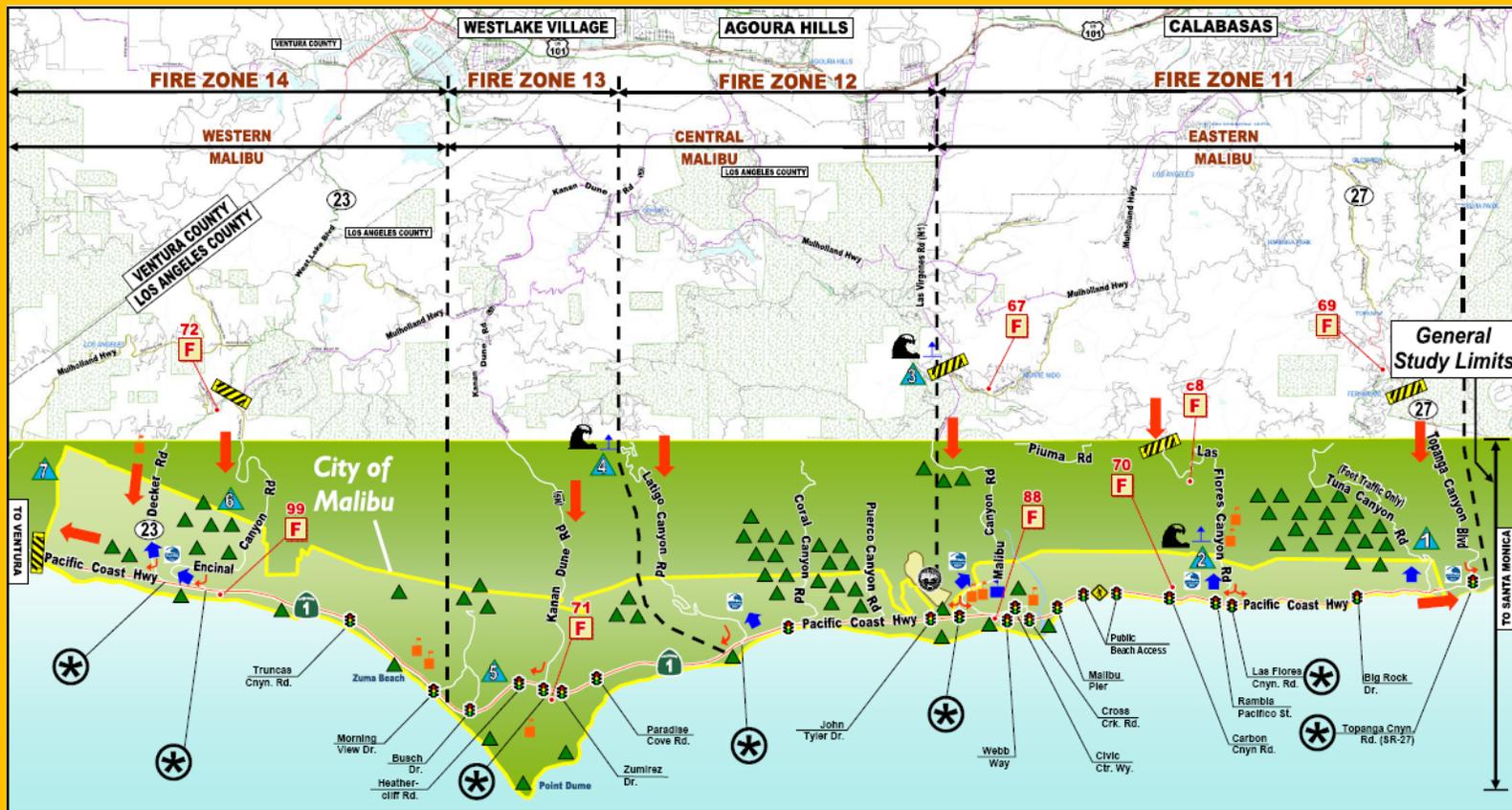


Final Report

Transportation Plan for Wildfire and Tsunami Evacuation

City of Malibu, CA – Public Safety Department



Project Map 	Legend: <ul style="list-style-type: none"> City Limits City Hall Public School LACF Station/No. 	<ul style="list-style-type: none"> Public Park Areas Pepperdine University Existing Traffic Signal Traffic Count Location 	Roadway Functional Class (CA Roadway System)		Wildfire Evacuation Access <ul style="list-style-type: none"> Primary Evacuation Route Path of Evacuation Egress (Varies based on fire location) 	Tsunami Evacuation Access <ul style="list-style-type: none"> Evacuation Routes Traffic Control Points (CHP) Public Park/Refuge Area
			<ul style="list-style-type: none"> Interstate Principal Arterial Minor Arterial 	<ul style="list-style-type: none"> Major Collector Local Street 		



PREPARED FOR:

CITY OF MALIBU

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27 Years of Excellence

April 21, 2020

FINAL REPORT

FOR

**THE TRANSPORTATION PLAN FOR WILDFIRE AND
TSUNAMI EVACUATION**

FOR

THE CITY OF MALIBU

PRESENTED TO:



CITY OF MALIBU

Public Safety Department
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PREPARED BY:



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APRIL 21, 2020



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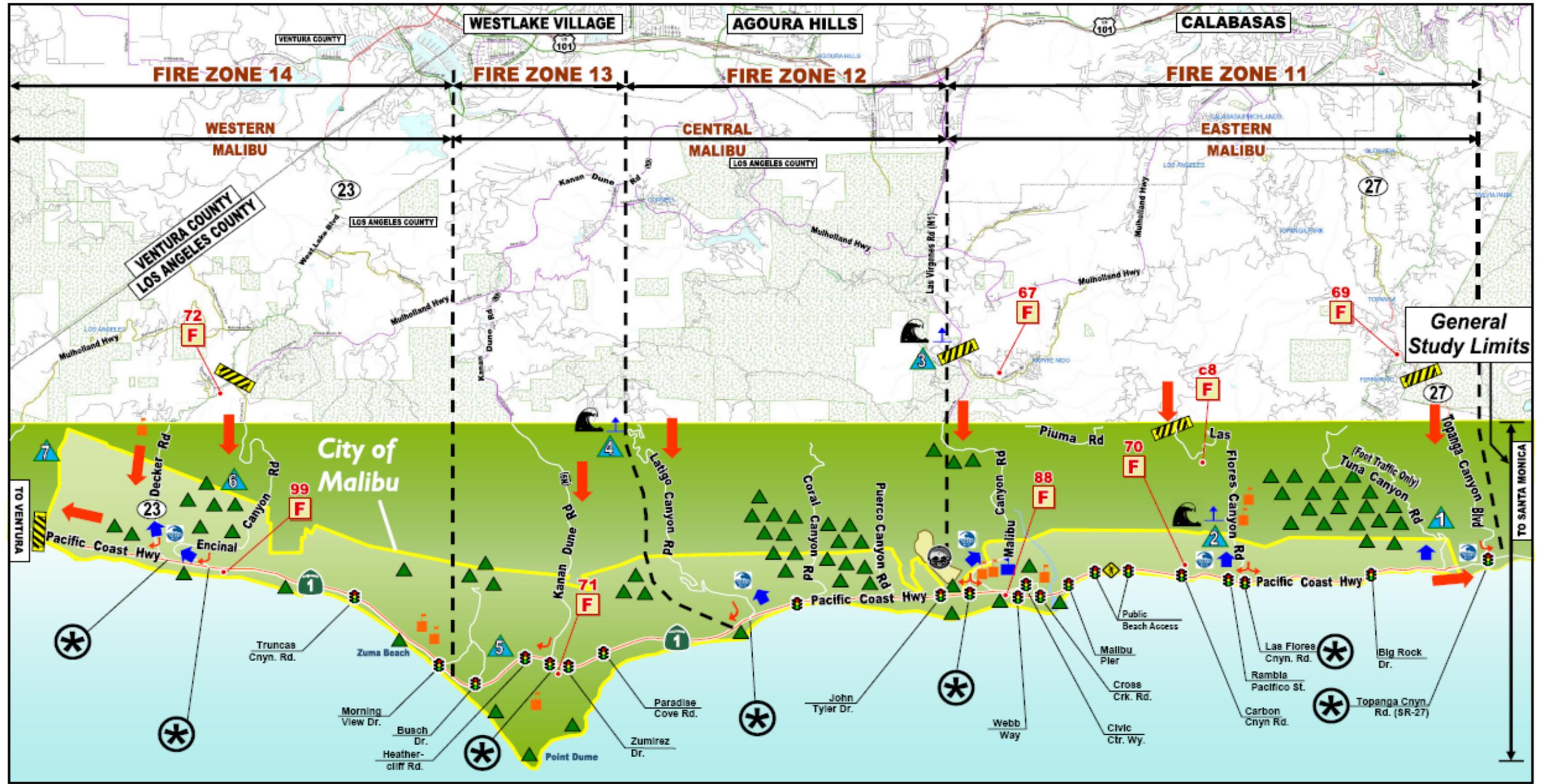
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Project Map 	Legend: City Limits City Hall Public School LACF Station/No. Public Park Areas Pepperdine University Existing Traffic Signal Traffic Count Location	Roadway Functional Class (CA Roadway System) Interstate Principal Arterial Minor Arterial Major Collector Local Street	Wildfire Evacuation Access Primary Evacuation Route Path of Evacuation Egress (Varies based on fire location)	Tsunami Evacuation Access Evacuation Routes Traffic Control Points (CHP) Public Park/Refuge Area
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Executive Summary

1.1 - Overview of Malibu Master Transportation Plan/Map for Wildlife & Tsunami Evacuation

In consideration of access and efficiency for residents and emergency personnel, Minagar & Associates, Inc. developed a “Master Map” shown in the previous page and an independent copy in **Appendix A**, of key locations and traffic flow in the event of an emergency.

The primary evacuation routes to be used by the City of Malibu were identified to be the following with consideration to their connection to the *Pacific Coast Highway (PCH)* and *ultimately to Ventura and Santa Monica Freeways* and also marked with a large black asterisk to denote the location of the traffic survey which was performed for the route from the west (Ventura County bound) to the east (Santa Monica bound):

1. Decker Road
2. Encinal Canyon Road
3. Kanan Dume Road
4. Latigo Canyon Road
5. Malibu Canyon Road
6. Las Flores Canyon Road
7. Topanga Canyon Road

It should be noted that while the true north is the opposite of the Pacific Ocean since Caltrans (California Department of Transportation) uses north/south orientation for its traffic signals along the Pacific Coast Highway (PCH), in order to be consistent, all the computer modeling, analyses, graphs, exhibits and tabulations are based upon the aforementioned Caltrans protocol.

Of the seven (7) intersections of the evacuation routes and Pacific Coast Highway, the intersections involving Kanan Dume Road, Malibu Canyon Road, Las Flores Canyon Road, and Topanga Canyon Road are signalized (shown by a traffic signal icon), whereas Decker Road, Encinal Canyon Road, and Latigo Canyon Road are STOP-controlled.

Other evacuation routes involved for the tsunami scenario are not considered to be primary evacuation routes due to boundary or capacity limitations, which include Tuna Canyon Road and Mulholland Highway. Mulholland Highway lies far enough outside of the City of Malibu’s Boundary to not be considered within the scope of the City of Malibu and Tuna Canyon Road restricts northbound traffic to pedestrians only.

Although not included as primary evacuation routes, the following local streets and their intersection with Pacific Coast Highway, is taken into account due to their effect on traffic flow along PCH. The effect of the intersection on traffic is dependent on whether the intersection is signalized and if so, is shown by a traffic signal on the map.

- Broad Beach Road
- Trancas Canyon Road
- Guernsey Avenue
- Morning View Drive
- Busch Drive
- Bonsall Drive
- Heathercliff Road
- Zumirez Drive/PCH





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- Paradise Cove Road
- Corral Canyon Road
- Malibu Road
- John Tyler Drive
- Webb Way
- Cross Creek Road
- Malibu Pier
- 22730 PCH Signal
- 22333 PCH Signal
- Carbon Canyon Road
- Rambla Vista
- Rambla Pacifico Street
- Big Rock Drive

For the wildfire scenarios, the City of Malibu contacted Minagar and defined fire zones within Western, Central, and Eastern Malibu to be used. **Fire Zone 14** encompasses all of Western Malibu, whereas **Fire Zone 12 and 13** cover all of Central Malibu. The separation between Fire Zone 12 and 13 is defined by Latigo Canyon Road with **Fire Zone 13** to the west of Latigo Canyon Road. **Fire Zone 11** covers the remaining eastern portion of Malibu.

The four (4) fire stations located within the City of Malibu (70, 71, 88, and 99) and the four fire stations/camps (67, 69, 72, and Camp 8) outside of the city limits, but along the seven (7) primary evacuation routes, are shown by a red dot with their corresponding camp/station number. Other locations of concern include public parks (denoted by a green triangle), schools (shown by an orange box with a flag), the city hall (shown by a blue box with a flag), and Pepperdine University (shown by the Pepperdine University logo).

Separate location considerations are used in the event of a tsunami. Tsunami Public Park/Refuge Areas determined by Minagar and the City of Malibu's Emergency Operations Plan include the following areas and are shown by the tsunami symbol, a blue "T" arrow and/or a blue triangle with a corresponding number:

1. Tuna Canyon Road approximately 1500' from Pacific Coast Highway
2. Las Flores Canyon Road at past Sycamore School at the roadside "drop-off area"
3. Malibu Canyon Road at the Salvation Army Camps in Tapia Park
4. Latigo Canyon Road near the vicinity of 4966 Latigo Canyon Road
5. Zuma Canyon Trailhead
6. Decker Canyon Road at Charmlee Park
7. Mulholland Highway at Leo Carillo Park

Traffic control points, which will also be implemented in the event of a tsunami are located in the following areas to prevent inflow of traffic to the City of Malibu, aside from emergency personnel and permitted residents:

- Malibu Canyon Road at Piuma Road
- Topanga Canyon Boulevard, south of Grandview
- Rambla Pacifico Street/Las Flores Canyon Road at Piuma/Schueren Road
- Encinal Canyon Road at Lechusa Road
- Decker Road at Lechusa Road

In the event of a wildfire, the primary direction of traffic along the evacuation routes and Pacific Coast Highway are shown with large red arrows. For the intersection of an evacuation route and





Pacific Coast Highway, the permitted movement for southbound traffic is shown by a smaller, red arrow. In the case of evacuation along Malibu Canyon Road and Las Flores Canyon Road, the direction of movement for the southbound traffic is dependent upon the scenario and would require a resident to look at the scenario maps in **Appendix B**.

In the case of a tsunami, traffic will be primarily travelling to the north. To show that movement along the evacuation routes, large blue arrows are used and to show the permitted movements for intersections along PCH, it is displayed with a small blue arrow.

1.2 - Key Findings of the Study

The following are key findings from this study:

- Highly impacted intersections require careful monitoring in the event of an emergency. The Level of Service for Malibu Canyon Road, Kanan Dume Road, and Topanga Canyon Boulevard frequently reach unacceptable levels in the different wildfire scenarios. If a disaster were to occur, judgement of the City and State (Caltrans/CHP) traffic control personnel would be required to increase the efficiency of these intersections.
- Debris and fire encroachment is a common issue in wildfire disaster scenarios. Many of the fires studied had transportation difficulties due to debris blocking critical roadways for residents, causing traffic flow to reach a stand-still and residents to become trapped.
- Failure of communication to residents is another common difficulty seen in wildfires where emergency alerts addressing road closures or other information is unable to reach the public.
- In the event of a tsunami, the Level of Service for most intersections reach an unacceptable level of “D” or worse with delay values above seven (7) minutes.

1.3 - Recommended Evacuation Strategies and Policies

The following are the Transportation Plan Strategies recommended by this report:

Short-Term Strategies:

1. Depending upon the location of wildfire or tsunami, utilize the recommended Transportation Plan Evacuation Scenarios #2 thru #6 or Scenario #7 respectively.
2. Consult the 2019 Fourteenthth Edition of the Work Area Traffic Control Handbook (WATCHBOOK) and 2016 Edition of Field Guide for Temporary Traffic Controls (A California Manual on Temporary Traffic Controls)
3. Purchase additional Changeable/Dynamic Message Signs (CMS/DMS), trailblazers and Traffic Incident Management Area Signs

Mid-Range Strategies:

4. Depending upon the location of wildfire or tsunami, utilize the recommended Transportation Plan Evacuation Scenarios #2 thru #6 or Scenario #7 respectively.





1. Harden or Implement Protection Systems for the Critical Infrastructure to prevent Roadway Debris.
2. Re-analyze and Re-optimize the Traffic Signals along Pacific Coast Highway for the corresponding wildfire location or tsunami scenarios.

Long-Term Strategies:

1. Widen Pacific Coast Highway via more reversible directional lanes with overhead changeable directional signals
2. Widen Evacuation Route Approaches to Pacific Coast Highway

These measures would be implemented alongside the evacuation plan detailed in the Scenario and Master Maps. Additional detailed information on the above measures are provided in the final section of this report.

Introduction

2.1 - Study Need and Purpose

Minagar & Associates, Inc. understands that on behalf of the citizens of the City of Malibu, the Public Safety Department has initiated this project to develop a citywide *Transportation Plan for Disasters, Emergencies and Significant Events* (henceforth referred to as “TPDESE”) to provide residents and businesses with a comprehensive mass evacuation plan with operational strategies for emergency routing out of the City during large-scale threats. The major objectives of the TPDESE are to develop a well-defined Plan which closes the gaps experienced during the Woolsey Fire incident in November 2018, by focusing on the primary transportation needs of evacuating citizens and the services they require, in order to be prepared for the need to respond and recover from a potential large-scale disaster event in the future.

Development of the TPDESE involved investigating the viability and efficiency of mass evacuation activities along the seven (7) evacuation routes, as well as PCH. The scope of this analysis is especially important given that:

1. Mass evacuations will cause a surge of evacuees to cross jurisdictional boundaries to the west (Ventura County), north (Calabasas), and east (City of Santa Monica), during which a coordinated/regional response can be impeded by unexpected traffic overloads on routes not designated or incapable of handling evacuation traffic;
2. Some citizens may not follow evacuation orders and will elect to stay in place to protect their home or business (even during a mandatory evacuation order); therefore, all available neighborhoods throughout the City must be able to directly or indirectly access the designated evacuation routes at all times during the emergency event; and





3. A certain number of the evacuating population will not have personal means to evacuate, or may be unable to coordinate arrangements in a sudden disaster situation; therefore, the plan needed to be able to understand and take into account for the need to accommodate access and/or functional needs of disabled or elderly residents across the entire geographical scope of the City; and
4. In order to prevent both outbound traffic from leaving the City, or inbound traffic from obstructing the evacuation effort, an accurate understanding of potential bottlenecks, choke points or other existing infrastructure challenges needed to be identified on all major travelled routes.

Overall, the Plan will incorporate several key elements, namely:

- Policies and procedures to interface the various stakeholders involved in the transportation aspect of mass-evacuation events of people from the City of Malibu, including: emergency management groups (Public Safety staff, Los Angeles County Sheriff/Fire, etc.), Public Works, local residents and businesses, and support groups required for all types of evacuee accommodation.
- Detailed, roll-out-ready staging and traffic control plans to accommodate a range of citywide emergency and disaster evacuation scenarios.
- An operational plan for organizing motorists evacuating the city, staging emergency resources, identifying traffic detours/closures, and routing citizens to temporary/mass care centers.
- A detailed and phased implementation plan to establish funding sources for emergency activities and evacuation procedures before, during and after disaster events.

Through our collection of traffic volume and circulation data in the field; a modeling analysis of the City's population density data and traffic patterns; and the identification and comparison of several feasible evacuation scenarios, we developed a viable set of operational and organizational evacuation strategies to present to the Project's stakeholders for incorporation into the City's Emergency Operations Plan (EOP). Stakeholders on this Project include emergency services such as Los Angeles County Fire/Sheriff, the California Highway Patrol (CHP), City Public Safety and Public Works staff, as well as the residents and businesses of the City of Malibu.

2.2 - Background

The project limits generally consist of the entirety of the City of Malibu, which spans twenty-seven (27) miles along the south-facing shore of the Santa Monica Bay, and houses approximately 13,000 residents. The City is bordered by the Pacific Ocean to the south, the Santa Monica Mountains to the north, the Pacific Palisades (City of Los Angeles) to the east, and Ventura County to the west.





2.2.1 - Streets and Intersections of Study

The primary transportation route through Malibu consists of a Caltrans-maintained, four-lane highway (Hwy 1)—Pacific Coast Highway, or PCH. There are seven (7) major north-south routes within or near the limits of the City of Malibu which originate at PCH and connect to the US-101 Highway corridor to the north, approximately seven (7) miles inland from the coast. The street classification terminology is defined in **Section 2.2.1**. The routes are as follows:

- Decker Canyon (State Highway 23, maintained by Caltrans)
- Encinal Canyon (city maintained)
- Kanan Dume Road (city maintained)
- Latigo Canyon Road (city maintained)
- Malibu Canyon Road (city maintained)
- Las Flores Canyon Road (city maintained)
- Topanga Canyon Boulevard (State Route 27, maintained by Caltrans)

Pacific Coast Highway is a major highway for the City of Malibu, which primarily runs along the coastal beaches aside from the Point Dume region. The highway is the main method of travel for connecting the City of Malibu to the larger cities of Santa Monica and Los Angeles in the east and Oxnard to the west. The width and number of lanes for Pacific Coast Highway varies within the City of Malibu’s boundaries and on street parking is restricted in both directions of travel, unless otherwise marked. The speed limit along Pacific Coast Highway varies from forty-five (45) miles per hour between Coastline Drive and Malibu Canyon Road, fifty (50) miles per hour between Malibu Canyon Road and Trancas Canyon, and fifty-five (55) miles per hour between Trancas Canyon and Los Angeles/Ventura County Line.

Decker Road, also known as California State Route 23 is a two (2) lane route with no parking permitted in both directions. The intersection of Decker Road and Pacific Coast Highway is STOP-controlled only for the Decker Road approach, whereas Pacific Coast Highway is uncontrolled, or free. The land along Decker Road is primarily undeveloped except for the occasional neighborhood and Fire Station 72. There are also wooden power poles, which run along the length of the paved road. Parking is restricted unless there is sufficient room along the edges of the paved road. The speed limit for Decker Road is thirty (30) miles per hour due to the precarious turns and changing grade.

Encinal Canyon Road is a pre-designated evacuation route with a “TSUNAMI EVACUATION ROUTE” sign posted at the main entrance along Pacific Coast Highway. Encinal Canyon Road intersects with Mulholland Highway and merges to be called Mulholland Highway, following the intersection. Encinal Canyon road is a primarily two (2) lane road with exclusive left turn lanes at various intersections. The posted speed limit is forty-five (45) miles per hour, which changes to fifty-five (55) miles per hour depending on the area. Parking is generally not permitted in both directions, unless there is contrary signage or there is sufficient room to park outside of the paved road.

Kanan Dume Road intersects with Pacific Coast Highway in Central Malibu and the length of Kanan Dume Road within the boundaries of the City of Malibu is populated by neighborhoods.





Kanan Dume road is a four (4) lane roadway from the border of the City of Malibu to Tunnel 1 that shrinks to one (1) lane in both directions. Generally along Kanan Dume Road, there is sufficient shoulder space to park, unless otherwise indicated by markings or signage. Within the city limits, the speed limit for Kanan Dume Road is fifty (50) miles per hour.

Similarly to Encinal Canyon Road, **Latigo Canyon Road** is a pre-designated evacuation route, which merges with and becomes Kanan Dume Road. Parking is also not permitted in both directions unless signage dictates otherwise or there is sufficient space for parking that would not become a hazard for oncoming traffic. Latigo Canyon Road is primarily a one lane street. The speed limit along Latigo Canyon Road varies from thirty (30) miles per hour to fifty-five (55) miles per hour depending on the geometry of the respective road segment.

Malibu Canyon Road is a major road, which borders Pepperdine University. For the length of Malibu Canyon Road along Pepperdine University, there are two lanes, however for the remaining street segments, Malibu Canyon Road is a one lane street. The posted speed limit on Malibu Canyon Road is forty-five (45) miles per hour, however it lowers to thirty-five (35) miles per hour depending on the curvature of the roadway. Within the city boundaries, Malibu Canyon Road is partially developed with exclusive left and right turn lanes for smaller intersections or neighborhood driveways. Outside of the city borders, the land use bordering Malibu Canyon Road is primarily undeveloped with wooden power poles running alongside the road. Following the intersection of Malibu Canyon Road and Piuma Road, Malibu Canyon Road changes to become Las Virgenes Road.

Las Flores Canyon is a designated tsunami escape route with a speed limit of twenty-five (25) miles per hour for the residential areas. Outside of the residential areas the speed limit raises to thirty (30) miles per hour, however on road segment where the existing geometry dictates otherwise, the speed limit is fifteen (15) miles per hour. On street parking is permitted only in areas where there remains sufficient space for passing traffic. The two (2) lane roadway also has bordering wooden electricity poles.

Topanga Canyon Road remains outside of the borders of the City of Malibu with a speed limit of 45 miles per hour. The speed limit does decrease to twenty-five (25) miles per hour when the existing road geometry would become a danger to the motoring public and increases to forty (40) miles per hour on a designated length of Topanga Canyon Road. Topanga Canyon Road is a two (2) lane road that widens to four (4) lanes at segments with developed land use.

Aside from the seven (7) routes connecting Pacific Coast Highway to Ventura Freeway, there are also the minor intersections along PCH, which affect the traffic flow. The extent to which the flow is affected depends on the type of intersection it is, signalized or unsignalized. If the intersection is signalized there are expected delays for all approaches, however if it is unsignalized or STOP-controlled, the delay is dependent on the geometry of the intersection. For the City of Malibu, unsignalized intersections often have the minor street approach STOP-controlled and the major street approach (e.g. Pacific Coast Highway) be free. This leads to practically no delays on the major street approach and minor street approach delays that are dependent on the traffic along the conflicting major street approaches. **Table 2.1** categorizes all of the intersections along PCH as signalized or unsignalized.





Table 2.1: Signalization Summary of Intersections along PCH

Intersection Name(s)	Signalized or Unsignalized?
Decker Canyon Road/PCH	Unsignalized
Encinal Canyon Road/PCH	Unsignalized
Broad Beach Road/PCH	Unsignalized
Trancas Canyon Road/PCH	Signalized
Guernsey Avenue/PCH	Unsignalized
Morning View Drive/PCH	Signalized
Busch Drive/PCH	Signalized
Bonsall Drive/PCH	Unsignalized
Heathercliff Road/PCH	Signalized
Kanan Dume Road/PCH	Signalized
Zumirez Drive/PCH	Signalized
Paradise Cove Road/PCH	Signalized
Latigo Canyon Road/PCH	Unsignalized
Corral Canyon Road/PCH	Signalized
Malibu Road/PCH	Unsignalized
John Tyler Drive/PCH	Signalized
Malibu Canyon Road/PCH	Signalized
Webb Way/PCH	Signalized
Cross Creek Road/PCH	Signalized
Malibu Pier/PCH	Signalized
22730 PCH Signal	Signalized
22333 PCH Signal	Signalized
Carbon Canyon Road/PCH	Signalized
Rambla Vista/PCH	Unsignalized
Rambla Pacifico Street/PCH	Signalized
Las Flores Canyon Road/PCH	Signalized
Big Rock Drive/PCH	Signalized
Topanga Canyon Boulevard/PCH	Signalized





Other evacuation routes used only for the tsunami scenario include Tuna Canyon Road and Mulholland Highway. Tuna Canyon Road is excluded from the fire scenarios due to its limitations vehicular movement as a one way road. Mulholland Highway is excluded from Scenarios #1-6 because of its distance from the city limits, which would not affect the evacuation plan for the residents of the City of Malibu to travel east or west.

Tuna Canyon Road is a one way road for southbound traffic only within the borders of the City, however it becomes a two-way one lane road once reaching the residential areas north of the City of Malibu. The primary route to reaching Tuna Canyon Road would be via Topanga Canyon Boulevard and Fernwood Pacific Drive. Along the length of Tuna Canyon Road, if there exists sufficient shoulder space, parking is permitted.

Mulholland Highway is a historical highway outside of the borders of the City of Malibu. The posted speed limit is forty-five (45) miles per hour, which changes to forty (40) and thirty-five (35) miles per hour in consideration of road geometries. Mulholland highway's bordering lands are undeveloped with no powerlines running along its length. For the majority of Mulholland Highway, it remains a two (2) lane road.

2.2.2 – Fire Zones and Inundation Area

The fire zones used to designate evacuation areas were given by the Los Angeles Fire Department in accordance with the City of Malibu to be labelled and located at the following regions:

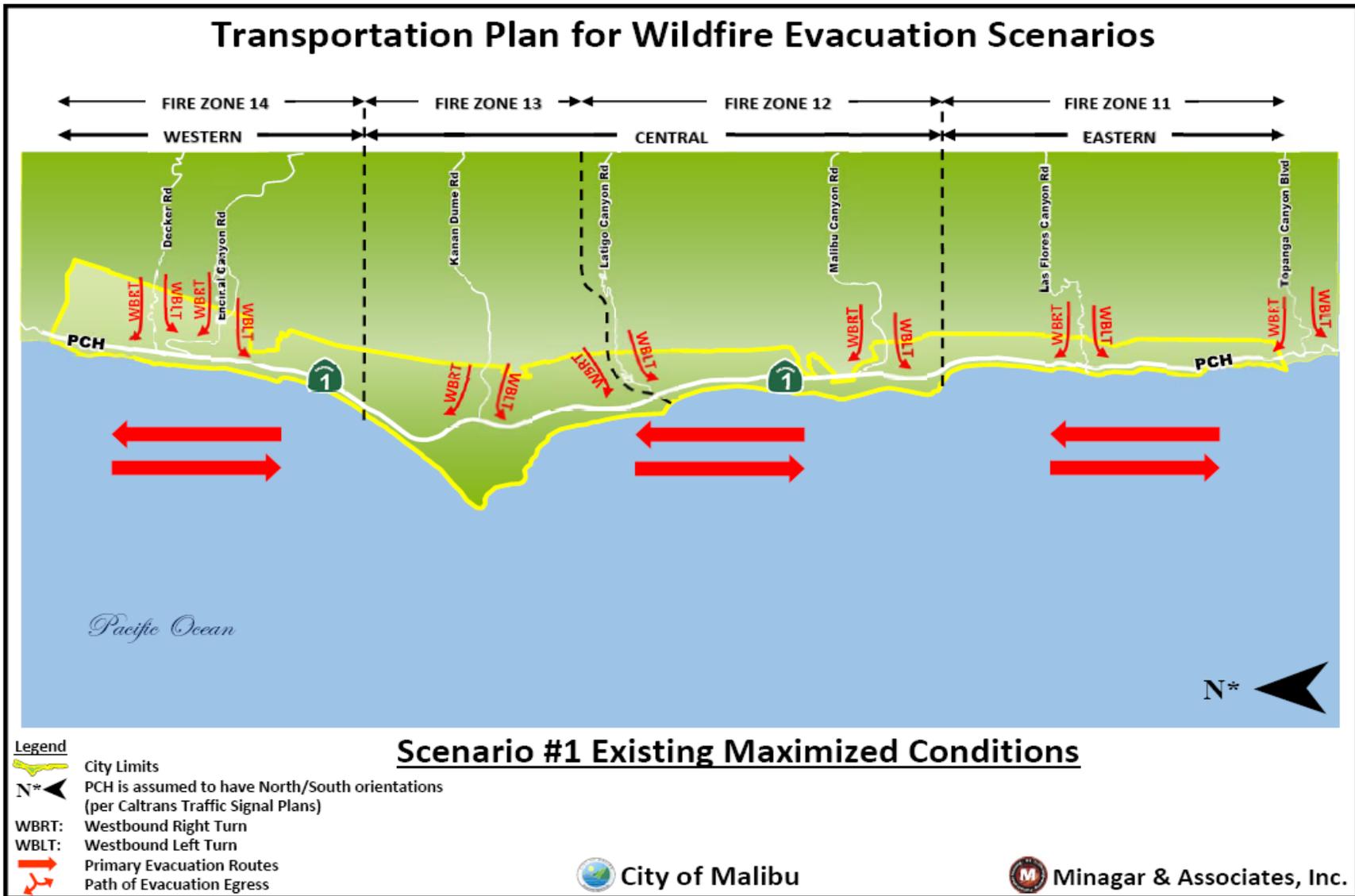
- **Fire Zone 14:** Within the boundary considerations of “Western Malibu”
- **Fire Zone 13 & Fire Zone 12:** Within the boundary consideration of “Central Malibu”
- **Fire Zone 11:** Within the boundary considerations of “Eastern Malibu”

A sample map displaying these boundaries is shown below on the following page.





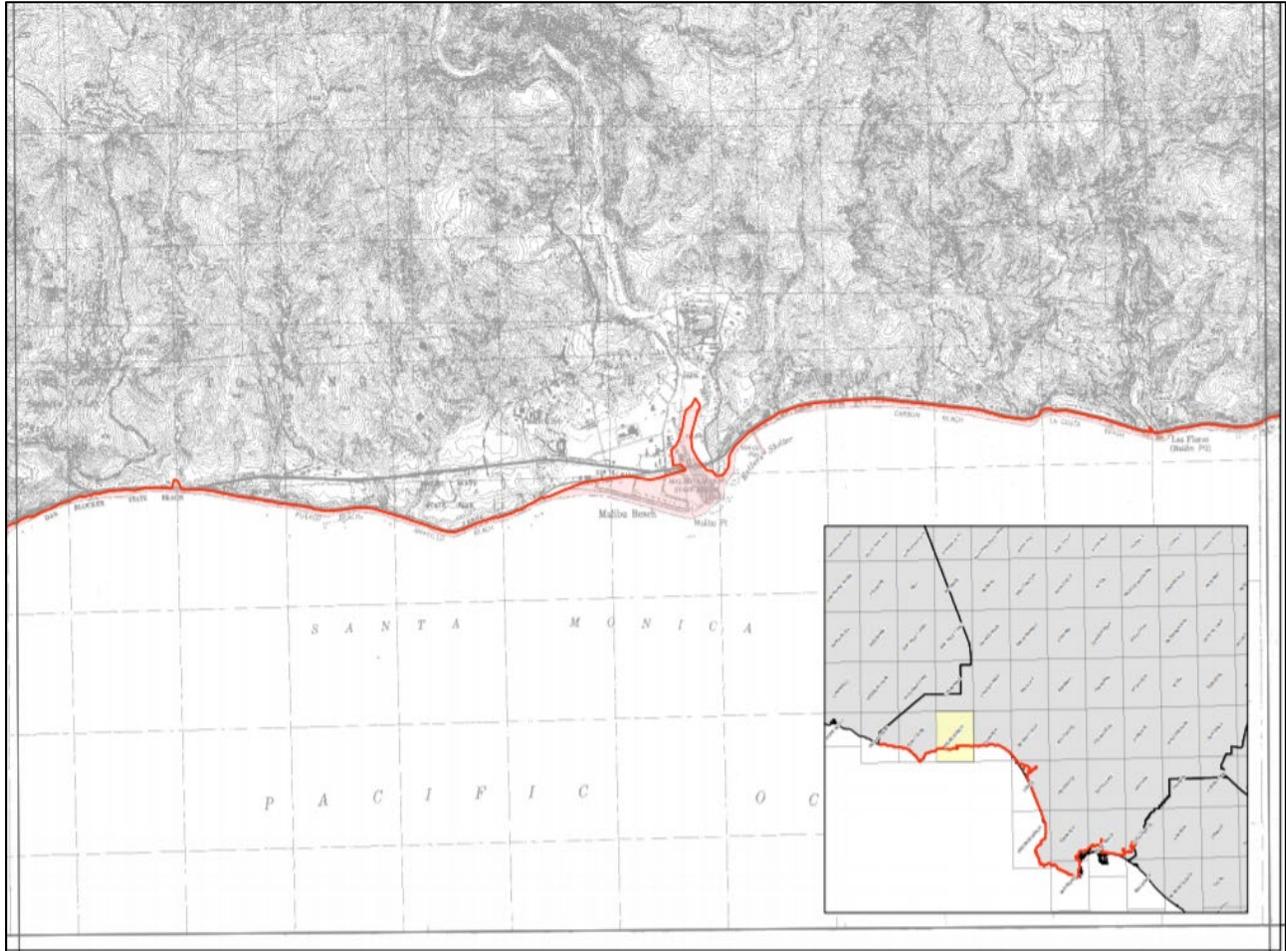
Transportation Plan for Wildfire Evacuation Scenarios



April 2020

Sample Evacuation Map for Scenario #1 Existing Maximized Conditions





Sample of the 2019 LA County Inundation Map for the City of Malibu

For this report the evacuation of residents in the event of a tsunami is based upon the evacuation area created by Minagar, shown in **Appendix G**. The evacuation area created, considers the inundation map from the Los Angeles County published in March of 2019 to dictate its boundaries.





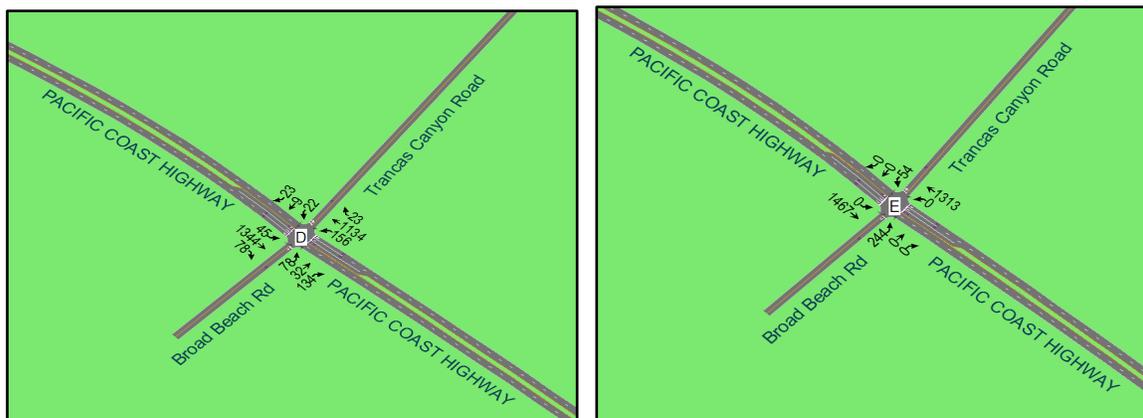
2.3 - Methodology

Due to budget and time constraints, the surveyed intersections were limited to those, which would have the largest traffic volume and impact on traffic flow in the event of an emergency. The traffic study was conducted at the previously mentioned seven (7) major evacuation routes that are connected to US-101 Freeway to evaluate the number of vehicle movements or turning movement counts (TMC) at each intersection on Thursday July 25th, 2019. The survey aimed to capture data involving the heaviest impact on the City of Malibu’s infrastructure where vehicles consisted of commuters, vacationing students from Pepperdine University and Universities/Colleges in the Los Angeles County, and summer tourists to account for the worst-case scenario. The count program included the following time periods:

- Weekday Morning (AM) Period: 7:00 AM – 9:00 AM
- Weekday Mid-Day (MD) Period: 11:00 AM – 1:00 PM
- Weekday Evening (PM) Period: 4:00 PM – 6:00 PM

The results of the survey were analyzed and a spreadsheet of the maximum hourly traffic volume was created by tabulating the maximum hourly traffic volume for each of the possible vehicle movements within the intersection of the three (3) AM, MD, and PM periods. The results can be found in **Appendix C** along with the pre-analyzed turning movement counts of each intersection in **Appendix D**.

The maximum hourly traffic volumes were used in conjunction with *SYNCHRO/SimTraffic-10* to generate Level of Service (LOS) and delay values for each intersection and respective disaster scenario. SYNCHRO-10.0/SimTRAFFIC and LOS is further defined in **Section 2.2.1 Level of Service Definition and Procedures** and **Section 2.2.2 SYNCHRO/SimTraffic-10 and Highway Capacity Manual Definition and Procedures**. Depending on the scenario, specific movements for each intersection was restricted to those which would maximize the safety and efficiency of evacuation. The vehicles previously performing restricted movements were allocated to the appropriate alternate movements to show the flow of traffic in the event of an evacuation.



Sample of SYNCHRO-10.0 Analysis for the Intersection of Trancas Canyon Road and Pacific Coast Highway (PCH) with Scenario #1 Maximized Existing Conditions (Left) and Scenario #2 Conditions (Right)





2.3.1 Level of Service Definitions and Procedures

The Project's traffic impacts were primarily evaluated in the context of "Level of Service", or LOS, criteria and impact thresholds established in the Transportation Research Board's Special Report 209, *Highway Capacity Manual* (HCM). The HCM establishes six (6) levels of service, LOS A through F, which represent the quality of intersection operations and the delay experienced by motorists.

The degree of LOS is generally based on quantifiable factors such as the traffic-handling capacity of the intersection's roadways and lanes, the volume of traffic using the intersection, and the types and configurations of traffic control devices used to regulate right-of-way through the intersection. Brief descriptions of the levels of service grades, as abstracted from the HCM, are shown below in **Table 2.2**. **Table 2.3** shows the level of service criteria for signalized and unsignalized intersections.

For the City of Malibu, an unacceptable LOS is considered LOS D or worse, however this would only apply to the analysis of existing conditions. In the case of a citywide evacuation, LOS are likely to fall below the threshold due to high volumes of directional traffic to evacuate. Although low LOS is expected, the purpose of the report is to generate an evacuation plan which minimizes intersections with the case of poor LOS.

TABLE 2.2: Level of Service (LOS) Descriptions

LOS	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 approaching 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 seldom 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. Speeds are reduced substantially and stoppages may occur for short or long periods of time due to the congestion. In the extreme case, both speed and volume can drop to zero.



Level of Service (LOS) Definitions

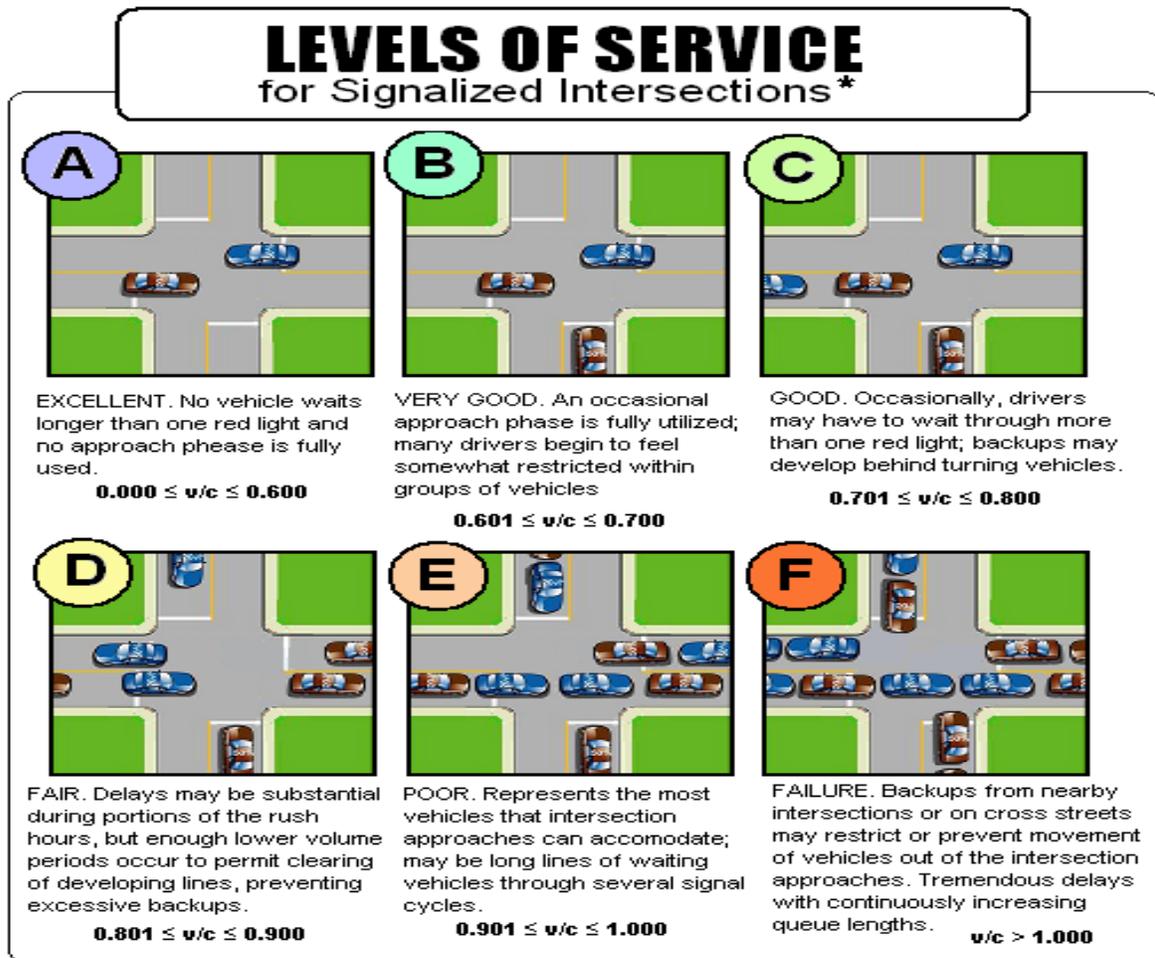


TABLE 2.3: Level of Service (LOS) Criteria for Signalized and Unsignalized Intersections

LOS	Average Delay (seconds per vehicle)	
	Signalized Intersections	Unsignalized Intersections
A	≤ 10	≤ 10
B	>10 and ≤15	>10 and ≤20
C	>15 and ≤25	>20 and ≤35
D	>25 and ≤35	>35 and ≤55
E	>35 and ≤50	>55 and ≤80
F	> 50	> 80



2.3.1 SYNCHRO/SimTraffic-10 and Highway Capacity Manual Definitions and Procedures

SYNCHRO/SimTraffic-10 is the latest computer modelling software used across the United States to simulate traffic conditions for intersection(s). SYNCHRO conducts analyses on each intersection based off of the equations and theories within the *Highway Capacity Manual*. For this report, the latest edition of the *Highway Capacity Manual*, 6th Edition, was used. A sample of the report given by SYNCHRO and the “Lane Settings” page for the model is shown in the figure below.

In order to accurately depict the traffic flow patterns along Pacific Coast Highway, Minagar & Associates, Inc. requested signal phasing for the seven (7) evacuation routes from the California Department of Transportation (Caltrans) and inputted the signal timings into the SYNCHRO street network.

Sample Micro-computer SYNCHRO Report (below)

HCM 6th Signalized Intersection Summary												
21: PACIFIC COAST HIGHWAY & Zumeriz Drive												
03/26/2020												
	↖	→	↘	↙	←	↖	↙	↑	↘	↘	↓	↙
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↖	↖		↔		↖	↔		↖	↔	↖
Traffic Volume (veh/h)	148	0	0	0	0	14	0	1280	0	0	1120	0
Future Volume (veh/h)	148	0	0	0	0	14	0	1280	0	0	1120	0
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	161	0	0	0	0	15	0	1391	0	0	1217	0
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	540	0	480	0	0	29	3	1625	0	3	1625	725
Arrive On Green	0.30	0.00	0.00	0.00	0.00	0.02	0.00	0.46	0.00	0.00	0.46	0.00
Sat Flow, veh/h	1781	0	1585	0	0	1585	1781	3647	0	1781	3554	1585
Grp Volume(v), veh/h	161	0	0	0	0	15	0	1391	0	0	1217	0
Grp Sat Flow(s),veh/h/ln	1781	0	1585	0	0	1585	1781	1777	0	1781	1777	1585
Q Serve(g_s), s	4.2	0.0	0.0	0.0	0.0	0.6	0.0	21.3	0.0	0.0	17.3	0.0
Cycle Q Clear(g_c), s	4.2	0.0	0.0	0.0	0.0	0.6	0.0	21.3	0.0	0.0	17.3	0.0
Prop In Lane	1.00		1.00	0.00		1.00	1.00		0.00	1.00		1.00
Lane Grp Cap(c), veh/h	540	0	480	0	0	29	3	1625	0	3	1625	725
V/C Ratio(X)	0.30	0.00	0.00	0.00	0.00	0.51	0.00	0.86	0.00	0.00	0.75	0.00
Avail Cap(c_a), veh/h	540	0	480	0	0	467	146	1776	0	146	1776	792
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	0.00	0.00	0.00	1.00	0.00	1.00	0.00	0.00	1.00	0.00
Uniform Delay (d), s/veh	16.3	0.0	0.0	0.0	0.0	29.7	0.0	14.8	0.0	0.0	13.7	0.0
Incr Delay (d2), s/veh	1.4	0.0	0.0	0.0	0.0	13.3	0.0	4.1	0.0	0.0	1.6	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.8	0.0	0.0	0.0	0.0	0.3	0.0	6.9	0.0	0.0	5.2	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	17.7	0.0	0.0	0.0	0.0	43.0	0.0	18.8	0.0	0.0	15.3	0.0
LnGrp LOS	B	A	A	A	A	D	A	B	A	A	B	A
Approach Vol, veh/h		161			15			1391			1217	
Approach Delay, s/veh		17.7			43.0			18.8			15.3	
Approach LOS		B			D			B			B	
Timer - Assigned Phs		2	3	4		6	7	8				
Phs Duration (G+Y+Rc), s		23.0	0.0	32.4		5.6	0.0	32.4				
Change Period (Y+Rc), s		4.5	4.5	4.5		4.5	4.5	4.5				
Max Green Setting (Gmax), s		18.5	5.0	30.5		18.0	5.0	30.5				
Max Q Clear Time (q_c+I1), s		6.2	0.0	19.3		2.6	0.0	23.3				
Green Ext Time (p_c), s		0.6	0.0	5.7		0.0	0.0	4.6				
Intersection Summary												
HCM 6th Ctrl Delay											17.4	
HCM 6th LOS											B	





LANE SETTINGS						
Lanes and Sharing (#RL)						
Traffic Volume (vph)	0	662	1292	0	0	1304
Future Volume (vph)	0	662	1292	0	0	1304
Street Name	Kanan Dume Road		PACIFIC COAST HI		PACIFIC COAST HI	
Link Distance (ft)	532	—	1775	—	—	2403
Link Speed (mph)	30	—	50	—	—	55
Set Arterial Name and Speed	WB	—	NB	—	—	SB
Travel Time (s)	12.1	—	24.2	—	—	29.8
Ideal Satd. Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12
Grade (%)	0	—	0	—	—	0
Area Type CBD	<input type="checkbox"/>	—	<input type="checkbox"/>	—	—	<input type="checkbox"/>
Storage Length (ft)	0	0	—	170	330	—
Storage Lanes (#)	—	—	—	1	1	—
Right Turn Channelized	—	None	—	None	—	None
Curb Radius (ft)	—	—	—	—	—	—
Add Lanes (#)	—	—	—	—	—	—
Lane Utilization Factor	0.97	1.00	0.95	1.00	1.00	0.95
Right Turn Factor	1.000	0.850	1.000	1.000	1.000	1.000
Left Turn Factor (prot)	1.000	1.000	1.000	1.000	1.000	1.000
Saturated Flow Rate (prot)	3614	1583	3539	1863	1863	3539
Left Turn Factor (perm)	1.000	1.000	1.000	1.000	1.000	1.000
Right Ped Bike Factor	1.000	1.000	1.000	1.000	1.000	1.000
Left Ped Factor	1.000	1.000	1.000	1.000	1.000	1.000
Saturated Flow Rate (perm)	3614	1583	3539	1863	1863	3539
Right Turn on Red?	—	<input checked="" type="checkbox"/>	—	<input checked="" type="checkbox"/>	—	—
Saturated Flow Rate (RTOR)	0	453	0	0	0	0
Link Is Hidden	<input type="checkbox"/>	—	<input type="checkbox"/>	—	—	<input type="checkbox"/>
Hide Name in Node Title	<input type="checkbox"/>	—	<input type="checkbox"/>	—	—	<input type="checkbox"/>



Sample Micro-computer SYNCHRO Report Input Menu (top), and SimTraffic Simulation (bottom)

SimTraffic is a software used in conjunction with SYNCHRO, which takes the model developed by SYNCHRO and creates a simulation for the movement of traffic within a specified timeframe. For this report, SimTraffic creates a visual representation of traffic along Pacific Coast Highway and analysts can distinguish bottlenecks or other issues with the traffic flow.





Literature Review

In order to assess the existing infrastructure and prospective improvements to the City of Malibu in the case of a disaster, Minagar & Associates, Inc. studied existing literature that addresses previous disasters within the City of Malibu and geographically similar locations. Minagar has identified, collected and reviewed five (5) primary documents related to fires and tsunamis in Malibu or similar areas and they are listed below as part of this literature review/research effort:

- **The Report is Out: How Will We Respond to the Next Major Wildfire**, Emily Sawicki, August 2019
- **After Action Review of the Woolsey Fire Incident**, County of Los Angeles, November 2019
- **Thomas Fire and 1/9 Debris Flow: After-Action Report and Improvement Plan**, County of Santa Barbara Office of Emergency Management, October 2018
- **Last day in Paradise: the untold story of how a fire swallowed a town**, Alastair Gee and Dani Anguiano, December 2018
- **Emergency Operations Plan**, City of Malibu, 2018

Included below is a synopsis of each document. Following the synopsis for curb applications, in italics, is commentary on the relevance of the findings to the Transportation Plan for Disasters, Emergencies, and Significant Events for the City of Malibu.

3.1 - The Report is Out: How Will We Respond to the Next Major Wildfire?

An article published in the *Malibu Times* on August 8th, 2019 aims to increase awareness for citizens of the City of Malibu to the After Action Review of the Woolsey Fire.

Shortcomings in the emergency response highlighted by the article include the following:

- Overburdening of the City Manager
- Members of the Community Emergency Response Team (CERT) evacuating
- City Staff protocol inconsistencies
- Lack of formal authority by the City of Malibu over firefighting, evacuation, and repopulation

The remedy quoted by the article refers to the role of the City of Malibu and designates the city to be the primary convener for the agencies involved in services. Additionally, the City should create a planned response method accounting for the unique features of Malibu.

*The article raises the concern of residents within the City of Malibu regarding the emergency response during the Woolsey Fire. The article itself does mention one remedy, however it primarily focuses on the report titled "Suggestion for how the city can improve before the next major disaster". Any concerns not addressed in the report are discussed in **Section 3.2***





3.2 - After Action Review of the Woolsey Fire Incident

The After Action Review is a comprehensive document covering a major incident, for this document it would be the Woolsey Fire, to summarize the event, actions taken before, during, and after the event, and recommendations for the county to prevent a similar disaster from occurring.

Significant findings within the report in relation to emergency transportation planning include the following:

- Downed power lines affected the movement of essential services vehicles
- Inefficient movement through the evacuation routes from lack of information available to those staffing road closures
- Inability for key personnel to access command site
- Lack of efficient communication to notify residents
- Significant road closures due to fire movement
- GIS systems identified key routes which required debris removal
- There were sufficient number of signs that were deployed by the County Public Works and CHP
- Confusion regarding which access/direction to use due to road closures
- Lack of staff direction for contraflow lane reversal



The report also finds that the Los Angeles County currently uses the *2018 Integrated Emergency Response Manual* or *Red Book* by the Department of Public Works in order to direct personnel on response procedures using an emergency. The *Red Book* is based off of the National Incident Management System (NIMS) and Standardized Emergency Management System (SEMS)

In order to address issues presented within the findings, a section of the *After Action Review* was dedicated to recommendations to improve response to emergency situations in the City of Malibu. Relevant recommendations to the previously mentioned findings are as follows:

- Increase diversity of communication methods for residents (Implemented by LAC, LASD, CPW, OEM, and DACC)
- Shorten the approval process for evacuation alerts (Implemented by LAC, LASD, CPW, OEM, and DACC)
- Create detailed evacuation plan with traffic engineering capacity (Implemented by LAC, LASD, CPW, OEM, and DACC)
- Create a monitoring process for vital routes (Implemented by LASD and CPW)





Lessons Learned: The *Redbook* covers the operation of emergency personnel, however fails to cover emergency transportation standards for efficient direction of traffic, which was an issue in the Woolsey Fire. The report suggests that in the event of a citywide evacuation, there was inadequate communication with the affected residents. Additionally, unexpected closures due to advancement of the fire or debris affected the flow of traffic in the evacuation.

Using a report on an event which occurred 2-3 years ago within the City of Malibu gives insight into issues with the emergency evacuation that can be remedied with the enactment of a Transportation Plan. The recommendations mentioned in the Report defines which issues have been resolved and which issues require further action.

3.3 - Thomas Fire and 1/9 Debris Flow: After-Action Report and Improvement Plan

The report created by the County of Santa Barbara is similar to the *After Action Review of the Woolsey Fire Incident* in that it addresses primary concern in the county response to the emergency, summarizes the event, and provides recommendations to alleviate the issues in the event of a similar disaster.

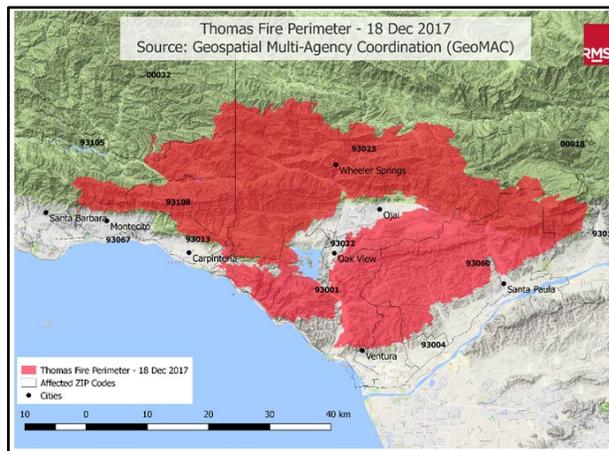
The primary issues identified by the County of Santa Barbara's After-Action report include the following:

- Dissemination issues with emergency public information and evacuation areas
- Debris flow cause road closures, restricting access for key personnel

The report addresses the transportation issues found during the emergency response to the Thomas Fire in addition to other concerns, which were not listed as a primary concern by the Santa Barbara County. The recommendations are shown in the following list:

- Streamlining alert systems with consideration to individuals with access and functional needs
- Development of a standard operation procedure or guide book for disasters and emergencies
- Formalize emergency transportation plans
- Creation of Call Center, which would contact a transportation to relocate residents to evacuation centers





Thomas Fire Footprint

Source: Fire Records Management System (RMS)



Woolsey Fire Footprint

Source: KPCC Fire Tracker

The geographic similarities between the affected counties of Ventura and Santa Barbara to the City of Malibu during the Woolsey Fire, allow for comparison between the two incidents in terms of evacuation and response. The primary similarity between the two incidents in terms of transportation planning is the primary lateral evacuation route within the City of Malibu is Pacific Coast Highway, which is the same evacuation route used for the Thomas Fire Incident. Additionally, both regions are bordered by the Pacific Ocean and mountain ranges with large amounts of vegetation. Recommendations and issues raised for the Thomas Fire can be analyzed for its application to the Woolsey Fire or the City of Malibu’s Evacuation Plan for fires.

3.4 – Last day in Paradise: the untold story of how a fire swallowed a town

An article published in *The Guardian* addresses California’s deadliest and most destructive fire known as Camp Fire, which affected Paradise City and nearby towns leading to the death of eighty-six (86) people and the destruction of nearly nineteen thousand (19,000) buildings. Paradise City is a rural town with a population of 26,218 as of the 2010 Census, consisting of a large of retirees. The City is surrounded by forest and mountain ranges where primary routes of entrance or exit to the city are Route 191, Pentz Road, Neal Road, and Skyway Road.

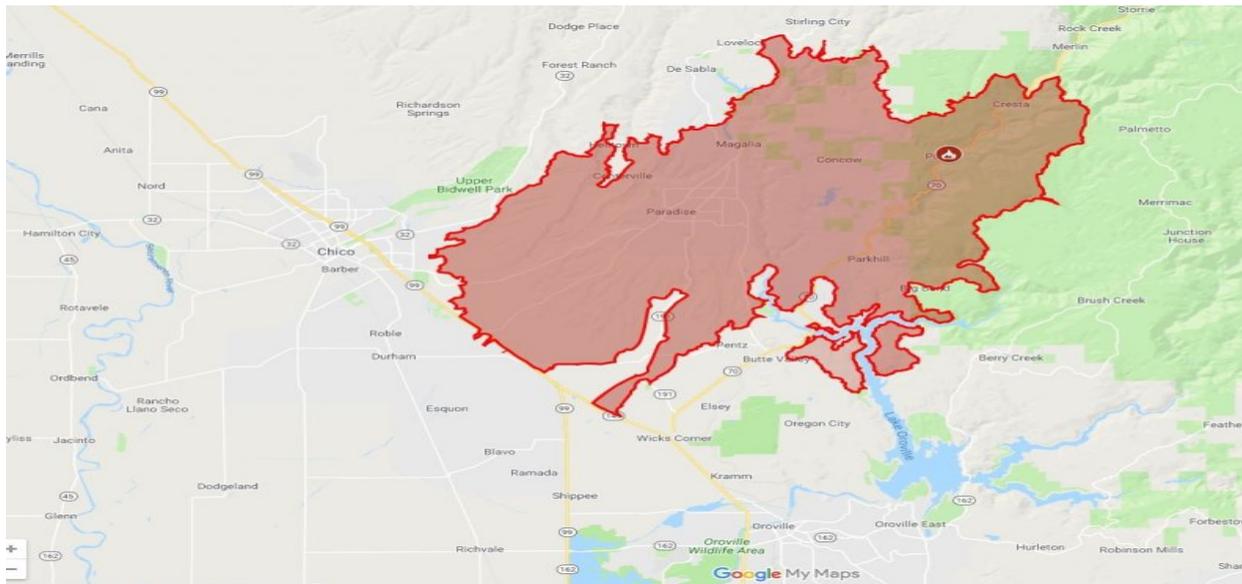
Paradise City uses an emergency plan and emergency alert system, which segregate the city into evacuation zones and alert residents of disasters and evacuations through telephone, email, and text.

The ongoing drought and weather conditions prior to the disaster exacerbated the chance of fire and a fallen transmission line eventually ignited the forestry in a nearby area. Initial predictions believed that the fire would mainly affect the cities to the east of Paradise City, however unexpected high velocity winds blowing to the west led to the fire advancing towards Paradise City.





The spot fires, caused by the embers blown from the wind, led to a mass evacuation rather than the evacuation zones mentioned Paradise City's evacuation plan. Vehicles along the evacuation routes were at a stand-still due to burning and/or running out of gas. In addition, possible damage to the communication infrastructure created notification gaps for the residents on which routes were the best choice for their area.



Camp Fire Footprint

Source: CAL FIRE

One of the mentioned remedies to the fires include prescribed burning of potential fuel and the restriction of settlements within forests and grasslands.

Lessons Learned: The age distribution within the City of Paradise, consisting primarily of retirees, led to a large number of residents who failed to receive emergency alerts due to the gap in technological knowledge. In addition, efficient and immediate debris removal on primary evacuation routes is essential for vehicle flow and therefore conservation of life.

Two primary differences in the geography of the City of Paradise and the City of Malibu limit the application of possible scenarios to occur in the City of Malibu: 1) The City of Paradise is bordered by only mountain ranges and forests 2) There are multiple evacuation routes to be used to exit the city. However, the article does provide valuable insight into infrastructure and communication issues, which may occur in the event of a citywide evacuation



3.5 - Existing Emergency Operations Plan (EOP)

The *Emergency Operations Plan* created by the City of Malibu intends to encompass all divisions, which will be involved in the event of a disaster or emergency. The EOP defines the respective purpose for each division, their operation, and how they are to coordinate with other divisions. Additionally, the EOP states primary disaster scenarios of concern for the City of Malibu, as well as mitigation and response procedures.

In regards to tsunamis, the City of Malibu's current 2018 Emergency Operations Plan (EOP) mandates two phases of evacuation, voluntary and mandatory, with specified routes to become northbound only. In the case of a tsunami, high elevation regions in or near the boundaries of the City of Malibu become Tsunami Safe Areas. For the City of Malibu, the current Tsunami safe-refuge areas defined in the EOP are as follows:

- Tuna Canyon Road approximately 1500' from PCH
- Las Flores Canyon Road past 3504 Las Flores (Odyssey School)
- Malibu Canyon Road at Salvation Army camps north of Piuma Road
- Latigo Canyon Road in the area of 5656 Latigo Canyon Road
- Encinal Canyon Road at Charmlee Park
- Decker Canyon Road as a last resort

The Emergency Operations Plan also defines recommended traffic control points at the following locations (locations were omitted due to being outside the City of Malibu's boundaries):

- Topanga Canyon Boulevard, south of Grandview
- Malibu Canyon Road at Piuma Road
- Kanan Dume Road at Tunnel #1
- Encinal Canyon Road at Lechusa Road
- Decker Road at Lechusa Road

A primary concern in regards to transportation within the City of Malibu addresses the 20% of individuals, which lack a means of transportation. Local transportation needs are to be filled by the Transportation Unit of the Emergency Operations Center, however in the event of an emergency, the transportation needs are to be filled by the Los Angeles County Sheriff's Department (LASD) and American Red Cross (if enlisted).

The Transportation Plan created by Minagar in the event of a tsunami takes into account the aforementioned safe refuge areas and traffic control points, and includes them as deemed appropriate. Minagar also took into consideration the operational structure in the recommendations to the City of Malibu.





Scenario Analysis

Scenarios were created for the existing conditions along Pacific Coast Highway, the maximized conditions for PCH, evacuation involving varying fire locations, and evacuation involving a tsunami. For the wildfire evacuation scenarios (Scenarios #2-6), due to the higher capacity of Pacific Coast Highway (PCH) in the Westbound direction, preference was given to right turns for the “Westbound” (true direction is southbound) traffic.

All of the movements for the evacuations routes are summarized in the evacuation maps given in **Appendix B**. The true north is the opposite of the Pacific Ocean since Caltrans (California Department of Transportation) uses north/south orientation for its traffic signals along the Pacific Coast Highway (PCH), in order to be consistent, all the computer modeling, analyses, graphs, exhibits and tabulations are based upon the aforementioned Caltrans protocol.

In regards to the fire scenarios and Scenario #1, the fire icon indicates the location of the wildfire for its respective scenario. The large red arrows show the general direction of traffic along Pacific Coast Highway and the smaller arrows show the permitted movements for general traffic at the intersection of an evacuation route and Pacific Coast Highway

Similarly, the tsunami scenario shows the location of the tsunami using a blue wave where the large blue arrows describe general traffic flow and smaller blue arrows dictate permitted actions for the intersection of an evacuation route and PCH.

Scenario #0: Existing Normal Conditions

4.1.1 - Scenario Conditions

Scenario #0, named “True Existing Conditions,” demonstrates the peak hour conditions along the street network for the AM, MD, and PM periods. No restrictions have been made on the *SYNCHRO* for specific movements and neither were any of the traffic counts maximized to account for the worst conditions of the entire day. The traffic data used for each intersection was for their respective peak hour in either the morning, mid-day, or evening survey period.

4.1.2 - Scenario Analysis

For each survey period and intersection, different peak hour time frames were recorded. **Table 4.1** shows the existing normal peak hour used for each intersection and respective survey period:



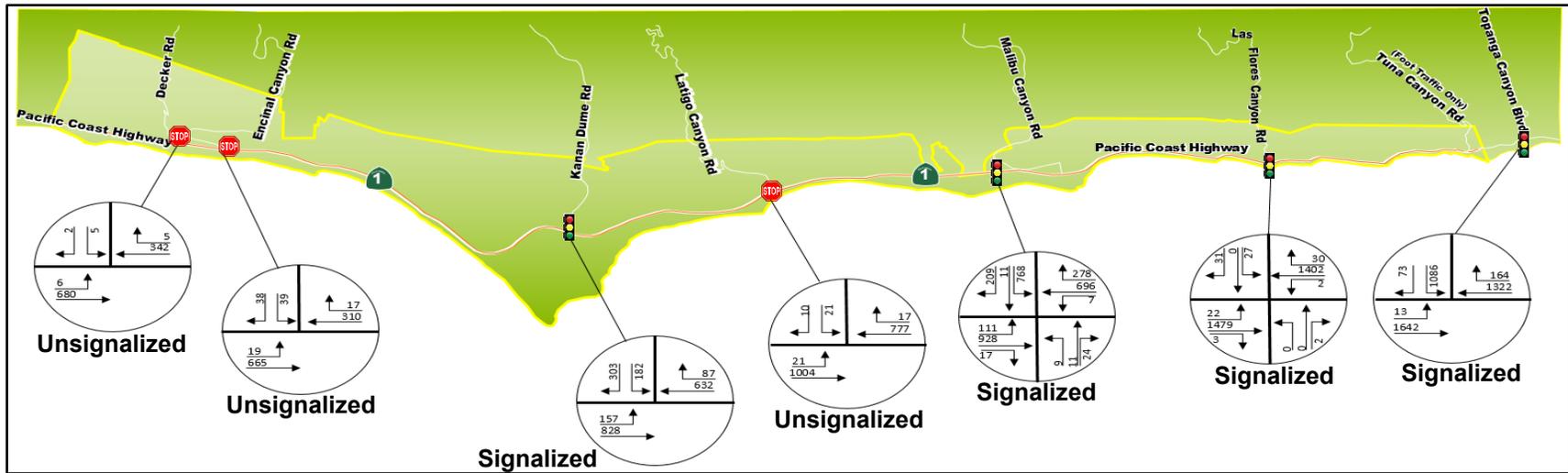


**Table 4.1: Existing Normal Peak Hour Summary for
Each Evacuation Route Intersection with PCH**

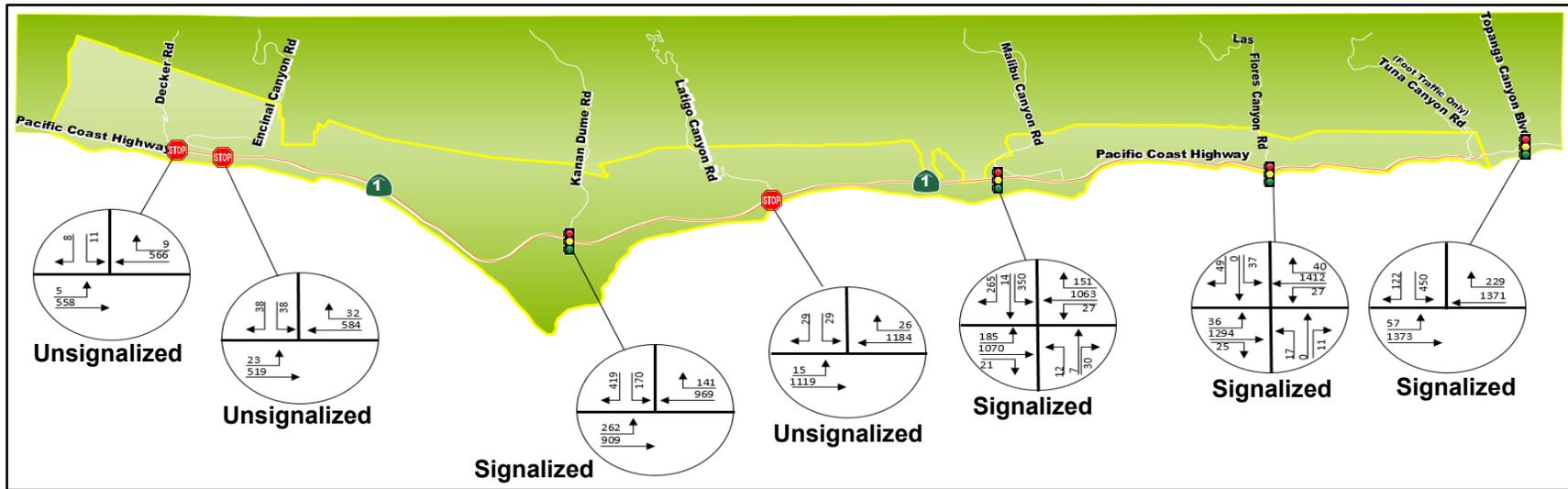
Intersection with PCH	AM Peak Hour	MD Peak Hour	PM Peak Hour
Decker Canyon	7:45AM – 8:45 AM	11:30 AM – 12:30 PM	4:00PM – 5:00 AM
Encinal Canyon	7:45AM – 8:45 AM	12:00 PM – 1:00 PM	4:30 PM – 5:30 PM
Kanan Dume	8:00 AM – 9:00 AM	12:00 PM – 1:00 PM	4:00PM – 5:00 AM
Latigo Canyon	8:00 AM – 9:00 AM	12:00 PM – 1:00 PM	4:15 PM – 5:15 PM
Malibu Canyon	8:00 AM – 9:00 AM	12:00 PM – 1:00 PM	4:00PM – 5:00 AM
Las Flores Canyon	7:30 AM – 8:30 AM	12:00 PM – 1:00 PM	4:45 PM – 5:45 PM
Topanga Canyon	7:00 AM – 8:00 AM	11:15 AM – 12:15 PM	4:45 PM – 5:45 PM

The intersection’s existing normal peak hour for the respective period was then recorded and distributed to the appropriate movement in accordance with the figures below. In the case of the intersections of Decker Road, Encinal Canyon Road, Kanan Dume Road, Latigo Canyon Road, and Topanga Canyon Boulevard, which are three-legged intersections or “T-Intersection,” the possible vehicle movements are restricted due to the existing street geometry.



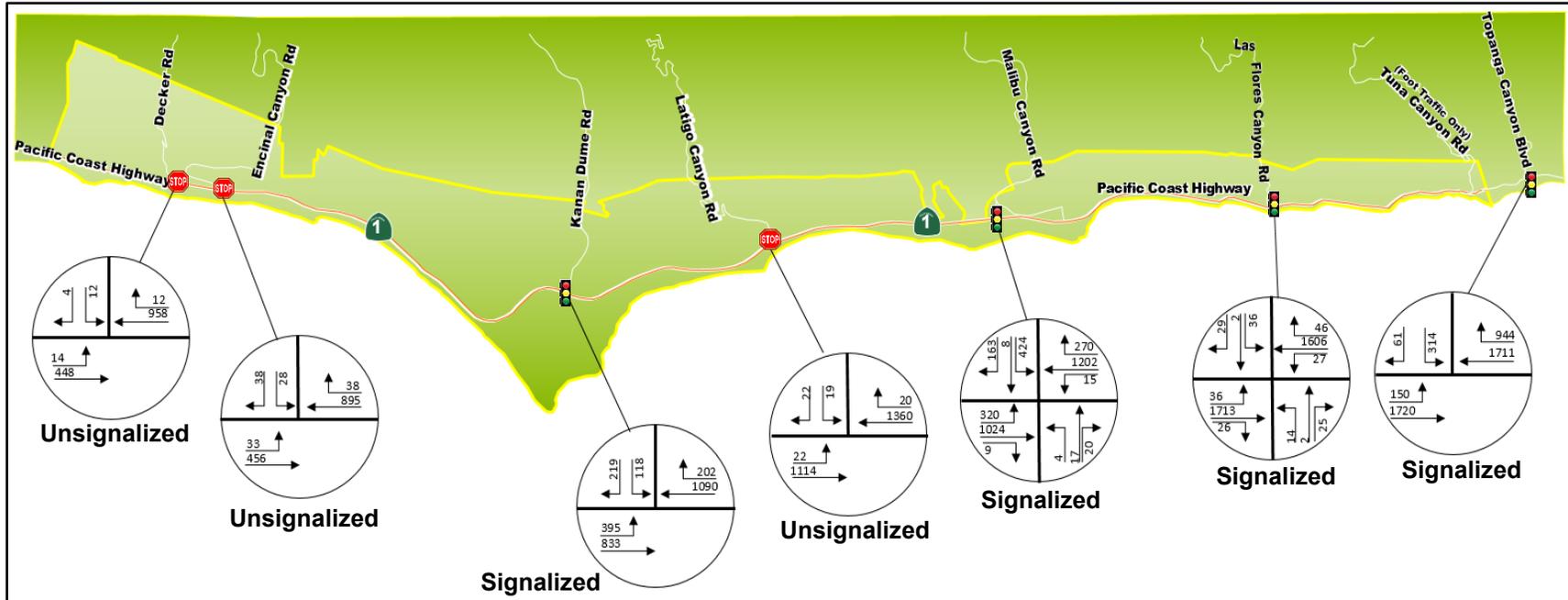


Existing Normal AM Peak Hour Intersection Traffic Count Summary Map



Existing Normal MD Peak Hour Intersection Traffic Count Summary Map





Existing Normal PM Peak Hour Intersection Traffic Count Summary Map





Table 4.2: LOS Summary for Existing Normal AM Peak Hour at Each Evacuation Route Intersection

Street Name Intersecting PCH	Intersection LOS	Delay Value (sec/veh)	STOP Controlled Approach LOS	STOP Controlled Approach Delay Value (sec/veh)
Las Flores Canyon Rd	A	6.6	N/A*	N/A
Malibu Canyon Rd	D	43.2	N/A	N/A
Latigo Canyon Rd	A	0.7	D	33.5
Kanan Dume Rd	C	23.2	N/A	N/A
Encinal Canyon Rd	A	0.9	B	11.3
Decker Canyon Rd	A	0.1	B	11.1
Topanga Canyon Blvd	E	74.2	N/A	N/A

Signalized Intersection

Stop Controlled Approach/Intersection

*N/ A: Not Applicable

Table 4.3: LOS Summary for Existing Normal MD Peak Hour at Each Evacuation Route Intersection

Street Name Intersecting PCH	Intersection LOS	Delay Value (sec/veh)	STOP Controlled Approach LOS	STOP Controlled Approach Delay Value (sec/veh)
Las Flores Canyon Rd	A	9.9	N/A*	N/A
Malibu Canyon Rd	C	27.2	N/A	N/A
Latigo Canyon Rd	A	2.4	F	94
Kanan Dume Rd	C	25.1	N/A	N/A
Encinal Canyon Rd	A	1.1	B	14.3
Decker Canyon Rd	A	0.3	B	13.1
Topanga Canyon Blvd	C	27.3	N/A	N/A

*N/A: Not Applicable

Table 4.4: LOS Summary for Existing Normal PM Peak Hour at Each Evacuation Route Intersection

Street Name Intersecting PCH	Intersection LOS	Delay Value (sec/veh)	STOP Controlled Approach LOS	STOP Controlled Approach Delay Value (sec/veh)
Las Flores Canyon Rd	B	11.8	N/A*	N/A
Malibu Canyon Rd	C	31.0	N/A	N/A
Latigo Canyon Rd	A	1.8	F	104.8
Kanan Dume Rd	D	39.5	N/A	N/A
Encinal Canyon Rd	A	1	C	17.6
Decker Canyon Rd	A	0.3	C	18.9
Topanga Canyon Blvd	D	39.2	N/A	N/A

*N/A: Not Applicable





Using the previously mentioned standards for Level of Service (LOS) in the City of Malibu, for the morning survey period, the intersections of primary concern are Malibu Canyon Road, Latigo Canyon Road and Topanga Canyon Boulevard with Pacific Coast Highway (PCH) where there exists an LOS of D or worse for the peak hour conditions. The intersection of Malibu Canyon Road and PCH had a delay value of approximately forty-five (45) seconds per vehicle, Latigo Canyon road and PCH had a delay value of thirty (30) seconds per vehicle, for the STOP sign on the southbound approach, and Topanga Canyon Boulevard intersection with PCH had a delay of about seventy-five (75) seconds or over one (1) minute per vehicle.

For the mid-day survey period where less commuters and travelers are present, the main intersection of concern was for Latigo Canyon Road and PCH where there was an LOS F. The corresponding delay value for the LOS was ninety-four (94) seconds or over 1.5 minutes.

In the evening survey period, there were more intersections failing to meet the City of Malibu's LOS standards, which include Latigo Canyon Road and PCH, Kanan Dume Road and PCH, and Topanga Canyon Boulevard and PCH. The LOS values were F, D, and D, respectively, with corresponding delay values of 104 seconds (1.5+ minutes), forty (40) seconds, and forty (40) seconds, approximately.

These intersections are of primary concern because with the increased impact of using worst case scenario for traffic counts and higher traffic volumes due to re-direction of traffic, the LOS and delay values will worsen. However, the decrease in LOS and increase in delay values are inevitable in the event of a disaster and the effects were minimized with Scenarios #2-7.

Scenario #1: Existing Maximized Conditions

4.2.1 - Scenario Conditions

In this report, Scenario #1 is defined as the "Existing Maximized Conditions." For the scenario, it assumes existing conditions of no wildfire or tsunami where traffic proceeds as per usual. There would be no restrictions placed on intersection turning movements and vehicles would be travelling in all possible directions. The manipulation for this scenario would be the application of the maximizing system for each possible movement at each intersection. Since the latter scenarios also use maximized traffic counts to account for worst case conditions, Scenario #1 is taken as the base case for analysis.

4.2.2 - Scenario Analysis

The Level of Service (LOS) and delay values are summarized in **Table 4.5** and represent worst case scenarios for each intersection on a weekday without disasters.





Table 4.5: LOS Summary for Existing Maximized Conditions at Each Evacuation Route Intersection

Street Name Intersecting PCH	Intersection LOS	Delay Value (sec/veh)	STOP Controlled Approach LOS	STOP Controlled Approach Delay Value (sec/veh)
Las Flores Canyon Rd	B	12.4	N/A*	N/A
Malibu Canyon Rd	D	45.1	N/A	N/A
Latigo Canyon Rd	A	4.4	F	196.9
Kanan Dume Rd	D	36.8	N/A	N/A
Encinal Canyon Rd	A	1.1	C	20.1
Decker Canyon Rd	A	0.4	B	11.9
Topanga Canyon Blvd	F	140.1	N/A	N/A

*N/A: Not Applicable

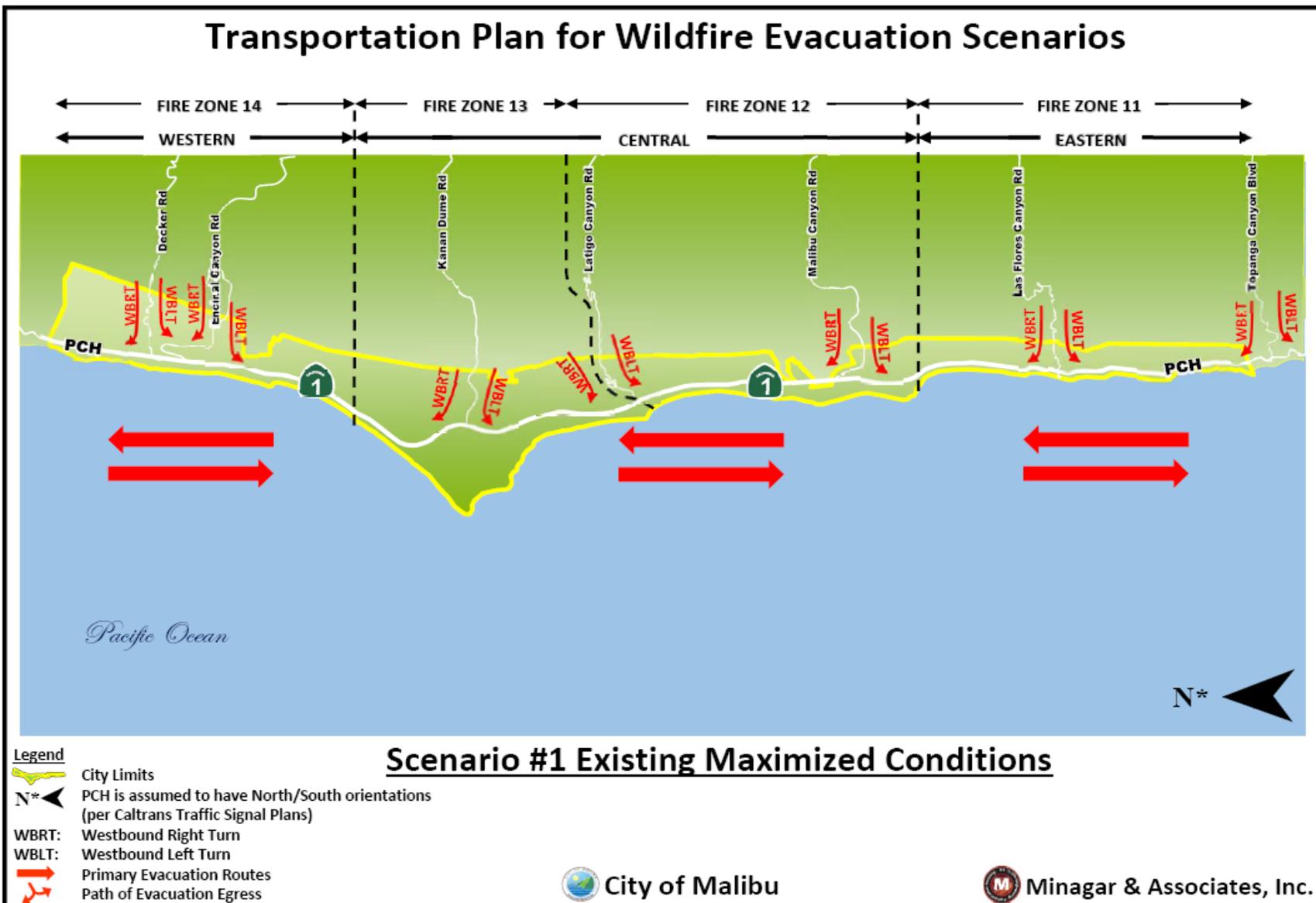
For Scenario #1, the previous trend from Scenario #0 where the worst intersection LOS was for Malibu Canyon Road, Latigo Canyon Road, Kanan Dume Road, and Topanga Canyon Road, persists for the Maximized Existing Conditions Scenario. In this case, the most prevalent intersections of concern are all four of the intersections with an LOS D or worse. Malibu Canyon Road and Kanan Dume Road intersections with PCH are at LOS D with delay values of forty-five (45) and thirty-five (35) seconds, respectively, whereas Latigo Canyon Road and Topanga Canyon Boulevard intersections with PCH have the worst possible LOS F. Their respective delay values are two-hundred (200) and one-hundred forty (140) seconds or 3.5 and 2.5 minutes, approximately, which is an unacceptable delay.

The delay increase from the Scenario #0 is expected as the conditions for Scenario #1 are manipulated to have worse conditions





Transportation Plan for Wildfire Evacuation Scenarios



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Scenario #2: Wildfire within Western & Central Malibu (Fire Zones 14 and 12 & 13 respectively)

4.3.1 - Scenario Conditions

Scenario #2 assumes that a fire occurs within the boundaries of Western Malibu (Fire Zone 14) and Central Malibu (Fire Zone 13 and Fire zone 12). For this scenario all traffic, except essential services, is restricted from any movements which would direct traffic north. The evacuation routes involved are all seven (7) primary roads connecting to Ventura (101) Freeway. The recommended movements for all southbound traffic are given in **Table 4**. Due to the delay and interference with roadway efficiency, traffic proceeding in Northbound or Southbound direction are prohibited from performing any U-turns unless otherwise dictated by roadway conditions.

