Calls (#/hr)		20	20		20		20		20			
Act Effct Green (s)		19.4	19.4	26.9	26.9		19.0		19.0			
Actuated g/C Ratio		0.35	0.35	0.49	0.49		0.34		0.34			
v/c Ratio		0.82	0.08	0.41	0.37		0.05		0.12			
Control Delay		28.7	0.4	11.1	8.9		15.0		2.0			
Queue Delay		0.0	0.0	0.0	0.0		0.0		0.0			
Total Delay		28.7	0.4	11.1	8.9		15.0		2.0			
LOS		C	A	B	A		B		A			
Approach Delay		26.5			9.3			5.8				
Approach LOS		C			A			A				

Intersection Summary

Area Type:	Other
Cycle Length:	60
Actuated Cycle Length:	55.1
Natural Cycle:	60
Control Type:	Actuated-Uncoordinated
Maximum v/c Ratio:	0.82
Intersection Signal Delay:	16.0
Intersection LOS:	B
Intersection Capacity Utilization:	49.2%
ICU Level of Service:	A
Analysis Period (min):	15

Splits and Phases: 2: Casitas Place & Dana Point Harbor Dr



Queues

2: Casitas Place & Dana Point Harbor Dr

02/19/2021



Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Group Flow (vph)	535	45	121	643	27	65
v/c Ratio	0.82	0.08	0.41	0.37	0.05	0.12
Control Delay	28.7	0.4	11.1	8.9	15.0	2.0
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	28.7	0.4	11.1	8.9	15.0	2.0
Queue Length 50th (ft)	164	0	20	62	7	0
Queue Length 95th (ft)	#310	2	41	90	22	11
Internal Link Dist (ft)	770			233		
Turn Bay Length (ft)		225	180			
Base Capacity (vph)	780	649	298	2142	549	553
Starvation Cap Reductn	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.69	0.07	0.41	0.30	0.05	0.12

Intersection Summary

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

Level Of Service Computation Report

ICU 1(Loss as Cycle Length %) Method (Future Volume Alternative)

Intersection #2 Casitas Place/Dana Point Harbor Drive

Cycle (sec): 100 Critical Vol./Cap.(X): 0.316
Loss Time (sec): 5 Average Delay (sec/veh): xxxxxx
Optimal Cycle: 18 Level Of Service: A

Table with columns for Street Name, Approach, Movement, Control, Rights, Min. Green, Y+R, and Lanes. Rows include Casitas Place and Dana Point Harbor Drive with various traffic movements and control settings.



















Volume Module table showing Base Vol, Growth Adj, Initial Bse, Added Vol, Cm2,3,17,18, Initial Fut, User Adj, PHF Adj, PHF Volume, Reduct Vol, Reduced Vol, PCE Adj, MLF Adj, and FinalVolume for various movements.

Saturation Flow Module table showing Sat/Lane, Adjustment, Lanes, and Final Sat. for various movements.

Capacity Analysis Module table showing Vol/Sat and Crit Moves for various movements.

Lanes, Volumes, Timings
 2: Casitas Place & Dana Point Harbor Dr

02/19/2021

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	0	508	43	115	611	0	26	0	62	0	0	0
Future Volume (vph)	0	508	43	115	611	0	26	0	62	0	0	0
Ideal Flow (vphp)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0		225	180		0	0		0	0		0
Storage Lanes	0		1	1		0	1		1	0		0
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	1.00	1.00	1.00	0.95	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor			0.88	0.95			0.90		0.88			
Frt			0.850						0.850			
Flt Protected				0.950			0.950					
Satd. Flow (prot)	0	1863	1583	1770	3539	0	1770	0	1583	0	0	0
Flt Permitted				0.950			0.950					
Satd. Flow (perm)	0	1863	1397	1685	3539	0	1593	0	1397	0	0	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			109						109			
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		850			313			237			171	
Travel Time (s)		19.3			7.1			5.4			3.9	
Confl. Peds. (#/hr)	60		60	60		60	60		60	60		60
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	0	535	45	121	643	0	27	0	65	0	0	0
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	535	45	121	643	0	27	0	65	0	0	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway 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
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors		2	1	1	2		1		1			
Detector Template		Thru	Right	Left	Thru		Left		Right			
Leading Detector (ft)		100	20	20	100		20		20			
Trailing Detector (ft)		0	0	0	0		0		0			
Detector 1 Position(ft)		0	0	0	0		0		0			
Detector 1 Size(ft)		6	20	20	6		20		20			
Detector 1 Type		Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex		Cl+Ex		Cl+Ex			
Detector 1 Channel												
Detector 1 Extend (s)		0.0	0.0	0.0	0.0		0.0		0.0			
Detector 1 Queue (s)		0.0	0.0	0.0	0.0		0.0		0.0			
Detector 1 Delay (s)		0.0	0.0	0.0	0.0		0.0		0.0			
Detector 2 Position(ft)		94			94							
Detector 2 Size(ft)		6			6							
Detector 2 Type		Cl+Ex			Cl+Ex							
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0							
Turn Type		NA	Perm	Prot	NA		Perm		Perm			

Lanes, Volumes, Timings
2: Casitas Place & Dana Point Harbor Dr

02/19/2021

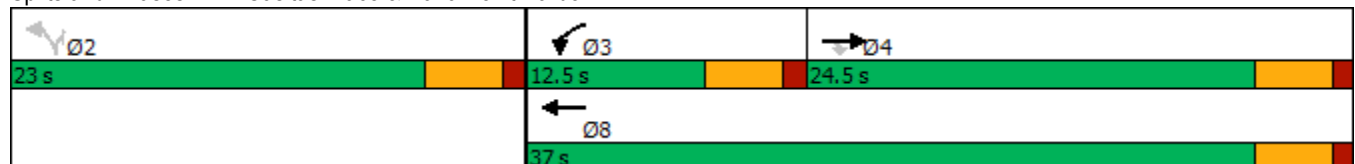


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Protected Phases		4		3	8							
Permitted Phases			4				2		2			
Detector Phase		4	4	3	8		2		2			
Switch Phase												
Minimum Initial (s)		5.0	5.0	5.0	5.0		5.0		5.0			
Minimum Split (s)		22.5	22.5	9.5	22.5		22.5		22.5			
Total Split (s)		24.5	24.5	12.5	37.0		23.0		23.0			
Total Split (%)		40.8%	40.8%	20.8%	61.7%		38.3%		38.3%			
Maximum Green (s)		20.0	20.0	8.0	32.5		18.5		18.5			
Yellow Time (s)		3.5	3.5	3.5	3.5		3.5		3.5			
All-Red Time (s)		1.0	1.0	1.0	1.0		1.0		1.0			
Lost Time Adjust (s)		0.0	0.0	0.0	0.0		0.0		0.0			
Total Lost Time (s)		4.5	4.5	4.5	4.5		4.5		4.5			
Lead/Lag		Lag	Lag	Lead								
Lead-Lag Optimize?		Yes	Yes	Yes								
Vehicle Extension (s)		3.0	3.0	3.0	3.0		3.0		3.0			
Recall Mode		None	None	None	None		Max		Max			
Walk Time (s)		7.0	7.0		7.0		7.0		7.0			
Flash Dont Walk (s)		11.0	11.0		11.0		11.0		11.0			
Pedestrian Calls (#/hr)		20	20		20		20		20			
Act Effct Green (s)		18.6	18.6	7.5	28.0		18.9		18.9			
Actuated g/C Ratio		0.33	0.33	0.13	0.50		0.34		0.34			
v/c Ratio		0.87	0.08	0.51	0.36		0.05		0.12			
Control Delay		35.7	0.5	32.5	8.8		15.0		2.0			
Queue Delay		0.0	0.0	0.0	0.0		0.0		0.0			
Total Delay		35.7	0.5	32.5	8.8		15.0		2.0			
LOS		D	A	C	A		B		A			
Approach Delay		33.0			12.5			5.8				
Approach LOS		C			B			A				