Table 4.6: Permitted Movement Summary at Each Evacuation Route Intersection

Intersection with PCH	Permitted Westbound Traffic Movement During Evacuation
Decker Canyon Rd 	Right Turn
Encinal Canyon Rd 	Right Turn
Kanan Dume Rd 	Right Turn
Latigo Canyon Rd 	Right Turn
Malibu Canyon Rd 	Left Turn
Las Flores Canyon Rd 	Left Turn
Topanga Canyon Rd 	Left Turn





4.3.2 - Scenario Analysis

Table 4.7: LOS Summary at Each Evacuation Route Intersection

Street Name Intersecting PCH	Intersection LOS	Delay Value (sec/veh)	Delay Value Change (sec/veh)	STOP Controlled Approach LOS	STOP Controlled Approach Delay Value (sec/veh)	Delay Value Change (sec/veh)
Las Flores Canyon Road	A	6.1	- 6.3	N/A*	N/A	N/A
Malibu Canyon Road	F	94.7	+ 49.6	N/A	N/A	N/A
Latigo Canyon Road	A	0.4	- 4	C	17.7	- 179.2
Kanan Dume Road	E	59.6	+ 22.8	N/A	N/A	N/A
Encinal Canyon Road	A	0.7	+ 0.4	B	13.6	- 6.5
Decker Canyon	A	0.2	- 0.2	A	9.5	- 2.4
Topanga Canyon Blvd	F	603.9	+ 463.8	N/A	N/A	N/A

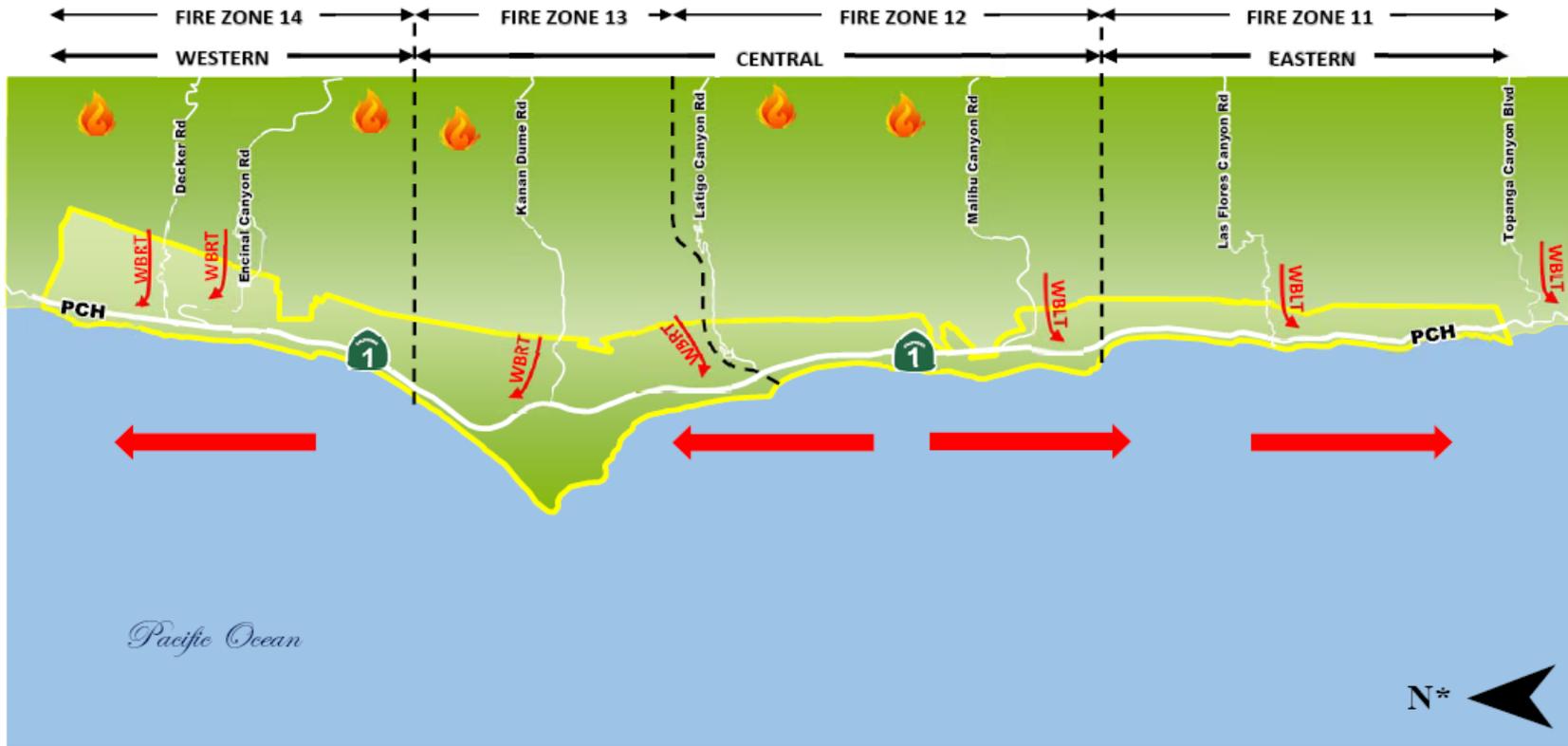
*N/A: Not Applicable

With the evacuation measures in place, primary bottlenecks occur at the intersections of Malibu Canyon Road, Kanan Dume Road, and Topanga Canyon Boulevard with Pacific Coast Highway. Malibu Canyon Road’s delay value is ninety-five (95) seconds or 1.5 minutes, Kanan Dume’s delay value is sixty (60) seconds or one (1) minute, and Topanga Canyon Boulevard with the worst delay of six-hundred (600) seconds or ten (10) minutes. The Level of Services are F, E, and F, respectively. The STOP controlled approach for Latigo Canyon Road at Pacific Coast Highway improves due to the efficiency of right-turn movements on high traffic intersections and restricting vehicles from performing left-turn movements. Additionally, due to the low LOS and high Delay Value, additional measures may be taken by the traffic authority to alleviate the traffic delay.





Transportation Plan for Wildfire Evacuation Scenarios



Scenario #2 Western Malibu (Fire Zone 14) Including Central Malibu (Fire Zone 12 & 13)

- Legend**
- City Limits
 - N* PCH is assumed to have North/South orientations (per Caltrans Traffic Signal Plans)
 - Scenario Fire Location
 - WBRT: Westbound Right Turn
 - WBLT: Westbound Left Turn
 - Primary Evacuation Routes
 - Path of Evacuation Egress





Scenario #3: Wildfire within Western Malibu (Fire Zone 14) Excluding Central Malibu (Fire Zones 13 & 12)

4.4.1 - Scenario Conditions

Similarly to Scenario #2, Scenario #3 includes Western Malibu (Fire Zone 14), however it excludes Central Malibu (Fire Zone 13 and 12). Due to the containment of the disaster into one fire zone, the evacuation routes considered are Decker Canyon Road and Encinal Canyon Road. The previously mentioned considerations on the capacity of Pacific Coast Highway were taken into account and both routes are restricted to right-turn movements only.

Table 4.8: Permitted Movement Summary at Each Evacuation Route Intersection

Intersection with PCH	Permitted Westbound Traffic Movement During Evacuation
Decker Canyon Rd	Right Turn
Encinal Canyon Rd	Right Turn
Kanan Dume Rd	N/A*
Latigo Canyon Rd	N/A
Malibu Canyon Rd	N/A
Las Flores Canyon Rd	N/A
Topanga Canyon Rd	N/A

*N/A: Not Applicable

4.4.2 - Scenario Analysis

Table 4.9: LOS Summary at Each Evacuation Route Intersection

Street Name Intersecting PCH	Intersection Level of Service	Delay Value (sec/veh)	Delay Value Change (sec/veh)	STOP Controlled Approach LOS	STOP Controlled Approach Delay Value (sec/veh)	Delay Value Change (sec/veh)
Las Flores Canyon Road	N/A*	N/A	N/A	N/A	N/A	N/A
Malibu Canyon Road	N/A	N/A	N/A	N/A	N/A	N/A
Latigo Canyon Road	N/A	N/A	N/A	N/A	N/A	N/A
Kanan Dume Road	N/A	N/A	N/A	N/A	N/A	N/A
Encinal Canyon Road	A	0.7	- 0.4	B	13.6	- 6.5
Decker Canyon	A	0.2	- 0.2	A	9.5	- 2.4
Topanga Canyon Blvd	N/A	N/A	N/A	N/A	N/A	N/A

*N/A: Not Applicable

The result of the analysis for the intersections of concern showed higher traffic flows due to decreasing the amount of left-turn movements to zero (0). Without the disruption of traffic to the east of Encinal Canyon Road, the traffic volume interfering with the right-turn movements is also minimal, which leads to the STOP controlled approach LOS B and LOS A for Encinal Canyon Road and Decker Canyon Road respectively.





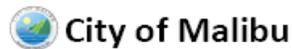
Transportation Plan for Wildfire Evacuation Scenarios



Scenario #3 Western Malibu (Fire Zone 14) Excluding Central Malibu

Legend

- City Limits
- PCH is assumed to have North/South orientations (per Caltrans Traffic Signal Plans)
- Scenario Fire Location
- WBRT: Westbound Right Turn
- WBLT: Westbound Left Turn
- Primary Evacuation Routes
- Path of Evacuation Egress



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Scenario #4: Wildfire within Eastern (Fire Zone 11) including Central Malibu (Fire Zones 12 & 13)

4.5.1 - Scenario Conditions

The opposite scenario to Scenario #3 is Scenario #4, which includes Central Malibu (Fire Zone 13 and 12), and Eastern Malibu (Fire Zone 11). Due to the coverage of the fire in Scenario #4, all evacuation routes movements onto Pacific Coast Highway have been restricted. As mentioned, preference is given to the westbound direction of Pacific Coast Highway due to its higher capacity. The permitted movements for the southbound traffic are as follows:

Table 4.10: Permitted Movement Summary at Each Evacuation Route Intersection

Intersection with PCH	Permitted Westbound Traffic Movement During Evacuation
Decker Canyon Rd	Right Turn
Encinal Canyon Rd	Right Turn
Kanan Dume Rd	Right Turn
Latigo Canyon Rd	Right Turn
Malibu Canyon Rd	Left Turn
Las Flores Canyon Rd	Left Turn
Topanga Canyon Rd	Left Turn

4.5.2 - Scenario Analysis

Table 4.11: LOS Summary at Each Evacuation Route Intersection

Street Name Intersecting PCH	Intersection Level of Service	Delay Value (sec/veh)	Delay Value Change (sec/veh)	STOP Controlled Approach LOS	STOP Controlled Approach Delay Value (sec/veh)	Delay Value Change (sec/veh)
Las Flores Canyon Road	A	6.1	- 6.3	N/A*	N/A	N/A
Malibu Canyon Road	F	94.7	+ 49.6	N/A	N/A	N/A
Latigo Canyon Road	A	0.4	- 4	C	17.7	- 179.2
Kanan Dume Road	F	95.8	+ 59	N/A	N/A	N/A
Encinal Canyon Road	A	0.7	- 0.4	B	13.6	- 6.5
Decker Canyon	A	0.2	- 0.2	A	9.5	- 2.4
Topanga Canyon Blvd	F	603.9	+ 463.8	N/A	N/A	N/A

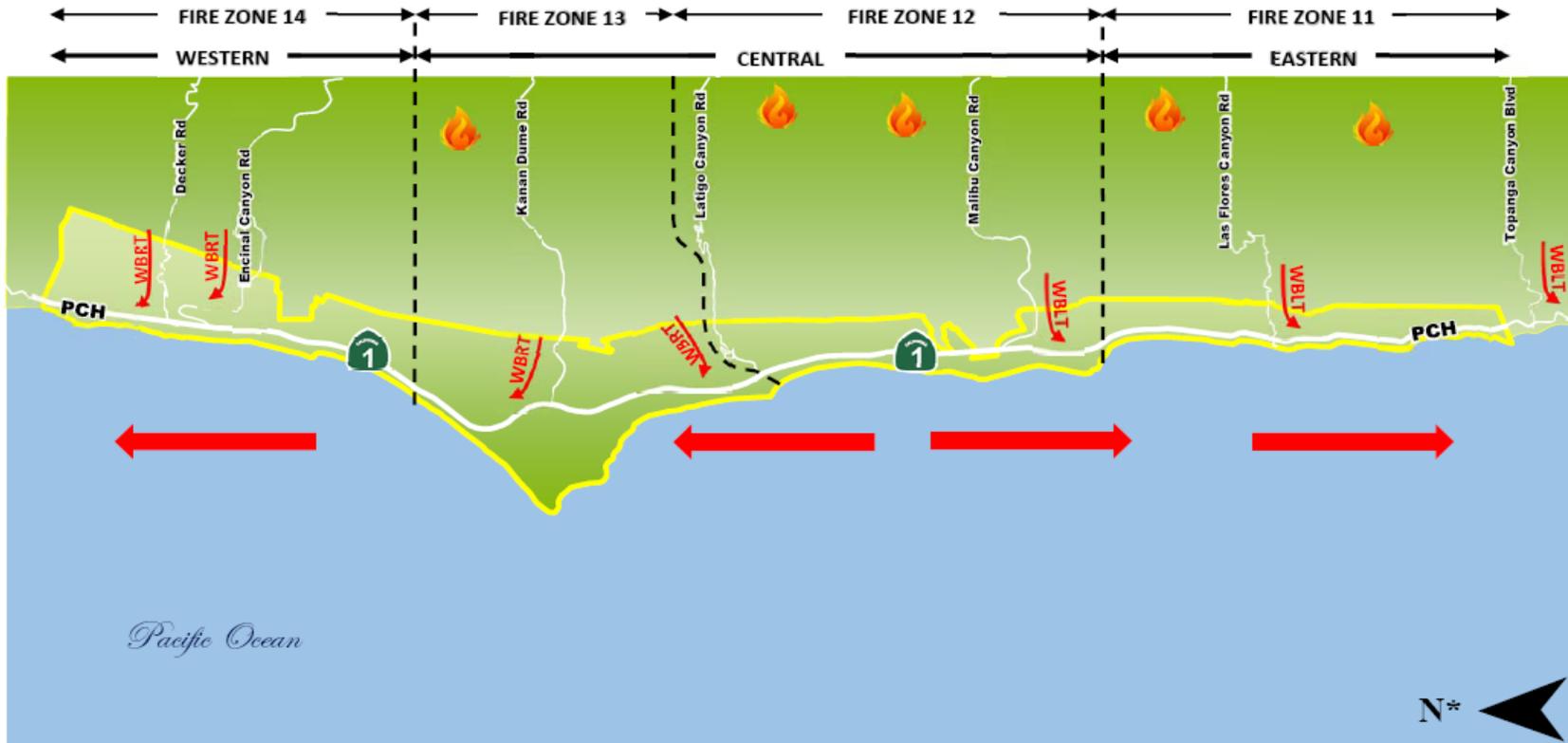
*N/A: Not Applicable

The result of the evacuation severely affects the Level of Service and delay values within the intersections of Malibu Canyon Road, Kanan Dume Road, and Topanga Canyon Boulevard with Pacific Coast Highway with a minimal impact on the remaining intersections. As mentioned in Scenario #2, the LOS and delay value for the STOP-controlled approach on Latigo Canyon Road improves due to restriction on left turn movements for this intersection. Malibu Canyon Road's LOS and delay value worsens to F and ninety-five (95) seconds or 1.5 minutes, whereas Kanan Dume Road's LOS and delay value worsens to a similar F and ninety-five seconds or 1.5 minutes. The worst intersection within this evacuation scenario is Topanga Canyon Boulevard with an LOS F and delay value of six-hundred (600) seconds or ten (10) minutes. In the event of Scenario #4, where LOS for some intersections are F with high Delay Values, there may be additional traffic management to lessen the delay.





Transportation Plan for Wildfire Evacuation Scenarios



Scenario #4 Eastern Malibu (Fire Zone 11) Including Central Malibu (Fire Zone 12 & 13)

Legend

- City Limits
- PCH is assumed to have North/South orientations (per Caltrans Traffic Signal Plans)
- Scenario Fire Location
- WBRT: Westbound Right Turn
- WBLT: Westbound Left Turn
- Primary Evacuation Routes
- Path of Evacuation Egress





Scenario #5: Wildfire within Eastern (Fire Zone 11) excluding Central Malibu (Fire Zones 12 & 13)

4.6.1 - Scenario Conditions

Scenario #5 considers the case where a fire occurs in the Eastern regions of Malibu (Fire Zone 11) only. The evacuation routes involved would be limited to Malibu Canyon Road, Las Flores Canyon Road, and Topanga Canyon Road. The Southbound traffic along Malibu Canyon Road and Las Flores Canyon Road would be restricted to right-turn movements only at Pacific Coast Highway and Topanga Canyon Boulevard would be restricted to left-turn movements upon reaching PCH.

Table 4.12: Permitted Movement Summary at Each Evacuation Route Intersection

Intersection with PCH	Permitted Westbound Traffic Movement During Evacuation
Decker Canyon Rd 	N/A*
Encinal Canyon Rd 	N/A
Kanan Dume Rd 	N/A
Latigo Canyon Rd 	N/A
Malibu Canyon Rd 	Right Turn
Las Flores Canyon Rd 	Right Turn
Topanga Canyon Rd 	Left Turn

*N/A: Not Applicable

4.6.2 - Scenario Analysis

Table 4.13: LOS Summary at Each Evacuation Route Intersection

Street Name Intersecting PCH	Intersection Level of Service	Delay Value (sec/veh)	Delay Value Change (sec/veh)	STOP Controlled Approach LOS	STOP Controlled Approach Delay Value (sec/veh)	Delay Value Change (sec/veh)
Las Flores Canyon Road 	B	12.4	0	N/A*	N/A	N/A
Malibu Canyon Road 	F	94.7	+ 49.6	N/A	N/A	N/A
Latigo Canyon Road 	N/A	N/A	N/A	N/A	N/A	N/A
Kanan Dume Road 	N/A	N/A	N/A	N/A	N/A	N/A
Encinal Canyon Road 	N/A	N/A	N/A	N/A	N/A	N/A
Decker Canyon 	N/A	N/A	N/A	N/A	N/A	N/A
Topanga Canyon Blvd 	F	603.9	+ 493.8	N/A	N/A	N/A

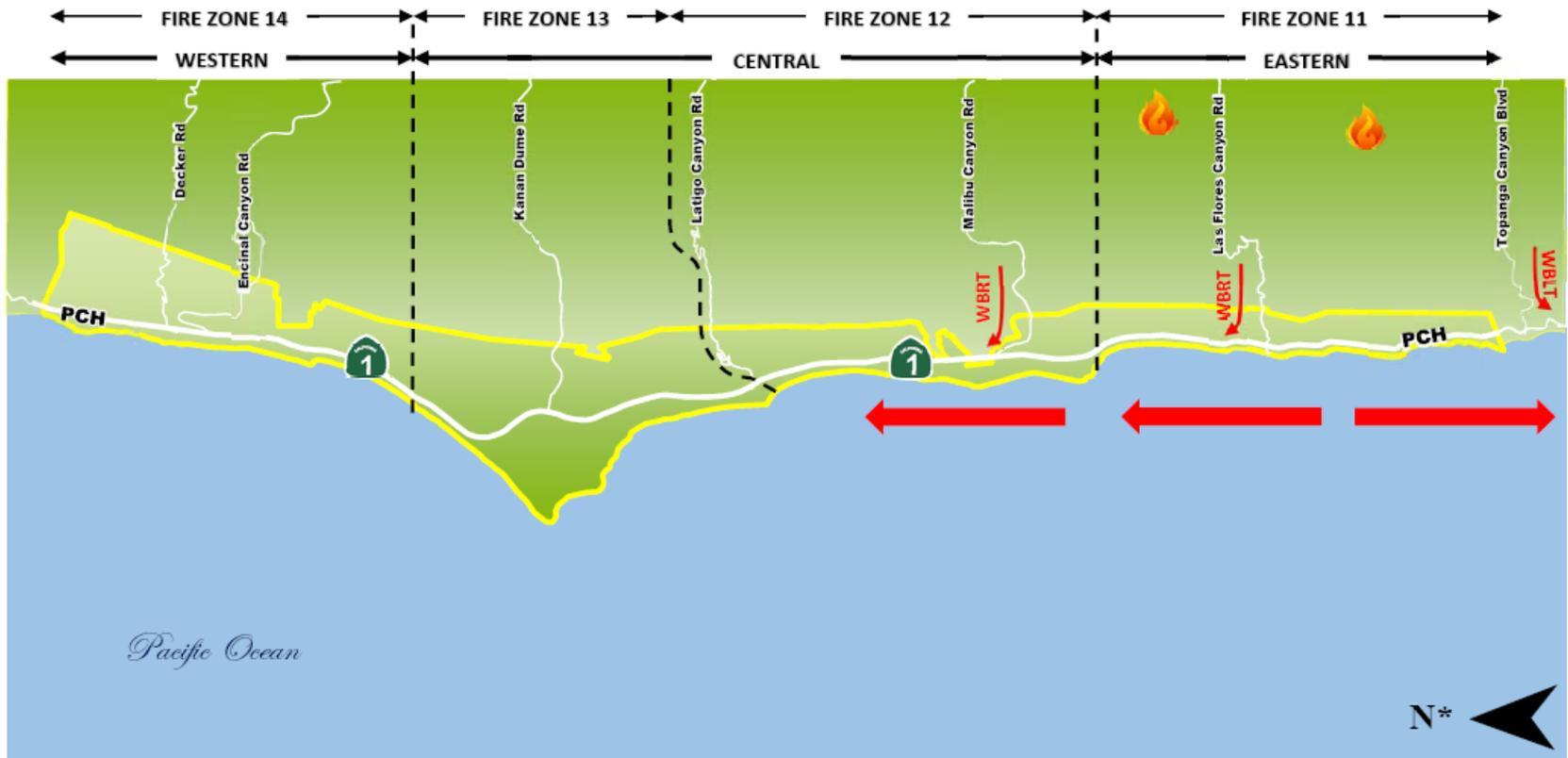
*N/A: Not Applicable

Following the re-direction of traffic, the LOS and delay values of Malibu Canyon Road and Topanga Canyon Boulevard worsen (Topanga Canyon Boulevard's LOS remains at the worse LOS F), which the LOS and delay value of Las Flores Canyon Road remains the same from Scenario #1. Malibu Canyon Road's LOS and delay value worsens to F and ninety-five (95) seconds or 1.5 minutes, whereas Topanga Canyon Boulevard's LOS and delay value worsens to a similar F and six-hundred (600) seconds or 1.5 minutes. As per the judgement of the traffic authority, in order to prevent further decrease in the Level of Service or Delay Values, additional traffic management measures can be taken





Transportation Plan for Wildfire Evacuation Scenarios



Scenario #5 Eastern Malibu (Fire Zone 11) Excluding Central Malibu (Fire Zone 12 & 13)

Legend

- City Limits
- PCH is assumed to have North/South orientations (per Caltrans Traffic Signal Plans)
- Scenario Fire Location
- WBRT: Westbound Right Turn
- WBLT: Westbound Left Turn
- Primary Evacuation Routes
- Path of Evacuation Egress





Scenario #6: Wildfire Citywide (Fire Zones 11, 12, 13 & 14)

4.7.1 - Scenario Conditions

Scenario #6 is the worst case of Scenarios #2-6, which assumes the situation where all of the City of Malibu is affected by a fire (Fire Zone 11-14). The flow of the southbound traffic on the evacuation routes is similar to Scenario #2 and 4, in which routes to the west of Latigo Canyon Road (Inclusive) are restricted to right-turn movements upon the approach to Pacific Coast Highway and the routes to the east of Latigo Canyon Road (Exclusive) are restricted to left-turn movements upon reaching PCH.

Table 4.14: Permitted Movement Summary at Each Evacuation Route Intersection

Intersection with PCH	Permitted Westbound Traffic Movement During Evacuation
Decker Canyon Rd	Right Turn
Encinal Canyon Rd	Right Turn
Kanan Dume Rd	Right Turn
Latigo Canyon Rd	Right Turn
Malibu Canyon Rd	Left Turn
Las Flores Canyon Rd	Left Turn
Topanga Canyon Rd	Left Turn

4.7.2 - Scenario Analysis

Table 4.15: LOS Summary at Each Evacuation Route Intersection

Street Name Intersecting PCH	Intersection Level of Service	Delay Value (sec/veh)	Delay Value Change (sec/veh)	STOP Controlled Approach LOS	STOP Controlled Approach Delay Value (sec/veh)	Delay Value Change (sec/veh)
Las Flores Canyon Road	A	6.1	- 6.3	N/A*	N/A	N/A
Malibu Canyon Road	F	94.7	+ 49.6	N/A	N/A	N/A
Latigo Canyon Road	A	0.4	- 4	C	17.7	- 179.2
Kanan Dume Road	F	95.8	+ 59	N/A	N/A	N/A
Encinal Canyon Road	A	0.7	- 0.4	B	13.6	- 6.5
Decker Canyon	A	0.2	- 0.2	A	9.5	- 2.4
Topanga Canyon Blvd	F	603.9	+ 463.8	N/A	N/A	N/A

*N/A: Not Applicable

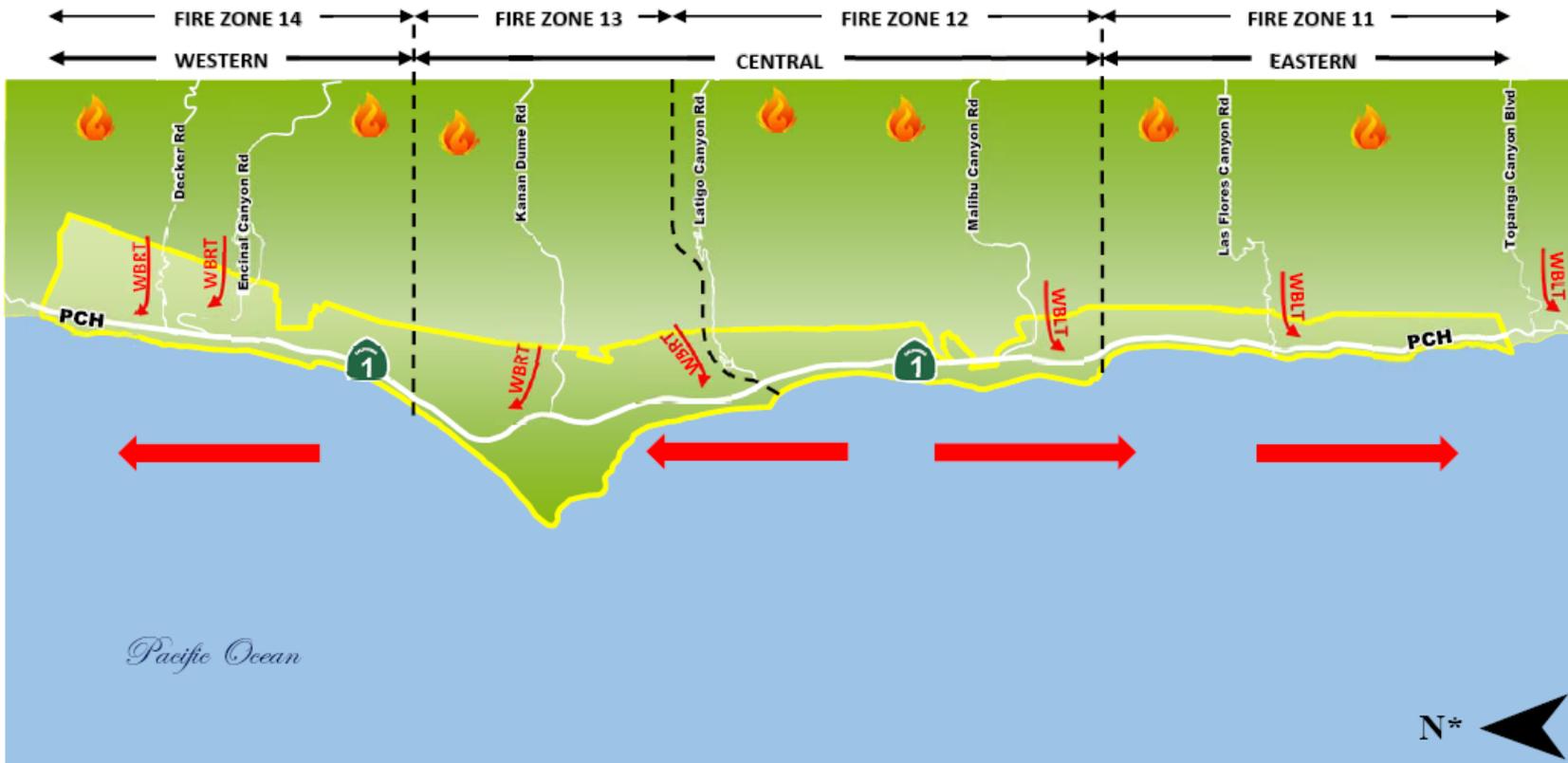
Values similar to the previous scenarios include Malibu Canyon Road with LOS F and delay value of ninety-five (95) seconds or 1.5 minutes, Kanan Dume Road with LOS F and delay value of ninety-five (95) seconds or 1.5 minutes, and Topanga Canyon Boulevard with LOS F and delay value of six-hundred (600) seconds or ten (10) minutes.

In the event of a disaster similar to Scenario #6, special considerations may need to be taken by the emergency traffic authority to manage the high delay intersections.





Transportation Plan for Wildfire Evacuation Scenarios



Scenario #6 Citywide Evacuation (Fire Zones 11, 12, 13 & 14)

Legend

- City Limits
- N* PCH is assumed to have North/South orientations (per Caltrans Traffic Signal Plans)
- Scenario Fire Location
- WBRT: Westbound Right Turn
- WBLT: Westbound Left Turn
- Primary Evacuation Routes
- Path of Evacuation Egress





Scenario #7: Tsunami Citywide (Within Los Angeles County & CGS Tsunami Inundation Areas 2 - 24 and Fire Zones 11, 12, 13 & 14)

4.8.1 - Scenario Conditions

In the event of a tsunami, evacuation routes are restricted to northbound traffic only to simulate residents travelling to high elevation or tsunami refuge areas. The traffic already travelling along Pacific Coast Highway are taken to make a turn onto the nearest evacuation route.

Along the evacuation routes and Pacific Coast Highway are Tsunami Refuge Areas and Public Park/Safety Areas gathered by the Emergency Operations Plan and Minagar:

1. Tuna Canyon Road approximately 1500' from Pacific Coast Highway
2. Las Flores Canyon Road at past Sycamore School at the roadside "drop-off area"
3. Malibu Canyon Road at the Salvation Army Camps in Tapia Park
4. Latigo Canyon Road near the vicinity of 4966 Latigo Canyon Road
5. Zuma Canyon Trailhead
6. Decker Canyon Road at Charmlee Park
7. Mulholland Highway at Leo Carillo Park

Due to having an tsunami refuge area along Mulholland Highway, it is included within the Evacuation Plans, however it is outside the jurisdiction of the City of Malibu and recommendations to improve traffic in the area cannot be applied by the City of Malibu. Another evacuation route available to residents of the City of Malibu in the case of a tsunami is Tuna Canyon Road. For traffic coming from Pacific Coast Highway, access is restricted to pedestrians only due to being a one-way road.

Minagar also optimized the locations for traffic control points and recommend locating them in the following locations:

- Malibu Canyon Road at Piuma Road
- Topanga Canyon Boulevard, south of Grandview
- Rambla Pacifico Street/Las Flores Canyon Road at Piuma/Schueren Road
- Encinal Canyon Road at Lechusa Road
- Decker Road at Lechusa Road
-

4.8.2 - Scenario Analysis

The Level of Service for each intersection with the adjustments to turning movements are shown in **Table 4.16**.





Table 4.16: LOS Summary at Each Evacuation Route Intersection

Street Name Intersecting PCH	Intersection Level of Service	Delay Value (sec/veh)	Delay Value Change (sec/veh)
Las Flores Canyon Road 	F	754.2	+ 741.8
Malibu Canyon Road 	F	684.7	+ 639.6
Latigo Canyon Road 	F	431.1	+ 426.7
Kanan Dume Road 	F	698.7	+ 661.9
Encinal Canyon Road 	D	45.9	+ 44.8
Decker Canyon 	A	8.9	+ 8.5
Topanga Canyon Blvd 	F	1932.0	+ 1791.9

As traffic is restricted to vehicles moving northbound only, the STOP-controlled approaches for the southbound direction is no longer applicable. Scenario #7 has the worst impact on the evacuation route intersections due to the limited capacity of the routes. All of the seven (7) evacuation routes, except for Decker Canyon Road worsen to a Level of Service below the City of Malibu’s acceptable standard. Las Flores Canyon Road, Malibu Canyon Road, Latigo Canyon Road, Kanan Dume Road, and Topanga Canyon Boulevard each have a LOS F. The delay value for Las Flores Canyon Road is approximately 750 seconds or 12.5 minutes, for Malibu Canyon Road is 680 seconds or eleven (11) minutes, for Latigo Canyon Road is 430 seconds or seven (7) minutes, for Kanan Dume Road is seven-hundred (700) seconds or 11.5 minutes, and for Topanga Canyon Boulevard is 1,930 seconds or thirty-two (32) minutes

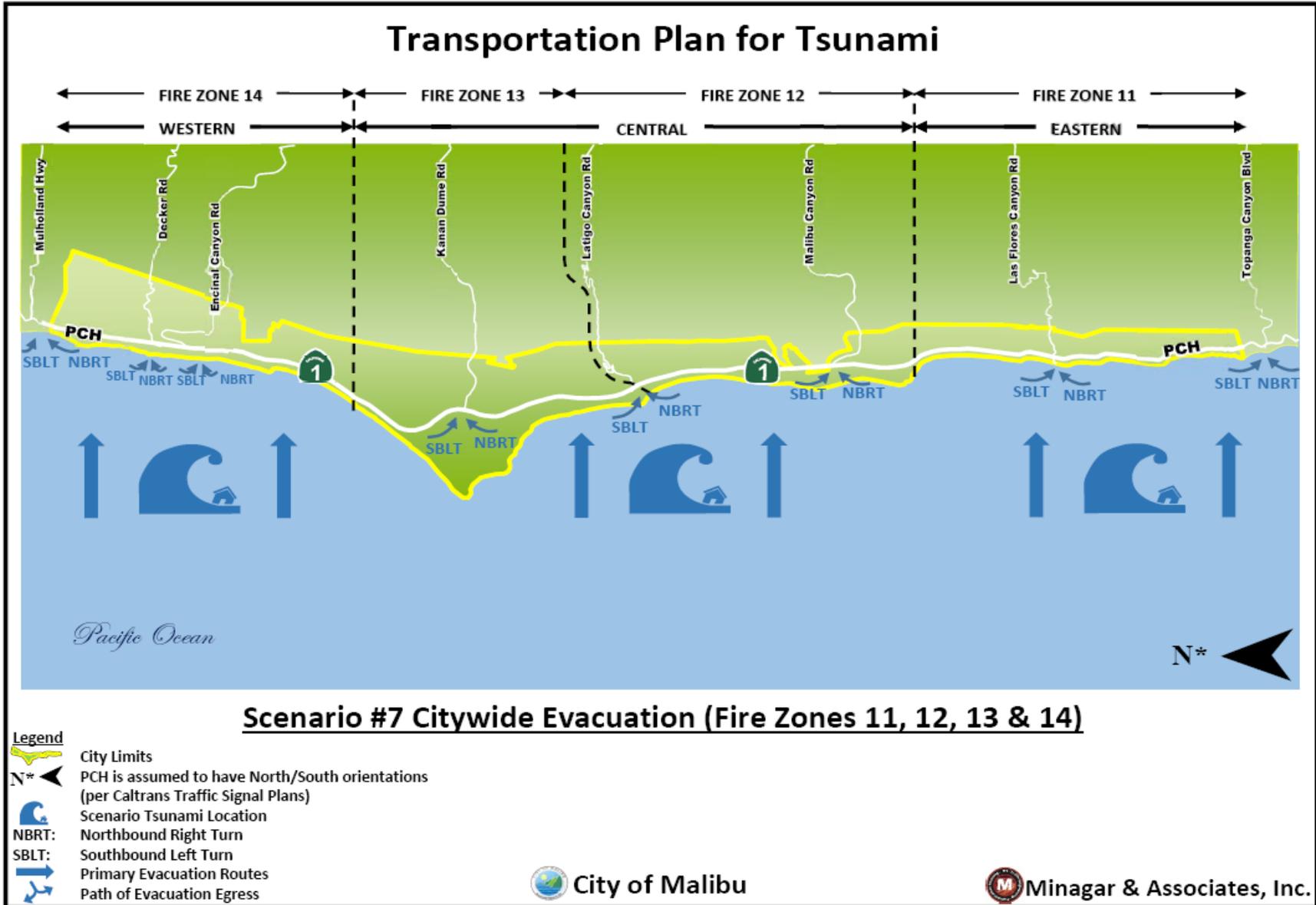
Taking into consideration the existing home elevations along the coast of the City of Malibu, a tsunami area elevation graphic was drawn and can be seen on the following page. As regions along Pacific Coast Highway are the major areas of concern for flooding/tsunami, elevation data along the length of Pacific Coast Highway and local streets bordering the coast for Point Dume were gathered and are summarized in Table 4.17.

In the case of PCH flooding in Areas 8-11, 15-16, and 18 onwards. For those areas, depending on the intensity of flooding, may be subject to change based on the judgement of the emergency traffic authority.



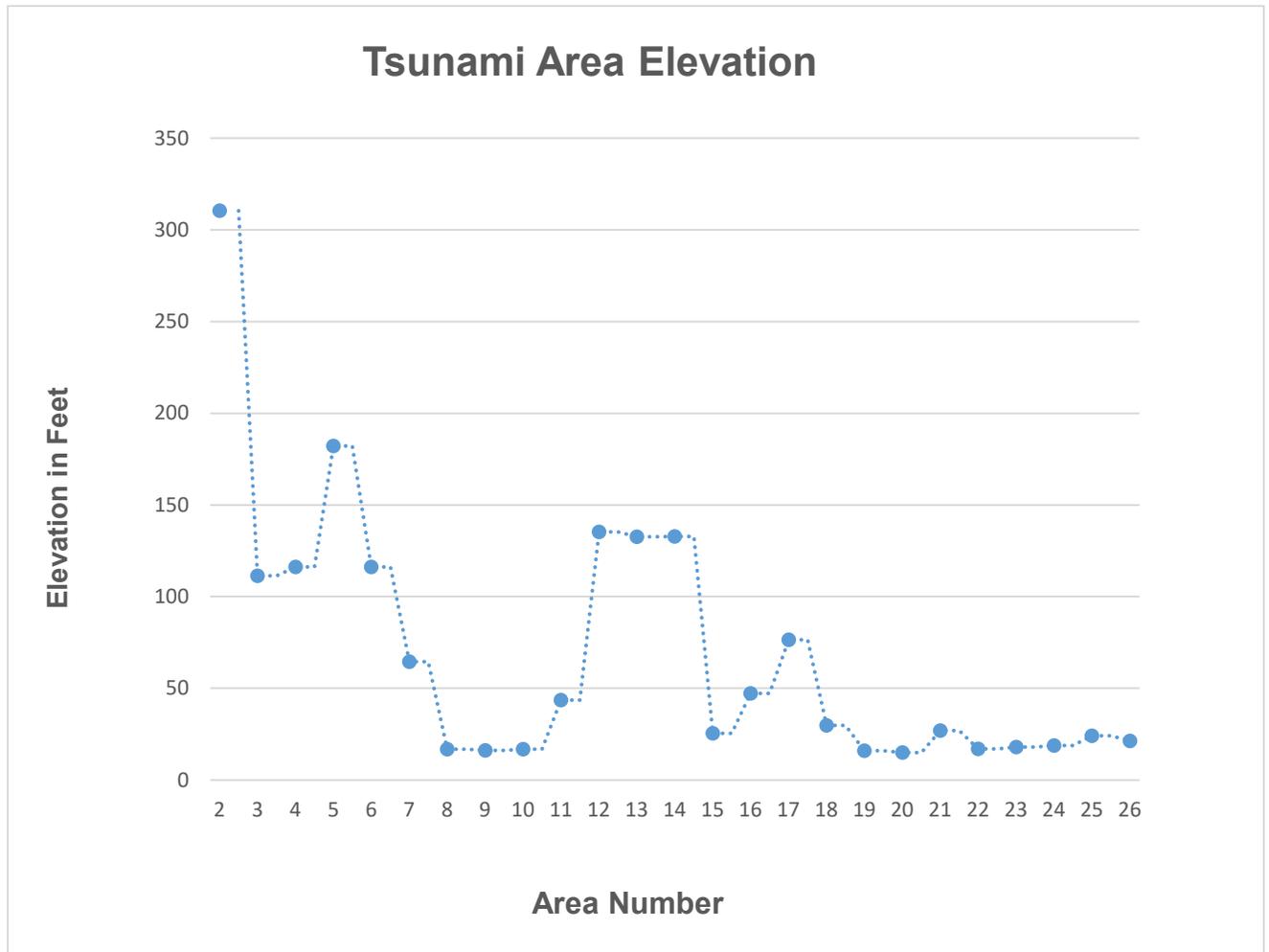


Transportation Plan for Tsunami



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Graphic Summary of the Elevations for the Tsunami Areas





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Table 4.17: Evacuation Area Elevation Summary of Buildings along PCH or Local Streets

	Area 2		Area 3		Area 4		Area 5		Area 6	
Location	34555 PCH ²	33634 PCH	33776 PCH	32999 PCH	33148 PCH	32058 PCH	32399 PCH	31369 PCH	31555 PCH	30485 PCH
Elevation ³ (m)	94.6	43.97	33.92	44.74	35.43	38.08	55.54	31.31	35.4	6.68
Elevation (ft)	310.37	144.26	111.29	146.78	116.24	124.93	182.22	102.72	116.14	21.92
	Area 7		Area 8		Area 9		Area 10		Area 11	
Location	31209 PCH	30245 PCH	30425 PCH	29701 PCH	29917 PCH	7103 Westward Beach Rd	6798 Westward Beach Rd	28999 Cliffside Dr	6801 Westward Beach Rd	28730 Grayfox St
Elevation (m)	19.67	4.22	5.12	8.85	4.93	11.83	5.12	29.88	13.27	26.14
Elevation (ft)	64.53	13.85	16.80	29.04	16.17	38.81	16.80	98.03	43.54	85.76
	Area 12		Area 13		Area 14		Area 15		Area 16	
Location	29099 Cliffside Dr	6643 Wildlife Rd	28805 PCH	27628 PCH	27920 PCH	26901 PCH	27498 PCH	26050 PCH	26201 PCH	25149 PCH
Elevation (m)	41.25	40.85	40.43	34.98	40.48	40.90	7.78	13.96	14.42	47.57
Elevation (ft)	135.33	134.02	132.64	114.76	132.81	134.19	25.52	45.80	47.31	156.07
	Area 17		Area 18		Area 19		Area 20		Area 21	
Location	25499 PCH	24254 Malibu Rd	24654 Malibu Rd	23644 Malibu Rd	23858 Malibu Rd	22779 PCH	23740 Civic Center Way	22774 PCH	23050 PCH	22050 PCH
Elevation (m)	23.32	8.05	9.09	4.58	4.86	5.23	4.56	5.30	8.21	5.89
Elevation (ft)	76.51	26.41	29.82	15.03	15.94	17.16	14.96	17.39	26.94	19.32
	Area 22		Area 23		Area 24		Area 25		Area 26	
Location	22333 PCH	21202 PCH	21510 PCH	19896 PCH	19896 PCH	19562 PCH	19900 PCH	18824 PCH	19100 PCH	18814 PCH
Elevation (m)	5.16	7.34	5.49	5.33	5.75	12.21	7.38	12.67	6.49	11.27
Elevation (ft)	16.93	24.08	18.01	17.49	18.86	40.06	24.21	41.57	21.29	36.98

¹ Defined Areas per California Department of Conservation’s Geological Survey (CGS) and Los Angeles County Tsunami Inundation are provided in Appendix G

² Google Maps

³ U.S. Geological Survey’s National Map





Final Report

Transportation Plan for Disasters, Emergencies, and Significant Events
City of Malibu – Public Safety Department

Recommended Evacuation Strategies and Implementation

This section details the recommendations designed to assist the City of Malibu improve citywide evacuation strategy, including equipping emergency personnel with the necessary tools to guide future emergency traffic control and the City Departments with operational strategies to implement evacuation policy solutions on a short-, mid- and long-term basis.

In the event of a disaster, efficient traffic movement is critical to maintain the lives of residents and emergency personnel operations. Due to the unpredictability of emergencies, there is no catch-all solution to traffic challenges posed in the event of a disaster. Minagar and Associates created a list of strategies meant to address key issues in the evacuation plan used for the Woolsey Fire and fires in similar cities. These evacuation strategies are meant to be implemented in conjunction to the evacuation plan for each disaster scenario.

For the City, expectations must also be realistic, as progress will be incremental. It will not only take time for the City to plan and implement the recommendations in this section, but also to realize their benefits and adjust as conditions change over time. In addition, negative feedback throughout this process is guaranteed, as certain groups and individuals will be affected by the evacuation strategies, however the phased action plans outlined in the next section will help guide the City through navigating implementation of the strategies.

The recommendations describe approaches that seek to better manage the utilization of the existing parking supply, and ensure that the City's resources are utilized in the most cost-efficient manner possible to achieve this goal. The materialization of these solutions will be realized through the implementation of the recommendations provided. This, however, should not prevent the City's from exploring new strategies or any other combination of opportunities in the future that may exist outside of this recommendation, especially as new technologies emerge, new infrastructure is built, and transportation needs shift that may alter or redefine the City's overall approach to transportation plans for disaster, emergencies, and significant events.

5.1 - Short-Term Evacuation Strategies

In anticipation of the oncoming 2020 fire season, a list of "short-term strategies" was developed to help address immediate evacuation planning concerns in a way that could be implemented over a span of one year or less. These recommendations include the following options:

1. Depending upon the location of wildfire or tsunami, **utilize the recommended Transportation Plan Evacuation Scenarios #2 thru #6 or Scenario #7 respectively.**
2. **Utilize the 2019 14th Edition of the Work Area Traffic Control Handbook (WATCHBOOK) and 2016 Field Guide for Temporary Traffic Control.**



Samples of the WATCHBOOK & California MUTCD Field Guide for Temporary Traffic Control

This measure would ensure that the emergency personnel managing the traffic, if required to place traffic controls, are able to do so in a manner in compliance with the latest CAMUTCD.



Additionally, personnel have a reference handbook, which increases the speed and efficiency of the staff. The estimated cost for the WATCHBOOK is \$15 per staff member, however the cost decreases with increasing quantities purchased. The cost of the 2016 California Field Guide for Temporary Traffic Control is estimated to be \$20 per required staff member without bulk discounts.

- Purchase Additional Changeable/Dynamic Message Signs (CMS/DMS), Trailblazers and Traffic Incident Management Area Signs.** By purchasing additional CMS/DMS, in the event of an emergency they can be deployed/changed to notify residents of any unusual traffic conditions and/or emergencies alerts. CMS/DMS can be portable or permanent.



Permanent would require installation upon at a designated location, whereas portable CMS can be deployed as needed, albeit with an additional towing vehicle. Once the signs are situated, remote communication allows staff to change messages immediately from a separate location. Traffic Incident Management Area Signs permit quick deployment and manipulation of traffic flow without the supervision of staff. The lightweight signs do not require towing vehicles and allow for efficient manipulation of traffic. As mentioned in the *After Action Report of the Woolsey Fire*, the City of Malibu possesses sufficient signage of a disaster the scale of the Woolsey Fire, however in the event of a citywide disaster, additional signage is required. The estimated price for CMS is dependent upon the number of signs, the dimensions and type of sign (portable or permanent) the City chooses to invest on. The same cost criteria applies to Traffic Incident Management Area Signs.

Traffic Incident Management Sign (Above) and CMS/DMS (Below)



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5.2 - Mid-Range Evacuation Strategies

Mid-range evacuation strategies would occur over a period of 1 to 5 years, and include measures such as:

1. Depending upon the location of wildfire or tsunami, **utilize the recommended Transportation Plan Evacuation Scenarios #2 thru #6 or Scenario #7 respectively.**
2. ***Harden or Implement Protection Systems for the Critical Infrastructure to prevent Roadway Debris.*** A critical aspect of efficient evacuation requires the roadways to be unrestricted in terms of debris and/or fires. Although encroaching disasters leading to a roadway blockage is inevitable, debris prevention remains a viable improvement to the transportation plan. Critical evacuation routes mentioned in **Section 2.2.1** are bordered by wooden electrical poles, which have the potential to be burned and block the route to evacuate the city. Potential improvements include treating the wooden poles with a fire-resistant coating, investing in fire proof pole wrap, and reinforcing the poles with a metal shield. The estimated cost of the infrastructure improvement is dependent on the method of strengthening/protection the City of Malibu chooses to employ.
3. ***Re-analyze and Re-optimize the Traffic Signals along Pacific Coast Highway.*** This measure would increase traffic flow along Pacific Coast Highway in event of an emergency and “normal” conditions. Engineers would survey the turning movement counts of all the signalized intersections along Pacific Coast Highway and evaluate the performance of the existing signal timing. If found unsatisfactory, the involved traffic signals would require the field timing re-calibration. The cost-estimate is dependent on the number of hours and days for the field counts, as well as the number of scenarios which would be involved in the project as well as the amount of time the City allots for the project.

5.3 - Long-Term Evacuation Strategies

Long-term recommendations would take place over a 5-10 year span or longer, and should be coupled with the City’s greater vision to improve quality of life by improving circulation for the primary roadway of the City of Malibu. The major components of this vision include the following umbrella strategies:

1. ***Widen Pacific Coast Highway via more reversible directional lanes with overhead changeable directional signals.*** This method would entail an analysis of the City of Malibu’s existing right-of-way, topography along the highway, the safety of the construction, and parking availability following the widening. Currently, stretches of Pacific Coast Highway is bordered by hills or bluffs, requiring terraforming by the City. Additionally, Pacific Coast Highway is also bordered by homes and commercial areas, which limit the width of PCH if the City chooses to not purchase additional right-of-way. Permits would also need to be gathered from various agencies to approve of the project. The cost estimate is dependent on the length of the Highway found to support the widening.





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- 2. Expand Approach Capacity of Key Intersections.** The signalized intersections of Malibu Canyon Road, Kanan Dume Road, and Topanga Canyon Boulevard have the worst Level of Service and Delay value for Scenarios #0 and 1, which worsen when introducing a disaster scenario. The existing approaches for Topanga Canyon Boulevard and Malibu Canyon Road include two (2) exclusive left turn lanes and one (1) exclusive right turn lane. For Kanan Dume Road, there is one (1) exclusive left turn lane, one (1) center lane permitting left and right turns, and one (1) exclusive right turn lane. Scenario #2, 4, 5, and 6 require either Malibu Canyon Road or Kanan Dume Road to be restricted to right turns only, where one of the left turn lanes can be changed to a temporary right turn lane to increase volume flow,

however this adjustment would not improve normal traffic conditions. By constructing an additional right turn lane, the LOS for the minor street approach (Malibu Canyon Road/Kanan Dume Road/Topanga Canyon Road) would improve, which in turn improves the LOS for the entire intersection. With the higher capacity and initial LOS, the amount of change in the delay value for these intersections in the relevant disaster scenarios would be decreased. The cost estimate is dependent on the City's right of way, the existing lane widths, and any additional potential markings/construction required, which determines the viability of a lane addition for the minor street approaches.



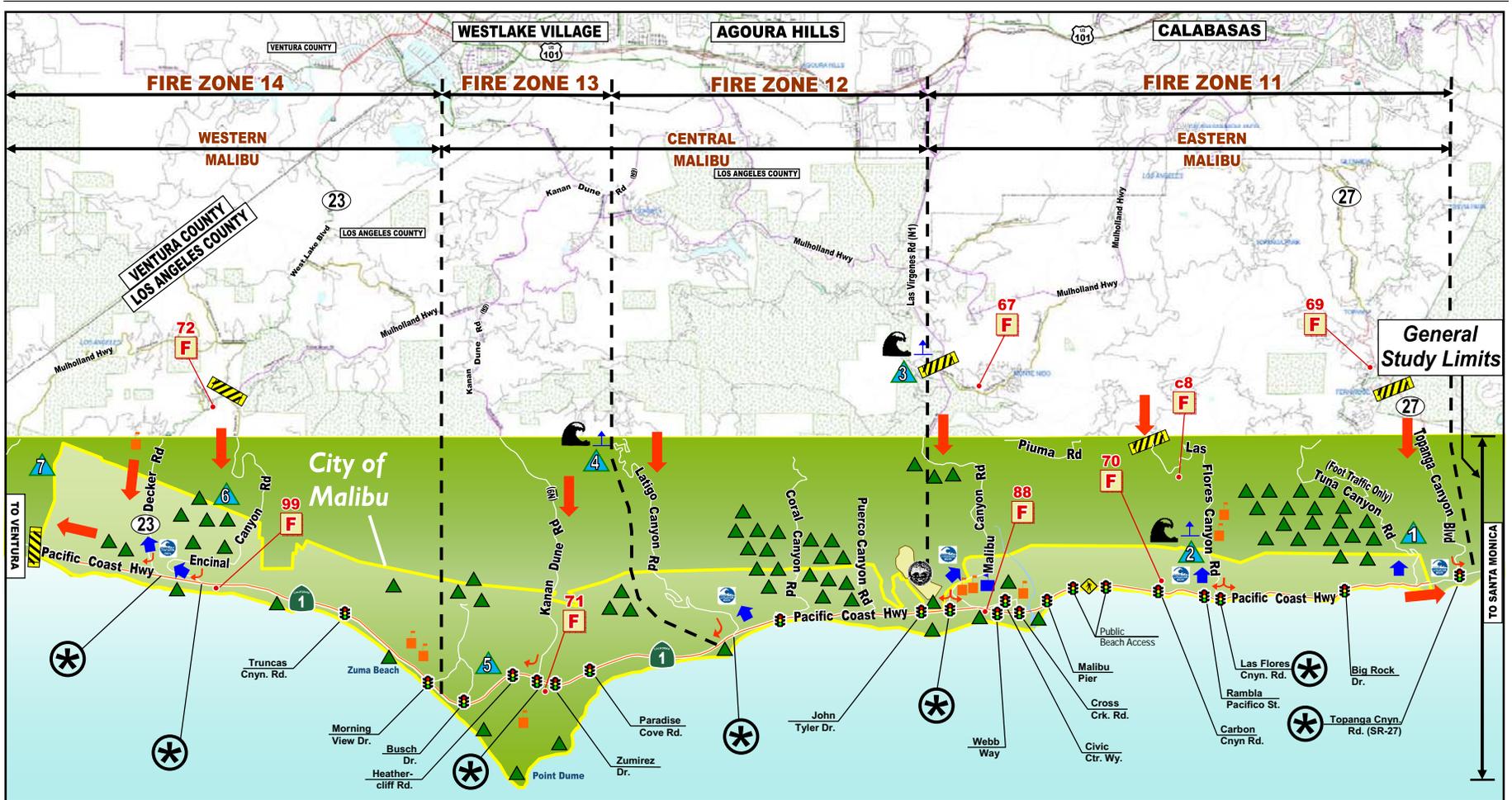


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**Appendix A: Malibu Master Transportation
Plan for Wildfire & Tsunami Evacuation
(8 1/2" x 11" Exhibit)**





Project Map



Legend:		Roadway Functional Class (CA Roadway System)		Wildfire Evacuation Access		Tsunami Evacuation Access	
	City Limits		Interstate		Primary Evacuation Route		Evacuation Routes
	City Hall		Major Collector		Path of Evacuation Egress (Varies based on fire location)		Traffic Control Points (CHP)
	Public School		Principal Arterial				Public Park/Refuge Area
	LACF Station/No.		Minor Arterial				
	Public Park Areas		Local Street				
	Pepperdine University						
	Existing Traffic Signal						
	Traffic Count Location						



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**Appendix B: Wildfire & Tsunami Scenario
Evacuation Scenario Maps
(8 1/2" X 11" Exhibits)**



Transportation Plan for Wildfire Evacuation Scenarios

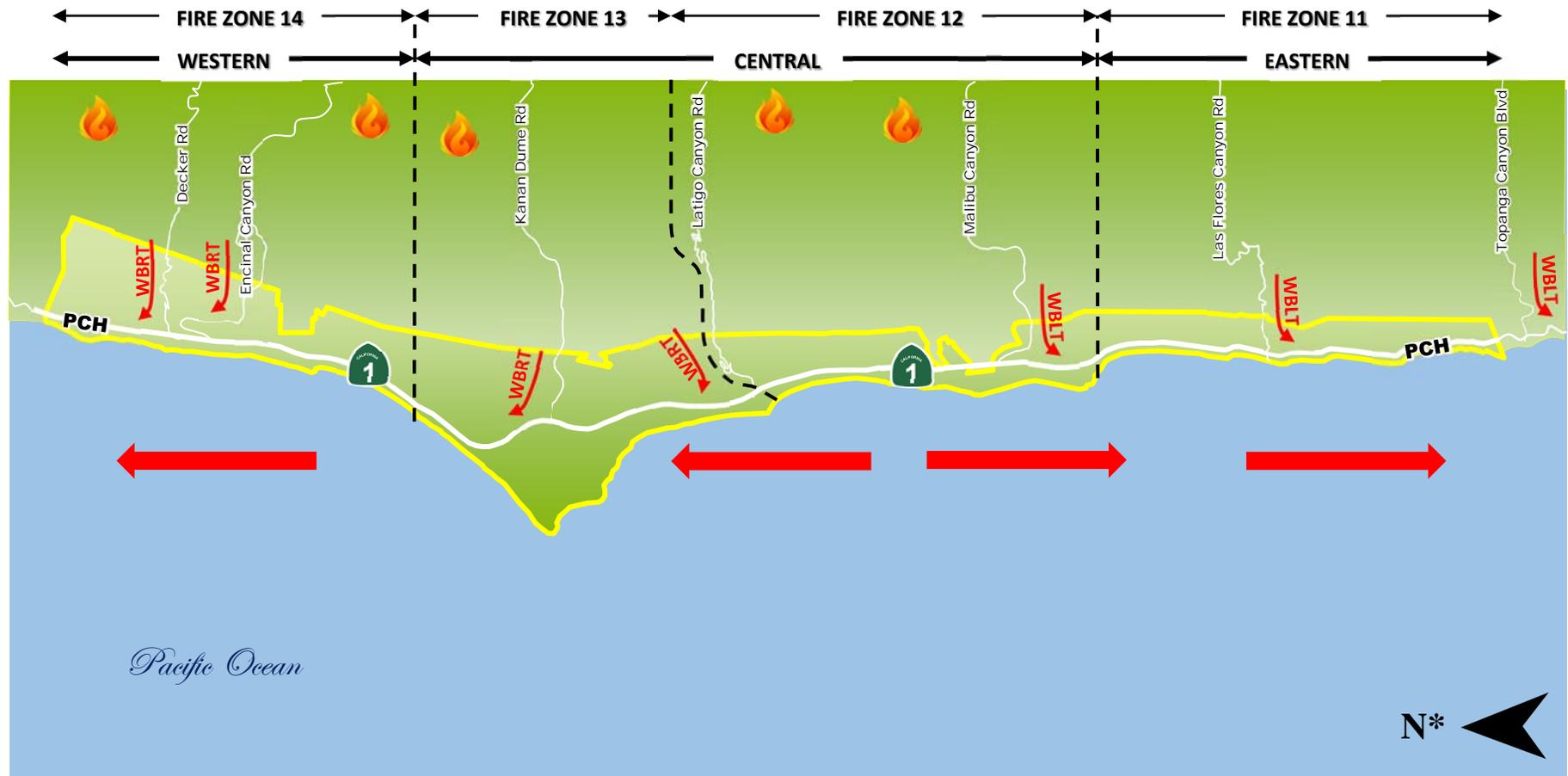


Scenario #1 Existing Maximized Conditions

- Legend**
- City Limits
 - N* PCH is assumed to have North/South orientations (per Caltrans Traffic Signal Plans)
 - WBRT: Westbound Right Turn
 - WBLT: Westbound Left Turn
 - Primary Evacuation Routes
 - Path of Evacuation Egress



Transportation Plan for Wildfire Evacuation Scenarios



Scenario #2 Western Malibu (Fire Zone 14) Including Central Malibu (Fire Zone 12 & 13)

Legend

- City Limits
- PCH is assumed to have North/South orientations (per Caltrans Traffic Signal Plans)
- Scenario Fire Location
- WBRT:** Westbound Right Turn
- WBLT:** Westbound Left Turn
- Primary Evacuation Routes
- Path of Evacuation Egress

Transportation Plan for Wildfire Evacuation Scenarios

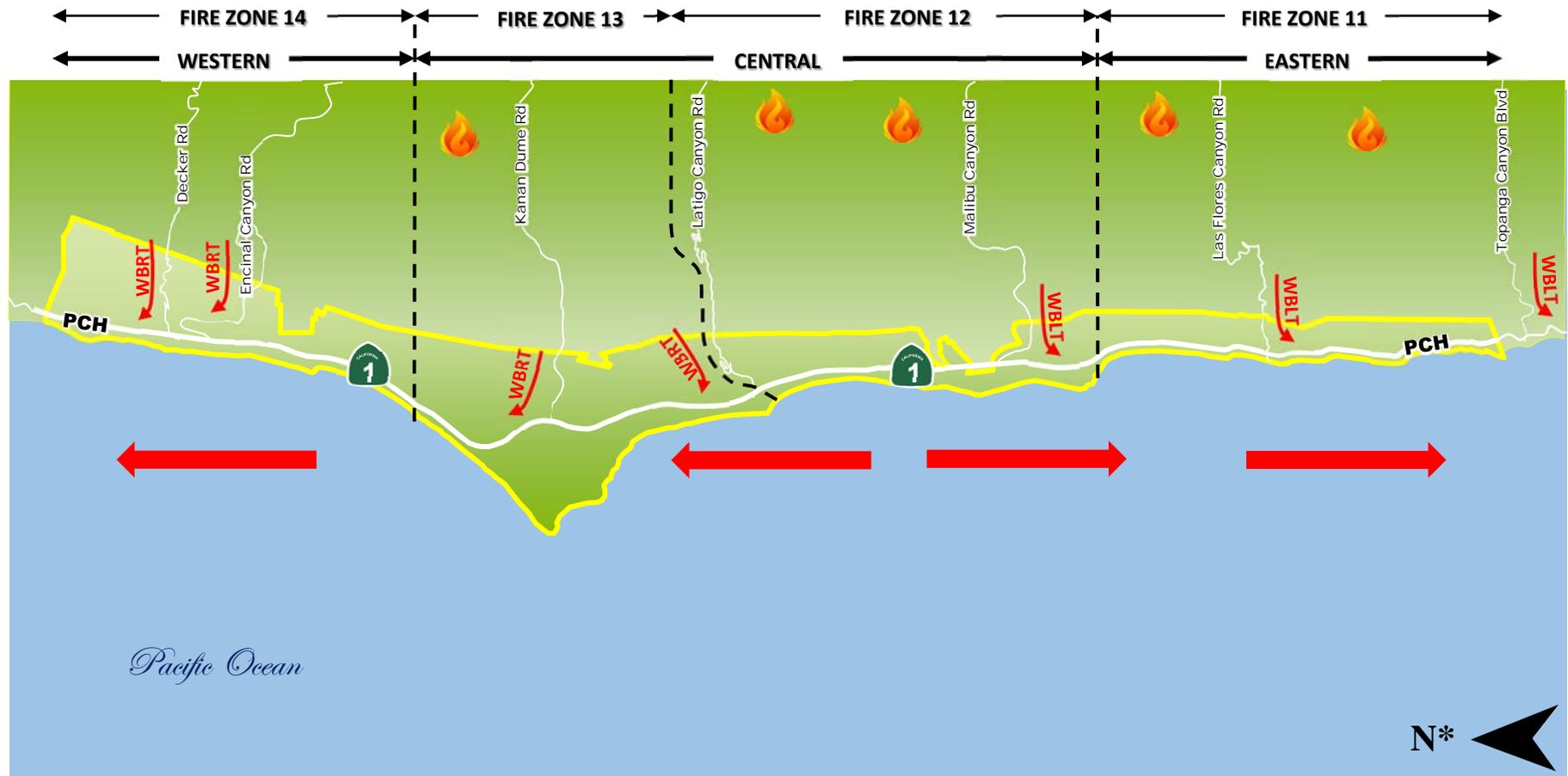


Scenario #3 Western Malibu (Fire Zone 14) Excluding Central Malibu

Legend

-  City Limits
-  N* PCH is assumed to have North/South orientations (per Caltrans Traffic Signal Plans)
-  Scenario Fire Location
- WBRT:** Westbound Right Turn
- WBLT:** Westbound Left Turn
-  Primary Evacuation Routes
-  Path of Evacuation Egress

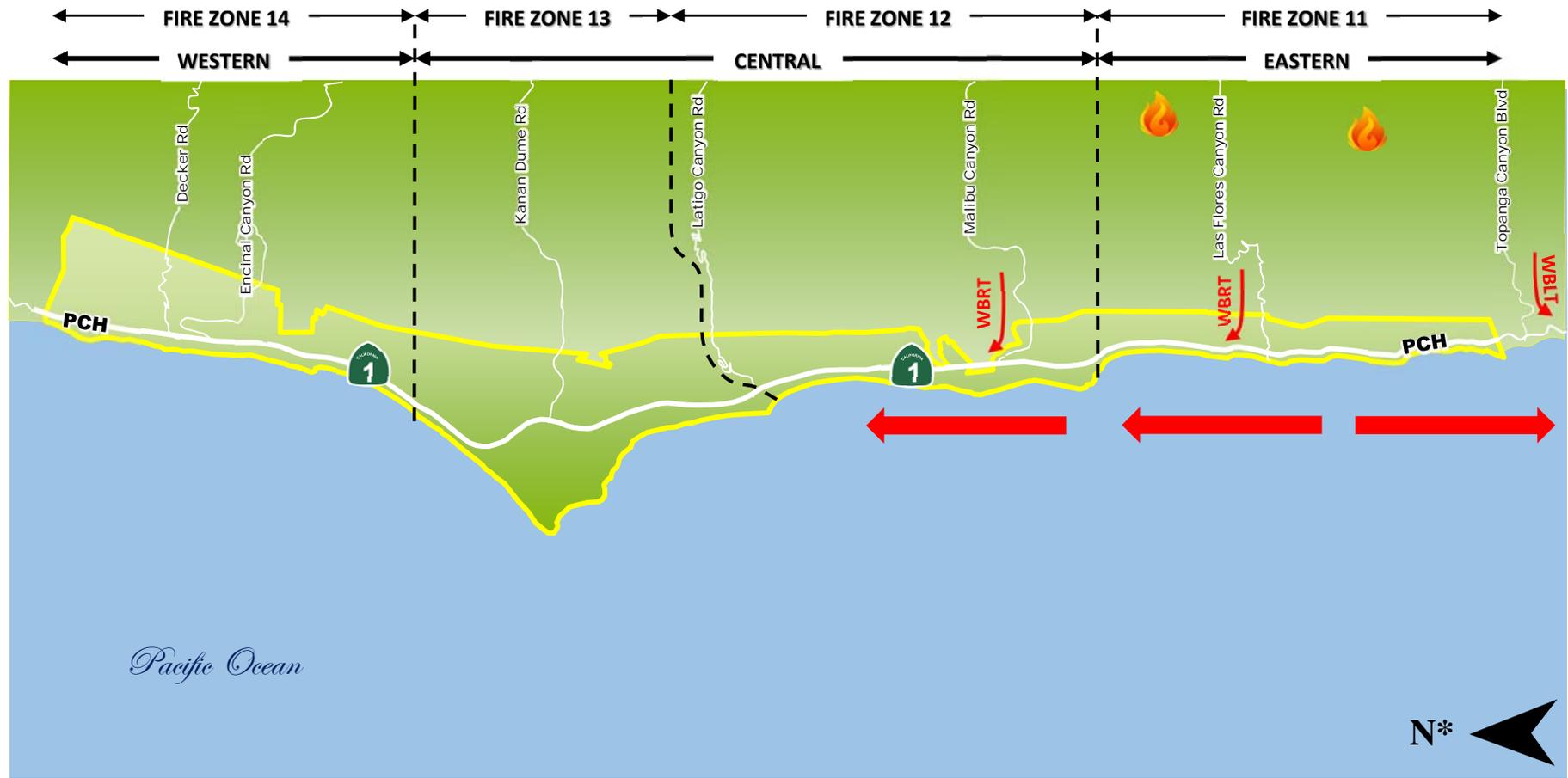
Transportation Plan for Wildfire Evacuation Scenarios



Scenario #4 Eastern Malibu (Fire Zone 11) Including Central Malibu (Fire Zone 12 & 13)

- Legend**
- City Limits
 - PCH is assumed to have North/South orientations (per Caltrans Traffic Signal Plans)
 - Scenario Fire Location
 - WBRT:** Westbound Right Turn
 - WBLT:** Westbound Left Turn
 - Primary Evacuation Routes
 - Path of Evacuation Egress

Transportation Plan for Wildfire Evacuation Scenarios

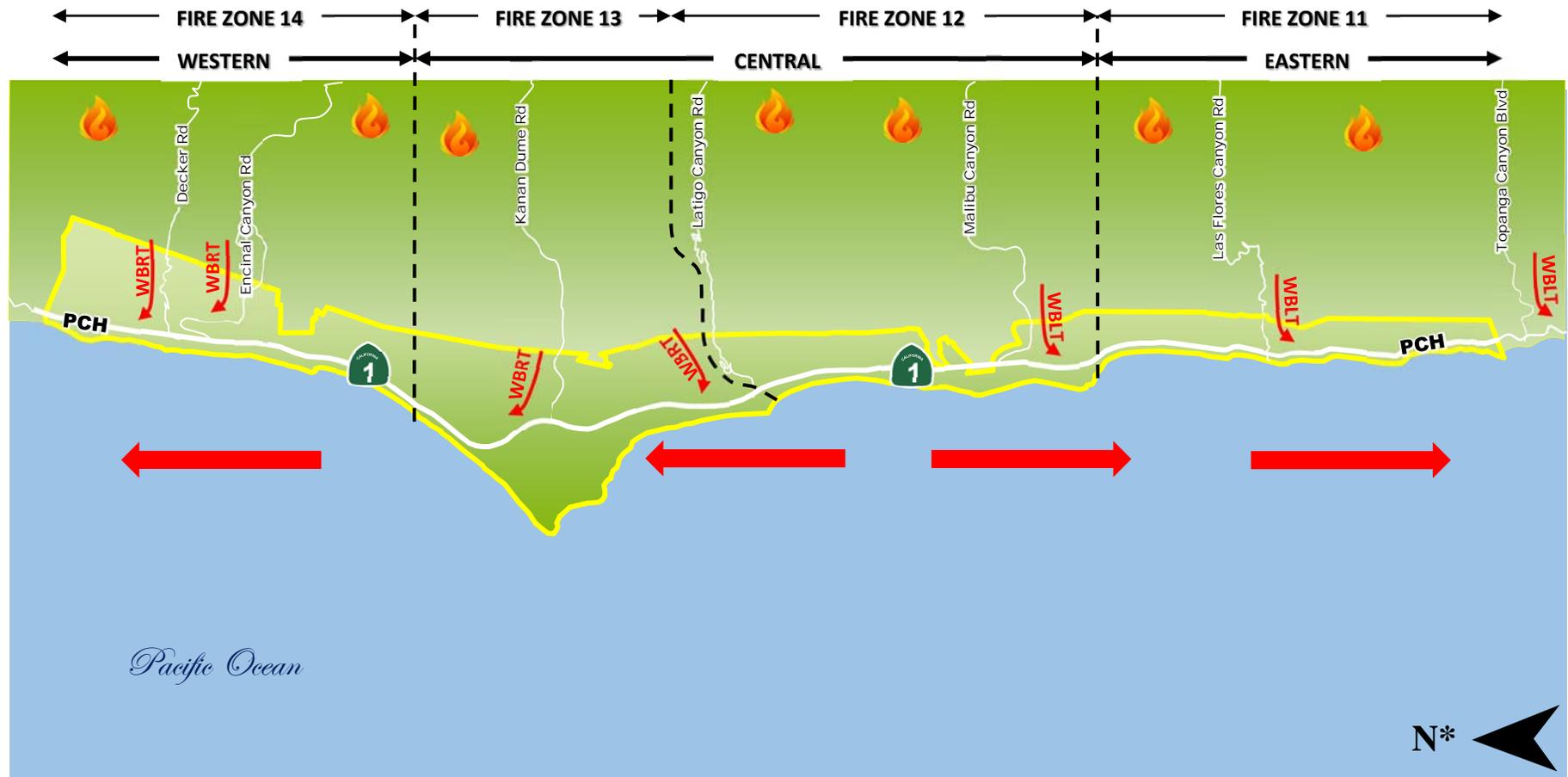


Scenario #5 Eastern Malibu (Fire Zone 11) Excluding Central Malibu (Fire Zone 12 & 13)

Legend

-  City Limits
-  N*  PCH is assumed to have North/South orientations (per Caltrans Traffic Signal Plans)
-  Scenario Fire Location
- WBRT:** Westbound Right Turn
- WBLT:** Westbound Left Turn
-  Primary Evacuation Routes
-  Path of Evacuation Egress

Transportation Plan for Wildfire Evacuation Scenarios

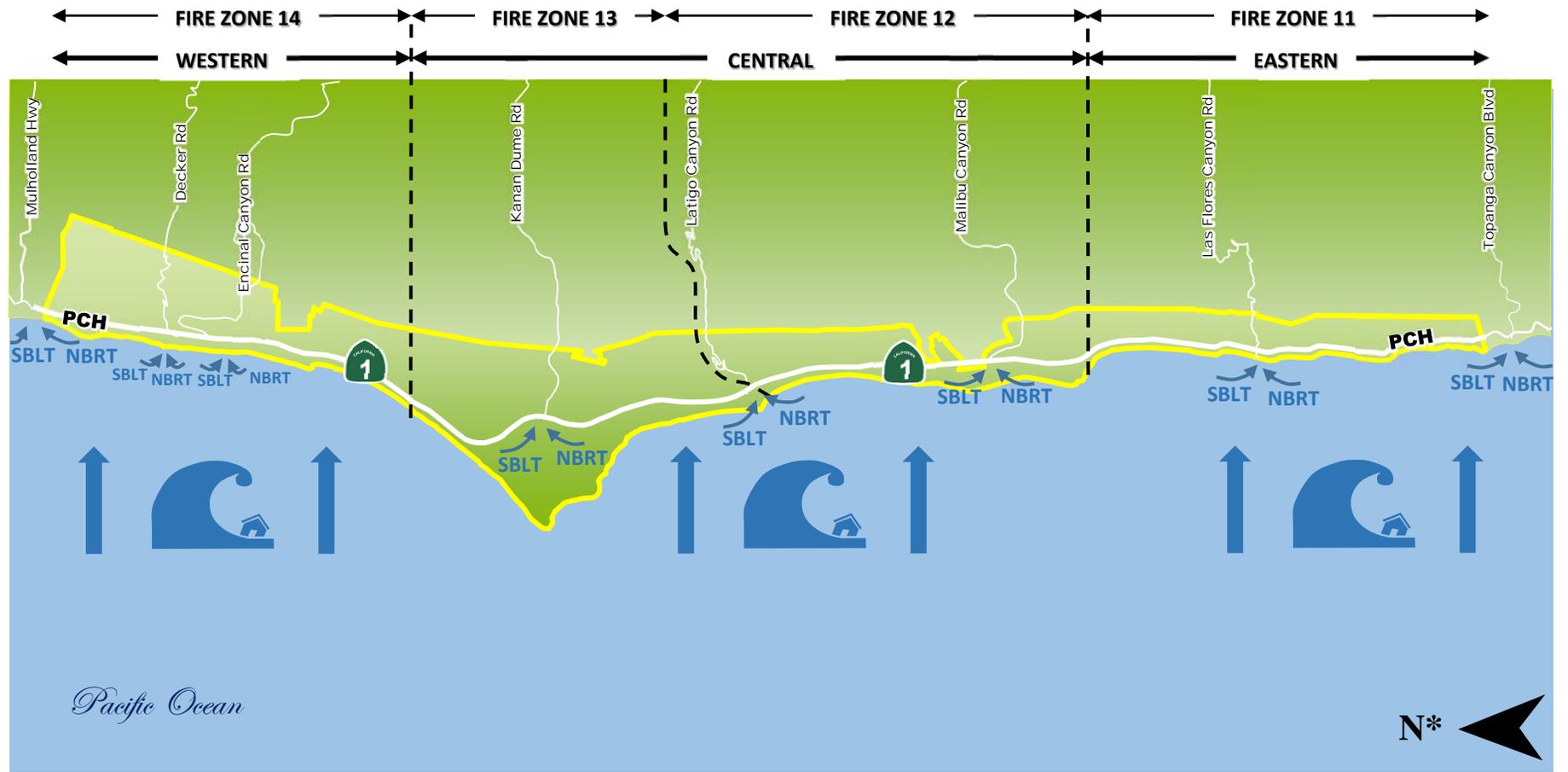


Scenario #6 Citywide Evacuation (Fire Zones 11, 12, 13 & 14)

Legend

-  City Limits
-  N* PCH is assumed to have North/South orientations (per Caltrans Traffic Signal Plans)
-  Scenario Fire Location
- WBRT:** Westbound Right Turn
- WBLT:** Westbound Left Turn
-  Primary Evacuation Routes
-  Path of Evacuation Egress

Transportation Plan for Tsunami



Scenario #7 Citywide Evacuation (Fire Zones 11, 12, 13 & 14)

- Legend**
- City Limits
 - PCH is assumed to have North/South orientations (per Caltrans Traffic Signal Plans)
 - Scenario Tsunami Location
 - NBRT:** Northbound Right Turn
 - SBLT:** Southbound Left Turn
 - Primary Evacuation Routes
 - Path of Evacuation Egress



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**Appendix C: Existing Maximized Hourly Traffic
Volume TMCs at Critical Evacuation
Intersections Spreadsheet**



City of Malibu's Evacuation Plan Traffic Study Appendix C

Maximized Hourly Traffic Volume

25-Jul-19

Evacuation Response Development Notes

PCH (E/W)



1- PCH at Decker Canyon (unsignalized)

PCH (E/W)

Segment	TOD	Analysis Direction	Segment Limits		Cycle Length	Volumes											Analysis Notes	
			North-South	East-West		EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT		SBR
1	AM	NB,SB,WB	PCH	Decker Canyon	-	0	0	0	5	0	2	0	342	5	6	680	0	Scenario# 2: Response is flushing Decker Road to traverse thru PCH in NB direction. Scenario# 3: Response is flushing Decker Road to traverse thru PCH in NB direction. Scenario# 4: Response is flushing Decker Road to traverse thru PCH in NB direction. Scenario# 5 & 6: Response is flushing Decker Road to traverse thru PCH in NB direction. Scenario# 7: Response is flushing PCH to traverse thru Decker Road in EB direction.
1	MD	NB,SB,WB	PCH	Decker Canyon	-	0	0	0	11	0	8	0	566	9	5	558	0	
1	PM	NB,SB,WB	PCH	Decker Canyon	-	0	0	0	12	0	4	0	958	12	14	448	0	
1	EVAC	NB,SB,WB	PCH	Decker Canyon	-	-	-	-	12	-	8	-	958	12	14	680	-	

2. PCH at Encinal Canyon (unsignalized)

Segment	TOD	Analysis Direction	Segment Limits		Cycle Length	Volumes											Analysis Notes	
			North-South	East-West		EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT		SBR
1	AM	NB,SB,WB	PCH	Encinal Canyon	-	0	0	0	39	0	38	0	310	17	19	665	0	Scenario# 2: Response is flushing Encinal Road to traverse thru PCH in NB direction. Scenario# 3: Response is flushing Encinal Road to traverse thru PCH in NB direction. Scenario# 4: Response is flushing Encinal Road to traverse thru PCH in NB direction. Scenario# 5 & 6: Response is flushing Encinal Road to traverse thru PCH in NB direction. Scenario# 7: Response is flushing PCH to traverse thru Encinal Road in EB direction.
1	MD	NB,SB,WB	PCH	Encinal Canyon	-	0	0	0	38	0	38	0	584	32	23	519	0	
1	PM	NB,SB,WB	PCH	Encinal Canyon	-	0	0	0	28	0	38	0	895	38	33	456	0	
1	EVAC	NB,SB,WB	PCH	Encinal Canyon	-	-	-	-	39	-	38	-	895	38	33	665	-	

3. PCH at Kanan Dume (Signalized)

Segment	TOD	Analysis Direction	Segment Limits		Cycle Length	Volumes											Analysis Notes	
			North-South	East-West		EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT		SBR
1	AM	NB,SB,WB	PCH	Kanan Dume	FREE	0	0	0	182	0	303	0	632	87	157	828	0	Scenario# 2: Response is flushing Kanan Dume Road to traverse thru PCH in NB direction. Scenario# 3: Response is flushing Kanan Dume Road to traverse thru PCH in NB direction. Scenario# 4: Response is flushing Kanan Dume Road to traverse thru PCH in NB direction. Scenario# 5 & 6: Response is flushing Kanan Dume Road to traverse thru PCH in NB direction. Scenario# 7: Response is flushing PCH to traverse thru Kanan Dume Road in EB direction.
1	MD	NB,SB,WB	PCH	Kanan Dume	FREE	0	0	0	170	0	419	0	969	141	262	909	0	
1	PM	NB,SB,WB	PCH	Kanan Dume	FREE	0	0	0	118	0	219	0	1090	202	395	833	0	
1	EVAC	NB,SB,WB	PCH	Kanan Dume	FREE	-	-	-	182	-	419	-	1090	202	395	909	-	

4. PCH at Latigo Canyon (unsignalized)

Segment	TOD	Analysis Direction	Segment Limits		Cycle Length	Volumes											Analysis Notes	
			North-South	East-West		EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT		SBR
1	AM	NB,SB,WB	PCH	Latigo Canyon	-	0	0	0	21	0	10	0	777	17	21	1004	0	Scenario# 2: Response is flushing Latigo Canyon Road to traverse thru PCH in NB direction. Scenario# 3: Response is flushing Latigo Canyon Road to traverse thru PCH in NB direction. Scenario# 4: Response is flushing Latigo Canyon Road to traverse thru PCH in NB direction. Scenario# 5 & 6: Response is flushing Latigo Canyon Road to traverse thru PCH in NB direction. Scenario# 7: Response is flushing PCH to traverse thru Latigo Canyon Road in EB direction.
1	MD	NB,SB,WB	PCH	Latigo Canyon	-	0	0	0	29	0	29	0	1184	26	15	1119	0	
1	PM	NB,SB,WB	PCH	Latigo Canyon	-	0	0	0	19	0	22	0	1360	20	22	1114	0	
1	EVAC	NB,SB,WB	PCH	Latigo Canyon	-	-	-	-	29	-	29	-	1360	26	22	1119	-	

5. PCH at Malibu Canyon (Signalized)

Segment	TOD	Analysis Direction	Segment Limits		Cycle Length	Volumes											Analysis Notes	
			North-South	East-West		EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT		SBR
1	AM	NB,SB,WB,EB	PCH	Malibu Canyon	130	9	11	24	768	11	209	7	696	278	111	928	17	Scenario# 2: Response is flushing Malibu Canyon Road to traverse thru PCH in SB direction. Scenario# 3: Response is flushing Malibu Canyon Road to traverse thru PCH in SB direction. Scenario# 4: Response is flushing Malibu Canyon Road to traverse thru PCH in SB direction. Scenario# 5: Response is flushing Malibu Canyon Road to traverse thru PCH in NB direction. Scenario# 6: Response is flushing Malibu Canyon Road to traverse thru PCH in SB direction. Scenario# 7: Response is flushing PCH to traverse thru Malibu Canyon Road in EB direction.
1	MD	NB,SB,WB,EB	PCH	Malibu Canyon	130	12	7	30	350	14	265	27	1063	151	185	1070	21	
1	PM	NB,SB,WB,EB	PCH	Malibu Canyon	130	4	17	20	424	8	163	15	1202	270	320	1024	9	
1	EVAC	NB,SB,WB,EB	PCH	Malibu Canyon	130	12	17	30	768	14	265	27	1202	278	320	1070	21	

6. PCH at Las Flores Canyon (Signalized)

Segment	TOD	Analysis Direction	Segment Limits		Cycle Length	Volumes											Analysis Notes	
			North-South	East-West		EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT		SBR
1	AM	NB,SB,WB	PCH	Las Flores Canyon	170	0	0	2	27	0	31	2	1402	30	22	1479	3	Scenario# 2: Response is flushing Las Flores Canyon Road to traverse thru PCH in SB direction. Scenario# 3: Response is flushing Las Flores Canyon Road to traverse thru PCH in SB direction. Scenario# 4: Response is flushing Las Flores Canyon Road to traverse thru PCH in SB direction. Scenario# 5: Response is flushing Las Flores Canyon Road to traverse thru PCH in NB direction. Scenario# 6: Response is flushing Las Flores Canyon Road to traverse thru PCH in SB direction. Scenario# 7: Response is flushing PCH to traverse thru Las Flores Canyon Road in EB direction.
1	MD	NB,SB,WB	PCH	Las Flores Canyon	170	17	0	11	37	0	49	27	1412	40	36	1294	25	
1	PM	NB,SB,WB	PCH	Las Flores Canyon	170	14	2	25	36	2	29	27	1606	46	36	1713	26	
1	EVAC	NB,SB,WB	PCH	Las Flores Canyon	170	17	2	25	37	2	49	27	1606	46	36	1713	26	

7. PCH at Topanga Canyon (Signalized)

Segment	TOD	Analysis Direction	Segment Limits		Cycle Length	Volumes											Analysis Notes	
			North-South	East-West		EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT		SBR
1	AM	NB,SB,WB	PCH	Topanga Canyon	240	0	0	0	1086	0	73	0	1322	164	13	1642	0	Scenario# 2: Response is flushing Topanga Canyon Road to traverse thru PCH in SB direction. Scenario# 3: Response is flushing Topanga Canyon Road to traverse thru PCH in SB direction. Scenario# 4: Response is flushing Topanga Canyon Road to traverse thru PCH in SB direction. Scenario# 5: Response is flushing Topanga Canyon Road to traverse thru PCH in SB direction. Scenario# 6: Response is flushing Topanga Canyon Road to traverse thru PCH in SB direction. Scenario# 7: Response is flushing PCH to traverse thru Topanga Canyon Road in EB direction.
1	MD	NB,SB,WB	PCH	Topanga Canyon	170	0	0	0	450	0	122	0	1371	229	57	1373	0	
1	PM	NB,SB,WB	PCH	Topanga Canyon	240	0	0	0	314	0	61	0	1711	944	150	1720	0	
1	EVAC	NB,SB,WB	PCH	Topanga Canyon	240	-	-	-	1086	-	122	-	1711	944	150	1720	-	

NOTE: PCH is Assumed to have North/South Orientation (Per Caltrans Traffic Signal Plans)



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Appendix D: Existing Normal Turning Movement Counts (TMC) at Critical Evacuation Intersections