Intersection Summary

Area Type:	Other
Cycle Length:	60
Actuated Cycle Length:	56.1
Natural Cycle:	60
Control Type:	Actuated-Uncoordinated
Maximum v/c Ratio:	0.87
Intersection Signal Delay:	20.4
Intersection LOS:	C
Intersection Capacity Utilization:	49.2%
ICU Level of Service:	A
Analysis Period (min):	15

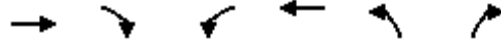
Splits and Phases: 2: Casitas Place & Dana Point Harbor Dr



Queues

2: Casitas Place & Dana Point Harbor Dr

02/19/2021



Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Group Flow (vph)	535	45	121	643	27	65
v/c Ratio	0.87	0.08	0.51	0.36	0.05	0.12
Control Delay	35.7	0.5	32.5	8.8	15.0	2.0
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	35.7	0.5	32.5	8.8	15.0	2.0
Queue Length 50th (ft)	177	0	42	62	7	0
Queue Length 95th (ft)	#340	2	87	90	22	11
Internal Link Dist (ft)	770			233		
Turn Bay Length (ft)		225	180			
Base Capacity (vph)	680	579	258	2097	537	543
Starvation Cap Reductn	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.79	0.08	0.47	0.31	0.05	0.12

Intersection Summary

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

Level Of Service Computation Report

ICU 1(Loss as Cycle Length %) Method (Future Volume Alternative)

Intersection #2 Casitas Place/Dana Point Harbor Drive

Cycle (sec): 100 Critical Vol./Cap.(X): 0.626
Loss Time (sec): 36 Average Delay (sec/veh): xxxxxx
Optimal Cycle: 77 Level Of Service: B

Street Name: Casitas Place Dana Point Harbor Drive
Approach: North Bound South Bound East Bound West Bound
Movement: L - T - R L - T - R L - T - R L - T - R

Control: Protected Protected Protected Prot+Permit
Rights: Include Include Include Include
Min. Green: 0 0 0 0 0 0 0 0 0 0 0 0
Y+R: 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0
Lanes: 1 0 0 0 1 0 0 0 0 0 0 0 1 1 0 1 0 2 0 0



















Volume Module:
Base Vol: 25 0 67 0 0 0 0 427 42 118 528 0
Growth Adj: 1.02 1.02 1.02 1.02 1.02 1.02 1.02 1.02 1.02 1.02 1.02 1.02
Initial Bse: 26 0 69 0 0 0 0 438 43 121 541 0
Added Vol: 0 0 -7 0 0 0 0 53 0 -6 71 0
Cm2,3,17,18: 0 0 0 0 0 0 0 17 0 0 -1 0
Initial Fut: 26 0 62 0 0 0 0 508 43 115 611 0
User Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
PHF Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
PHF Volume: 26 0 62 0 0 0 0 508 43 115 611 0
Reduct Vol: 0 0 0 0 0 0 0 0 0 0 0 0
Reduced Vol: 26 0 62 0 0 0 0 508 43 115 611 0
PCE Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
MLF Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
FinalVolume: 26 0 62 0 0 0 0 508 43 115 611 0

Saturation Flow Module:
Sat/Lane: 1700 1700 1700 1700 1700 1700 1700 1700 1700 1700 1700 1700
Adjustment: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
Lanes: 1.00 0.00 1.00 0.00 0.00 0.00 0.00 1.84 0.16 1.00 2.00 0.00
Final Sat.: 1700 0 1700 0 0 0 0 3134 266 1700 3400 0

Capacity Analysis Module:
Vol/Sat: 0.02 0.00 0.04 0.00 0.00 0.00 0.00 0.16 0.16 0.07 0.18 0.00
Crit Moves: ****