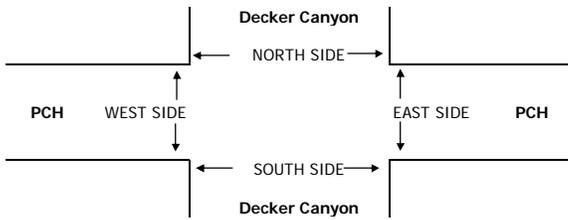


INTERSECTION TURNING MOVEMENT COUNTS

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

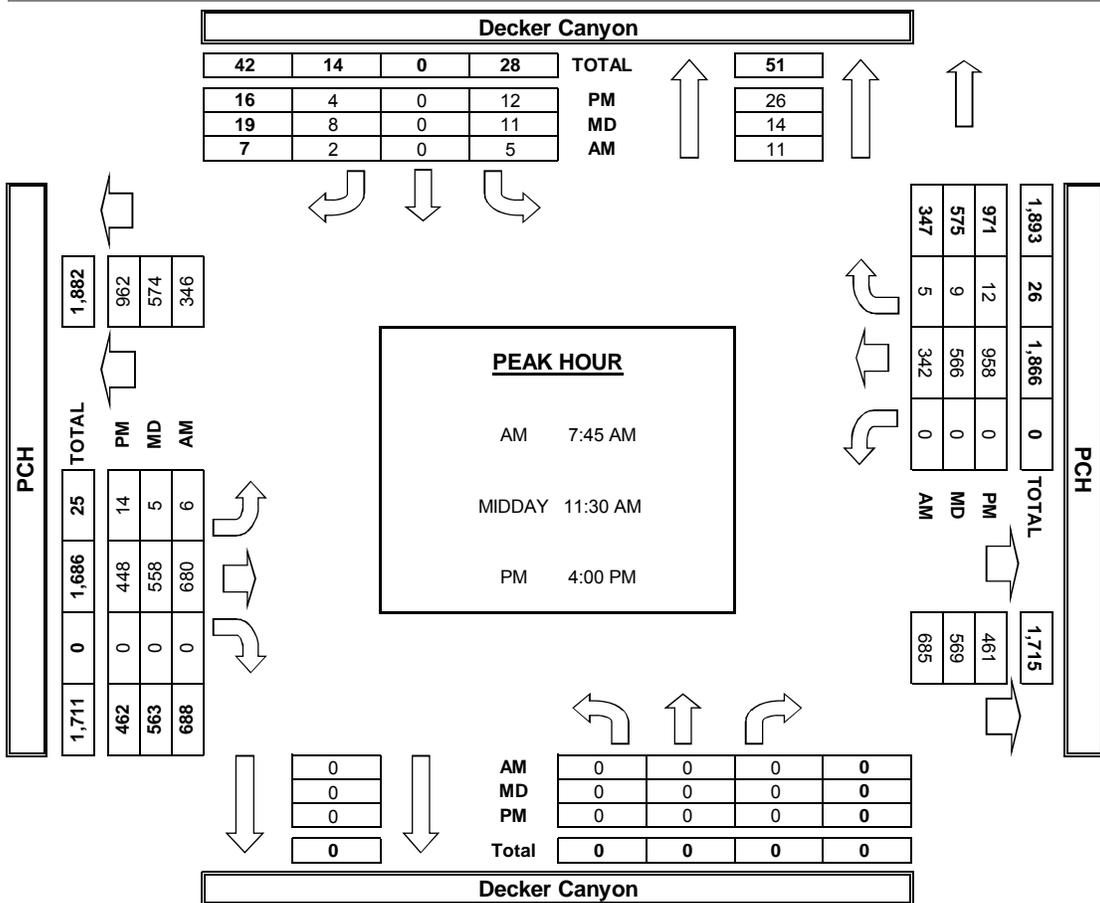
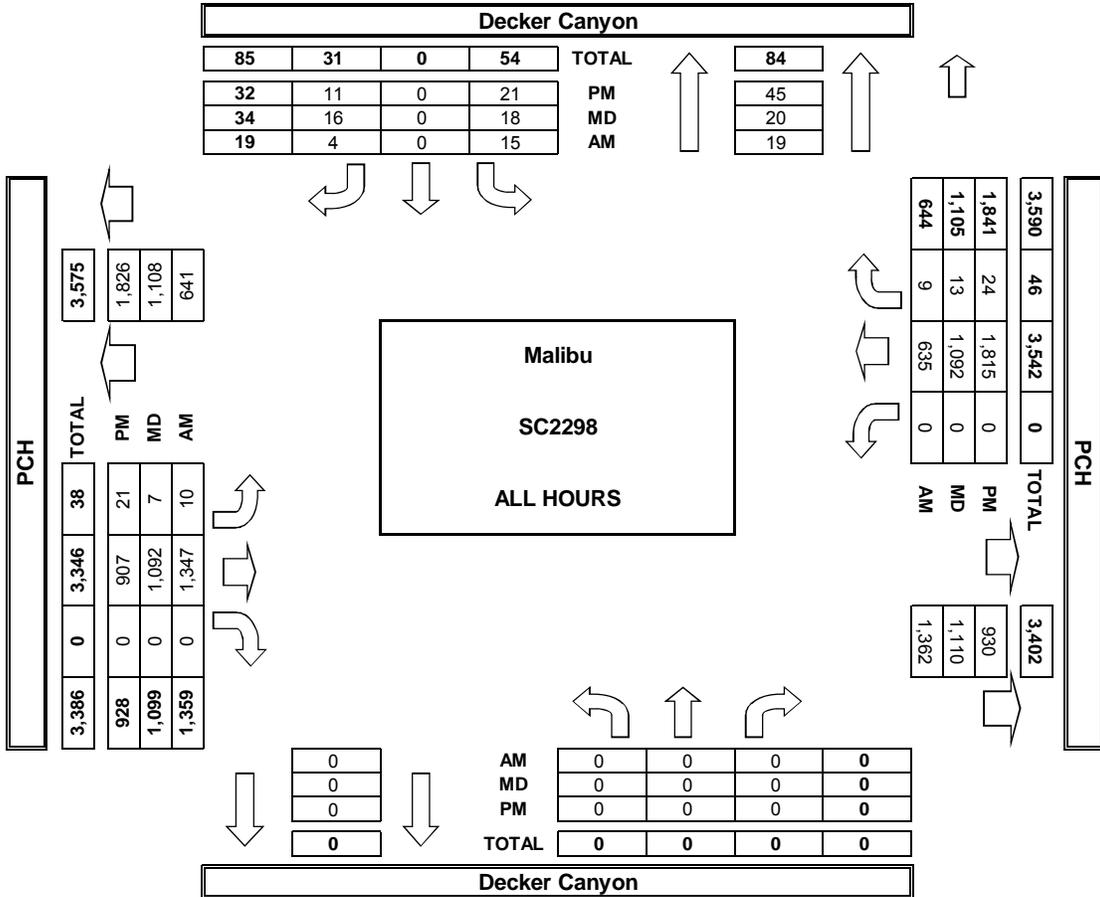
DATE: Thu, Jul 25, 19	LOCATION: NORTH & SOUTH: EAST & WEST:	Malibu Decker Canyon PCH	PROJECT #: SC2298 LOCATION #: 1 CONTROL: STOP S																				
NOTES:		<table border="1" style="margin: auto;"> <tr><td>AM</td><td></td><td>▲</td><td></td></tr> <tr><td>PM</td><td></td><td>▲</td><td></td></tr> <tr><td>MD</td><td>← W</td><td></td><td>E →</td></tr> <tr><td>OTHER</td><td></td><td>▼</td><td></td></tr> <tr><td>OTHER</td><td></td><td></td><td></td></tr> </table>	AM		▲		PM		▲		MD	← W		E →	OTHER		▼		OTHER				<div style="border: 1px solid black; padding: 2px; width: fit-content; margin: auto;"> <input type="checkbox"/> Add U-Turns to Left Turns </div>
AM		▲																					
PM		▲																					
MD	← W		E →																				
OTHER		▼																					
OTHER																							

	NORTHBOUND <small>Decker Canyon</small>			SOUTHBOUND <small>Decker Canyon</small>			EASTBOUND <small>PCH</small>			WESTBOUND <small>PCH</small>			TOTAL	U-TURNS					
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR		NB	SB	EB	WB	TTL	
AM	7:00 AM	0	0	0	3	0	1	1	185	0	0	73	0	263	0	0	0	0	0
	7:15 AM	0	0	0	5	0	1	1	154	0	0	69	0	230	0	0	0	0	0
	7:30 AM	0	0	0	0	0	0	1	176	0	0	66	2	245	0	0	0	0	0
	7:45 AM	0	0	0	1	0	0	1	185	0	0	84	1	272	0	0	0	0	0
	8:00 AM	0	0	0	0	0	1	1	173	0	0	88	0	263	0	0	0	0	0
	8:15 AM	0	0	0	2	0	0	3	130	0	0	87	2	224	0	0	2	0	2
	8:30 AM	0	0	0	2	0	1	1	192	0	0	83	2	281	0	0	0	0	0
	8:45 AM	0	0	0	2	0	0	1	152	0	0	85	2	242	0	0	0	0	0
	VOLUMES	0	0	0	15	0	4	10	1,347	0	0	635	9	2,022	0	0	2	0	2
	APPROACH %	0%	0%	0%	79%	0%	21%	1%	99%	0%	0%	99%	1%						
APP/DEPART	0	/	19	19	/	0	1,359	/	1,362	644	/	641	0						
BEGIN PEAK HR	7:45 AM																		
VOLUMES	0	0	0	5	0	2	6	680	0	0	342	5	1,042						
APPROACH %	0%	0%	0%	71%	0%	29%	1%	99%	0%	0%	99%	1%							
PEAK HR FACTOR	0.000			0.583			0.891			0.975			0.927						
APP/DEPART	0	/	11	7	/	0	688	/	685	347	/	346	0						
MIDDAY	11:00 AM	0	0	0	2	0	3	1	139	0	0	110	0	255	0	0	0	0	0
	11:15 AM	0	0	0	2	0	3	1	139	0	0	110	1	256	0	0	0	0	0
	11:30 AM	0	0	0	2	0	2	1	149	0	0	140	2	296	0	0	0	0	0
	11:45 AM	0	0	0	2	0	4	1	146	0	0	125	1	279	0	0	0	0	0
	12:00 PM	0	0	0	2	0	1	0	132	0	0	148	3	286	0	0	0	0	0
	12:15 PM	0	0	0	5	0	1	3	131	0	0	153	3	296	0	0	0	0	0
	12:30 PM	0	0	0	1	0	1	0	129	0	0	157	2	290	0	0	0	0	0
	12:45 PM	0	0	0	2	0	1	0	127	0	0	149	1	280	0	0	0	0	0
	VOLUMES	0	0	0	18	0	16	7	1,092	0	0	1,092	13	2,238	0	0	0	0	0
	APPROACH %	0%	0%	0%	53%	0%	47%	1%	99%	0%	0%	99%	1%						
APP/DEPART	0	/	20	34	/	0	1,099	/	1,110	1,105	/	1,108	0						
BEGIN PEAK HR	11:30 AM																		
VOLUMES	0	0	0	11	0	8	5	558	0	0	566	9	1,157						
APPROACH %	0%	0%	0%	58%	0%	42%	1%	99%	0%	0%	98%	2%							
PEAK HR FACTOR	0.000			0.792			0.938			0.921			0.977						
APP/DEPART	0	/	14	19	/	0	563	/	569	575	/	574	0						
PM	4:00 PM	0	0	0	6	0	1	3	97	0	0	250	3	360	0	0	0	0	0
	4:15 PM	0	0	0	2	0	1	3	98	0	0	241	2	347	0	0	0	1	1
	4:30 PM	0	0	0	0	0	0	2	128	0	0	239	4	373	0	0	0	0	0
	4:45 PM	0	0	0	4	0	2	6	125	0	0	228	3	368	0	0	0	0	0
	5:00 PM	0	0	0	1	0	1	1	108	0	0	223	2	336	0	0	0	1	1
	5:15 PM	0	0	0	2	0	2	0	111	0	0	223	2	340	0	0	0	0	0
	5:30 PM	0	0	0	3	0	3	3	128	0	0	211	4	352	0	0	0	0	0
	5:45 PM	0	0	0	3	0	1	3	112	0	0	200	4	323	0	0	0	0	0
	VOLUMES	0	0	0	21	0	11	21	907	0	0	1,815	24	2,801	0	0	0	2	2
	APPROACH %	0%	0%	0%	66%	0%	34%	2%	98%	0%	0%	99%	1%						
APP/DEPART	0	/	45	32	/	0	928	/	930	1,841	/	1,826	0						
BEGIN PEAK HR	4:00 PM																		
VOLUMES	0	0	0	12	0	4	14	448	0	0	958	12	1,449						
APPROACH %	0%	0%	0%	75%	0%	25%	3%	97%	0%	0%	99%	1%							
PEAK HR FACTOR	0.000			0.571			0.882			0.959			0.971						
APP/DEPART	0	/	26	16	/	0	462	/	461	971	/	962	0						



	PEDESTRIAN + BIKE CROSSINGS					PEDESTRIAN CROSSINGS					BICYCLE CROSSINGS					
	N SIDE	S SIDE	E SIDE	W SIDE	TOTAL	N SIDE	S SIDE	E SIDE	W SIDE	TOTAL	NS	SS	ES	WS	TOTAL	
AM	7:00 AM	1	0	0	0	1	0	0	0	0	1	0	0	0	0	1
	7:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	7:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	7:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	8:00 AM	0	1	1	0	2	0	0	0	0	0	0	1	1	0	2
	8:15 AM	2	3	0	0	5	0	0	0	0	0	2	3	0	0	5
	8:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	8:45 AM	1	3	0	1	5	0	0	0	0	0	1	3	0	1	5
TOTAL	4	7	1	1	13	0	0	0	0	0	4	7	1	1	13	
MIDDAY	11:00 AM	4	1	0	0	5	0	0	0	0	5	1	0	0	0	5
	11:15 AM	1	2	0	0	3	0	0	0	0	3	2	0	0	0	3
	11:30 AM	2	1	0	0	3	0	0	0	0	3	1	2	0	0	3
	11:45 AM	1	2	0	0	3	0	0	0	0	3	1	2	0	0	3
	12:00 PM	1	1	0	0	2	0	0	0	0	2	1	1	0	0	2
	12:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	12:30 PM	0	2	0	1	3	0	0	0	0	3	0	2	0	1	3
	12:45 PM	0	3	0	0	3	0	0	0	0	3	0	3	0	0	3
TOTAL	9	12	0	1	22	0	0	0	0	0	9	12	0	1	22	
PM	4:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	4:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	4:30 PM	0	1	0	0	1	0	0	0	0	1	0	1	0	0	1
	4:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	5:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	5:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	5:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	5:45 PM	0	1	0	0	1	0	0	0	0	1	0	1	0	0	1
TOTAL	0	2	0	0	2	0	0	0	0	0	0	2	0	0	2	

AimTD LLC
TURNING MOVEMENT COUNTS



INTERSECTION TURNING MOVEMENT COUNTS

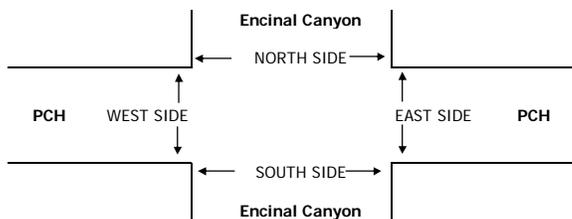
PREPARED BY: AimTD LLC. tel: 714 253 7888 cs@aimtd.com

DATE: Thu, Jul 25, 19	LOCATION: NORTH & SOUTH: EAST & WEST:	Malibu Encinal Canyon PCH	PROJECT #: LOCATION #: CONTROL:	SC2298 2 STOP S
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NOTES:	AM	▲ N	E ►
	PM		
	MD	◄ W	▼ S
	OTHER	OTHER	OTHER



	NORTHBOUND Encinal Canyon			SOUTHBOUND Encinal Canyon			EASTBOUND PCH			WESTBOUND PCH			TOTAL	U-TURNS					
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR		NB	SB	EB	WB	TTL	
LANES:	X	X	X	0	X	0	1	2	X	1	2	1							
AM	7:00 AM	0	0	0	3	0	8	5	182	0	0	64	3	265	0	0	0	0	0
	7:15 AM	0	0	0	6	0	9	7	154	0	0	63	1	240	0	0	0	0	0
	7:30 AM	0	0	0	7	0	6	3	170	0	0	62	4	252	0	0	0	0	0
	7:45 AM	0	0	0	11	0	11	7	191	0	0	75	5	300	0	0	0	0	0
	8:00 AM	0	0	0	9	0	8	3	148	0	0	78	4	250	0	0	0	0	0
	8:15 AM	0	0	0	8	0	7	3	148	0	0	80	5	251	0	0	0	0	0
	8:30 AM	0	0	0	11	0	12	6	178	0	0	77	3	287	0	0	1	0	1
	8:45 AM	0	0	0	13	0	11	9	160	0	0	84	4	281	0	0	0	0	0
	VOLUMES	0	0	0	68	0	72	43	1,331	0	0	583	29	2,127	0	0	1	0	1
	APPROACH %	0%	0%	0%	49%	0%	51%	3%	97%	0%	0%	95%	5%						
APP/DEPART	0	/	72	140	/	0	1,375	/	1,399	612	/	656	0						
BEGIN PEAK HR	7:45 AM																		
VOLUMES	0	0	0	39	0	38	19	665	0	0	310	17	1,089						
APPROACH %	0%	0%	0%	51%	0%	49%	3%	97%	0%	0%	95%	5%							
PEAK HR FACTOR	0.000			0.837			0.865			0.962			0.908						
APP/DEPART	0	/	36	77	/	0	685	/	704	327	/	349	0						
MIDDAY	11:00 AM	0	0	0	10	0	9	8	138	0	0	102	4	271	0	0	0	0	0
	11:15 AM	0	0	0	9	0	10	8	131	0	0	106	8	272	0	0	0	0	0
	11:30 AM	0	0	0	13	0	6	9	160	0	0	143	3	334	0	0	0	0	0
	11:45 AM	0	0	0	6	0	8	3	132	0	0	118	4	271	0	0	0	0	0
	12:00 PM	0	0	0	11	0	7	4	132	0	0	137	9	300	0	0	0	0	0
	12:15 PM	0	0	0	11	0	11	6	124	0	0	152	6	310	0	0	0	0	0
	12:30 PM	0	0	0	8	0	10	8	144	0	0	150	7	327	0	0	0	0	0
	12:45 PM	0	0	0	8	0	10	5	119	0	0	145	10	297	0	0	0	0	0
	VOLUMES	0	0	0	76	0	71	51	1,080	0	0	1,053	51	2,382	0	0	0	0	0
	APPROACH %	0%	0%	0%	52%	0%	48%	5%	95%	0%	0%	95%	5%						
APP/DEPART	0	/	102	147	/	0	1,131	/	1,156	1,104	/	1,124	0						
BEGIN PEAK HR	12:00 PM																		
VOLUMES	0	0	0	38	0	38	23	519	0	0	584	32	1,234						
APPROACH %	0%	0%	0%	50%	0%	50%	4%	96%	0%	0%	95%	5%							
PEAK HR FACTOR	0.000			0.864			0.891			0.975			0.943						
APP/DEPART	0	/	55	76	/	0	542	/	557	616	/	622	0						
PM	4:00 PM	0	0	0	10	0	7	6	87	0	0	229	8	347	0	0	0	0	0
	4:15 PM	0	0	0	8	0	8	6	91	0	0	213	12	338	0	0	0	0	0
	4:30 PM	0	0	0	6	0	9	8	121	0	0	236	11	391	0	0	0	0	0
	4:45 PM	0	0	0	10	0	13	6	126	0	0	229	9	393	0	0	0	0	0
	5:00 PM	0	0	0	6	0	7	8	97	0	0	207	11	336	0	0	0	0	0
	5:15 PM	0	0	0	6	0	9	11	112	0	0	223	7	368	0	0	0	0	0
	5:30 PM	0	0	0	7	0	11	9	124	0	0	202	12	365	0	0	0	0	0
	5:45 PM	0	0	0	7	0	9	9	116	0	0	212	15	368	0	0	0	0	0
	VOLUMES	0	0	0	60	0	73	63	874	0	0	1,751	85	2,906	0	0	0	0	0
	APPROACH %	0%	0%	0%	45%	0%	55%	7%	93%	0%	0%	95%	5%						
APP/DEPART	0	/	148	133	/	0	937	/	934	1,836	/	1,824	0						
BEGIN PEAK HR	4:30 PM																		
VOLUMES	0	0	0	28	0	38	33	456	0	0	895	38	1,488						
APPROACH %	0%	0%	0%	42%	0%	58%	7%	93%	0%	0%	96%	4%							
PEAK HR FACTOR	0.000			0.717			0.926			0.944			0.947						
APP/DEPART	0	/	71	66	/	0	489	/	484	933	/	933	0						



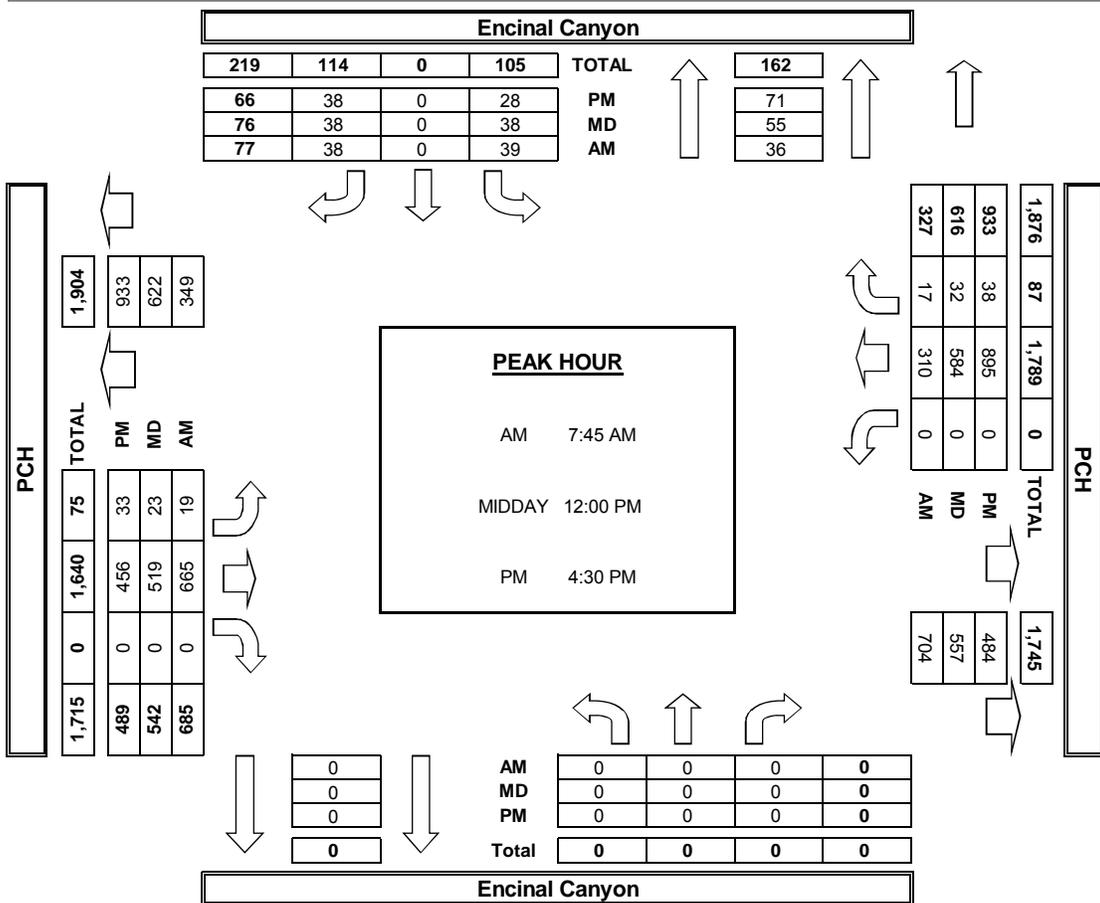
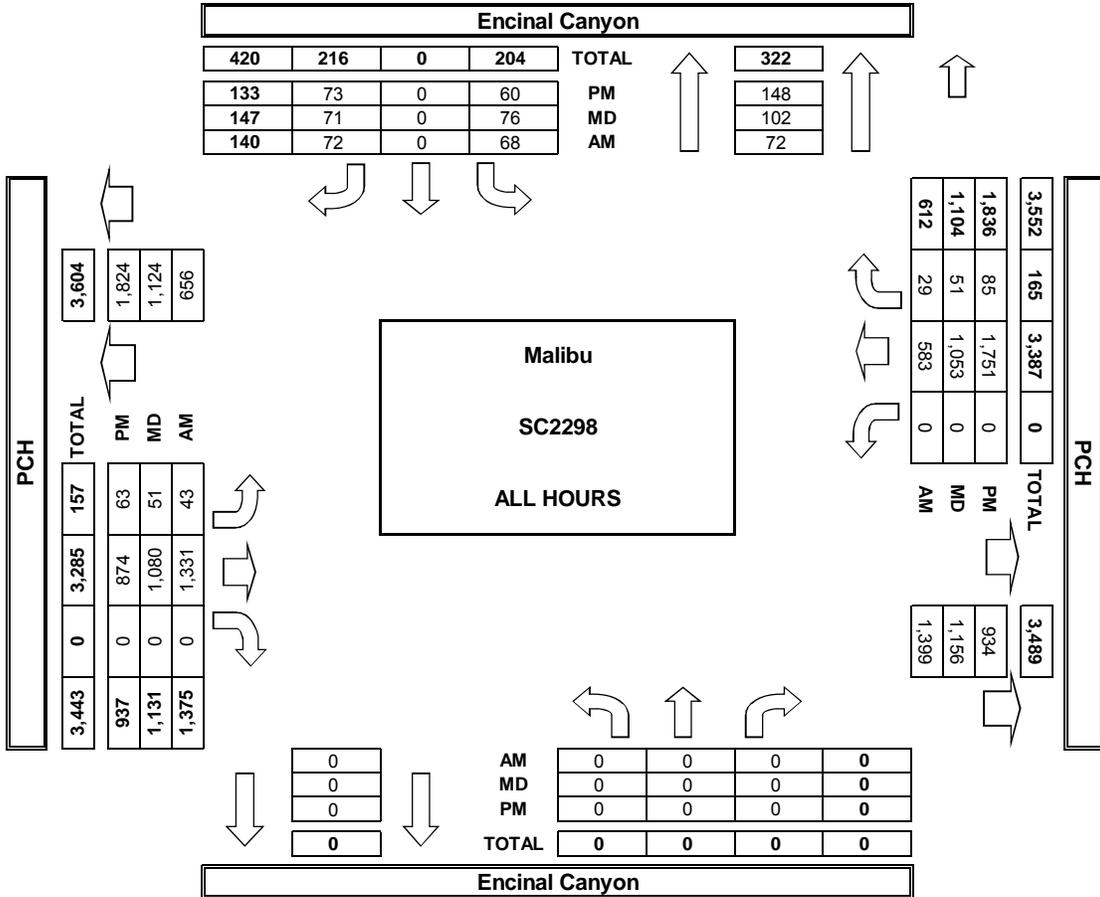
	AM	MIDDAY	PM
7:00 AM	0	0	0
7:15 AM	0	0	0
7:30 AM	0	0	0
7:45 AM	0	0	0
8:00 AM	0	2	0
8:15 AM	2	1	0
8:30 AM	0	1	0
8:45 AM	1	4	0
TOTAL	4	8	0
11:00 AM	1	0	0
11:15 AM	1	3	0
11:30 AM	3	4	0
11:45 AM	1	4	0
12:00 PM	1	1	0
12:15 PM	0	0	0
12:30 PM	0	1	0
12:45 PM	0	3	0
TOTAL	7	16	0
4:00 PM	0	0	0
4:15 PM	0	0	0
4:30 PM	0	0	0
4:45 PM	0	0	0
5:00 PM	0	0	0
5:15 PM	0	0	0
5:30 PM	0	0	0
5:45 PM	0	1	0
TOTAL	0	1	0

PEDESTRIAN + BIKE CROSSINGS				
N SIDE	S SIDE	E SIDE	W SIDE	TOTAL
1	0	0	0	1
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	2	0	2	4
2	1	0	0	3
0	1	0	0	1
1	4	0	0	5
4	8	0	2	14
1	0	0	0	1
1	3	0	0	4
3	4	0	2	9
1	4	0	2	7
1	1	0	0	2
0	0	0	0	0
0	1	0	0	1
0	3	0	0	3
7	16	0	4	27
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	1	0	0	1
0	1	0	0	1

PEDESTRIAN CROSSINGS				
N SIDE	S SIDE	E SIDE	W SIDE	TOTAL
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0

BICYCLE CROSSINGS				
NS	SS	ES	WS	TOTAL
1	0	0	0	1
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	2	0	2	4
2	1	0	0	3
0	1	0	0	1
1	4	0	0	5
4	8	0	2	14
1	0	0	0	1
1	3	0	0	4
3	4	0	2	9
1	4	0	2	7
1	1	0	0	2
0	0	0	0	0
0	1	0	0	1
0	3	0	0	3
7	16	0	4	27
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	1	0	0	1
0	1	0	0	1

AimTD LLC
TURNING MOVEMENT COUNTS



INTERSECTION TURNING MOVEMENT COUNTS

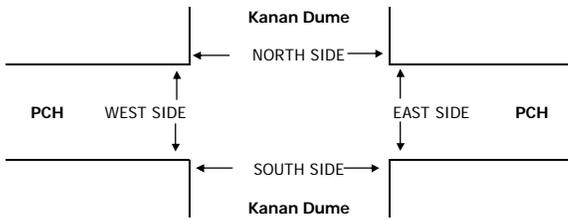
PREPARED BY: AimTD LLC. tel: 714 253 7888 cs@aimtd.com

DATE: Thu, Jul 25, 19	LOCATION: NORTH & SOUTH: EAST & WEST:	Malibu Kanan Dume PCH	PROJECT #: LOCATION #: CONTROL:	SC2298 3 SIGNAL
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NOTES:	AM	▲ N E ▶
	PM	
	MD	
	OTHER	

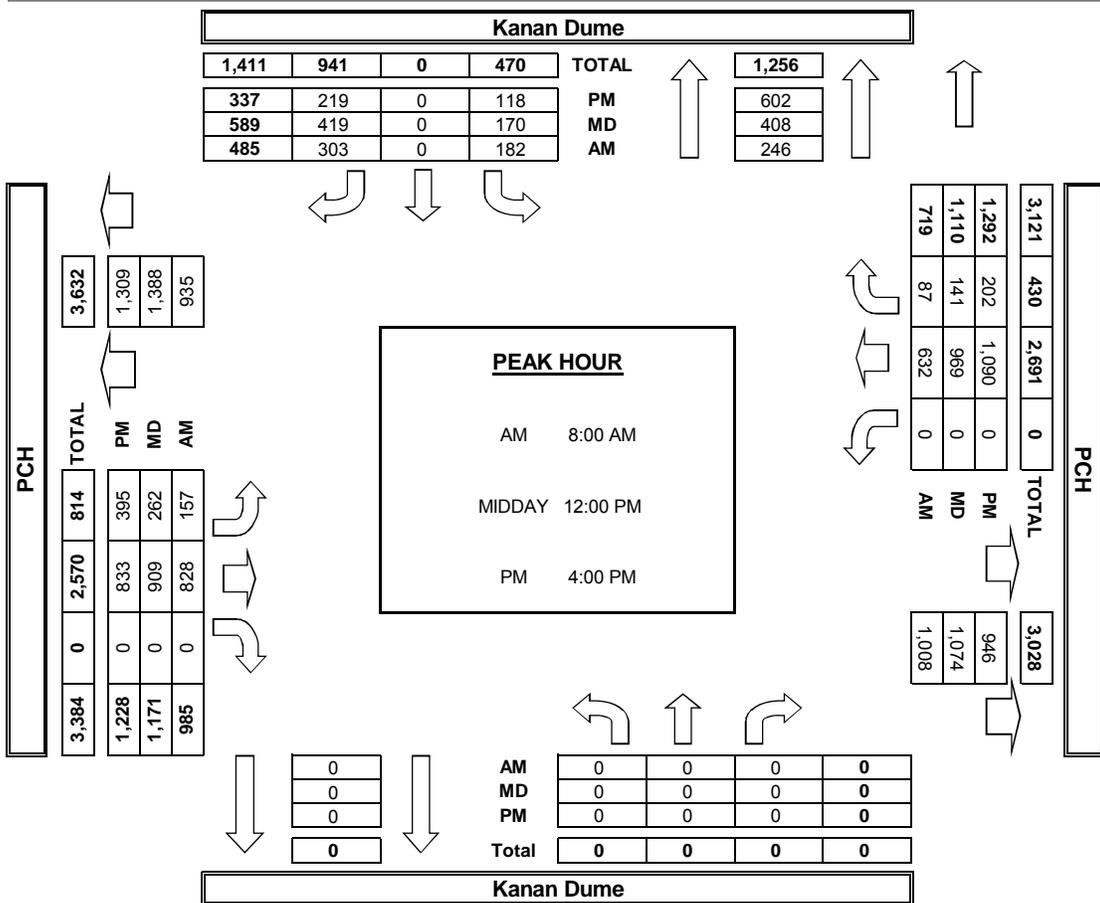
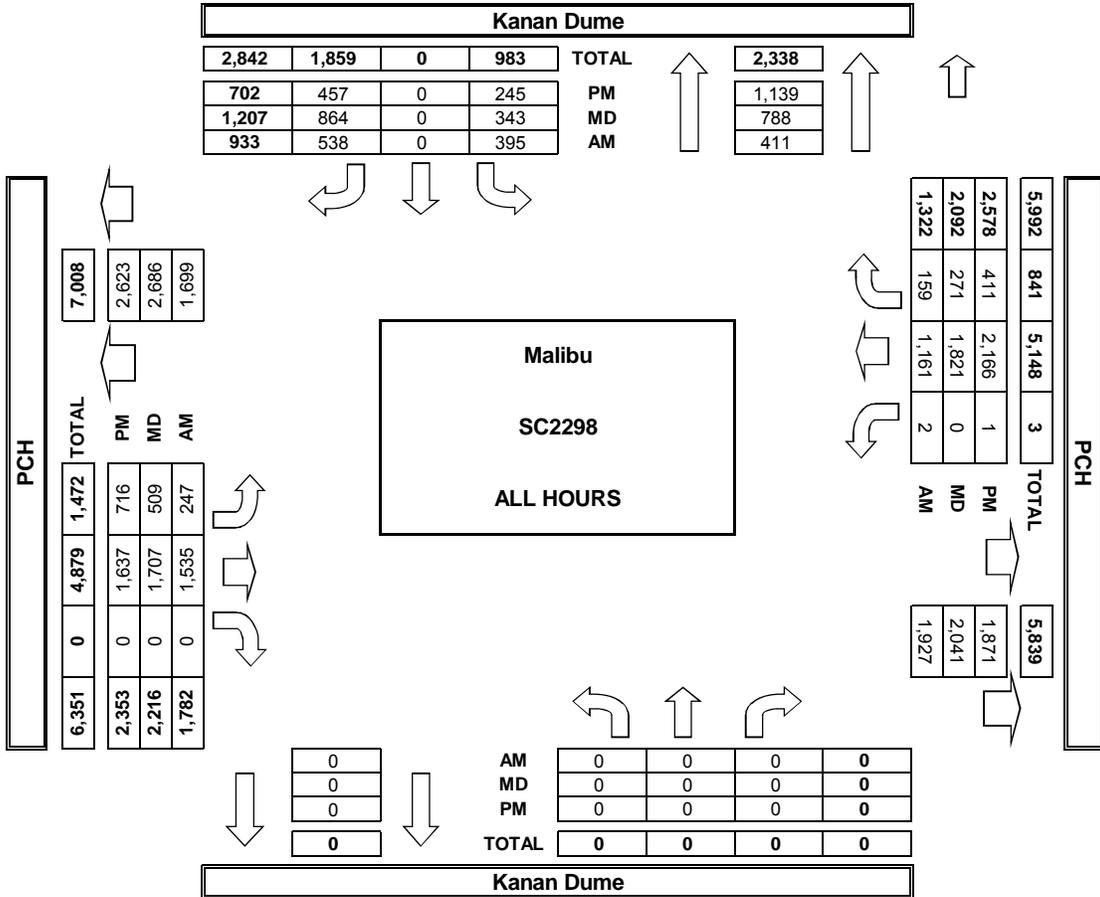


LANES:	NORTHBOUND Kanan Dume			SOUTHBOUND Kanan Dume			EASTBOUND PCH			WESTBOUND PCH			TOTAL	U-TURNS					
	NL X	NT X	NR X	SL 1.5	ST X	SR 1.5	EL 1	ET 2	ER X	WL X	WT 2	WR 1		NB 0	SB 0	EB 0	WB 0	TTL 0	
7:00 AM	0	0	0	52	0	56	25	170	0	0	131	10	444	0	0	0	0	0	
7:15 AM	0	0	0	58	0	50	26	164	0	2	124	17	441	0	1	0	2	3	
7:30 AM	0	0	0	50	0	54	19	182	0	0	118	21	444	0	2	0	0	2	
7:45 AM	0	0	0	53	0	75	20	191	0	0	156	24	519	0	0	0	0	0	
8:00 AM	0	0	0	54	0	68	29	198	0	0	179	14	542	0	0	0	0	0	
8:15 AM	0	0	0	36	0	68	42	196	0	0	134	26	502	0	0	0	0	0	
8:30 AM	0	0	0	49	0	70	30	188	0	0	150	24	511	0	1	0	0	1	
8:45 AM	0	0	0	43	0	97	56	246	0	0	169	23	634	0	1	0	0	1	
VOLUMES	0	0	0	395	0	538	247	1,535	0	2	1,161	159	4,037	0	5	0	2	7	
APPROACH %	0%	0%	0%	42%	0%	58%	14%	86%	0%	0%	88%	12%							
APP/DEPART	0	/	411	933	/	0	1,782	/	1,927	1,322	/	1,699	0						
BEGIN PEAK HR	8:00 AM																		
VOLUMES	0	0	0	182	0	303	157	828	0	0	632	87	2,189						
APPROACH %	0%	0%	0%	38%	0%	62%	16%	84%	0%	0%	88%	12%							
PEAK HR FACTOR	0.000			0.866			0.815			0.931			0.863						
APP/DEPART	0	/	246	485	/	0	985	/	1,008	719	/	935	0						
11:00 AM	0	0	0	44	0	124	66	182	0	0	206	37	659	0	3	0	0	3	
11:15 AM	0	0	0	38	0	99	70	188	0	0	195	31	621	0	0	0	0	0	
11:30 AM	0	0	0	46	0	105	50	208	0	0	232	42	683	0	0	0	0	0	
11:45 AM	0	0	0	45	0	117	61	220	0	0	219	20	682	0	1	1	0	2	
12:00 PM	0	0	0	33	0	107	73	238	0	0	262	27	740	0	0	0	0	0	
12:15 PM	0	0	0	41	0	91	62	236	0	0	234	34	698	0	1	0	0	1	
12:30 PM	0	0	0	40	0	115	47	211	0	0	217	42	672	0	2	0	0	2	
12:45 PM	0	0	0	56	0	106	80	224	0	0	256	38	760	0	2	0	0	2	
VOLUMES	0	0	0	343	0	864	509	1,707	0	0	1,821	271	5,515	0	9	1	0	10	
APPROACH %	0%	0%	0%	28%	0%	72%	23%	77%	0%	0%	87%	13%							
APP/DEPART	0	/	788	1,207	/	0	2,216	/	2,041	2,092	/	2,686	0						
BEGIN PEAK HR	12:00 PM																		
VOLUMES	0	0	0	170	0	419	262	909	0	0	969	141	2,870						
APPROACH %	0%	0%	0%	29%	0%	71%	22%	78%	0%	0%	87%	13%							
PEAK HR FACTOR	0.000			0.909			0.941			0.944			0.944						
APP/DEPART	0	/	408	589	/	0	1,171	/	1,074	1,110	/	1,388	0						
4:00 PM	0	0	0	29	0	62	100	220	0	0	280	49	740	0	0	0	0	0	
4:15 PM	0	0	0	26	0	52	98	202	0	0	295	70	743	0	2	0	0	2	
4:30 PM	0	0	0	32	0	54	100	225	0	0	270	42	723	0	2	0	0	2	
4:45 PM	0	0	0	31	0	51	97	186	0	0	245	41	651	0	1	0	0	1	
5:00 PM	0	0	0	23	0	60	91	222	0	0	292	50	738	0	3	0	0	3	
5:15 PM	0	0	0	37	0	68	83	188	0	1	253	72	702	0	1	0	1	2	
5:30 PM	0	0	0	36	0	47	78	183	0	0	275	51	670	0	3	0	0	3	
5:45 PM	0	0	0	31	0	63	69	211	0	0	256	36	666	0	0	0	0	0	
VOLUMES	0	0	0	245	0	457	716	1,637	0	1	2,166	411	5,633	0	12	0	1	13	
APPROACH %	0%	0%	0%	35%	0%	65%	30%	70%	0%	0%	84%	16%							
APP/DEPART	0	/	1,139	702	/	0	2,353	/	1,871	2,578	/	2,623	0						
BEGIN PEAK HR	4:00 PM																		
VOLUMES	0	0	0	118	0	219	395	833	0	0	1,090	202	2,857						
APPROACH %	0%	0%	0%	35%	0%	65%	32%	68%	0%	0%	84%	16%							
PEAK HR FACTOR	0.000			0.926			0.945			0.885			0.961						
APP/DEPART	0	/	602	337	/	0	1,228	/	946	1,292	/	1,309	0						



	PEDESTRIAN + BIKE CROSSINGS					PEDESTRIAN CROSSINGS					BICYCLE CROSSINGS				
	N SIDE	S SIDE	E SIDE	W SIDE	TOTAL	N SIDE	S SIDE	E SIDE	W SIDE	TOTAL	NS	SS	ES	WS	TOTAL
7:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:15 AM	2	0	0	1	3	2	0	0	1	3	0	0	0	0	0
7:30 AM	0	0	0	1	1	0	0	0	1	1	0	0	0	0	0
7:45 AM	1	0	0	0	1	0	0	0	0	0	1	0	0	0	1
8:00 AM	2	0	0	0	2	2	0	0	0	2	0	0	0	0	0
8:15 AM	1	0	0	0	1	0	0	0	0	0	1	0	0	0	1
8:30 AM	1	2	0	0	3	0	0	0	0	0	1	2	0	0	3
8:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
TOTAL	7	2	0	2	11	4	0	0	2	6	3	2	0	0	5
11:00 AM	5	2	0	0	7	0	0	0	0	0	5	2	0	0	7
11:15 AM	1	1	0	1	3	0	0	0	1	1	1	1	0	0	2
11:30 AM	1	2	0	0	3	0	0	0	0	0	1	2	0	0	3
11:45 AM	2	5	0	1	8	0	0	0	1	1	2	5	0	0	7
12:00 PM	2	0	0	0	2	0	0	0	0	0	2	0	0	0	2
12:15 PM	0	1	0	0	1	0	0	0	0	0	0	1	0	0	1
12:30 PM	0	3	0	0	3	0	0	0	0	0	0	3	0	0	3
12:45 PM	0	2	0	0	2	0	0	0	0	0	0	2	0	0	2
TOTAL	11	16	0	2	29	0	0	0	2	2	11	16	0	0	27
4:00 PM	0	3	0	0	3	0	0	0	0	0	0	3	0	0	3
4:15 PM	1	0	0	0	1	0	0	0	0	0	1	0	0	0	1
4:30 PM	1	0	0	1	2	0	0	0	0	0	1	0	0	1	2
4:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5:15 PM	0	0	0	2	2	0	0	0	2	2	0	0	0	0	0
5:30 PM	0	1	0	1	2	0	0	0	0	0	0	1	0	1	2
5:45 PM	1	0	0	0	1	0	0	0	0	0	1	0	0	0	1
TOTAL	3	4	0	4	11	0	0	0	2	2	3	4	0	2	9

AimTD LLC
TURNING MOVEMENT COUNTS



INTERSECTION TURNING MOVEMENT COUNTS

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

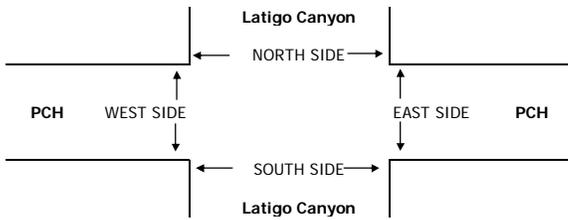
DATE: Thu, Jul 25, 19	LOCATION: NORTH & SOUTH: EAST & WEST:	Malibu Latigo Canyon PCH	PROJECT #: LOCATION #: CONTROL:	SC2298 4 STOP S
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NOTES:	<table border="1"> <tr> <td>AM</td> <td></td> <td>▲</td> <td></td> </tr> <tr> <td>PM</td> <td></td> <td>▼</td> <td></td> </tr> <tr> <td>MD</td> <td>◀ W</td> <td></td> <td>E ▶</td> </tr> <tr> <td>OTHER</td> <td></td> <td>S</td> <td></td> </tr> <tr> <td>OTHER</td> <td></td> <td></td> <td></td> </tr> </table>	AM		▲		PM		▼		MD	◀ W		E ▶	OTHER		S		OTHER			
AM		▲																			
PM		▼																			
MD	◀ W		E ▶																		
OTHER		S																			
OTHER																					



LANES:	NORTHBOUND Latigo Canyon			SOUTHBOUND Latigo Canyon			EASTBOUND PCH			WESTBOUND PCH			TOTAL
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	
7:00 AM	0	0	0	2	0	2	2	208	0	0	175	10	399
7:15 AM	0	0	0	2	0	1	5	223	0	0	179	7	417
7:30 AM	0	0	0	3	0	0	2	233	0	0	193	2	433
7:45 AM	0	0	0	5	0	3	5	239	0	0	221	5	478
8:00 AM	0	0	0	6	0	2	6	241	0	0	204	3	462
8:15 AM	0	0	0	6	0	2	5	206	0	0	173	9	401
8:30 AM	0	0	0	5	0	2	8	234	0	0	211	2	462
8:45 AM	0	0	0	4	0	4	2	323	0	0	189	3	525
VOLUMES	0	0	0	33	0	16	35	1,907	0	0	1,545	41	3,577
APPROACH %	0%	0%	0%	67%	0%	33%	2%	98%	0%	0%	97%	3%	
APP/DEPART	0	/	69	49	/	0	1,942	/	1,940	1,586	/	1,568	0
BEGIN PEAK HR	8:00 AM												
VOLUMES	0	0	0	21	0	10	21	1,004	0	0	777	17	1,850
APPROACH %	0%	0%	0%	68%	0%	32%	2%	98%	0%	0%	98%	2%	
PEAK HR FACTOR	0.000			0.969			0.788			0.932			0.881
APP/DEPART	0	/	34	31	/	0	1,025	/	1,025	794	/	791	0
11:00 AM	0	0	0	5	0	3	3	232	0	0	254	7	504
11:15 AM	0	0	0	4	0	4	5	245	0	0	245	4	507
11:30 AM	0	0	0	3	0	7	4	228	0	0	286	11	539
11:45 AM	0	0	0	10	0	5	4	259	0	0	296	7	581
12:00 PM	0	0	0	7	0	1	3	260	0	0	287	8	566
12:15 PM	0	0	0	9	0	9	3	286	0	0	308	6	621
12:30 PM	0	0	0	10	0	10	4	306	0	0	271	5	606
12:45 PM	0	0	0	3	0	9	5	267	0	0	318	7	609
VOLUMES	0	0	0	51	0	48	31	2,083	0	0	2,265	55	4,533
APPROACH %	0%	0%	0%	52%	0%	48%	1%	99%	0%	0%	98%	2%	
APP/DEPART	0	/	83	99	/	0	2,114	/	2,134	2,320	/	2,316	0
BEGIN PEAK HR	12:00 PM												
VOLUMES	0	0	0	29	0	29	15	1,119	0	0	1,184	26	2,402
APPROACH %	0%	0%	0%	50%	0%	50%	1%	99%	0%	0%	98%	2%	
PEAK HR FACTOR	0.000			0.725			0.915			0.931			0.967
APP/DEPART	0	/	39	58	/	0	1,134	/	1,148	1,210	/	1,215	0
4:00 PM	0	0	0	7	0	5	4	304	0	0	349	5	674
4:15 PM	0	0	0	7	0	7	7	278	0	0	344	6	649
4:30 PM	0	0	0	6	0	8	7	262	0	0	303	6	592
4:45 PM	0	0	0	2	0	3	3	295	0	0	331	5	639
5:00 PM	0	0	0	4	0	4	5	279	0	0	382	3	677
5:15 PM	0	0	0	4	0	2	3	242	0	0	325	9	585
5:30 PM	0	0	0	4	0	5	6	242	0	0	301	3	561
5:45 PM	0	0	0	2	0	1	5	257	0	0	297	5	567
VOLUMES	0	0	0	36	0	35	40	2,159	0	0	2,632	42	4,944
APPROACH %	0%	0%	0%	51%	0%	49%	2%	98%	0%	0%	98%	2%	
APP/DEPART	0	/	78	71	/	0	2,199	/	2,195	2,674	/	2,671	0
BEGIN PEAK HR	4:15 PM												
VOLUMES	0	0	0	19	0	22	22	1,114	0	0	1,360	20	2,557
APPROACH %	0%	0%	0%	46%	0%	54%	2%	98%	0%	0%	99%	1%	
PEAK HR FACTOR	0.000			0.732			0.953			0.896			0.944
APP/DEPART	0	/	39	41	/	0	1,136	/	1,133	1,380	/	1,385	0

U-TURNS				
NB	SB	EB	WB	TTL
0	0	0	0	0
0	0	2	0	2
0	0	0	0	0
0	0	1	0	1
0	0	1	0	1
0	0	1	0	1
0	0	2	0	2
0	0	0	0	0
0	0	7	0	7
0	0	1	0	1
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	1	0	1
0	0	1	0	1
0	0	0	0	0
0	0	3	0	3
0	0	0	0	0
0	0	0	0	0
0	0	4	0	4

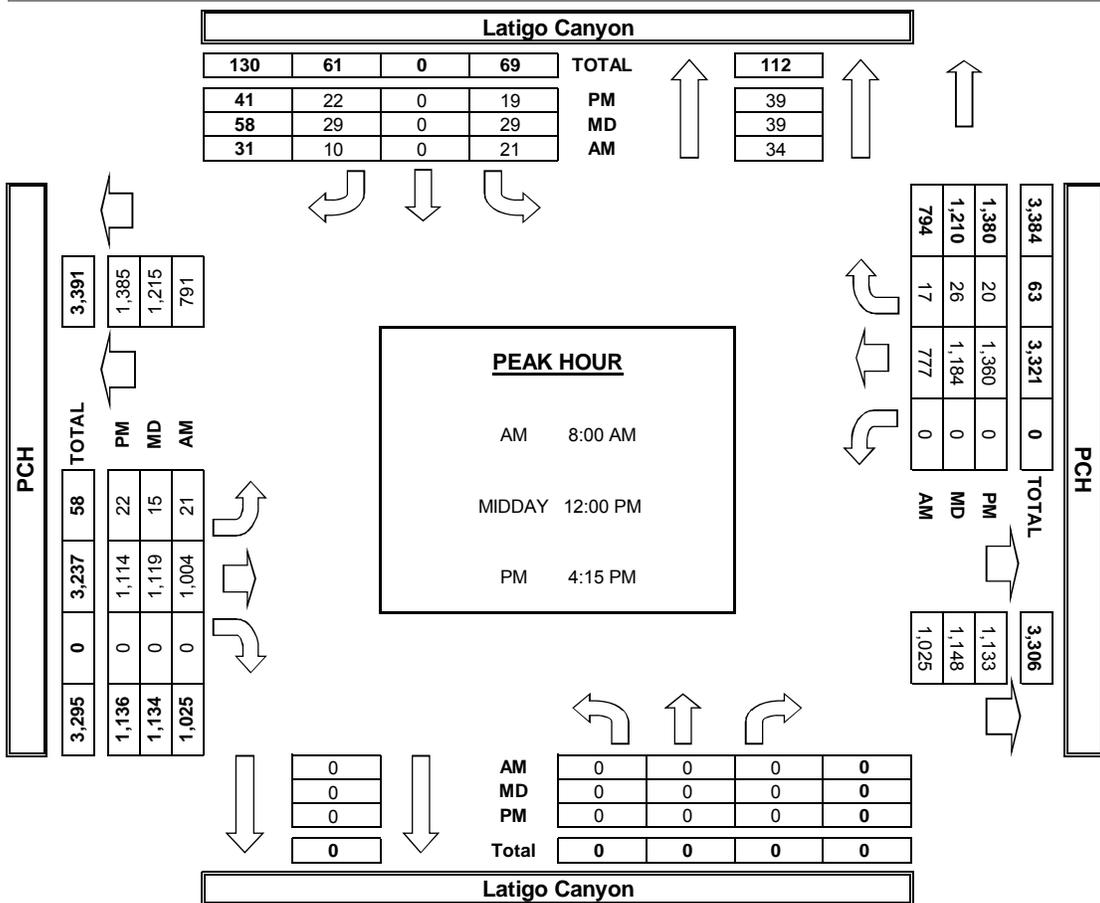
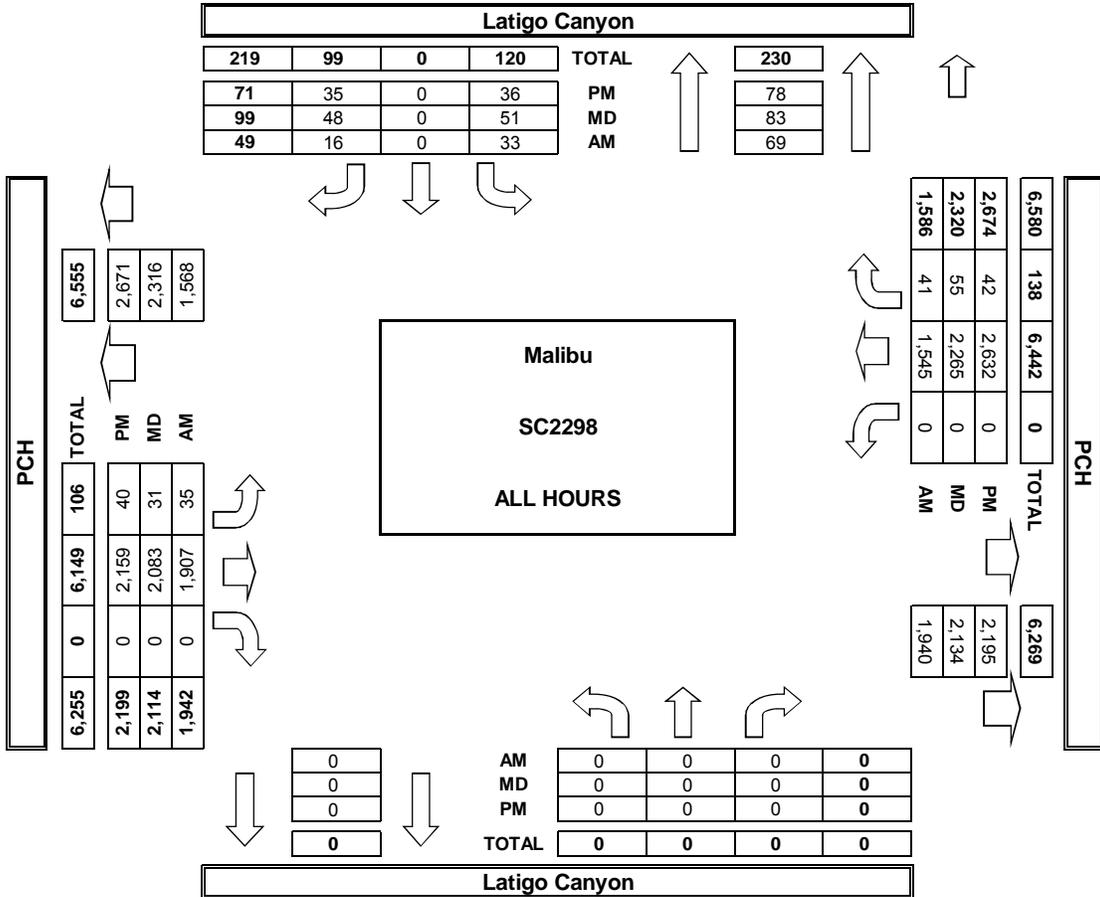


	PEDESTRIAN + BIKE CROSSINGS				TOTAL
	N SIDE	S SIDE	E SIDE	W SIDE	
7:00 AM	0	0	0	0	0
7:15 AM	2	0	0	0	2
7:30 AM	0	0	0	0	0
7:45 AM	0	0	0	0	0
8:00 AM	2	2	0	2	6
8:15 AM	0	0	0	0	0
8:30 AM	0	0	0	0	0
8:45 AM	0	3	2	0	5
TOTAL	4	5	2	2	13
11:00 AM	1	2	0	0	3
11:15 AM	0	1	0	0	1
11:30 AM	3	1	0	0	4
11:45 AM	0	3	0	0	3
12:00 PM	0	5	0	0	5
12:15 PM	0	1	0	0	1
12:30 PM	1	1	0	0	2
12:45 PM	0	2	0	0	2
TOTAL	5	16	0	0	21
4:00 PM	0	0	0	0	0
4:15 PM	1	2	0	0	3
4:30 PM	1	1	0	0	2
4:45 PM	0	1	0	0	1
5:00 PM	0	0	0	0	0
5:15 PM	0	1	1	0	2
5:30 PM	1	0	0	0	1
5:45 PM	0	1	0	0	1
TOTAL	3	6	1	0	10

	PEDESTRIAN CROSSINGS				TOTAL
	N SIDE	S SIDE	E SIDE	W SIDE	
7:00 AM	0	0	0	0	0
7:15 AM	1	0	0	0	1
7:30 AM	0	0	0	0	0
7:45 AM	0	0	0	0	0
8:00 AM	0	0	0	0	0
8:15 AM	0	0	0	0	0
8:30 AM	0	0	0	0	0
8:45 AM	0	0	0	0	0
TOTAL	1	0	0	0	1
11:00 AM	0	0	0	0	0
11:15 AM	0	0	0	0	0
11:30 AM	0	0	0	0	0
11:45 AM	0	0	0	0	0
12:00 PM	0	0	0	0	0
12:15 PM	0	0	0	0	0
12:30 PM	0	0	0	0	0
12:45 PM	0	0	0	0	0
TOTAL	0	0	0	0	0
4:00 PM	0	0	0	0	0
4:15 PM	0	0	0	0	0
4:30 PM	0	0	0	0	0
4:45 PM	0	0	0	0	0
5:00 PM	0	0	0	0	0
5:15 PM	0	0	0	0	0
5:30 PM	0	0	0	0	0
5:45 PM	0	0	0	0	0
TOTAL	0	0	0	0	0

	BICYCLE CROSSINGS				TOTAL
	NS	SS	ES	WS	
7:00 AM	0	0	0	0	0
7:15 AM	1	0	0	0	1
7:30 AM	0	0	0	0	0
7:45 AM	0	0	0	0	0
8:00 AM	2	2	0	2	6
8:15 AM	0	0	0	0	0
8:30 AM	0	0	0	0	0
8:45 AM	0	3	2	0	5
TOTAL	3	5	2	2	12
11:00 AM	1	2	0	0	3
11:15 AM	0	1	0	0	1
11:30 AM	3	1	0	0	4
11:45 AM	0	3	0	0	3
12:00 PM	0	5	0	0	5
12:15 PM	0	1	0	0	1
12:30 PM	1	1	0	0	2
12:45 PM	0	2	0	0	2
TOTAL	5	16	0	0	21
4:00 PM	0	0	0	0	0
4:15 PM	1	2	0	0	3
4:30 PM	1	1	0	0	2
4:45 PM	0	1	0	0	1
5:00 PM	0	0	0	0	0
5:15 PM	0	1	1	0	2
5:30 PM	1	0	0	0	1
5:45 PM	0	1	0	0	1
TOTAL	3	6	1	0	10

AimTD LLC
TURNING MOVEMENT COUNTS

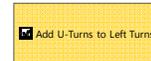


INTERSECTION TURNING MOVEMENT COUNTS

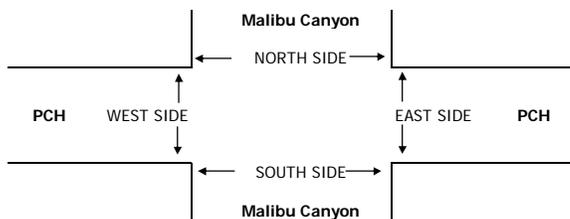
PREPARED BY: AimTD LLC. tel: 714 253 7888 cs@aimtd.com

DATE: Thu, Jul 25, 19	LOCATION: NORTH & SOUTH: EAST & WEST:	Malibu Malibu Canyon PCH	PROJECT #: LOCATION #: CONTROL:	SC2298 5 SIGNAL
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NOTES:	<table border="1"> <tr> <td>AM</td> <td></td> <td>▲</td> <td></td> </tr> <tr> <td>PM</td> <td></td> <td>▼</td> <td></td> </tr> <tr> <td>MD</td> <td>← W</td> <td>N</td> <td>E →</td> </tr> <tr> <td>OTHER</td> <td></td> <td>S</td> <td></td> </tr> <tr> <td>OTHER</td> <td></td> <td></td> <td></td> </tr> </table>	AM		▲		PM		▼		MD	← W	N	E →	OTHER		S		OTHER			
AM		▲																			
PM		▼																			
MD	← W	N	E →																		
OTHER		S																			
OTHER																					



	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			TOTAL	U-TURNS					
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR		NB	SB	EB	WB	TTL	
LANES:	1	1	1	1.5	0.5	1	2	2	0	1	2	1	0	0	0	0	0	0	
AM	7:00 AM	0	1	5	208	7	47	19	195	5	9	187	22	705	0	0	0	1	1
	7:15 AM	4	1	5	207	2	45	14	197	9	2	156	31	673	0	0	0	0	0
	7:30 AM	2	4	0	229	2	42	20	209	3	3	172	44	730	0	1	0	0	1
	7:45 AM	0	2	5	152	6	44	25	186	2	2	231	72	727	0	0	0	0	0
	8:00 AM	6	3	6	192	2	50	20	205	4	1	160	72	721	0	0	0	0	0
	8:15 AM	1	2	8	184	2	56	18	235	3	3	166	71	749	0	0	0	0	0
	8:30 AM	1	2	6	219	5	56	33	205	2	1	168	76	774	0	0	0	0	0
	8:45 AM	1	4	4	173	2	47	40	283	8	2	202	59	825	0	0	0	0	0
	VOLUMES	15	19	39	1,564	28	387	189	1,715	36	23	1,442	447	5,904	0	1	0	1	2
	APPROACH %	21%	26%	53%	79%	1%	20%	10%	88%	2%	1%	75%	23%						
	APP/DEPART	73	/	656	1,979	/	86	1,940	/	3,318	1,912	/	1,844	0					
	BEGIN PEAK HR	8:00 AM																	
	VOLUMES	9	11	24	768	11	209	111	928	17	7	696	278	3,069					
	APPROACH %	20%	25%	55%	78%	1%	21%	11%	88%	2%	1%	71%	28%						
	PEAK HR FACTOR	0.733			0.882			0.798			0.933			0.930					
	APP/DEPART	44	/	400	988	/	35	1,056	/	1,720	981	/	914	0					
MIDDAY	11:00 AM	3	0	10	94	1	83	29	279	2	3	203	32	739	0	0	0	0	0
	11:15 AM	4	0	3	89	4	59	37	231	2	13	233	27	702	0	0	0	1	1
	11:30 AM	2	2	4	119	1	73	46	260	4	3	252	35	801	0	0	1	0	1
	11:45 AM	0	4	4	112	0	77	29	272	4	1	218	40	761	0	0	0	0	0
	12:00 PM	1	2	13	106	3	76	38	226	3	7	258	32	765	0	0	0	0	0
	12:15 PM	2	1	6	84	4	66	49	309	5	7	265	34	832	0	0	0	0	0
	12:30 PM	3	2	6	83	5	70	41	289	6	8	276	42	831	0	0	0	0	0
	12:45 PM	6	2	5	77	2	53	57	246	7	5	264	43	767	0	0	0	0	0
	VOLUMES	21	13	51	764	20	557	326	2,112	33	47	1,969	285	6,198	0	0	1	1	2
	APPROACH %	25%	15%	60%	57%	1%	42%	13%	85%	1%	2%	86%	12%						
	APP/DEPART	85	/	623	1,341	/	99	2,471	/	2,928	2,301	/	2,548	0					
	BEGIN PEAK HR	12:00 PM																	
	VOLUMES	12	7	30	350	14	265	185	1,070	21	27	1,063	151	3,195					
	APPROACH %	24%	14%	61%	56%	2%	42%	14%	84%	2%	2%	86%	12%						
	PEAK HR FACTOR	0.766			0.850			0.879			0.952			0.960					
	APP/DEPART	49	/	343	629	/	62	1,276	/	1,450	1,241	/	1,340	0					
PM	4:00 PM	1	5	4	76	0	42	78	255	2	8	345	64	880	0	0	0	1	1
	4:15 PM	1	8	4	127	6	36	81	244	1	2	294	66	872	0	0	0	0	0
	4:30 PM	2	3	5	96	1	29	85	239	4	4	276	62	806	0	0	0	0	0
	4:45 PM	0	1	5	125	1	56	76	286	2	1	287	78	918	0	0	0	0	0
	5:00 PM	1	2	4	122	3	48	53	258	3	0	302	65	861	0	0	0	0	0
	5:15 PM	1	1	6	119	3	37	68	223	4	3	240	55	760	0	0	0	0	0
	5:30 PM	2	0	3	116	2	51	64	211	2	1	295	89	836	0	0	0	0	0
	5:45 PM	1	2	3	79	1	41	65	220	4	1	278	83	778	0	0	0	0	0
	VOLUMES	9	22	36	860	17	340	570	1,936	22	20	2,317	562	6,711	0	0	0	1	1
	APPROACH %	13%	33%	54%	71%	1%	28%	23%	77%	1%	1%	80%	19%						
	APP/DEPART	67	/	1,154	1,217	/	58	2,528	/	2,833	2,899	/	2,666	0					
	BEGIN PEAK HR	4:00 PM																	
	VOLUMES	4	17	20	424	8	163	320	1,024	9	15	1,202	270	3,476					
	APPROACH %	10%	41%	49%	71%	1%	27%	24%	76%	1%	1%	80%	18%						
	PEAK HR FACTOR	0.683			0.817			0.929			0.891			0.947					
	APP/DEPART	41	/	607	595	/	31	1,353	/	1,469	1,487	/	1,369	0					



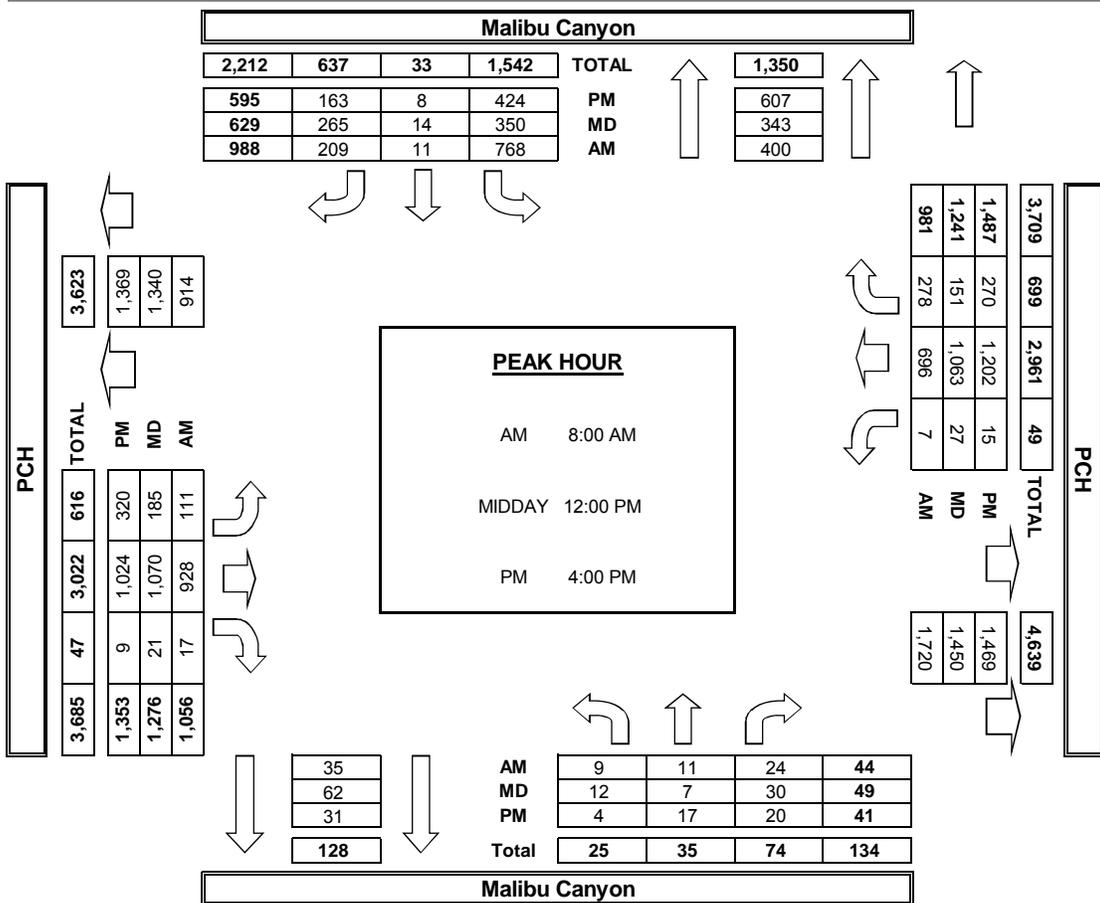
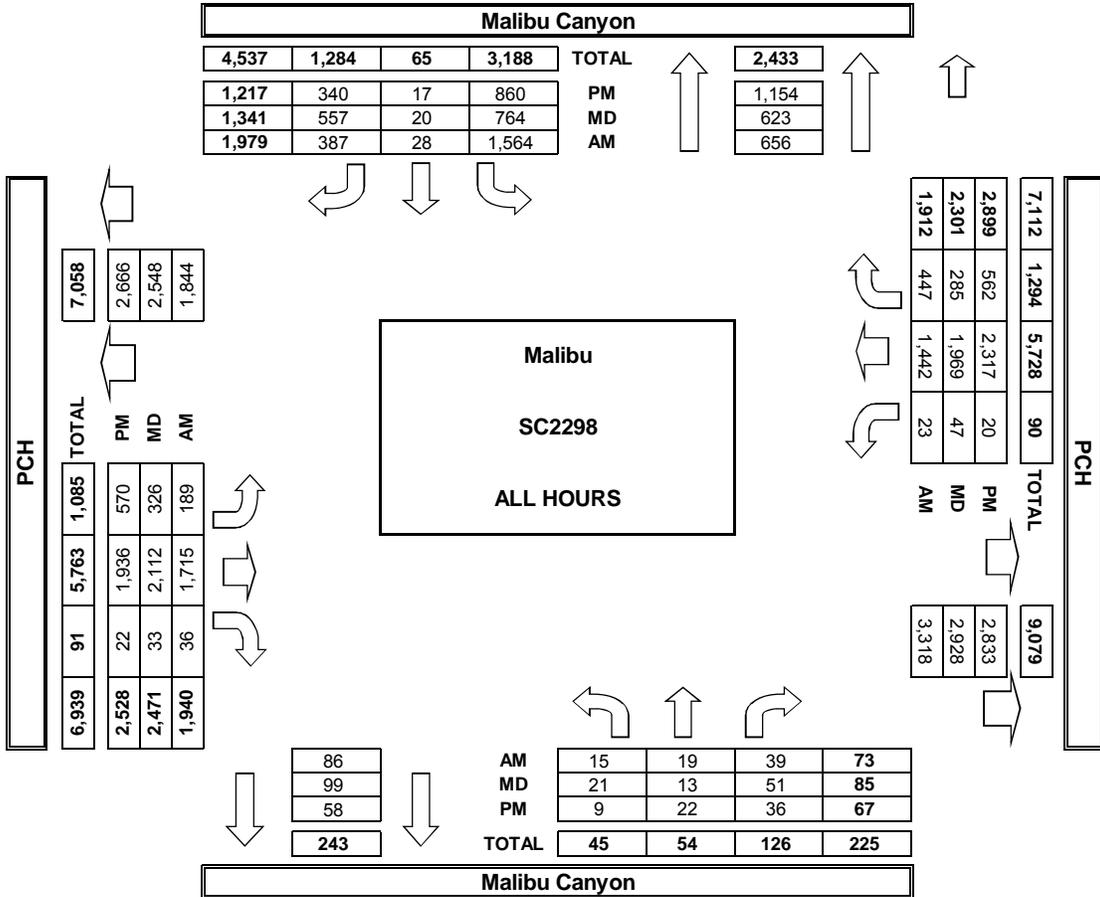
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7:00 AM	0	0	0
7:15 AM	1	0	0
7:30 AM	0	0	0
7:45 AM	1	0	0
8:00 AM	1	0	0
8:15 AM	0	0	0
8:30 AM	1	0	0
8:45 AM	3	0	0
TOTAL	7	0	0
11:00 AM	0	0	0
11:15 AM	2	2	0
11:30 AM	1	2	0
11:45 AM	2	0	0
12:00 PM	0	5	0
12:15 PM	1	0	0
12:30 PM	1	1	0
12:45 PM	1	0	0
TOTAL	8	10	0
4:00 PM	0	0	0
4:15 PM	0	0	0
4:30 PM	0	2	0
4:45 PM	0	0	0
5:00 PM	1	0	0
5:15 PM	1	1	0
5:30 PM	0	0	0
5:45 PM	0	1	0
TOTAL	2	4	0

PEDESTRIAN + BIKE CROSSINGS				
N SIDE	S SIDE	E SIDE	W SIDE	TOTAL
0	0	0	0	0
1	0	0	0	1
0	0	0	0	0
1	0	0	0	1
1	0	0	1	2
0	0	0	0	0
1	0	0	0	1
3	0	0	0	3
7	0	0	1	8
0	0	0	2	2
1	0	0	1	2
0	0	0	0	0
0	1	0	0	1
0	0	0	0	0
0	0	0	1	1
0	1	0	1	2
2	4	0	4	10

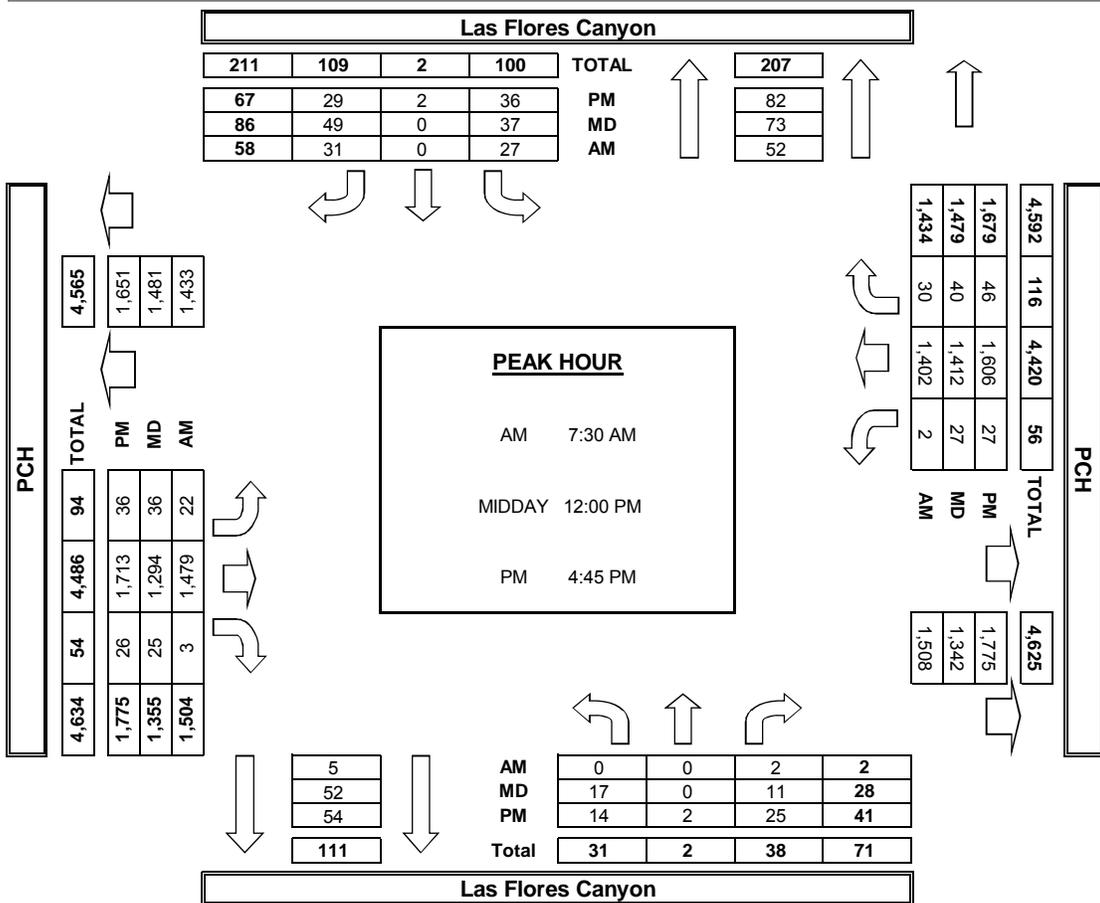
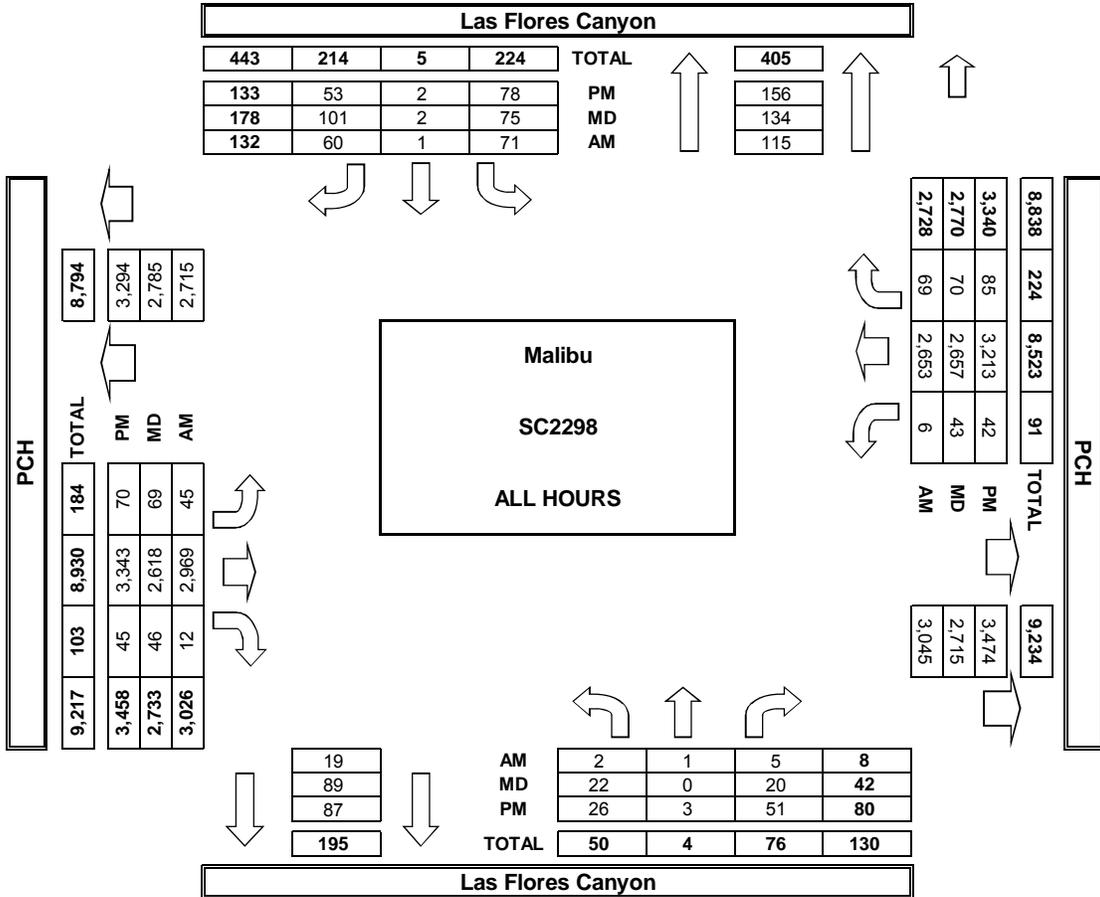
PEDESTRIAN CROSSINGS				
N SIDE	S SIDE	E SIDE	W SIDE	TOTAL
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
1	0	0	1	2
0	0	0	0	0
0	1	0	0	1
0	0	0	0	0
0	0	0	1	1
0	1	0	1	2
1	1	0	4	6
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	1	1
0	0	0	0	0
0	1	0	1	2
0	1	0	3	4

BICYCLE CROSSINGS				
NS	SS	ES	WS	TOTAL
0	0	0	0	0
1	0	0	0	1
0	0	0	0	0
1	0	0	0	1
1	0	0	1	2
0	0	0	0	0
1	0	0	0	1
3	0	0	0	3
7	0	0	1	8
0	0	0	1	1
1	2	0	0	3
1	2	0	0	3
2	0	0	0	2
0	4	0	0	4
1	0	0	0	1
1	1	0	0	2
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
2	3	0	1	6

AimTD LLC
TURNING MOVEMENT COUNTS



AimTD LLC
TURNING MOVEMENT COUNTS



INTERSECTION TURNING MOVEMENT COUNTS

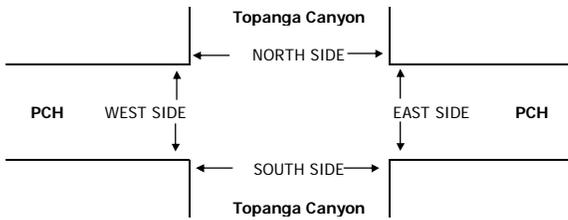
PREPARED BY: AimTD LLC. tel: 714 253 7888 cs@aimtd.com

DATE: Thu, Jul 25, 19	LOCATION: NORTH & SOUTH: EAST & WEST:	Malibu Topanga Canyon PCH	PROJECT #: LOCATION #: CONTROL:	SC2298 7 SIGNAL
--------------------------	---	---------------------------------	---------------------------------------	-----------------------

NOTES: Queue EB AM; NB PM	<table border="1"> <tr> <td>AM</td> <td></td> <td>▲</td> <td></td> </tr> <tr> <td>PM</td> <td></td> <td>▲</td> <td>N</td> </tr> <tr> <td>MD</td> <td>◀ W</td> <td></td> <td>E ▶</td> </tr> <tr> <td>OTHER</td> <td></td> <td>▼</td> <td>S</td> </tr> <tr> <td>OTHER</td> <td></td> <td></td> <td></td> </tr> </table>	AM		▲		PM		▲	N	MD	◀ W		E ▶	OTHER		▼	S	OTHER			
AM		▲																			
PM		▲	N																		
MD	◀ W		E ▶																		
OTHER		▼	S																		
OTHER																					



LANES:	NORTHBOUND Topanga Canyon			SOUTHBOUND Topanga Canyon			EASTBOUND PCH			WESTBOUND PCH			TOTAL	U-TURNS					
	NL X	NT X	NR X	SL 2	ST X	SR 1	EL 1	ET 2	ER X	WL X	WT 3	WR 0		NB 0	SB 0	EB 0	WB 0	TTL 0	
7:00 AM	0	0	0	288	0	13	4	386	0	0	296	42	1,029	0	0	0	0	0	
7:15 AM	0	0	0	276	0	16	3	396	0	0	330	37	1,058	0	0	0	0	0	
7:30 AM	0	0	0	241	0	15	5	469	0	0	326	36	1,092	0	0	0	0	0	
7:45 AM	0	0	0	281	0	29	1	391	0	0	370	49	1,121	0	0	0	0	0	
8:00 AM	0	0	0	273	0	13	8	327	0	0	282	49	952	0	0	0	0	0	
8:15 AM	0	0	0	262	0	13	5	385	0	0	389	70	1,124	0	0	0	0	0	
8:30 AM	0	0	0	279	0	9	11	339	0	0	363	67	1,068	0	0	0	0	0	
8:45 AM	0	0	0	279	0	16	6	292	0	0	341	43	977	0	0	0	0	0	
VOLUMES	0	0	0	2,179	0	124	43	2,985	0	0	2,697	393	8,421	0	0	0	0	0	
APPROACH %	0%	0%	0%	95%	0%	5%	1%	99%	0%	0%	87%	13%							
APP/DEPART	0	/	436	2,303	/	0	3,028	/	5,164	3,090	/	2,821	0						
BEGIN PEAK HR	7:00 AM																		
VOLUMES	0	0	0	1,086	0	73	13	1,642	0	0	1,322	164	4,300						
APPROACH %	0%	0%	0%	94%	0%	6%	1%	99%	0%	0%	89%	11%							
PEAK HR FACTOR	0.000			0.935			0.873			0.887			0.959						
APP/DEPART	0	/	177	1,159	/	0	1,655	/	2,728	1,486	/	1,395	0						
11:00 AM	0	0	0	117	0	16	18	344	0	0	285	51	831	0	0	0	0	0	
11:15 AM	0	0	0	121	0	28	13	368	0	0	317	59	906	0	0	0	0	0	
11:30 AM	0	0	0	114	0	44	15	350	0	0	350	53	926	0	0	0	0	0	
11:45 AM	0	0	0	120	0	19	14	340	0	0	320	50	863	0	0	0	0	0	
12:00 PM	0	0	0	95	0	31	15	315	0	0	384	67	907	0	0	0	0	0	
12:15 PM	0	0	0	114	0	18	20	339	0	0	341	56	888	0	0	0	0	0	
12:30 PM	0	0	0	119	0	25	16	319	0	0	354	65	898	0	0	0	0	0	
12:45 PM	0	0	0	111	0	23	25	337	0	0	331	73	900	0	0	0	0	0	
VOLUMES	0	0	0	911	0	204	136	2,712	0	0	2,682	474	7,119	0	0	0	0	0	
APPROACH %	0%	0%	0%	82%	0%	18%	5%	95%	0%	0%	85%	15%							
APP/DEPART	0	/	610	1,115	/	0	2,848	/	3,623	3,156	/	2,886	0						
BEGIN PEAK HR	11:15 AM																		
VOLUMES	0	0	0	450	0	122	57	1,373	0	0	1,371	229	3,602						
APPROACH %	0%	0%	0%	79%	0%	21%	4%	96%	0%	0%	86%	14%							
PEAK HR FACTOR	0.000			0.905			0.938			0.887			0.972						
APP/DEPART	0	/	286	572	/	0	1,430	/	1,823	1,600	/	1,493	0						
4:00 PM	0	0	0	80	0	18	38	430	0	0	404	253	1,223	0	0	0	0	0	
4:15 PM	0	0	0	74	0	19	42	465	0	0	428	234	1,262	0	0	0	0	0	
4:30 PM	0	0	0	83	0	16	27	404	0	0	421	221	1,172	0	0	0	0	0	
4:45 PM	0	0	0	90	0	14	39	410	0	0	419	227	1,199	0	0	0	0	0	
5:00 PM	0	0	0	56	0	18	33	430	0	0	428	244	1,209	0	0	0	0	0	
5:15 PM	0	0	0	88	0	18	43	437	0	0	428	235	1,249	0	0	0	0	0	
5:30 PM	0	0	0	80	0	11	35	443	0	0	436	238	1,243	0	0	0	0	0	
5:45 PM	0	0	0	73	0	22	39	375	0	0	444	224	1,177	0	0	0	0	0	
VOLUMES	0	0	0	624	0	136	296	3,394	0	0	3,408	1,876	9,734	0	0	0	0	0	
APPROACH %	0%	0%	0%	82%	0%	18%	8%	92%	0%	0%	64%	36%							
APP/DEPART	0	/	2,172	760	/	0	3,690	/	4,018	5,284	/	3,544	0						
BEGIN PEAK HR	4:45 PM																		
VOLUMES	0	0	0	314	0	61	150	1,720	0	0	1,711	944	4,900						
APPROACH %	0%	0%	0%	84%	0%	16%	8%	92%	0%	0%	64%	36%							
PEAK HR FACTOR	0.000			0.884			0.974			0.985			0.981						
APP/DEPART	0	/	1,094	375	/	0	1,870	/	2,034	2,655	/	1,772	0						



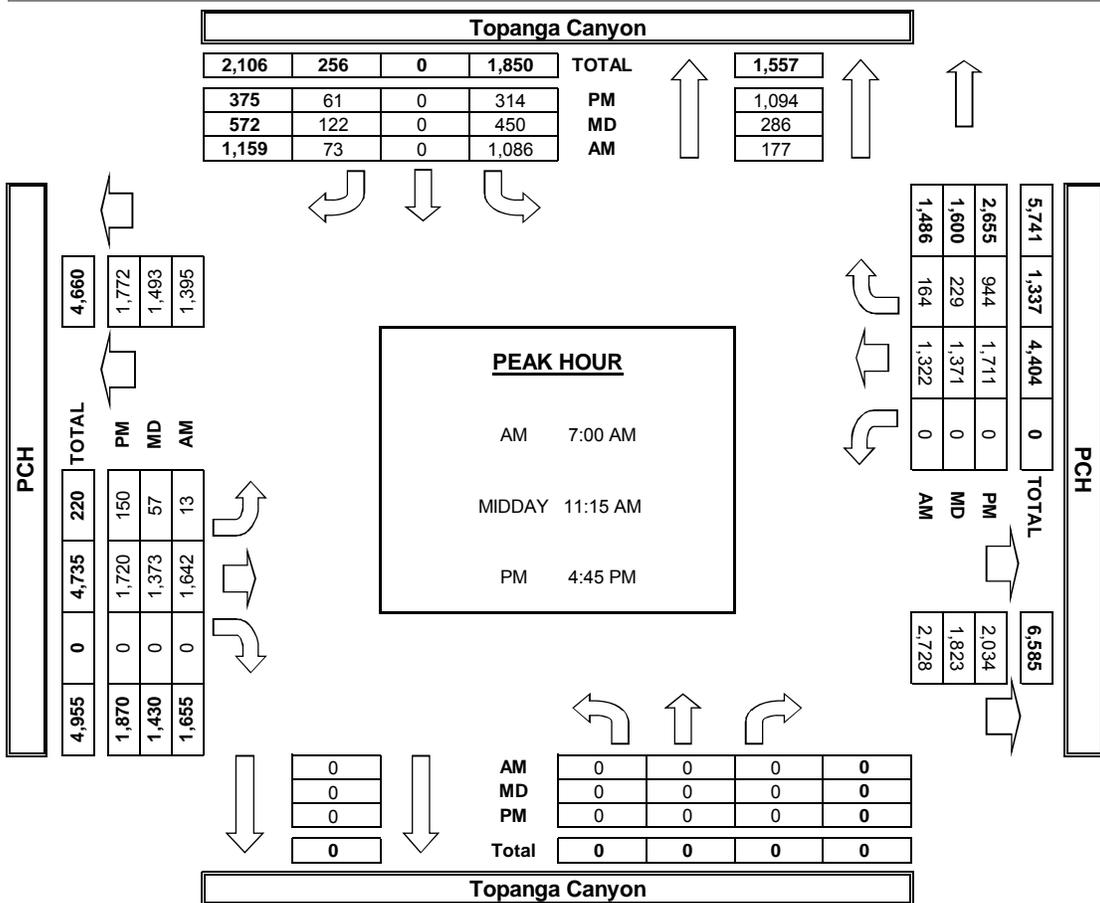
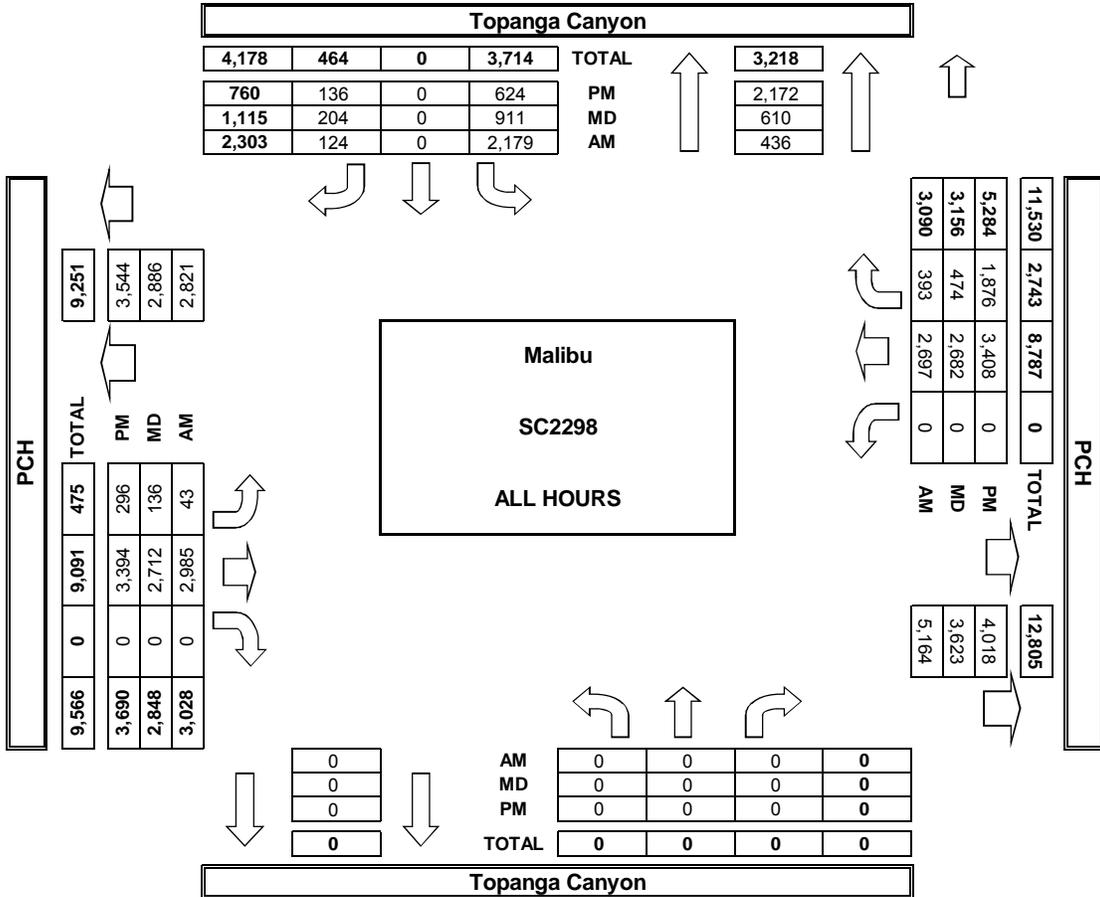
AM	7:00 AM	7:15 AM	7:30 AM	7:45 AM	8:00 AM	8:15 AM	8:30 AM	8:45 AM	TOTAL
MIDDAY	11:00 AM	11:15 AM	11:30 AM	11:45 AM	12:00 PM	12:15 PM	12:30 PM	12:45 PM	TOTAL
PM	4:00 PM	4:15 PM	4:30 PM	4:45 PM	5:00 PM	5:15 PM	5:30 PM	5:45 PM	TOTAL

PEDESTRIAN + BIKE CROSSINGS				
N SIDE	S SIDE	E SIDE	W SIDE	TOTAL
5	3	0	1	9
3	3	0	1	7
4	12	0	0	16
2	6	0	3	11
0	1	0	1	2
3	1	0	4	8
5	2	0	1	8
1	0	0	0	1
23	28	0	11	62
0	4	0	2	6
5	1	0	1	7
0	4	0	3	7
2	2	0	3	7
4	5	1	1	11
3	5	0	3	11
2	8	0	8	18
7	2	0	2	11
23	31	1	23	78
4	7	0	6	17
2	3	0	3	8
3	5	0	7	15
6	6	0	7	19
1	0	0	0	1
1	4	0	0	5
1	2	0	6	9
6	8	0	15	29
24	35	0	44	103

PEDESTRIAN CROSSINGS				
N SIDE	S SIDE	E SIDE	W SIDE	TOTAL
3	1	0	1	5
3	1	0	1	5
3	1	0	0	4
2	4	0	1	7
0	1	0	1	2
3	1	0	4	8
4	0	0	1	5
0	0	0	0	0
18	9	0	9	36
0	1	0	1	2
4	0	0	0	4
0	3	0	3	6
2	1	0	3	6
1	1	1	0	3
1	1	0	3	5
2	3	0	6	11
4	0	0	2	6
14	10	1	18	43
4	7	0	6	17
1	2	0	2	5
3	5	0	7	15
5	4	0	6	15
1	0	0	0	1
1	1	0	0	2
1	0	0	6	7
6	6	0	15	27
22	25	0	42	89

BICYCLE CROSSINGS				
NS	SS	ES	WS	TOTAL
2	2	0	0	4
0	2	0	0	2
1	11	0	0	12
0	2	0	2	4
0	0	0	0	0
0	0	0	0	0
1	2	0	0	3
1	0	0	0	1
5	19	0	2	26
0	3	0	1	4
1	1	0	1	3
0	1	0	0	1
0	1	0	0	1
3	4	0	1	8
2	4	0	0	6
0	5	0	2	7
3	2	0	0	5
9	21	0	5	35
0	0	0	0	0
1	1	0	1	3
0	0	0	0	0
1	2	0	1	4
0	0	0	0	0
0	3	0	0	3
0	2	0	0	2
0	2	0	0	2
2	10	0	2	14

AimTD LLC
TURNING MOVEMENT COUNTS





Final Report

Transportation Plan for Disasters, Emergencies, and Significant Events
City of Malibu – Public Safety Department

Appendix E: SYNCHRO 10 Micro-Computer Traffic Reports



Transportation Plan for Wildfire Evacuation Scenario
 1: TOPANGA CANYON ROAD & PACIFIC COAST HIGHWAY

04/21/2020



Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	1086	122	1711	944	150	1720
Future Volume (vph)	1086	122	1711	944	150	1720
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.6	4.2	6.0		4.2	6.0
Lane Util. Factor	0.97	1.00	0.91		1.00	0.95
Frbp, ped/bikes	1.00	0.76	0.95		1.00	1.00
Flpb, ped/bikes	1.00	1.00	1.00		1.00	1.00
Frt	1.00	0.85	0.94		1.00	1.00
Flt Protected	0.95	1.00	1.00		0.95	1.00
Satd. Flow (prot)	3433	1204	4570		1770	3539
Flt Permitted	0.95	1.00	1.00		0.95	1.00
Satd. Flow (perm)	3433	1204	4570		1770	3539
Peak-hour factor, PHF	0.74	0.74	0.90	0.84	0.83	0.85
Adj. Flow (vph)	1468	165	1901	1124	181	2024
RTOR Reduction (vph)	0	2	44	0	0	0
Lane Group Flow (vph)	1468	163	2981	0	181	2024
Confl. Peds. (#/hr)		68		42		
Confl. Bikes (#/hr)		1		11		
Turn Type	Prot	pm+ov	NA		Prot	NA
Protected Phases	8	5	6		5	2
Permitted Phases		8				
Actuated Green, G (s)	86.4	106.2	119.0		19.8	143.0
Effective Green, g (s)	86.4	106.2	119.0		19.8	143.0
Actuated g/C Ratio	0.36	0.44	0.50		0.08	0.60
Clearance Time (s)	4.6	4.2	6.0		4.2	6.0
Vehicle Extension (s)	3.0	3.0	3.0		3.0	3.0
Lane Grp Cap (vph)	1235	532	2265		146	2108
v/s Ratio Prot	c0.43	0.03	c0.65		c0.10	0.57
v/s Ratio Perm		0.11				
v/c Ratio	1.19	0.31	1.40dr		1.24	0.96
Uniform Delay, d1	76.8	43.1	60.5		110.1	45.8
Progression Factor	1.00	1.00	1.00		1.00	1.00
Incremental Delay, d2	93.3	0.3	145.4		152.9	11.7
Delay (s)	170.1	43.5	205.9		263.0	57.5
Level of Service	F	D	F		F	E
Approach Delay (s)	157.3		205.9			74.3
Approach LOS	F		F			E

Intersection Summary

HCM 2000 Control Delay	152.1	HCM 2000 Level of Service	F
HCM 2000 Volume to Capacity ratio	1.26		
Actuated Cycle Length (s)	240.0	Sum of lost time (s)	14.8
Intersection Capacity Utilization	107.1%	ICU Level of Service	G
Analysis Period (min)	15		

dr Defacto Right Lane. Recode with 1 though lane as a right lane.

c Critical Lane Group

Transportation Plan for Wildfire Evacuation Scenario
2: BIG ROCK DRIVE & PACIFIC COAST HIGHWAY

04/21/2020



Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	17	18	2035	38	23	1578
Future Volume (vph)	17	18	2035	38	23	1578
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.2		5.3		3.7	5.3
Lane Util. Factor	1.00		0.95		1.00	0.95
Frbp, ped/bikes	0.99		1.00		1.00	1.00
Flpb, ped/bikes	1.00		1.00		1.00	1.00
Frt	0.93		1.00		1.00	1.00
Flt Protected	0.98		1.00		0.95	1.00
Satd. Flow (prot)	1674		3525		1770	3539
Flt Permitted	0.98		1.00		0.07	1.00
Satd. Flow (perm)	1674		3525		132	3539
Peak-hour factor, PHF	0.71	0.64	0.96	0.73	0.53	0.84
Adj. Flow (vph)	24	28	2120	52	43	1879
RTOR Reduction (vph)	26	0	1	0	0	0
Lane Group Flow (vph)	26	0	2171	0	43	1879
Confl. Bikes (#/hr)		1		3		
Turn Type	Prot		NA		pm+pt	NA
Protected Phases	8		2		1	6
Permitted Phases					6	
Actuated Green, G (s)	3.8		51.3		59.2	57.6
Effective Green, g (s)	3.8		51.3		59.2	57.6
Actuated g/C Ratio	0.05		0.72		0.83	0.81
Clearance Time (s)	4.2		5.3		3.7	5.3
Vehicle Extension (s)	2.0		3.0		2.0	3.0
Lane Grp Cap (vph)	89		2550		170	2875
v/s Ratio Prot	c0.02		c0.62		0.01	c0.53
v/s Ratio Perm					0.20	
v/c Ratio	0.29		0.85		0.25	0.65
Uniform Delay, d1	32.2		7.1		13.8	2.7
Progression Factor	1.00		1.00		1.00	1.00
Incremental Delay, d2	0.6		2.9		0.3	0.5
Delay (s)	32.9		10.0		14.1	3.2
Level of Service	C		A		B	A
Approach Delay (s)	32.9		10.0			3.4
Approach LOS	C		A			A

Intersection Summary

HCM 2000 Control Delay	7.2	HCM 2000 Level of Service	A
HCM 2000 Volume to Capacity ratio	0.82		
Actuated Cycle Length (s)	70.9	Sum of lost time (s)	13.2
Intersection Capacity Utilization	68.7%	ICU Level of Service	C
Analysis Period (min)	15		
c Critical Lane Group			

Transportation Plan for Wildfire Evacuation Scenario
 3: PACIFIC COAST HIGHWAY & LAS FLORES CANYON ROAD

04/21/2020

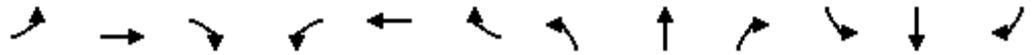


Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕	↕	↕	↕↕	↕	↕	↕↕	
Traffic Volume (vph)	17	2	25	37	2	49	27	1606	46	36	1713	26
Future Volume (vph)	17	2	25	37	2	49	27	1606	46	36	1713	26
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		5.1			5.1	5.1	4.7	6.3	6.3	4.7	6.3	
Lane Util. Factor		1.00			1.00	1.00	1.00	0.95	1.00	1.00	0.95	
Frbp, ped/bikes		0.98			1.00	0.98	1.00	1.00	0.98	1.00	1.00	
Flpb, ped/bikes		1.00			0.98	1.00	1.00	1.00	1.00	1.00	1.00	
Frt		0.92			1.00	0.85	1.00	1.00	0.85	1.00	1.00	
Flt Protected		0.98			0.95	1.00	0.95	1.00	1.00	0.95	1.00	
Satd. Flow (prot)		1658			1750	1558	1770	3539	1549	1770	3526	
Flt Permitted		0.81			0.60	1.00	0.95	1.00	1.00	0.11	1.00	
Satd. Flow (perm)		1372			1095	1558	1770	3539	1549	208	3526	
Peak-hour factor, PHF	0.60	0.25	0.53	0.39	0.62	0.77	0.75	0.98	0.58	0.58	0.88	0.66
Adj. Flow (vph)	28	8	47	95	3	64	36	1639	79	62	1947	39
RTOR Reduction (vph)	0	26	0	0	0	42	0	0	10	0	1	0
Lane Group Flow (vph)	0	57	0	0	98	22	36	1639	69	62	1985	0
Confl. Peds. (#/hr)			10	10			3					3
Confl. Bikes (#/hr)			2			2			4			24
Turn Type	Perm	NA		Perm	NA	Perm	Prot	NA	Perm	pm+pt	NA	
Protected Phases		4			4		1	6		5	2	
Permitted Phases	4			4		4			6	2		
Actuated Green, G (s)		19.4			19.4	19.4	6.0	122.2	122.2	127.8	122.0	
Effective Green, g (s)		19.4			19.4	19.4	6.0	122.2	122.2	127.8	122.0	
Actuated g/C Ratio		0.12			0.12	0.12	0.04	0.75	0.75	0.78	0.75	
Clearance Time (s)		5.1			5.1	5.1	4.7	6.3	6.3	4.7	6.3	
Vehicle Extension (s)		3.0			3.0	3.0	1.0	7.0	7.0	2.0	7.0	
Lane Grp Cap (vph)		162			129	184	64	2645	1157	217	2631	
v/s Ratio Prot							c0.02	0.46		0.01	c0.56	
v/s Ratio Perm		0.04			c0.09	0.01			0.04	0.21		
v/c Ratio		0.35			0.76	0.12	0.56	0.62	0.06	0.29	0.75	
Uniform Delay, d1		66.2			69.8	64.4	77.5	9.7	5.5	7.9	12.1	
Progression Factor		1.00			1.00	1.00	1.00	1.00	1.00	0.30	0.27	
Incremental Delay, d2		1.3			22.3	0.3	6.6	0.9	0.1	0.2	1.4	
Delay (s)		67.6			92.1	64.7	84.0	10.6	5.5	2.6	4.7	
Level of Service		E			F	E	F	B	A	A	A	
Approach Delay (s)		67.6			81.3			11.9			4.7	
Approach LOS		E			F			B			A	
Intersection Summary												
HCM 2000 Control Delay			12.2								HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio			0.75									
Actuated Cycle Length (s)			163.5								Sum of lost time (s)	16.1
Intersection Capacity Utilization			75.3%								ICU Level of Service	D
Analysis Period (min)			15									

c Critical Lane Group

Transportation Plan for Wildfire Evacuation Scenario
 4: PACIFIC COAST HIGHWAY & RAMBLA PACIFICO

04/21/2020



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕	↕	↕	↕↕	↕	↕	↕↕	
Traffic Volume (vph)	3	3	31	20	3	18	11	1926	34	7	1564	1
Future Volume (vph)	3	3	31	20	3	18	11	1926	34	7	1564	1
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		5.1			5.1	5.1	6.3	6.3	6.3	4.7	6.3	
Lane Util. Factor		1.00			1.00	1.00	1.00	0.95	1.00	1.00	0.95	
Frbp, ped/bikes		1.00			1.00	0.97	1.00	1.00	0.97	1.00	1.00	
Flpb, ped/bikes		1.00			1.00	1.00	1.00	1.00	1.00	1.00	1.00	
Frt		0.90			1.00	0.85	1.00	1.00	0.85	1.00	1.00	
Flt Protected		0.99			0.96	1.00	0.95	1.00	1.00	0.95	1.00	
Satd. Flow (prot)		1651			1783	1529	1770	3539	1534	1770	3538	
Flt Permitted		0.96			0.77	1.00	0.08	1.00	1.00	0.95	1.00	
Satd. Flow (perm)		1599			1433	1529	148	3539	1534	1770	3538	
Peak-hour factor, PHF	0.38	0.75	0.78	0.62	0.75	0.56	0.46	0.98	0.65	0.58	0.85	0.25
Adj. Flow (vph)	8	4	40	32	4	32	24	1965	52	12	1840	4
RTOR Reduction (vph)	0	35	0	0	0	28	0	0	10	0	0	0
Lane Group Flow (vph)	0	17	0	0	36	4	24	1965	42	12	1844	0
Confl. Peds. (#/hr)	11					11	13		2	2		13
Confl. Bikes (#/hr)									6			27
Turn Type	Perm	NA		Perm	NA	Perm	Perm	NA	Perm	Prot	NA	
Protected Phases		4			4			6		5	2	
Permitted Phases	4			4		4	6		6			
Actuated Green, G (s)		19.4			19.4	19.4	122.2	122.2	122.2	5.8	122.0	
Effective Green, g (s)		19.4			19.4	19.4	122.2	122.2	122.2	5.8	122.0	
Actuated g/C Ratio		0.12			0.12	0.12	0.75	0.75	0.75	0.04	0.75	
Clearance Time (s)		5.1			5.1	5.1	6.3	6.3	6.3	4.7	6.3	
Vehicle Extension (s)		3.0			3.0	3.0	7.0	7.0	7.0	2.0	7.0	
Lane Grp Cap (vph)		189			170	181	110	2645	1146	62	2639	
v/s Ratio Prot								c0.56		c0.01	0.52	
v/s Ratio Perm		0.01			c0.03	0.00	0.16		0.03			
v/c Ratio		0.09			0.21	0.02	0.22	0.74	0.04	0.19	0.70	
Uniform Delay, d1		64.2			65.1	63.7	6.2	11.7	5.4	76.6	11.0	
Progression Factor		1.00			1.00	1.00	0.32	0.42	0.03	1.00	1.00	
Incremental Delay, d2		0.2			0.6	0.0	3.1	1.5	0.0	0.6	1.4	
Delay (s)		64.4			65.8	63.7	5.1	6.5	0.2	77.1	12.4	
Level of Service		E			E	E	A	A	A	E	B	
Approach Delay (s)		64.4			64.8			6.3			12.8	
Approach LOS		E			E			A			B	
Intersection Summary												
HCM 2000 Control Delay			11.1									B
HCM 2000 Volume to Capacity ratio			0.65									
Actuated Cycle Length (s)			163.5								16.1	
Intersection Capacity Utilization			84.4%									E
Analysis Period (min)			15									

c Critical Lane Group

Transportation Plan for Wildfire Evacuation Scenario
 5: PACIFIC COAST HIGHWAY & CARBON CANYON ROAD

04/21/2020



Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	6	8	1945	9	20	1642
Future Volume (vph)	6	8	1945	9	20	1642
Ideal Flow (vphp)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.2		5.3	5.3	3.7	5.3
Lane Util. Factor	1.00		0.95	1.00	1.00	0.95
Frpb, ped/bikes	0.99		1.00	0.97	1.00	1.00
Flpb, ped/bikes	1.00		1.00	1.00	1.00	1.00
Frt	0.93		1.00	0.85	1.00	1.00
Flt Protected	0.98		1.00	1.00	0.95	1.00
Satd. Flow (prot)	1683		3539	1539	1770	3539
Flt Permitted	0.98		1.00	1.00	0.95	1.00
Satd. Flow (perm)	1683		3539	1539	1770	3539
Peak-hour factor, PHF	0.38	0.50	0.97	0.56	0.58	0.94
Adj. Flow (vph)	16	16	2005	16	34	1747
RTOR Reduction (vph)	15	0	0	1	0	0
Lane Group Flow (vph)	17	0	2005	15	34	1747
Confl. Peds. (#/hr)		1		2		
Confl. Bikes (#/hr)				6		
Turn Type	Prot		NA	Perm	Prot	NA
Protected Phases	4		2		1	6
Permitted Phases				2		
Actuated Green, G (s)	5.1		81.5	81.5	4.4	89.6
Effective Green, g (s)	5.1		81.5	81.5	4.4	89.6
Actuated g/C Ratio	0.05		0.78	0.78	0.04	0.86
Clearance Time (s)	4.2		5.3	5.3	3.7	5.3
Vehicle Extension (s)	2.0		8.0	8.0	2.0	8.0
Lane Grp Cap (vph)	82		2768	1203	74	3043
v/s Ratio Prot	c0.01		c0.57		0.02	c0.49
v/s Ratio Perm				0.01		
v/c Ratio	0.20		0.72	0.01	0.46	0.57
Uniform Delay, d1	47.6		5.7	2.5	48.7	2.0
Progression Factor	1.00		1.00	1.00	1.00	1.00
Incremental Delay, d2	0.5		1.7	0.0	1.6	0.7
Delay (s)	48.1		7.4	2.5	50.4	2.8
Level of Service	D		A	A	D	A
Approach Delay (s)	48.1		7.4			3.7
Approach LOS	D		A			A

Intersection Summary			
HCM 2000 Control Delay	6.0	HCM 2000 Level of Service	A
HCM 2000 Volume to Capacity ratio	0.70		
Actuated Cycle Length (s)	104.2	Sum of lost time (s)	13.2
Intersection Capacity Utilization	65.5%	ICU Level of Service	C
Analysis Period (min)	15		

c Critical Lane Group

Transportation Plan for Wildfire Evacuation Scenario
6: PACIFIC COAST HIGHWAY & BUSCH REALTY

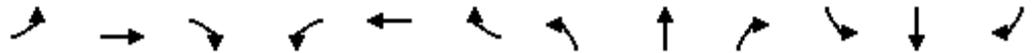
04/21/2020



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations							5	↑↑		5	↑↑	
Traffic Volume (vph)	0	0	0	0	0	0	8	1909	0	6	1674	0
Future Volume (vph)	0	0	0	0	0	0	8	1909	0	6	1674	0
Ideal Flow (vphp)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)							3.7	5.3		3.7	5.3	
Lane Util. Factor							1.00	0.95		1.00	0.95	
Frbp, ped/bikes							1.00	1.00		1.00	1.00	
Flpb, ped/bikes							1.00	1.00		1.00	1.00	
Frt							1.00	1.00		1.00	1.00	
Flt Protected							0.95	1.00		0.95	1.00	
Satd. Flow (prot)							1770	3539		1770	3539	
Flt Permitted							0.95	1.00		0.95	1.00	
Satd. Flow (perm)							1770	3539		1770	3539	
Peak-hour factor, PHF	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.95	0.25	0.38	0.97	0.25
Adj. Flow (vph)	0	0	0	0	0	0	32	2009	0	16	1726	0
RTOR Reduction (vph)	0	0	0	0	0	0	0	0	0	0	0	0
Lane Group Flow (vph)	0	0	0	0	0	0	32	2009	0	16	1726	0
Confl. Bikes (#/hr)							2		8			28
Turn Type							Prot	NA		Prot	NA	
Protected Phases							5	2		1	6	
Permitted Phases												
Actuated Green, G (s)							4.0	92.7		3.2	91.9	
Effective Green, g (s)							4.0	92.7		3.2	91.9	
Actuated g/C Ratio							0.03	0.80		0.03	0.79	
Clearance Time (s)							3.7	5.3		3.7	5.3	
Vehicle Extension (s)							2.0	8.0		2.0	8.0	
Lane Grp Cap (vph)							61	2835		48	2811	
v/s Ratio Prot							c0.02	c0.57		0.01	0.49	
v/s Ratio Perm												
v/c Ratio							0.52	0.71		0.33	0.61	
Uniform Delay, d1							54.9	5.3		55.2	4.8	
Progression Factor							1.00	1.00		1.00	1.00	
Incremental Delay, d2							3.7	1.5		1.5	0.9	
Delay (s)							58.6	6.8		56.7	5.7	
Level of Service							E	A		E	A	
Approach Delay (s)		0.0			0.0			7.6			6.2	
Approach LOS		A			A			A			A	
Intersection Summary												
HCM 2000 Control Delay			7.0				HCM 2000 Level of Service			A		
HCM 2000 Volume to Capacity ratio			0.65									
Actuated Cycle Length (s)			115.7				Sum of lost time (s)			12.0		
Intersection Capacity Utilization			57.2%				ICU Level of Service			B		
Analysis Period (min)			15									
c Critical Lane Group												

Transportation Plan for Wildfire Evacuation Scenario
 7: PACIFIC COAST HIGHWAY & MCDONALDS

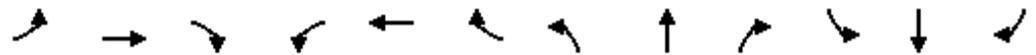
04/21/2020



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations							5	↑↑		5	↑↑	
Traffic Volume (vph)	0	0	0	0	0	0	12	1864	0	0	1646	1
Future Volume (vph)	0	0	0	0	0	0	12	1864	0	0	1646	1
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)							3.7	5.3			5.3	
Lane Util. Factor							1.00	0.95			0.95	
Frbp, ped/bikes							1.00	1.00			1.00	
Flpb, ped/bikes							1.00	1.00			1.00	
Frt							1.00	1.00			1.00	
Flt Protected							0.95	1.00			1.00	
Satd. Flow (prot)							1770	3539			3538	
Flt Permitted							0.95	1.00			1.00	
Satd. Flow (perm)							1770	3539			3538	
Peak-hour factor, PHF	0.50	0.25	0.65	0.25	0.25	0.25	0.25	0.96	0.25	0.25	0.95	0.25
Adj. Flow (vph)	0	0	0	0	0	0	48	1942	0	0	1733	4
RTOR Reduction (vph)	0	0	0	0	0	0	0	0	0	0	0	0
Lane Group Flow (vph)	0	0	0	0	0	0	48	1942	0	0	1737	0
Confl. Bikes (#/hr)									22			6
Turn Type							Prot	NA		Prot	NA	
Protected Phases							5	2		1	6	
Permitted Phases												
Actuated Green, G (s)							6.9	91.6			81.0	
Effective Green, g (s)							6.9	91.6			81.0	
Actuated g/C Ratio							0.06	0.76			0.67	
Clearance Time (s)							3.7	5.3			5.3	
Vehicle Extension (s)							2.0	8.0			8.0	
Lane Grp Cap (vph)							101	2687			2376	
v/s Ratio Prot							0.03	c0.55			0.49	
v/s Ratio Perm												
v/c Ratio							0.48	0.72			0.73	
Uniform Delay, d1							55.1	7.7			12.8	
Progression Factor							1.00	1.00			1.00	
Incremental Delay, d2							1.3	1.7			2.0	
Delay (s)							56.4	9.5			14.8	
Level of Service							E	A			B	
Approach Delay (s)		0.0			0.0			10.6			14.8	
Approach LOS		A			A			B			B	
Intersection Summary												
HCM 2000 Control Delay			12.5				HCM 2000 Level of Service				B	
HCM 2000 Volume to Capacity ratio			0.61									
Actuated Cycle Length (s)			120.6				Sum of lost time (s)				12.0	
Intersection Capacity Utilization			55.9%				ICU Level of Service				B	
Analysis Period (min)			15									
c Critical Lane Group												

Transportation Plan for Wildfire Evacuation Scenario
 8: PACIFIC COAST HIGHWAY & MALIBU PIER

04/21/2020



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations							5	↑↑		5	↑↑	
Traffic Volume (vph)	0	0	0	0	0	0	36	1856	2	19	1788	0
Future Volume (vph)	0	0	0	0	0	0	36	1856	2	19	1788	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)							3.7	5.3		3.7	5.3	
Lane Util. Factor							1.00	0.95		1.00	0.95	
Frbp, ped/bikes							1.00	1.00		1.00	1.00	
Flpb, ped/bikes							1.00	1.00		1.00	1.00	
Frt							1.00	1.00		1.00	1.00	
Flt Protected							0.95	1.00		0.95	1.00	
Satd. Flow (prot)							1770	3537		1770	3539	
Flt Permitted							0.95	1.00		0.95	1.00	
Satd. Flow (perm)							1770	3537		1770	3539	
Peak-hour factor, PHF	0.25	0.25	0.25	0.38	0.25	0.44	0.25	0.96	0.25	0.62	0.98	0.25
Adj. Flow (vph)	0	0	0	0	0	0	144	1933	8	31	1824	0
RTOR Reduction (vph)	0	0	0	0	0	0	0	0	0	0	0	0
Lane Group Flow (vph)	0	0	0	0	0	0	144	1941	0	31	1824	0
Confl. Bikes (#/hr)									8			28
Turn Type							Prot	NA		Prot	NA	
Protected Phases							5	2		1	6	
Permitted Phases												
Actuated Green, G (s)							16.6	104.6		4.8	92.8	
Effective Green, g (s)							16.6	104.6		4.8	92.8	
Actuated g/C Ratio							0.11	0.70		0.03	0.62	
Clearance Time (s)							3.7	5.3		3.7	5.3	
Vehicle Extension (s)							2.0	8.0		2.0	8.0	
Lane Grp Cap (vph)							195	2464		56	2188	
v/s Ratio Prot							c0.08	0.55		0.02	c0.52	
v/s Ratio Perm												
v/c Ratio							0.74	0.79		0.55	0.83	
Uniform Delay, d1							64.6	15.3		71.6	22.6	
Progression Factor							1.00	1.00		1.00	1.00	
Incremental Delay, d2							11.8	2.5		6.6	3.7	
Delay (s)							76.5	17.7		78.2	26.2	
Level of Service							E	B		E	C	
Approach Delay (s)		0.0			0.0			21.8			27.1	
Approach LOS		A			A			C			C	
Intersection Summary												
HCM 2000 Control Delay			24.3				HCM 2000 Level of Service				C	
HCM 2000 Volume to Capacity ratio			0.65									
Actuated Cycle Length (s)			150.1				Sum of lost time (s)				12.0	
Intersection Capacity Utilization			55.8%				ICU Level of Service				B	
Analysis Period (min)			15									
c Critical Lane Group												

Transportation Plan for Wildfire Evacuation Scenario
 9: PACIFIC COAST HIGHWAY & CROSS CREEK ROAD

04/21/2020



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR	
Lane Configurations		↕	↗	↖	↕	↗	↖	↕↕	↗	↖	↕↔		
Traffic Volume (vph)	17	9	32	233	5	132	31	1592	212	146	1488	24	
Future Volume (vph)	17	9	32	233	5	132	31	1592	212	146	1488	24	
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	
Total Lost time (s)		4.2	4.2	4.2	4.2	4.2	3.7	5.3	5.3	3.7	5.3		
Lane Util. Factor		1.00	1.00	0.95	0.95	1.00	1.00	0.95	1.00	1.00	0.95		
Frbp, ped/bikes		1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.60	1.00	0.99		
Flpb, ped/bikes		1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00		
Frt		1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00		
Flt Protected		0.97	1.00	0.95	0.96	1.00	0.95	1.00	1.00	0.95	1.00		
Satd. Flow (prot)		1803	1583	1681	1690	1583	1770	3539	955	1770	3486		
Flt Permitted		0.97	1.00	0.95	0.96	1.00	0.95	1.00	1.00	0.95	1.00		
Satd. Flow (perm)		1803	1583	1681	1690	1583	1770	3539	955	1770	3486		
Peak-hour factor, PHF	0.71	0.75	0.80	0.93	0.62	0.81	0.75	0.97	0.96	0.92	0.95	0.67	
Adj. Flow (vph)	24	12	40	251	8	163	41	1641	221	159	1566	36	
RTOR Reduction (vph)	0	0	38	0	0	141	0	0	34	0	0	0	
Lane Group Flow (vph)	0	36	2	131	128	22	41	1641	187	159	1602	0	
Confl. Peds. (#/hr)						199			85			99	
Confl. Bikes (#/hr)						3			6			26	
Turn Type	Split	NA	Prot	Split	NA	Prot	Prot	NA	Perm	Prot	NA		
Protected Phases	3	3	3	4	4	4	5	2		1	6		
Permitted Phases									2				
Actuated Green, G (s)		9.9	9.9	28.4	28.4	28.4	10.7	121.1	121.1	30.0	140.4		
Effective Green, g (s)		9.9	9.9	28.4	28.4	28.4	10.7	121.1	121.1	30.0	140.4		
Actuated g/C Ratio		0.05	0.05	0.14	0.14	0.14	0.05	0.59	0.59	0.15	0.68		
Clearance Time (s)		4.2	4.2	4.2	4.2	4.2	3.7	5.3	5.3	3.7	5.3		
Vehicle Extension (s)		2.0	2.0	2.0	2.0	2.0	2.0	7.0	7.0	2.0	7.0		
Lane Grp Cap (vph)		86	75	230	232	217	91	2072	559	256	2366		
v/s Ratio Prot		c0.02	0.00	c0.08	0.08	0.01	0.02	c0.46		c0.09	c0.46		
v/s Ratio Perm									0.20				
v/c Ratio		0.42	0.03	0.57	0.55	0.10	0.45	0.79	0.34	0.62	0.68		
Uniform Delay, d1		95.7	93.9	83.5	83.3	78.1	95.2	33.1	22.1	83.1	19.7		
Progression Factor		1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00		
Incremental Delay, d2		1.2	0.1	1.9	1.6	0.1	1.3	2.8	1.3	3.3	1.4		
Delay (s)		96.9	93.9	85.4	84.9	78.1	96.5	35.9	23.4	86.4	21.1		
Level of Service		F	F	F	F	E	F	D	C	F	C		
Approach Delay (s)		95.3			82.4			35.7			27.0		
Approach LOS		F			F			D			C		
Intersection Summary													
HCM 2000 Control Delay			37.9									HCM 2000 Level of Service	D
HCM 2000 Volume to Capacity ratio			0.71										
Actuated Cycle Length (s)			206.8									Sum of lost time (s)	17.4
Intersection Capacity Utilization			83.3%									ICU Level of Service	E
Analysis Period (min)			15										

c Critical Lane Group

Transportation Plan for Wildfire Evacuation Scenario
 10: PACIFIC COAST HIGHWAY & WEBB WAY

04/21/2020



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR		
Lane Configurations	↖	↗		↖	↗	↖	↖	↗	↖	↖	↗	↖		
Traffic Volume (vph)	118	85	27	113	111	101	227	1364	140	182	1348	111		
Future Volume (vph)	118	85	27	113	111	101	227	1364	140	182	1348	111		
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900		
Lane Width	11	16	12	11	11	10	11	11	16	11	12	12		
Total Lost time (s)	4.7	4.7		4.7	4.7	5.8	3.7	5.8	4.7	3.7	5.8	5.8		
Lane Util. Factor	1.00	1.00		0.95	0.95	1.00	1.00	0.95	1.00	0.97	0.91	1.00		
Frbp, ped/bikes	1.00	1.00		1.00	1.00	0.87	1.00	1.00	0.96	1.00	1.00	0.94		
Flpb, ped/bikes	0.96	1.00		1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00		
Frt	1.00	0.96		1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85		
Flt Protected	0.95	1.00		0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00		
Satd. Flow (prot)	1635	2017		1625	1705	1287	1711	3421	1714	3319	5085	1490		
Flt Permitted	0.64	1.00		0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00		
Satd. Flow (perm)	1104	2017		1625	1705	1287	1711	3421	1714	3319	5085	1490		
Peak-hour factor, PHF	0.79	0.79	0.68	0.91	0.68	0.81	0.85	0.91	0.92	0.82	0.95	0.87		
Adj. Flow (vph)	149	108	40	124	163	125	267	1499	152	222	1419	128		
RTOR Reduction (vph)	0	4	0	0	0	67	0	0	32	0	0	55		
Lane Group Flow (vph)	149	144	0	112	175	58	267	1499	120	222	1419	73		
Confl. Peds. (#/hr)	28						28		14			4		
Confl. Bikes (#/hr)			3			5			5			15		
Turn Type	Perm	NA		Split	NA	custom	Prot	NA	pm+ov	Prot	NA	Perm		
Protected Phases		4		3	3		5	2	3	1	6			
Permitted Phases	4					6			2			6		
Actuated Green, G (s)	35.4	35.4		31.9	31.9	110.9	40.4	128.9	160.8	22.4	110.9	110.9		
Effective Green, g (s)	35.4	35.4		31.9	31.9	110.9	40.4	128.9	160.8	22.4	110.9	110.9		
Actuated g/C Ratio	0.15	0.15		0.13	0.13	0.47	0.17	0.54	0.68	0.09	0.47	0.47		
Clearance Time (s)	4.7	4.7		4.7	4.7	5.8	3.7	5.8	4.7	3.7	5.8	5.8		
Vehicle Extension (s)	3.0	3.0		3.0	3.0	8.0	2.0	8.0	3.0	2.0	8.0	8.0		
Lane Grp Cap (vph)	164	300		218	229	600	291	1856	1160	313	2374	695		
v/s Ratio Prot		0.07		0.07	c0.10		c0.16	c0.44	0.01	0.07	0.28			
v/s Ratio Perm	c0.13					0.05			0.06			0.05		
v/c Ratio	0.91	0.48		0.51	0.76	0.10	0.92	0.81	0.10	0.71	0.60	0.11		
Uniform Delay, d1	99.5	92.6		95.6	99.2	35.3	96.9	44.2	13.3	104.4	46.8	35.5		
Progression Factor	1.00	1.00		1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00		
Incremental Delay, d2	44.2	1.2		2.0	14.0	0.3	31.3	3.5	0.0	5.9	1.0	0.3		
Delay (s)	143.6	93.8		97.6	113.2	35.7	128.2	47.7	13.4	110.3	47.8	35.8		
Level of Service	F	F		F	F	D	F	D	B	F	D	D		
Approach Delay (s)		118.8			85.4			56.2			54.8			
Approach LOS		F			F			E			D			
Intersection Summary														
HCM 2000 Control Delay			62.6									HCM 2000 Level of Service	E	
HCM 2000 Volume to Capacity ratio			0.85											
Actuated Cycle Length (s)			237.5								18.9			
Intersection Capacity Utilization			74.5%										ICU Level of Service	D
Analysis Period (min)			15											
c Critical Lane Group														

Transportation Plan for Wildfire Evacuation Scenario

11: PACIFIC COAST HIGHWAY & WINTER MESA DR/MALIBU CANYON RD.

04/21/2020



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	12	17	30	768	14	265	27	1202	278	320	1070	21
Future Volume (vph)	12	17	30	768	14	265	27	1202	278	320	1070	21
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	12	14	12	12	12	12	10	12	10	10	12	11
Total Lost time (s)	4.2	4.2	4.2	4.6	4.6	3.7	3.7	6.2	4.6	3.7	5.7	
Lane Util. Factor	1.00	1.00	1.00	0.95	0.95	1.00	1.00	0.95	1.00	0.97	0.95	
Frbp, ped/bikes	1.00	1.00	0.98	1.00	1.00	0.99	1.00	1.00	0.99	1.00	1.00	
Flpb, ped/bikes	0.99	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
Frt	1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	
Flt Protected	0.95	1.00	1.00	0.95	0.95	1.00	0.95	1.00	1.00	0.95	1.00	
Satd. Flow (prot)	1757	1987	1557	1681	1689	1569	1652	3539	1465	3204	3524	
Flt Permitted	0.67	1.00	1.00	0.95	0.95	1.00	0.95	1.00	1.00	0.95	1.00	
Satd. Flow (perm)	1233	1987	1557	1681	1689	1569	1652	3539	1465	3204	3524	
Peak-hour factor, PHF	0.79	0.62	0.72	0.96	0.73	0.82	0.56	0.96	0.83	0.88	0.94	0.69
Adj. Flow (vph)	15	27	42	800	19	323	48	1252	335	364	1138	30
RTOR Reduction (vph)	0	0	40	0	0	137	0	0	114	0	1	0
Lane Group Flow (vph)	15	27	2	408	411	186	48	1252	221	364	1167	0
Confl. Peds. (#/hr)	2					2						2
Confl. Bikes (#/hr)			1			2			3			10
Turn Type	Perm	NA	Perm	Split	NA	pm+ov	Prot	NA	pm+ov	Prot	NA	
Protected Phases		4		3	3	1	5	2	3	1	6	
Permitted Phases	4		4			3			2			
Actuated Green, G (s)	6.0	6.0	6.0	30.0	30.0	49.6	7.3	55.7	85.7	19.6	68.5	
Effective Green, g (s)	6.0	6.0	6.0	30.0	30.0	49.6	7.3	55.7	85.7	19.6	68.5	
Actuated g/C Ratio	0.05	0.05	0.05	0.23	0.23	0.38	0.06	0.43	0.66	0.15	0.53	
Clearance Time (s)	4.2	4.2	4.2	4.6	4.6	3.7	3.7	6.2	4.6	3.7	5.7	
Vehicle Extension (s)	2.0	2.0	2.0	3.0	3.0	2.0	2.0	7.0	3.0	2.0	7.0	
Lane Grp Cap (vph)	56	91	71	387	389	598	92	1516	965	483	1856	
v/s Ratio Prot		c0.01		0.24	c0.24	0.05	0.03	c0.35	0.05	c0.11	0.33	
v/s Ratio Perm	0.01		0.00			0.07			0.10			
v/c Ratio	0.27	0.30	0.03	1.05	1.06	0.31	0.52	0.83	0.23	0.75	0.63	
Uniform Delay, d1	59.9	60.0	59.2	50.0	50.0	28.2	59.7	32.9	8.9	52.9	21.8	
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
Incremental Delay, d2	0.9	0.7	0.1	60.7	61.3	0.1	2.4	5.3	0.1	5.8	1.6	
Delay (s)	60.8	60.6	59.3	110.7	111.3	28.3	62.1	38.1	9.0	58.7	23.4	
Level of Service	E	E	E	F	F	C	E	D	A	E	C	
Approach Delay (s)		60.0			87.6			32.9			31.8	
Approach LOS		E			F			C			C	

Intersection Summary

HCM 2000 Control Delay	47.2	HCM 2000 Level of Service	D
HCM 2000 Volume to Capacity ratio	0.85		
Actuated Cycle Length (s)	130.0	Sum of lost time (s)	18.7
Intersection Capacity Utilization	83.0%	ICU Level of Service	E
Analysis Period (min)	15		
c Critical Lane Group			

Transportation Plan for Wildfire Evacuation Scenario
 12: PACIFIC COAST HIGHWAY & JOHN TYLER

04/21/2020



Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	75	18	1937	49	19	1434
Future Volume (vph)	75	18	1937	49	19	1434
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.6	4.6	5.7	5.7	5.7	5.7
Lane Util. Factor	0.97	0.91	0.95	1.00	1.00	0.95
Frbp, ped/bikes	1.00	1.00	1.00	0.99	1.00	1.00
Flpb, ped/bikes	1.00	1.00	1.00	1.00	1.00	1.00
Frt	1.00	0.85	1.00	0.85	1.00	1.00
Flt Protected	0.95	1.00	1.00	1.00	0.95	1.00
Satd. Flow (prot)	3431	1441	3539	1564	1770	3539
Flt Permitted	0.95	1.00	1.00	1.00	0.08	1.00
Satd. Flow (perm)	3431	1441	3539	1564	143	3539
Peak-hour factor, PHF	0.78	0.64	0.94	0.77	0.68	0.92
Adj. Flow (vph)	96	28	2061	64	28	1559
RTOR Reduction (vph)	2	22	0	4	0	0
Lane Group Flow (vph)	97	3	2061	60	28	1559
Confl. Bikes (#/hr)				2		
Turn Type	Prot	Perm	NA	Perm	Perm	NA
Protected Phases	4		2			6
Permitted Phases		4		2	6	
Actuated Green, G (s)	9.1	9.1	113.3	113.3	113.3	113.3
Effective Green, g (s)	9.1	9.1	113.3	113.3	113.3	113.3
Actuated g/C Ratio	0.07	0.07	0.85	0.85	0.85	0.85
Clearance Time (s)	4.6	4.6	5.7	5.7	5.7	5.7
Vehicle Extension (s)	3.0	3.0	8.0	8.0	8.0	8.0
Lane Grp Cap (vph)	235	98	3021	1335	122	3021
v/s Ratio Prot	c0.03		c0.58			0.44
v/s Ratio Perm		0.00		0.04	0.20	
v/c Ratio	0.41	0.03	0.68	0.04	0.23	0.52
Uniform Delay, d1	59.2	57.7	3.4	1.5	1.8	2.5
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	1.2	0.1	1.3	0.1	4.1	0.6
Delay (s)	60.4	57.8	4.7	1.5	5.8	3.1
Level of Service	E	E	A	A	A	A
Approach Delay (s)	59.9		4.6			3.2
Approach LOS	E		A			A
Intersection Summary						
HCM 2000 Control Delay			5.8		HCM 2000 Level of Service	A
HCM 2000 Volume to Capacity ratio			0.66			
Actuated Cycle Length (s)			132.7		Sum of lost time (s)	10.3
Intersection Capacity Utilization			65.5%		ICU Level of Service	C
Analysis Period (min)			15			
c Critical Lane Group						

Transportation Plan for Wildfire Evacuation Scenario
 17: PACIFIC COAST HIGHWAY & Coral Canyon Road

04/21/2020



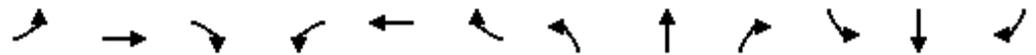
Movement	WBL	WBR	NBU	NBT	NBR	SBL	SBT
Lane Configurations							
Traffic Volume (vph)	61	21	0	1363	63	41	1290
Future Volume (vph)	61	21	0	1363	63	41	1290
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.5	4.5		4.5		4.5	4.5
Lane Util. Factor	1.00	1.00		0.95		1.00	0.95
Frt	1.00	0.85		0.99		1.00	1.00
Flt Protected	0.95	1.00		1.00		0.95	1.00
Satd. Flow (prot)	1770	1583		3516		1770	3539
Flt Permitted	0.95	1.00		1.00		0.22	1.00
Satd. Flow (perm)	1770	1583		3516		414	3539
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	66	23	0	1482	68	45	1402
RTOR Reduction (vph)	0	4	0	7	0	0	0
Lane Group Flow (vph)	66	19	0	1543	0	45	1402
Turn Type	Prot	Perm	Perm	NA		Perm	NA
Protected Phases	8			2			6
Permitted Phases		8	2			6	
Actuated Green, G (s)	18.0	18.0		18.0		18.0	18.0
Effective Green, g (s)	18.0	18.0		18.0		18.0	18.0
Actuated g/C Ratio	0.40	0.40		0.40		0.40	0.40
Clearance Time (s)	4.5	4.5		4.5		4.5	4.5
Lane Grp Cap (vph)	708	633		1406		165	1415
v/s Ratio Prot	c0.04			c0.44			0.40
v/s Ratio Perm		0.01				0.11	
v/c Ratio	0.09	0.03		1.10		0.27	0.99
Uniform Delay, d1	8.4	8.2		13.5		9.1	13.4
Progression Factor	1.00	1.00		1.00		1.00	1.00
Incremental Delay, d2	0.3	0.1		55.2		4.0	21.8
Delay (s)	8.7	8.3		68.7		13.1	35.3
Level of Service	A	A		E		B	D
Approach Delay (s)	8.6			68.7			34.6
Approach LOS	A			E			C

Intersection Summary

HCM 2000 Control Delay	51.0	HCM 2000 Level of Service	D
HCM 2000 Volume to Capacity ratio	0.60		
Actuated Cycle Length (s)	45.0	Sum of lost time (s)	9.0
Intersection Capacity Utilization	51.3%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			

Transportation Plan for Wildfire Evacuation Scenario
 21: PACIFIC COAST HIGHWAY & Zumeriz Drive

04/21/2020



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕	↗		↔		↖	↕↔		↖	↕↕	↗
Traffic Volume (vph)	43	3	102	4	0	10	59	1221	0	3	1097	23
Future Volume (vph)	43	3	102	4	0	10	59	1221	0	3	1097	23
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.5	4.5		4.5		4.5	4.5		4.5	4.5	4.5
Lane Util. Factor		1.00	1.00		1.00		1.00	0.95		1.00	0.95	1.00
Frt		1.00	0.85		0.90		1.00	1.00		1.00	1.00	0.85
Flt Protected		0.96	1.00		0.99		0.95	1.00		0.95	1.00	1.00
Satd. Flow (prot)		1779	1583		1656		1770	3539		1770	3539	1583
Flt Permitted		0.96	1.00		0.99		0.95	1.00		0.95	1.00	1.00
Satd. Flow (perm)		1779	1583		1656		1770	3539		1770	3539	1583
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	47	3	111	4	0	11	64	1327	0	3	1192	25
RTOR Reduction (vph)	0	0	83	0	15	0	0	0	0	0	0	14
Lane Group Flow (vph)	0	50	28	0	0	0	64	1327	0	3	1192	11
Turn Type	Split	NA	Perm	Split	NA		Prot	NA		Prot	NA	Perm
Protected Phases	2	2		6	6		3	8		7	4	
Permitted Phases			2									4
Actuated Green, G (s)		18.7	18.7		1.0		3.9	36.5		0.9	33.5	33.5
Effective Green, g (s)		18.7	18.7		1.0		3.9	36.5		0.9	33.5	33.5
Actuated g/C Ratio		0.25	0.25		0.01		0.05	0.49		0.01	0.45	0.45
Clearance Time (s)		4.5	4.5		4.5		4.5	4.5		4.5	4.5	4.5
Vehicle Extension (s)		3.0	3.0		3.0		3.0	3.0		3.0	3.0	3.0
Lane Grp Cap (vph)		442	394		22		91	1720		21	1578	706
v/s Ratio Prot		c0.03			c0.00		c0.04	c0.37		0.00	0.34	
v/s Ratio Perm			0.02									0.01
v/c Ratio		0.11	0.07		0.01		0.70	0.77		0.14	0.76	0.02
Uniform Delay, d1		21.8	21.6		36.6		35.0	15.9		36.7	17.4	11.6
Progression Factor		1.00	1.00		1.00		1.00	1.00		1.00	1.00	1.00
Incremental Delay, d2		0.5	0.3		0.2		21.8	2.2		3.1	2.1	0.0
Delay (s)		22.3	21.9		36.7		56.8	18.1		39.8	19.5	11.6
Level of Service		C	C		D		E	B		D	B	B
Approach Delay (s)		22.0			36.7			19.9			19.4	
Approach LOS		C			D			B			B	

Intersection Summary

HCM 2000 Control Delay	19.9	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.57		
Actuated Cycle Length (s)	75.1	Sum of lost time (s)	18.0
Intersection Capacity Utilization	56.0%	ICU Level of Service	B
Analysis Period (min)	15		

c Critical Lane Group

Transportation Plan for Wildfire Evacuation Scenario
 25: PACIFIC COAST HIGHWAY & Paradise Cove Drive

04/21/2020



Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	59	100	59	1294	1121	51
Future Volume (vph)	59	100	59	1294	1121	51
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.5		4.5	4.5	4.5	
Lane Util. Factor	1.00		1.00	0.95	0.95	
Frt	0.91		1.00	1.00	0.99	
Flt Protected	0.98		0.95	1.00	1.00	
Satd. Flow (prot)	1673		1770	3539	3516	
Flt Permitted	0.98		0.95	1.00	1.00	
Satd. Flow (perm)	1673		1770	3539	3516	
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	64	109	64	1407	1218	55
RTOR Reduction (vph)	96	0	0	0	3	0
Lane Group Flow (vph)	77	0	64	1407	1270	0
Turn Type	Prot		Prot	NA	NA	
Protected Phases	2		3	8	4	
Permitted Phases						
Actuated Green, G (s)	7.2		5.2	43.8	34.1	
Effective Green, g (s)	7.2		5.2	43.8	34.1	
Actuated g/C Ratio	0.12		0.09	0.73	0.57	
Clearance Time (s)	4.5		4.5	4.5	4.5	
Vehicle Extension (s)	3.0		3.0	3.0	3.0	
Lane Grp Cap (vph)	200		153	2583	1998	
v/s Ratio Prot	c0.05		0.04	c0.40	c0.36	
v/s Ratio Perm						
v/c Ratio	0.39		0.42	0.54	0.64	
Uniform Delay, d1	24.4		26.0	3.6	8.7	
Progression Factor	1.00		1.00	1.00	1.00	
Incremental Delay, d2	1.2		1.8	0.8	1.6	
Delay (s)	25.6		27.8	4.5	10.3	
Level of Service	C		C	A	B	
Approach Delay (s)	25.6			5.5	10.3	
Approach LOS	C			A	B	

Intersection Summary

HCM 2000 Control Delay	8.8	HCM 2000 Level of Service	A
HCM 2000 Volume to Capacity ratio	0.61		
Actuated Cycle Length (s)	60.0	Sum of lost time (s)	13.5
Intersection Capacity Utilization	57.4%	ICU Level of Service	B
Analysis Period (min)	15		

c Critical Lane Group

Transportation Plan for Wildfire Evacuation Scenario
 28: PACIFIC COAST HIGHWAY & Kanan Dume Road

04/21/2020



Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	182	419	1090	202	395	909
Future Volume (vph)	182	419	1090	202	395	909
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	5.1	5.1	6.7	6.7	4.2	6.7
Lane Util. Factor	0.97	1.00	0.95	1.00	1.00	0.95
Frt	1.00	0.85	1.00	0.85	1.00	1.00
Flt Protected	0.95	1.00	1.00	1.00	0.95	1.00
Satd. Flow (prot)	3433	1583	3539	1583	1770	3539
Flt Permitted	0.95	1.00	1.00	1.00	0.95	1.00
Satd. Flow (perm)	3433	1583	3539	1583	1770	3539
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	198	455	1185	220	429	988
RTOR Reduction (vph)	0	334	0	94	0	0
Lane Group Flow (vph)	198	121	1185	126	429	988
Turn Type	Prot	Perm	NA	Perm	Prot	NA
Protected Phases	8		2		1	6
Permitted Phases		8		2		
Actuated Green, G (s)	28.0	28.0	35.8	35.8	25.2	65.2
Effective Green, g (s)	28.0	28.0	35.8	35.8	25.2	65.2
Actuated g/C Ratio	0.27	0.27	0.34	0.34	0.24	0.62
Clearance Time (s)	5.1	5.1	6.7	6.7	4.2	6.7
Lane Grp Cap (vph)	915	422	1206	539	424	2197
v/s Ratio Prot	0.06		c0.33		c0.24	0.28
v/s Ratio Perm		c0.08		0.08		
v/c Ratio	0.22	0.29	0.98	0.23	1.01	0.45
Uniform Delay, d1	30.0	30.6	34.3	24.8	39.9	10.5
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	0.5	1.7	22.1	1.0	46.7	0.7
Delay (s)	30.5	32.3	56.4	25.8	86.6	11.1
Level of Service	C	C	E	C	F	B
Approach Delay (s)	31.7		51.6			34.0
Approach LOS	C		D			C

Intersection Summary			
HCM 2000 Control Delay	40.7	HCM 2000 Level of Service	D
HCM 2000 Volume to Capacity ratio	0.77		
Actuated Cycle Length (s)	105.0	Sum of lost time (s)	16.0
Intersection Capacity Utilization	70.5%	ICU Level of Service	C
Analysis Period (min)	15		
c	Critical Lane Group		

Transportation Plan for Wildfire Evacuation Scenario
 36: PACIFIC COAST HIGHWAY & Busch Drive

04/21/2020



Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	155	194	1006	247	344	972
Future Volume (vph)	155	194	1006	247	344	972
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.5	4.5	4.5	4.5	4.5	4.5
Lane Util. Factor	0.97	1.00	0.95	1.00	1.00	0.95
Frt	1.00	0.85	1.00	0.85	1.00	1.00
Flt Protected	0.95	1.00	1.00	1.00	0.95	1.00
Satd. Flow (prot)	3433	1583	3539	1583	1770	3539
Flt Permitted	0.95	1.00	1.00	1.00	0.22	1.00
Satd. Flow (perm)	3433	1583	3539	1583	414	3539
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	168	211	1093	268	374	1057
RTOR Reduction (vph)	0	16	0	161	0	0
Lane Group Flow (vph)	168	195	1093	107	374	1057
Turn Type	Prot	Perm	NA	Perm	Perm	NA
Protected Phases	2		8			4
Permitted Phases		2		8	4	
Actuated Green, G (s)	18.0	18.0	18.0	18.0	18.0	18.0
Effective Green, g (s)	18.0	18.0	18.0	18.0	18.0	18.0
Actuated g/C Ratio	0.40	0.40	0.40	0.40	0.40	0.40
Clearance Time (s)	4.5	4.5	4.5	4.5	4.5	4.5
Lane Grp Cap (vph)	1373	633	1415	633	165	1415
v/s Ratio Prot	0.05		0.31			0.30
v/s Ratio Perm		c0.12		0.07	c0.90	
v/c Ratio	0.12	0.31	0.77	0.17	2.27	0.75
Uniform Delay, d1	8.5	9.2	11.7	8.7	13.5	11.6
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	0.2	1.3	4.1	0.6	588.9	3.6
Delay (s)	8.7	10.5	15.9	9.3	602.4	15.2
Level of Service	A	B	B	A	F	B
Approach Delay (s)	9.7		14.6			168.7
Approach LOS	A		B			F

Intersection Summary

HCM 2000 Control Delay	83.5	HCM 2000 Level of Service	F
HCM 2000 Volume to Capacity ratio	1.28		
Actuated Cycle Length (s)	45.0	Sum of lost time (s)	9.0
Intersection Capacity Utilization	62.5%	ICU Level of Service	B
Analysis Period (min)	15		
c Critical Lane Group			

Transportation Plan for Wildfire Evacuation Scenario
 42: PACIFIC COAST HIGHWAY & Heathercliff Road

04/21/2020



Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	166	235	217	996	1097	123
Future Volume (vph)	166	235	217	996	1097	123
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.5	4.5	4.5	4.5	4.5	4.5
Lane Util. Factor	1.00	1.00	1.00	0.95	0.95	1.00
Frt	1.00	0.85	1.00	1.00	1.00	0.85
Flt Protected	0.95	1.00	0.95	1.00	1.00	1.00
Satd. Flow (prot)	1770	1583	1770	3539	3539	1583
Flt Permitted	0.95	1.00	0.95	1.00	1.00	1.00
Satd. Flow (perm)	1770	1583	1770	3539	3539	1583
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	180	255	236	1083	1192	134
RTOR Reduction (vph)	0	176	0	0	0	90
Lane Group Flow (vph)	180	79	236	1083	1192	44
Turn Type	Prot	Perm	Prot	NA	NA	Perm
Protected Phases	2		3	8	4	
Permitted Phases		2				4
Actuated Green, G (s)	18.7	18.7	8.3	32.3	19.5	19.5
Effective Green, g (s)	18.7	18.7	8.3	32.3	19.5	19.5
Actuated g/C Ratio	0.31	0.31	0.14	0.54	0.32	0.32
Clearance Time (s)	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
Lane Grp Cap (vph)	551	493	244	1905	1150	514
v/s Ratio Prot	c0.10		c0.13	0.31	c0.34	
v/s Ratio Perm		0.05				0.03
v/c Ratio	0.33	0.16	0.97	0.57	1.04	0.08
Uniform Delay, d1	15.8	15.0	25.7	9.2	20.2	14.1
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	1.6	0.7	47.9	1.2	36.5	0.3
Delay (s)	17.4	15.7	73.7	10.5	56.7	14.4
Level of Service	B	B	E	B	E	B
Approach Delay (s)	16.4			21.8	52.4	
Approach LOS	B			C	D	

Intersection Summary

HCM 2000 Control Delay	34.2	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.74		
Actuated Cycle Length (s)	60.0	Sum of lost time (s)	13.5
Intersection Capacity Utilization	62.8%	ICU Level of Service	B
Analysis Period (min)	15		

c Critical Lane Group

Transportation Plan for Wildfire Evacuation Scenario

53: PACIFIC COAST HIGHWAY & Broad Beach Rd/Trancas Canyon Road

04/21/2020



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕		↗	↕		↗	↕	
Traffic Volume (vph)	78	32	134	22	9	23	156	1134	23	45	1344	78
Future Volume (vph)	78	32	134	22	9	23	156	1134	23	45	1344	78
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.5			4.5		4.5	4.5		4.5	4.5	
Lane Util. Factor		1.00			1.00		1.00	0.95		1.00	0.95	
Frt		0.93			0.94		1.00	1.00		1.00	0.99	
Flt Protected		0.98			0.98		0.95	1.00		0.95	1.00	
Satd. Flow (prot)		1698			1721		1770	3529		1770	3510	
Flt Permitted		0.89			0.85		0.22	1.00		0.22	1.00	
Satd. Flow (perm)		1537			1501		414	3529		414	3510	
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	85	35	146	24	10	25	170	1233	25	49	1461	85
RTOR Reduction (vph)	0	4	0	0	10	0	0	3	0	0	10	0
Lane Group Flow (vph)	0	262	0	0	49	0	170	1255	0	49	1536	0
Turn Type	Perm	NA		Perm	NA		Perm	NA		Perm	NA	
Protected Phases		2			2			8			4	
Permitted Phases	2			2			8			4		
Actuated Green, G (s)		18.0			18.0		18.0	18.0		18.0	18.0	
Effective Green, g (s)		18.0			18.0		18.0	18.0		18.0	18.0	
Actuated g/C Ratio		0.40			0.40		0.40	0.40		0.40	0.40	
Clearance Time (s)		4.5			4.5		4.5	4.5		4.5	4.5	
Lane Grp Cap (vph)		614			600		165	1411		165	1404	
v/s Ratio Prot								0.36			c0.44	
v/s Ratio Perm		c0.17			0.03		0.41			0.12		
v/c Ratio		0.43			0.08		1.03	0.89		0.30	1.09	
Uniform Delay, d1		9.8			8.4		13.5	12.6		9.2	13.5	
Progression Factor		1.00			1.00		1.00	1.00		1.00	1.00	
Incremental Delay, d2		2.2			0.3		78.3	8.7		4.5	54.1	
Delay (s)		11.9			8.6		91.8	21.3		13.7	67.6	
Level of Service		B			A		F	C		B	E	
Approach Delay (s)		11.9			8.6			29.7			65.9	
Approach LOS		B			A			C			E	

Intersection Summary

HCM 2000 Control Delay	45.2	HCM 2000 Level of Service	D
HCM 2000 Volume to Capacity ratio	0.76		
Actuated Cycle Length (s)	45.0	Sum of lost time (s)	9.0
Intersection Capacity Utilization	76.5%	ICU Level of Service	D
Analysis Period (min)	15		
c Critical Lane Group			

Transportation Plan for Wildfire Evacuation Scenario
 73: PACIFIC COAST HIGHWAY & Morning View Drive

04/21/2020



Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations	↔		↑↑	↗	↘	↑↑
Traffic Volume (vph)	56	78	1119	67	56	897
Future Volume (vph)	56	78	1119	67	56	897
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.5		4.5	4.5	4.5	4.5
Lane Util. Factor	1.00		0.95	1.00	1.00	0.95
Frt	0.92		1.00	0.85	1.00	1.00
Flt Protected	0.98		1.00	1.00	0.95	1.00
Satd. Flow (prot)	1681		3539	1583	1770	3539
Flt Permitted	0.98		1.00	1.00	0.95	1.00
Satd. Flow (perm)	1681		3539	1583	1770	3539
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	61	85	1216	73	61	975
RTOR Reduction (vph)	51	0	0	40	0	0
Lane Group Flow (vph)	95	0	1216	33	61	975
Turn Type	Prot		NA	Perm	Prot	NA
Protected Phases	2		8		7	4
Permitted Phases				8		
Actuated Green, G (s)	22.6		33.1	33.1	4.6	42.2
Effective Green, g (s)	22.6		33.1	33.1	4.6	42.2
Actuated g/C Ratio	0.31		0.45	0.45	0.06	0.57
Clearance Time (s)	4.5		4.5	4.5	4.5	4.5
Vehicle Extension (s)	3.0		3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	514		1587	709	110	2023
v/s Ratio Prot	c0.06		c0.34		0.03	c0.28
v/s Ratio Perm				0.02		
v/c Ratio	0.19		0.77	0.05	0.55	0.48
Uniform Delay, d1	18.8		17.1	11.5	33.6	9.3
Progression Factor	1.00		1.00	1.00	1.00	1.00
Incremental Delay, d2	0.8		2.3	0.0	5.9	0.2
Delay (s)	19.6		19.4	11.5	39.5	9.5
Level of Service	B		B	B	D	A
Approach Delay (s)	19.6		18.9			11.3
Approach LOS	B		B			B

Intersection Summary

HCM 2000 Control Delay	15.8	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.54		
Actuated Cycle Length (s)	73.8	Sum of lost time (s)	13.5
Intersection Capacity Utilization	54.2%	ICU Level of Service	A
Analysis Period (min)	15		

c Critical Lane Group

Transportation Plan for Wildfire Evacuation Scenario
 16: PACIFIC COAST HIGHWAY & Malibu Road

04/21/2020



Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations		↗		↑↑	↑↑	
Traffic Volume (veh/h)	0	36	0	1447	1416	0
Future Volume (Veh/h)	0	36	0	1447	1416	0
Sign Control	Stop			Free	Free	
Grade	0%			0%	0%	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	0	39	0	1573	1539	0
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type				None TWLTL		
Median storage (veh)				2		
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume	2326	770	1539			
vC1, stage 1 conf vol	1539					
vC2, stage 2 conf vol	786					
vCu, unblocked vol	2326	770	1539			
tC, single (s)	6.8	6.9	4.1			
tC, 2 stage (s)	5.8					
tF (s)	3.5	3.3	2.2			
p0 queue free %	100	89	100			
cM capacity (veh/h)	148	344	428			
Direction, Lane #	EB 1	NB 1	NB 2	SB 1	SB 2	
Volume Total	39	786	786	1026	513	
Volume Left	0	0	0	0	0	
Volume Right	39	0	0	0	0	
cSH	344	1700	1700	1700	1700	
Volume to Capacity	0.11	0.46	0.46	0.60	0.30	
Queue Length 95th (ft)	10	0	0	0	0	
Control Delay (s)	16.8	0.0	0.0	0.0	0.0	
Lane LOS	C					
Approach Delay (s)	16.8	0.0		0.0		
Approach LOS	C					
Intersection Summary						
Average Delay	0.2					
Intersection Capacity Utilization	49.1%			ICU Level of Service	A	
Analysis Period (min)	15					

Transportation Plan for Wildfire Evacuation Scenario
 19: PACIFIC COAST HIGHWAY & Latigo Canyon Road

04/21/2020



Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (veh/h)	29	29	1360	26	22	1191
Future Volume (Veh/h)	29	29	1360	26	22	1191
Sign Control	Stop		Free		Free	
Grade	0%		0%		0%	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	32	32	1478	28	24	1295
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type	None			None		
Median storage veh						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume	2188	753			1506	
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	2188	753			1506	
tC, single (s)	6.8	6.9			4.1	
tC, 2 stage (s)						
tF (s)	3.5	3.3			2.2	
p0 queue free %	13	91			95	
cM capacity (veh/h)	37	352			441	
Direction, Lane #	WB 1	NB 1	NB 2	SB 1	SB 2	SB 3
Volume Total	64	985	521	24	648	648
Volume Left	32	0	0	24	0	0
Volume Right	32	0	28	0	0	0
cSH	67	1700	1700	441	1700	1700
Volume to Capacity	0.96	0.58	0.31	0.05	0.38	0.38
Queue Length 95th (ft)	119	0	0	4	0	0
Control Delay (s)	203.9	0.0	0.0	13.6	0.0	0.0
Lane LOS	F		B			
Approach Delay (s)	203.9	0.0	0.2			
Approach LOS	F					
Intersection Summary						
Average Delay			4.6			
Intersection Capacity Utilization			48.5%		ICU Level of Service	A
Analysis Period (min)			15			

Transportation Plan for Wildfire Evacuation Scenario
 49: PACIFIC COAST HIGHWAY & Encinal Canyon

04/21/2020



Movement	WBL	WBR	NBT	NBR	SBL	SBT	
Lane Configurations							
Traffic Volume (veh/h)	39	38	895	38	33	665	
Future Volume (Veh/h)	39	38	895	38	33	665	
Sign Control	Stop		Free		Free		
Grade	0%		0%		0%		
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	
Hourly flow rate (vph)	42	41	973	41	36	723	
Pedestrians							
Lane Width (ft)							
Walking Speed (ft/s)							
Percent Blockage							
Right turn flare (veh)							
Median type	TWLTL			TWLTL			
Median storage veh	2			2			
Upstream signal (ft)							
pX, platoon unblocked							
vC, conflicting volume	1406	486			1014		
vC1, stage 1 conf vol	973						
vC2, stage 2 conf vol	434						
vCu, unblocked vol	1406	486			1014		
tC, single (s)	6.8	6.9			4.1		
tC, 2 stage (s)	5.8						
tF (s)	3.5	3.3			2.2		
p0 queue free %	86	92			95		
cM capacity (veh/h)	296	527			680		
Direction, Lane #	WB 1	NB 1	NB 2	NB 3	SB 1	SB 2	SB 3
Volume Total	83	486	486	41	36	362	362
Volume Left	42	0	0	0	36	0	0
Volume Right	41	0	0	41	0	0	0
cSH	378	1700	1700	1700	680	1700	1700
Volume to Capacity	0.22	0.29	0.29	0.02	0.05	0.21	0.21
Queue Length 95th (ft)	21	0	0	0	4	0	0
Control Delay (s)	17.2	0.0	0.0	0.0	10.6	0.0	0.0
Lane LOS	C			B			
Approach Delay (s)	17.2	0.0			0.5		
Approach LOS	C						
Intersection Summary							
Average Delay			1.0				
Intersection Capacity Utilization			38.6%		ICU Level of Service		A
Analysis Period (min)	15						

Transportation Plan for Wildfire Evacuation Scenario
 52: PACIFIC COAST HIGHWAY & Decker Canyon

04/21/2020



Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations	↔		↑↑		↔	↑↑
Traffic Volume (veh/h)	12	8	342	5	14	680
Future Volume (Veh/h)	12	8	342	5	14	680
Sign Control	Stop		Free			Free
Grade	0%		0%			0%
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	13	9	372	5	15	739
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type	TWLTL			TWLTL		
Median storage veh	2			2		
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume	774	188			377	
vC1, stage 1 conf vol	374					
vC2, stage 2 conf vol	400					
vCu, unblocked vol	774	188			377	
tC, single (s)	6.8	6.9			4.1	
tC, 2 stage (s)	5.8					
tF (s)	3.5	3.3			2.2	
p0 queue free %	98	99			99	
cM capacity (veh/h)	531	821			1178	
Direction, Lane #	WB 1	NB 1	NB 2	SB 1	SB 2	SB 3
Volume Total	22	248	129	15	370	370
Volume Left	13	0	0	15	0	0
Volume Right	9	0	5	0	0	0
cSH	621	1700	1700	1178	1700	1700
Volume to Capacity	0.04	0.15	0.08	0.01	0.22	0.22
Queue Length 95th (ft)	3	0	0	1	0	0
Control Delay (s)	11.0	0.0	0.0	8.1	0.0	0.0
Lane LOS	B			A		
Approach Delay (s)	11.0	0.0		0.2		
Approach LOS	B					
Intersection Summary						
Average Delay			0.3			
Intersection Capacity Utilization			28.8%	ICU Level of Service	A	
Analysis Period (min)			15			

Transportation Plan for Wildfire Evacuation Scenario
 1: TOPANGA CANYON ROAD & PACIFIC COAST HIGHWAY

04/20/2020



Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations	↔↔	↔	↕↕↕		↔	↕↕
Traffic Volume (vph)	0	1330	2655	0	0	1870
Future Volume (vph)	0	1330	2655	0	0	1870
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.2	6.0			6.0
Lane Util. Factor		1.00	0.91			0.95
Frbp, ped/bikes		0.90	1.00			1.00
Flpb, ped/bikes		1.00	1.00			1.00
Frt		0.85	1.00			1.00
Flt Protected		1.00	1.00			1.00
Satd. Flow (prot)		1427	5085			3539
Flt Permitted		1.00	1.00			1.00
Satd. Flow (perm)		1427	5085			3539
Peak-hour factor, PHF	0.74	0.74	0.90	0.84	0.83	0.85
Adj. Flow (vph)	0	1797	2950	0	0	2200
RTOR Reduction (vph)	0	0	0	0	0	0
Lane Group Flow (vph)	0	1797	2950	0	0	2200
Confl. Peds. (#/hr)		68		42		
Confl. Bikes (#/hr)		1		11		
Turn Type	Prot	pm+ov	NA		Prot	NA
Protected Phases	8	5	6		5	2
Permitted Phases		8				
Actuated Green, G (s)		36.8	119.0			143.0
Effective Green, g (s)		36.8	119.0			143.0
Actuated g/C Ratio		0.22	0.70			0.84
Clearance Time (s)		4.2	6.0			6.0
Vehicle Extension (s)		3.0	3.0			3.0
Lane Grp Cap (vph)		307	3546			2966
v/s Ratio Prot		c0.68	c0.58			0.62
v/s Ratio Perm		0.58				
v/c Ratio		5.85	0.83			0.74
Uniform Delay, d1		66.9	18.6			5.9
Progression Factor		1.00	1.00			1.00
Incremental Delay, d2		2191.1	1.8			1.0
Delay (s)		2258.0	20.4			6.9
Level of Service		F	C			A
Approach Delay (s)	2258.0		20.4			6.9
Approach LOS	F		C			A

Intersection Summary			
HCM 2000 Control Delay		594.9	HCM 2000 Level of Service F
HCM 2000 Volume to Capacity ratio		2.01	
Actuated Cycle Length (s)		170.6	Sum of lost time (s) 14.8
Intersection Capacity Utilization		147.0%	ICU Level of Service H
Analysis Period (min)		15	

c Critical Lane Group

Transportation Plan for Wildfire Evacuation Scenario
 2: BIG ROCK DRIVE & PACIFIC COAST HIGHWAY

04/20/2020



Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations	↔		↕↔		↔	↕↕
Traffic Volume (vph)	0	35	2073	0	0	1601
Future Volume (vph)	0	35	2073	0	0	1601
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.2		5.3			5.3
Lane Util. Factor	1.00		0.95			0.95
Frbp, ped/bikes	0.98		1.00			1.00
Flpb, ped/bikes	1.00		1.00			1.00
Frt	0.86		1.00			1.00
Flt Protected	1.00		1.00			1.00
Satd. Flow (prot)	1584		3539			3539
Flt Permitted	1.00		1.00			1.00
Satd. Flow (perm)	1584		3539			3539
Peak-hour factor, PHF	0.71	0.64	0.96	0.73	0.53	0.84
Adj. Flow (vph)	0	55	2159	0	0	1906
RTOR Reduction (vph)	53	0	0	0	0	0
Lane Group Flow (vph)	2	0	2159	0	0	1906
Confl. Bikes (#/hr)		1		3		
Turn Type	Prot		NA		pm+pt	NA
Protected Phases	8		2		1	6
Permitted Phases					6	
Actuated Green, G (s)	2.8		53.0			53.0
Effective Green, g (s)	2.8		53.0			53.0
Actuated g/C Ratio	0.04		0.81			0.81
Clearance Time (s)	4.2		5.3			5.3
Vehicle Extension (s)	2.0		3.0			3.0
Lane Grp Cap (vph)	67		2872			2872
v/s Ratio Prot	c0.00		c0.61			0.54
v/s Ratio Perm						
v/c Ratio	0.04		0.75			0.66
Uniform Delay, d1	30.0		3.0			2.5
Progression Factor	1.00		1.00			1.00
Incremental Delay, d2	0.1		1.1			0.6
Delay (s)	30.0		4.1			3.1
Level of Service	C		A			A
Approach Delay (s)	30.0		4.1			3.1
Approach LOS	C		A			A

Intersection Summary

HCM 2000 Control Delay	4.0	HCM 2000 Level of Service	A
HCM 2000 Volume to Capacity ratio	0.77		
Actuated Cycle Length (s)	65.3	Sum of lost time (s)	13.2
Intersection Capacity Utilization	68.6%	ICU Level of Service	C
Analysis Period (min)	15		
c Critical Lane Group			

Transportation Plan for Wildfire Evacuation Scenario
 3: PACIFIC COAST HIGHWAY & LAS FLORES CANYON ROAD

04/20/2020



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕↔			↕	↕	↕	↕↕	↕	↕	↕↔	
Traffic Volume (vph)	50	0	0	0	0	98	0	1679	0	0	1775	0
Future Volume (vph)	50	0	0	0	0	98	0	1679	0	0	1775	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		5.1				5.1		6.3			6.3	
Lane Util. Factor		1.00				1.00		0.95			0.95	
Frbp, ped/bikes		1.00				0.98		1.00			1.00	
Flpb, ped/bikes		1.00				1.00		1.00			1.00	
Frt		1.00				0.85		1.00			1.00	
Flt Protected		0.95				1.00		1.00			1.00	
Satd. Flow (prot)		1770				1558		3539			3539	
Flt Permitted		0.76				1.00		1.00			1.00	
Satd. Flow (perm)		1410				1558		3539			3539	
Peak-hour factor, PHF	0.60	0.25	0.53	0.39	0.62	0.77	0.75	0.98	0.58	0.58	0.88	0.66
Adj. Flow (vph)	83	0	0	0	0	127	0	1713	0	0	2017	0
RTOR Reduction (vph)	0	0	0	0	0	112	0	0	0	0	0	0
Lane Group Flow (vph)	0	83	0	0	0	15	0	1713	0	0	2017	0
Confl. Peds. (#/hr)			10	10			3					3
Confl. Bikes (#/hr)			2			2			4			24
Turn Type	Perm	NA				Perm	Prot	NA	Perm	pm+pt	NA	
Protected Phases		4			4		1	6		5	2	
Permitted Phases	4			4		4			6	2		
Actuated Green, G (s)		17.1				17.1		120.2			120.2	
Effective Green, g (s)		17.1				17.1		120.2			120.2	
Actuated g/C Ratio		0.11				0.11		0.81			0.81	
Clearance Time (s)		5.1				5.1		6.3			6.3	
Vehicle Extension (s)		3.0				3.0		7.0			7.0	
Lane Grp Cap (vph)		162				179		2860			2860	
v/s Ratio Prot								0.48			c0.57	
v/s Ratio Perm		c0.06				0.01						
v/c Ratio		0.51				0.08		0.60			0.71	
Uniform Delay, d1		61.9				58.8		5.3			6.4	
Progression Factor		1.00				1.00		1.00			0.20	
Incremental Delay, d2		2.7				0.2		0.7			1.1	
Delay (s)		64.6				59.0		6.0			2.4	
Level of Service		E				E		A			A	
Approach Delay (s)		64.6			59.0			6.0			2.4	
Approach LOS		E			E			A			A	

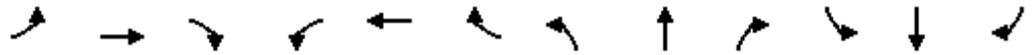
Intersection Summary

HCM 2000 Control Delay	7.1	HCM 2000 Level of Service	A
HCM 2000 Volume to Capacity ratio	0.71		
Actuated Cycle Length (s)	148.7	Sum of lost time (s)	16.1
Intersection Capacity Utilization	77.3%	ICU Level of Service	D
Analysis Period (min)	15		

c Critical Lane Group

Transportation Plan for Wildfire Evacuation Scenario
 4: PACIFIC COAST HIGHWAY & RAMBLA PACIFICO

04/20/2020



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕	↕	↕	↕↕	↕	↕	↕↕	
Traffic Volume (vph)	37	0	0	0	0	41	0	1971	0	0	1572	0
Future Volume (vph)	37	0	0	0	0	41	0	1971	0	0	1572	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		5.1				5.1		6.3			6.3	
Lane Util. Factor		1.00				1.00		0.95			0.95	
Frbp, ped/bikes		1.00				0.97		1.00			1.00	
Flpb, ped/bikes		0.98				1.00		1.00			1.00	
Frt		1.00				0.85		1.00			1.00	
Flt Protected		0.95				1.00		1.00			1.00	
Satd. Flow (prot)		1733				1533		3539			3539	
Flt Permitted		0.76				1.00		1.00			1.00	
Satd. Flow (perm)		1382				1533		3539			3539	
Peak-hour factor, PHF	0.38	0.75	0.78	0.62	0.75	0.56	0.46	0.98	0.65	0.58	0.85	0.25
Adj. Flow (vph)	97	0	0	0	0	73	0	2011	0	0	1849	0
RTOR Reduction (vph)	0	0	0	0	0	65	0	0	0	0	0	0
Lane Group Flow (vph)	0	97	0	0	0	8	0	2011	0	0	1849	0
Confl. Peds. (#/hr)	11					11	13		2	2		13
Confl. Bikes (#/hr)									6			27
Turn Type	Perm	NA				Perm	Perm	NA	Perm	Prot	NA	
Protected Phases		4			4			6		5	2	
Permitted Phases	4			4		4	6		6			
Actuated Green, G (s)		17.1				17.1		120.2			120.2	
Effective Green, g (s)		17.1				17.1		120.2			120.2	
Actuated g/C Ratio		0.11				0.11		0.81			0.81	
Clearance Time (s)		5.1				5.1		6.3			6.3	
Vehicle Extension (s)		3.0				3.0		7.0			7.0	
Lane Grp Cap (vph)		158				176		2860			2860	
v/s Ratio Prot								c0.57			0.52	
v/s Ratio Perm		c0.07				0.01						
v/c Ratio		0.61				0.05		0.70			0.65	
Uniform Delay, d1		62.7				58.6		6.3			5.7	
Progression Factor		1.00				1.00		0.54			1.00	
Incremental Delay, d2		6.9				0.1		1.2			1.0	
Delay (s)		69.6				58.7		4.6			6.7	
Level of Service		E				E		A			A	
Approach Delay (s)		69.6			58.7			4.6			6.7	
Approach LOS		E			E			A			A	
Intersection Summary												
HCM 2000 Control Delay			8.1								A	
HCM 2000 Volume to Capacity ratio			0.72									
Actuated Cycle Length (s)			148.7							16.1		
Intersection Capacity Utilization			85.7%								E	
Analysis Period (min)			15									

c Critical Lane Group

Transportation Plan for Wildfire Evacuation Scenario
 5: PACIFIC COAST HIGHWAY & CARBON CANYON ROAD