Lanes, Volumes, Timings
 2: Casitas Place & Dana Point Harbor Dr

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Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	0	508	43	115	611	0	26	0	62	0	0	0
Future Volume (vph)	0	508	43	115	611	0	26	0	62	0	0	0
Ideal Flow (vphp)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0		225	180		0	0		0	0		0
Storage Lanes	0		1	1		0	1		1	0		0
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	1.00	1.00	1.00	0.95	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor			0.86	0.98			0.87		0.85			
Frt			0.850						0.850			
Flt Protected				0.950			0.950					
Satd. Flow (prot)	0	1863	1583	1770	3539	0	1770	0	1583	0	0	0
Flt Permitted				0.156			0.950					
Satd. Flow (perm)	0	1863	1360	284	3539	0	1533	0	1344	0	0	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			139						139			
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		850			313			237			171	
Travel Time (s)		19.3			7.1			5.4			3.9	
Confl. Peds. (#/hr)	60		60	60		60	60		60	60		60
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	0	535	45	121	643	0	27	0	65	0	0	0
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	535	45	121	643	0	27	0	65	0	0	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway 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
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors		2	1	1	2		1		1			
Detector Template		Thru	Right	Left	Thru		Left		Right			
Leading Detector (ft)		100	20	20	100		20		20			
Trailing Detector (ft)		0	0	0	0		0		0			
Detector 1 Position(ft)		0	0	0	0		0		0			
Detector 1 Size(ft)		6	20	20	6		20		20			
Detector 1 Type		Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex		Cl+Ex		Cl+Ex			
Detector 1 Channel												
Detector 1 Extend (s)		0.0	0.0	0.0	0.0		0.0		0.0			
Detector 1 Queue (s)		0.0	0.0	0.0	0.0		0.0		0.0			
Detector 1 Delay (s)		0.0	0.0	0.0	0.0		0.0		0.0			
Detector 2 Position(ft)		94			94							
Detector 2 Size(ft)		6			6							
Detector 2 Type		Cl+Ex			Cl+Ex							
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0							
Turn Type		NA	Perm	pm+pt	NA		Perm		Perm			

Lane Group	Ø9
Lane Configurations	
Traffic Volume (vph)	
Future Volume (vph)	
Ideal Flow (vphpl)	
Storage Length (ft)	
Storage Lanes	
Taper Length (ft)	
Lane Util. Factor	
Ped Bike Factor	
Frt	
Flt Protected	
Satd. Flow (prot)	
Flt Permitted	
Satd. Flow (perm)	
Right Turn on Red	
Satd. Flow (RTOR)	
Link Speed (mph)	
Link Distance (ft)	
Travel Time (s)	
Confl. Peds. (#/hr)	
Peak Hour Factor	
Adj. Flow (vph)	
Shared Lane Traffic (%)	
Lane Group Flow (vph)	
Enter Blocked Intersection	
Lane Alignment	
Median Width(ft)	
Link Offset(ft)	
Crosswalk Width(ft)	
Two way Left Turn Lane	
Headway Factor	
Turning Speed (mph)	
Number of Detectors	
Detector Template	
Leading Detector (ft)	
Trailing Detector (ft)	
Detector 1 Position(ft)	
Detector 1 Size(ft)	
Detector 1 Type	
Detector 1 Channel	
Detector 1 Extend (s)	
Detector 1 Queue (s)	
Detector 1 Delay (s)	
Detector 2 Position(ft)	
Detector 2 Size(ft)	
Detector 2 Type	
Detector 2 Channel	
Detector 2 Extend (s)	
Turn Type	

Lanes, Volumes, Timings
 2: Casitas Place & Dana Point Harbor Dr

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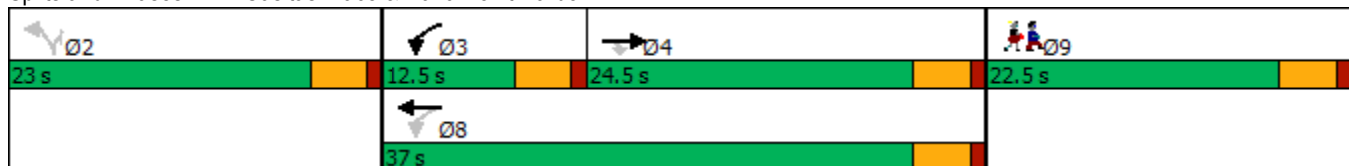