04/20/2020



Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	0	14	1954	0	0	1662
Future Volume (vph)	0	14	1954	0	0	1662
Ideal Flow (vphp)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.2		5.3			5.3
Lane Util. Factor	1.00		0.95			0.95
Frbp, ped/bikes	0.99		1.00			1.00
Flpb, ped/bikes	1.00		1.00			1.00
Frt	0.86		1.00			1.00
Flt Protected	1.00		1.00			1.00
Satd. Flow (prot)	1590		3539			3539
Flt Permitted	1.00		1.00			1.00
Satd. Flow (perm)	1590		3539			3539
Peak-hour factor, PHF	0.38	0.50	0.97	0.56	0.58	0.94
Adj. Flow (vph)	0	28	2014	0	0	1768
RTOR Reduction (vph)	26	0	0	0	0	0
Lane Group Flow (vph)	2	0	2014	0	0	1768
Confl. Peds. (#/hr)		1		2		
Confl. Bikes (#/hr)				6		
Turn Type	Prot		NA	Perm	Prot	NA
Protected Phases	4		2		1	6
Permitted Phases				2		
Actuated Green, G (s)	4.6		69.1			69.1
Effective Green, g (s)	4.6		69.1			69.1
Actuated g/C Ratio	0.06		0.83			0.83
Clearance Time (s)	4.2		5.3			5.3
Vehicle Extension (s)	2.0		8.0			8.0
Lane Grp Cap (vph)	87		2939			2939
v/s Ratio Prot	c0.00		c0.57			0.50
v/s Ratio Perm						
v/c Ratio	0.02		0.69			0.60
Uniform Delay, d1	37.2		2.8			2.4
Progression Factor	1.00		1.00			1.00
Incremental Delay, d2	0.0		1.3			0.8
Delay (s)	37.2		4.1			3.2
Level of Service	D		A			A
Approach Delay (s)	37.2		4.1			3.2
Approach LOS	D		A			A

Intersection Summary

HCM 2000 Control Delay	3.9	HCM 2000 Level of Service	A
HCM 2000 Volume to Capacity ratio	0.68		
Actuated Cycle Length (s)	83.2	Sum of lost time (s)	13.2
Intersection Capacity Utilization	65.7%	ICU Level of Service	C
Analysis Period (min)	15		

c Critical Lane Group

Transportation Plan for Wildfire Evacuation Scenario
6: PACIFIC COAST HIGHWAY & BUSCH REALTY

04/20/2020



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations							5	↑↑		5	↑↑	
Traffic Volume (vph)	0	0	0	0	0	0	8	1909	0	6	1674	0
Future Volume (vph)	0	0	0	0	0	0	8	1909	0	6	1674	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)							3.7	5.3		3.7	5.3	
Lane Util. Factor							1.00	0.95		1.00	0.95	
Frbp, ped/bikes							1.00	1.00		1.00	1.00	
Flpb, ped/bikes							1.00	1.00		1.00	1.00	
Frt							1.00	1.00		1.00	1.00	
Flt Protected							0.95	1.00		0.95	1.00	
Satd. Flow (prot)							1770	3539		1770	3539	
Flt Permitted							0.95	1.00		0.95	1.00	
Satd. Flow (perm)							1770	3539		1770	3539	
Peak-hour factor, PHF	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.95	0.25	0.38	0.97	0.25
Adj. Flow (vph)	0	0	0	0	0	0	32	2009	0	16	1726	0
RTOR Reduction (vph)	0	0	0	0	0	0	0	0	0	0	0	0
Lane Group Flow (vph)	0	0	0	0	0	0	32	2009	0	16	1726	0
Confl. Bikes (#/hr)							2		8			28
Turn Type							Prot	NA		Prot	NA	
Protected Phases							5	2		1	6	
Permitted Phases												
Actuated Green, G (s)							4.0	92.7		3.2	91.9	
Effective Green, g (s)							4.0	92.7		3.2	91.9	
Actuated g/C Ratio							0.03	0.80		0.03	0.79	
Clearance Time (s)							3.7	5.3		3.7	5.3	
Vehicle Extension (s)							2.0	8.0		2.0	8.0	
Lane Grp Cap (vph)							61	2835		48	2811	
v/s Ratio Prot							c0.02	c0.57		0.01	0.49	
v/s Ratio Perm												
v/c Ratio							0.52	0.71		0.33	0.61	
Uniform Delay, d1							54.9	5.3		55.2	4.8	
Progression Factor							1.00	1.00		1.00	1.00	
Incremental Delay, d2							3.7	1.5		1.5	0.9	
Delay (s)							58.6	6.8		56.7	5.7	
Level of Service							E	A		E	A	
Approach Delay (s)		0.0			0.0			7.6			6.2	
Approach LOS		A			A			A			A	
Intersection Summary												
HCM 2000 Control Delay			7.0				HCM 2000 Level of Service			A		
HCM 2000 Volume to Capacity ratio			0.65									
Actuated Cycle Length (s)			115.7				Sum of lost time (s)			12.0		
Intersection Capacity Utilization			57.2%				ICU Level of Service			B		
Analysis Period (min)			15									
c Critical Lane Group												

Transportation Plan for Wildfire Evacuation Scenario
7: PACIFIC COAST HIGHWAY & MCDONALDS

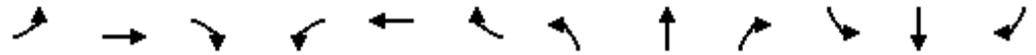
04/20/2020



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations							↔	↑↑		↔	↑↑	
Traffic Volume (vph)	0	0	0	0	0	0	12	1864	0	0	1646	1
Future Volume (vph)	0	0	0	0	0	0	12	1864	0	0	1646	1
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)							3.7	5.3			5.3	
Lane Util. Factor							1.00	0.95			0.95	
Frbp, ped/bikes							1.00	1.00			1.00	
Flpb, ped/bikes							1.00	1.00			1.00	
Frt							1.00	1.00			1.00	
Flt Protected							0.95	1.00			1.00	
Satd. Flow (prot)							1770	3539			3538	
Flt Permitted							0.95	1.00			1.00	
Satd. Flow (perm)							1770	3539			3538	
Peak-hour factor, PHF	0.50	0.25	0.65	0.25	0.25	0.25	0.25	0.96	0.25	0.25	0.95	0.25
Adj. Flow (vph)	0	0	0	0	0	0	48	1942	0	0	1733	4
RTOR Reduction (vph)	0	0	0	0	0	0	0	0	0	0	0	0
Lane Group Flow (vph)	0	0	0	0	0	0	48	1942	0	0	1737	0
Confl. Bikes (#/hr)									22			6
Turn Type							Prot	NA		Prot	NA	
Protected Phases							5	2		1	6	
Permitted Phases												
Actuated Green, G (s)							6.9	91.6			81.0	
Effective Green, g (s)							6.9	91.6			81.0	
Actuated g/C Ratio							0.06	0.76			0.67	
Clearance Time (s)							3.7	5.3			5.3	
Vehicle Extension (s)							2.0	8.0			8.0	
Lane Grp Cap (vph)							101	2687			2376	
v/s Ratio Prot							0.03	c0.55			0.49	
v/s Ratio Perm												
v/c Ratio							0.48	0.72			0.73	
Uniform Delay, d1							55.1	7.7			12.8	
Progression Factor							1.00	1.00			1.00	
Incremental Delay, d2							1.3	1.7			2.0	
Delay (s)							56.4	9.5			14.8	
Level of Service							E	A			B	
Approach Delay (s)		0.0			0.0			10.6			14.8	
Approach LOS		A			A			B			B	
Intersection Summary												
HCM 2000 Control Delay			12.5				HCM 2000 Level of Service				B	
HCM 2000 Volume to Capacity ratio			0.61									
Actuated Cycle Length (s)			120.6				Sum of lost time (s)				12.0	
Intersection Capacity Utilization			55.9%				ICU Level of Service				B	
Analysis Period (min)			15									
c Critical Lane Group												

Transportation Plan for Wildfire Evacuation Scenario
 8: PACIFIC COAST HIGHWAY & MALIBU PIER

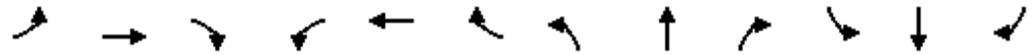
04/20/2020



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations							5	↑↑		5	↑↑	
Traffic Volume (vph)	0	0	0	0	0	0	36	1856	2	19	1788	0
Future Volume (vph)	0	0	0	0	0	0	36	1856	2	19	1788	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)							3.7	5.3		3.7	5.3	
Lane Util. Factor							1.00	0.95		1.00	0.95	
Frbp, ped/bikes							1.00	1.00		1.00	1.00	
Flpb, ped/bikes							1.00	1.00		1.00	1.00	
Frt							1.00	1.00		1.00	1.00	
Flt Protected							0.95	1.00		0.95	1.00	
Satd. Flow (prot)							1770	3537		1770	3539	
Flt Permitted							0.95	1.00		0.95	1.00	
Satd. Flow (perm)							1770	3537		1770	3539	
Peak-hour factor, PHF	0.25	0.25	0.25	0.38	0.25	0.44	0.25	0.96	0.25	0.62	0.98	0.25
Adj. Flow (vph)	0	0	0	0	0	0	144	1933	8	31	1824	0
RTOR Reduction (vph)	0	0	0	0	0	0	0	0	0	0	0	0
Lane Group Flow (vph)	0	0	0	0	0	0	144	1941	0	31	1824	0
Confl. Bikes (#/hr)									8			28
Turn Type							Prot	NA		Prot	NA	
Protected Phases							5	2		1	6	
Permitted Phases												
Actuated Green, G (s)							16.6	104.6		4.8	92.8	
Effective Green, g (s)							16.6	104.6		4.8	92.8	
Actuated g/C Ratio							0.11	0.70		0.03	0.62	
Clearance Time (s)							3.7	5.3		3.7	5.3	
Vehicle Extension (s)							2.0	8.0		2.0	8.0	
Lane Grp Cap (vph)							195	2464		56	2188	
v/s Ratio Prot							c0.08	0.55		0.02	c0.52	
v/s Ratio Perm												
v/c Ratio							0.74	0.79		0.55	0.83	
Uniform Delay, d1							64.6	15.3		71.6	22.6	
Progression Factor							1.00	1.00		1.00	1.00	
Incremental Delay, d2							11.8	2.5		6.6	3.7	
Delay (s)							76.5	17.7		78.2	26.2	
Level of Service							E	B		E	C	
Approach Delay (s)		0.0			0.0			21.8			27.1	
Approach LOS		A			A			C			C	
Intersection Summary												
HCM 2000 Control Delay			24.3				HCM 2000 Level of Service				C	
HCM 2000 Volume to Capacity ratio			0.65									
Actuated Cycle Length (s)			150.1				Sum of lost time (s)				12.0	
Intersection Capacity Utilization			55.8%				ICU Level of Service				B	
Analysis Period (min)			15									
c Critical Lane Group												

Transportation Plan for Wildfire Evacuation Scenario
 9: PACIFIC COAST HIGHWAY & CROSS CREEK ROAD

04/20/2020



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕	↗	↖	↕	↗	↖	↕↕	↗	↖	↕↕	
Traffic Volume (vph)	0	0	58	370	0	0	0	1835	0	0	1658	0
Future Volume (vph)	0	0	58	370	0	0	0	1835	0	0	1658	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)			4.2	4.2	4.2			5.3			5.3	
Lane Util. Factor			1.00	0.95	0.95			0.95			0.95	
Frbp, ped/bikes			1.00	1.00	1.00			1.00			1.00	
Flpb, ped/bikes			1.00	1.00	1.00			1.00			1.00	
Frt			0.85	1.00	1.00			1.00			1.00	
Flt Protected			1.00	0.95	0.95			1.00			1.00	
Satd. Flow (prot)			1583	1681	1681			3539			3539	
Flt Permitted			1.00	0.95	0.95			1.00			1.00	
Satd. Flow (perm)			1583	1681	1681			3539			3539	
Peak-hour factor, PHF	0.71	0.75	0.80	0.93	0.62	0.81	0.75	0.97	0.96	0.92	0.95	0.67
Adj. Flow (vph)	0	0	72	398	0	0	0	1892	0	0	1745	0
RTOR Reduction (vph)	0	0	71	0	0	0	0	0	0	0	0	0
Lane Group Flow (vph)	0	0	2	199	199	0	0	1892	0	0	1745	0
Confl. Peds. (#/hr)							199		85			99
Confl. Bikes (#/hr)							3		6			26
Turn Type			Prot	Split	NA	Prot	Prot	NA	Perm	Prot	NA	
Protected Phases	3	3	3	4	4	4	5	2		1	6	
Permitted Phases									2			
Actuated Green, G (s)			5.0	34.3	34.3			117.3			117.3	
Effective Green, g (s)			5.0	34.3	34.3			117.3			117.3	
Actuated g/C Ratio			0.03	0.20	0.20			0.69			0.69	
Clearance Time (s)			4.2	4.2	4.2			5.3			5.3	
Vehicle Extension (s)			2.0	2.0	2.0			7.0			7.0	
Lane Grp Cap (vph)			46	338	338			2437			2437	
v/s Ratio Prot			c0.00	c0.12	0.12			c0.53			0.49	
v/s Ratio Perm												
v/c Ratio			0.05	0.59	0.59			0.78			0.72	
Uniform Delay, d1			80.3	61.6	61.6			17.7			16.3	
Progression Factor			1.00	1.00	1.00			1.00			1.00	
Incremental Delay, d2			0.2	1.7	1.7			2.2			1.7	
Delay (s)			80.5	63.3	63.3			19.9			18.0	
Level of Service			F	E	E			B			B	
Approach Delay (s)		80.5			63.3			19.9			18.0	
Approach LOS		F			E			B			B	
Intersection Summary												
HCM 2000 Control Delay			24.4									C
HCM 2000 Volume to Capacity ratio			0.73									
Actuated Cycle Length (s)			170.3								17.4	
Intersection Capacity Utilization			80.8%									D
Analysis Period (min)			15									

c Critical Lane Group

Transportation Plan for Wildfire Evacuation Scenario
 10: PACIFIC COAST HIGHWAY & WEBB WAY

04/20/2020



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↖	↗		↖	↗	↖	↘	↕	↖	↗	↕	↖
Traffic Volume (vph)	0	0	230	325	0	0	0	1731	0	0	1641	0
Future Volume (vph)	0	0	230	325	0	0	0	1731	0	0	1641	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	11	16	12	11	11	10	11	11	16	11	12	12
Total Lost time (s)		4.7		4.7	4.7			5.8			5.8	
Lane Util. Factor		1.00		0.95	0.95			0.95			0.91	
Frbp, ped/bikes		0.98		1.00	1.00			1.00			1.00	
Flpb, ped/bikes		1.00		1.00	1.00			1.00			1.00	
Frt		0.85		1.00	1.00			1.00			1.00	
Flt Protected		1.00		0.95	0.95			1.00			1.00	
Satd. Flow (prot)		1764		1625	1625			3421			5085	
Flt Permitted		1.00		0.95	0.95			1.00			1.00	
Satd. Flow (perm)		1764		1625	1625			3421			5085	
Peak-hour factor, PHF	0.79	0.79	0.68	0.91	0.68	0.81	0.85	0.91	0.92	0.82	0.95	0.87
Adj. Flow (vph)	0	0	338	357	0	0	0	1902	0	0	1727	0
RTOR Reduction (vph)	0	158	0	0	0	0	0	0	0	0	0	0
Lane Group Flow (vph)	0	180	0	178	179	0	0	1902	0	0	1727	0
Confl. Peds. (#/hr)	28						28		14			4
Confl. Bikes (#/hr)			3			5			5			15
Turn Type	Perm	NA		Split	NA	custom	Prot	NA	pm+ov	Prot	NA	Perm
Protected Phases		4		3	3		5	2	3	1	6	
Permitted Phases	4					6			2			6
Actuated Green, G (s)		29.4		32.0	32.0			146.7			146.7	
Effective Green, g (s)		29.4		32.0	32.0			146.7			146.7	
Actuated g/C Ratio		0.13		0.14	0.14			0.66			0.66	
Clearance Time (s)		4.7		4.7	4.7			5.8			5.8	
Vehicle Extension (s)		3.0		3.0	3.0			8.0			8.0	
Lane Grp Cap (vph)		232		232	232			2247			3340	
v/s Ratio Prot		c0.10		0.11	c0.11			c0.56			0.34	
v/s Ratio Perm												
v/c Ratio		0.78		0.77	0.77			0.85			0.52	
Uniform Delay, d1		93.8		92.1	92.1			29.6			19.9	
Progression Factor		1.00		1.00	1.00			1.00			1.00	
Incremental Delay, d2		14.9		14.1	14.6			4.0			0.5	
Delay (s)		108.7		106.1	106.8			33.6			20.4	
Level of Service		F		F	F			C			C	
Approach Delay (s)		108.7			106.5			33.6			20.4	
Approach LOS		F			F			C			C	

Intersection Summary			
HCM 2000 Control Delay	40.2	HCM 2000 Level of Service	D
HCM 2000 Volume to Capacity ratio	0.84		
Actuated Cycle Length (s)	223.3	Sum of lost time (s)	18.9
Intersection Capacity Utilization	83.8%	ICU Level of Service	E
Analysis Period (min)	15		
c Critical Lane Group			

Transportation Plan for Wildfire Evacuation Scenario

11: PACIFIC COAST HIGHWAY & WINTER MESA DR/MALIBU CANYON RD.

04/20/2020



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↖	↑	↗	↖	↖	↗	↖	↑↑	↗	↖↗	↖↗	
Traffic Volume (vph)	0	0	66	1153	0	0	0	1507	0	0	1411	0
Future Volume (vph)	0	0	66	1153	0	0	0	1507	0	0	1411	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	12	14	12	12	12	12	10	12	10	10	12	11
Total Lost time (s)			4.2	4.6	4.6			6.2			5.7	
Lane Util. Factor			1.00	0.95	0.95			0.95			0.95	
Frbp, ped/bikes			0.98	1.00	1.00			1.00			1.00	
Flpb, ped/bikes			1.00	1.00	1.00			1.00			1.00	
Frt			0.85	1.00	1.00			1.00			1.00	
Flt Protected			1.00	0.95	0.95			1.00			1.00	
Satd. Flow (prot)			1555	1681	1681			3539			3539	
Flt Permitted			1.00	0.95	0.95			1.00			1.00	
Satd. Flow (perm)			1555	1681	1681			3539			3539	
Peak-hour factor, PHF	0.79	0.62	0.72	0.96	0.73	0.82	0.56	0.96	0.83	0.88	0.94	0.69
Adj. Flow (vph)	0	0	92	1201	0	0	0	1570	0	0	1501	0
RTOR Reduction (vph)	0	0	89	0	0	0	0	0	0	0	0	0
Lane Group Flow (vph)	0	0	3	600	601	0	0	1570	0	0	1501	0
Confl. Peds. (#/hr)	2						2					2
Confl. Bikes (#/hr)			1			2			3			10
Turn Type	Perm		Perm	Split	NA	pm+ov	Prot	NA	pm+ov	Prot	NA	
Protected Phases		4		3	3		1	2	3	1	6	
Permitted Phases	4		4			3			2			
Actuated Green, G (s)			4.7	30.0	30.0			80.3			80.8	
Effective Green, g (s)			4.7	30.0	30.0			80.3			80.8	
Actuated g/C Ratio			0.04	0.23	0.23			0.62			0.62	
Clearance Time (s)			4.2	4.6	4.6			6.2			5.7	
Vehicle Extension (s)			2.0	3.0	3.0			7.0			7.0	
Lane Grp Cap (vph)			56	387	387			2186			2199	
v/s Ratio Prot				0.36	c0.36			c0.44			0.42	
v/s Ratio Perm			c0.00									
v/c Ratio			0.06	1.55	1.55			0.72			0.68	
Uniform Delay, d1			60.5	50.0	50.0			17.1			16.2	
Progression Factor			1.00	1.00	1.00			1.00			1.00	
Incremental Delay, d2			0.2	260.1	261.3			2.1			1.7	
Delay (s)			60.7	310.1	311.3			19.1			17.9	
Level of Service			E	F	F			B			B	
Approach Delay (s)		60.7			310.7			19.1			17.9	
Approach LOS		E			F			B			B	
Intersection Summary												
HCM 2000 Control Delay			99.8								F	
HCM 2000 Volume to Capacity ratio			0.94									
Actuated Cycle Length (s)			130.0						18.7			
Intersection Capacity Utilization			87.1%								E	
ICU Level of Service												
Analysis Period (min)			15									
c Critical Lane Group												

Transportation Plan for Wildfire Evacuation Scenario
 12: PACIFIC COAST HIGHWAY & JOHN TYLER

04/20/2020



Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations	↙↙	↙	↕↕	↘	↘	↕↕
Traffic Volume (vph)	0	93	1937	0	0	1453
Future Volume (vph)	0	93	1937	0	0	1453
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.6	4.6	5.7			5.7
Lane Util. Factor	0.97	0.91	0.95			0.95
Frbp, ped/bikes	1.00	1.00	1.00			1.00
Flpb, ped/bikes	1.00	1.00	1.00			1.00
Frt	0.85	0.85	1.00			1.00
Flt Protected	1.00	1.00	1.00			1.00
Satd. Flow (prot)	3072	1441	3539			3539
Flt Permitted	1.00	1.00	1.00			1.00
Satd. Flow (perm)	3072	1441	3539			3539
Peak-hour factor, PHF	0.78	0.64	0.94	0.77	0.68	0.92
Adj. Flow (vph)	0	145	2061	0	0	1579
RTOR Reduction (vph)	22	22	0	0	0	0
Lane Group Flow (vph)	51	50	2061	0	0	1579
Confl. Bikes (#/hr)				2		
Turn Type	Prot	Perm	NA	Perm	Perm	NA
Protected Phases	4		2			6
Permitted Phases		4		2	6	
Actuated Green, G (s)	10.0	10.0	113.3			113.3
Effective Green, g (s)	10.0	10.0	113.3			113.3
Actuated g/C Ratio	0.07	0.07	0.85			0.85
Clearance Time (s)	4.6	4.6	5.7			5.7
Vehicle Extension (s)	3.0	3.0	8.0			8.0
Lane Grp Cap (vph)	229	107	3001			3001
v/s Ratio Prot	0.02		c0.58			0.45
v/s Ratio Perm		c0.03				
v/c Ratio	0.22	0.47	0.69			0.53
Uniform Delay, d1	58.1	59.2	3.7			2.8
Progression Factor	1.00	1.00	1.00			1.00
Incremental Delay, d2	0.5	3.2	1.3			0.6
Delay (s)	58.6	62.4	5.0			3.4
Level of Service	E	E	A			A
Approach Delay (s)	60.5		5.0			3.4
Approach LOS	E		A			A

Intersection Summary

HCM 2000 Control Delay	6.5	HCM 2000 Level of Service	A
HCM 2000 Volume to Capacity ratio	0.67		
Actuated Cycle Length (s)	133.6	Sum of lost time (s)	10.3
Intersection Capacity Utilization	66.0%	ICU Level of Service	C
Analysis Period (min)	15		
c Critical Lane Group			

Transportation Plan for Wildfire Evacuation Scenario
 17: PACIFIC COAST HIGHWAY & Coral Canyon Road

04/20/2020



Movement	WBL	WBR	NBU	NBT	NBR	SBL	SBT
Lane Configurations	↖	↗	⊠	↑↑		↖	↑↑
Traffic Volume (vph)	0	82	0	1426	0	0	1331
Future Volume (vph)	0	82	0	1426	0	0	1331
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.5		4.5			4.5
Lane Util. Factor		1.00		0.95			0.95
Frt		0.85		1.00			1.00
Flt Protected		1.00		1.00			1.00
Satd. Flow (prot)		1583		3539			3539
Flt Permitted		1.00		1.00			1.00
Satd. Flow (perm)		1583		3539			3539
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	0	89	0	1550	0	0	1447
RTOR Reduction (vph)	0	3	0	0	0	0	0
Lane Group Flow (vph)	0	86	0	1550	0	0	1447
Turn Type	Prot	Perm	Perm	NA		Perm	NA
Protected Phases	8			2			6
Permitted Phases		8	2			6	
Actuated Green, G (s)		18.0		18.0			18.0
Effective Green, g (s)		18.0		18.0			18.0
Actuated g/C Ratio		0.40		0.40			0.40
Clearance Time (s)		4.5		4.5			4.5
Lane Grp Cap (vph)		633		1415			1415
v/s Ratio Prot				c0.44			0.41
v/s Ratio Perm		c0.05					
v/c Ratio		0.14		1.10			1.02
Uniform Delay, d1		8.6		13.5			13.5
Progression Factor		1.00		1.00			1.00
Incremental Delay, d2		0.4		54.4			29.8
Delay (s)		9.0		67.9			43.3
Level of Service		A		E			D
Approach Delay (s)	9.0			67.9			43.3
Approach LOS	A			E			D

Intersection Summary

HCM 2000 Control Delay	54.7	HCM 2000 Level of Service	D
HCM 2000 Volume to Capacity ratio	0.62		
Actuated Cycle Length (s)	45.0	Sum of lost time (s)	9.0
Intersection Capacity Utilization	52.0%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			

Transportation Plan for Wildfire Evacuation Scenario
 21: PACIFIC COAST HIGHWAY & Zumeriz Drive

04/20/2020



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕	↗		↔		↖	↕↔		↖	↕↕	↗
Traffic Volume (vph)	148	0	0	0	0	14	0	1280	0	0	1120	0
Future Volume (vph)	148	0	0	0	0	14	0	1280	0	0	1120	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.5			4.5			4.5			4.5	
Lane Util. Factor		1.00			1.00			0.95			0.95	
Frt		1.00			0.86			1.00			1.00	
Flt Protected		0.95			1.00			1.00			1.00	
Satd. Flow (prot)		1770			1611			3539			3539	
Flt Permitted		0.95			1.00			1.00			1.00	
Satd. Flow (perm)		1770			1611			3539			3539	
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	161	0	0	0	0	15	0	1391	0	0	1217	0
RTOR Reduction (vph)	0	0	0	0	15	0	0	0	0	0	0	0
Lane Group Flow (vph)	0	161	0	0	0	0	0	1391	0	0	1217	0
Turn Type	Split	NA	Perm		NA		Prot	NA		Prot	NA	Perm
Protected Phases	2	2		6	6		3	8		7	4	
Permitted Phases			2									4
Actuated Green, G (s)		18.6			1.0			30.6			30.6	
Effective Green, g (s)		18.6			1.0			30.6			30.6	
Actuated g/C Ratio		0.29			0.02			0.48			0.48	
Clearance Time (s)		4.5			4.5			4.5			4.5	
Vehicle Extension (s)		3.0			3.0			3.0			3.0	
Lane Grp Cap (vph)		516			25			1700			1700	
v/s Ratio Prot		c0.09			c0.00			c0.39			0.34	
v/s Ratio Perm												
v/c Ratio		0.31			0.01			0.82			0.72	
Uniform Delay, d1		17.6			30.9			14.2			13.1	
Progression Factor		1.00			1.00			1.00			1.00	
Incremental Delay, d2		1.6			0.2			3.2			1.5	
Delay (s)		19.1			31.0			17.4			14.6	
Level of Service		B			C			B			B	
Approach Delay (s)		19.1			31.0			17.4			14.6	
Approach LOS		B			C			B			B	

Intersection Summary

HCM 2000 Control Delay	16.3	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.67		
Actuated Cycle Length (s)	63.7	Sum of lost time (s)	18.0
Intersection Capacity Utilization	57.7%	ICU Level of Service	B
Analysis Period (min)	15		

c Critical Lane Group

Transportation Plan for Wildfire Evacuation Scenario
 25: PACIFIC COAST HIGHWAY & Paradise Cove Drive

04/20/2020



Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	159	0	0	1353	1172	0
Future Volume (vph)	159	0	0	1353	1172	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.5			4.5	4.5	
Lane Util. Factor	1.00			0.95	0.95	
Frt	1.00			1.00	1.00	
Flt Protected	0.95			1.00	1.00	
Satd. Flow (prot)	1770			3539	3539	
Flt Permitted	0.95			1.00	1.00	
Satd. Flow (perm)	1770			3539	3539	
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	173	0	0	1471	1274	0
RTOR Reduction (vph)	0	0	0	0	0	0
Lane Group Flow (vph)	173	0	0	1471	1274	0
Turn Type	Prot		Prot	NA	NA	
Protected Phases	2		3	8	4	
Permitted Phases						
Actuated Green, G (s)	9.8			41.2	41.2	
Effective Green, g (s)	9.8			41.2	41.2	
Actuated g/C Ratio	0.16			0.69	0.69	
Clearance Time (s)	4.5			4.5	4.5	
Vehicle Extension (s)	3.0			3.0	3.0	
Lane Grp Cap (vph)	289			2430	2430	
v/s Ratio Prot	c0.10			c0.42	0.36	
v/s Ratio Perm						
v/c Ratio	0.60			0.61	0.52	
Uniform Delay, d1	23.3			5.0	4.6	
Progression Factor	1.00			1.00	1.00	
Incremental Delay, d2	3.3			1.1	0.8	
Delay (s)	26.6			6.2	5.4	
Level of Service	C			A	A	
Approach Delay (s)	26.6			6.2	5.4	
Approach LOS	C			A	A	

Intersection Summary

HCM 2000 Control Delay	7.1	HCM 2000 Level of Service	A
HCM 2000 Volume to Capacity ratio	0.66		
Actuated Cycle Length (s)	60.0	Sum of lost time (s)	13.5
Intersection Capacity Utilization	53.7%	ICU Level of Service	A
Analysis Period (min)	15		

c Critical Lane Group

Transportation Plan for Wildfire Evacuation Scenario
 28: PACIFIC COAST HIGHWAY & Kanan Dume Road

04/20/2020



Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	0	662	1292	0	0	1304
Future Volume (vph)	0	662	1292	0	0	1304
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)		5.1	6.7			6.7
Lane Util. Factor		1.00	0.95			0.95
Frt		0.85	1.00			1.00
Flt Protected		1.00	1.00			1.00
Satd. Flow (prot)		1583	3539			3539
Flt Permitted		1.00	1.00			1.00
Satd. Flow (perm)		1583	3539			3539
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	0	720	1404	0	0	1417
RTOR Reduction (vph)	0	332	0	0	0	0
Lane Group Flow (vph)	0	388	1404	0	0	1417
Turn Type	Prot	Perm	NA	Perm	Prot	NA
Protected Phases	8		2		1	6
Permitted Phases		8		2		
Actuated Green, G (s)		28.0	35.8			65.2
Effective Green, g (s)		28.0	35.8			65.2
Actuated g/C Ratio		0.27	0.34			0.62
Clearance Time (s)		5.1	6.7			6.7
Lane Grp Cap (vph)		422	1206			2197
v/s Ratio Prot			c0.40			c0.40
v/s Ratio Perm		c0.24				
v/c Ratio		0.92	1.16			0.64
Uniform Delay, d1		37.4	34.6			12.6
Progression Factor		1.00	1.00			1.00
Incremental Delay, d2		27.6	83.3			1.5
Delay (s)		64.9	117.9			14.1
Level of Service		E	F			B
Approach Delay (s)	64.9		117.9			14.1
Approach LOS	E		F			B

Intersection Summary			
HCM 2000 Control Delay		65.6	HCM 2000 Level of Service E
HCM 2000 Volume to Capacity ratio		0.95	
Actuated Cycle Length (s)		105.0	Sum of lost time (s) 16.0
Intersection Capacity Utilization		86.5%	ICU Level of Service E
Analysis Period (min)		15	
c Critical Lane Group			

Transportation Plan for Wildfire Evacuation Scenario
 36: PACIFIC COAST HIGHWAY & Busch Drive

04/20/2020



Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	0	349	1253	0	0	1316
Future Volume (vph)	0	349	1253	0	0	1316
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.5	4.5			4.5
Lane Util. Factor		1.00	0.95			0.95
Frt		0.85	1.00			1.00
Flt Protected		1.00	1.00			1.00
Satd. Flow (prot)		1583	3539			3539
Flt Permitted		1.00	1.00			1.00
Satd. Flow (perm)		1583	3539			3539
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	0	379	1362	0	0	1430
RTOR Reduction (vph)	0	6	0	0	0	0
Lane Group Flow (vph)	0	373	1362	0	0	1430
Turn Type	Prot	Perm	NA	Perm	Perm	NA
Protected Phases	2		8			4
Permitted Phases		2		8	4	
Actuated Green, G (s)		18.0	18.0			18.0
Effective Green, g (s)		18.0	18.0			18.0
Actuated g/C Ratio		0.40	0.40			0.40
Clearance Time (s)		4.5	4.5			4.5
Lane Grp Cap (vph)		633	1415			1415
v/s Ratio Prot			0.38			c0.40
v/s Ratio Perm		c0.24				
v/c Ratio		0.59	0.96			1.01
Uniform Delay, d1		10.6	13.2			13.5
Progression Factor		1.00	1.00			1.00
Incremental Delay, d2		4.0	16.5			26.6
Delay (s)		14.6	29.7			40.1
Level of Service		B	C			D
Approach Delay (s)	14.6		29.7			40.1
Approach LOS	B		C			D

Intersection Summary			
HCM 2000 Control Delay		32.6	HCM 2000 Level of Service C
HCM 2000 Volume to Capacity ratio		0.80	
Actuated Cycle Length (s)		45.0	Sum of lost time (s) 9.0
Intersection Capacity Utilization		63.7%	ICU Level of Service B
Analysis Period (min)		15	
c	Critical Lane Group		

Transportation Plan for Wildfire Evacuation Scenario
 42: PACIFIC COAST HIGHWAY & Heathercliff Road

04/20/2020



Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	401	0	0	1213	1220	0
Future Volume (vph)	401	0	0	1213	1220	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.5			4.5	4.5	
Lane Util. Factor	1.00			0.95	0.95	
Frt	1.00			1.00	1.00	
Flt Protected	0.95			1.00	1.00	
Satd. Flow (prot)	1770			3539	3539	
Flt Permitted	0.95			1.00	1.00	
Satd. Flow (perm)	1770			3539	3539	
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	436	0	0	1318	1326	0
RTOR Reduction (vph)	0	0	0	0	0	0
Lane Group Flow (vph)	436	0	0	1318	1326	0
Turn Type	Prot	Perm	Prot	NA	NA	Perm
Protected Phases	2		3	8	4	
Permitted Phases		2				4
Actuated Green, G (s)	18.7			32.3	32.3	
Effective Green, g (s)	18.7			32.3	32.3	
Actuated g/C Ratio	0.31			0.54	0.54	
Clearance Time (s)	4.5			4.5	4.5	
Vehicle Extension (s)	3.0			3.0	3.0	
Lane Grp Cap (vph)	551			1905	1905	
v/s Ratio Prot	c0.25			0.37	c0.37	
v/s Ratio Perm						
v/c Ratio	0.79			0.69	0.70	
Uniform Delay, d1	18.9			10.2	10.2	
Progression Factor	1.00			1.00	1.00	
Incremental Delay, d2	11.1			2.1	2.1	
Delay (s)	29.9			12.3	12.4	
Level of Service	C			B	B	
Approach Delay (s)	29.9			12.3	12.4	
Approach LOS	C			B	B	

Intersection Summary

HCM 2000 Control Delay	14.8	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.80		
Actuated Cycle Length (s)	60.0	Sum of lost time (s)	13.5
Intersection Capacity Utilization	63.4%	ICU Level of Service	B
Analysis Period (min)	15		

c Critical Lane Group

Transportation Plan for Wildfire Evacuation Scenario

53: PACIFIC COAST HIGHWAY & Broad Beach Rd/Trancas Canyon Road

04/20/2020



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕		↗	↕		↗	↕	
Traffic Volume (vph)	244	0	0	54	0	0	0	1313	0	0	1467	0
Future Volume (vph)	244	0	0	54	0	0	0	1313	0	0	1467	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.5			4.5			4.5			4.5	
Lane Util. Factor		1.00			1.00			0.95			0.95	
Frt		1.00			1.00			1.00			1.00	
Flt Protected		0.95			0.95			1.00			1.00	
Satd. Flow (prot)		1770			1770			3539			3539	
Flt Permitted		0.72			0.66			1.00			1.00	
Satd. Flow (perm)		1338			1221			3539			3539	
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	265	0	0	59	0	0	0	1427	0	0	1595	0
RTOR Reduction (vph)	0	0	0	0	0	0	0	0	0	0	0	0
Lane Group Flow (vph)	0	265	0	0	59	0	0	1427	0	0	1595	0
Turn Type	Perm	NA		Perm	NA		Perm	NA		Perm	NA	
Protected Phases		2			2			8			4	
Permitted Phases	2			2			8			4		
Actuated Green, G (s)		18.0			18.0			18.0			18.0	
Effective Green, g (s)		18.0			18.0			18.0			18.0	
Actuated g/C Ratio		0.40			0.40			0.40			0.40	
Clearance Time (s)		4.5			4.5			4.5			4.5	
Lane Grp Cap (vph)		535			488			1415			1415	
v/s Ratio Prot								0.40			c0.45	
v/s Ratio Perm		c0.20			0.05							
v/c Ratio		0.50			0.12			1.01			1.13	
Uniform Delay, d1		10.1			8.5			13.5			13.5	
Progression Factor		1.00			1.00			1.00			1.00	
Incremental Delay, d2		3.3			0.5			26.0			66.9	
Delay (s)		13.4			9.0			39.5			80.4	
Level of Service		B			A			D			F	
Approach Delay (s)		13.4			9.0			39.5			80.4	
Approach LOS		B			A			D			F	

Intersection Summary

HCM 2000 Control Delay	56.4	HCM 2000 Level of Service	E
HCM 2000 Volume to Capacity ratio	0.81		
Actuated Cycle Length (s)	45.0	Sum of lost time (s)	9.0
Intersection Capacity Utilization	60.7%	ICU Level of Service	B
Analysis Period (min)	15		
c Critical Lane Group			

Transportation Plan for Wildfire Evacuation Scenario
 73: PACIFIC COAST HIGHWAY & Morning View Drive

04/20/2020



Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations	↙		↑↑	↗	↘	↑↑
Traffic Volume (vph)	0	134	1186	0	0	953
Future Volume (vph)	0	134	1186	0	0	953
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.5		4.5			4.5
Lane Util. Factor	1.00		0.95			0.95
Frt	0.86		1.00			1.00
Flt Protected	1.00		1.00			1.00
Satd. Flow (prot)	1611		3539			3539
Flt Permitted	1.00		1.00			1.00
Satd. Flow (perm)	1611		3539			3539
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	0	146	1289	0	0	1036
RTOR Reduction (vph)	93	0	0	0	0	0
Lane Group Flow (vph)	53	0	1289	0	0	1036
Turn Type	Prot		NA	Perm	Prot	NA
Protected Phases	2		8		7	4
Permitted Phases				8		
Actuated Green, G (s)	21.7		29.5			29.5
Effective Green, g (s)	21.7		29.5			29.5
Actuated g/C Ratio	0.36		0.49			0.49
Clearance Time (s)	4.5		4.5			4.5
Vehicle Extension (s)	3.0		3.0			3.0
Lane Grp Cap (vph)	580		1734			1734
v/s Ratio Prot	c0.03		c0.36			0.29
v/s Ratio Perm						
v/c Ratio	0.09		0.74			0.60
Uniform Delay, d1	12.7		12.3			11.1
Progression Factor	1.00		1.00			1.00
Incremental Delay, d2	0.3		1.8			0.6
Delay (s)	13.0		14.1			11.6
Level of Service	B		B			B
Approach Delay (s)	13.0		14.1			11.6
Approach LOS	B		B			B

Intersection Summary

HCM 2000 Control Delay	13.0	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.51		
Actuated Cycle Length (s)	60.2	Sum of lost time (s)	13.5
Intersection Capacity Utilization	48.6%	ICU Level of Service	A
Analysis Period (min)	15		

c Critical Lane Group

Transportation Plan for Wildfire Evacuation Scenario
 16: PACIFIC COAST HIGHWAY & Malibu Road

04/20/2020



Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (veh/h)	0	36	0	1447	1416	0
Future Volume (Veh/h)	0	36	0	1447	1416	0
Sign Control	Stop			Free	Free	
Grade	0%			0%	0%	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	0	39	0	1573	1539	0
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type				None	TWLTL	
Median storage (veh)					2	
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume	2326	770	1539			
vC1, stage 1 conf vol	1539					
vC2, stage 2 conf vol	786					
vCu, unblocked vol	2326	770	1539			
tC, single (s)	6.8	6.9	4.1			
tC, 2 stage (s)	5.8					
tF (s)	3.5	3.3	2.2			
p0 queue free %	100	89	100			
cM capacity (veh/h)	148	344	428			
Direction, Lane #	EB 1	NB 1	NB 2	SB 1	SB 2	
Volume Total	39	786	786	1026	513	
Volume Left	0	0	0	0	0	
Volume Right	39	0	0	0	0	
cSH	344	1700	1700	1700	1700	
Volume to Capacity	0.11	0.46	0.46	0.60	0.30	
Queue Length 95th (ft)	10	0	0	0	0	
Control Delay (s)	16.8	0.0	0.0	0.0	0.0	
Lane LOS	C					
Approach Delay (s)	16.8	0.0		0.0		
Approach LOS	C					
Intersection Summary						
Average Delay			0.2			
Intersection Capacity Utilization			49.1%	ICU Level of Service	A	
Analysis Period (min)			15			

Transportation Plan for Wildfire Evacuation Scenario
 19: PACIFIC COAST HIGHWAY & Latigo Canyon Road

04/20/2020



Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (veh/h)	0	64	1386	0	0	1213
Future Volume (Veh/h)	0	64	1386	0	0	1213
Sign Control	Stop		Free		Free	
Grade	0%		0%		0%	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	0	70	1507	0	0	1318
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type	None			None		
Median storage veh						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume	2166	754			1507	
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	2166	754			1507	
tC, single (s)	6.8	6.9			4.1	
tC, 2 stage (s)						
tF (s)	3.5	3.3			2.2	
p0 queue free %	100	80			100	
cM capacity (veh/h)	40	352			440	
Direction, Lane #	WB 1	NB 1	NB 2	SB 1	SB 2	SB 3
Volume Total	70	1005	502	0	659	659
Volume Left	0	0	0	0	0	0
Volume Right	70	0	0	0	0	0
cSH	352	1700	1700	1700	1700	1700
Volume to Capacity	0.20	0.59	0.30	0.00	0.39	0.39
Queue Length 95th (ft)	18	0	0	0	0	0
Control Delay (s)	17.7	0.0	0.0	0.0	0.0	0.0
Lane LOS	C					
Approach Delay (s)	17.7	0.0	0.0			
Approach LOS	C					
Intersection Summary						
Average Delay			0.4			
Intersection Capacity Utilization			48.9%	ICU Level of Service	A	
Analysis Period (min)			15			

Transportation Plan for Wildfire Evacuation Scenario
 49: PACIFIC COAST HIGHWAY & Encinal Canyon

04/20/2020



Movement	WBL	WBR	NBT	NBR	SBL	SBT	
Lane Configurations							
Traffic Volume (veh/h)	0	85	933	0	0	698	
Future Volume (Veh/h)	0	85	933	0	0	698	
Sign Control	Stop		Free			Free	
Grade	0%		0%			0%	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	
Hourly flow rate (vph)	0	92	1014	0	0	759	
Pedestrians							
Lane Width (ft)							
Walking Speed (ft/s)							
Percent Blockage							
Right turn flare (veh)							
Median type			TWLTL			TWLTL	
Median storage veh			2			2	
Upstream signal (ft)							
pX, platoon unblocked							
vC, conflicting volume	1394	507			1014		
vC1, stage 1 conf vol	1014						
vC2, stage 2 conf vol	380						
vCu, unblocked vol	1394	507			1014		
tC, single (s)	6.8	6.9			4.1		
tC, 2 stage (s)	5.8						
tF (s)	3.5	3.3			2.2		
p0 queue free %	100	82			100		
cM capacity (veh/h)	290	511			680		
Direction, Lane #	WB 1	NB 1	NB 2	NB 3	SB 1	SB 2	SB 3
Volume Total	92	507	507	0	0	380	380
Volume Left	0	0	0	0	0	0	0
Volume Right	92	0	0	0	0	0	0
cSH	511	1700	1700	1700	1700	1700	1700
Volume to Capacity	0.18	0.30	0.30	0.00	0.00	0.22	0.22
Queue Length 95th (ft)	16	0	0	0	0	0	0
Control Delay (s)	13.6	0.0	0.0	0.0	0.0	0.0	0.0
Lane LOS	B						
Approach Delay (s)	13.6	0.0			0.0		
Approach LOS	B						
Intersection Summary							
Average Delay			0.7				
Intersection Capacity Utilization			37.7%		ICU Level of Service		A
Analysis Period (min)			15				

Transportation Plan for Wildfire Evacuation Scenario
 52: PACIFIC COAST HIGHWAY & Decker Canyon

04/20/2020



Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (veh/h)	0	23	347	0	0	694
Future Volume (Veh/h)	0	23	347	0	0	694
Sign Control	Stop		Free			Free
Grade	0%		0%			0%
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	0	25	377	0	0	754
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type	TWLTL			TWLTL		
Median storage veh	2			2		
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume	754	188			377	
vC1, stage 1 conf vol	377					
vC2, stage 2 conf vol	377					
vCu, unblocked vol	754	188			377	
tC, single (s)	6.8	6.9			4.1	
tC, 2 stage (s)	5.8					
tF (s)	3.5	3.3			2.2	
p0 queue free %	100	97			100	
cM capacity (veh/h)	544	821			1178	
Direction, Lane #	WB 1	NB 1	NB 2	SB 1	SB 2	SB 3
Volume Total	25	188	188	0	377	377
Volume Left	0	0	0	0	0	0
Volume Right	25	0	0	0	0	0
cSH	821	1700	1700	1700	1700	1700
Volume to Capacity	0.03	0.11	0.11	0.00	0.22	0.22
Queue Length 95th (ft)	2	0	0	0	0	0
Control Delay (s)	9.5	0.0	0.0	0.0	0.0	0.0
Lane LOS	A					
Approach Delay (s)	9.5	0.0		0.0		
Approach LOS	A					
Intersection Summary						
Average Delay			0.2			
Intersection Capacity Utilization			29.2%	ICU Level of Service	A	
Analysis Period (min)			15			

Transportation Plan for Wildfire Evacuation Scenario

53: PACIFIC COAST HIGHWAY & Broad Beach Rd/Trancas Canyon Road

04/20/2020



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕		↗	↕		↗	↕	
Traffic Volume (vph)	244	0	0	54	0	0	0	1313	0	0	1467	0
Future Volume (vph)	244	0	0	54	0	0	0	1313	0	0	1467	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.5			4.5			4.5			4.5	
Lane Util. Factor		1.00			1.00			0.95			0.95	
Frt		1.00			1.00			1.00			1.00	
Flt Protected		0.95			0.95			1.00			1.00	
Satd. Flow (prot)		1770			1770			3539			3539	
Flt Permitted		0.72			0.66			1.00			1.00	
Satd. Flow (perm)		1338			1221			3539			3539	
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	265	0	0	59	0	0	0	1427	0	0	1595	0
RTOR Reduction (vph)	0	0	0	0	0	0	0	0	0	0	0	0
Lane Group Flow (vph)	0	265	0	0	59	0	0	1427	0	0	1595	0
Turn Type	Perm	NA		Perm	NA		Perm	NA		Perm	NA	
Protected Phases		2			2			8			4	
Permitted Phases	2			2			8			4		
Actuated Green, G (s)		18.0			18.0			18.0			18.0	
Effective Green, g (s)		18.0			18.0			18.0			18.0	
Actuated g/C Ratio		0.40			0.40			0.40			0.40	
Clearance Time (s)		4.5			4.5			4.5			4.5	
Lane Grp Cap (vph)		535			488			1415			1415	
v/s Ratio Prot								0.40			c0.45	
v/s Ratio Perm		c0.20			0.05							
v/c Ratio		0.50			0.12			1.01			1.13	
Uniform Delay, d1		10.1			8.5			13.5			13.5	
Progression Factor		1.00			1.00			1.00			1.00	
Incremental Delay, d2		3.3			0.5			26.0			66.9	
Delay (s)		13.4			9.0			39.5			80.4	
Level of Service		B			A			D			F	
Approach Delay (s)		13.4			9.0			39.5			80.4	
Approach LOS		B			A			D			F	

Intersection Summary

HCM 2000 Control Delay	56.4	HCM 2000 Level of Service	E
HCM 2000 Volume to Capacity ratio	0.81		
Actuated Cycle Length (s)	45.0	Sum of lost time (s)	9.0
Intersection Capacity Utilization	60.7%	ICU Level of Service	B
Analysis Period (min)	15		
c Critical Lane Group			

Transportation Plan for Wildfire Evacuation Scenario
 73: PACIFIC COAST HIGHWAY & Morning View Drive

04/20/2020



Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations	↙		↕	↘	↘	↕
Traffic Volume (vph)	0	134	1186	0	0	953
Future Volume (vph)	0	134	1186	0	0	953
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.5		4.5			4.5
Lane Util. Factor	1.00		0.95			0.95
Frt	0.86		1.00			1.00
Flt Protected	1.00		1.00			1.00
Satd. Flow (prot)	1611		3539			3539
Flt Permitted	1.00		1.00			1.00
Satd. Flow (perm)	1611		3539			3539
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	0	146	1289	0	0	1036
RTOR Reduction (vph)	93	0	0	0	0	0
Lane Group Flow (vph)	53	0	1289	0	0	1036
Turn Type	Prot		NA	Perm	Prot	NA
Protected Phases	2		8		7	4
Permitted Phases				8		
Actuated Green, G (s)	21.7		29.5			29.5
Effective Green, g (s)	21.7		29.5			29.5
Actuated g/C Ratio	0.36		0.49			0.49
Clearance Time (s)	4.5		4.5			4.5
Vehicle Extension (s)	3.0		3.0			3.0
Lane Grp Cap (vph)	580		1734			1734
v/s Ratio Prot	c0.03		c0.36			0.29
v/s Ratio Perm						
v/c Ratio	0.09		0.74			0.60
Uniform Delay, d1	12.7		12.3			11.1
Progression Factor	1.00		1.00			1.00
Incremental Delay, d2	0.3		1.8			0.6
Delay (s)	13.0		14.1			11.6
Level of Service	B		B			B
Approach Delay (s)	13.0		14.1			11.6
Approach LOS	B		B			B

Intersection Summary

HCM 2000 Control Delay	13.0	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.51		
Actuated Cycle Length (s)	60.2	Sum of lost time (s)	13.5
Intersection Capacity Utilization	48.6%	ICU Level of Service	A
Analysis Period (min)	15		

c Critical Lane Group

Transportation Plan for Wildfire Evacuation Scenario
 49: PACIFIC COAST HIGHWAY & Encinal Canyon

04/20/2020



Movement	WBL	WBR	NBT	NBR	SBL	SBT	
Lane Configurations							
Traffic Volume (veh/h)	0	85	933	0	0	695	
Future Volume (Veh/h)	0	85	933	0	0	695	
Sign Control	Stop		Free			Free	
Grade	0%		0%			0%	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	
Hourly flow rate (vph)	0	92	1014	0	0	755	
Pedestrians							
Lane Width (ft)							
Walking Speed (ft/s)							
Percent Blockage							
Right turn flare (veh)							
Median type							
Median storage veh							
Upstream signal (ft)							
pX, platoon unblocked							
vC, conflicting volume	1392	507			1014		
vC1, stage 1 conf vol	1014						
vC2, stage 2 conf vol	378						
vCu, unblocked vol	1392	507			1014		
tC, single (s)	6.8	6.9			4.1		
tC, 2 stage (s)	5.8						
tF (s)	3.5	3.3			2.2		
p0 queue free %	100	82			100		
cM capacity (veh/h)	290	511			680		
Direction, Lane #	WB 1	NB 1	NB 2	NB 3	SB 1	SB 2	SB 3
Volume Total	92	507	507	0	0	378	378
Volume Left	0	0	0	0	0	0	0
Volume Right	92	0	0	0	0	0	0
cSH	511	1700	1700	1700	1700	1700	1700
Volume to Capacity	0.18	0.30	0.30	0.00	0.00	0.22	0.22
Queue Length 95th (ft)	16	0	0	0	0	0	0
Control Delay (s)	13.6	0.0	0.0	0.0	0.0	0.0	0.0
Lane LOS	B						
Approach Delay (s)	13.6	0.0			0.0		
Approach LOS	B						
Intersection Summary							
Average Delay			0.7				
Intersection Capacity Utilization			37.7%		ICU Level of Service		A
Analysis Period (min)			15				

Transportation Plan for Wildfire Evacuation Scenario
 52: PACIFIC COAST HIGHWAY & Decker Canyon

04/20/2020

						
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations			 			 
Traffic Volume (veh/h)	0	23	347	0	0	694
Future Volume (Veh/h)	0	23	347	0	0	694
Sign Control	Stop		Free			Free
Grade	0%		0%			0%
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	0	25	377	0	0	754
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type	TWLTL			TWLTL		
Median storage veh	2			2		
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume	754	188			377	
vC1, stage 1 conf vol	377					
vC2, stage 2 conf vol	377					
vCu, unblocked vol	754	188			377	
tC, single (s)	6.8	6.9			4.1	
tC, 2 stage (s)	5.8					
tF (s)	3.5	3.3			2.2	
p0 queue free %	100	97			100	
cM capacity (veh/h)	544	821			1178	
Direction, Lane #	WB 1	NB 1	NB 2	SB 1	SB 2	SB 3
Volume Total	25	188	188	0	377	377
Volume Left	0	0	0	0	0	0
Volume Right	25	0	0	0	0	0
cSH	821	1700	1700	1700	1700	1700
Volume to Capacity	0.03	0.11	0.11	0.00	0.22	0.22
Queue Length 95th (ft)	2	0	0	0	0	0
Control Delay (s)	9.5	0.0	0.0	0.0	0.0	0.0
Lane LOS	A					
Approach Delay (s)	9.5	0.0		0.0		
Approach LOS	A					
Intersection Summary						
Average Delay			0.2			
Intersection Capacity Utilization			29.2%		ICU Level of Service	A
Analysis Period (min)			15			

Transportation Plan for Wildfire Evacuation Scenario
 1: TOPANGA CANYON ROAD & PACIFIC COAST HIGHWAY

04/20/2020



Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	0	1330	2655	0	0	1870
Future Volume (vph)	0	1330	2655	0	0	1870
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.2	6.0			6.0
Lane Util. Factor		1.00	0.91			0.95
Frbp, ped/bikes		0.90	1.00			1.00
Flpb, ped/bikes		1.00	1.00			1.00
Frt		0.85	1.00			1.00
Flt Protected		1.00	1.00			1.00
Satd. Flow (prot)		1427	5085			3539
Flt Permitted		1.00	1.00			1.00
Satd. Flow (perm)		1427	5085			3539
Peak-hour factor, PHF	0.74	0.74	0.90	0.84	0.83	0.85
Adj. Flow (vph)	0	1797	2950	0	0	2200
RTOR Reduction (vph)	0	0	0	0	0	0
Lane Group Flow (vph)	0	1797	2950	0	0	2200
Confl. Peds. (#/hr)		68		42		
Confl. Bikes (#/hr)		1		11		
Turn Type	Prot	pm+ov	NA		Prot	NA
Protected Phases	8	5	6		5	2
Permitted Phases		8				
Actuated Green, G (s)		36.8	119.0			143.0
Effective Green, g (s)		36.8	119.0			143.0
Actuated g/C Ratio		0.22	0.70			0.84
Clearance Time (s)		4.2	6.0			6.0
Vehicle Extension (s)		3.0	3.0			3.0
Lane Grp Cap (vph)		307	3546			2966
v/s Ratio Prot		c0.68	c0.58			0.62
v/s Ratio Perm		0.58				
v/c Ratio		5.85	0.83			0.74
Uniform Delay, d1		66.9	18.6			5.9
Progression Factor		1.00	1.00			1.00
Incremental Delay, d2		2191.1	1.8			1.0
Delay (s)		2258.0	20.4			6.9
Level of Service		F	C			A
Approach Delay (s)	2258.0		20.4			6.9
Approach LOS	F		C			A

Intersection Summary				
HCM 2000 Control Delay		594.9	HCM 2000 Level of Service	F
HCM 2000 Volume to Capacity ratio		2.01		
Actuated Cycle Length (s)		170.6	Sum of lost time (s)	14.8
Intersection Capacity Utilization		147.0%	ICU Level of Service	H
Analysis Period (min)		15		

c Critical Lane Group

Transportation Plan for Wildfire Evacuation Scenario
2: BIG ROCK DRIVE & PACIFIC COAST HIGHWAY

04/20/2020



Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	0	35	2073	0	0	1601
Future Volume (vph)	0	35	2073	0	0	1601
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.2		5.3			5.3
Lane Util. Factor	1.00		0.95			0.95
Frbp, ped/bikes	0.98		1.00			1.00
Flpb, ped/bikes	1.00		1.00			1.00
Frt	0.86		1.00			1.00
Flt Protected	1.00		1.00			1.00
Satd. Flow (prot)	1584		3539			3539
Flt Permitted	1.00		1.00			1.00
Satd. Flow (perm)	1584		3539			3539
Peak-hour factor, PHF	0.71	0.64	0.96	0.73	0.53	0.84
Adj. Flow (vph)	0	55	2159	0	0	1906
RTOR Reduction (vph)	53	0	0	0	0	0
Lane Group Flow (vph)	2	0	2159	0	0	1906
Confl. Bikes (#/hr)		1		3		
Turn Type	Prot		NA		pm+pt	NA
Protected Phases	8		2		1	6
Permitted Phases					6	
Actuated Green, G (s)	2.8		53.0			53.0
Effective Green, g (s)	2.8		53.0			53.0
Actuated g/C Ratio	0.04		0.81			0.81
Clearance Time (s)	4.2		5.3			5.3
Vehicle Extension (s)	2.0		3.0			3.0
Lane Grp Cap (vph)	67		2872			2872
v/s Ratio Prot	c0.00		c0.61			0.54
v/s Ratio Perm						
v/c Ratio	0.04		0.75			0.66
Uniform Delay, d1	30.0		3.0			2.5
Progression Factor	1.00		1.00			1.00
Incremental Delay, d2	0.1		1.1			0.6
Delay (s)	30.0		4.1			3.1
Level of Service	C		A			A
Approach Delay (s)	30.0		4.1			3.1
Approach LOS	C		A			A

Intersection Summary

HCM 2000 Control Delay	4.0	HCM 2000 Level of Service	A
HCM 2000 Volume to Capacity ratio	0.77		
Actuated Cycle Length (s)	65.3	Sum of lost time (s)	13.2
Intersection Capacity Utilization	68.6%	ICU Level of Service	C
Analysis Period (min)	15		
c Critical Lane Group			

Transportation Plan for Wildfire Evacuation Scenario
 3: PACIFIC COAST HIGHWAY & LAS FLORES CANYON ROAD

04/20/2020



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕↔			↕	↕	↕	↕↕	↕	↕	↕↔	
Traffic Volume (vph)	50	0	0	0	0	98	0	1679	0	0	1775	0
Future Volume (vph)	50	0	0	0	0	98	0	1679	0	0	1775	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		5.1				5.1		6.3			6.3	
Lane Util. Factor		1.00				1.00		0.95			0.95	
Frbp, ped/bikes		1.00				0.98		1.00			1.00	
Flpb, ped/bikes		1.00				1.00		1.00			1.00	
Frt		1.00				0.85		1.00			1.00	
Flt Protected		0.95				1.00		1.00			1.00	
Satd. Flow (prot)		1770				1558		3539			3539	
Flt Permitted		0.76				1.00		1.00			1.00	
Satd. Flow (perm)		1410				1558		3539			3539	
Peak-hour factor, PHF	0.60	0.25	0.53	0.39	0.62	0.77	0.75	0.98	0.58	0.58	0.88	0.66
Adj. Flow (vph)	83	0	0	0	0	127	0	1713	0	0	2017	0
RTOR Reduction (vph)	0	0	0	0	0	112	0	0	0	0	0	0
Lane Group Flow (vph)	0	83	0	0	0	15	0	1713	0	0	2017	0
Confl. Peds. (#/hr)			10	10			3					3
Confl. Bikes (#/hr)			2			2			4			24
Turn Type	Perm	NA				Perm	Prot	NA	Perm	pm+pt	NA	
Protected Phases		4			4		1	6		5	2	
Permitted Phases	4			4		4			6	2		
Actuated Green, G (s)		17.1				17.1		120.2			120.2	
Effective Green, g (s)		17.1				17.1		120.2			120.2	
Actuated g/C Ratio		0.11				0.11		0.81			0.81	
Clearance Time (s)		5.1				5.1		6.3			6.3	
Vehicle Extension (s)		3.0				3.0		7.0			7.0	
Lane Grp Cap (vph)		162				179		2860			2860	
v/s Ratio Prot								0.48			c0.57	
v/s Ratio Perm		c0.06				0.01						
v/c Ratio		0.51				0.08		0.60			0.71	
Uniform Delay, d1		61.9				58.8		5.3			6.4	
Progression Factor		1.00				1.00		1.00			0.20	
Incremental Delay, d2		2.7				0.2		0.7			1.1	
Delay (s)		64.6				59.0		6.0			2.4	
Level of Service		E				E		A			A	
Approach Delay (s)		64.6			59.0			6.0			2.4	
Approach LOS		E			E			A			A	
Intersection Summary												
HCM 2000 Control Delay			7.1								A	
HCM 2000 Volume to Capacity ratio			0.71									
Actuated Cycle Length (s)			148.7							16.1		
Intersection Capacity Utilization			77.3%								D	
Analysis Period (min)			15									

c Critical Lane Group

Transportation Plan for Wildfire Evacuation Scenario
 4: PACIFIC COAST HIGHWAY & RAMBLA PACIFICO

04/20/2020



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕	↕	↕	↕↕	↕	↕	↕↕	
Traffic Volume (vph)	37	0	0	0	0	41	0	1971	0	0	1572	0
Future Volume (vph)	37	0	0	0	0	41	0	1971	0	0	1572	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		5.1				5.1		6.3			6.3	
Lane Util. Factor		1.00				1.00		0.95			0.95	
Frbp, ped/bikes		1.00				0.97		1.00			1.00	
Flpb, ped/bikes		0.98				1.00		1.00			1.00	
Frt		1.00				0.85		1.00			1.00	
Flt Protected		0.95				1.00		1.00			1.00	
Satd. Flow (prot)		1733				1533		3539			3539	
Flt Permitted		0.76				1.00		1.00			1.00	
Satd. Flow (perm)		1382				1533		3539			3539	
Peak-hour factor, PHF	0.38	0.75	0.78	0.62	0.75	0.56	0.46	0.98	0.65	0.58	0.85	0.25
Adj. Flow (vph)	97	0	0	0	0	73	0	2011	0	0	1849	0
RTOR Reduction (vph)	0	0	0	0	0	65	0	0	0	0	0	0
Lane Group Flow (vph)	0	97	0	0	0	8	0	2011	0	0	1849	0
Confl. Peds. (#/hr)	11					11	13		2	2		13
Confl. Bikes (#/hr)									6			27
Turn Type	Perm	NA				Perm	Perm	NA	Perm	Prot	NA	
Protected Phases		4			4			6		5	2	
Permitted Phases	4			4		4	6		6			
Actuated Green, G (s)		17.1				17.1		120.2			120.2	
Effective Green, g (s)		17.1				17.1		120.2			120.2	
Actuated g/C Ratio		0.11				0.11		0.81			0.81	
Clearance Time (s)		5.1				5.1		6.3			6.3	
Vehicle Extension (s)		3.0				3.0		7.0			7.0	
Lane Grp Cap (vph)		158				176		2860			2860	
v/s Ratio Prot								c0.57			0.52	
v/s Ratio Perm		c0.07				0.01						
v/c Ratio		0.61				0.05		0.70			0.65	
Uniform Delay, d1		62.7				58.6		6.3			5.7	
Progression Factor		1.00				1.00		0.54			1.00	
Incremental Delay, d2		6.9				0.1		1.2			1.0	
Delay (s)		69.6				58.7		4.6			6.7	
Level of Service		E				E		A			A	
Approach Delay (s)		69.6			58.7			4.6			6.7	
Approach LOS		E			E			A			A	

Intersection Summary

HCM 2000 Control Delay	8.1	HCM 2000 Level of Service	A
HCM 2000 Volume to Capacity ratio	0.72		
Actuated Cycle Length (s)	148.7	Sum of lost time (s)	16.1
Intersection Capacity Utilization	85.7%	ICU Level of Service	E
Analysis Period (min)	15		

c Critical Lane Group

Transportation Plan for Wildfire Evacuation Scenario
 5: PACIFIC COAST HIGHWAY & CARBON CANYON ROAD

04/20/2020



Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations	↔		↑↑	↗	↘	↑↑
Traffic Volume (vph)	0	14	1954	0	0	1662
Future Volume (vph)	0	14	1954	0	0	1662
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.2		5.3			5.3
Lane Util. Factor	1.00		0.95			0.95
Frbp, ped/bikes	0.99		1.00			1.00
Flpb, ped/bikes	1.00		1.00			1.00
Frt	0.86		1.00			1.00
Flt Protected	1.00		1.00			1.00
Satd. Flow (prot)	1590		3539			3539
Flt Permitted	1.00		1.00			1.00
Satd. Flow (perm)	1590		3539			3539
Peak-hour factor, PHF	0.38	0.50	0.97	0.56	0.58	0.94
Adj. Flow (vph)	0	28	2014	0	0	1768
RTOR Reduction (vph)	26	0	0	0	0	0
Lane Group Flow (vph)	2	0	2014	0	0	1768
Confl. Peds. (#/hr)		1		2		
Confl. Bikes (#/hr)				6		
Turn Type	Prot		NA	Perm	Prot	NA
Protected Phases	4		2		1	6
Permitted Phases				2		
Actuated Green, G (s)	4.6		69.1			69.1
Effective Green, g (s)	4.6		69.1			69.1
Actuated g/C Ratio	0.06		0.83			0.83
Clearance Time (s)	4.2		5.3			5.3
Vehicle Extension (s)	2.0		8.0			8.0
Lane Grp Cap (vph)	87		2939			2939
v/s Ratio Prot	c0.00		c0.57			0.50
v/s Ratio Perm						
v/c Ratio	0.02		0.69			0.60
Uniform Delay, d1	37.2		2.8			2.4
Progression Factor	1.00		1.00			1.00
Incremental Delay, d2	0.0		1.3			0.8
Delay (s)	37.2		4.1			3.2
Level of Service	D		A			A
Approach Delay (s)	37.2		4.1			3.2
Approach LOS	D		A			A

Intersection Summary

HCM 2000 Control Delay	3.9	HCM 2000 Level of Service	A
HCM 2000 Volume to Capacity ratio	0.68		
Actuated Cycle Length (s)	83.2	Sum of lost time (s)	13.2
Intersection Capacity Utilization	65.7%	ICU Level of Service	C
Analysis Period (min)	15		

c Critical Lane Group

Transportation Plan for Wildfire Evacuation Scenario
6: PACIFIC COAST HIGHWAY & BUSCH REALTY

04/20/2020



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations							5	↑↑		5	↑↑	
Traffic Volume (vph)	0	0	0	0	0	0	8	1909	0	6	1674	0
Future Volume (vph)	0	0	0	0	0	0	8	1909	0	6	1674	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)							3.7	5.3		3.7	5.3	
Lane Util. Factor							1.00	0.95		1.00	0.95	
Frbp, ped/bikes							1.00	1.00		1.00	1.00	
Flpb, ped/bikes							1.00	1.00		1.00	1.00	
Frt							1.00	1.00		1.00	1.00	
Flt Protected							0.95	1.00		0.95	1.00	
Satd. Flow (prot)							1770	3539		1770	3539	
Flt Permitted							0.95	1.00		0.95	1.00	
Satd. Flow (perm)							1770	3539		1770	3539	
Peak-hour factor, PHF	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.95	0.25	0.38	0.97	0.25
Adj. Flow (vph)	0	0	0	0	0	0	32	2009	0	16	1726	0
RTOR Reduction (vph)	0	0	0	0	0	0	0	0	0	0	0	0
Lane Group Flow (vph)	0	0	0	0	0	0	32	2009	0	16	1726	0
Confl. Bikes (#/hr)							2		8			28
Turn Type							Prot	NA		Prot	NA	
Protected Phases							5	2		1	6	
Permitted Phases												
Actuated Green, G (s)							4.0	92.7		3.2	91.9	
Effective Green, g (s)							4.0	92.7		3.2	91.9	
Actuated g/C Ratio							0.03	0.80		0.03	0.79	
Clearance Time (s)							3.7	5.3		3.7	5.3	
Vehicle Extension (s)							2.0	8.0		2.0	8.0	
Lane Grp Cap (vph)							61	2835		48	2811	
v/s Ratio Prot							c0.02	c0.57		0.01	0.49	
v/s Ratio Perm												
v/c Ratio							0.52	0.71		0.33	0.61	
Uniform Delay, d1							54.9	5.3		55.2	4.8	
Progression Factor							1.00	1.00		1.00	1.00	
Incremental Delay, d2							3.7	1.5		1.5	0.9	
Delay (s)							58.6	6.8		56.7	5.7	
Level of Service							E	A		E	A	
Approach Delay (s)		0.0			0.0			7.6			6.2	
Approach LOS		A			A			A			A	
Intersection Summary												
HCM 2000 Control Delay			7.0				HCM 2000 Level of Service			A		
HCM 2000 Volume to Capacity ratio			0.65									
Actuated Cycle Length (s)			115.7				Sum of lost time (s)			12.0		
Intersection Capacity Utilization			57.2%				ICU Level of Service			B		
Analysis Period (min)			15									
c Critical Lane Group												

Transportation Plan for Wildfire Evacuation Scenario
7: PACIFIC COAST HIGHWAY & MCDONALDS

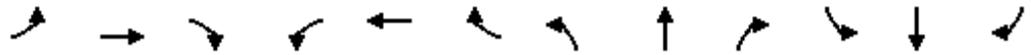
04/20/2020



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations							↔	↑↑		↔	↑↑	
Traffic Volume (vph)	0	0	0	0	0	0	12	1864	0	0	1646	1
Future Volume (vph)	0	0	0	0	0	0	12	1864	0	0	1646	1
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)							3.7	5.3			5.3	
Lane Util. Factor							1.00	0.95			0.95	
Frbp, ped/bikes							1.00	1.00			1.00	
Flpb, ped/bikes							1.00	1.00			1.00	
Frt							1.00	1.00			1.00	
Flt Protected							0.95	1.00			1.00	
Satd. Flow (prot)							1770	3539			3538	
Flt Permitted							0.95	1.00			1.00	
Satd. Flow (perm)							1770	3539			3538	
Peak-hour factor, PHF	0.50	0.25	0.65	0.25	0.25	0.25	0.25	0.96	0.25	0.25	0.95	0.25
Adj. Flow (vph)	0	0	0	0	0	0	48	1942	0	0	1733	4
RTOR Reduction (vph)	0	0	0	0	0	0	0	0	0	0	0	0
Lane Group Flow (vph)	0	0	0	0	0	0	48	1942	0	0	1737	0
Confl. Bikes (#/hr)									22			6
Turn Type							Prot	NA		Prot	NA	
Protected Phases							5	2		1	6	
Permitted Phases												
Actuated Green, G (s)							6.9	91.6			81.0	
Effective Green, g (s)							6.9	91.6			81.0	
Actuated g/C Ratio							0.06	0.76			0.67	
Clearance Time (s)							3.7	5.3			5.3	
Vehicle Extension (s)							2.0	8.0			8.0	
Lane Grp Cap (vph)							101	2687			2376	
v/s Ratio Prot							0.03	c0.55			0.49	
v/s Ratio Perm												
v/c Ratio							0.48	0.72			0.73	
Uniform Delay, d1							55.1	7.7			12.8	
Progression Factor							1.00	1.00			1.00	
Incremental Delay, d2							1.3	1.7			2.0	
Delay (s)							56.4	9.5			14.8	
Level of Service							E	A			B	
Approach Delay (s)		0.0			0.0			10.6			14.8	
Approach LOS		A			A			B			B	
Intersection Summary												
HCM 2000 Control Delay			12.5				HCM 2000 Level of Service				B	
HCM 2000 Volume to Capacity ratio			0.61									
Actuated Cycle Length (s)			120.6				Sum of lost time (s)				12.0	
Intersection Capacity Utilization			55.9%				ICU Level of Service				B	
Analysis Period (min)			15									
c Critical Lane Group												

Transportation Plan for Wildfire Evacuation Scenario
 8: PACIFIC COAST HIGHWAY & MALIBU PIER

04/20/2020



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations							5	↑↑		5	↑↑	
Traffic Volume (vph)	0	0	0	0	0	0	36	1856	2	19	1788	0
Future Volume (vph)	0	0	0	0	0	0	36	1856	2	19	1788	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)							3.7	5.3		3.7	5.3	
Lane Util. Factor							1.00	0.95		1.00	0.95	
Frbp, ped/bikes							1.00	1.00		1.00	1.00	
Flpb, ped/bikes							1.00	1.00		1.00	1.00	
Frt							1.00	1.00		1.00	1.00	
Flt Protected							0.95	1.00		0.95	1.00	
Satd. Flow (prot)							1770	3537		1770	3539	
Flt Permitted							0.95	1.00		0.95	1.00	
Satd. Flow (perm)							1770	3537		1770	3539	
Peak-hour factor, PHF	0.25	0.25	0.25	0.38	0.25	0.44	0.25	0.96	0.25	0.62	0.98	0.25
Adj. Flow (vph)	0	0	0	0	0	0	144	1933	8	31	1824	0
RTOR Reduction (vph)	0	0	0	0	0	0	0	0	0	0	0	0
Lane Group Flow (vph)	0	0	0	0	0	0	144	1941	0	31	1824	0
Confl. Bikes (#/hr)									8			28
Turn Type							Prot	NA		Prot	NA	
Protected Phases							5	2		1	6	
Permitted Phases												
Actuated Green, G (s)							16.6	104.6		4.8	92.8	
Effective Green, g (s)							16.6	104.6		4.8	92.8	
Actuated g/C Ratio							0.11	0.70		0.03	0.62	
Clearance Time (s)							3.7	5.3		3.7	5.3	
Vehicle Extension (s)							2.0	8.0		2.0	8.0	
Lane Grp Cap (vph)							195	2464		56	2188	
v/s Ratio Prot							c0.08	0.55		0.02	c0.52	
v/s Ratio Perm												
v/c Ratio							0.74	0.79		0.55	0.83	
Uniform Delay, d1							64.6	15.3		71.6	22.6	
Progression Factor							1.00	1.00		1.00	1.00	
Incremental Delay, d2							11.8	2.5		6.6	3.7	
Delay (s)							76.5	17.7		78.2	26.2	
Level of Service							E	B		E	C	
Approach Delay (s)		0.0			0.0			21.8			27.1	
Approach LOS		A			A			C			C	
Intersection Summary												
HCM 2000 Control Delay			24.3				HCM 2000 Level of Service				C	
HCM 2000 Volume to Capacity ratio			0.65									
Actuated Cycle Length (s)			150.1				Sum of lost time (s)				12.0	
Intersection Capacity Utilization			55.8%				ICU Level of Service				B	
Analysis Period (min)			15									
c Critical Lane Group												

Transportation Plan for Wildfire Evacuation Scenario
 9: PACIFIC COAST HIGHWAY & CROSS CREEK ROAD

04/20/2020



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕	↗	↖	↕	↗	↖	↕↕	↗	↖	↕↕	
Traffic Volume (vph)	0	0	58	370	0	0	0	1835	0	0	1658	0
Future Volume (vph)	0	0	58	370	0	0	0	1835	0	0	1658	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)			4.2	4.2	4.2			5.3			5.3	
Lane Util. Factor			1.00	0.95	0.95			0.95			0.95	
Frbp, ped/bikes			1.00	1.00	1.00			1.00			1.00	
Flpb, ped/bikes			1.00	1.00	1.00			1.00			1.00	
Frt			0.85	1.00	1.00			1.00			1.00	
Flt Protected			1.00	0.95	0.95			1.00			1.00	
Satd. Flow (prot)			1583	1681	1681			3539			3539	
Flt Permitted			1.00	0.95	0.95			1.00			1.00	
Satd. Flow (perm)			1583	1681	1681			3539			3539	
Peak-hour factor, PHF	0.71	0.75	0.80	0.93	0.62	0.81	0.75	0.97	0.96	0.92	0.95	0.67
Adj. Flow (vph)	0	0	72	398	0	0	0	1892	0	0	1745	0
RTOR Reduction (vph)	0	0	71	0	0	0	0	0	0	0	0	0
Lane Group Flow (vph)	0	0	2	199	199	0	0	1892	0	0	1745	0
Confl. Peds. (#/hr)							199		85			99
Confl. Bikes (#/hr)							3		6			26
Turn Type			Prot	Split	NA	Prot	Prot	NA	Perm	Prot	NA	
Protected Phases	3	3	3	4	4	4	5	2		1	6	
Permitted Phases									2			
Actuated Green, G (s)			5.0	34.3	34.3			117.3			117.3	
Effective Green, g (s)			5.0	34.3	34.3			117.3			117.3	
Actuated g/C Ratio			0.03	0.20	0.20			0.69			0.69	
Clearance Time (s)			4.2	4.2	4.2			5.3			5.3	
Vehicle Extension (s)			2.0	2.0	2.0			7.0			7.0	
Lane Grp Cap (vph)			46	338	338			2437			2437	
v/s Ratio Prot			c0.00	c0.12	0.12			c0.53			0.49	
v/s Ratio Perm												
v/c Ratio			0.05	0.59	0.59			0.78			0.72	
Uniform Delay, d1			80.3	61.6	61.6			17.7			16.3	
Progression Factor			1.00	1.00	1.00			1.00			1.00	
Incremental Delay, d2			0.2	1.7	1.7			2.2			1.7	
Delay (s)			80.5	63.3	63.3			19.9			18.0	
Level of Service			F	E	E			B			B	
Approach Delay (s)		80.5			63.3			19.9			18.0	
Approach LOS		F			E			B			B	
Intersection Summary												
HCM 2000 Control Delay			24.4									C
HCM 2000 Volume to Capacity ratio			0.73									
Actuated Cycle Length (s)			170.3								17.4	
Intersection Capacity Utilization			80.8%									D
Analysis Period (min)			15									

c Critical Lane Group

Transportation Plan for Wildfire Evacuation Scenario
 10: PACIFIC COAST HIGHWAY & WEBB WAY

04/20/2020



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↖	↗		↖	↖	↗	↘	↕	↗	↖	↕	↗
Traffic Volume (vph)	0	0	230	325	0	0	0	1731	0	0	1641	0
Future Volume (vph)	0	0	230	325	0	0	0	1731	0	0	1641	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	11	16	12	11	11	10	11	11	16	11	12	12
Total Lost time (s)		4.7		4.7	4.7			5.8			5.8	
Lane Util. Factor		1.00		0.95	0.95			0.95			0.91	
Frbp, ped/bikes		0.98		1.00	1.00			1.00			1.00	
Flpb, ped/bikes		1.00		1.00	1.00			1.00			1.00	
Frt		0.85		1.00	1.00			1.00			1.00	
Flt Protected		1.00		0.95	0.95			1.00			1.00	
Satd. Flow (prot)		1764		1625	1625			3421			5085	
Flt Permitted		1.00		0.95	0.95			1.00			1.00	
Satd. Flow (perm)		1764		1625	1625			3421			5085	
Peak-hour factor, PHF	0.79	0.79	0.68	0.91	0.68	0.81	0.85	0.91	0.92	0.82	0.95	0.87
Adj. Flow (vph)	0	0	338	357	0	0	0	1902	0	0	1727	0
RTOR Reduction (vph)	0	158	0	0	0	0	0	0	0	0	0	0
Lane Group Flow (vph)	0	180	0	178	179	0	0	1902	0	0	1727	0
Confl. Peds. (#/hr)	28						28		14			4
Confl. Bikes (#/hr)			3			5			5			15
Turn Type	Perm	NA		Split	NA	custom	Prot	NA	pm+ov	Prot	NA	Perm
Protected Phases		4		3	3		5	2	3	1	6	
Permitted Phases	4					6			2			6
Actuated Green, G (s)		29.4		32.0	32.0			146.7			146.7	
Effective Green, g (s)		29.4		32.0	32.0			146.7			146.7	
Actuated g/C Ratio		0.13		0.14	0.14			0.66			0.66	
Clearance Time (s)		4.7		4.7	4.7			5.8			5.8	
Vehicle Extension (s)		3.0		3.0	3.0			8.0			8.0	
Lane Grp Cap (vph)		232		232	232			2247			3340	
v/s Ratio Prot		c0.10		0.11	c0.11			c0.56			0.34	
v/s Ratio Perm												
v/c Ratio		0.78		0.77	0.77			0.85			0.52	
Uniform Delay, d1		93.8		92.1	92.1			29.6			19.9	
Progression Factor		1.00		1.00	1.00			1.00			1.00	
Incremental Delay, d2		14.9		14.1	14.6			4.0			0.5	
Delay (s)		108.7		106.1	106.8			33.6			20.4	
Level of Service		F		F	F			C			C	
Approach Delay (s)		108.7			106.5			33.6			20.4	
Approach LOS		F			F			C			C	

Intersection Summary

HCM 2000 Control Delay	40.2	HCM 2000 Level of Service	D
HCM 2000 Volume to Capacity ratio	0.84		
Actuated Cycle Length (s)	223.3	Sum of lost time (s)	18.9
Intersection Capacity Utilization	83.8%	ICU Level of Service	E
Analysis Period (min)	15		
c Critical Lane Group			

Transportation Plan for Wildfire Evacuation Scenario

11: PACIFIC COAST HIGHWAY & WINTER MESA DR/MALIBU CANYON RD.

04/20/2020



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↖	↑	↗	↖	↖	↗	↖	↑↑	↗	↖↗	↖↗	0
Traffic Volume (vph)	0	0	66	1153	0	0	0	1507	0	0	1411	0
Future Volume (vph)	0	0	66	1153	0	0	0	1507	0	0	1411	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	12	14	12	12	12	12	10	12	10	10	12	11
Total Lost time (s)			4.2	4.6	4.6			6.2			5.7	
Lane Util. Factor			1.00	0.95	0.95			0.95			0.95	
Frbp, ped/bikes			0.98	1.00	1.00			1.00			1.00	
Flpb, ped/bikes			1.00	1.00	1.00			1.00			1.00	
Frt			0.85	1.00	1.00			1.00			1.00	
Flt Protected			1.00	0.95	0.95			1.00			1.00	
Satd. Flow (prot)			1555	1681	1681			3539			3539	
Flt Permitted			1.00	0.95	0.95			1.00			1.00	
Satd. Flow (perm)			1555	1681	1681			3539			3539	
Peak-hour factor, PHF	0.79	0.62	0.72	0.96	0.73	0.82	0.56	0.96	0.83	0.88	0.94	0.69
Adj. Flow (vph)	0	0	92	1201	0	0	0	1570	0	0	1501	0
RTOR Reduction (vph)	0	0	89	0	0	0	0	0	0	0	0	0
Lane Group Flow (vph)	0	0	3	600	601	0	0	1570	0	0	1501	0
Confl. Peds. (#/hr)	2						2					2
Confl. Bikes (#/hr)			1			2			3			10
Turn Type	Perm		Perm	Split	NA	pm+ov	Prot	NA	pm+ov	Prot	NA	
Protected Phases		4		3	3	1	5	2	3	1	6	
Permitted Phases	4		4			3			2			
Actuated Green, G (s)			4.7	30.0	30.0			80.3			80.8	
Effective Green, g (s)			4.7	30.0	30.0			80.3			80.8	
Actuated g/C Ratio			0.04	0.23	0.23			0.62			0.62	
Clearance Time (s)			4.2	4.6	4.6			6.2			5.7	
Vehicle Extension (s)			2.0	3.0	3.0			7.0			7.0	
Lane Grp Cap (vph)			56	387	387			2186			2199	
v/s Ratio Prot				0.36	c0.36			c0.44			0.42	
v/s Ratio Perm			c0.00									
v/c Ratio			0.06	1.55	1.55			0.72			0.68	
Uniform Delay, d1			60.5	50.0	50.0			17.1			16.2	
Progression Factor			1.00	1.00	1.00			1.00			1.00	
Incremental Delay, d2			0.2	260.1	261.3			2.1			1.7	
Delay (s)			60.7	310.1	311.3			19.1			17.9	
Level of Service			E	F	F			B			B	
Approach Delay (s)		60.7			310.7			19.1			17.9	
Approach LOS		E			F			B			B	
Intersection Summary												
HCM 2000 Control Delay			99.8								F	
HCM 2000 Volume to Capacity ratio			0.94									
Actuated Cycle Length (s)			130.0						18.7			
Intersection Capacity Utilization			87.1%								E	
Analysis Period (min)			15									
c Critical Lane Group												

Transportation Plan for Wildfire Evacuation Scenario
 12: PACIFIC COAST HIGHWAY & JOHN TYLER

04/20/2020



Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations	↔↔	↗	↕↕	↘	↘	↕↕
Traffic Volume (vph)	93	0	1986	0	0	1453
Future Volume (vph)	93	0	1986	0	0	1453
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.6		5.7			5.7
Lane Util. Factor	0.97		0.95			0.95
Frbp, ped/bikes	1.00		1.00			1.00
Flpb, ped/bikes	1.00		1.00			1.00
Frt	1.00		1.00			1.00
Flt Protected	0.95		1.00			1.00
Satd. Flow (prot)	3433		3539			3539
Flt Permitted	0.95		1.00			1.00
Satd. Flow (perm)	3433		3539			3539
Peak-hour factor, PHF	0.78	0.64	0.94	0.77	0.68	0.92
Adj. Flow (vph)	119	0	2113	0	0	1579
RTOR Reduction (vph)	0	0	0	0	0	0
Lane Group Flow (vph)	119	0	2113	0	0	1579
Confl. Bikes (#/hr)				2		
Turn Type	Prot	Perm	NA	Perm	Perm	NA
Protected Phases	4		2			6
Permitted Phases		4		2	6	
Actuated Green, G (s)	10.0		114.2			114.2
Effective Green, g (s)	10.0		114.2			114.2
Actuated g/C Ratio	0.07		0.85			0.85
Clearance Time (s)	4.6		5.7			5.7
Vehicle Extension (s)	3.0		8.0			8.0
Lane Grp Cap (vph)	255		3004			3004
v/s Ratio Prot	c0.03		c0.60			0.45
v/s Ratio Perm						
v/c Ratio	0.47		0.70			0.53
Uniform Delay, d1	59.7		3.8			2.8
Progression Factor	1.00		1.00			1.00
Incremental Delay, d2	1.4		1.4			0.6
Delay (s)	61.0		5.2			3.4
Level of Service	E		A			A
Approach Delay (s)	61.0		5.2			3.4
Approach LOS	E		A			A
Intersection Summary						
HCM 2000 Control Delay			6.2		HCM 2000 Level of Service	A
HCM 2000 Volume to Capacity ratio			0.68			
Actuated Cycle Length (s)			134.5		Sum of lost time (s)	10.3
Intersection Capacity Utilization			66.8%		ICU Level of Service	C
Analysis Period (min)			15			
c Critical Lane Group						

Transportation Plan for Wildfire Evacuation Scenario
 17: PACIFIC COAST HIGHWAY & Coral Canyon Road

04/20/2020



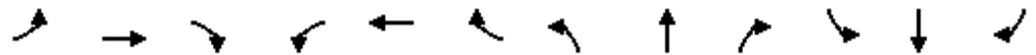
Movement	WBL	WBR	NBU	NBT	NBR	SBL	SBT
Lane Configurations	↙	↗	↘	↑↑		↙	↑↑
Traffic Volume (vph)	82	0	0	1426	0	0	1331
Future Volume (vph)	82	0	0	1426	0	0	1331
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.5			4.5			4.5
Lane Util. Factor	1.00			0.95			0.95
Frt	1.00			1.00			1.00
Flt Protected	0.95			1.00			1.00
Satd. Flow (prot)	1770			3539			3539
Flt Permitted	0.95			1.00			1.00
Satd. Flow (perm)	1770			3539			3539
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	89	0	0	1550	0	0	1447
RTOR Reduction (vph)	0	0	0	0	0	0	0
Lane Group Flow (vph)	89	0	0	1550	0	0	1447
Turn Type	Prot	Perm	Perm	NA		Perm	NA
Protected Phases	8			2			6
Permitted Phases		8	2			6	
Actuated Green, G (s)	18.0			18.0			18.0
Effective Green, g (s)	18.0			18.0			18.0
Actuated g/C Ratio	0.40			0.40			0.40
Clearance Time (s)	4.5			4.5			4.5
Lane Grp Cap (vph)	708			1415			1415
v/s Ratio Prot	c0.05			c0.44			0.41
v/s Ratio Perm							
v/c Ratio	0.13			1.10			1.02
Uniform Delay, d1	8.5			13.5			13.5
Progression Factor	1.00			1.00			1.00
Incremental Delay, d2	0.4			54.4			29.8
Delay (s)	8.9			67.9			43.3
Level of Service	A			E			D
Approach Delay (s)	8.9			67.9			43.3
Approach LOS	A			E			D

Intersection Summary

HCM 2000 Control Delay	54.7	HCM 2000 Level of Service	D
HCM 2000 Volume to Capacity ratio	0.61		
Actuated Cycle Length (s)	45.0	Sum of lost time (s)	9.0
Intersection Capacity Utilization	51.5%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			

Transportation Plan for Wildfire Evacuation Scenario
 21: PACIFIC COAST HIGHWAY & Zumeriz Drive

04/20/2020



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR	
Lane Configurations		↕	↗		↔		↖	↕↔		↖	↕↕	↗	
Traffic Volume (vph)	0	0	148	14	0	0	0	1280	0	0	1123	0	
Future Volume (vph)	0	0	148	14	0	0	0	1280	0	0	1123	0	
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	
Total Lost time (s)			4.5		4.5			4.5			4.5		
Lane Util. Factor			1.00		1.00			0.95			0.95		
Frt			0.85		1.00			1.00			1.00		
Flt Protected			1.00		0.95			1.00			1.00		
Satd. Flow (prot)			1583		1770			3539			3539		
Flt Permitted			1.00		0.95			1.00			1.00		
Satd. Flow (perm)			1583		1770			3539			3539		
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	
Adj. Flow (vph)	0	0	161	15	0	0	0	1391	0	0	1221	0	
RTOR Reduction (vph)	0	0	114	0	0	0	0	0	0	0	0	0	
Lane Group Flow (vph)	0	0	47	0	15	0	0	1391	0	0	1221	0	
Turn Type			Perm	Split	NA		Prot	NA		Prot	NA	Perm	
Protected Phases	2	2		6	6		3	8		7	4		
Permitted Phases			2									4	
Actuated Green, G (s)			18.6		1.2			30.7			30.7		
Effective Green, g (s)			18.6		1.2			30.7			30.7		
Actuated g/C Ratio			0.29		0.02			0.48			0.48		
Clearance Time (s)			4.5		4.5			4.5			4.5		
Vehicle Extension (s)			3.0		3.0			3.0			3.0		
Lane Grp Cap (vph)			460		33			1697			1697		
v/s Ratio Prot					c0.01			c0.39			0.34		
v/s Ratio Perm			c0.03										
v/c Ratio			0.10		0.45			0.82			0.72		
Uniform Delay, d1			16.6		31.1			14.3			13.2		
Progression Factor			1.00		1.00			1.00			1.00		
Incremental Delay, d2			0.4		9.6			3.2			1.5		
Delay (s)			17.0		40.7			17.5			14.7		
Level of Service			B		D			B			B		
Approach Delay (s)		17.0			40.7			17.5			14.7		
Approach LOS		B			D			B			B		
Intersection Summary													
HCM 2000 Control Delay			16.4		HCM 2000 Level of Service						B		
HCM 2000 Volume to Capacity ratio			0.60										
Actuated Cycle Length (s)			64.0		Sum of lost time (s)					18.0			
Intersection Capacity Utilization			55.6%		ICU Level of Service					B			
Analysis Period (min)			15										

c Critical Lane Group

Transportation Plan for Wildfire Evacuation Scenario
 25: PACIFIC COAST HIGHWAY & Paradise Cove Drive

04/20/2020



Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	159	0	0	1353	1172	0
Future Volume (vph)	159	0	0	1353	1172	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.5			4.5	4.5	
Lane Util. Factor	1.00			0.95	0.95	
Frt	1.00			1.00	1.00	
Flt Protected	0.95			1.00	1.00	
Satd. Flow (prot)	1770			3539	3539	
Flt Permitted	0.95			1.00	1.00	
Satd. Flow (perm)	1770			3539	3539	
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	173	0	0	1471	1274	0
RTOR Reduction (vph)	0	0	0	0	0	0
Lane Group Flow (vph)	173	0	0	1471	1274	0
Turn Type	Prot		Prot	NA	NA	
Protected Phases	2		3	8	4	
Permitted Phases						
Actuated Green, G (s)	9.8			41.2	41.2	
Effective Green, g (s)	9.8			41.2	41.2	
Actuated g/C Ratio	0.16			0.69	0.69	
Clearance Time (s)	4.5			4.5	4.5	
Vehicle Extension (s)	3.0			3.0	3.0	
Lane Grp Cap (vph)	289			2430	2430	
v/s Ratio Prot	c0.10			c0.42	0.36	
v/s Ratio Perm						
v/c Ratio	0.60			0.61	0.52	
Uniform Delay, d1	23.3			5.0	4.6	
Progression Factor	1.00			1.00	1.00	
Incremental Delay, d2	3.3			1.1	0.8	
Delay (s)	26.6			6.2	5.4	
Level of Service	C			A	A	
Approach Delay (s)	26.6			6.2	5.4	
Approach LOS	C			A	A	

Intersection Summary

HCM 2000 Control Delay	7.1	HCM 2000 Level of Service	A
HCM 2000 Volume to Capacity ratio	0.66		
Actuated Cycle Length (s)	60.0	Sum of lost time (s)	13.5
Intersection Capacity Utilization	53.7%	ICU Level of Service	A
Analysis Period (min)	15		

c Critical Lane Group

Transportation Plan for Wildfire Evacuation Scenario
 28: PACIFIC COAST HIGHWAY & Kanan Dume Road

04/20/2020



Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations	↔↔	↔	↕↕	↔	↔	↕↕
Traffic Volume (vph)	0	662	1494	0	0	1304
Future Volume (vph)	0	662	1494	0	0	1304
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)		5.1	6.7			6.7
Lane Util. Factor		1.00	0.95			0.95
Frt		0.85	1.00			1.00
Flt Protected		1.00	1.00			1.00
Satd. Flow (prot)		1583	3539			3539
Flt Permitted		1.00	1.00			1.00
Satd. Flow (perm)		1583	3539			3539
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	0	720	1624	0	0	1417
RTOR Reduction (vph)	0	331	0	0	0	0
Lane Group Flow (vph)	0	389	1624	0	0	1417
Turn Type	Prot	Perm	NA	Perm	Prot	NA
Protected Phases	8		2		1	6
Permitted Phases		8		2		
Actuated Green, G (s)		28.0	35.8			65.2
Effective Green, g (s)		28.0	35.8			65.2
Actuated g/C Ratio		0.27	0.34			0.62
Clearance Time (s)		5.1	6.7			6.7
Lane Grp Cap (vph)		422	1206			2197
v/s Ratio Prot			c0.46			c0.40
v/s Ratio Perm		c0.25				
v/c Ratio		0.92	1.35			0.64
Uniform Delay, d1		37.4	34.6			12.6
Progression Factor		1.00	1.00			1.00
Incremental Delay, d2		28.1	161.6			1.5
Delay (s)		65.5	196.2			14.1
Level of Service		E	F			B
Approach Delay (s)	65.5		196.2			14.1
Approach LOS	E		F			B

Intersection Summary

HCM 2000 Control Delay	102.5	HCM 2000 Level of Service	F
HCM 2000 Volume to Capacity ratio	1.03		
Actuated Cycle Length (s)	105.0	Sum of lost time (s)	16.0
Intersection Capacity Utilization	92.1%	ICU Level of Service	F
Analysis Period (min)	15		
c Critical Lane Group			

Transportation Plan for Wildfire Evacuation Scenario
 36: PACIFIC COAST HIGHWAY & Busch Drive

04/20/2020



Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	349	0	1253	0	0	1316
Future Volume (vph)	349	0	1253	0	0	1316
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.5		4.5			4.5
Lane Util. Factor	0.97		0.95			0.95
Frt	1.00		1.00			1.00
Flt Protected	0.95		1.00			1.00
Satd. Flow (prot)	3433		3539			3539
Flt Permitted	0.95		1.00			1.00
Satd. Flow (perm)	3433		3539			3539
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	379	0	1362	0	0	1430
RTOR Reduction (vph)	0	0	0	0	0	0
Lane Group Flow (vph)	379	0	1362	0	0	1430
Turn Type	Prot	Perm	NA	Perm	Perm	NA
Protected Phases	2		8			4
Permitted Phases		2		8	4	
Actuated Green, G (s)	18.0		18.0			18.0
Effective Green, g (s)	18.0		18.0			18.0
Actuated g/C Ratio	0.40		0.40			0.40
Clearance Time (s)	4.5		4.5			4.5
Lane Grp Cap (vph)	1373		1415			1415
v/s Ratio Prot	c0.11		0.38			c0.40
v/s Ratio Perm						
v/c Ratio	0.28		0.96			1.01
Uniform Delay, d1	9.1		13.2			13.5
Progression Factor	1.00		1.00			1.00
Incremental Delay, d2	0.5		16.5			26.6
Delay (s)	9.6		29.7			40.1
Level of Service	A		C			D
Approach Delay (s)	9.6		29.7			40.1
Approach LOS	A		C			D

Intersection Summary			
HCM 2000 Control Delay	32.0	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.64		
Actuated Cycle Length (s)	45.0	Sum of lost time (s)	9.0
Intersection Capacity Utilization	53.8%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			

Transportation Plan for Wildfire Evacuation Scenario
 42: PACIFIC COAST HIGHWAY & Heathercliff Road

04/20/2020



Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	0	401	0	1213	1220	0
Future Volume (vph)	0	401	0	1213	1220	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.5		4.5	4.5	
Lane Util. Factor		1.00		0.95	0.95	
Frt		0.85		1.00	1.00	
Flt Protected		1.00		1.00	1.00	
Satd. Flow (prot)		1583		3539	3539	
Flt Permitted		1.00		1.00	1.00	
Satd. Flow (perm)		1583		3539	3539	
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	0	436	0	1318	1326	0
RTOR Reduction (vph)	0	226	0	0	0	0
Lane Group Flow (vph)	0	210	0	1318	1326	0
Turn Type	Prot	Perm	Prot	NA	NA	Perm
Protected Phases	2		3	8	4	
Permitted Phases		2				4
Actuated Green, G (s)		18.7		32.3	32.3	
Effective Green, g (s)		18.7		32.3	32.3	
Actuated g/C Ratio		0.31		0.54	0.54	
Clearance Time (s)		4.5		4.5	4.5	
Vehicle Extension (s)		3.0		3.0	3.0	
Lane Grp Cap (vph)		493		1905	1905	
v/s Ratio Prot				0.37	c0.37	
v/s Ratio Perm		c0.13				
v/c Ratio		0.43		0.69	0.70	
Uniform Delay, d1		16.4		10.2	10.2	
Progression Factor		1.00		1.00	1.00	
Incremental Delay, d2		2.7		2.1	2.1	
Delay (s)		19.1		12.3	12.4	
Level of Service		B		B	B	
Approach Delay (s)	19.1			12.3	12.4	
Approach LOS	B			B	B	

Intersection Summary

HCM 2000 Control Delay	13.3	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.65		
Actuated Cycle Length (s)	60.0	Sum of lost time (s)	13.5
Intersection Capacity Utilization	66.1%	ICU Level of Service	C
Analysis Period (min)	15		

c Critical Lane Group

Transportation Plan for Wildfire Evacuation Scenario

53: PACIFIC COAST HIGHWAY & Broad Beach Rd/Trancas Canyon Road

04/20/2020



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕		↗	↕		↗	↕	
Traffic Volume (vph)	244	0	0	0	0	54	0	1313	0	0	1467	0
Future Volume (vph)	244	0	0	0	0	54	0	1313	0	0	1467	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.5			4.5			4.5			4.5	
Lane Util. Factor		1.00			1.00			0.95			0.95	
Frt		1.00			0.86			1.00			1.00	
Flt Protected		0.95			1.00			1.00			1.00	
Satd. Flow (prot)		1770			1611			3539			3539	
Flt Permitted		0.72			1.00			1.00			1.00	
Satd. Flow (perm)		1338			1611			3539			3539	
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	265	0	0	0	0	59	0	1427	0	0	1595	0
RTOR Reduction (vph)	0	0	0	0	22	0	0	0	0	0	0	0
Lane Group Flow (vph)	0	265	0	0	37	0	0	1427	0	0	1595	0
Turn Type	Perm	NA			NA		Perm	NA		Perm	NA	
Protected Phases		2			2			8			4	
Permitted Phases	2			2			8			4		
Actuated Green, G (s)		18.0			18.0			18.0			18.0	
Effective Green, g (s)		18.0			18.0			18.0			18.0	
Actuated g/C Ratio		0.40			0.40			0.40			0.40	
Clearance Time (s)		4.5			4.5			4.5			4.5	
Lane Grp Cap (vph)		535			644			1415			1415	
v/s Ratio Prot					0.02			0.40			c0.45	
v/s Ratio Perm		c0.20										
v/c Ratio		0.50			0.06			1.01			1.13	
Uniform Delay, d1		10.1			8.3			13.5			13.5	
Progression Factor		1.00			1.00			1.00			1.00	
Incremental Delay, d2		3.3			0.2			26.0			66.9	
Delay (s)		13.4			8.5			39.5			80.4	
Level of Service		B			A			D			F	
Approach Delay (s)		13.4			8.5			39.5			80.4	
Approach LOS		B			A			D			F	

Intersection Summary

HCM 2000 Control Delay	56.4	HCM 2000 Level of Service	E
HCM 2000 Volume to Capacity ratio	0.81		
Actuated Cycle Length (s)	45.0	Sum of lost time (s)	9.0
Intersection Capacity Utilization	68.2%	ICU Level of Service	C
Analysis Period (min)	15		
c Critical Lane Group			

Transportation Plan for Wildfire Evacuation Scenario
73: PACIFIC COAST HIGHWAY & Morning View Drive

04/20/2020



Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	0	134	1186	0	56	953
Future Volume (vph)	0	134	1186	0	56	953
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.5		4.5		4.5	4.5
Lane Util. Factor	1.00		0.95		1.00	0.95
Frt	0.86		1.00		1.00	1.00
Flt Protected	1.00		1.00		0.95	1.00
Satd. Flow (prot)	1611		3539		1770	3539
Flt Permitted	1.00		1.00		0.95	1.00
Satd. Flow (perm)	1611		3539		1770	3539
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	0	146	1289	0	61	1036
RTOR Reduction (vph)	103	0	0	0	0	0
Lane Group Flow (vph)	43	0	1289	0	61	1036
Turn Type	Prot		NA	Perm	Prot	NA
Protected Phases	2		8		7	4
Permitted Phases				8		
Actuated Green, G (s)	22.5		35.2		4.7	44.4
Effective Green, g (s)	22.5		35.2		4.7	44.4
Actuated g/C Ratio	0.30		0.46		0.06	0.58
Clearance Time (s)	4.5		4.5		4.5	4.5
Vehicle Extension (s)	3.0		3.0		3.0	3.0
Lane Grp Cap (vph)	477		1641		109	2070
v/s Ratio Prot	c0.03		c0.36		0.03	c0.29
v/s Ratio Perm						
v/c Ratio	0.09		0.79		0.56	0.50
Uniform Delay, d1	19.3		17.2		34.6	9.2
Progression Factor	1.00		1.00		1.00	1.00
Incremental Delay, d2	0.4		2.6		6.1	0.2
Delay (s)	19.7		19.7		40.7	9.4
Level of Service	B		B		D	A
Approach Delay (s)	19.7		19.7			11.2
Approach LOS	B		B			B

Intersection Summary

HCM 2000 Control Delay	16.0	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.53		
Actuated Cycle Length (s)	75.9	Sum of lost time (s)	13.5
Intersection Capacity Utilization	56.5%	ICU Level of Service	B
Analysis Period (min)	15		

c Critical Lane Group

Transportation Plan for Wildfire Evacuation Scenario
 16: PACIFIC COAST HIGHWAY & Malibu Road

04/20/2020



Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations		↗		↕	↕	
Traffic Volume (veh/h)	0	36	0	1447	1416	0
Future Volume (Veh/h)	0	36	0	1447	1416	0
Sign Control	Stop			Free	Free	
Grade	0%			0%	0%	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	0	39	0	1573	1539	0
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type				None TWLTL		
Median storage (veh)				2		
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume	2326	770	1539			
vC1, stage 1 conf vol	1539					
vC2, stage 2 conf vol	786					
vCu, unblocked vol	2326	770	1539			
tC, single (s)	6.8	6.9	4.1			
tC, 2 stage (s)	5.8					
tF (s)	3.5	3.3	2.2			
p0 queue free %	100	89	100			
cM capacity (veh/h)	148	344	428			
Direction, Lane #	EB 1	NB 1	NB 2	SB 1	SB 2	
Volume Total	39	786	786	1026	513	
Volume Left	0	0	0	0	0	
Volume Right	39	0	0	0	0	
cSH	344	1700	1700	1700	1700	
Volume to Capacity	0.11	0.46	0.46	0.60	0.30	
Queue Length 95th (ft)	10	0	0	0	0	
Control Delay (s)	16.8	0.0	0.0	0.0	0.0	
Lane LOS	C					
Approach Delay (s)	16.8	0.0		0.0		
Approach LOS	C					
Intersection Summary						
Average Delay	0.2					
Intersection Capacity Utilization	49.1%			ICU Level of Service	A	
Analysis Period (min)	15					

Transportation Plan for Wildfire Evacuation Scenario
 19: PACIFIC COAST HIGHWAY & Latigo Canyon Road

04/20/2020



Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (veh/h)	0	64	1386	0	0	1213
Future Volume (Veh/h)	0	64	1386	0	0	1213
Sign Control	Stop		Free		Free	
Grade	0%		0%		0%	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	0	70	1507	0	0	1318
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type	None			None		
Median storage (veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume	2166	754			1507	
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	2166	754			1507	
tC, single (s)	6.8	6.9			4.1	
tC, 2 stage (s)						
tF (s)	3.5	3.3			2.2	
p0 queue free %	100	80			100	
cM capacity (veh/h)	40	352			440	
Direction, Lane #	WB 1	NB 1	NB 2	SB 1	SB 2	SB 3
Volume Total	70	1005	502	0	659	659
Volume Left	0	0	0	0	0	0
Volume Right	70	0	0	0	0	0
cSH	352	1700	1700	1700	1700	1700
Volume to Capacity	0.20	0.59	0.30	0.00	0.39	0.39
Queue Length 95th (ft)	18	0	0	0	0	0
Control Delay (s)	17.7	0.0	0.0	0.0	0.0	0.0
Lane LOS	C					
Approach Delay (s)	17.7	0.0	0.0			
Approach LOS	C					
Intersection Summary						
Average Delay			0.4			
Intersection Capacity Utilization			48.9%	ICU Level of Service	A	
Analysis Period (min)	15					

Transportation Plan for Wildfire Evacuation Scenario
 49: PACIFIC COAST HIGHWAY & Encinal Canyon

04/20/2020



Movement	WBL	WBR	NBT	NBR	SBL	SBT	
Lane Configurations							
Traffic Volume (veh/h)	0	85	933	38	0	698	
Future Volume (Veh/h)	0	85	933	38	0	698	
Sign Control	Stop		Free			Free	
Grade	0%		0%			0%	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	
Hourly flow rate (vph)	0	92	1014	41	0	759	
Pedestrians							
Lane Width (ft)							
Walking Speed (ft/s)							
Percent Blockage							
Right turn flare (veh)							
Median type			TWLTL			TWLTL	
Median storage veh			2			2	
Upstream signal (ft)							
pX, platoon unblocked							
vC, conflicting volume	1394	507			1055		
vC1, stage 1 conf vol	1014						
vC2, stage 2 conf vol	380						
vCu, unblocked vol	1394	507			1055		
tC, single (s)	6.8	6.9			4.1		
tC, 2 stage (s)	5.8						
tF (s)	3.5	3.3			2.2		
p0 queue free %	100	82			100		
cM capacity (veh/h)	290	511			656		
Direction, Lane #	WB 1	NB 1	NB 2	NB 3	SB 1	SB 2	SB 3
Volume Total	92	507	507	41	0	380	380
Volume Left	0	0	0	0	0	0	0
Volume Right	92	0	0	41	0	0	0
cSH	511	1700	1700	1700	1700	1700	1700
Volume to Capacity	0.18	0.30	0.30	0.02	0.00	0.22	0.22
Queue Length 95th (ft)	16	0	0	0	0	0	0
Control Delay (s)	13.6	0.0	0.0	0.0	0.0	0.0	0.0
Lane LOS	B						
Approach Delay (s)	13.6	0.0			0.0		
Approach LOS	B						
Intersection Summary							
Average Delay			0.7				
Intersection Capacity Utilization			37.7%		ICU Level of Service		A
Analysis Period (min)			15				

Transportation Plan for Wildfire Evacuation Scenario
52: PACIFIC COAST HIGHWAY & Decker Canyon

04/20/2020



Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (veh/h)	0	23	347	0	0	694
Future Volume (Veh/h)	0	23	347	0	0	694
Sign Control	Stop		Free			Free
Grade	0%		0%			0%
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	0	25	377	0	0	754
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type	TWLTL			TWLTL		
Median storage veh	2			2		
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume	754	188			377	
vC1, stage 1 conf vol	377					
vC2, stage 2 conf vol	377					
vCu, unblocked vol	754	188			377	
tC, single (s)	6.8	6.9			4.1	
tC, 2 stage (s)	5.8					
tF (s)	3.5	3.3			2.2	
p0 queue free %	100	97			100	
cM capacity (veh/h)	544	821			1178	
Direction, Lane #	WB 1	NB 1	NB 2	SB 1	SB 2	SB 3
Volume Total	25	188	188	0	377	377
Volume Left	0	0	0	0	0	0
Volume Right	25	0	0	0	0	0
cSH	821	1700	1700	1700	1700	1700
Volume to Capacity	0.03	0.11	0.11	0.00	0.22	0.22
Queue Length 95th (ft)	2	0	0	0	0	0
Control Delay (s)	9.5	0.0	0.0	0.0	0.0	0.0
Lane LOS	A					
Approach Delay (s)	9.5	0.0		0.0		
Approach LOS	A					
Intersection Summary						
Average Delay			0.2			
Intersection Capacity Utilization			29.2%	ICU Level of Service	A	
Analysis Period (min)			15			

Transportation Plan for Wildfire Evacuation Scenario
 1: TOPANGA CANYON ROAD & PACIFIC COAST HIGHWAY

04/20/2020



Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	0	1330	2655	0	0	1870
Future Volume (vph)	0	1330	2655	0	0	1870
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.2	6.0			6.0
Lane Util. Factor		1.00	0.91			0.95
Frbp, ped/bikes		0.90	1.00			1.00
Flpb, ped/bikes		1.00	1.00			1.00
Frt		0.85	1.00			1.00
Flt Protected		1.00	1.00			1.00
Satd. Flow (prot)		1427	5085			3539
Flt Permitted		1.00	1.00			1.00
Satd. Flow (perm)		1427	5085			3539
Peak-hour factor, PHF	0.74	0.74	0.90	0.84	0.83	0.85
Adj. Flow (vph)	0	1797	2950	0	0	2200
RTOR Reduction (vph)	0	0	0	0	0	0
Lane Group Flow (vph)	0	1797	2950	0	0	2200
Confl. Peds. (#/hr)		68		42		
Confl. Bikes (#/hr)		1		11		
Turn Type	Prot	pm+ov	NA		Prot	NA
Protected Phases	8	5	6		5	2
Permitted Phases		8				
Actuated Green, G (s)		36.8	119.0			143.0
Effective Green, g (s)		36.8	119.0			143.0
Actuated g/C Ratio		0.22	0.70			0.84
Clearance Time (s)		4.2	6.0			6.0
Vehicle Extension (s)		3.0	3.0			3.0
Lane Grp Cap (vph)		307	3546			2966
v/s Ratio Prot		c0.68	c0.58			0.62
v/s Ratio Perm		0.58				
v/c Ratio		5.85	0.83			0.74
Uniform Delay, d1		66.9	18.6			5.9
Progression Factor		1.00	1.00			1.00
Incremental Delay, d2		2191.1	1.8			1.0
Delay (s)		2258.0	20.4			6.9
Level of Service		F	C			A
Approach Delay (s)	2258.0		20.4			6.9
Approach LOS	F		C			A

Intersection Summary

HCM 2000 Control Delay	594.9	HCM 2000 Level of Service	F
HCM 2000 Volume to Capacity ratio	2.01		
Actuated Cycle Length (s)	170.6	Sum of lost time (s)	14.8
Intersection Capacity Utilization	147.0%	ICU Level of Service	H
Analysis Period (min)	15		

c Critical Lane Group

Transportation Plan for Wildfire Evacuation Scenario
2: BIG ROCK DRIVE & PACIFIC COAST HIGHWAY

04/20/2020



Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	0	35	2073	0	0	1601
Future Volume (vph)	0	35	2073	0	0	1601
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.2		5.3			5.3
Lane Util. Factor	1.00		0.95			0.95
Frbp, ped/bikes	0.98		1.00			1.00
Flpb, ped/bikes	1.00		1.00			1.00
Frt	0.86		1.00			1.00
Flt Protected	1.00		1.00			1.00
Satd. Flow (prot)	1584		3539			3539
Flt Permitted	1.00		1.00			1.00
Satd. Flow (perm)	1584		3539			3539
Peak-hour factor, PHF	0.71	0.64	0.96	0.73	0.53	0.84
Adj. Flow (vph)	0	55	2159	0	0	1906
RTOR Reduction (vph)	53	0	0	0	0	0
Lane Group Flow (vph)	2	0	2159	0	0	1906
Confl. Bikes (#/hr)		1		3		
Turn Type	Prot		NA		pm+pt	NA
Protected Phases	8		2		1	6
Permitted Phases					6	
Actuated Green, G (s)	2.8		53.0			53.0
Effective Green, g (s)	2.8		53.0			53.0
Actuated g/C Ratio	0.04		0.81			0.81
Clearance Time (s)	4.2		5.3			5.3
Vehicle Extension (s)	2.0		3.0			3.0
Lane Grp Cap (vph)	67		2872			2872
v/s Ratio Prot	c0.00		c0.61			0.54
v/s Ratio Perm						
v/c Ratio	0.04		0.75			0.66
Uniform Delay, d1	30.0		3.0			2.5
Progression Factor	1.00		1.00			1.00
Incremental Delay, d2	0.1		1.1			0.6
Delay (s)	30.0		4.1			3.1
Level of Service	C		A			A
Approach Delay (s)	30.0		4.1			3.1
Approach LOS	C		A			A

Intersection Summary

HCM 2000 Control Delay	4.0	HCM 2000 Level of Service	A
HCM 2000 Volume to Capacity ratio	0.77		
Actuated Cycle Length (s)	65.3	Sum of lost time (s)	13.2
Intersection Capacity Utilization	68.6%	ICU Level of Service	C
Analysis Period (min)	15		
c Critical Lane Group			

Transportation Plan for Wildfire Evacuation Scenario
 3: PACIFIC COAST HIGHWAY & LAS FLORES CANYON ROAD

04/20/2020



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕	↕	↕	↕↕	↕	↕	↕↕	
Traffic Volume (vph)	0	0	50	98	0	0	0	1679	0	0	1775	0
Future Volume (vph)	0	0	50	98	0	0	0	1679	0	0	1775	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		5.1			5.1			6.3			6.3	
Lane Util. Factor		1.00			1.00			0.95			0.95	
Frbp, ped/bikes		0.97			1.00			1.00			1.00	
Flpb, ped/bikes		1.00			0.98			1.00			1.00	
Frt		0.86			1.00			1.00			1.00	
Flt Protected		1.00			0.95			1.00			1.00	
Satd. Flow (prot)		1557			1740			3539			3539	
Flt Permitted		1.00			0.64			1.00			1.00	
Satd. Flow (perm)		1557			1178			3539			3539	
Peak-hour factor, PHF	0.60	0.25	0.53	0.39	0.62	0.77	0.75	0.98	0.58	0.58	0.88	0.66
Adj. Flow (vph)	0	0	94	251	0	0	0	1713	0	0	2017	0
RTOR Reduction (vph)	0	77	0	0	0	0	0	0	0	0	0	0
Lane Group Flow (vph)	0	17	0	0	251	0	0	1713	0	0	2017	0
Confl. Peds. (#/hr)			10	10			3					3
Confl. Bikes (#/hr)			2			2			4			24
Turn Type		NA		Perm	NA	Perm	Prot	NA	Perm	pm+pt	NA	
Protected Phases		4			4		1	6		5	2	
Permitted Phases	4			4		4			6		2	
Actuated Green, G (s)		28.0			28.0			120.0			120.0	
Effective Green, g (s)		28.0			28.0			120.0			120.0	
Actuated g/C Ratio		0.18			0.18			0.75			0.75	
Clearance Time (s)		5.1			5.1			6.3			6.3	
Vehicle Extension (s)		3.0			3.0			7.0			7.0	
Lane Grp Cap (vph)		273			206			2664			2664	
v/s Ratio Prot		0.01						0.48			c0.57	
v/s Ratio Perm					c0.21							
v/c Ratio		0.06			1.22			0.64			0.76	
Uniform Delay, d1		54.7			65.7			9.4			11.3	
Progression Factor		1.00			1.00			1.00			0.33	
Incremental Delay, d2		0.1			134.0			1.0			1.4	
Delay (s)		54.8			199.7			10.5			5.1	
Level of Service		D			F			B			A	
Approach Delay (s)		54.8			199.7			10.5			5.1	
Approach LOS		D			F			B			A	
Intersection Summary												
HCM 2000 Control Delay			20.5									C
HCM 2000 Volume to Capacity ratio			0.87									
Actuated Cycle Length (s)			159.4							16.1		
Intersection Capacity Utilization			70.7%									C
Analysis Period (min)			15									

c Critical Lane Group

Transportation Plan for Wildfire Evacuation Scenario
 4: PACIFIC COAST HIGHWAY & RAMBLA PACIFICO

04/20/2020



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕	↕	↕	↕↕	↕	↕	↕↕	
Traffic Volume (vph)	0	0	37	41	0	0	0	1971	0	0	1572	0
Future Volume (vph)	0	0	37	41	0	0	0	1971	0	0	1572	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		5.1			5.1			6.3			6.3	
Lane Util. Factor		1.00			1.00			0.95			0.95	
Frb, ped/bikes		1.00			1.00			1.00			1.00	
Flpb, ped/bikes		1.00			1.00			1.00			1.00	
Frt		0.86			1.00			1.00			1.00	
Flt Protected		1.00			0.95			1.00			1.00	
Satd. Flow (prot)		1611			1770			3539			3539	
Flt Permitted		1.00			0.73			1.00			1.00	
Satd. Flow (perm)		1611			1353			3539			3539	
Peak-hour factor, PHF	0.38	0.75	0.78	0.62	0.75	0.56	0.46	0.98	0.65	0.58	0.85	0.25
Adj. Flow (vph)	0	0	47	66	0	0	0	2011	0	0	1849	0
RTOR Reduction (vph)	0	39	0	0	0	0	0	0	0	0	0	0
Lane Group Flow (vph)	0	8	0	0	66	0	0	2011	0	0	1849	0
Confl. Peds. (#/hr)	11					11	13		2	2		13
Confl. Bikes (#/hr)									6			27
Turn Type		NA		Perm	NA	Perm	Perm	NA	Perm	Prot	NA	
Protected Phases		4			4			6		5		2
Permitted Phases	4			4		4	6		6			
Actuated Green, G (s)		28.0			28.0			120.0			120.0	
Effective Green, g (s)		28.0			28.0			120.0			120.0	
Actuated g/C Ratio		0.18			0.18			0.75			0.75	
Clearance Time (s)		5.1			5.1			6.3			6.3	
Vehicle Extension (s)		3.0			3.0			7.0			7.0	
Lane Grp Cap (vph)		282			237			2664			2664	
v/s Ratio Prot		0.01						c0.57			0.52	
v/s Ratio Perm					c0.05							
v/c Ratio		0.03			0.28			0.75			0.69	
Uniform Delay, d1		54.4			56.9			11.3			10.2	
Progression Factor		1.00			1.00			0.29			1.00	
Incremental Delay, d2		0.0			0.6			1.5			1.4	
Delay (s)		54.5			57.6			4.9			11.6	
Level of Service		D			E			A			B	
Approach Delay (s)		54.5			57.6			4.9			11.6	
Approach LOS		D			E			A			B	
Intersection Summary												
HCM 2000 Control Delay			9.4									A
HCM 2000 Volume to Capacity ratio			0.69									
Actuated Cycle Length (s)			159.4							16.1		
Intersection Capacity Utilization			85.7%									E
Analysis Period (min)			15									

c Critical Lane Group

Transportation Plan for Wildfire Evacuation Scenario
 5: PACIFIC COAST HIGHWAY & CARBON CANYON ROAD

04/20/2020



Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	14	0	1954	0	0	1662
Future Volume (vph)	14	0	1954	0	0	1662
Ideal Flow (vphp)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.2		5.3			5.3
Lane Util. Factor	1.00		0.95			0.95
Frbp, ped/bikes	1.00		1.00			1.00
Flpb, ped/bikes	1.00		1.00			1.00
Frt	1.00		1.00			1.00
Flt Protected	0.95		1.00			1.00
Satd. Flow (prot)	1770		3539			3539
Flt Permitted	0.95		1.00			1.00
Satd. Flow (perm)	1770		3539			3539
Peak-hour factor, PHF	0.38	0.50	0.97	0.56	0.58	0.94
Adj. Flow (vph)	37	0	2014	0	0	1768
RTOR Reduction (vph)	0	0	0	0	0	0
Lane Group Flow (vph)	37	0	2014	0	0	1768
Confl. Peds. (#/hr)		1		2		
Confl. Bikes (#/hr)				6		
Turn Type	Prot		NA	Perm	Prot	NA
Protected Phases	4		2		1	6
Permitted Phases				2		
Actuated Green, G (s)	7.4		71.5			71.5
Effective Green, g (s)	7.4		71.5			71.5
Actuated g/C Ratio	0.08		0.81			0.81
Clearance Time (s)	4.2		5.3			5.3
Vehicle Extension (s)	2.0		8.0			8.0
Lane Grp Cap (vph)	148		2862			2862
v/s Ratio Prot	c0.02		c0.57			0.50
v/s Ratio Perm						
v/c Ratio	0.25		0.70			0.62
Uniform Delay, d1	37.9		3.7			3.2
Progression Factor	1.00		1.00			1.00
Incremental Delay, d2	0.3		1.5			0.9
Delay (s)	38.2		5.2			4.2
Level of Service	D		A			A
Approach Delay (s)	38.2		5.2			4.2
Approach LOS	D		A			A

Intersection Summary

HCM 2000 Control Delay	5.1	HCM 2000 Level of Service	A
HCM 2000 Volume to Capacity ratio	0.69		
Actuated Cycle Length (s)	88.4	Sum of lost time (s)	13.2
Intersection Capacity Utilization	65.7%	ICU Level of Service	C
Analysis Period (min)	15		

c Critical Lane Group

Transportation Plan for Wildfire Evacuation Scenario
6: PACIFIC COAST HIGHWAY & BUSCH REALTY

04/20/2020



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations							5	↑↑		5	↑↑	
Traffic Volume (vph)	0	0	0	0	0	0	8	1909	0	6	1674	0
Future Volume (vph)	0	0	0	0	0	0	8	1909	0	6	1674	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)							3.7	5.3		3.7	5.3	
Lane Util. Factor							1.00	0.95		1.00	0.95	
Frbp, ped/bikes							1.00	1.00		1.00	1.00	
Flpb, ped/bikes							1.00	1.00		1.00	1.00	
Frt							1.00	1.00		1.00	1.00	
Flt Protected							0.95	1.00		0.95	1.00	
Satd. Flow (prot)							1770	3539		1770	3539	
Flt Permitted							0.95	1.00		0.95	1.00	
Satd. Flow (perm)							1770	3539		1770	3539	
Peak-hour factor, PHF	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.95	0.25	0.38	0.97	0.25
Adj. Flow (vph)	0	0	0	0	0	0	32	2009	0	16	1726	0
RTOR Reduction (vph)	0	0	0	0	0	0	0	0	0	0	0	0
Lane Group Flow (vph)	0	0	0	0	0	0	32	2009	0	16	1726	0
Confl. Bikes (#/hr)							2		8			28
Turn Type							Prot	NA		Prot	NA	
Protected Phases							5	2		1	6	
Permitted Phases												
Actuated Green, G (s)							4.0	92.7		3.2	91.9	
Effective Green, g (s)							4.0	92.7		3.2	91.9	
Actuated g/C Ratio							0.03	0.80		0.03	0.79	
Clearance Time (s)							3.7	5.3		3.7	5.3	
Vehicle Extension (s)							2.0	8.0		2.0	8.0	
Lane Grp Cap (vph)							61	2835		48	2811	
v/s Ratio Prot							c0.02	c0.57		0.01	0.49	
v/s Ratio Perm												
v/c Ratio							0.52	0.71		0.33	0.61	
Uniform Delay, d1							54.9	5.3		55.2	4.8	
Progression Factor							1.00	1.00		1.00	1.00	
Incremental Delay, d2							3.7	1.5		1.5	0.9	
Delay (s)							58.6	6.8		56.7	5.7	
Level of Service							E	A		E	A	
Approach Delay (s)		0.0			0.0			7.6			6.2	
Approach LOS		A			A			A			A	
Intersection Summary												
HCM 2000 Control Delay			7.0				HCM 2000 Level of Service			A		
HCM 2000 Volume to Capacity ratio			0.65									
Actuated Cycle Length (s)			115.7				Sum of lost time (s)			12.0		
Intersection Capacity Utilization			57.2%				ICU Level of Service			B		
Analysis Period (min)			15									
c Critical Lane Group												

Transportation Plan for Wildfire Evacuation Scenario
7: PACIFIC COAST HIGHWAY & MCDONALDS

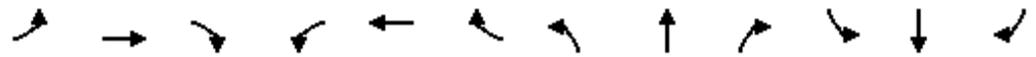
04/20/2020



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations							5	↑↑		5	↑↑	
Traffic Volume (vph)	0	0	0	0	0	0	12	1864	0	0	1646	1
Future Volume (vph)	0	0	0	0	0	0	12	1864	0	0	1646	1
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)							3.7	5.3			5.3	
Lane Util. Factor							1.00	0.95			0.95	
Frbp, ped/bikes							1.00	1.00			1.00	
Flpb, ped/bikes							1.00	1.00			1.00	
Frt							1.00	1.00			1.00	
Flt Protected							0.95	1.00			1.00	
Satd. Flow (prot)							1770	3539			3538	
Flt Permitted							0.95	1.00			1.00	
Satd. Flow (perm)							1770	3539			3538	
Peak-hour factor, PHF	0.50	0.25	0.65	0.25	0.25	0.25	0.25	0.96	0.25	0.25	0.95	0.25
Adj. Flow (vph)	0	0	0	0	0	0	48	1942	0	0	1733	4
RTOR Reduction (vph)	0	0	0	0	0	0	0	0	0	0	0	0
Lane Group Flow (vph)	0	0	0	0	0	0	48	1942	0	0	1737	0
Confl. Bikes (#/hr)									22			6
Turn Type							Prot	NA		Prot	NA	
Protected Phases							5	2		1	6	
Permitted Phases												
Actuated Green, G (s)							6.9	91.6			81.0	
Effective Green, g (s)							6.9	91.6			81.0	
Actuated g/C Ratio							0.06	0.76			0.67	
Clearance Time (s)							3.7	5.3			5.3	
Vehicle Extension (s)							2.0	8.0			8.0	
Lane Grp Cap (vph)							101	2687			2376	
v/s Ratio Prot							0.03	c0.55			0.49	
v/s Ratio Perm												
v/c Ratio							0.48	0.72			0.73	
Uniform Delay, d1							55.1	7.7			12.8	
Progression Factor							1.00	1.00			1.00	
Incremental Delay, d2							1.3	1.7			2.0	
Delay (s)							56.4	9.5			14.8	
Level of Service							E	A			B	
Approach Delay (s)		0.0			0.0			10.6			14.8	
Approach LOS		A			A			B			B	
Intersection Summary												
HCM 2000 Control Delay			12.5				HCM 2000 Level of Service				B	
HCM 2000 Volume to Capacity ratio			0.61									
Actuated Cycle Length (s)			120.6				Sum of lost time (s)				12.0	
Intersection Capacity Utilization			55.9%				ICU Level of Service				B	
Analysis Period (min)			15									
c Critical Lane Group												

Transportation Plan for Wildfire Evacuation Scenario
 8: PACIFIC COAST HIGHWAY & MALIBU PIER

04/20/2020



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations							5	↑↑		5	↑↑	
Traffic Volume (vph)	0	0	0	0	0	0	36	1856	2	19	1788	0
Future Volume (vph)	0	0	0	0	0	0	36	1856	2	19	1788	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)							3.7	5.3		3.7	5.3	
Lane Util. Factor							1.00	0.95		1.00	0.95	
Frbp, ped/bikes							1.00	1.00		1.00	1.00	
Flpb, ped/bikes							1.00	1.00		1.00	1.00	
Frt							1.00	1.00		1.00	1.00	
Flt Protected							0.95	1.00		0.95	1.00	
Satd. Flow (prot)							1770	3537		1770	3539	
Flt Permitted							0.95	1.00		0.95	1.00	
Satd. Flow (perm)							1770	3537		1770	3539	
Peak-hour factor, PHF	0.25	0.25	0.25	0.38	0.25	0.44	0.25	0.96	0.25	0.62	0.98	0.25
Adj. Flow (vph)	0	0	0	0	0	0	144	1933	8	31	1824	0
RTOR Reduction (vph)	0	0	0	0	0	0	0	0	0	0	0	0
Lane Group Flow (vph)	0	0	0	0	0	0	144	1941	0	31	1824	0
Confl. Bikes (#/hr)									8			28
Turn Type							Prot	NA		Prot	NA	
Protected Phases							5	2		1	6	
Permitted Phases												
Actuated Green, G (s)							16.6	104.6		4.8	92.8	
Effective Green, g (s)							16.6	104.6		4.8	92.8	
Actuated g/C Ratio							0.11	0.70		0.03	0.62	
Clearance Time (s)							3.7	5.3		3.7	5.3	
Vehicle Extension (s)							2.0	8.0		2.0	8.0	
Lane Grp Cap (vph)							195	2464		56	2188	
v/s Ratio Prot							c0.08	0.55		0.02	c0.52	
v/s Ratio Perm												
v/c Ratio							0.74	0.79		0.55	0.83	
Uniform Delay, d1							64.6	15.3		71.6	22.6	
Progression Factor							1.00	1.00		1.00	1.00	
Incremental Delay, d2							11.8	2.5		6.6	3.7	
Delay (s)							76.5	17.7		78.2	26.2	
Level of Service							E	B		E	C	
Approach Delay (s)		0.0			0.0			21.8			27.1	
Approach LOS		A			A			C			C	
Intersection Summary												
HCM 2000 Control Delay			24.3				HCM 2000 Level of Service				C	
HCM 2000 Volume to Capacity ratio			0.65									
Actuated Cycle Length (s)			150.1				Sum of lost time (s)				12.0	
Intersection Capacity Utilization			55.8%				ICU Level of Service				B	
Analysis Period (min)			15									
c Critical Lane Group												

Transportation Plan for Wildfire Evacuation Scenario
 9: PACIFIC COAST HIGHWAY & CROSS CREEK ROAD

04/20/2020



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕	↗	↖	↕	↗	↖	↕↕	↗	↖	↕↕	
Traffic Volume (vph)	0	0	58	370	0	0	0	1835	0	0	1658	0
Future Volume (vph)	0	0	58	370	0	0	0	1835	0	0	1658	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)			4.2	4.2	4.2			5.3			5.3	
Lane Util. Factor			1.00	0.95	0.95			0.95			0.95	
Frbp, ped/bikes			1.00	1.00	1.00			1.00			1.00	
Flpb, ped/bikes			1.00	1.00	1.00			1.00			1.00	
Frt			0.85	1.00	1.00			1.00			1.00	
Flt Protected			1.00	0.95	0.95			1.00			1.00	
Satd. Flow (prot)			1583	1681	1681			3539			3539	
Flt Permitted			1.00	0.95	0.95			1.00			1.00	
Satd. Flow (perm)			1583	1681	1681			3539			3539	
Peak-hour factor, PHF	0.71	0.75	0.80	0.93	0.62	0.81	0.75	0.97	0.96	0.92	0.95	0.67
Adj. Flow (vph)	0	0	72	398	0	0	0	1892	0	0	1745	0
RTOR Reduction (vph)	0	0	71	0	0	0	0	0	0	0	0	0
Lane Group Flow (vph)	0	0	2	199	199	0	0	1892	0	0	1745	0
Confl. Peds. (#/hr)							199		85			99
Confl. Bikes (#/hr)							3		6			26
Turn Type			Prot	Split	NA	Prot	Prot	NA	Perm	Prot	NA	
Protected Phases	3	3	3	4	4	4	5	2		1	6	
Permitted Phases									2			
Actuated Green, G (s)			5.0	34.3	34.3			117.3			117.3	
Effective Green, g (s)			5.0	34.3	34.3			117.3			117.3	
Actuated g/C Ratio			0.03	0.20	0.20			0.69			0.69	
Clearance Time (s)			4.2	4.2	4.2			5.3			5.3	
Vehicle Extension (s)			2.0	2.0	2.0			7.0			7.0	
Lane Grp Cap (vph)			46	338	338			2437			2437	
v/s Ratio Prot			c0.00	c0.12	0.12			c0.53			0.49	
v/s Ratio Perm												
v/c Ratio			0.05	0.59	0.59			0.78			0.72	
Uniform Delay, d1			80.3	61.6	61.6			17.7			16.3	
Progression Factor			1.00	1.00	1.00			1.00			1.00	
Incremental Delay, d2			0.2	1.7	1.7			2.2			1.7	
Delay (s)			80.5	63.3	63.3			19.9			18.0	
Level of Service			F	E	E			B			B	
Approach Delay (s)		80.5			63.3			19.9			18.0	
Approach LOS		F			E			B			B	
Intersection Summary												
HCM 2000 Control Delay			24.4									C
HCM 2000 Volume to Capacity ratio			0.73									
Actuated Cycle Length (s)			170.3								17.4	
Intersection Capacity Utilization			80.8%									D
Analysis Period (min)			15									

c Critical Lane Group

Transportation Plan for Wildfire Evacuation Scenario
 10: PACIFIC COAST HIGHWAY & WEBB WAY

04/20/2020



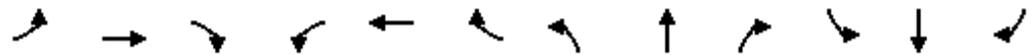
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↖	↗		↖	↖	↗	↘	↕	↗	↖↗	↕↕↕	↖
Traffic Volume (vph)	0	0	230	325	0	0	0	1731	0	0	1641	0
Future Volume (vph)	0	0	230	325	0	0	0	1731	0	0	1641	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	11	16	12	11	11	10	11	11	16	11	12	12
Total Lost time (s)		4.7		4.7	4.7			5.8			5.8	
Lane Util. Factor		1.00		0.95	0.95			0.95			0.91	
Frbp, ped/bikes		0.98		1.00	1.00			1.00			1.00	
Flpb, ped/bikes		1.00		1.00	1.00			1.00			1.00	
Frt		0.85		1.00	1.00			1.00			1.00	
Flt Protected		1.00		0.95	0.95			1.00			1.00	
Satd. Flow (prot)		1764		1625	1625			3421			5085	
Flt Permitted		1.00		0.95	0.95			1.00			1.00	
Satd. Flow (perm)		1764		1625	1625			3421			5085	
Peak-hour factor, PHF	0.79	0.79	0.68	0.91	0.68	0.81	0.85	0.91	0.92	0.82	0.95	0.87
Adj. Flow (vph)	0	0	338	357	0	0	0	1902	0	0	1727	0
RTOR Reduction (vph)	0	158	0	0	0	0	0	0	0	0	0	0
Lane Group Flow (vph)	0	180	0	178	179	0	0	1902	0	0	1727	0
Confl. Peds. (#/hr)	28						28		14			4
Confl. Bikes (#/hr)			3				5		5			15
Turn Type	Perm	NA		Split	NA	custom	Prot	NA	pm+ov	Prot	NA	Perm
Protected Phases		4		3	3		5	2	3	1	6	
Permitted Phases	4					6			2			6
Actuated Green, G (s)		29.4		32.0	32.0			146.7			146.7	
Effective Green, g (s)		29.4		32.0	32.0			146.7			146.7	
Actuated g/C Ratio		0.13		0.14	0.14			0.66			0.66	
Clearance Time (s)		4.7		4.7	4.7			5.8			5.8	
Vehicle Extension (s)		3.0		3.0	3.0			8.0			8.0	
Lane Grp Cap (vph)		232		232	232			2247			3340	
v/s Ratio Prot		c0.10		0.11	c0.11			c0.56			0.34	
v/s Ratio Perm												
v/c Ratio		0.78		0.77	0.77			0.85			0.52	
Uniform Delay, d1		93.8		92.1	92.1			29.6			19.9	
Progression Factor		1.00		1.00	1.00			1.00			1.00	
Incremental Delay, d2		14.9		14.1	14.6			4.0			0.5	
Delay (s)		108.7		106.1	106.8			33.6			20.4	
Level of Service		F		F	F			C			C	
Approach Delay (s)		108.7			106.5			33.6			20.4	
Approach LOS		F			F			C			C	

Intersection Summary			
HCM 2000 Control Delay	40.2	HCM 2000 Level of Service	D
HCM 2000 Volume to Capacity ratio	0.84		
Actuated Cycle Length (s)	223.3	Sum of lost time (s)	18.9
Intersection Capacity Utilization	83.8%	ICU Level of Service	E
Analysis Period (min)	15		
c Critical Lane Group			

Transportation Plan for Wildfire Evacuation Scenario

11: PACIFIC COAST HIGHWAY & WINTER MESA DR/MALIBU CANYON RD.

04/20/2020



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	0	0	66	1153	0	0	0	1507	0	0	1411	0
Future Volume (vph)	0	0	66	1153	0	0	0	1507	0	0	1411	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	12	14	12	12	12	12	10	12	10	10	12	11
Total Lost time (s)			4.2	4.6	4.6			6.2			5.7	
Lane Util. Factor			1.00	0.95	0.95			0.95			0.95	
Frbp, ped/bikes			0.98	1.00	1.00			1.00			1.00	
Flpb, ped/bikes			1.00	1.00	1.00			1.00			1.00	
Frt			0.85	1.00	1.00			1.00			1.00	
Flt Protected			1.00	0.95	0.95			1.00			1.00	
Satd. Flow (prot)			1555	1681	1681			3539			3539	
Flt Permitted			1.00	0.95	0.95			1.00			1.00	
Satd. Flow (perm)			1555	1681	1681			3539			3539	
Peak-hour factor, PHF	0.79	0.62	0.72	0.96	0.73	0.82	0.56	0.96	0.83	0.88	0.94	0.69
Adj. Flow (vph)	0	0	92	1201	0	0	0	1570	0	0	1501	0
RTOR Reduction (vph)	0	0	89	0	0	0	0	0	0	0	0	0
Lane Group Flow (vph)	0	0	3	600	601	0	0	1570	0	0	1501	0
Confl. Peds. (#/hr)	2						2					2
Confl. Bikes (#/hr)			1			2			3			10
Turn Type	Perm		Perm	Split	NA	pm+ov	Prot	NA	pm+ov	Prot	NA	
Protected Phases		4		3	3	1	5	2	3	1	6	
Permitted Phases	4		4			3			2			
Actuated Green, G (s)			4.7	30.0	30.0			80.3			80.8	
Effective Green, g (s)			4.7	30.0	30.0			80.3			80.8	
Actuated g/C Ratio			0.04	0.23	0.23			0.62			0.62	
Clearance Time (s)			4.2	4.6	4.6			6.2			5.7	
Vehicle Extension (s)			2.0	3.0	3.0			7.0			7.0	
Lane Grp Cap (vph)			56	387	387			2186			2199	
v/s Ratio Prot				0.36	c0.36			c0.44			0.42	
v/s Ratio Perm			c0.00									
v/c Ratio			0.06	1.55	1.55			0.72			0.68	
Uniform Delay, d1			60.5	50.0	50.0			17.1			16.2	
Progression Factor			1.00	1.00	1.00			1.00			1.00	
Incremental Delay, d2			0.2	260.1	261.3			2.1			1.7	
Delay (s)			60.7	310.1	311.3			19.1			17.9	
Level of Service			E	F	F			B			B	
Approach Delay (s)		60.7			310.7			19.1			17.9	
Approach LOS		E			F			B			B	
Intersection Summary												
HCM 2000 Control Delay			99.8								F	
HCM 2000 Volume to Capacity ratio			0.94									
Actuated Cycle Length (s)			130.0						18.7			
Intersection Capacity Utilization			87.1%								E	
Analysis Period (min)			15									
c Critical Lane Group												

Transportation Plan for Wildfire Evacuation Scenario
 1: TOPANGA CANYON ROAD & PACIFIC COAST HIGHWAY

04/20/2020



Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	0	1330	2655	0	0	1870
Future Volume (vph)	0	1330	2655	0	0	1870
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.2	6.0			6.0
Lane Util. Factor		1.00	0.91			0.95
Frbp, ped/bikes		0.90	1.00			1.00
Flpb, ped/bikes		1.00	1.00			1.00
Frt		0.85	1.00			1.00
Flt Protected		1.00	1.00			1.00
Satd. Flow (prot)		1427	5085			3539
Flt Permitted		1.00	1.00			1.00
Satd. Flow (perm)		1427	5085			3539
Peak-hour factor, PHF	0.74	0.74	0.90	0.84	0.83	0.85
Adj. Flow (vph)	0	1797	2950	0	0	2200
RTOR Reduction (vph)	0	0	0	0	0	0
Lane Group Flow (vph)	0	1797	2950	0	0	2200
Confl. Peds. (#/hr)		68		42		
Confl. Bikes (#/hr)		1		11		
Turn Type	Prot	pm+ov	NA		Prot	NA
Protected Phases	8	5	6		5	2
Permitted Phases		8				
Actuated Green, G (s)		36.8	119.0			143.0
Effective Green, g (s)		36.8	119.0			143.0
Actuated g/C Ratio		0.22	0.70			0.84
Clearance Time (s)		4.2	6.0			6.0
Vehicle Extension (s)		3.0	3.0			3.0
Lane Grp Cap (vph)		307	3546			2966
v/s Ratio Prot		c0.68	c0.58			0.62
v/s Ratio Perm		0.58				
v/c Ratio		5.85	0.83			0.74
Uniform Delay, d1		66.9	18.6			5.9
Progression Factor		1.00	1.00			1.00
Incremental Delay, d2		2191.1	1.8			1.0
Delay (s)		2258.0	20.4			6.9
Level of Service		F	C			A
Approach Delay (s)	2258.0		20.4			6.9
Approach LOS	F		C			A

Intersection Summary				
HCM 2000 Control Delay		594.9	HCM 2000 Level of Service	F
HCM 2000 Volume to Capacity ratio		2.01		
Actuated Cycle Length (s)		170.6	Sum of lost time (s)	14.8
Intersection Capacity Utilization		147.0%	ICU Level of Service	H
Analysis Period (min)		15		

c Critical Lane Group

Transportation Plan for Wildfire Evacuation Scenario
 2: BIG ROCK DRIVE & PACIFIC COAST HIGHWAY

04/20/2020



Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations	↔		↕↔		↔	↕↕
Traffic Volume (vph)	0	35	2073	0	0	1601
Future Volume (vph)	0	35	2073	0	0	1601
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.2		5.3			5.3
Lane Util. Factor	1.00		0.95			0.95
Frbp, ped/bikes	0.98		1.00			1.00
Flpb, ped/bikes	1.00		1.00			1.00
Frt	0.86		1.00			1.00
Flt Protected	1.00		1.00			1.00
Satd. Flow (prot)	1584		3539			3539
Flt Permitted	1.00		1.00			1.00
Satd. Flow (perm)	1584		3539			3539
Peak-hour factor, PHF	0.71	0.64	0.96	0.73	0.53	0.84
Adj. Flow (vph)	0	55	2159	0	0	1906
RTOR Reduction (vph)	53	0	0	0	0	0
Lane Group Flow (vph)	2	0	2159	0	0	1906
Confl. Bikes (#/hr)		1		3		
Turn Type	Prot		NA		pm+pt	NA
Protected Phases	8		2		1	6
Permitted Phases					6	
Actuated Green, G (s)	2.8		53.0			53.0
Effective Green, g (s)	2.8		53.0			53.0
Actuated g/C Ratio	0.04		0.81			0.81
Clearance Time (s)	4.2		5.3			5.3
Vehicle Extension (s)	2.0		3.0			3.0
Lane Grp Cap (vph)	67		2872			2872
v/s Ratio Prot	c0.00		c0.61			0.54
v/s Ratio Perm						
v/c Ratio	0.04		0.75			0.66
Uniform Delay, d1	30.0		3.0			2.5
Progression Factor	1.00		1.00			1.00
Incremental Delay, d2	0.1		1.1			0.6
Delay (s)	30.0		4.1			3.1
Level of Service	C		A			A
Approach Delay (s)	30.0		4.1			3.1
Approach LOS	C		A			A

Intersection Summary

HCM 2000 Control Delay	4.0	HCM 2000 Level of Service	A
HCM 2000 Volume to Capacity ratio	0.77		
Actuated Cycle Length (s)	65.3	Sum of lost time (s)	13.2
Intersection Capacity Utilization	68.6%	ICU Level of Service	C
Analysis Period (min)	15		
c Critical Lane Group			

Transportation Plan for Wildfire Evacuation Scenario
 3: PACIFIC COAST HIGHWAY & LAS FLORES CANYON ROAD

04/20/2020



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕	↕	↕	↕↕	↕	↕	↕↕	
Traffic Volume (vph)	50	0	0	0	0	98	0	1679	0	0	1775	0
Future Volume (vph)	50	0	0	0	0	98	0	1679	0	0	1775	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		5.1				5.1		6.3			6.3	
Lane Util. Factor		1.00				1.00		0.95			0.95	
Frbp, ped/bikes		1.00				0.98		1.00			1.00	
Flpb, ped/bikes		1.00				1.00		1.00			1.00	
Frt		1.00				0.85		1.00			1.00	
Flt Protected		0.95				1.00		1.00			1.00	
Satd. Flow (prot)		1770				1558		3539			3539	
Flt Permitted		0.76				1.00		1.00			1.00	
Satd. Flow (perm)		1410				1558		3539			3539	
Peak-hour factor, PHF	0.60	0.25	0.53	0.39	0.62	0.77	0.75	0.98	0.58	0.58	0.88	0.66
Adj. Flow (vph)	83	0	0	0	0	127	0	1713	0	0	2017	0
RTOR Reduction (vph)	0	0	0	0	0	112	0	0	0	0	0	0
Lane Group Flow (vph)	0	83	0	0	0	15	0	1713	0	0	2017	0
Confl. Peds. (#/hr)			10	10			3					3
Confl. Bikes (#/hr)			2			2			4			24
Turn Type	Perm	NA				Perm	Prot	NA	Perm	pm+pt	NA	
Protected Phases		4			4		1	6		5	2	
Permitted Phases	4			4		4			6	2		
Actuated Green, G (s)		17.1				17.1		120.2			120.2	
Effective Green, g (s)		17.1				17.1		120.2			120.2	
Actuated g/C Ratio		0.11				0.11		0.81			0.81	
Clearance Time (s)		5.1				5.1		6.3			6.3	
Vehicle Extension (s)		3.0				3.0		7.0			7.0	
Lane Grp Cap (vph)		162				179		2860			2860	
v/s Ratio Prot								0.48			c0.57	
v/s Ratio Perm		c0.06				0.01						
v/c Ratio		0.51				0.08		0.60			0.71	
Uniform Delay, d1		61.9				58.8		5.3			6.4	
Progression Factor		1.00				1.00		1.00			0.20	
Incremental Delay, d2		2.7				0.2		0.7			1.1	
Delay (s)		64.6				59.0		6.0			2.4	
Level of Service		E				E		A			A	
Approach Delay (s)		64.6			59.0			6.0			2.4	
Approach LOS		E			E			A			A	

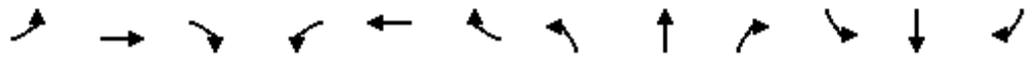
Intersection Summary

HCM 2000 Control Delay	7.1	HCM 2000 Level of Service	A
HCM 2000 Volume to Capacity ratio	0.71		
Actuated Cycle Length (s)	148.7	Sum of lost time (s)	16.1
Intersection Capacity Utilization	77.3%	ICU Level of Service	D
Analysis Period (min)	15		

c Critical Lane Group

Transportation Plan for Wildfire Evacuation Scenario
 4: PACIFIC COAST HIGHWAY & RAMBLA PACIFICO

04/20/2020



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕	↕	↕	↕↕	↕	↕	↕↕	
Traffic Volume (vph)	37	0	0	0	0	41	0	1971	0	0	1572	0
Future Volume (vph)	37	0	0	0	0	41	0	1971	0	0	1572	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		5.1				5.1		6.3			6.3	
Lane Util. Factor		1.00				1.00		0.95			0.95	
Frbp, ped/bikes		1.00				0.97		1.00			1.00	
Flpb, ped/bikes		0.98				1.00		1.00			1.00	
Frt		1.00				0.85		1.00			1.00	
Flt Protected		0.95				1.00		1.00			1.00	
Satd. Flow (prot)		1733				1533		3539			3539	
Flt Permitted		0.76				1.00		1.00			1.00	
Satd. Flow (perm)		1382				1533		3539			3539	
Peak-hour factor, PHF	0.38	0.75	0.78	0.62	0.75	0.56	0.46	0.98	0.65	0.58	0.85	0.25
Adj. Flow (vph)	97	0	0	0	0	73	0	2011	0	0	1849	0
RTOR Reduction (vph)	0	0	0	0	0	65	0	0	0	0	0	0
Lane Group Flow (vph)	0	97	0	0	0	8	0	2011	0	0	1849	0
Confl. Peds. (#/hr)	11					11	13		2	2		13
Confl. Bikes (#/hr)									6			27
Turn Type	Perm	NA				Perm	Perm	NA	Perm	Prot	NA	
Protected Phases		4			4			6		5	2	
Permitted Phases	4			4		4	6		6			
Actuated Green, G (s)		17.1				17.1		120.2			120.2	
Effective Green, g (s)		17.1				17.1		120.2			120.2	
Actuated g/C Ratio		0.11				0.11		0.81			0.81	
Clearance Time (s)		5.1				5.1		6.3			6.3	
Vehicle Extension (s)		3.0				3.0		7.0			7.0	
Lane Grp Cap (vph)		158				176		2860			2860	
v/s Ratio Prot								c0.57			0.52	
v/s Ratio Perm		c0.07				0.01						
v/c Ratio		0.61				0.05		0.70			0.65	
Uniform Delay, d1		62.7				58.6		6.3			5.7	
Progression Factor		1.00				1.00		0.54			1.00	
Incremental Delay, d2		6.9				0.1		1.2			1.0	
Delay (s)		69.6				58.7		4.6			6.7	
Level of Service		E				E		A			A	
Approach Delay (s)		69.6			58.7			4.6			6.7	
Approach LOS		E			E			A			A	
Intersection Summary												
HCM 2000 Control Delay			8.1								A	
HCM 2000 Volume to Capacity ratio			0.72									
Actuated Cycle Length (s)			148.7							16.1		
Intersection Capacity Utilization			85.7%								E	
Analysis Period (min)			15									

c Critical Lane Group

Transportation Plan for Wildfire Evacuation Scenario
 5: PACIFIC COAST HIGHWAY & CARBON CANYON ROAD

04/20/2020



Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	0	14	1954	0	0	1662
Future Volume (vph)	0	14	1954	0	0	1662
Ideal Flow (vphp)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.2		5.3			5.3
Lane Util. Factor	1.00		0.95			0.95
Frbp, ped/bikes	0.99		1.00			1.00
Flpb, ped/bikes	1.00		1.00			1.00
Frt	0.86		1.00			1.00
Flt Protected	1.00		1.00			1.00
Satd. Flow (prot)	1590		3539			3539
Flt Permitted	1.00		1.00			1.00
Satd. Flow (perm)	1590		3539			3539
Peak-hour factor, PHF	0.38	0.50	0.97	0.56	0.58	0.94
Adj. Flow (vph)	0	28	2014	0	0	1768
RTOR Reduction (vph)	26	0	0	0	0	0
Lane Group Flow (vph)	2	0	2014	0	0	1768
Confl. Peds. (#/hr)		1		2		
Confl. Bikes (#/hr)				6		
Turn Type	Prot		NA	Perm	Prot	NA
Protected Phases	4		2		1	6
Permitted Phases				2		
Actuated Green, G (s)	4.6		69.1			69.1
Effective Green, g (s)	4.6		69.1			69.1
Actuated g/C Ratio	0.06		0.83			0.83
Clearance Time (s)	4.2		5.3			5.3
Vehicle Extension (s)	2.0		8.0			8.0
Lane Grp Cap (vph)	87		2939			2939
v/s Ratio Prot	c0.00		c0.57			0.50
v/s Ratio Perm						
v/c Ratio	0.02		0.69			0.60
Uniform Delay, d1	37.2		2.8			2.4
Progression Factor	1.00		1.00			1.00
Incremental Delay, d2	0.0		1.3			0.8
Delay (s)	37.2		4.1			3.2
Level of Service	D		A			A
Approach Delay (s)	37.2		4.1			3.2
Approach LOS	D		A			A

Intersection Summary

HCM 2000 Control Delay	3.9	HCM 2000 Level of Service	A
HCM 2000 Volume to Capacity ratio	0.68		
Actuated Cycle Length (s)	83.2	Sum of lost time (s)	13.2
Intersection Capacity Utilization	65.7%	ICU Level of Service	C
Analysis Period (min)	15		

c Critical Lane Group

Transportation Plan for Wildfire Evacuation Scenario
6: PACIFIC COAST HIGHWAY & BUSCH REALTY

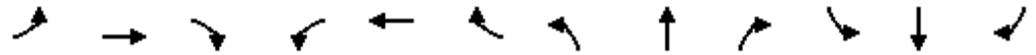
04/20/2020



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations							↔	↑↑		↔	↑↑	
Traffic Volume (vph)	0	0	0	0	0	0	8	1909	0	6	1674	0
Future Volume (vph)	0	0	0	0	0	0	8	1909	0	6	1674	0
Ideal Flow (vphp)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)							3.7	5.3		3.7	5.3	
Lane Util. Factor							1.00	0.95		1.00	0.95	
Frbp, ped/bikes							1.00	1.00		1.00	1.00	
Flpb, ped/bikes							1.00	1.00		1.00	1.00	
Frt							1.00	1.00		1.00	1.00	
Flt Protected							0.95	1.00		0.95	1.00	
Satd. Flow (prot)							1770	3539		1770	3539	
Flt Permitted							0.95	1.00		0.95	1.00	
Satd. Flow (perm)							1770	3539		1770	3539	
Peak-hour factor, PHF	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.95	0.25	0.38	0.97	0.25
Adj. Flow (vph)	0	0	0	0	0	0	32	2009	0	16	1726	0
RTOR Reduction (vph)	0	0	0	0	0	0	0	0	0	0	0	0
Lane Group Flow (vph)	0	0	0	0	0	0	32	2009	0	16	1726	0
Confl. Bikes (#/hr)							2		8			28
Turn Type							Prot	NA		Prot	NA	
Protected Phases							5	2		1	6	
Permitted Phases												
Actuated Green, G (s)							4.0	92.7		3.2	91.9	
Effective Green, g (s)							4.0	92.7		3.2	91.9	
Actuated g/C Ratio							0.03	0.80		0.03	0.79	
Clearance Time (s)							3.7	5.3		3.7	5.3	
Vehicle Extension (s)							2.0	8.0		2.0	8.0	
Lane Grp Cap (vph)							61	2835		48	2811	
v/s Ratio Prot							c0.02	c0.57		0.01	0.49	
v/s Ratio Perm												
v/c Ratio							0.52	0.71		0.33	0.61	
Uniform Delay, d1							54.9	5.3		55.2	4.8	
Progression Factor							1.00	1.00		1.00	1.00	
Incremental Delay, d2							3.7	1.5		1.5	0.9	
Delay (s)							58.6	6.8		56.7	5.7	
Level of Service							E	A		E	A	
Approach Delay (s)		0.0			0.0			7.6			6.2	
Approach LOS		A			A			A			A	
Intersection Summary												
HCM 2000 Control Delay			7.0				HCM 2000 Level of Service			A		
HCM 2000 Volume to Capacity ratio			0.65									
Actuated Cycle Length (s)			115.7				Sum of lost time (s)			12.0		
Intersection Capacity Utilization			57.2%				ICU Level of Service			B		
Analysis Period (min)			15									
c Critical Lane Group												

Transportation Plan for Wildfire Evacuation Scenario
 7: PACIFIC COAST HIGHWAY & MCDONALDS

04/20/2020



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations							5	↑↑		5	↑↑	
Traffic Volume (vph)	0	0	0	0	0	0	12	1864	0	0	1646	1
Future Volume (vph)	0	0	0	0	0	0	12	1864	0	0	1646	1
Ideal Flow (vphp)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)							3.7	5.3			5.3	
Lane Util. Factor							1.00	0.95			0.95	
Frbp, ped/bikes							1.00	1.00			1.00	
Flpb, ped/bikes							1.00	1.00			1.00	
Frt							1.00	1.00			1.00	
Flt Protected							0.95	1.00			1.00	
Satd. Flow (prot)							1770	3539			3538	
Flt Permitted							0.95	1.00			1.00	
Satd. Flow (perm)							1770	3539			3538	
Peak-hour factor, PHF	0.50	0.25	0.65	0.25	0.25	0.25	0.25	0.96	0.25	0.25	0.95	0.25
Adj. Flow (vph)	0	0	0	0	0	0	48	1942	0	0	1733	4
RTOR Reduction (vph)	0	0	0	0	0	0	0	0	0	0	0	0
Lane Group Flow (vph)	0	0	0	0	0	0	48	1942	0	0	1737	0
Confl. Bikes (#/hr)									22			6
Turn Type							Prot	NA		Prot	NA	
Protected Phases							5	2		1	6	
Permitted Phases												
Actuated Green, G (s)							6.9	91.6			81.0	
Effective Green, g (s)							6.9	91.6			81.0	
Actuated g/C Ratio							0.06	0.76			0.67	
Clearance Time (s)							3.7	5.3			5.3	
Vehicle Extension (s)							2.0	8.0			8.0	
Lane Grp Cap (vph)							101	2687			2376	
v/s Ratio Prot							0.03	c0.55			0.49	
v/s Ratio Perm												
v/c Ratio							0.48	0.72			0.73	
Uniform Delay, d1							55.1	7.7			12.8	
Progression Factor							1.00	1.00			1.00	
Incremental Delay, d2							1.3	1.7			2.0	
Delay (s)							56.4	9.5			14.8	
Level of Service							E	A			B	
Approach Delay (s)		0.0			0.0			10.6			14.8	
Approach LOS		A			A			B			B	
Intersection Summary												
HCM 2000 Control Delay			12.5				HCM 2000 Level of Service				B	
HCM 2000 Volume to Capacity ratio			0.61									
Actuated Cycle Length (s)			120.6				Sum of lost time (s)				12.0	
Intersection Capacity Utilization			55.9%				ICU Level of Service				B	
Analysis Period (min)			15									
c Critical Lane Group												

Transportation Plan for Wildfire Evacuation Scenario
 8: PACIFIC COAST HIGHWAY & MALIBU PIER

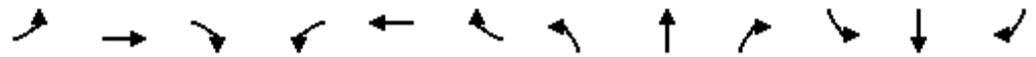
04/20/2020



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations							5	↑↑		5	↑↑	
Traffic Volume (vph)	0	0	0	0	0	0	36	1856	2	19	1788	0
Future Volume (vph)	0	0	0	0	0	0	36	1856	2	19	1788	0
Ideal Flow (vphp)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)							3.7	5.3		3.7	5.3	
Lane Util. Factor							1.00	0.95		1.00	0.95	
Frbp, ped/bikes							1.00	1.00		1.00	1.00	
Flpb, ped/bikes							1.00	1.00		1.00	1.00	
Frt							1.00	1.00		1.00	1.00	
Flt Protected							0.95	1.00		0.95	1.00	
Satd. Flow (prot)							1770	3537		1770	3539	
Flt Permitted							0.95	1.00		0.95	1.00	
Satd. Flow (perm)							1770	3537		1770	3539	
Peak-hour factor, PHF	0.25	0.25	0.25	0.38	0.25	0.44	0.25	0.96	0.25	0.62	0.98	0.25
Adj. Flow (vph)	0	0	0	0	0	0	144	1933	8	31	1824	0
RTOR Reduction (vph)	0	0	0	0	0	0	0	0	0	0	0	0
Lane Group Flow (vph)	0	0	0	0	0	0	144	1941	0	31	1824	0
Confl. Bikes (#/hr)									8			28
Turn Type							Prot	NA		Prot	NA	
Protected Phases							5	2		1	6	
Permitted Phases												
Actuated Green, G (s)							16.6	104.6		4.8	92.8	
Effective Green, g (s)							16.6	104.6		4.8	92.8	
Actuated g/C Ratio							0.11	0.70		0.03	0.62	
Clearance Time (s)							3.7	5.3		3.7	5.3	
Vehicle Extension (s)							2.0	8.0		2.0	8.0	
Lane Grp Cap (vph)							195	2464		56	2188	
v/s Ratio Prot							c0.08	0.55		0.02	c0.52	
v/s Ratio Perm												
v/c Ratio							0.74	0.79		0.55	0.83	
Uniform Delay, d1							64.6	15.3		71.6	22.6	
Progression Factor							1.00	1.00		1.00	1.00	
Incremental Delay, d2							11.8	2.5		6.6	3.7	
Delay (s)							76.5	17.7		78.2	26.2	
Level of Service							E	B		E	C	
Approach Delay (s)		0.0			0.0			21.8			27.1	
Approach LOS		A			A			C			C	
Intersection Summary												
HCM 2000 Control Delay			24.3				HCM 2000 Level of Service				C	
HCM 2000 Volume to Capacity ratio			0.65									
Actuated Cycle Length (s)			150.1				Sum of lost time (s)				12.0	
Intersection Capacity Utilization			55.8%				ICU Level of Service				B	
Analysis Period (min)			15									
c Critical Lane Group												

Transportation Plan for Wildfire Evacuation Scenario
 9: PACIFIC COAST HIGHWAY & CROSS CREEK ROAD

04/20/2020



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕	↗	↖	↕	↗	↖	↕↕	↗	↖	↕↕	
Traffic Volume (vph)	0	0	58	370	0	0	0	1835	0	0	1658	0
Future Volume (vph)	0	0	58	370	0	0	0	1835	0	0	1658	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)			4.2	4.2	4.2			5.3			5.3	
Lane Util. Factor			1.00	0.95	0.95			0.95			0.95	
Frbp, ped/bikes			1.00	1.00	1.00			1.00			1.00	
Flpb, ped/bikes			1.00	1.00	1.00			1.00			1.00	
Frt			0.85	1.00	1.00			1.00			1.00	
Flt Protected			1.00	0.95	0.95			1.00			1.00	
Satd. Flow (prot)			1583	1681	1681			3539			3539	
Flt Permitted			1.00	0.95	0.95			1.00			1.00	
Satd. Flow (perm)			1583	1681	1681			3539			3539	
Peak-hour factor, PHF	0.71	0.75	0.80	0.93	0.62	0.81	0.75	0.97	0.96	0.92	0.95	0.67
Adj. Flow (vph)	0	0	72	398	0	0	0	1892	0	0	1745	0
RTOR Reduction (vph)	0	0	71	0	0	0	0	0	0	0	0	0
Lane Group Flow (vph)	0	0	2	199	199	0	0	1892	0	0	1745	0
Confl. Peds. (#/hr)							199		85			99
Confl. Bikes (#/hr)							3		6			26
Turn Type			Prot	Split	NA	Prot	Prot	NA	Perm	Prot	NA	
Protected Phases	3	3	3	4	4	4	5	2		1	6	
Permitted Phases									2			
Actuated Green, G (s)			5.0	34.3	34.3			117.3			117.3	
Effective Green, g (s)			5.0	34.3	34.3			117.3			117.3	
Actuated g/C Ratio			0.03	0.20	0.20			0.69			0.69	
Clearance Time (s)			4.2	4.2	4.2			5.3			5.3	
Vehicle Extension (s)			2.0	2.0	2.0			7.0			7.0	
Lane Grp Cap (vph)			46	338	338			2437			2437	
v/s Ratio Prot			c0.00	c0.12	0.12			c0.53			0.49	
v/s Ratio Perm												
v/c Ratio			0.05	0.59	0.59			0.78			0.72	
Uniform Delay, d1			80.3	61.6	61.6			17.7			16.3	
Progression Factor			1.00	1.00	1.00			1.00			1.00	
Incremental Delay, d2			0.2	1.7	1.7			2.2			1.7	
Delay (s)			80.5	63.3	63.3			19.9			18.0	
Level of Service			F	E	E			B			B	
Approach Delay (s)		80.5			63.3			19.9			18.0	
Approach LOS		F			E			B			B	
Intersection Summary												
HCM 2000 Control Delay			24.4									C
HCM 2000 Volume to Capacity ratio			0.73									
Actuated Cycle Length (s)			170.3								17.4	
Intersection Capacity Utilization			80.8%									D
Analysis Period (min)			15									

c Critical Lane Group

Transportation Plan for Wildfire Evacuation Scenario
 10: PACIFIC COAST HIGHWAY & WEBB WAY

04/20/2020

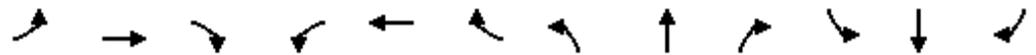


Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR		
Lane Configurations	↖	↗		↖	↖	↗	↘	↕	↗	↖↗	↕↕↕	↗		
Traffic Volume (vph)	0	0	230	325	0	0	0	1731	0	0	1641	0		
Future Volume (vph)	0	0	230	325	0	0	0	1731	0	0	1641	0		
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900		
Lane Width	11	16	12	11	11	10	11	11	16	11	12	12		
Total Lost time (s)		4.7		4.7	4.7			5.8			5.8			
Lane Util. Factor		1.00		0.95	0.95			0.95			0.91			
Frbp, ped/bikes		0.98		1.00	1.00			1.00			1.00			
Flpb, ped/bikes		1.00		1.00	1.00			1.00			1.00			
Frt		0.85		1.00	1.00			1.00			1.00			
Flt Protected		1.00		0.95	0.95			1.00			1.00			
Satd. Flow (prot)		1764		1625	1625			3421			5085			
Flt Permitted		1.00		0.95	0.95			1.00			1.00			
Satd. Flow (perm)		1764		1625	1625			3421			5085			
Peak-hour factor, PHF	0.79	0.79	0.68	0.91	0.68	0.81	0.85	0.91	0.92	0.82	0.95	0.87		
Adj. Flow (vph)	0	0	338	357	0	0	0	1902	0	0	1727	0		
RTOR Reduction (vph)	0	158	0	0	0	0	0	0	0	0	0	0		
Lane Group Flow (vph)	0	180	0	178	179	0	0	1902	0	0	1727	0		
Confl. Peds. (#/hr)	28						28		14			4		
Confl. Bikes (#/hr)			3				5		5			15		
Turn Type	Perm	NA		Split	NA	custom	Prot	NA	pm+ov	Prot	NA	Perm		
Protected Phases		4		3	3		5	2	3	1	6			
Permitted Phases	4					6			2			6		
Actuated Green, G (s)		29.4		32.0	32.0			146.7			146.7			
Effective Green, g (s)		29.4		32.0	32.0			146.7			146.7			
Actuated g/C Ratio		0.13		0.14	0.14			0.66			0.66			
Clearance Time (s)		4.7		4.7	4.7			5.8			5.8			
Vehicle Extension (s)		3.0		3.0	3.0			8.0			8.0			
Lane Grp Cap (vph)		232		232	232			2247			3340			
v/s Ratio Prot		c0.10		0.11	c0.11			c0.56			0.34			
v/s Ratio Perm														
v/c Ratio		0.78		0.77	0.77			0.85			0.52			
Uniform Delay, d1		93.8		92.1	92.1			29.6			19.9			
Progression Factor		1.00		1.00	1.00			1.00			1.00			
Incremental Delay, d2		14.9		14.1	14.6			4.0			0.5			
Delay (s)		108.7		106.1	106.8			33.6			20.4			
Level of Service		F		F	F			C			C			
Approach Delay (s)		108.7			106.5			33.6			20.4			
Approach LOS		F			F			C			C			
Intersection Summary														
HCM 2000 Control Delay			40.2									HCM 2000 Level of Service	D	
HCM 2000 Volume to Capacity ratio			0.84											
Actuated Cycle Length (s)			223.3								18.9			
Intersection Capacity Utilization			83.8%										ICU Level of Service	E
Analysis Period (min)			15											
c Critical Lane Group														

Transportation Plan for Wildfire Evacuation Scenario

11: PACIFIC COAST HIGHWAY & WINTER MESA DR/MALIBU CANYON RD.