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Protected Phases		4		3	8							
Permitted Phases			4	8			2		2			
Detector Phase		4	4	3	8		2		2			
Switch Phase												
Minimum Initial (s)		5.0	5.0	5.0	5.0		5.0		5.0			
Minimum Split (s)		22.5	22.5	9.5	22.5		22.5		22.5			
Total Split (s)		24.5	24.5	12.5	37.0		23.0		23.0			
Total Split (%)		29.7%	29.7%	15.2%	44.8%		27.9%		27.9%			
Maximum Green (s)		20.0	20.0	8.0	32.5		18.5		18.5			
Yellow Time (s)		3.5	3.5	3.5	3.5		3.5		3.5			
All-Red Time (s)		1.0	1.0	1.0	1.0		1.0		1.0			
Lost Time Adjust (s)		0.0	0.0	0.0	0.0		0.0		0.0			
Total Lost Time (s)		4.5	4.5	4.5	4.5		4.5		4.5			
Lead/Lag		Lag	Lag	Lead								
Lead-Lag Optimize?		Yes	Yes	Yes								
Vehicle Extension (s)		3.0	3.0	3.0	3.0		3.0		3.0			
Recall Mode		None	None	None	None		Max		Max			
Walk Time (s)												
Flash Dont Walk (s)												
Pedestrian Calls (#/hr)												
Act Effct Green (s)		21.1	21.1	30.2	30.2		19.5		19.5			
Actuated g/C Ratio		0.30	0.30	0.43	0.43		0.28		0.28			
v/c Ratio		0.97	0.09	0.44	0.43		0.06		0.14			
Control Delay		62.9	0.3	20.3	16.9		25.5		0.6			
Queue Delay		0.0	0.0	0.0	0.0		0.0		0.0			
Total Delay		62.9	0.3	20.3	16.9		25.5		0.6			
LOS		E	A	C	B		C		A			
Approach Delay		58.1			17.5			7.9				
Approach LOS		E			B			A				

Intersection Summary

Area Type:	Other
Cycle Length:	82.5
Actuated Cycle Length:	70.8
Natural Cycle:	90
Control Type:	Actuated-Uncoordinated
Maximum v/c Ratio:	0.97
Intersection Signal Delay:	33.3
Intersection LOS:	C
Intersection Capacity Utilization:	48.5%
ICU Level of Service:	A
Analysis Period (min):	15

Splits and Phases: 2: Casitas Place & Dana Point Harbor Dr



Lane Group	Ø9
Protected Phases	9
Permitted Phases	
Detector Phase	
Switch Phase	
Minimum Initial (s)	5.0
Minimum Split (s)	22.5
Total Split (s)	22.5
Total Split (%)	27%
Maximum Green (s)	18.0
Yellow Time (s)	3.5
All-Red Time (s)	1.0
Lost Time Adjust (s)	
Total Lost Time (s)	
Lead/Lag	
Lead-Lag Optimize?	
Vehicle Extension (s)	3.0
Recall Mode	None
Walk Time (s)	7.0
Flash Dont Walk (s)	11.0
Pedestrian Calls (#/hr)	45
Act Effct Green (s)	
Actuated g/C Ratio	
v/c Ratio	
Control Delay	
Queue Delay	
Total Delay	
LOS	
Approach Delay	
Approach LOS	
Intersection Summary	

Queues

2: Casitas Place & Dana Point Harbor Dr

02/19/2021



Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Group Flow (vph)	535	45	121	643	27	65
v/c Ratio	0.97	0.09	0.44	0.43	0.06	0.14
Control Delay	62.9	0.3	20.3	16.9	25.5	0.6
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	62.9	0.3	20.3	16.9	25.5	0.6
Queue Length 50th (ft)	~337	0	40	126	11	0
Queue Length 95th (ft)	#525	0	76	173	32	0
Internal Link Dist (ft)	770			233		
Turn Bay Length (ft)		225	180			
Base Capacity (vph)	554	502	297	1712	422	471
Starvation Cap Reductn	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.97	0.09	0.41	0.38	0.06	0.14

Intersection Summary

~ 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.