04/20/2020



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↖	↑	↗	↖	↖	↗	↖	↑↑	↗	↖↗	↖↗	0
Traffic Volume (vph)	0	0	66	1153	0	0	0	1507	0	0	1411	0
Future Volume (vph)	0	0	66	1153	0	0	0	1507	0	0	1411	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	12	14	12	12	12	12	10	12	10	10	12	11
Total Lost time (s)			4.2	4.6	4.6			6.2			5.7	
Lane Util. Factor			1.00	0.95	0.95			0.95			0.95	
Frbp, ped/bikes			0.98	1.00	1.00			1.00			1.00	
Flpb, ped/bikes			1.00	1.00	1.00			1.00			1.00	
Frt			0.85	1.00	1.00			1.00			1.00	
Flt Protected			1.00	0.95	0.95			1.00			1.00	
Satd. Flow (prot)			1555	1681	1681			3539			3539	
Flt Permitted			1.00	0.95	0.95			1.00			1.00	
Satd. Flow (perm)			1555	1681	1681			3539			3539	
Peak-hour factor, PHF	0.79	0.62	0.72	0.96	0.73	0.82	0.56	0.96	0.83	0.88	0.94	0.69
Adj. Flow (vph)	0	0	92	1201	0	0	0	1570	0	0	1501	0
RTOR Reduction (vph)	0	0	89	0	0	0	0	0	0	0	0	0
Lane Group Flow (vph)	0	0	3	600	601	0	0	1570	0	0	1501	0
Confl. Peds. (#/hr)	2						2					2
Confl. Bikes (#/hr)			1			2			3			10
Turn Type	Perm		Perm	Split	NA	pm+ov	Prot	NA	pm+ov	Prot	NA	
Protected Phases		4		3	3	1	5	2	3	1	6	
Permitted Phases	4		4			3			2			
Actuated Green, G (s)			4.7	30.0	30.0			80.3			80.8	
Effective Green, g (s)			4.7	30.0	30.0			80.3			80.8	
Actuated g/C Ratio			0.04	0.23	0.23			0.62			0.62	
Clearance Time (s)			4.2	4.6	4.6			6.2			5.7	
Vehicle Extension (s)			2.0	3.0	3.0			7.0			7.0	
Lane Grp Cap (vph)			56	387	387			2186			2199	
v/s Ratio Prot				0.36	c0.36			c0.44			0.42	
v/s Ratio Perm			c0.00									
v/c Ratio			0.06	1.55	1.55			0.72			0.68	
Uniform Delay, d1			60.5	50.0	50.0			17.1			16.2	
Progression Factor			1.00	1.00	1.00			1.00			1.00	
Incremental Delay, d2			0.2	260.1	261.3			2.1			1.7	
Delay (s)			60.7	310.1	311.3			19.1			17.9	
Level of Service			E	F	F			B			B	
Approach Delay (s)		60.7			310.7			19.1			17.9	
Approach LOS		E			F			B			B	

Intersection Summary

HCM 2000 Control Delay	99.8	HCM 2000 Level of Service	F
HCM 2000 Volume to Capacity ratio	0.94		
Actuated Cycle Length (s)	130.0	Sum of lost time (s)	18.7
Intersection Capacity Utilization	87.1%	ICU Level of Service	E
Analysis Period (min)	15		
c Critical Lane Group			

Transportation Plan for Wildfire Evacuation Scenario
 12: PACIFIC COAST HIGHWAY & JOHN TYLER

04/20/2020



Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations	↔↔	↗	↕↕	↗	↖	↕↕
Traffic Volume (vph)	93	0	1986	0	0	1453
Future Volume (vph)	93	0	1986	0	0	1453
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.6		5.7			5.7
Lane Util. Factor	0.97		0.95			0.95
Frbp, ped/bikes	1.00		1.00			1.00
Flpb, ped/bikes	1.00		1.00			1.00
Frt	1.00		1.00			1.00
Flt Protected	0.95		1.00			1.00
Satd. Flow (prot)	3433		3539			3539
Flt Permitted	0.95		1.00			1.00
Satd. Flow (perm)	3433		3539			3539
Peak-hour factor, PHF	0.78	0.64	0.94	0.77	0.68	0.92
Adj. Flow (vph)	119	0	2113	0	0	1579
RTOR Reduction (vph)	0	0	0	0	0	0
Lane Group Flow (vph)	119	0	2113	0	0	1579
Confl. Bikes (#/hr)				2		
Turn Type	Prot	Perm	NA	Perm	Perm	NA
Protected Phases	4		2			6
Permitted Phases		4		2	6	
Actuated Green, G (s)	10.0		114.2			114.2
Effective Green, g (s)	10.0		114.2			114.2
Actuated g/C Ratio	0.07		0.85			0.85
Clearance Time (s)	4.6		5.7			5.7
Vehicle Extension (s)	3.0		8.0			8.0
Lane Grp Cap (vph)	255		3004			3004
v/s Ratio Prot	c0.03		c0.60			0.45
v/s Ratio Perm						
v/c Ratio	0.47		0.70			0.53
Uniform Delay, d1	59.7		3.8			2.8
Progression Factor	1.00		1.00			1.00
Incremental Delay, d2	1.4		1.4			0.6
Delay (s)	61.0		5.2			3.4
Level of Service	E		A			A
Approach Delay (s)	61.0		5.2			3.4
Approach LOS	E		A			A
Intersection Summary						
HCM 2000 Control Delay			6.2		HCM 2000 Level of Service	A
HCM 2000 Volume to Capacity ratio			0.68			
Actuated Cycle Length (s)			134.5		Sum of lost time (s)	10.3
Intersection Capacity Utilization			66.8%		ICU Level of Service	C
Analysis Period (min)			15			
c Critical Lane Group						

Transportation Plan for Wildfire Evacuation Scenario
 17: PACIFIC COAST HIGHWAY & Coral Canyon Road

04/20/2020



Movement	WBL	WBR	NBU	NBT	NBR	SBL	SBT
Lane Configurations	↶	↷	↶	↷		↶	↷
Traffic Volume (vph)	0	82	0	1426	0	0	1331
Future Volume (vph)	0	82	0	1426	0	0	1331
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.5		4.5			4.5
Lane Util. Factor		1.00		0.95			0.95
Frt		0.85		1.00			1.00
Flt Protected		1.00		1.00			1.00
Satd. Flow (prot)		1583		3539			3539
Flt Permitted		1.00		1.00			1.00
Satd. Flow (perm)		1583		3539			3539
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	0	89	0	1550	0	0	1447
RTOR Reduction (vph)	0	3	0	0	0	0	0
Lane Group Flow (vph)	0	86	0	1550	0	0	1447
Turn Type	Prot	Perm	Perm	NA		Perm	NA
Protected Phases	8			2			6
Permitted Phases		8	2			6	
Actuated Green, G (s)		18.0		18.0			18.0
Effective Green, g (s)		18.0		18.0			18.0
Actuated g/C Ratio		0.40		0.40			0.40
Clearance Time (s)		4.5		4.5			4.5
Lane Grp Cap (vph)		633		1415			1415
v/s Ratio Prot				c0.44			0.41
v/s Ratio Perm		c0.05					
v/c Ratio		0.14		1.10			1.02
Uniform Delay, d1		8.6		13.5			13.5
Progression Factor		1.00		1.00			1.00
Incremental Delay, d2		0.4		54.4			29.8
Delay (s)		9.0		67.9			43.3
Level of Service		A		E			D
Approach Delay (s)	9.0			67.9			43.3
Approach LOS	A			E			D

Intersection Summary

HCM 2000 Control Delay	54.7	HCM 2000 Level of Service	D
HCM 2000 Volume to Capacity ratio	0.62		
Actuated Cycle Length (s)	45.0	Sum of lost time (s)	9.0
Intersection Capacity Utilization	52.0%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			

Transportation Plan for Wildfire Evacuation Scenario
 21: PACIFIC COAST HIGHWAY & Zumeriz Drive

04/20/2020



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕	↗		↔		↖	↕↔		↖	↕↕	↗
Traffic Volume (vph)	148	0	0	0	0	14	0	1280	0	0	1123	0
Future Volume (vph)	148	0	0	0	0	14	0	1280	0	0	1123	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.5			4.5			4.5			4.5	
Lane Util. Factor		1.00			1.00			0.95			0.95	
Frt		1.00			0.86			1.00			1.00	
Flt Protected		0.95			1.00			1.00			1.00	
Satd. Flow (prot)		1770			1611			3539			3539	
Flt Permitted		0.95			1.00			1.00			1.00	
Satd. Flow (perm)		1770			1611			3539			3539	
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	161	0	0	0	0	15	0	1391	0	0	1221	0
RTOR Reduction (vph)	0	0	0	0	15	0	0	0	0	0	0	0
Lane Group Flow (vph)	0	161	0	0	0	0	0	1391	0	0	1221	0
Turn Type	Split	NA	Perm		NA		Prot	NA		Prot	NA	Perm
Protected Phases	2	2		6	6		3	8		7	4	
Permitted Phases			2									4
Actuated Green, G (s)		18.6			1.0			30.6			30.6	
Effective Green, g (s)		18.6			1.0			30.6			30.6	
Actuated g/C Ratio		0.29			0.02			0.48			0.48	
Clearance Time (s)		4.5			4.5			4.5			4.5	
Vehicle Extension (s)		3.0			3.0			3.0			3.0	
Lane Grp Cap (vph)		516			25			1700			1700	
v/s Ratio Prot		c0.09			c0.00			c0.39			0.34	
v/s Ratio Perm												
v/c Ratio		0.31			0.01			0.82			0.72	
Uniform Delay, d1		17.6			30.9			14.2			13.1	
Progression Factor		1.00			1.00			1.00			1.00	
Incremental Delay, d2		1.6			0.2			3.2			1.5	
Delay (s)		19.1			31.0			17.4			14.6	
Level of Service		B			C			B			B	
Approach Delay (s)		19.1			31.0			17.4			14.6	
Approach LOS		B			C			B			B	

Intersection Summary

HCM 2000 Control Delay	16.3	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.67		
Actuated Cycle Length (s)	63.7	Sum of lost time (s)	18.0
Intersection Capacity Utilization	57.7%	ICU Level of Service	B
Analysis Period (min)	15		

c Critical Lane Group

Transportation Plan for Wildfire Evacuation Scenario
 25: PACIFIC COAST HIGHWAY & Paradise Cove Drive

04/20/2020



Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	0	159	0	1353	1172	0
Future Volume (vph)	0	159	0	1353	1172	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.5			4.5	4.5	
Lane Util. Factor	1.00			0.95	0.95	
Frt	0.86			1.00	1.00	
Flt Protected	1.00			1.00	1.00	
Satd. Flow (prot)	1611			3539	3539	
Flt Permitted	1.00			1.00	1.00	
Satd. Flow (perm)	1611			3539	3539	
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	0	173	0	1471	1274	0
RTOR Reduction (vph)	159	0	0	0	0	0
Lane Group Flow (vph)	14	0	0	1471	1274	0
Turn Type	Prot		Prot	NA	NA	
Protected Phases	2		3	8	4	
Permitted Phases						
Actuated Green, G (s)	4.8			46.2	46.2	
Effective Green, g (s)	4.8			46.2	46.2	
Actuated g/C Ratio	0.08			0.77	0.77	
Clearance Time (s)	4.5			4.5	4.5	
Vehicle Extension (s)	3.0			3.0	3.0	
Lane Grp Cap (vph)	128			2725	2725	
v/s Ratio Prot	c0.01			c0.42	0.36	
v/s Ratio Perm						
v/c Ratio	0.11			0.54	0.47	
Uniform Delay, d1	25.6			2.7	2.5	
Progression Factor	1.00			1.00	1.00	
Incremental Delay, d2	0.4			0.8	0.6	
Delay (s)	26.0			3.5	3.1	
Level of Service	C			A	A	
Approach Delay (s)	26.0			3.5	3.1	
Approach LOS	C			A	A	

Intersection Summary

HCM 2000 Control Delay	4.6	HCM 2000 Level of Service	A
HCM 2000 Volume to Capacity ratio	0.55		
Actuated Cycle Length (s)	60.0	Sum of lost time (s)	13.5
Intersection Capacity Utilization	54.7%	ICU Level of Service	A
Analysis Period (min)	15		

c Critical Lane Group

Transportation Plan for Wildfire Evacuation Scenario
 28: PACIFIC COAST HIGHWAY & Kanan Dume Road

04/20/2020



Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations	↖↗	↖	↕↕	↖	↗	↕↕
Traffic Volume (vph)	0	662	1494	0	0	1304
Future Volume (vph)	0	662	1494	0	0	1304
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)		5.1	6.7			6.7
Lane Util. Factor		1.00	0.95			0.95
Frt		0.85	1.00			1.00
Flt Protected		1.00	1.00			1.00
Satd. Flow (prot)		1583	3539			3539
Flt Permitted		1.00	1.00			1.00
Satd. Flow (perm)		1583	3539			3539
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	0	720	1624	0	0	1417
RTOR Reduction (vph)	0	331	0	0	0	0
Lane Group Flow (vph)	0	389	1624	0	0	1417
Turn Type	Prot	Perm	NA	Perm	Prot	NA
Protected Phases	8		2		1	6
Permitted Phases		8		2		
Actuated Green, G (s)		28.0	35.8			65.2
Effective Green, g (s)		28.0	35.8			65.2
Actuated g/C Ratio		0.27	0.34			0.62
Clearance Time (s)		5.1	6.7			6.7
Lane Grp Cap (vph)		422	1206			2197
v/s Ratio Prot			c0.46			c0.40
v/s Ratio Perm		c0.25				
v/c Ratio		0.92	1.35			0.64
Uniform Delay, d1		37.4	34.6			12.6
Progression Factor		1.00	1.00			1.00
Incremental Delay, d2		28.1	161.6			1.5
Delay (s)		65.5	196.2			14.1
Level of Service		E	F			B
Approach Delay (s)	65.5		196.2			14.1
Approach LOS	E		F			B

Intersection Summary

HCM 2000 Control Delay	102.5	HCM 2000 Level of Service	F
HCM 2000 Volume to Capacity ratio	1.03		
Actuated Cycle Length (s)	105.0	Sum of lost time (s)	16.0
Intersection Capacity Utilization	92.1%	ICU Level of Service	F
Analysis Period (min)	15		
c Critical Lane Group			

Transportation Plan for Wildfire Evacuation Scenario
 36: PACIFIC COAST HIGHWAY & Busch Drive

04/20/2020



Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	349	0	1253	0	0	1316
Future Volume (vph)	349	0	1253	0	0	1316
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.5		4.5			4.5
Lane Util. Factor	0.97		0.95			0.95
Frt	1.00		1.00			1.00
Flt Protected	0.95		1.00			1.00
Satd. Flow (prot)	3433		3539			3539
Flt Permitted	0.95		1.00			1.00
Satd. Flow (perm)	3433		3539			3539
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	379	0	1362	0	0	1430
RTOR Reduction (vph)	0	0	0	0	0	0
Lane Group Flow (vph)	379	0	1362	0	0	1430
Turn Type	Prot	Perm	NA	Perm	Perm	NA
Protected Phases	2		8			4
Permitted Phases		2		8	4	
Actuated Green, G (s)	18.0		18.0			18.0
Effective Green, g (s)	18.0		18.0			18.0
Actuated g/C Ratio	0.40		0.40			0.40
Clearance Time (s)	4.5		4.5			4.5
Lane Grp Cap (vph)	1373		1415			1415
v/s Ratio Prot	c0.11		0.38			c0.40
v/s Ratio Perm						
v/c Ratio	0.28		0.96			1.01
Uniform Delay, d1	9.1		13.2			13.5
Progression Factor	1.00		1.00			1.00
Incremental Delay, d2	0.5		16.5			26.6
Delay (s)	9.6		29.7			40.1
Level of Service	A		C			D
Approach Delay (s)	9.6		29.7			40.1
Approach LOS	A		C			D

Intersection Summary

HCM 2000 Control Delay	32.0	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.64		
Actuated Cycle Length (s)	45.0	Sum of lost time (s)	9.0
Intersection Capacity Utilization	53.8%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			

Transportation Plan for Wildfire Evacuation Scenario
42: PACIFIC COAST HIGHWAY & Heathercliff Road

04/20/2020



Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	0	401	0	1213	1220	0
Future Volume (vph)	0	401	0	1213	1220	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.5		4.5	4.5	
Lane Util. Factor		1.00		0.95	0.95	
Frt		0.85		1.00	1.00	
Flt Protected		1.00		1.00	1.00	
Satd. Flow (prot)		1583		3539	3539	
Flt Permitted		1.00		1.00	1.00	
Satd. Flow (perm)		1583		3539	3539	
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	0	436	0	1318	1326	0
RTOR Reduction (vph)	0	226	0	0	0	0
Lane Group Flow (vph)	0	210	0	1318	1326	0
Turn Type	Prot	Perm	Prot	NA	NA	Perm
Protected Phases	2		3	8	4	
Permitted Phases		2				4
Actuated Green, G (s)		18.7		32.3	32.3	
Effective Green, g (s)		18.7		32.3	32.3	
Actuated g/C Ratio		0.31		0.54	0.54	
Clearance Time (s)		4.5		4.5	4.5	
Vehicle Extension (s)		3.0		3.0	3.0	
Lane Grp Cap (vph)		493		1905	1905	
v/s Ratio Prot				0.37	c0.37	
v/s Ratio Perm		c0.13				
v/c Ratio		0.43		0.69	0.70	
Uniform Delay, d1		16.4		10.2	10.2	
Progression Factor		1.00		1.00	1.00	
Incremental Delay, d2		2.7		2.1	2.1	
Delay (s)		19.1		12.3	12.4	
Level of Service		B		B	B	
Approach Delay (s)	19.1			12.3	12.4	
Approach LOS	B			B	B	

Intersection Summary

HCM 2000 Control Delay	13.3	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.65		
Actuated Cycle Length (s)	60.0	Sum of lost time (s)	13.5
Intersection Capacity Utilization	66.1%	ICU Level of Service	C
Analysis Period (min)	15		

c Critical Lane Group

Transportation Plan for Wildfire Evacuation Scenario

53: PACIFIC COAST HIGHWAY & Broad Beach Rd/Trancas Canyon Road

04/20/2020



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕		↗	↕		↗	↕	
Traffic Volume (vph)	244	0	0	0	0	54	0	1313	0	0	1467	0
Future Volume (vph)	244	0	0	0	0	54	0	1313	0	0	1467	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.5			4.5			4.5			4.5	
Lane Util. Factor		1.00			1.00			0.95			0.95	
Frt		1.00			0.86			1.00			1.00	
Flt Protected		0.95			1.00			1.00			1.00	
Satd. Flow (prot)		1770			1611			3539			3539	
Flt Permitted		0.72			1.00			1.00			1.00	
Satd. Flow (perm)		1338			1611			3539			3539	
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	265	0	0	0	0	59	0	1427	0	0	1595	0
RTOR Reduction (vph)	0	0	0	0	22	0	0	0	0	0	0	0
Lane Group Flow (vph)	0	265	0	0	37	0	0	1427	0	0	1595	0
Turn Type	Perm	NA			NA		Perm	NA		Perm	NA	
Protected Phases		2			2			8			4	
Permitted Phases	2			2			8			4		
Actuated Green, G (s)		18.0			18.0			18.0			18.0	
Effective Green, g (s)		18.0			18.0			18.0			18.0	
Actuated g/C Ratio		0.40			0.40			0.40			0.40	
Clearance Time (s)		4.5			4.5			4.5			4.5	
Lane Grp Cap (vph)		535			644			1415			1415	
v/s Ratio Prot					0.02			0.40			c0.45	
v/s Ratio Perm		c0.20										
v/c Ratio		0.50			0.06			1.01			1.13	
Uniform Delay, d1		10.1			8.3			13.5			13.5	
Progression Factor		1.00			1.00			1.00			1.00	
Incremental Delay, d2		3.3			0.2			26.0			66.9	
Delay (s)		13.4			8.5			39.5			80.4	
Level of Service		B			A			D			F	
Approach Delay (s)		13.4			8.5			39.5			80.4	
Approach LOS		B			A			D			F	

Intersection Summary

HCM 2000 Control Delay	56.4	HCM 2000 Level of Service	E
HCM 2000 Volume to Capacity ratio	0.81		
Actuated Cycle Length (s)	45.0	Sum of lost time (s)	9.0
Intersection Capacity Utilization	68.2%	ICU Level of Service	C
Analysis Period (min)	15		
c Critical Lane Group			

Transportation Plan for Wildfire Evacuation Scenario
 73: PACIFIC COAST HIGHWAY & Morning View Drive

04/20/2020



Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	0	134	1186	0	56	953
Future Volume (vph)	0	134	1186	0	56	953
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.5		4.5		4.5	4.5
Lane Util. Factor	1.00		0.95		1.00	0.95
Frt	0.86		1.00		1.00	1.00
Flt Protected	1.00		1.00		0.95	1.00
Satd. Flow (prot)	1611		3539		1770	3539
Flt Permitted	1.00		1.00		0.95	1.00
Satd. Flow (perm)	1611		3539		1770	3539
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	0	146	1289	0	61	1036
RTOR Reduction (vph)	103	0	0	0	0	0
Lane Group Flow (vph)	43	0	1289	0	61	1036
Turn Type	Prot		NA	Perm	Prot	NA
Protected Phases	2		8		7	4
Permitted Phases				8		
Actuated Green, G (s)	22.5		35.2		4.7	44.4
Effective Green, g (s)	22.5		35.2		4.7	44.4
Actuated g/C Ratio	0.30		0.46		0.06	0.58
Clearance Time (s)	4.5		4.5		4.5	4.5
Vehicle Extension (s)	3.0		3.0		3.0	3.0
Lane Grp Cap (vph)	477		1641		109	2070
v/s Ratio Prot	c0.03		c0.36		0.03	c0.29
v/s Ratio Perm						
v/c Ratio	0.09		0.79		0.56	0.50
Uniform Delay, d1	19.3		17.2		34.6	9.2
Progression Factor	1.00		1.00		1.00	1.00
Incremental Delay, d2	0.4		2.6		6.1	0.2
Delay (s)	19.7		19.7		40.7	9.4
Level of Service	B		B		D	A
Approach Delay (s)	19.7		19.7			11.2
Approach LOS	B		B			B

Intersection Summary

HCM 2000 Control Delay	16.0	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.53		
Actuated Cycle Length (s)	75.9	Sum of lost time (s)	13.5
Intersection Capacity Utilization	56.5%	ICU Level of Service	B
Analysis Period (min)	15		

c Critical Lane Group

Transportation Plan for Wildfire Evacuation Scenario
 16: PACIFIC COAST HIGHWAY & Malibu Road

04/20/2020



Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations		↗		↑↑	↑↓	
Traffic Volume (veh/h)	0	36	0	1447	1416	0
Future Volume (Veh/h)	0	36	0	1447	1416	0
Sign Control	Stop			Free	Free	
Grade	0%			0%	0%	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	0	39	0	1573	1539	0
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type				None	TWLTL	
Median storage (veh)					2	
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume	2326	770	1539			
vC1, stage 1 conf vol	1539					
vC2, stage 2 conf vol	786					
vCu, unblocked vol	2326	770	1539			
tC, single (s)	6.8	6.9	4.1			
tC, 2 stage (s)	5.8					
tF (s)	3.5	3.3	2.2			
p0 queue free %	100	89	100			
cM capacity (veh/h)	148	344	428			
Direction, Lane #	EB 1	NB 1	NB 2	SB 1	SB 2	
Volume Total	39	786	786	1026	513	
Volume Left	0	0	0	0	0	
Volume Right	39	0	0	0	0	
cSH	344	1700	1700	1700	1700	
Volume to Capacity	0.11	0.46	0.46	0.60	0.30	
Queue Length 95th (ft)	10	0	0	0	0	
Control Delay (s)	16.8	0.0	0.0	0.0	0.0	
Lane LOS	C					
Approach Delay (s)	16.8	0.0		0.0		
Approach LOS	C					
Intersection Summary						
Average Delay			0.2			
Intersection Capacity Utilization			49.1%	ICU Level of Service	A	
Analysis Period (min)			15			

Transportation Plan for Wildfire Evacuation Scenario
 19: PACIFIC COAST HIGHWAY & Latigo Canyon Road

04/20/2020



Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (veh/h)	0	64	1386	0	0	1213
Future Volume (Veh/h)	0	64	1386	0	0	1213
Sign Control	Stop		Free		Free	
Grade	0%		0%		0%	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	0	70	1507	0	0	1318
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type	None			None		
Median storage (veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume	2166	754			1507	
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	2166	754			1507	
tC, single (s)	6.8	6.9			4.1	
tC, 2 stage (s)						
tF (s)	3.5	3.3			2.2	
p0 queue free %	100	80			100	
cM capacity (veh/h)	40	352			440	
Direction, Lane #	WB 1	NB 1	NB 2	SB 1	SB 2	SB 3
Volume Total	70	1005	502	0	659	659
Volume Left	0	0	0	0	0	0
Volume Right	70	0	0	0	0	0
cSH	352	1700	1700	1700	1700	1700
Volume to Capacity	0.20	0.59	0.30	0.00	0.39	0.39
Queue Length 95th (ft)	18	0	0	0	0	0
Control Delay (s)	17.7	0.0	0.0	0.0	0.0	0.0
Lane LOS	C					
Approach Delay (s)	17.7	0.0	0.0			
Approach LOS	C					
Intersection Summary						
Average Delay			0.4			
Intersection Capacity Utilization			48.9%	ICU Level of Service	A	
Analysis Period (min)			15			

Transportation Plan for Wildfire Evacuation Scenario
 49: PACIFIC COAST HIGHWAY & Encinal Canyon

04/20/2020



Movement	WBL	WBR	NBT	NBR	SBL	SBT	
Lane Configurations							
Traffic Volume (veh/h)	0	85	933	38	0	698	
Future Volume (Veh/h)	0	85	933	38	0	698	
Sign Control	Stop		Free			Free	
Grade	0%		0%			0%	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	
Hourly flow rate (vph)	0	92	1014	41	0	759	
Pedestrians							
Lane Width (ft)							
Walking Speed (ft/s)							
Percent Blockage							
Right turn flare (veh)							
Median type			TWLTL			TWLTL	
Median storage veh			2			2	
Upstream signal (ft)							
pX, platoon unblocked							
vC, conflicting volume	1394	507			1055		
vC1, stage 1 conf vol	1014						
vC2, stage 2 conf vol	380						
vCu, unblocked vol	1394	507			1055		
tC, single (s)	6.8	6.9			4.1		
tC, 2 stage (s)	5.8						
tF (s)	3.5	3.3			2.2		
p0 queue free %	100	82			100		
cM capacity (veh/h)	290	511			656		
Direction, Lane #	WB 1	NB 1	NB 2	NB 3	SB 1	SB 2	SB 3
Volume Total	92	507	507	41	0	380	380
Volume Left	0	0	0	0	0	0	0
Volume Right	92	0	0	41	0	0	0
cSH	511	1700	1700	1700	1700	1700	1700
Volume to Capacity	0.18	0.30	0.30	0.02	0.00	0.22	0.22
Queue Length 95th (ft)	16	0	0	0	0	0	0
Control Delay (s)	13.6	0.0	0.0	0.0	0.0	0.0	0.0
Lane LOS	B						
Approach Delay (s)	13.6	0.0			0.0		
Approach LOS	B						
Intersection Summary							
Average Delay			0.7				
Intersection Capacity Utilization			37.7%		ICU Level of Service		A
Analysis Period (min)			15				

Transportation Plan for Wildfire Evacuation Scenario
 52: PACIFIC COAST HIGHWAY & Decker Canyon

04/20/2020

						
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations			 			 
Traffic Volume (veh/h)	0	23	347	0	0	694
Future Volume (Veh/h)	0	23	347	0	0	694
Sign Control	Stop		Free			Free
Grade	0%		0%			0%
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	0	25	377	0	0	754
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type			TWLTL			TWLTL
Median storage veh			2			2
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume	754	188			377	
vC1, stage 1 conf vol	377					
vC2, stage 2 conf vol	377					
vCu, unblocked vol	754	188			377	
tC, single (s)	6.8	6.9			4.1	
tC, 2 stage (s)	5.8					
tF (s)	3.5	3.3			2.2	
p0 queue free %	100	97			100	
cM capacity (veh/h)	544	821			1178	
Direction, Lane #	WB 1	NB 1	NB 2	SB 1	SB 2	SB 3
Volume Total	25	188	188	0	377	377
Volume Left	0	0	0	0	0	0
Volume Right	25	0	0	0	0	0
cSH	821	1700	1700	1700	1700	1700
Volume to Capacity	0.03	0.11	0.11	0.00	0.22	0.22
Queue Length 95th (ft)	2	0	0	0	0	0
Control Delay (s)	9.5	0.0	0.0	0.0	0.0	0.0
Lane LOS	A					
Approach Delay (s)	9.5	0.0		0.0		
Approach LOS	A					
Intersection Summary						
Average Delay			0.2			
Intersection Capacity Utilization			29.2%		ICU Level of Service	A
Analysis Period (min)			15			

Transportation Plan for Tsunami Scenario
 1: TOPANGA CANYON ROAD & PACIFIC COAST HIGHWAY

04/20/2020



Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations	↔↔	↔	↑↑↑↔		↔	↑↑
Traffic Volume (vph)	0	0	0	2655	1879	0
Future Volume (vph)	0	0	0	2655	1879	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)			6.0		4.2	
Lane Util. Factor			0.91		1.00	
Frbp, ped/bikes			0.90		1.00	
Flpb, ped/bikes			1.00		1.00	
Frt			0.85		1.00	
Flt Protected			1.00		0.95	
Satd. Flow (prot)			3907		1770	
Flt Permitted			1.00		0.95	
Satd. Flow (perm)			3907		1770	
Peak-hour factor, PHF	0.74	0.74	0.90	0.84	0.83	0.85
Adj. Flow (vph)	0	0	0	3161	2264	0
RTOR Reduction (vph)	0	0	269	0	0	0
Lane Group Flow (vph)	0	0	2892	0	2264	0
Confl. Peds. (#/hr)		68		42		
Confl. Bikes (#/hr)		1		11		
Turn Type	Prot	pm+ov	NA		Prot	
Protected Phases	8	5	6		5	2
Permitted Phases		8				
Actuated Green, G (s)			119.0		19.8	
Effective Green, g (s)			119.0		19.8	
Actuated g/C Ratio			0.70		0.12	
Clearance Time (s)			6.0		4.2	
Vehicle Extension (s)			3.0		3.0	
Lane Grp Cap (vph)			2725		205	
v/s Ratio Prot			c0.74		c1.28	
v/s Ratio Perm						
v/c Ratio			2.54dr		11.04	
Uniform Delay, d1			25.8		75.4	
Progression Factor			1.00		1.00	
Incremental Delay, d2			36.3		4529.4	
Delay (s)			62.1		4604.8	
Level of Service			E		F	
Approach Delay (s)	0.0		62.1		4604.8	
Approach LOS	A		E		F	

Intersection Summary			
HCM 2000 Control Delay	1957.9	HCM 2000 Level of Service	F
HCM 2000 Volume to Capacity ratio	2.21		
Actuated Cycle Length (s)	170.6	Sum of lost time (s)	14.8
Intersection Capacity Utilization	193.9%	ICU Level of Service	H
Analysis Period (min)	15		

dr Defacto Right Lane. Recode with 1 though lane as a right lane.
 c Critical Lane Group

Transportation Plan for Tsunami Scenario
 2: BIG ROCK DRIVE & PACIFIC COAST HIGHWAY

04/20/2020



Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations	↘		↕↔		↘	↕↕
Traffic Volume (vph)	0	0	0	2073	1601	0
Future Volume (vph)	0	0	0	2073	1601	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)			5.3		3.7	
Lane Util. Factor			0.95		1.00	
Frbp, ped/bikes			0.98		1.00	
Flpb, ped/bikes			1.00		1.00	
Frt			0.85		1.00	
Flt Protected			1.00		0.95	
Satd. Flow (prot)			2943		1770	
Flt Permitted			1.00		0.08	
Satd. Flow (perm)			2943		148	
Peak-hour factor, PHF	0.71	0.64	0.96	0.73	0.53	0.84
Adj. Flow (vph)	0	0	0	2840	3021	0
RTOR Reduction (vph)	0	0	240	0	0	0
Lane Group Flow (vph)	0	0	2600	0	3021	0
Confl. Bikes (#/hr)		1		3		
Turn Type	Prot		NA		pm+pt	
Protected Phases	8		2		1	6
Permitted Phases					6	
Actuated Green, G (s)			45.0		60.3	
Effective Green, g (s)			45.0		60.3	
Actuated g/C Ratio			0.70		0.94	
Clearance Time (s)			5.3		3.7	
Vehicle Extension (s)			3.0		2.0	
Lane Grp Cap (vph)			2069		392	
v/s Ratio Prot			0.88		c1.20	
v/s Ratio Perm					c6.04	
v/c Ratio			2.11dr		7.71	
Uniform Delay, d1			9.5		23.3	
Progression Factor			1.00		1.00	
Incremental Delay, d2			119.6		3023.3	
Delay (s)			129.1		3046.6	
Level of Service			F		F	
Approach Delay (s)	0.0		129.1			3046.6
Approach LOS	A		F			F

Intersection Summary

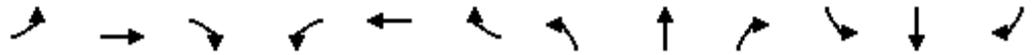
HCM 2000 Control Delay	1632.9	HCM 2000 Level of Service	F
HCM 2000 Volume to Capacity ratio	8.78		
Actuated Cycle Length (s)	64.0	Sum of lost time (s)	13.2
Intersection Capacity Utilization	163.9%	ICU Level of Service	H
Analysis Period (min)	15		

dr Defacto Right Lane. Recode with 1 though lane as a right lane.

c Critical Lane Group

Transportation Plan for Tsunami Scenario
 3: PACIFIC COAST HIGHWAY & LAS FLORES CANYON ROAD

04/20/2020



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕	↕	↕	↕	↕	↕	↕	↕
Traffic Volume (vph)	0	50	0	0	0	0	0	0	1679	1775	0	0
Future Volume (vph)	0	50	0	0	0	0	0	0	1679	1775	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		5.1							6.3	4.7		
Lane Util. Factor		1.00							1.00	1.00		
Frbp, ped/bikes		1.00							0.98	1.00		
Flpb, ped/bikes		1.00							1.00	1.00		
Frt		1.00							0.85	1.00		
Flt Protected		1.00							1.00	0.95		
Satd. Flow (prot)		1863							1548	1770		
Flt Permitted		1.00							1.00	0.73		
Satd. Flow (perm)		1863							1548	1357		
Peak-hour factor, PHF	0.60	0.25	0.53	0.39	0.62	0.77	0.75	0.98	0.58	0.58	0.88	0.66
Adj. Flow (vph)	0	200	0	0	0	0	0	0	2895	3060	0	0
RTOR Reduction (vph)	0	0	0	0	0	0	0	0	32	0	0	0
Lane Group Flow (vph)	0	200	0	0	0	0	0	0	2863	3060	0	0
Confl. Peds. (#/hr)			10	10			3					3
Confl. Bikes (#/hr)			2			2			4			24
Turn Type		NA				Perm	Prot		Perm	pm+pt		
Protected Phases		4			4		1	6		5	2	
Permitted Phases	4			4		4			6		2	
Actuated Green, G (s)		23.4							120.1	143.8		
Effective Green, g (s)		23.4							120.1	143.8		
Actuated g/C Ratio		0.13							0.67	0.81		
Clearance Time (s)		5.1							6.3	4.7		
Vehicle Extension (s)		3.0							7.0	2.0		
Lane Grp Cap (vph)		244							1040	1136		
v/s Ratio Prot		c0.11								c0.29		
v/s Ratio Perm									c1.85	1.88		
v/c Ratio		0.82							2.75	2.69		
Uniform Delay, d1		75.5							29.2	16.9		
Progression Factor		1.00							1.00	1.00		
Incremental Delay, d2		18.9							791.5	764.7		
Delay (s)		94.5							820.7	781.6		
Level of Service		F							F	F		
Approach Delay (s)		94.5			0.0			820.7			781.6	
Approach LOS		F			A			F			F	
Intersection Summary												
HCM 2000 Control Delay			777.7									F
HCM 2000 Volume to Capacity ratio			2.49									
Actuated Cycle Length (s)			178.6							16.1		
Intersection Capacity Utilization			226.2%									H
Analysis Period (min)			15									

c Critical Lane Group

Transportation Plan for Tsunami Scenario
4: PACIFIC COAST HIGHWAY & RAMBLA PACIFICO

04/20/2020



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕↕			↕	↕	↕	↕↕	↕	↕	↕↕	
Traffic Volume (vph)	0	37	0	0	0	0	0	0	1971	1572	0	0
Future Volume (vph)	0	37	0	0	0	0	0	0	1971	1572	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		5.1							6.3	4.7		
Lane Util. Factor		1.00							1.00	1.00		
Frbp, ped/bikes		1.00							0.97	1.00		
Flpb, ped/bikes		1.00							1.00	1.00		
Frt		1.00							0.85	1.00		
Flt Protected		1.00							1.00	0.95		
Satd. Flow (prot)		1863							1533	1770		
Flt Permitted		1.00							1.00	0.95		
Satd. Flow (perm)		1863							1533	1770		
Peak-hour factor, PHF	0.38	0.75	0.78	0.62	0.75	0.56	0.46	0.98	0.65	0.58	0.85	0.25
Adj. Flow (vph)	0	49	0	0	0	0	0	0	3032	2710	0	0
RTOR Reduction (vph)	0	0	0	0	0	0	0	0	142	0	0	0
Lane Group Flow (vph)	0	49	0	0	0	0	0	0	2890	2710	0	0
Confl. Peds. (#/hr)	11					11	13		2	2		13
Confl. Bikes (#/hr)									6			27
Turn Type		NA				Perm	Perm		Perm	Prot		
Protected Phases		4			4			6		5	2	
Permitted Phases	4			4		4	6		6			
Actuated Green, G (s)		23.4							120.1	19.0		
Effective Green, g (s)		23.4							120.1	19.0		
Actuated g/C Ratio		0.13							0.67	0.11		
Clearance Time (s)		5.1							6.3	4.7		
Vehicle Extension (s)		3.0							7.0	2.0		
Lane Grp Cap (vph)		244							1030	188		
v/s Ratio Prot		c0.03								c1.53		
v/s Ratio Perm									c1.89			
v/c Ratio		0.20							2.81	14.41		
Uniform Delay, d1		69.3							29.2	79.8		
Progression Factor		1.00							1.00	1.00		
Incremental Delay, d2		0.4							815.5	6047.0		
Delay (s)		69.7							844.8	6126.8		
Level of Service		E							F	F		
Approach Delay (s)		69.7			0.0			844.8			6126.8	
Approach LOS		E			A			F			F	
Intersection Summary												
HCM 2000 Control Delay			3310.0									F
HCM 2000 Volume to Capacity ratio			3.78									
Actuated Cycle Length (s)			178.6									16.1
Intersection Capacity Utilization			229.4%									H
Analysis Period (min)			15									

c Critical Lane Group

Transportation Plan for Tsunami Scenario
 5: PACIFIC COAST HIGHWAY & CARBON CANYON ROAD

04/20/2020



Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations	↔		↑↑	↗	↘	↑↑
Traffic Volume (vph)	14	0	0	1954	1662	0
Future Volume (vph)	14	0	0	1954	1662	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.2			5.3	3.7	
Lane Util. Factor	1.00			1.00	1.00	
Frbp, ped/bikes	1.00			0.97	1.00	
Flpb, ped/bikes	1.00			1.00	1.00	
Frt	1.00			0.85	1.00	
Flt Protected	0.95			1.00	0.95	
Satd. Flow (prot)	1770			1534	1770	
Flt Permitted	0.95			1.00	0.95	
Satd. Flow (perm)	1770			1534	1770	
Peak-hour factor, PHF	0.38	0.50	0.97	0.56	0.58	0.94
Adj. Flow (vph)	37	0	0	3489	2866	0
RTOR Reduction (vph)	0	0	0	151	0	0
Lane Group Flow (vph)	37	0	0	3338	2866	0
Confl. Peds. (#/hr)		1		2		
Confl. Bikes (#/hr)				6		
Turn Type	Prot			Perm	Prot	
Protected Phases	4		2		1	6
Permitted Phases				2		
Actuated Green, G (s)	8.6			120.3	23.7	
Effective Green, g (s)	8.6			120.3	23.7	
Actuated g/C Ratio	0.05			0.73	0.14	
Clearance Time (s)	4.2			5.3	3.7	
Vehicle Extension (s)	2.0			8.0	2.0	
Lane Grp Cap (vph)	91			1113	253	
v/s Ratio Prot	c0.02				c1.62	
v/s Ratio Perm				c2.18		
v/c Ratio	0.41			3.00	11.33	
Uniform Delay, d1	76.1			22.8	71.1	
Progression Factor	1.00			1.00	1.00	
Incremental Delay, d2	1.1			902.0	4655.4	
Delay (s)	77.2			924.8	4726.5	
Level of Service	E			F	F	
Approach Delay (s)	77.2		924.8		4726.5	
Approach LOS	E		F		F	
Intersection Summary						
HCM 2000 Control Delay			2624.5		HCM 2000 Level of Service	F
HCM 2000 Volume to Capacity ratio			4.15			
Actuated Cycle Length (s)			165.8		Sum of lost time (s)	13.2
Intersection Capacity Utilization			221.0%		ICU Level of Service	H
Analysis Period (min)			15			

c Critical Lane Group

Transportation Plan for Tsunami Scenario
 6: PACIFIC COAST HIGHWAY & BUSCH REALTY

04/20/2020



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations							↔	↑↑		↔	↑↑	
Traffic Volume (vph)	0	0	0	0	0	0	0	0	1917	1680	0	0
Future Volume (vph)	0	0	0	0	0	0	0	0	1917	1680	0	0
Ideal Flow (vphp)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)								5.3		3.7		
Lane Util. Factor								0.95		1.00		
Frbp, ped/bikes								0.98		1.00		
Flpb, ped/bikes								1.00		1.00		
Frt								0.85		1.00		
Flt Protected								1.00		0.95		
Satd. Flow (prot)								2935		1770		
Flt Permitted								1.00		0.95		
Satd. Flow (perm)								2935		1770		
Peak-hour factor, PHF	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.95	0.25	0.38	0.97	0.25
Adj. Flow (vph)	0	0	0	0	0	0	0	0	7668	4421	0	0
RTOR Reduction (vph)	0	0	0	0	0	0	0	176	0	0	0	0
Lane Group Flow (vph)	0	0	0	0	0	0	0	7492	0	4421	0	0
Confl. Bikes (#/hr)							2			8		28
Turn Type								Prot	NA		Prot	
Protected Phases								5	2		1	6
Permitted Phases												
Actuated Green, G (s)								121.0		24.2		
Effective Green, g (s)								121.0		24.2		
Actuated g/C Ratio								0.70		0.14		
Clearance Time (s)								5.3		3.7		
Vehicle Extension (s)								8.0		2.0		
Lane Grp Cap (vph)								2053		247		
v/s Ratio Prot								c2.55		c2.50		
v/s Ratio Perm												
v/c Ratio								6.08dr		17.90		
Uniform Delay, d1								26.0		74.4		
Progression Factor								1.00		1.00		
Incremental Delay, d2								1193.3		7612.2		
Delay (s)								1219.3		7686.5		
Level of Service								F		F		
Approach Delay (s)		0.0			0.0			1219.3			7686.5	
Approach LOS		A			A			F			F	

Intersection Summary

HCM 2000 Control Delay	3584.4	HCM 2000 Level of Service	F
HCM 2000 Volume to Capacity ratio	5.43		
Actuated Cycle Length (s)	172.9	Sum of lost time (s)	12.0
Intersection Capacity Utilization	163.2%	ICU Level of Service	H
Analysis Period (min)	15		

dr Defacto Right Lane. Recode with 1 though lane as a right lane.

c Critical Lane Group

Transportation Plan for Tsunami Scenario
 7: PACIFIC COAST HIGHWAY & MCDONALDS

04/20/2020



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations							↔	↑↑		↔	↑↑	
Traffic Volume (vph)	0	0	0	0	0	0	0	0	1876	1647	0	0
Future Volume (vph)	0	0	0	0	0	0	0	0	1876	1647	0	0
Ideal Flow (vphp)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)								5.3		3.7		
Lane Util. Factor								0.95		1.00		
Frbp, ped/bikes								0.97		1.00		
Flpb, ped/bikes								1.00		1.00		
Frt								0.85		1.00		
Flt Protected								1.00		0.95		
Satd. Flow (prot)								2911		1770		
Flt Permitted								1.00		0.95		
Satd. Flow (perm)								2911		1770		
Peak-hour factor, PHF	0.50	0.25	0.65	0.25	0.25	0.25	0.25	0.96	0.25	0.25	0.95	0.25
Adj. Flow (vph)	0	0	0	0	0	0	0	0	7504	6588	0	0
RTOR Reduction (vph)	0	0	0	0	0	0	0	204	0	0	0	0
Lane Group Flow (vph)	0	0	0	0	0	0	0	7300	0	6588	0	0
Confl. Bikes (#/hr)										22		6
Turn Type								Prot	NA		Prot	
Protected Phases								5	2		1	6
Permitted Phases												
Actuated Green, G (s)								120.0		24.0		
Effective Green, g (s)								120.0		24.0		
Actuated g/C Ratio								0.65		0.13		
Clearance Time (s)								5.3		3.7		
Vehicle Extension (s)								8.0		2.0		
Lane Grp Cap (vph)								1898		230		
v/s Ratio Prot								c2.51		c3.72		
v/s Ratio Perm												
v/c Ratio								6.24dr		28.64		
Uniform Delay, d1								32.0		80.0		
Progression Factor								1.00		1.00		
Incremental Delay, d2								1282.0		12447.7		
Delay (s)								1314.0		12527.7		
Level of Service								F		F		
Approach Delay (s)		0.0			0.0			1314.0			12527.7	
Approach LOS		A			A			F			F	

Intersection Summary			
HCM 2000 Control Delay	6556.4	HCM 2000 Level of Service	F
HCM 2000 Volume to Capacity ratio	6.66		
Actuated Cycle Length (s)	184.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	160.0%	ICU Level of Service	H
Analysis Period (min)	15		
dr Defacto Right Lane. Recode with 1 though lane as a right lane.			
c Critical Lane Group			

Transportation Plan for Tsunami Scenario
 8: PACIFIC COAST HIGHWAY & MALIBU PIER

04/20/2020



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR	
Lane Configurations							↔	↑↑		↔	↑↑		
Traffic Volume (vph)	0	0	0	0	0	0	0	0	1894	1807	0	0	
Future Volume (vph)	0	0	0	0	0	0	0	0	1894	1807	0	0	
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	
Total Lost time (s)								5.3		3.7			
Lane Util. Factor								0.95		1.00			
Frbp, ped/bikes								0.98		1.00			
Flpb, ped/bikes								1.00		1.00			
Frt								0.85		1.00			
Flt Protected								1.00		0.95			
Satd. Flow (prot)								2935		1770			
Flt Permitted								1.00		0.95			
Satd. Flow (perm)								2935		1770			
Peak-hour factor, PHF	0.25	0.25	0.25	0.38	0.25	0.44	0.25	0.96	0.25	0.62	0.98	0.25	
Adj. Flow (vph)	0	0	0	0	0	0	0	0	7576	2915	0	0	
RTOR Reduction (vph)	0	0	0	0	0	0	0	205	0	0	0	0	
Lane Group Flow (vph)	0	0	0	0	0	0	0	7371	0	2915	0	0	
Confl. Bikes (#/hr)									8			28	
Turn Type								Prot	NA		Prot		
Protected Phases								5	2		1	6	
Permitted Phases													
Actuated Green, G (s)								120.0		23.6			
Effective Green, g (s)								120.0		23.6			
Actuated g/C Ratio								0.65		0.13			
Clearance Time (s)								5.3		3.7			
Vehicle Extension (s)								8.0		2.0			
Lane Grp Cap (vph)								1918		227			
v/s Ratio Prot								c2.51		c1.65			
v/s Ratio Perm													
v/c Ratio								6.24dr		12.84			
Uniform Delay, d1								31.8		80.0			
Progression Factor								1.00		1.00			
Incremental Delay, d2								1280.6		5337.2			
Delay (s)								1312.4		5417.2			
Level of Service								F		F			
Approach Delay (s)		0.0			0.0			1312.4			5417.2		
Approach LOS		A			A			F			F		
Intersection Summary													
HCM 2000 Control Delay			2453.0									HCM 2000 Level of Service	F
HCM 2000 Volume to Capacity ratio			4.45										
Actuated Cycle Length (s)			183.6									Sum of lost time (s)	12.0
Intersection Capacity Utilization			169.5%									ICU Level of Service	H
Analysis Period (min)			15										
dr Defacto Right Lane. Recode with 1 though lane as a right lane.													
c Critical Lane Group													

Transportation Plan for Tsunami Scenario
 9: PACIFIC COAST HIGHWAY & CROSS CREEK ROAD

04/20/2020

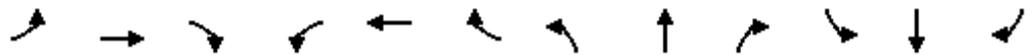


Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR	
Lane Configurations		↕	↗	↖	↕	↗	↖	↕↕	↗	↖	↕↔		
Traffic Volume (vph)	0	58	0	0	0	0	0	0	1835	1658	0	0	
Future Volume (vph)	0	58	0	0	0	0	0	0	1835	1658	0	0	
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	
Total Lost time (s)		4.2							5.3	3.7			
Lane Util. Factor		1.00							1.00	1.00			
Frbp, ped/bikes		1.00							0.54	1.00			
Flpb, ped/bikes		1.00							1.00	1.00			
Frt		1.00							0.85	1.00			
Flt Protected		1.00							1.00	0.95			
Satd. Flow (prot)		1863							856	1770			
Flt Permitted		1.00							1.00	0.95			
Satd. Flow (perm)		1863							856	1770			
Peak-hour factor, PHF	0.71	0.75	0.80	0.93	0.62	0.81	0.75	0.97	0.96	0.92	0.95	0.67	
Adj. Flow (vph)	0	77	0	0	0	0	0	0	1911	1802	0	0	
RTOR Reduction (vph)	0	0	0	0	0	0	0	0	150	0	0	0	
Lane Group Flow (vph)	0	77	0	0	0	0	0	0	1761	1802	0	0	
Confl. Peds. (#/hr)						199			85			99	
Confl. Bikes (#/hr)						3			6			26	
Turn Type		NA	Prot	Split		Prot	Prot		Perm	Prot			
Protected Phases	3	3	3	4	4	4	5	2		1	6		
Permitted Phases									2				
Actuated Green, G (s)		14.4							185.0	29.0			
Effective Green, g (s)		14.4							185.0	29.0			
Actuated g/C Ratio		0.06							0.77	0.12			
Clearance Time (s)		4.2							5.3	3.7			
Vehicle Extension (s)		2.0							7.0	2.0			
Lane Grp Cap (vph)		111							655	212			
v/s Ratio Prot		c0.04								c1.02			
v/s Ratio Perm									c2.06				
v/c Ratio		0.69							2.69	8.50			
Uniform Delay, d1		111.4							28.3	106.3			
Progression Factor		1.00							1.00	1.00			
Incremental Delay, d2		14.1							764.2	3384.6			
Delay (s)		125.5							792.5	3490.9			
Level of Service		F							F	F			
Approach Delay (s)		125.5			0.0			792.5			3490.9		
Approach LOS		F			A			F			F		
Intersection Summary													
HCM 2000 Control Delay			2062.0									HCM 2000 Level of Service	F
HCM 2000 Volume to Capacity ratio			3.36										
Actuated Cycle Length (s)			241.6									Sum of lost time (s)	17.4
Intersection Capacity Utilization			225.6%									ICU Level of Service	H
Analysis Period (min)			15										

c Critical Lane Group

Transportation Plan for Tsunami Scenario
 10: PACIFIC COAST HIGHWAY & WEBB WAY

04/20/2020

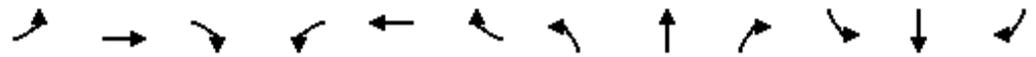


Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR	
Lane Configurations	↖	↗		↖	↗	↗	↖	↖	↗	↖↗	↖↗↗	↖	
Traffic Volume (vph)	0	230	0	0	0	0	0	0	1731	1641	0	0	
Future Volume (vph)	0	230	0	0	0	0	0	0	1731	1641	0	0	
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	
Lane Width	11	16	12	11	11	10	11	11	16	11	12	12	
Total Lost time (s)		4.7							4.7	3.7			
Lane Util. Factor		1.00							1.00	0.97			
Frbp, ped/bikes		1.00							0.98	1.00			
Flpb, ped/bikes		1.00							1.00	1.00			
Frt		1.00							0.85	1.00			
Flt Protected		1.00							1.00	0.95			
Satd. Flow (prot)		2111							1767	3319			
Flt Permitted		1.00							1.00	0.95			
Satd. Flow (perm)		2111							1767	3319			
Peak-hour factor, PHF	0.79	0.79	0.68	0.91	0.68	0.81	0.85	0.91	0.92	0.82	0.95	0.87	
Adj. Flow (vph)	0	291	0	0	0	0	0	0	1882	2001	0	0	
RTOR Reduction (vph)	0	0	0	0	0	0	0	0	13	0	0	0	
Lane Group Flow (vph)	0	291	0	0	0	0	0	0	1869	2001	0	0	
Confl. Peds. (#/hr)	28						28		14			4	
Confl. Bikes (#/hr)			3				5		5			15	
Turn Type	Perm	NA		Split		custom	Prot		pm+ov	Prot		Perm	
Protected Phases		4		3	3		5	2	3	1	6		
Permitted Phases	4					6			2			6	
Actuated Green, G (s)		32.3							55.2	34.0			
Effective Green, g (s)		32.3							55.2	34.0			
Actuated g/C Ratio		0.23							0.39	0.24			
Clearance Time (s)		4.7							4.7	3.7			
Vehicle Extension (s)		3.0							3.0	2.0			
Lane Grp Cap (vph)		485							694	803			
v/s Ratio Prot		c0.14							c0.65	c0.60			
v/s Ratio Perm									0.41				
v/c Ratio		0.60							2.69	2.49			
Uniform Delay, d1		48.3							42.6	53.2			
Progression Factor		1.00							1.00	1.00			
Incremental Delay, d2		2.0							766.2	675.1			
Delay (s)		50.3							808.8	728.3			
Level of Service		D							F	F			
Approach Delay (s)		50.3			0.0			808.8			728.3		
Approach LOS		D			A			F			F		
Intersection Summary													
HCM 2000 Control Delay			717.3									HCM 2000 Level of Service	F
HCM 2000 Volume to Capacity ratio			2.08										
Actuated Cycle Length (s)			140.4									Sum of lost time (s)	18.9
Intersection Capacity Utilization			178.7%									ICU Level of Service	H
Analysis Period (min)			15										
c Critical Lane Group													

Transportation Plan for Tsunami Scenario

11: PACIFIC COAST HIGHWAY & WINTER MESA DR/MALIBU CANYON RD.

04/20/2020



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR	
Lane Configurations													
Traffic Volume (vph)	0	66	0	0	0	0	0	0	1507	1411	0	0	
Future Volume (vph)	0	66	0	0	0	0	0	0	1507	1411	0	0	
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	
Lane Width	12	14	12	12	12	12	10	12	10	10	12	11	
Total Lost time (s)		4.2							4.6	3.7			
Lane Util. Factor		1.00							1.00	0.97			
Frbp, ped/bikes		1.00							0.99	1.00			
Flpb, ped/bikes		1.00							1.00	1.00			
Frt		1.00							0.85	1.00			
Flt Protected		1.00							1.00	0.95			
Satd. Flow (prot)		1987							1466	3204			
Flt Permitted		1.00							1.00	0.95			
Satd. Flow (perm)		1987							1466	3204			
Peak-hour factor, PHF	0.79	0.62	0.72	0.96	0.73	0.82	0.56	0.96	0.83	0.88	0.94	0.69	
Adj. Flow (vph)	0	106	0	0	0	0	0	0	1816	1603	0	0	
RTOR Reduction (vph)	0	0	0	0	0	0	0	0	70	0	0	0	
Lane Group Flow (vph)	0	106	0	0	0	0	0	0	1746	1603	0	0	
Confl. Peds. (#/hr)	2						2					2	
Confl. Bikes (#/hr)			1			2			3			10	
Turn Type	Perm	NA	Perm	Split		pm+ov	Prot		pm+ov	Prot			
Protected Phases		4		3	3	1	5	2	3	1	6		
Permitted Phases	4		4			3			2				
Actuated Green, G (s)		11.1							80.3	19.9			
Effective Green, g (s)		11.1							80.3	19.9			
Actuated g/C Ratio		0.09							0.62	0.15			
Clearance Time (s)		4.2							4.6	3.7			
Vehicle Extension (s)		2.0							3.0	2.0			
Lane Grp Cap (vph)		169							905	490			
v/s Ratio Prot		c0.05							c0.45	c0.50			
v/s Ratio Perm									0.75				
v/c Ratio		0.63							1.93	3.27			
Uniform Delay, d1		57.5							24.9	55.1			
Progression Factor		1.00							1.00	1.00			
Incremental Delay, d2		5.1							422.5	1027.4			
Delay (s)		62.6							447.3	1082.5			
Level of Service		E							F	F			
Approach Delay (s)		62.6			0.0			447.3			1082.5		
Approach LOS		E			A			F			F		
Intersection Summary													
HCM 2000 Control Delay			724.6									HCM 2000 Level of Service	F
HCM 2000 Volume to Capacity ratio			2.04										
Actuated Cycle Length (s)			130.0									Sum of lost time (s)	18.7
Intersection Capacity Utilization			147.7%									ICU Level of Service	H
Analysis Period (min)			15										
c Critical Lane Group													

Transportation Plan for Tsunami Scenario
 12: PACIFIC COAST HIGHWAY & JOHN TYLER

04/20/2020



Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations	↔↔	↗	↑↑	↘	↘	↑↑
Traffic Volume (vph)	0	0	0	1986	1453	0
Future Volume (vph)	0	0	0	1986	1453	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)				5.7	5.7	
Lane Util. Factor				1.00	1.00	
Frbp, ped/bikes				0.99	1.00	
Flpb, ped/bikes				1.00	1.00	
Frt				0.85	1.00	
Flt Protected				1.00	0.95	
Satd. Flow (prot)				1564	1770	
Flt Permitted				1.00	0.76	
Satd. Flow (perm)				1564	1410	
Peak-hour factor, PHF	0.78	0.64	0.94	0.77	0.68	0.92
Adj. Flow (vph)	0	0	0	2579	2137	0
RTOR Reduction (vph)	0	0	0	0	0	0
Lane Group Flow (vph)	0	0	0	2579	2137	0
Confl. Bikes (#/hr)				2		
Turn Type	Prot	Perm		Perm	Perm	
Protected Phases	4		2			6
Permitted Phases		4		2	6	
Actuated Green, G (s)				125.7	125.7	
Effective Green, g (s)				125.7	125.7	
Actuated g/C Ratio				1.00	1.00	
Clearance Time (s)				5.7	5.7	
Vehicle Extension (s)				8.0	8.0	
Lane Grp Cap (vph)				1564	1410	
v/s Ratio Prot						
v/s Ratio Perm				c1.65	1.52	
v/c Ratio				1.65	1.52	
Uniform Delay, d1				62.9	62.9	
Progression Factor				1.00	1.00	
Incremental Delay, d2				294.9	235.7	
Delay (s)				357.8	298.6	
Level of Service				F	F	
Approach Delay (s)	0.0		357.8			298.6
Approach LOS	A		F			F
Intersection Summary						
HCM 2000 Control Delay			331.0		HCM 2000 Level of Service	F
HCM 2000 Volume to Capacity ratio			1.80			
Actuated Cycle Length (s)			125.7		Sum of lost time (s)	10.3
Intersection Capacity Utilization			213.0%		ICU Level of Service	H
Analysis Period (min)			15			
c Critical Lane Group						

Transportation Plan for Tsunami Scenario
 17: PACIFIC COAST HIGHWAY & Coral Canyon Road

04/20/2020



Movement	WBL	WBR	NBU	NBT	NBR	SBL	SBT
Lane Configurations	↶	↷	↶	↶↷		↶	↶↷
Traffic Volume (vph)	0	0	0	0	1426	1331	0
Future Volume (vph)	0	0	0	0	1426	1331	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)				4.5		4.5	
Lane Util. Factor				0.95		1.00	
Frt				0.85		1.00	
Flt Protected				1.00		0.95	
Satd. Flow (prot)				3008		1770	
Flt Permitted				1.00		0.22	
Satd. Flow (perm)				3008		414	
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	0	0	0	0	1550	1447	0
RTOR Reduction (vph)	0	0	0	655	0	0	0
Lane Group Flow (vph)	0	0	0	895	0	1447	0
Turn Type	Prot	Perm	Perm	NA		Perm	
Protected Phases	8			2			6
Permitted Phases		8	2			6	
Actuated Green, G (s)				18.0		18.0	
Effective Green, g (s)				18.0		18.0	
Actuated g/C Ratio				0.40		0.40	
Clearance Time (s)				4.5		4.5	
Lane Grp Cap (vph)				1203		165	
v/s Ratio Prot				0.30			
v/s Ratio Perm						c3.50	
v/c Ratio				1.20dr		8.77	
Uniform Delay, d1				11.5		13.5	
Progression Factor				1.00		1.00	
Incremental Delay, d2				4.2		3508.6	
Delay (s)				15.7		3522.1	
Level of Service				B		F	
Approach Delay (s)	0.0			15.7		3522.1	
Approach LOS	A			B		F	

Intersection Summary

HCM 2000 Control Delay	1708.7	HCM 2000 Level of Service	F
HCM 2000 Volume to Capacity ratio	4.37		
Actuated Cycle Length (s)	45.0	Sum of lost time (s)	9.0
Intersection Capacity Utilization	127.6%	ICU Level of Service	H
Analysis Period (min)	15		

dr Defacto Right Lane. Recode with 1 though lane as a right lane.

c Critical Lane Group

Transportation Plan for Tsunami Scenario
 21: PACIFIC COAST HIGHWAY & Zumeriz Drive

04/20/2020



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕	↗		↔		↖	↕↔		↖	↕↕	↗
Traffic Volume (vph)	0	148	0	0	0	0	0	0	1280	1123	0	0
Future Volume (vph)	0	148	0	0	0	0	0	0	1280	1123	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.5						4.5		4.5		
Lane Util. Factor		1.00						0.95		1.00		
Frt		1.00						0.85		1.00		
Flt Protected		1.00						1.00		0.95		
Satd. Flow (prot)		1863						3008		1770		
Flt Permitted		1.00						1.00		0.95		
Satd. Flow (perm)		1863						3008		1770		
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	0	161	0	0	0	0	0	0	1391	1221	0	0
RTOR Reduction (vph)	0	0	0	0	0	0	0	0	0	0	0	0
Lane Group Flow (vph)	0	161	0	0	0	0	0	1391	0	1221	0	0
Turn Type		NA	Perm				Prot	NA		Prot		Perm
Protected Phases	2	2		6	6		3	8		7	4	
Permitted Phases			2									4
Actuated Green, G (s)		18.5						30.5		5.0		
Effective Green, g (s)		18.5						30.5		5.0		
Actuated g/C Ratio		0.27						0.45		0.07		
Clearance Time (s)		4.5						4.5		4.5		
Vehicle Extension (s)		3.0						3.0		3.0		
Lane Grp Cap (vph)		510						1359		131		
v/s Ratio Prot		c0.09						c0.46		c0.69		
v/s Ratio Perm												
v/c Ratio		0.32						1.95dr		9.32		
Uniform Delay, d1		19.5						18.5		31.2		
Progression Factor		1.00						1.00		1.00		
Incremental Delay, d2		1.6						30.6		3759.6		
Delay (s)		21.1						49.1		3790.9		
Level of Service		C						D		F		
Approach Delay (s)		21.1		0.0				49.1			3790.9	
Approach LOS		C		A				D			F	
Intersection Summary												
HCM 2000 Control Delay			1695.0									F
HCM 2000 Volume to Capacity ratio			1.69									
Actuated Cycle Length (s)			67.5							18.0		
Intersection Capacity Utilization			122.9%									H
Analysis Period (min)			15									
dr Defacto Right Lane. Recode with 1 though lane as a right lane.												
c Critical Lane Group												

Transportation Plan for Tsunami Scenario
 25: PACIFIC COAST HIGHWAY & Paradise Cove Drive

04/20/2020



Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	159	0	0	1353	1172	0
Future Volume (vph)	159	0	0	1353	1172	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.5			4.5	4.5	
Lane Util. Factor	1.00			0.95	0.95	
Frt	1.00			1.00	1.00	
Flt Protected	0.95			1.00	1.00	
Satd. Flow (prot)	1770			3539	3539	
Flt Permitted	0.95			1.00	1.00	
Satd. Flow (perm)	1770			3539	3539	
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	173	0	0	1471	1274	0
RTOR Reduction (vph)	0	0	0	0	0	0
Lane Group Flow (vph)	173	0	0	1471	1274	0
Turn Type	Prot		Prot	NA	NA	
Protected Phases	2		3	8	4	
Permitted Phases						
Actuated Green, G (s)	9.8			41.2	41.2	
Effective Green, g (s)	9.8			41.2	41.2	
Actuated g/C Ratio	0.16			0.69	0.69	
Clearance Time (s)	4.5			4.5	4.5	
Vehicle Extension (s)	3.0			3.0	3.0	
Lane Grp Cap (vph)	289			2430	2430	
v/s Ratio Prot	c0.10			c0.42	0.36	
v/s Ratio Perm						
v/c Ratio	0.60			0.61	0.52	
Uniform Delay, d1	23.3			5.0	4.6	
Progression Factor	1.00			1.00	1.00	
Incremental Delay, d2	3.3			1.1	0.8	
Delay (s)	26.6			6.2	5.4	
Level of Service	C			A	A	
Approach Delay (s)	26.6			6.2	5.4	
Approach LOS	C			A	A	

Intersection Summary

HCM 2000 Control Delay	7.1	HCM 2000 Level of Service	A
HCM 2000 Volume to Capacity ratio	0.66		
Actuated Cycle Length (s)	60.0	Sum of lost time (s)	13.5
Intersection Capacity Utilization	53.7%	ICU Level of Service	A
Analysis Period (min)	15		

c Critical Lane Group

Transportation Plan for Tsunami Scenario
 28: PACIFIC COAST HIGHWAY & Kanan Dume Road

04/20/2020



Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations	↶↶	↶	↶↶	↶	↶	↶↶
Traffic Volume (vph)	0	0	0	1494	1304	0
Future Volume (vph)	0	0	0	1494	1304	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)				6.7	4.2	
Lane Util. Factor				1.00	1.00	
Frt				0.85	1.00	
Flt Protected				1.00	0.95	
Satd. Flow (prot)				1583	1770	
Flt Permitted				1.00	0.95	
Satd. Flow (perm)				1583	1770	
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	0	0	0	1624	1417	0
RTOR Reduction (vph)	0	0	0	378	0	0
Lane Group Flow (vph)	0	0	0	1246	1417	0
Turn Type	Prot	Perm		Perm	Prot	
Protected Phases	8		2		1	6
Permitted Phases		8		2		
Actuated Green, G (s)				35.8	25.2	
Effective Green, g (s)				35.8	25.2	
Actuated g/C Ratio				0.34	0.24	
Clearance Time (s)				6.7	4.2	
Lane Grp Cap (vph)				539	424	
v/s Ratio Prot					c0.80	
v/s Ratio Perm				c0.79		
v/c Ratio				2.31	3.34	
Uniform Delay, d1				34.6	39.9	
Progression Factor				1.00	1.00	
Incremental Delay, d2				595.8	1059.9	
Delay (s)				630.4	1099.8	
Level of Service				F	F	
Approach Delay (s)	0.0		630.4			1099.8
Approach LOS	A		F			F

Intersection Summary				
HCM 2000 Control Delay		849.2	HCM 2000 Level of Service	F
HCM 2000 Volume to Capacity ratio		1.87		
Actuated Cycle Length (s)		105.0	Sum of lost time (s)	16.0
Intersection Capacity Utilization		173.8%	ICU Level of Service	H
Analysis Period (min)		15		
c Critical Lane Group				

Transportation Plan for Tsunami Scenario
 36: PACIFIC COAST HIGHWAY & Busch Drive

04/20/2020



Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations	↖↗	↖	↕↕	↖	↖	↕↕
Traffic Volume (vph)	0	0	0	1253	1316	0
Future Volume (vph)	0	0	0	1253	1316	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)				4.5	4.5	
Lane Util. Factor				1.00	1.00	
Frt				0.85	1.00	
Flt Protected				1.00	0.95	
Satd. Flow (prot)				1583	1770	
Flt Permitted				1.00	0.76	
Satd. Flow (perm)				1583	1410	
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	0	0	0	1362	1430	0
RTOR Reduction (vph)	0	0	0	655	0	0
Lane Group Flow (vph)	0	0	0	707	1430	0
Turn Type	Prot	Perm		Perm	Perm	
Protected Phases	2		8			4
Permitted Phases		2		8	4	
Actuated Green, G (s)				18.0	18.0	
Effective Green, g (s)				18.0	18.0	
Actuated g/C Ratio				0.40	0.40	
Clearance Time (s)				4.5	4.5	
Lane Grp Cap (vph)				633	564	
v/s Ratio Prot						
v/s Ratio Perm				0.45	c1.01	
v/c Ratio				1.12	2.54	
Uniform Delay, d1				13.5	13.5	
Progression Factor				1.00	1.00	
Incremental Delay, d2				72.6	696.2	
Delay (s)				86.1	709.7	
Level of Service				F	F	
Approach Delay (s)	0.0		86.1			709.7
Approach LOS	A		F			F

Intersection Summary				
HCM 2000 Control Delay		405.5	HCM 2000 Level of Service	F
HCM 2000 Volume to Capacity ratio		1.27		
Actuated Cycle Length (s)		45.0	Sum of lost time (s)	9.0
Intersection Capacity Utilization		158.0%	ICU Level of Service	H
Analysis Period (min)		15		
c Critical Lane Group				

Transportation Plan for Tsunami Scenario
 42: PACIFIC COAST HIGHWAY & Heathercliff Road

04/20/2020



Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	0	401	0	1213	1220	0
Future Volume (vph)	0	401	0	1213	1220	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.5		4.5	4.5	
Lane Util. Factor		1.00		0.95	0.95	
Frt		0.85		1.00	1.00	
Flt Protected		1.00		1.00	1.00	
Satd. Flow (prot)		1583		3539	3539	
Flt Permitted		1.00		1.00	1.00	
Satd. Flow (perm)		1583		3539	3539	
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	0	436	0	1318	1326	0
RTOR Reduction (vph)	0	226	0	0	0	0
Lane Group Flow (vph)	0	210	0	1318	1326	0
Turn Type	Prot	Perm	Prot	NA	NA	Perm
Protected Phases	2		3	8	4	
Permitted Phases		2				4
Actuated Green, G (s)		18.7		32.3	32.3	
Effective Green, g (s)		18.7		32.3	32.3	
Actuated g/C Ratio		0.31		0.54	0.54	
Clearance Time (s)		4.5		4.5	4.5	
Vehicle Extension (s)		3.0		3.0	3.0	
Lane Grp Cap (vph)		493		1905	1905	
v/s Ratio Prot				0.37	c0.37	
v/s Ratio Perm		c0.13				
v/c Ratio		0.43		0.69	0.70	
Uniform Delay, d1		16.4		10.2	10.2	
Progression Factor		1.00		1.00	1.00	
Incremental Delay, d2		2.7		2.1	2.1	
Delay (s)		19.1		12.3	12.4	
Level of Service		B		B	B	
Approach Delay (s)	19.1			12.3	12.4	
Approach LOS	B			B	B	

Intersection Summary

HCM 2000 Control Delay	13.3	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.65		
Actuated Cycle Length (s)	60.0	Sum of lost time (s)	13.5
Intersection Capacity Utilization	66.1%	ICU Level of Service	C
Analysis Period (min)	15		

c Critical Lane Group

Transportation Plan for Tsunami Scenario

53: PACIFIC COAST HIGHWAY & Broad Beach Rd/Trancas Canyon Road

04/20/2020



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕		↗	↕		↗	↕	
Traffic Volume (vph)	0	244	0	0	0	0	0	0	1313	1467	0	0
Future Volume (vph)	0	244	0	0	0	0	0	0	1313	1467	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.5						4.5		4.5		
Lane Util. Factor		1.00						0.95		1.00		
Frt		1.00						0.85		1.00		
Flt Protected		1.00						1.00		0.95		
Satd. Flow (prot)		1863						3008		1770		
Flt Permitted		1.00						1.00		0.22		
Satd. Flow (perm)		1863						3008		414		
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	0	265	0	0	0	0	0	0	1427	1595	0	0
RTOR Reduction (vph)	0	0	0	0	0	0	0	279	0	0	0	0
Lane Group Flow (vph)	0	265	0	0	0	0	0	1148	0	1595	0	0
Turn Type		NA					Perm	NA		Perm		
Protected Phases		2			2			8			4	
Permitted Phases	2			2			8			4		
Actuated Green, G (s)		18.0						18.0		18.0		
Effective Green, g (s)		18.0						18.0		18.0		
Actuated g/C Ratio		0.40						0.40		0.40		
Clearance Time (s)		4.5						4.5		4.5		
Lane Grp Cap (vph)		745						1203		165		
v/s Ratio Prot		c0.14						0.38				
v/s Ratio Perm										c3.85		
v/c Ratio		0.36						1.56dr		9.67		
Uniform Delay, d1		9.4						13.1		13.5		
Progression Factor		1.00						1.00		1.00		
Incremental Delay, d2		1.3						17.1		3912.1		
Delay (s)		10.8						30.2		3925.6		
Level of Service		B						C		F		
Approach Delay (s)		10.8			0.0			30.2			3925.6	
Approach LOS		B			A			C			F	

Intersection Summary

HCM 2000 Control Delay	1918.9	HCM 2000 Level of Service	F
HCM 2000 Volume to Capacity ratio	4.99		
Actuated Cycle Length (s)	45.0	Sum of lost time (s)	9.0
Intersection Capacity Utilization	148.1%	ICU Level of Service	H
Analysis Period (min)	15		

dr Defacto Right Lane. Recode with 1 though lane as a right lane.

c Critical Lane Group

Transportation Plan for Tsunami Scenario
 73: PACIFIC COAST HIGHWAY & Morning View Drive

04/20/2020



Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations	↵		↑↑	↱	↱	↑↑
Traffic Volume (vph)	0	0	0	1186	1009	0
Future Volume (vph)	0	0	0	1186	1009	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)				4.5	4.5	
Lane Util. Factor				1.00	1.00	
Frt				0.85	1.00	
Flt Protected				1.00	0.95	
Satd. Flow (prot)				1583	1770	
Flt Permitted				1.00	0.95	
Satd. Flow (perm)				1583	1770	
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	0	0	0	1289	1097	0
RTOR Reduction (vph)	0	0	0	374	0	0
Lane Group Flow (vph)	0	0	0	915	1097	0
Turn Type	Prot			Perm	Prot	
Protected Phases	2		8		7	4
Permitted Phases				8		
Actuated Green, G (s)				45.5	9.5	
Effective Green, g (s)				45.5	9.5	
Actuated g/C Ratio				0.51	0.11	
Clearance Time (s)				4.5	4.5	
Vehicle Extension (s)				3.0	3.0	
Lane Grp Cap (vph)				800	186	
v/s Ratio Prot					c0.62	
v/s Ratio Perm				c0.58		
v/c Ratio				1.14	5.90	
Uniform Delay, d1				22.2	40.2	
Progression Factor				1.00	1.00	
Incremental Delay, d2				79.1	2215.6	
Delay (s)				101.4	2255.9	
Level of Service				F	F	
Approach Delay (s)	0.0		101.4			2255.9
Approach LOS	A		F			F

Intersection Summary

HCM 2000 Control Delay	1092.0	HCM 2000 Level of Service	F
HCM 2000 Volume to Capacity ratio	1.41		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	13.5
Intersection Capacity Utilization	136.8%	ICU Level of Service	H
Analysis Period (min)	15		

c Critical Lane Group

Transportation Plan for Tsunami Scenario
 16: PACIFIC COAST HIGHWAY & Malibu Road

04/20/2020



Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (veh/h)	0	36	0	1447	1416	0
Future Volume (Veh/h)	0	36	0	1447	1416	0
Sign Control	Stop			Free	Free	
Grade	0%			0%	0%	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	0	39	0	1573	1539	0
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type	None TWLTL					
Median storage (veh)	2					
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume	2326	770	1539			
vC1, stage 1 conf vol	1539					
vC2, stage 2 conf vol	786					
vCu, unblocked vol	2326	770	1539			
tC, single (s)	6.8	6.9	4.1			
tC, 2 stage (s)	5.8					
tF (s)	3.5	3.3	2.2			
p0 queue free %	100	89	100			
cM capacity (veh/h)	148	344	428			
Direction, Lane #	EB 1	NB 1	NB 2	SB 1	SB 2	
Volume Total	39	786	786	1026	513	
Volume Left	0	0	0	0	0	
Volume Right	39	0	0	0	0	
cSH	344	1700	1700	1700	1700	
Volume to Capacity	0.11	0.46	0.46	0.60	0.30	
Queue Length 95th (ft)	10	0	0	0	0	
Control Delay (s)	16.8	0.0	0.0	0.0	0.0	
Lane LOS	C					
Approach Delay (s)	16.8	0.0		0.0		
Approach LOS	C					
Intersection Summary						
Average Delay	0.2					
Intersection Capacity Utilization	49.1%			ICU Level of Service	A	
Analysis Period (min)	15					

Transportation Plan for Tsunami Scenario
 19: PACIFIC COAST HIGHWAY & Latigo Canyon Road

04/20/2020



Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (veh/h)	0	0	0	1386	1213	0
Future Volume (Veh/h)	0	0	0	1386	1213	0
Sign Control	Stop		Free		Free	
Grade	0%		0%		0%	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	0	0	0	1507	1318	0
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type	None			None		
Median storage (veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume	3390	754			1507	
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	3390	754			1507	
tC, single (s)	6.8	6.9			4.1	
tC, 2 stage (s)						
tF (s)	3.5	3.3			2.2	
p0 queue free %	0	100			0	
cM capacity (veh/h)	0	352			440	
Direction, Lane #	WB 1	NB 1	NB 2	SB 1	SB 2	SB 3
Volume Total	0	0	1507	1318	0	0
Volume Left	0	0	0	1318	0	0
Volume Right	0	0	1507	0	0	0
cSH	1700	1700	1700	440	1700	1700
Volume to Capacity	0.00	0.00	0.89	2.99	0.00	0.00
Queue Length 95th (ft)	0	0	0	2852	0	0
Control Delay (s)	0.0	0.0	0.0	922.9	0.0	0.0
Lane LOS	A		F			
Approach Delay (s)	0.0	0.0	922.9			
Approach LOS	A					
Intersection Summary						
Average Delay			430.6			
Intersection Capacity Utilization			118.9%	ICU Level of Service		H
Analysis Period (min)	15					

Transportation Plan for Tsunami Scenario
 49: PACIFIC COAST HIGHWAY & Encinal Canyon

04/20/2020



Movement	WBL	WBR	NBT	NBR	SBL	SBT	
Lane Configurations	↔		↑↑	↗	↖	↑↑	
Traffic Volume (veh/h)	0	0	0	971	698	0	
Future Volume (Veh/h)	0	0	0	971	698	0	
Sign Control	Stop		Free			Free	
Grade	0%		0%			0%	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	
Hourly flow rate (vph)	0	0	0	1055	759	0	
Pedestrians							
Lane Width (ft)							
Walking Speed (ft/s)							
Percent Blockage							
Right turn flare (veh)							
Median type			TWLTL		TWLTL		
Median storage veh			2		2		
Upstream signal (ft)							
pX, platoon unblocked							
vC, conflicting volume	1518	0			1055		
vC1, stage 1 conf vol	0						
vC2, stage 2 conf vol	1518						
vCu, unblocked vol	1518	0			1055		
tC, single (s)	6.8	6.9			4.1		
tC, 2 stage (s)	5.8						
tF (s)	3.5	3.3			2.2		
p0 queue free %	0	100			0		
cM capacity (veh/h)	0	1084			656		
Direction, Lane #	WB 1	NB 1	NB 2	NB 3	SB 1	SB 2	SB 3
Volume Total	0	0	0	1055	759	0	0
Volume Left	0	0	0	0	759	0	0
Volume Right	0	0	0	1055	0	0	0
cSH	1700	1700	1700	1700	656	1700	1700
Volume to Capacity	0.00	0.00	0.00	0.62	1.16	0.00	0.00
Queue Length 95th (ft)	0	0	0	0	613	0	0
Control Delay (s)	0.0	0.0	0.0	0.0	110.1	0.0	0.0
Lane LOS	A				F		
Approach Delay (s)	0.0	0.0			110.1		
Approach LOS	A						
Intersection Summary							
Average Delay			46.1				
Intersection Capacity Utilization			105.5%		ICU Level of Service		G
Analysis Period (min)			15				

Transportation Plan for Tsunami Scenario
 52: PACIFIC COAST HIGHWAY & Decker Canyon

04/20/2020



Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations	↔		↕		↔	↕
Traffic Volume (veh/h)	0	0	0	347	694	0
Future Volume (Veh/h)	0	0	0	347	694	0
Sign Control	Stop		Free			Free
Grade	0%		0%			0%
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	0	0	0	377	754	0
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type			TWLTL		TWLTL	
Median storage veh			2		2	
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume	1696	188			377	
vC1, stage 1 conf vol	188					
vC2, stage 2 conf vol	1508					
vCu, unblocked vol	1696	188			377	
tC, single (s)	6.8	6.9			4.1	
tC, 2 stage (s)	5.8					
tF (s)	3.5	3.3			2.2	
p0 queue free %	100	100			36	
cM capacity (veh/h)	59	821			1178	
Direction, Lane #	WB 1	NB 1	NB 2	SB 1	SB 2	SB 3
Volume Total	0	0	377	754	0	0
Volume Left	0	0	0	754	0	0
Volume Right	0	0	377	0	0	0
cSH	1700	1700	1700	1178	1700	1700
Volume to Capacity	0.00	0.00	0.22	0.64	0.00	0.00
Queue Length 95th (ft)	0	0	0	122	0	0
Control Delay (s)	0.0	0.0	0.0	13.3	0.0	0.0
Lane LOS	A			B		
Approach Delay (s)	0.0	0.0		13.3		
Approach LOS	A					
Intersection Summary						
Average Delay			8.9			
Intersection Capacity Utilization			56.4%		ICU Level of Service	B
Analysis Period (min)			15			



Final Report

Transportation Plan for Disasters, Emergencies, and Significant Events
City of Malibu – Public Safety Department

Appendix F: Sim Traffic Micro-Computer Simulation Model Reports



MINAGAR & ASSOCIATES, INC.

Intersection: 1: TOPANGA CANYON ROAD & PACIFIC COAST HIGHWAY

Movement	WB	WB	WB	NB	NB	NB	SB	SB	SB
Directions Served	L	L	R	T	T	TR	L	T	T
Maximum Queue (ft)	350	350	41	401	368	353	51	193	180
Average Queue (ft)	323	298	19	342	330	352	26	154	123
95th Queue (ft)	411	420	48	401	388	354	54	212	194
Link Distance (ft)	335	335		338	338	338		335	335
Upstream Blk Time (%)	32	19		22	22	34			
Queuing Penalty (veh)	0	0		0	0	0			
Storage Bay Dist (ft)			170				300		
Storage Blk Time (%)		35							
Queuing Penalty (veh)		43							

Intersection: 2: BIG ROCK DRIVE & PACIFIC COAST HIGHWAY

Movement	WB	NB	NB	SB	SB
Directions Served	LR	T	TR	L	T
Maximum Queue (ft)	23	111	72	27	29
Average Queue (ft)	13	47	29	5	6
95th Queue (ft)	30	118	69	23	25
Link Distance (ft)	239	4016	4016		1282
Upstream Blk Time (%)					
Queuing Penalty (veh)					
Storage Bay Dist (ft)				130	
Storage Blk Time (%)					
Queuing Penalty (veh)					

Intersection: 3: PACIFIC COAST HIGHWAY & LAS FLORES CANYON ROAD

Movement	EB	WB	WB	NB	NB	NB	SB	SB
Directions Served	LTR	LT	R	L	T	T	T	TR
Maximum Queue (ft)	47	70	65	18	77	94	52	1
Average Queue (ft)	32	29	39	8	30	51	31	0
95th Queue (ft)	45	67	63	20	75	105	62	1
Link Distance (ft)	212	227			2488	2488	132	132
Upstream Blk Time (%)								
Queuing Penalty (veh)								
Storage Bay Dist (ft)			40	150				
Storage Blk Time (%)		13	3				1	
Queuing Penalty (veh)		6	1				0	

Intersection: 4: PACIFIC COAST HIGHWAY & RAMBLA PACIFICO

Movement	EB	WB	WB	NB	NB	NB	SB	SB	SB
Directions Served	LTR	LT	R	L	T	T	L	T	TR
Maximum Queue (ft)	31	40	27	26	71	88	1	59	47
Average Queue (ft)	24	20	5	5	51	53	0	12	9
95th Queue (ft)	44	49	23	22	95	97	1	50	41
Link Distance (ft)	224	193			132	132		2603	2603
Upstream Blk Time (%)									
Queuing Penalty (veh)									
Storage Bay Dist (ft)			50	50			60		
Storage Blk Time (%)		0			10	10		1	
Queuing Penalty (veh)		0			1	3		0	

Intersection: 5: PACIFIC COAST HIGHWAY & CARBON CANYON ROAD

Movement	WB	NB	NB	SB	SB	SB
Directions Served	LR	T	T	L	T	T
Maximum Queue (ft)	21	52	75	27	98	119
Average Queue (ft)	9	23	20	11	30	43
95th Queue (ft)	26	56	68	32	96	131
Link Distance (ft)	230	1127	1127		3247	3247
Upstream Blk Time (%)						
Queuing Penalty (veh)						
Storage Bay Dist (ft)				130		
Storage Blk Time (%)						
Queuing Penalty (veh)						

Intersection: 6: PACIFIC COAST HIGHWAY & BUSCH REALTY

Movement	NB	NB	SB	SB
Directions Served	T	T	T	T
Maximum Queue (ft)	111	131	265	315
Average Queue (ft)	36	60	76	92
95th Queue (ft)	112	151	248	285
Link Distance (ft)	3247	3247	2832	2832
Upstream Blk Time (%)				
Queuing Penalty (veh)				
Storage Bay Dist (ft)				
Storage Blk Time (%)	3		6	
Queuing Penalty (veh)	0		0	

Intersection: 7: PACIFIC COAST HIGHWAY & MCDONALDS

Movement	NB	NB	NB	SB	SB
Directions Served	UL	T	T	T	TR
Maximum Queue (ft)	46	197	195	50	113
Average Queue (ft)	9	71	67	35	62
95th Queue (ft)	40	190	205	67	123
Link Distance (ft)		2832	2832	2202	2202
Upstream Blk Time (%)					
Queuing Penalty (veh)					
Storage Bay Dist (ft)	100				
Storage Blk Time (%)		5			
Queuing Penalty (veh)		1			

Intersection: 8: PACIFIC COAST HIGHWAY & MALIBU PIER

Movement	NB	NB	NB	SB	SB
Directions Served	UL	T	TR	T	T
Maximum Queue (ft)	118	162	164	204	226
Average Queue (ft)	24	81	108	94	128
95th Queue (ft)	102	167	204	205	232
Link Distance (ft)		2202	2202	2759	2759
Upstream Blk Time (%)					
Queuing Penalty (veh)					
Storage Bay Dist (ft)	100				
Storage Blk Time (%)		3		6	
Queuing Penalty (veh)		1		1	

Intersection: 9: PACIFIC COAST HIGHWAY & CROSS CREEK ROAD

Movement	EB	EB	WB	WB	NB	NB	NB	NB	SB	SB	SB
Directions Served	LT	R	LT	R	L	T	T	R	L	T	TR
Maximum Queue (ft)	25	43	199	158	174	323	325	39	49	168	213
Average Queue (ft)	15	26	114	107	52	150	173	16	34	129	144
95th Queue (ft)	35	51	207	168	156	348	343	37	65	186	232
Link Distance (ft)	255	255	292	292		2759	2759	2759		1157	1157
Upstream Blk Time (%)											
Queuing Penalty (veh)											
Storage Bay Dist (ft)					150				300		
Storage Blk Time (%)			6			11					
Queuing Penalty (veh)			7			4					

Intersection: 10: PACIFIC COAST HIGHWAY & WEBB WAY

Movement	EB	EB	WB	WB	WB	NB	NB	NB	NB	SB	SB	SB
Directions Served	L	TR	L	LT	R	UL	T	T	R	L	L	T
Maximum Queue (ft)	136	52	106	132	52	59	178	182	31	56	69	189
Average Queue (ft)	113	36	61	87	33	23	75	73	8	22	49	102
95th Queue (ft)	166	50	101	138	49	61	184	191	27	56	71	203
Link Distance (ft)		223		117	117		492	492				395
Upstream Blk Time (%)			0	4								
Queuing Penalty (veh)			0	0								
Storage Bay Dist (ft)	220		200			330			280	250	250	
Storage Blk Time (%)			0	4								
Queuing Penalty (veh)			0	2								

Intersection: 10: PACIFIC COAST HIGHWAY & WEBB WAY

Movement	SB	SB	SB
Directions Served	T	T	R
Maximum Queue (ft)	236	200	3
Average Queue (ft)	129	40	1
95th Queue (ft)	240	172	3
Link Distance (ft)	395		
Upstream Blk Time (%)			
Queuing Penalty (veh)			
Storage Bay Dist (ft)		340	340
Storage Blk Time (%)			
Queuing Penalty (veh)			

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Intersection: 11: PACIFIC COAST HIGHWAY & WINTER MESA DR/MALIBU CANYON RD.

Movement	EB	EB	WB	WB	WB	NB	NB	NB	NB	SB	SB	SB
Directions Served	T	R	L	LT	R	L	T	T	R	L	L	T
Maximum Queue (ft)	31	31	260	457	391	50	167	205	31	98	136	126
Average Queue (ft)	24	6	248	423	119	15	64	70	6	64	78	65
95th Queue (ft)	36	26	285	528	350	48	152	186	27	98	128	146
Link Distance (ft)	235	235		442	442		1832	1832				1904
Upstream Blk Time (%)				12								
Queuing Penalty (veh)				0								
Storage Bay Dist (ft)			235			250			660	310	310	
Storage Blk Time (%)			4	42								
Queuing Penalty (veh)			16	161								

Intersection: 11: PACIFIC COAST HIGHWAY & WINTER MESA DR/MALIBU CANYON RD.

Movement	SB
Directions Served	TR
Maximum Queue (ft)	162
Average Queue (ft)	57
95th Queue (ft)	161
Link Distance (ft)	1904
Upstream Blk Time (%)	
Queuing Penalty (veh)	
Storage Bay Dist (ft)	
Storage Blk Time (%)	
Queuing Penalty (veh)	

Intersection: 12: PACIFIC COAST HIGHWAY & JOHN TYLER

Movement	WB	WB	NB	NB	NB	SB	SB	SB
Directions Served	L	LR	T	T	R	L	T	T
Maximum Queue (ft)	44	19	55	52	25	26	30	53
Average Queue (ft)	35	11	45	31	5	5	11	27
95th Queue (ft)	52	25	61	63	21	22	34	66
Link Distance (ft)	308	308	1904	1904			3847	3847
Upstream Blk Time (%)								
Queuing Penalty (veh)								
Storage Bay Dist (ft)					115	300		
Storage Blk Time (%)								
Queuing Penalty (veh)								

Intersection: 16: PACIFIC COAST HIGHWAY & Malibu Road

Movement	EB
Directions Served	R
Maximum Queue (ft)	31
Average Queue (ft)	11
95th Queue (ft)	35
Link Distance (ft)	375
Upstream Blk Time (%)	
Queuing Penalty (veh)	
Storage Bay Dist (ft)	
Storage Blk Time (%)	
Queuing Penalty (veh)	

Intersection: 17: PACIFIC COAST HIGHWAY & Coral Canyon Road

Movement	WB	WB	NB	NB	SB	SB	SB
Directions Served	L	R	T	TR	L	T	T
Maximum Queue (ft)	74	30	138	116	79	97	116
Average Queue (ft)	35	23	87	82	32	58	70
95th Queue (ft)	68	42	135	128	82	121	150
Link Distance (ft)	510	510	3058	3058		3425	3425
Upstream Blk Time (%)							
Queuing Penalty (veh)							
Storage Bay Dist (ft)					70		
Storage Blk Time (%)			7		2	4	
Queuing Penalty (veh)			0		15	1	

Intersection: 19: PACIFIC COAST HIGHWAY & Latigo Canyon Road

Movement	WB
Directions Served	LR
Maximum Queue (ft)	74
Average Queue (ft)	36
95th Queue (ft)	76
Link Distance (ft)	636
Upstream Blk Time (%)	
Queuing Penalty (veh)	
Storage Bay Dist (ft)	
Storage Blk Time (%)	
Queuing Penalty (veh)	

Intersection: 21: PACIFIC COAST HIGHWAY & Zumeriz Drive

Movement	EB	WB	NB	NB	NB	SB	SB	SB
Directions Served	R	LTR	L	T	TR	T	T	R
Maximum Queue (ft)	43	29	28	72	69	153	191	186
Average Queue (ft)	36	22	13	37	41	112	118	44
95th Queue (ft)	50	41	31	70	85	155	183	161
Link Distance (ft)	641	429		1940	1940	1702	1702	
Upstream Blk Time (%)								
Queuing Penalty (veh)								
Storage Bay Dist (ft)			315					170
Storage Blk Time (%)							1	0
Queuing Penalty (veh)							0	0

Intersection: 25: PACIFIC COAST HIGHWAY & Paradise Cove Drive

Movement	EB	NB	NB	NB	SB	SB
Directions Served	LR	L	T	T	T	TR
Maximum Queue (ft)	128	24	31	53	74	90
Average Queue (ft)	82	13	6	26	26	43
95th Queue (ft)	149	31	26	65	71	103
Link Distance (ft)	1438		11140	11140	1940	1940
Upstream Blk Time (%)						
Queuing Penalty (veh)						
Storage Bay Dist (ft)		100				
Storage Blk Time (%)						
Queuing Penalty (veh)						

Intersection: 28: PACIFIC COAST HIGHWAY & Kanan Dume Road

Movement	WB	WB	WB	NB	NB	NB	SB	SB	SB
Directions Served	L	L	R	T	T	R	L	T	T
Maximum Queue (ft)	155	128	142	154	201	31	349	118	118
Average Queue (ft)	96	36	96	71	71	11	229	53	69
95th Queue (ft)	156	119	161	147	189	34	370	128	123
Link Distance (ft)	478	478	478	1702	1702			2326	2326
Upstream Blk Time (%)									
Queuing Penalty (veh)									
Storage Bay Dist (ft)						170	330		
Storage Blk Time (%)					2		1		
Queuing Penalty (veh)					3		7		

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Intersection: 36: PACIFIC COAST HIGHWAY & Busch Drive

Movement	WB	WB	WB	NB	NB	NB	SB	SB	SB
Directions Served	L	L	R	T	T	R	L	T	T
Maximum Queue (ft)	22	17	56	53	73	52	94	612	523
Average Queue (ft)	21	7	19	47	57	28	94	327	298
95th Queue (ft)	23	20	49	57	83	55	95	593	521
Link Distance (ft)	392	392	392	2204	2204			3873	3873
Upstream Blk Time (%)									
Queuing Penalty (veh)									
Storage Bay Dist (ft)						350	70		
Storage Blk Time (%)							85	7	
Queuing Penalty (veh)							413	24	

Intersection: 42: PACIFIC COAST HIGHWAY & Heathercliff Road

Movement	EB	EB	NB	NB	NB	SB	SB	SB
Directions Served	L	R	L	T	T	T	T	R
Maximum Queue (ft)	96	88	98	95	121	205	155	52
Average Queue (ft)	73	64	49	55	74	138	92	33
95th Queue (ft)	107	92	96	96	123	209	169	63
Link Distance (ft)	988	988		2326	2326	2204	2204	
Upstream Blk Time (%)								
Queuing Penalty (veh)								
Storage Bay Dist (ft)			250					170
Storage Blk Time (%)							0	
Queuing Penalty (veh)							0	

Intersection: 49: PACIFIC COAST HIGHWAY & Encinal Canyon

Movement	WB
Directions Served	LR
Maximum Queue (ft)	52
Average Queue (ft)	41
95th Queue (ft)	58
Link Distance (ft)	308
Upstream Blk Time (%)	
Queuing Penalty (veh)	
Storage Bay Dist (ft)	
Storage Blk Time (%)	
Queuing Penalty (veh)	

Intersection: 52: PACIFIC COAST HIGHWAY & Decker Canyon

Movement	WB
Directions Served	LR
Maximum Queue (ft)	27
Average Queue (ft)	11
95th Queue (ft)	33
Link Distance (ft)	643
Upstream Blk Time (%)	
Queuing Penalty (veh)	
Storage Bay Dist (ft)	
Storage Blk Time (%)	
Queuing Penalty (veh)	

Intersection: 53: PACIFIC COAST HIGHWAY & Broad Beach Rd/Trancas Canyon Road

Movement	EB	WB	NB	NB	NB	SB	SB	SB
Directions Served	LTR	LTR	L	T	TR	L	T	TR
Maximum Queue (ft)	89	30	191	74	96	49	315	310
Average Queue (ft)	71	17	119	54	84	22	220	219
95th Queue (ft)	91	41	210	83	101	54	360	396
Link Distance (ft)	438	1495		4167	4167		4139	4139
Upstream Blk Time (%)								
Queuing Penalty (veh)								
Storage Bay Dist (ft)			170			200		
Storage Blk Time (%)			15				19	
Queuing Penalty (veh)			87				8	

Intersection: 73: PACIFIC COAST HIGHWAY & Morning View Drive

Movement	WB	NB	NB	NB	SB	SB	SB
Directions Served	LR	T	T	R	L	T	T
Maximum Queue (ft)	98	136	116	31	75	119	142
Average Queue (ft)	43	81	83	19	46	94	87
95th Queue (ft)	88	133	116	44	75	136	152
Link Distance (ft)	930	3873	3873			1913	1913
Upstream Blk Time (%)							
Queuing Penalty (veh)							
Storage Bay Dist (ft)				200	170		
Storage Blk Time (%)							
Queuing Penalty (veh)							

Network Summary

Network wide Queuing Penalty: 809

Intersection: 1: TOPANGA CANYON ROAD & PACIFIC COAST HIGHWAY

Movement	WB	WB	NB	NB	NB	SB	SB
Directions Served	L	R	T	T	TR	T	T
Maximum Queue (ft)	350	195	377	353	379	94	72
Average Queue (ft)	350	195	358	353	363	69	19
95th Queue (ft)	350	195	373	353	383	108	66
Link Distance (ft)	335		338	338	338	335	335
Upstream Blk Time (%)	91		42	93	78		
Queuing Penalty (veh)	0		0	0	0		
Storage Bay Dist (ft)		170					
Storage Blk Time (%)	1	89					
Queuing Penalty (veh)	8	0					

Intersection: 2: BIG ROCK DRIVE & PACIFIC COAST HIGHWAY

Movement	WB	NB	NB	B13	B13	SB	SB
Directions Served	LR	T	TR	T	T	T	T
Maximum Queue (ft)	45	54	52	351	397	51	52
Average Queue (ft)	26	40	27	132	294	16	27
95th Queue (ft)	52	74	55	399	541	51	65
Link Distance (ft)	239	4016	4016	335	335	1282	1282
Upstream Blk Time (%)				0	2		
Queuing Penalty (veh)				5	31		
Storage Bay Dist (ft)							
Storage Blk Time (%)							
Queuing Penalty (veh)							

Intersection: 3: PACIFIC COAST HIGHWAY & LAS FLORES CANYON ROAD

Movement	EB	WB	NB	NB	SB	SB
Directions Served	LTR	R	T	T	T	TR
Maximum Queue (ft)	28	62	81	117	27	20
Average Queue (ft)	16	41	34	45	12	4
95th Queue (ft)	39	64	86	128	27	17
Link Distance (ft)	212		2488	2488	132	132
Upstream Blk Time (%)						
Queuing Penalty (veh)						
Storage Bay Dist (ft)		40				
Storage Blk Time (%)		8		0		
Queuing Penalty (veh)		0		0		

Intersection: 4: PACIFIC COAST HIGHWAY & RAMBLA PACIFICO

Movement	WB	NB	NB	SB	SB
Directions Served	R	T	T	T	T
Maximum Queue (ft)	45	81	92	62	51
Average Queue (ft)	16	63	60	25	19
95th Queue (ft)	44	87	89	67	54
Link Distance (ft)		132	132	2603	2603
Upstream Blk Time (%)					
Queuing Penalty (veh)					
Storage Bay Dist (ft)	50				
Storage Blk Time (%)	0	5	7	1	
Queuing Penalty (veh)	0	0	0	0	

Intersection: 5: PACIFIC COAST HIGHWAY & CARBON CANYON ROAD

Movement	WB	NB	NB	SB	SB
Directions Served	LR	T	T	T	T
Maximum Queue (ft)	21	53	51	30	26
Average Queue (ft)	17	15	10	6	10
95th Queue (ft)	31	50	44	26	31
Link Distance (ft)	230	1127	1127	3247	3247
Upstream Blk Time (%)					
Queuing Penalty (veh)					
Storage Bay Dist (ft)					
Storage Blk Time (%)					
Queuing Penalty (veh)					

Intersection: 6: PACIFIC COAST HIGHWAY & BUSCH REALTY

Movement	NB	NB	SB	SB	SB
Directions Served	T	T	UL	T	T
Maximum Queue (ft)	181	180	22	250	275
Average Queue (ft)	84	110	4	111	124
95th Queue (ft)	204	239	19	249	288
Link Distance (ft)	3247	3247		2832	2832
Upstream Blk Time (%)					
Queuing Penalty (veh)					
Storage Bay Dist (ft)			100		
Storage Blk Time (%)	7			6	
Queuing Penalty (veh)	1			0	

Intersection: 7: PACIFIC COAST HIGHWAY & MCDONALDS

Movement	NB	NB	NB	SB	SB
Directions Served	UL	T	T	T	TR
Maximum Queue (ft)	25	302	297	159	180
Average Queue (ft)	13	80	90	42	58
95th Queue (ft)	31	267	266	144	162
Link Distance (ft)		2832	2832	2202	2202
Upstream Blk Time (%)					
Queuing Penalty (veh)					
Storage Bay Dist (ft)	100				
Storage Blk Time (%)		4		4	
Queuing Penalty (veh)		0		0	

Intersection: 8: PACIFIC COAST HIGHWAY & MALIBU PIER

Movement	NB	NB	NB	SB	SB
Directions Served	UL	T	TR	T	T
Maximum Queue (ft)	28	74	94	119	160
Average Queue (ft)	6	39	61	107	138
95th Queue (ft)	24	86	93	135	161
Link Distance (ft)		2202	2202	2759	2759
Upstream Blk Time (%)					
Queuing Penalty (veh)					
Storage Bay Dist (ft)	100				
Storage Blk Time (%)				13	
Queuing Penalty (veh)				2	

Intersection: 9: PACIFIC COAST HIGHWAY & CROSS CREEK ROAD

Movement	EB	WB	WB	NB	NB	SB	SB
Directions Served	R	L	LT	T	T	T	TR
Maximum Queue (ft)	65	163	263	123	131	158	132
Average Queue (ft)	26	87	198	58	61	111	93
95th Queue (ft)	68	205	289	136	148	173	147
Link Distance (ft)	255		292	2759	2759	1157	1157
Upstream Blk Time (%)							
Queuing Penalty (veh)							
Storage Bay Dist (ft)		150					
Storage Blk Time (%)		1	16				
Queuing Penalty (veh)		1	29				

Intersection: 10: PACIFIC COAST HIGHWAY & WEBB WAY

Movement	EB	WB	WB	NB	NB	SB	SB
Directions Served	TR	L	LT	T	T	T	T
Maximum Queue (ft)	97	145	85	80	114	132	139
Average Queue (ft)	71	111	36	41	65	46	60
95th Queue (ft)	98	147	76	96	134	130	148
Link Distance (ft)	223		117	492	492	395	395
Upstream Blk Time (%)		5					
Queuing Penalty (veh)		0					
Storage Bay Dist (ft)		200					
Storage Blk Time (%)		5					
Queuing Penalty (veh)		8					

Intersection: 11: PACIFIC COAST HIGHWAY & WINTER MESA DR/MALIBU CANYON RD.

Movement	EB	WB	WB	WB	NB	NB	SB	SB
Directions Served	R	L	LT	R	T	T	T	TR
Maximum Queue (ft)	54	260	476	457	119	116	73	52
Average Queue (ft)	35	257	461	450	56	47	30	20
95th Queue (ft)	51	264	473	469	127	127	77	60
Link Distance (ft)	235		442	442	1832	1832	1904	1904
Upstream Blk Time (%)			78	33				
Queuing Penalty (veh)			0	0				
Storage Bay Dist (ft)		235						
Storage Blk Time (%)		16	65					
Queuing Penalty (veh)		93	377					

Intersection: 12: PACIFIC COAST HIGHWAY & JOHN TYLER

Movement	WB	WB	NB	NB	SB	SB
Directions Served	LR	R	T	T	T	T
Maximum Queue (ft)	19	15	53	54	31	46
Average Queue (ft)	15	3	32	28	12	9
95th Queue (ft)	28	13	64	57	36	40
Link Distance (ft)	308	308	1904	1904	3847	3847
Upstream Blk Time (%)						
Queuing Penalty (veh)						
Storage Bay Dist (ft)						
Storage Blk Time (%)						
Queuing Penalty (veh)						

Intersection: 16: PACIFIC COAST HIGHWAY & Malibu Road

Movement	EB
Directions Served	R
Maximum Queue (ft)	49
Average Queue (ft)	21
95th Queue (ft)	51
Link Distance (ft)	375
Upstream Blk Time (%)	
Queuing Penalty (veh)	
Storage Bay Dist (ft)	
Storage Blk Time (%)	
Queuing Penalty (veh)	

Intersection: 17: PACIFIC COAST HIGHWAY & Coral Canyon Road

Movement	WB	NB	NB	SB	SB
Directions Served	R	T	TR	T	T
Maximum Queue (ft)	52	52	53	73	74
Average Queue (ft)	36	38	39	57	51
95th Queue (ft)	68	56	58	80	86
Link Distance (ft)	510	3058	3058	3425	3425
Upstream Blk Time (%)					
Queuing Penalty (veh)					
Storage Bay Dist (ft)					
Storage Blk Time (%)		0		2	
Queuing Penalty (veh)		0		0	

Intersection: 19: PACIFIC COAST HIGHWAY & Latigo Canyon Road

Movement	WB
Directions Served	LR
Maximum Queue (ft)	77
Average Queue (ft)	49
95th Queue (ft)	78
Link Distance (ft)	636
Upstream Blk Time (%)	
Queuing Penalty (veh)	
Storage Bay Dist (ft)	
Storage Blk Time (%)	
Queuing Penalty (veh)	

Intersection: 21: PACIFIC COAST HIGHWAY & Zumeriz Drive

Movement	EB	WB	NB	NB	SB	SB
Directions Served	LT	LTR	T	TR	T	T
Maximum Queue (ft)	66	29	48	64	198	142
Average Queue (ft)	41	6	33	35	103	91
95th Queue (ft)	67	25	53	72	214	153
Link Distance (ft)	641	429	1940	1940	1702	1702
Upstream Blk Time (%)						
Queuing Penalty (veh)						
Storage Bay Dist (ft)						
Storage Blk Time (%)						
Queuing Penalty (veh)						

Intersection: 25: PACIFIC COAST HIGHWAY & Paradise Cove Drive

Movement	EB	NB	NB	SB	SB
Directions Served	LR	T	T	T	TR
Maximum Queue (ft)	85	99	56	53	53
Average Queue (ft)	61	31	32	21	21
95th Queue (ft)	85	91	65	54	63
Link Distance (ft)	1438	11140	11140	1940	1940
Upstream Blk Time (%)					
Queuing Penalty (veh)					
Storage Bay Dist (ft)					
Storage Blk Time (%)		0			
Queuing Penalty (veh)		0			

Intersection: 28: PACIFIC COAST HIGHWAY & Kanan Dume Road

Movement	WB	NB	NB	SB	SB
Directions Served	R	T	T	T	T
Maximum Queue (ft)	262	164	156	171	166
Average Queue (ft)	182	120	97	72	89
95th Queue (ft)	258	165	158	180	186
Link Distance (ft)	478	1702	1702	2326	2326
Upstream Blk Time (%)					
Queuing Penalty (veh)					
Storage Bay Dist (ft)					
Storage Blk Time (%)			0		
Queuing Penalty (veh)			0		

Intersection: 36: PACIFIC COAST HIGHWAY & Busch Drive

Movement	WB	NB	NB	SB	SB
Directions Served	R	T	T	T	T
Maximum Queue (ft)	137	122	118	75	74
Average Queue (ft)	90	86	71	61	60
95th Queue (ft)	149	127	119	77	75
Link Distance (ft)	392	2204	2204	3873	3873
Upstream Blk Time (%)					
Queuing Penalty (veh)					
Storage Bay Dist (ft)					
Storage Blk Time (%)				2	
Queuing Penalty (veh)				0	

Intersection: 42: PACIFIC COAST HIGHWAY & Heathercliff Road

Movement	EB	NB	NB	SB	SB
Directions Served	L	T	T	T	T
Maximum Queue (ft)	166	102	97	96	115
Average Queue (ft)	137	71	63	56	67
95th Queue (ft)	169	117	120	111	132
Link Distance (ft)	988	2326	2326	2204	2204
Upstream Blk Time (%)					
Queuing Penalty (veh)					
Storage Bay Dist (ft)					
Storage Blk Time (%)					
Queuing Penalty (veh)					

Intersection: 49: PACIFIC COAST HIGHWAY & Encinal Canyon

Movement	WB
Directions Served	LR
Maximum Queue (ft)	50
Average Queue (ft)	33
95th Queue (ft)	47
Link Distance (ft)	308
Upstream Blk Time (%)	
Queuing Penalty (veh)	
Storage Bay Dist (ft)	
Storage Blk Time (%)	
Queuing Penalty (veh)	

Intersection: 52: PACIFIC COAST HIGHWAY & Decker Canyon

Movement	WB
Directions Served	LR
Maximum Queue (ft)	29
Average Queue (ft)	17
95th Queue (ft)	39
Link Distance (ft)	643
Upstream Blk Time (%)	
Queuing Penalty (veh)	
Storage Bay Dist (ft)	
Storage Blk Time (%)	
Queuing Penalty (veh)	

Intersection: 53: PACIFIC COAST HIGHWAY & Broad Beach Rd/Trancas Canyon Road

Movement	EB	WB	NB	NB	SB	SB
Directions Served	LTR	LTR	T	T	T	T
Maximum Queue (ft)	114	30	96	96	174	174
Average Queue (ft)	77	12	65	82	115	122
95th Queue (ft)	123	35	104	110	199	201
Link Distance (ft)	438	1495	4167	4167	4139	4139
Upstream Blk Time (%)						
Queuing Penalty (veh)						
Storage Bay Dist (ft)						
Storage Blk Time (%)						
Queuing Penalty (veh)						

Intersection: 73: PACIFIC COAST HIGHWAY & Morning View Drive

Movement	WB	NB	NB	SB	SB
Directions Served	LR	T	T	T	T
Maximum Queue (ft)	50	140	146	116	134
Average Queue (ft)	24	90	85	85	99
95th Queue (ft)	51	142	142	121	137
Link Distance (ft)	930	3873	3873	1913	1913
Upstream Blk Time (%)					
Queuing Penalty (veh)					
Storage Bay Dist (ft)					
Storage Blk Time (%)					
Queuing Penalty (veh)					

Network Summary

Network wide Queuing Penalty: 556

Intersection: 49: PACIFIC COAST HIGHWAY & Encinal Canyon

Movement	WB
Directions Served	LR
Maximum Queue (ft)	120
Average Queue (ft)	41
95th Queue (ft)	109
Link Distance (ft)	308
Upstream Blk Time (%)	
Queuing Penalty (veh)	
Storage Bay Dist (ft)	
Storage Blk Time (%)	
Queuing Penalty (veh)	

Intersection: 52: PACIFIC COAST HIGHWAY & Decker Canyon

Movement	WB
Directions Served	LR
Maximum Queue (ft)	49
Average Queue (ft)	27
95th Queue (ft)	53
Link Distance (ft)	643
Upstream Blk Time (%)	
Queuing Penalty (veh)	
Storage Bay Dist (ft)	
Storage Blk Time (%)	
Queuing Penalty (veh)	

Intersection: 53: PACIFIC COAST HIGHWAY & Broad Beach Rd/Trancas Canyon Road

Movement	EB	WB	NB	NB	SB	SB
Directions Served	LTR	LTR	T	T	T	T
Maximum Queue (ft)	73	70	247	224	473	464
Average Queue (ft)	64	40	147	148	269	270
95th Queue (ft)	79	79	239	231	513	525
Link Distance (ft)	438	1495	4167	4167	4139	4139
Upstream Blk Time (%)						
Queuing Penalty (veh)						
Storage Bay Dist (ft)						
Storage Blk Time (%)			3		34	
Queuing Penalty (veh)			0		0	

Intersection: 73: PACIFIC COAST HIGHWAY & Morning View Drive

Movement	WB	NB	NB	SB	SB
Directions Served	LR	T	T	T	T
Maximum Queue (ft)	60	74	121	75	142
Average Queue (ft)	34	69	94	47	83
95th Queue (ft)	69	84	120	74	138
Link Distance (ft)	930	3909	3909	1913	1913
Upstream Blk Time (%)					
Queuing Penalty (veh)					
Storage Bay Dist (ft)					
Storage Blk Time (%)					
Queuing Penalty (veh)					

Network Summary

Network wide Queuing Penalty: 0

Intersection: 1: TOPANGA CANYON ROAD & PACIFIC COAST HIGHWAY

Movement	WB	WB	NB	NB	NB	SB	SB
Directions Served	L	R	T	T	TR	T	T
Maximum Queue (ft)	387	195	372	377	353	167	158
Average Queue (ft)	370	195	357	358	353	70	35
95th Queue (ft)	390	195	369	374	353	160	137
Link Distance (ft)	335		338	338	338	335	335
Upstream Blk Time (%)	87		38	91	76		
Queuing Penalty (veh)	0		0	0	0		
Storage Bay Dist (ft)		170					
Storage Blk Time (%)	2	85					
Queuing Penalty (veh)	31	0					

Intersection: 2: BIG ROCK DRIVE & PACIFIC COAST HIGHWAY

Movement	WB	NB	NB	SB	SB
Directions Served	LR	T	TR	T	T
Maximum Queue (ft)	22	53	53	77	29
Average Queue (ft)	21	31	36	21	17
95th Queue (ft)	23	64	58	70	39
Link Distance (ft)	239	4016	4016	1282	1282
Upstream Blk Time (%)					
Queuing Penalty (veh)					
Storage Bay Dist (ft)					
Storage Blk Time (%)					
Queuing Penalty (veh)					

Intersection: 3: PACIFIC COAST HIGHWAY & LAS FLORES CANYON ROAD

Movement	EB	WB	NB	NB	SB	SB
Directions Served	LTR	R	T	T	T	TR
Maximum Queue (ft)	28	56	189	187	93	132
Average Queue (ft)	16	34	74	72	43	35
95th Queue (ft)	37	52	199	199	91	117
Link Distance (ft)	212		2488	2488	132	132
Upstream Blk Time (%)						0
Queuing Penalty (veh)						3
Storage Bay Dist (ft)		40				
Storage Blk Time (%)		14	3	3	1	
Queuing Penalty (veh)		0	0	0	0	

Intersection: 4: PACIFIC COAST HIGHWAY & RAMBLA PACIFICO

Movement	EB	WB	NB	NB	SB	SB
Directions Served	LTR	R	T	T	T	T
Maximum Queue (ft)	31	27	82	89	63	78
Average Queue (ft)	18	21	52	40	24	29
95th Queue (ft)	43	38	93	82	64	76
Link Distance (ft)	224		132	132	2603	2603
Upstream Blk Time (%)						
Queuing Penalty (veh)						
Storage Bay Dist (ft)		50				
Storage Blk Time (%)			8	6	0	
Queuing Penalty (veh)			0	0	0	

Intersection: 5: PACIFIC COAST HIGHWAY & CARBON CANYON ROAD

Movement	WB	NB	SB	SB
Directions Served	LR	T	T	T
Maximum Queue (ft)	21	26	76	72
Average Queue (ft)	4	5	15	25
95th Queue (ft)	18	22	65	76
Link Distance (ft)	230	1127	3247	3247
Upstream Blk Time (%)				
Queuing Penalty (veh)				
Storage Bay Dist (ft)				
Storage Blk Time (%)				
Queuing Penalty (veh)				

Intersection: 6: PACIFIC COAST HIGHWAY & BUSCH REALTY

Movement	NB	NB	SB	SB	SB
Directions Served	T	T	UL	T	T
Maximum Queue (ft)	199	209	20	178	201
Average Queue (ft)	49	58	8	36	40
95th Queue (ft)	176	187	24	153	173
Link Distance (ft)	3247	3247		2832	2832
Upstream Blk Time (%)					
Queuing Penalty (veh)					
Storage Bay Dist (ft)			100		
Storage Blk Time (%)	3			4	
Queuing Penalty (veh)	0			0	

Intersection: 7: PACIFIC COAST HIGHWAY & MCDONALDS

Movement	NB	NB	NB	SB	SB
Directions Served	UL	T	T	T	TR
Maximum Queue (ft)	22	292	361	229	284
Average Queue (ft)	4	87	100	73	95
95th Queue (ft)	19	261	320	218	272
Link Distance (ft)		2832	2832	2202	2202
Upstream Blk Time (%)					
Queuing Penalty (veh)					
Storage Bay Dist (ft)	100				
Storage Blk Time (%)		4		3	
Queuing Penalty (veh)		0		0	

Intersection: 8: PACIFIC COAST HIGHWAY & MALIBU PIER

Movement	NB	NB	NB	SB	SB	SB
Directions Served	UL	T	TR	UL	T	T
Maximum Queue (ft)	25	240	247	50	119	170
Average Queue (ft)	13	112	142	24	105	128
95th Queue (ft)	31	267	282	51	133	181
Link Distance (ft)		2202	2202		2759	2759
Upstream Blk Time (%)						
Queuing Penalty (veh)						
Storage Bay Dist (ft)	100			100		
Storage Blk Time (%)		3			9	
Queuing Penalty (veh)		1			2	

Intersection: 9: PACIFIC COAST HIGHWAY & CROSS CREEK ROAD

Movement	EB	WB	WB	NB	NB	SB	SB
Directions Served	R	L	LT	T	T	T	TR
Maximum Queue (ft)	43	174	246	332	339	178	148
Average Queue (ft)	30	120	182	120	123	137	117
95th Queue (ft)	46	225	262	313	314	180	150
Link Distance (ft)	255		292	2759	2759	1157	1157
Upstream Blk Time (%)							
Queuing Penalty (veh)							
Storage Bay Dist (ft)		150					
Storage Blk Time (%)		1	14	5			
Queuing Penalty (veh)		1	26	0			

Intersection: 10: PACIFIC COAST HIGHWAY & WEBB WAY

Movement	EB	WB	WB	NB	NB	SB	SB	SB
Directions Served	TR	L	LT	T	T	T	T	T
Maximum Queue (ft)	77	132	112	74	99	66	78	43
Average Queue (ft)	67	88	31	23	39	23	26	9
95th Queue (ft)	83	144	100	72	106	62	74	37
Link Distance (ft)	223		117	492	492	395	395	
Upstream Blk Time (%)		7	0					
Queuing Penalty (veh)		0	0					
Storage Bay Dist (ft)		200						340
Storage Blk Time (%)		7	0					
Queuing Penalty (veh)		11	1					

Intersection: 11: PACIFIC COAST HIGHWAY & WINTER MESA DR/MALIBU CANYON RD.

Movement	EB	WB	WB	WB	NB	NB	SB	SB
Directions Served	R	L	LT	R	T	T	T	TR
Maximum Queue (ft)	52	259	476	457	137	114	160	218
Average Queue (ft)	41	259	464	267	58	56	62	80
95th Queue (ft)	60	259	480	627	135	135	156	203
Link Distance (ft)	235		442	442	1832	1832	1904	1904
Upstream Blk Time (%)			75	5				
Queuing Penalty (veh)			0	0				
Storage Bay Dist (ft)		235						
Storage Blk Time (%)		12	66					
Queuing Penalty (veh)		66	382					

Intersection: 12: PACIFIC COAST HIGHWAY & JOHN TYLER

Movement	WB	NB	NB	SB	SB
Directions Served	L	T	T	T	T
Maximum Queue (ft)	44	53	75	31	76
Average Queue (ft)	30	33	26	6	38
95th Queue (ft)	47	49	72	26	80
Link Distance (ft)	308	1904	1904	3847	3847
Upstream Blk Time (%)					
Queuing Penalty (veh)					
Storage Bay Dist (ft)					
Storage Blk Time (%)					
Queuing Penalty (veh)					

Intersection: 16: PACIFIC COAST HIGHWAY & Malibu Road

Movement	EB
Directions Served	R
Maximum Queue (ft)	52
Average Queue (ft)	35
95th Queue (ft)	49
Link Distance (ft)	375
Upstream Blk Time (%)	
Queuing Penalty (veh)	
Storage Bay Dist (ft)	
Storage Blk Time (%)	
Queuing Penalty (veh)	

Intersection: 17: PACIFIC COAST HIGHWAY & Coral Canyon Road

Movement	WB	NB	NB	SB	SB
Directions Served	L	T	TR	T	T
Maximum Queue (ft)	90	74	74	137	165
Average Queue (ft)	35	55	56	102	102
95th Queue (ft)	92	83	85	151	194
Link Distance (ft)	510	3058	3058	3425	3425
Upstream Blk Time (%)					
Queuing Penalty (veh)					
Storage Bay Dist (ft)					
Storage Blk Time (%)		3		11	
Queuing Penalty (veh)		0		0	

Intersection: 19: PACIFIC COAST HIGHWAY & Latigo Canyon Road

Movement	WB
Directions Served	LR
Maximum Queue (ft)	31
Average Queue (ft)	24
95th Queue (ft)	44
Link Distance (ft)	636
Upstream Blk Time (%)	
Queuing Penalty (veh)	
Storage Bay Dist (ft)	
Storage Blk Time (%)	
Queuing Penalty (veh)	

Intersection: 21: PACIFIC COAST HIGHWAY & Zumeriz Drive

Movement	EB	WB	NB	NB	SB	SB
Directions Served	R	LTR	T	TR	T	T
Maximum Queue (ft)	66	30	48	66	140	137
Average Queue (ft)	38	6	34	47	98	90
95th Queue (ft)	66	25	53	68	162	177
Link Distance (ft)	641	429	1940	1940	1702	1702
Upstream Blk Time (%)						
Queuing Penalty (veh)						
Storage Bay Dist (ft)						
Storage Blk Time (%)						
Queuing Penalty (veh)						

Intersection: 25: PACIFIC COAST HIGHWAY & Paradise Cove Drive

Movement	EB	NB	NB	SB	SB
Directions Served	LR	T	T	T	TR
Maximum Queue (ft)	88	27	51	26	72
Average Queue (ft)	49	10	26	10	20
95th Queue (ft)	90	30	53	31	67
Link Distance (ft)	1438	11140	11140	1940	1940
Upstream Blk Time (%)					
Queuing Penalty (veh)					
Storage Bay Dist (ft)					
Storage Blk Time (%)					
Queuing Penalty (veh)					

Intersection: 28: PACIFIC COAST HIGHWAY & Kanan Dume Road

Movement	WB	NB	NB	SB	SB
Directions Served	R	T	T	T	T
Maximum Queue (ft)	238	163	141	178	190
Average Queue (ft)	184	117	98	95	109
95th Queue (ft)	278	170	152	167	181
Link Distance (ft)	478	1702	1702	2326	2326
Upstream Blk Time (%)					
Queuing Penalty (veh)					
Storage Bay Dist (ft)					
Storage Blk Time (%)					
Queuing Penalty (veh)					

Intersection: 36: PACIFIC COAST HIGHWAY & Busch Drive

Movement	WB	WB	NB	NB	SB	SB
Directions Served	L	L	T	T	T	T
Maximum Queue (ft)	103	38	73	110	142	171
Average Queue (ft)	75	17	51	81	76	89
95th Queue (ft)	102	37	74	113	141	166
Link Distance (ft)	392	392	2204	2204	3873	3873
Upstream Blk Time (%)						
Queuing Penalty (veh)						
Storage Bay Dist (ft)						
Storage Blk Time (%)					11	
Queuing Penalty (veh)					0	

Intersection: 42: PACIFIC COAST HIGHWAY & Heathercliff Road

Movement	EB	NB	NB	SB	SB
Directions Served	R	T	T	T	T
Maximum Queue (ft)	150	93	110	116	111
Average Queue (ft)	104	49	68	82	81
95th Queue (ft)	166	103	112	118	106
Link Distance (ft)	988	2326	2326	2204	2204
Upstream Blk Time (%)					
Queuing Penalty (veh)					
Storage Bay Dist (ft)					
Storage Blk Time (%)					
Queuing Penalty (veh)					

Intersection: 49: PACIFIC COAST HIGHWAY & Encinal Canyon

Movement	WB
Directions Served	LR
Maximum Queue (ft)	30
Average Queue (ft)	29
95th Queue (ft)	30
Link Distance (ft)	308
Upstream Blk Time (%)	
Queuing Penalty (veh)	
Storage Bay Dist (ft)	
Storage Blk Time (%)	
Queuing Penalty (veh)	

Queuing and Blocking Report
 Transportation Plan for Wildfire Evacuation Scenario

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Intersection: 52: PACIFIC COAST HIGHWAY & Decker Canyon

Movement	WB
Directions Served	LR
Maximum Queue (ft)	28
Average Queue (ft)	15
95th Queue (ft)	35
Link Distance (ft)	643
Upstream Blk Time (%)	
Queuing Penalty (veh)	
Storage Bay Dist (ft)	
Storage Blk Time (%)	
Queuing Penalty (veh)	

Intersection: 53: PACIFIC COAST HIGHWAY & Broad Beach Rd/Trancas Canyon Road

Movement	EB	WB	NB	NB	SB	SB
Directions Served	LTR	LTR	T	T	T	T
Maximum Queue (ft)	137	48	76	96	237	199
Average Queue (ft)	65	30	56	58	131	127
95th Queue (ft)	126	48	85	98	221	194
Link Distance (ft)	438	1495	4167	4167	4139	4139
Upstream Blk Time (%)						
Queuing Penalty (veh)						
Storage Bay Dist (ft)						
Storage Blk Time (%)					2	
Queuing Penalty (veh)					0	

Intersection: 73: PACIFIC COAST HIGHWAY & Morning View Drive

Movement	WB	NB	NB	SB	SB	SB
Directions Served	LR	T	T	L	T	T
Maximum Queue (ft)	49	118	131	53	143	116
Average Queue (ft)	33	78	84	41	82	91
95th Queue (ft)	47	133	147	58	138	117
Link Distance (ft)	930	3873	3873		1913	1913
Upstream Blk Time (%)						
Queuing Penalty (veh)						
Storage Bay Dist (ft)				170		
Storage Blk Time (%)						
Queuing Penalty (veh)						

Network Summary

Network wide Queuing Penalty: 523

Intersection: 1: TOPANGA CANYON ROAD & PACIFIC COAST HIGHWAY

Movement	WB	WB	NB	NB	NB	SB	SB
Directions Served	L	R	T	T	TR	T	T
Maximum Queue (ft)	398	195	353	372	353	51	53
Average Queue (ft)	367	195	353	357	353	21	20
95th Queue (ft)	396	195	353	369	353	53	61
Link Distance (ft)	335		338	338	338	335	335
Upstream Blk Time (%)	93		40	95	69		
Queuing Penalty (veh)	0		0	0	0		
Storage Bay Dist (ft)		170					
Storage Blk Time (%)	5	86					
Queuing Penalty (veh)	61	0					

Intersection: 2: BIG ROCK DRIVE & PACIFIC COAST HIGHWAY

Movement	WB	NB	NB	B13	B13	SB	SB
Directions Served	LR	T	TR	T	T	T	T
Maximum Queue (ft)	41	65	29	408	439	22	30
Average Queue (ft)	22	21	9	138	322	4	11
95th Queue (ft)	43	60	29	424	592	18	34
Link Distance (ft)	239	4016	4016	335	335	1282	1282
Upstream Blk Time (%)				1	8		
Queuing Penalty (veh)				11	105		
Storage Bay Dist (ft)							
Storage Blk Time (%)							
Queuing Penalty (veh)							

Intersection: 3: PACIFIC COAST HIGHWAY & LAS FLORES CANYON ROAD

Movement	EB	WB	NB	NB	SB
Directions Served	LTR	LT	T	T	T
Maximum Queue (ft)	27	70	98	157	49
Average Queue (ft)	22	47	60	62	16
95th Queue (ft)	39	70	115	157	48
Link Distance (ft)	212	227	2488	2488	132
Upstream Blk Time (%)					
Queuing Penalty (veh)					
Storage Bay Dist (ft)					
Storage Blk Time (%)		20		2	0
Queuing Penalty (veh)		0		0	0

Intersection: 4: PACIFIC COAST HIGHWAY & RAMBLA PACIFICO

Movement	EB	WB	NB	NB	SB	SB
Directions Served	LTR	LT	T	T	T	T
Maximum Queue (ft)	77	19	81	81	80	69
Average Queue (ft)	31	7	48	25	24	29
95th Queue (ft)	80	22	84	80	76	74
Link Distance (ft)	224	193	132	132	2603	2603
Upstream Blk Time (%)						
Queuing Penalty (veh)						
Storage Bay Dist (ft)						
Storage Blk Time (%)			8	5	2	
Queuing Penalty (veh)			0	0	0	

Intersection: 5: PACIFIC COAST HIGHWAY & CARBON CANYON ROAD

Movement	WB	NB	NB	SB	SB
Directions Served	LR	T	T	T	T
Maximum Queue (ft)	43	74	51	52	117
Average Queue (ft)	17	15	14	10	29
95th Queue (ft)	43	63	47	45	104
Link Distance (ft)	230	1127	1127	3247	3247
Upstream Blk Time (%)					
Queuing Penalty (veh)					
Storage Bay Dist (ft)					
Storage Blk Time (%)					
Queuing Penalty (veh)					

Intersection: 6: PACIFIC COAST HIGHWAY & BUSCH REALTY

Movement	NB	NB	SB	SB	SB
Directions Served	T	T	UL	T	T
Maximum Queue (ft)	180	218	23	353	326
Average Queue (ft)	81	103	5	147	163
95th Queue (ft)	199	260	19	343	336
Link Distance (ft)	3247	3247		2832	2832
Upstream Blk Time (%)					
Queuing Penalty (veh)					
Storage Bay Dist (ft)			100		
Storage Blk Time (%)	8			9	
Queuing Penalty (veh)	1			1	

Intersection: 7: PACIFIC COAST HIGHWAY & MCDONALDS

Movement	NB	NB	NB	SB	SB
Directions Served	UL	T	T	T	TR
Maximum Queue (ft)	26	135	127	309	311
Average Queue (ft)	5	70	84	144	162
95th Queue (ft)	22	144	148	313	356
Link Distance (ft)		2832	2832	2202	2202
Upstream Blk Time (%)					
Queuing Penalty (veh)					
Storage Bay Dist (ft)	100				
Storage Blk Time (%)		1		8	
Queuing Penalty (veh)		0		0	

Intersection: 8: PACIFIC COAST HIGHWAY & MALIBU PIER

Movement	NB	NB	NB	SB	SB	SB
Directions Served	UL	T	TR	UL	T	T
Maximum Queue (ft)	27	116	153	70	354	337
Average Queue (ft)	10	72	112	24	212	212
95th Queue (ft)	29	136	149	74	342	324
Link Distance (ft)		2202	2202		2759	2759
Upstream Blk Time (%)						
Queuing Penalty (veh)						
Storage Bay Dist (ft)	100			100		
Storage Blk Time (%)		3			13	
Queuing Penalty (veh)		1			2	

Intersection: 9: PACIFIC COAST HIGHWAY & CROSS CREEK ROAD

Movement	EB	WB	WB	NB	NB	SB	SB
Directions Served	R	L	LT	T	T	T	TR
Maximum Queue (ft)	112	170	307	346	363	312	315
Average Queue (ft)	80	128	229	103	110	215	204
95th Queue (ft)	120	235	348	318	337	347	359
Link Distance (ft)	255		292	2759	2759	1157	1157
Upstream Blk Time (%)			6				
Queuing Penalty (veh)			0				
Storage Bay Dist (ft)		150					
Storage Blk Time (%)		1	24	4		2	
Queuing Penalty (veh)		2	44	0		0	

Intersection: 10: PACIFIC COAST HIGHWAY & WEBB WAY

Movement	EB	WB	WB	NB	NB	SB	SB	SB
Directions Served	TR	L	LT	T	T	T	T	T
Maximum Queue (ft)	91	132	80	76	100	150	165	88
Average Queue (ft)	60	105	25	35	33	98	114	31
95th Queue (ft)	97	145	73	83	92	166	162	95
Link Distance (ft)	223		117	492	492	395	395	
Upstream Blk Time (%)		10						
Queuing Penalty (veh)		0						
Storage Bay Dist (ft)		200						340
Storage Blk Time (%)		10						
Queuing Penalty (veh)		16						

Intersection: 11: PACIFIC COAST HIGHWAY & WINTER MESA DR/MALIBU CANYON RD.

Movement	EB	WB	WB	WB	NB	NB	SB	SB
Directions Served	R	L	LT	R	T	T	T	TR
Maximum Queue (ft)	96	260	459	457	89	94	261	262
Average Queue (ft)	56	259	457	271	29	29	176	177
95th Queue (ft)	98	261	458	637	89	93	268	276
Link Distance (ft)	235		442	442	1832	1832	1960	1960
Upstream Blk Time (%)			76	26				
Queuing Penalty (veh)			0	0				
Storage Bay Dist (ft)		235						
Storage Blk Time (%)		7	68					
Queuing Penalty (veh)		41	390					

Network Summary

Network wide Queuing Penalty: 676

Intersection: 1: TOPANGA CANYON ROAD & PACIFIC COAST HIGHWAY

Movement	WB	WB	NB	NB	NB	SB	SB
Directions Served	L	R	T	T	TR	T	T
Maximum Queue (ft)	374	195	364	377	372	53	31
Average Queue (ft)	366	195	355	358	357	32	12
95th Queue (ft)	380	195	362	374	369	74	37
Link Distance (ft)	335		338	338	338	335	335
Upstream Blk Time (%)	90		37	89	69		
Queuing Penalty (veh)	0		0	0	0		
Storage Bay Dist (ft)		170					
Storage Blk Time (%)	2	89					
Queuing Penalty (veh)	30	0					

Intersection: 2: BIG ROCK DRIVE & PACIFIC COAST HIGHWAY

Movement	WB	NB	NB	B13	B13
Directions Served	LR	T	TR	T	T
Maximum Queue (ft)	107	75	76	397	430
Average Queue (ft)	25	26	21	214	242
95th Queue (ft)	94	78	71	505	570
Link Distance (ft)	239	4016	4016	335	335
Upstream Blk Time (%)				1	5
Queuing Penalty (veh)				10	67
Storage Bay Dist (ft)					
Storage Blk Time (%)					
Queuing Penalty (veh)					

Intersection: 3: PACIFIC COAST HIGHWAY & LAS FLORES CANYON ROAD

Movement	EB	WB	NB	NB	SB	SB
Directions Served	LTR	R	T	T	T	TR
Maximum Queue (ft)	48	47	140	130	54	21
Average Queue (ft)	33	27	51	61	22	4
95th Queue (ft)	47	52	130	137	55	18
Link Distance (ft)	212		2488	2488	132	132
Upstream Blk Time (%)						
Queuing Penalty (veh)						
Storage Bay Dist (ft)		40				
Storage Blk Time (%)		2	0	1	0	
Queuing Penalty (veh)		0	0	0	0	

Intersection: 4: PACIFIC COAST HIGHWAY & RAMBLA PACIFICO

Movement	EB	WB	NB	NB	SB	SB
Directions Served	LTR	R	T	T	T	T
Maximum Queue (ft)	50	27	68	66	124	111
Average Queue (ft)	19	24	51	47	57	51
95th Queue (ft)	51	33	68	75	138	113
Link Distance (ft)	224		132	132	2603	2603
Upstream Blk Time (%)						
Queuing Penalty (veh)						
Storage Bay Dist (ft)		50				
Storage Blk Time (%)			12	4	4	
Queuing Penalty (veh)			0	0	0	

Intersection: 5: PACIFIC COAST HIGHWAY & CARBON CANYON ROAD

Movement	WB	NB	NB	SB	SB
Directions Served	LR	T	T	T	T
Maximum Queue (ft)	21	98	52	76	76
Average Queue (ft)	8	35	32	25	27
95th Queue (ft)	26	96	64	71	73
Link Distance (ft)	230	1127	1127	3247	3247
Upstream Blk Time (%)					
Queuing Penalty (veh)					
Storage Bay Dist (ft)					
Storage Blk Time (%)					
Queuing Penalty (veh)					

Intersection: 6: PACIFIC COAST HIGHWAY & BUSCH REALTY

Movement	NB	NB	SB	SB
Directions Served	T	T	T	T
Maximum Queue (ft)	46	51	276	292
Average Queue (ft)	24	36	96	99
95th Queue (ft)	49	68	265	275
Link Distance (ft)	3247	3247	2832	2832
Upstream Blk Time (%)				
Queuing Penalty (veh)				
Storage Bay Dist (ft)				
Storage Blk Time (%)			5	
Queuing Penalty (veh)			0	

Intersection: 7: PACIFIC COAST HIGHWAY & MCDONALDS

Movement	NB	NB	NB	SB	SB
Directions Served	UL	T	T	T	TR
Maximum Queue (ft)	46	137	187	49	73
Average Queue (ft)	19	67	105	29	45
95th Queue (ft)	48	128	200	59	90
Link Distance (ft)		2832	2832	2202	2202
Upstream Blk Time (%)					
Queuing Penalty (veh)					
Storage Bay Dist (ft)	100				
Storage Blk Time (%)		2			
Queuing Penalty (veh)		0			

Intersection: 8: PACIFIC COAST HIGHWAY & MALIBU PIER

Movement	NB	NB	NB	SB	SB
Directions Served	UL	T	TR	T	T
Maximum Queue (ft)	23	162	173	317	292
Average Queue (ft)	7	66	76	149	159
95th Queue (ft)	23	147	166	292	272
Link Distance (ft)		2202	2202	2759	2759
Upstream Blk Time (%)					
Queuing Penalty (veh)					
Storage Bay Dist (ft)	100				
Storage Blk Time (%)		2		12	
Queuing Penalty (veh)		1		2	

Intersection: 9: PACIFIC COAST HIGHWAY & CROSS CREEK ROAD

Movement	EB	WB	WB	NB	NB	SB	SB
Directions Served	R	L	LT	T	T	T	TR
Maximum Queue (ft)	42	165	266	170	184	241	201
Average Queue (ft)	26	127	184	91	108	158	163
95th Queue (ft)	47	233	278	189	212	238	221
Link Distance (ft)	255		292	2759	2759	1157	1157
Upstream Blk Time (%)							
Queuing Penalty (veh)							
Storage Bay Dist (ft)		150					
Storage Blk Time (%)		2	19	3			
Queuing Penalty (veh)		3	34	0			

Intersection: 10: PACIFIC COAST HIGHWAY & WEBB WAY

Movement	EB	WB	WB	NB	NB	SB	SB	SB
Directions Served	TR	L	LT	T	T	T	T	T
Maximum Queue (ft)	100	132	46	82	122	152	143	103
Average Queue (ft)	64	114	32	40	49	67	65	28
95th Queue (ft)	102	147	51	84	117	154	153	94
Link Distance (ft)	223		117	492	492	395	395	
Upstream Blk Time (%)		16						
Queuing Penalty (veh)		0						
Storage Bay Dist (ft)		200						340
Storage Blk Time (%)		16						
Queuing Penalty (veh)		25						

Intersection: 11: PACIFIC COAST HIGHWAY & WINTER MESA DR/MALIBU CANYON RD.

Movement	EB	WB	WB	WB	NB	NB	SB	SB
Directions Served	R	L	LT	R	T	T	T	TR
Maximum Queue (ft)	55	260	457	457	91	118	50	74
Average Queue (ft)	35	258	457	362	28	42	26	33
95th Queue (ft)	51	262	457	660	89	128	63	72
Link Distance (ft)	235		442	442	1832	1832	1904	1904
Upstream Blk Time (%)			80	13				
Queuing Penalty (veh)			0	0				
Storage Bay Dist (ft)		235						
Storage Blk Time (%)		22	64					
Queuing Penalty (veh)		127	369					

Intersection: 12: PACIFIC COAST HIGHWAY & JOHN TYLER

Movement	WB	WB	NB	NB	SB	SB
Directions Served	L	LR	T	T	T	T
Maximum Queue (ft)	68	18	53	76	28	79
Average Queue (ft)	49	4	42	36	10	48
95th Queue (ft)	77	16	63	92	31	77
Link Distance (ft)	308	308	1904	1904	3847	3847
Upstream Blk Time (%)						
Queuing Penalty (veh)						
Storage Bay Dist (ft)						
Storage Blk Time (%)						
Queuing Penalty (veh)						

Intersection: 16: PACIFIC COAST HIGHWAY & Malibu Road

Movement	EB
Directions Served	R
Maximum Queue (ft)	48
Average Queue (ft)	28
95th Queue (ft)	53
Link Distance (ft)	375
Upstream Blk Time (%)	
Queuing Penalty (veh)	
Storage Bay Dist (ft)	
Storage Blk Time (%)	
Queuing Penalty (veh)	

Intersection: 17: PACIFIC COAST HIGHWAY & Coral Canyon Road

Movement	WB	NB	NB	SB	SB
Directions Served	R	T	TR	T	T
Maximum Queue (ft)	54	54	53	94	90
Average Queue (ft)	46	43	47	54	48
95th Queue (ft)	61	61	61	97	102
Link Distance (ft)	510	3058	3058	3425	3425
Upstream Blk Time (%)					
Queuing Penalty (veh)					
Storage Bay Dist (ft)					
Storage Blk Time (%)		0		3	
Queuing Penalty (veh)		0		0	

Intersection: 19: PACIFIC COAST HIGHWAY & Latigo Canyon Road

Movement	WB
Directions Served	LR
Maximum Queue (ft)	30
Average Queue (ft)	18
95th Queue (ft)	42
Link Distance (ft)	636
Upstream Blk Time (%)	
Queuing Penalty (veh)	
Storage Bay Dist (ft)	
Storage Blk Time (%)	
Queuing Penalty (veh)	

Intersection: 21: PACIFIC COAST HIGHWAY & Zumeriz Drive

Movement	EB	WB	NB	NB	SB	SB
Directions Served	LT	LTR	T	TR	T	T
Maximum Queue (ft)	87	29	150	166	152	168
Average Queue (ft)	43	11	43	55	114	117
95th Queue (ft)	94	34	141	148	161	177
Link Distance (ft)	641	429	1940	1940	1702	1702
Upstream Blk Time (%)						
Queuing Penalty (veh)						
Storage Bay Dist (ft)						
Storage Blk Time (%)						1
Queuing Penalty (veh)						0

Intersection: 25: PACIFIC COAST HIGHWAY & Paradise Cove Drive

Movement	EB	NB	NB	SB	SB
Directions Served	LR	T	T	T	TR
Maximum Queue (ft)	45	29	28	77	51
Average Queue (ft)	30	11	6	21	16
95th Queue (ft)	44	34	24	70	50
Link Distance (ft)	1438	11140	11140	1940	1940
Upstream Blk Time (%)					
Queuing Penalty (veh)					
Storage Bay Dist (ft)					
Storage Blk Time (%)					
Queuing Penalty (veh)					

Intersection: 28: PACIFIC COAST HIGHWAY & Kanan Dume Road

Movement	WB	NB	NB	SB	SB
Directions Served	R	T	T	T	T
Maximum Queue (ft)	357	229	226	140	138
Average Queue (ft)	258	107	103	87	110
95th Queue (ft)	385	225	223	149	149
Link Distance (ft)	478	1702	1702	2326	2326
Upstream Blk Time (%)					
Queuing Penalty (veh)					
Storage Bay Dist (ft)					
Storage Blk Time (%)			5		
Queuing Penalty (veh)			0		

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Intersection: 36: PACIFIC COAST HIGHWAY & Busch Drive

Movement	WB	WB	NB	NB	SB	SB
Directions Served	L	L	T	T	T	T
Maximum Queue (ft)	106	17	76	96	140	100
Average Queue (ft)	78	9	56	73	66	70
95th Queue (ft)	114	21	86	104	129	100
Link Distance (ft)	392	392	2204	2204	3873	3873
Upstream Blk Time (%)						
Queuing Penalty (veh)						
Storage Bay Dist (ft)						
Storage Blk Time (%)					7	
Queuing Penalty (veh)					0	

Intersection: 42: PACIFIC COAST HIGHWAY & Heathercliff Road

Movement	EB	NB	NB	SB	SB
Directions Served	R	T	T	T	T
Maximum Queue (ft)	111	50	74	98	96
Average Queue (ft)	84	27	57	83	69
95th Queue (ft)	112	53	84	113	106
Link Distance (ft)	988	2326	2326	2204	2204
Upstream Blk Time (%)					
Queuing Penalty (veh)					
Storage Bay Dist (ft)					
Storage Blk Time (%)					
Queuing Penalty (veh)					

Intersection: 49: PACIFIC COAST HIGHWAY & Encinal Canyon

Movement	WB
Directions Served	LR
Maximum Queue (ft)	48
Average Queue (ft)	33
95th Queue (ft)	45
Link Distance (ft)	308
Upstream Blk Time (%)	
Queuing Penalty (veh)	
Storage Bay Dist (ft)	
Storage Blk Time (%)	
Queuing Penalty (veh)	

Queuing and Blocking Report
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Intersection: 52: PACIFIC COAST HIGHWAY & Decker Canyon

Movement	WB
Directions Served	LR
Maximum Queue (ft)	30
Average Queue (ft)	23
95th Queue (ft)	41
Link Distance (ft)	643
Upstream Blk Time (%)	
Queuing Penalty (veh)	
Storage Bay Dist (ft)	
Storage Blk Time (%)	
Queuing Penalty (veh)	

Intersection: 53: PACIFIC COAST HIGHWAY & Broad Beach Rd/Trancas Canyon Road

Movement	EB	WB	NB	NB	SB	SB
Directions Served	LTR	LTR	T	T	T	T
Maximum Queue (ft)	93	30	162	142	216	204
Average Queue (ft)	71	17	72	82	125	129
95th Queue (ft)	112	41	167	152	246	239
Link Distance (ft)	438	1495	4167	4167	4139	4139
Upstream Blk Time (%)						
Queuing Penalty (veh)						
Storage Bay Dist (ft)						
Storage Blk Time (%)			0		4	
Queuing Penalty (veh)			0		0	

Intersection: 73: PACIFIC COAST HIGHWAY & Morning View Drive

Movement	WB	NB	NB	SB	SB	SB
Directions Served	LR	T	T	L	T	T
Maximum Queue (ft)	53	97	135	55	116	118
Average Queue (ft)	32	66	81	21	65	80
95th Queue (ft)	62	102	138	55	123	136
Link Distance (ft)	930	3873	3873		1913	1913
Upstream Blk Time (%)						
Queuing Penalty (veh)						
Storage Bay Dist (ft)				170		
Storage Blk Time (%)						
Queuing Penalty (veh)						

Network Summary

Network wide Queuing Penalty: 668

Intersection: 1: TOPANGA CANYON ROAD & PACIFIC COAST HIGHWAY

Movement	SB
Directions Served	L
Maximum Queue (ft)	182
Average Queue (ft)	182
95th Queue (ft)	182
Link Distance (ft)	
Upstream Blk Time (%)	
Queuing Penalty (veh)	
Storage Bay Dist (ft)	300
Storage Blk Time (%)	
Queuing Penalty (veh)	

Intersection: 2: BIG ROCK DRIVE & PACIFIC COAST HIGHWAY

Movement	NB	NB	SB	SB
Directions Served	T	TR	L	T
Maximum Queue (ft)	2023	2042	154	656
Average Queue (ft)	1982	2027	154	656
95th Queue (ft)	2117	2040	155	656
Link Distance (ft)				
Upstream Blk Time (%)				
Queuing Penalty (veh)				
Storage Bay Dist (ft)			130	
Storage Blk Time (%)			89	
Queuing Penalty (veh)			0	

Intersection: 3: PACIFIC COAST HIGHWAY & LAS FLORES CANYON ROAD

Movement	EB	NB	NB	SB
Directions Served	LTR	T	R	L
Maximum Queue (ft)	133	1259	145	83
Average Queue (ft)	70	1259	145	75
95th Queue (ft)	154	1259	145	89
Link Distance (ft)	212			
Upstream Blk Time (%)				
Queuing Penalty (veh)				
Storage Bay Dist (ft)			120	60
Storage Blk Time (%)			42	93
Queuing Penalty (veh)			0	0

Intersection: 4: PACIFIC COAST HIGHWAY & RAMBLA PACIFICO

Movement	EB	NB	NB	SB	SB
Directions Served	LTR	T	R	L	T
Maximum Queue (ft)	114	118	75	84	1330
Average Queue (ft)	75	96	75	82	1319
95th Queue (ft)	121	126	75	90	1328
Link Distance (ft)	224				2603
Upstream Blk Time (%)		0			
Queuing Penalty (veh)		0			
Storage Bay Dist (ft)			50	60	
Storage Blk Time (%)		7	68	90	
Queuing Penalty (veh)		144	0	0	

Intersection: 5: PACIFIC COAST HIGHWAY & CARBON CANYON ROAD

Movement	WB	NB	NB	SB	SB	SB
Directions Served	LR	T	R	L	T	T
Maximum Queue (ft)	21	597	125	155	1639	1636
Average Queue (ft)	6	582	125	153	1639	643
95th Queue (ft)	19	595	125	156	1639	1944
Link Distance (ft)	230					
Upstream Blk Time (%)						
Queuing Penalty (veh)						
Storage Bay Dist (ft)			100	130		
Storage Blk Time (%)			23	89		
Queuing Penalty (veh)			0	0		

Intersection: 6: PACIFIC COAST HIGHWAY & BUSCH REALTY

Movement	NB	NB	SB	SB
Directions Served	T	TR	UL	T
Maximum Queue (ft)	1640	1639	124	1431
Average Queue (ft)	1636	1639	123	1431
95th Queue (ft)	1643	1639	125	1431
Link Distance (ft)				
Upstream Blk Time (%)				
Queuing Penalty (veh)				
Storage Bay Dist (ft)			100	
Storage Blk Time (%)			88	
Queuing Penalty (veh)			0	

Intersection: 7: PACIFIC COAST HIGHWAY & MCDONALDS

Movement	NB	NB	SB	SB
Directions Served	T	TR	UL	T
Maximum Queue (ft)	1431	1468	124	1116
Average Queue (ft)	1428	1442	123	1116
95th Queue (ft)	1433	1467	127	1116
Link Distance (ft)				
Upstream Blk Time (%)				
Queuing Penalty (veh)				
Storage Bay Dist (ft)			100	
Storage Blk Time (%)			87	
Queuing Penalty (veh)			0	

Intersection: 8: PACIFIC COAST HIGHWAY & MALIBU PIER

Movement	NB	NB	SB	SB
Directions Served	T	TR	UL	T
Maximum Queue (ft)	1113	1135	125	1418
Average Queue (ft)	890	1120	122	1400
95th Queue (ft)	1624	1132	125	1415
Link Distance (ft)				
Upstream Blk Time (%)				
Queuing Penalty (veh)				
Storage Bay Dist (ft)			100	
Storage Blk Time (%)			89	
Queuing Penalty (veh)			0	

Intersection: 9: PACIFIC COAST HIGHWAY & CROSS CREEK ROAD

Movement	EB	NB	NB	SB	SB
Directions Served	LT	T	R	L	T
Maximum Queue (ft)	110	1347	1431	324	630
Average Queue (ft)	74	1036	1402	317	595
95th Queue (ft)	131	1894	1426	335	629
Link Distance (ft)	255				
Upstream Blk Time (%)					
Queuing Penalty (veh)					
Storage Bay Dist (ft)				300	
Storage Blk Time (%)				90	1
Queuing Penalty (veh)				0	20

Intersection: 10: PACIFIC COAST HIGHWAY & WEBB WAY

Movement	EB	NB	SB	SB
Directions Served	TR	R	L	L
Maximum Queue (ft)	238	261	232	213
Average Queue (ft)	186	261	216	213
95th Queue (ft)	286	261	229	213
Link Distance (ft)	223			
Upstream Blk Time (%)	7			
Queuing Penalty (veh)	0			
Storage Bay Dist (ft)		280	250	250
Storage Blk Time (%)	7	1	0	
Queuing Penalty (veh)	0	0	0	

Intersection: 11: PACIFIC COAST HIGHWAY & WINTER MESA DR/MALIBU CANYON RD.

Movement	EB	NB	NB	SB	SB	SB	SB
Directions Served	T	T	R	L	L	T	TR
Maximum Queue (ft)	113	950	685	322	335	986	956
Average Queue (ft)	71	940	685	321	334	976	379
95th Queue (ft)	120	954	685	324	335	989	1145
Link Distance (ft)	235						
Upstream Blk Time (%)							
Queuing Penalty (veh)							
Storage Bay Dist (ft)			660	310	310		
Storage Blk Time (%)			47	36	62		
Queuing Penalty (veh)			0	0	0		

Intersection: 12: PACIFIC COAST HIGHWAY & JOHN TYLER

Movement	NB	NB
Directions Served	T	R
Maximum Queue (ft)	991	140
Average Queue (ft)	782	138
95th Queue (ft)	1428	145
Link Distance (ft)		
Upstream Blk Time (%)		
Queuing Penalty (veh)		
Storage Bay Dist (ft)		115
Storage Blk Time (%)	2	66
Queuing Penalty (veh)	36	0

Intersection: 16: PACIFIC COAST HIGHWAY & Malibu Road

Movement	EB
Directions Served	R
Maximum Queue (ft)	31
Average Queue (ft)	21
95th Queue (ft)	41
Link Distance (ft)	375
Upstream Blk Time (%)	
Queuing Penalty (veh)	
Storage Bay Dist (ft)	
Storage Blk Time (%)	
Queuing Penalty (veh)	

Intersection: 17: PACIFIC COAST HIGHWAY & Coral Canyon Road

Movement	NB	NB	SB	SB
Directions Served	T	TR	L	T
Maximum Queue (ft)	1383	2456	94	1728
Average Queue (ft)	793	1613	94	1727
95th Queue (ft)	1866	2730	94	1729
Link Distance (ft)	3058	3058		
Upstream Blk Time (%)				
Queuing Penalty (veh)				
Storage Bay Dist (ft)			70	
Storage Blk Time (%)			100	
Queuing Penalty (veh)			0	

Intersection: 19: PACIFIC COAST HIGHWAY & Latigo Canyon Road

Movement	NB	SB	SB
Directions Served	TR	L	T
Maximum Queue (ft)	52	3983	1645
Average Queue (ft)	15	2485	842
95th Queue (ft)	48	4323	1998
Link Distance (ft)		11140	11140
Upstream Blk Time (%)			
Queuing Penalty (veh)			
Storage Bay Dist (ft)			
Storage Blk Time (%)			
Queuing Penalty (veh)			

Intersection: 21: PACIFIC COAST HIGHWAY & Zumeriz Drive

Movement	EB	NB	NB	SB	SB
Directions Served	LT	T	TR	L	T
Maximum Queue (ft)	114	1864	1963	325	866
Average Queue (ft)	79	955	1519	325	866
95th Queue (ft)	125	2289	2321	325	866
Link Distance (ft)	641	1940	1940		
Upstream Blk Time (%)			17		
Queuing Penalty (veh)			130		
Storage Bay Dist (ft)				300	
Storage Blk Time (%)				99	
Queuing Penalty (veh)				0	

Intersection: 25: PACIFIC COAST HIGHWAY & Paradise Cove Drive

Movement	EB	NB	NB	SB	SB
Directions Served	LR	T	T	T	TR
Maximum Queue (ft)	102	444	481	96	74
Average Queue (ft)	79	140	217	76	41
95th Queue (ft)	104	394	445	119	73
Link Distance (ft)	1438				
Upstream Blk Time (%)					
Queuing Penalty (veh)					
Storage Bay Dist (ft)					
Storage Blk Time (%)		11			
Queuing Penalty (veh)		0			

Intersection: 28: PACIFIC COAST HIGHWAY & Kanan Dume Road

Movement	NB	NB	SB	SB	SB
Directions Served	T	R	L	T	T
Maximum Queue (ft)	890	195	355	2351	2367
Average Queue (ft)	875	195	355	2164	1839
95th Queue (ft)	892	195	355	2749	3363
Link Distance (ft)				2326	2326
Upstream Blk Time (%)				47	26
Queuing Penalty (veh)				379	211
Storage Bay Dist (ft)		170	330		
Storage Blk Time (%)		75	85		
Queuing Penalty (veh)		0	0		

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Intersection: 36: PACIFIC COAST HIGHWAY & Busch Drive

Movement	NB	NB	NB	SB	SB	SB
Directions Served	T	T	R	L	T	T
Maximum Queue (ft)	1512	1919	375	95	1952	1930
Average Queue (ft)	302	1224	375	94	1952	1529
95th Queue (ft)	1300	2082	375	95	1952	2790
Link Distance (ft)	2204	2204				
Upstream Blk Time (%)						
Queuing Penalty (veh)						
Storage Bay Dist (ft)			350	70		
Storage Blk Time (%)		1	73	97		
Queuing Penalty (veh)		13	0	0		

Intersection: 42: PACIFIC COAST HIGHWAY & Heathercliff Road

Movement	EB	NB	NB	SB	SB
Directions Served	R	T	T	T	T
Maximum Queue (ft)	927	472	511	1117	1106
Average Queue (ft)	402	265	317	592	531
95th Queue (ft)	905	484	490	1227	1176
Link Distance (ft)	988				
Upstream Blk Time (%)					
Queuing Penalty (veh)					
Storage Bay Dist (ft)					
Storage Blk Time (%)		2		18	
Queuing Penalty (veh)		0		0	

Intersection: 49: PACIFIC COAST HIGHWAY & Encinal Canyon

Movement	NB	SB	SB
Directions Served	R	L	T
Maximum Queue (ft)	24	194	1344
Average Queue (ft)	14	193	1268
95th Queue (ft)	32	197	1472
Link Distance (ft)			
Upstream Blk Time (%)			
Queuing Penalty (veh)			
Storage Bay Dist (ft)	170	170	
Storage Blk Time (%)		97	
Queuing Penalty (veh)		0	

Intersection: 52: PACIFIC COAST HIGHWAY & Decker Canyon

Movement	NB	SB	SB
Directions Served	TR	L	T
Maximum Queue (ft)	52	145	315
Average Queue (ft)	34	133	109
95th Queue (ft)	55	162	333
Link Distance (ft)			8705
Upstream Blk Time (%)			
Queuing Penalty (veh)			
Storage Bay Dist (ft)		120	
Storage Blk Time (%)		32	1
Queuing Penalty (veh)		0	8

Intersection: 53: PACIFIC COAST HIGHWAY & Broad Beach Rd/Trancas Canyon Road

Movement	EB	NB	NB	SB	SB
Directions Served	LTR	T	TR	L	T
Maximum Queue (ft)	127	1178	2099	224	2085
Average Queue (ft)	76	593	1711	216	2077
95th Queue (ft)	127	1417	2224	231	2084
Link Distance (ft)	438				
Upstream Blk Time (%)					
Queuing Penalty (veh)					
Storage Bay Dist (ft)				200	
Storage Blk Time (%)				100	
Queuing Penalty (veh)				0	

Intersection: 73: PACIFIC COAST HIGHWAY & Morning View Drive

Movement	NB	NB	SB	SB
Directions Served	T	R	L	T
Maximum Queue (ft)	1942	225	195	972
Average Queue (ft)	1327	225	194	972
95th Queue (ft)	2118	225	195	972
Link Distance (ft)				
Upstream Blk Time (%)				
Queuing Penalty (veh)				
Storage Bay Dist (ft)		200	170	
Storage Blk Time (%)		61	98	
Queuing Penalty (veh)		0	0	

Network Summary

Network wide Queuing Penalty: 940



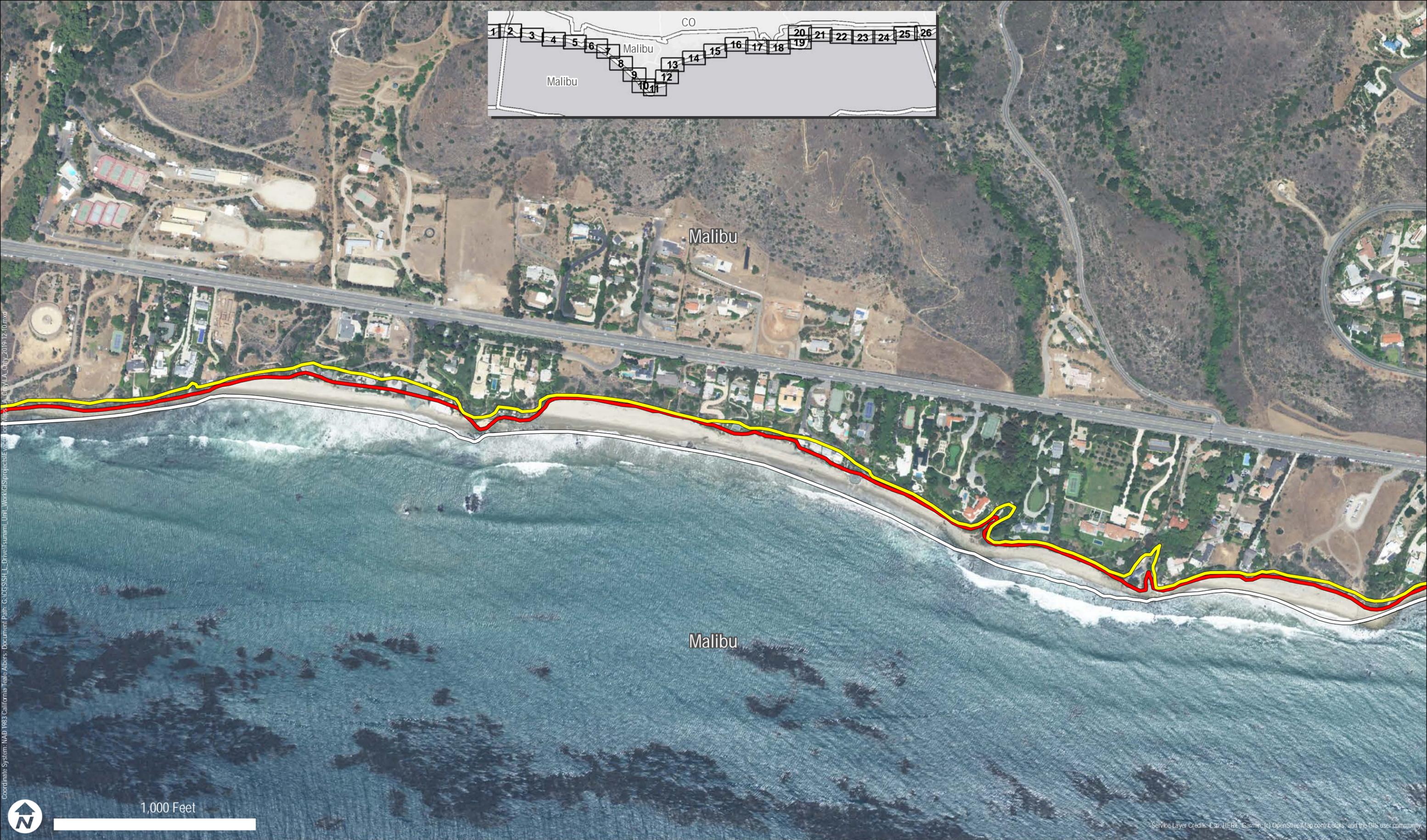
Final Report

Transportation Plan for Disasters, Emergencies, and Significant Events
City of Malibu – Public Safety Department

Appendix G: Tsunami Inundation Area Maps







Coordinate System: NAD 1983 California State Albers; Document Path: G:\CGS\SH_L_Drive\Tsunami_Unit_Work\GIS\projects\Evacuation\Map\LA_City\LA_City_2019-12-10.mxd

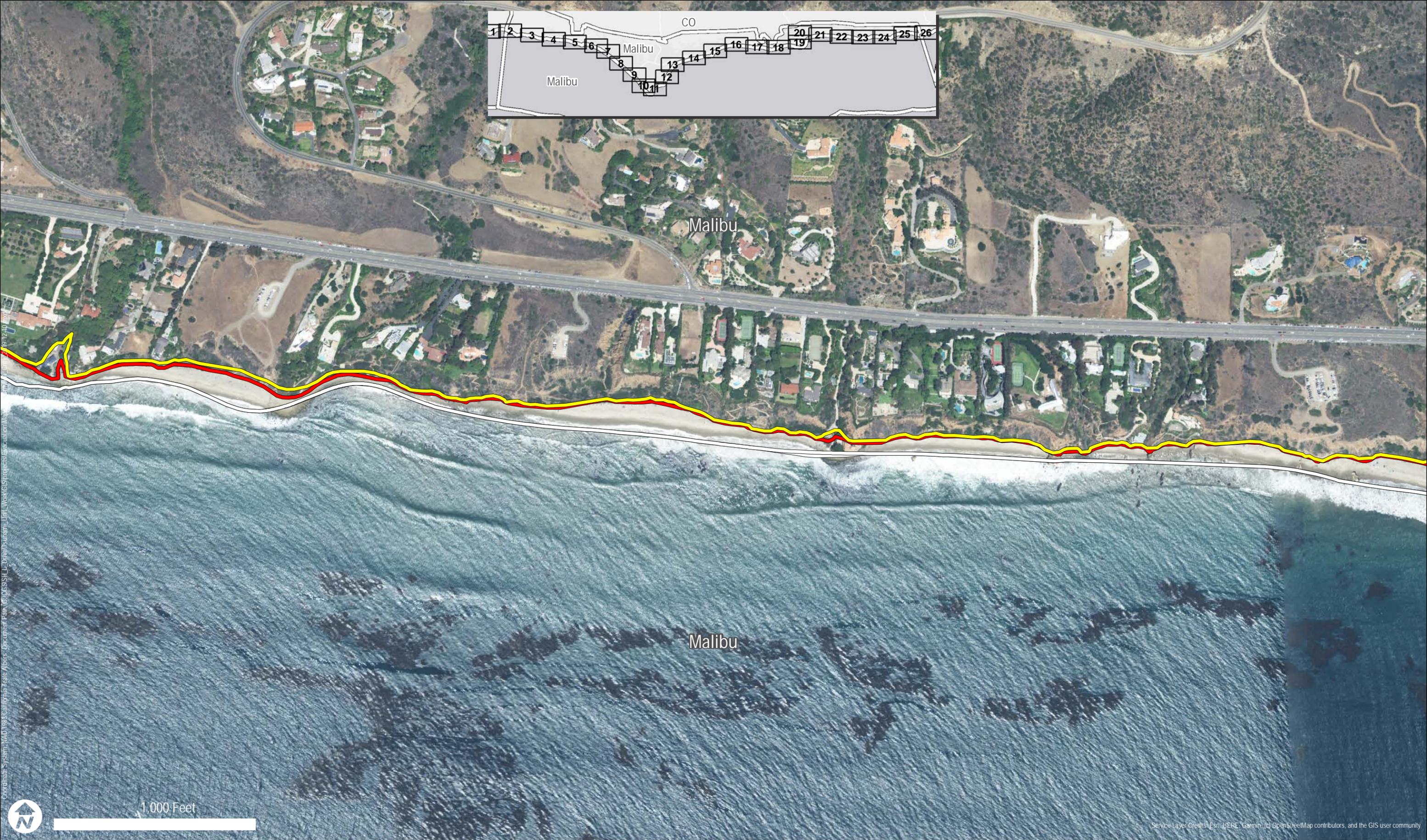


Service Layer Credits: Esri, HERE, Garmin, © OpenStreetMap contributors, and the GIS user community



CGS Draft Tsunami Inundation Area - 3

- Los Angeles County 2019 Inundation Area [20191018]
- Malibu 2019 Tsunami Evacuation Line [FINAL]



1,000 Feet

Service Layer Credits: Esri, HERE, Garmin, © OpenStreetMap contributors, and the GIS user community



1,000 Feet

Service Layer Credits: Esri, HERE, Garmin, (c) OpenStreetMap contributors, and the GIS user community

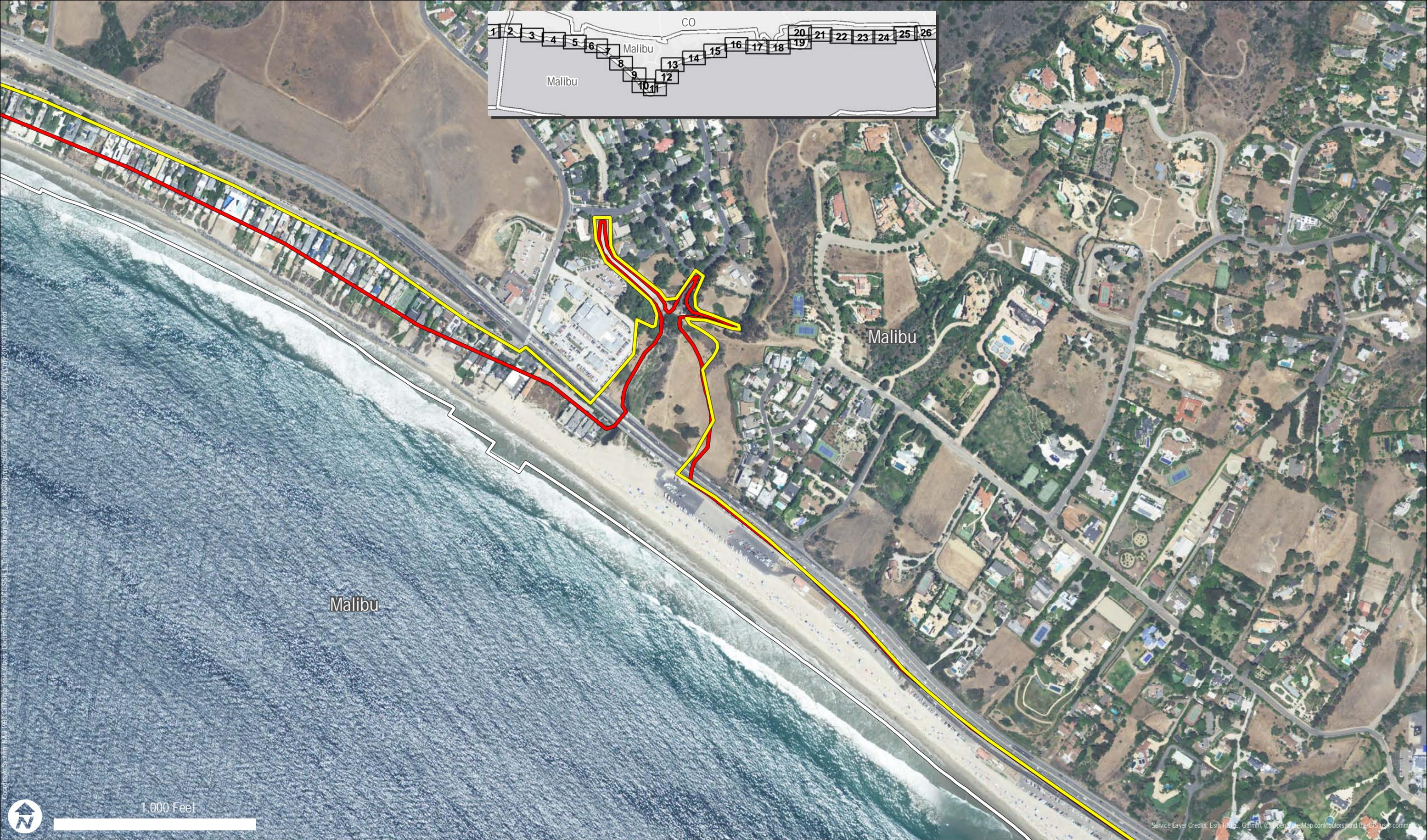


CGS Draft Tsunami Inundation Area - 5

- Los Angeles County 2019 Inundation Area [20191018]
- Malibu 2019 Tsunami Evacuation Line [FINAL]

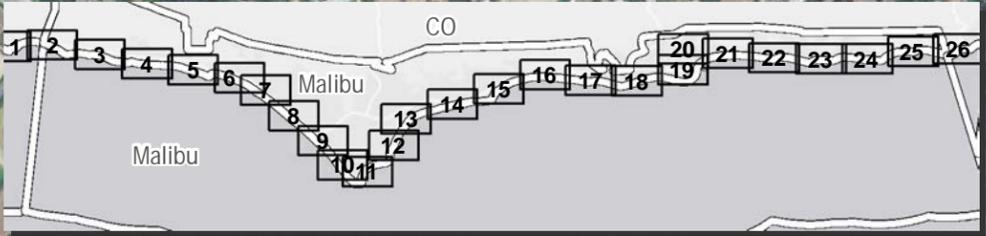


1,000 Feet



1,000 Feet

CGS Draft Tsunami Inundation Area - 7



Malibu

Malibu

1,000 Feet

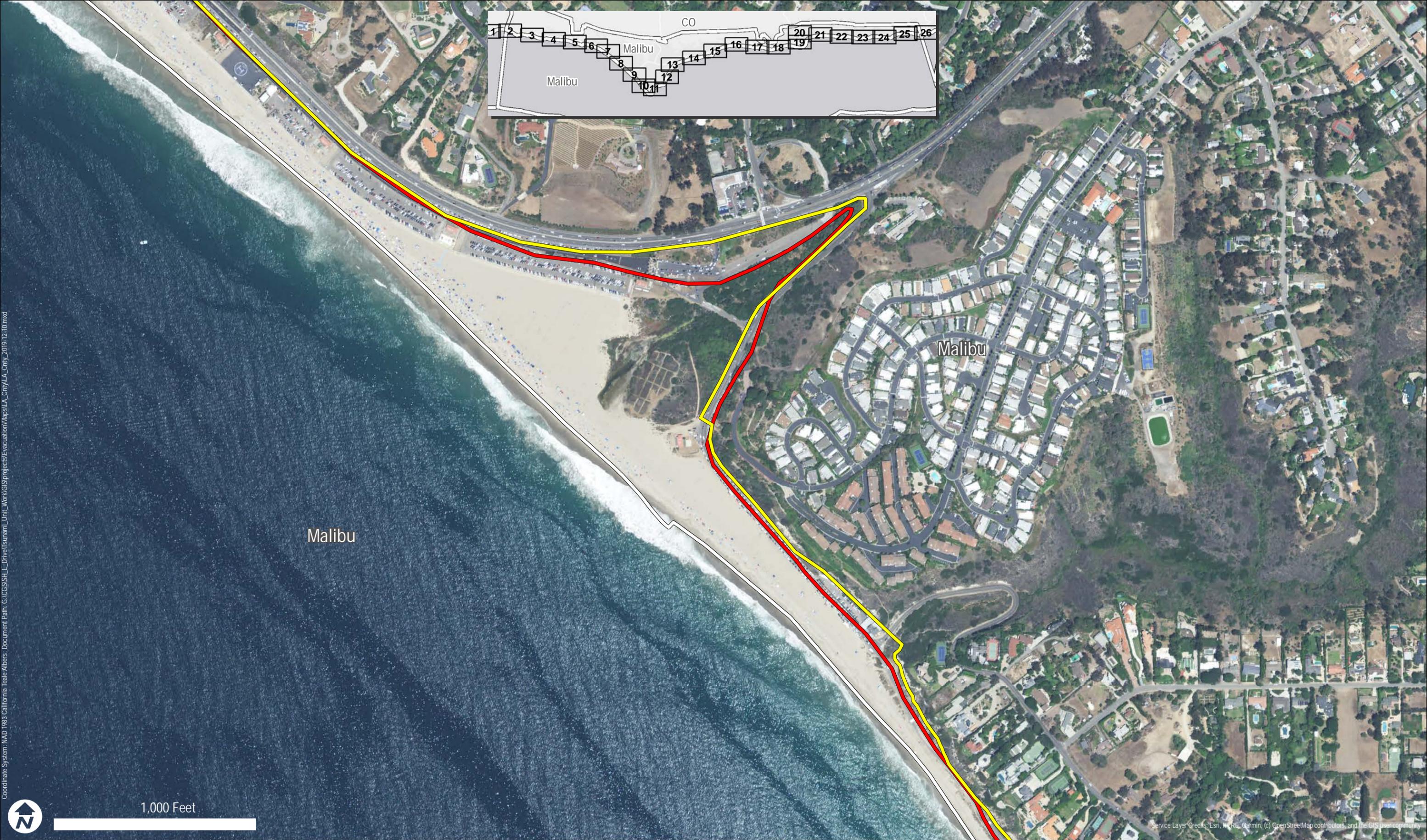
Service Layer Credits: Esri, HERE, Garmin, © OpenStreetMap contributors, and the GIS user community



California
Department of
Conservation
California Geological Survey

CGS Draft Tsunami Inundation Area - 8

- Los Angeles County 2019 Inundation Area [20191018]
- Malibu 2019 Tsunami Evacuation Line [FINAL]



Coordinate System: NAD 1983 California StateAlbers; Document Path: G:\CGS\SHL_Drive\Tsunami_Unit_Work\GIS\projects\Evacuation\Maps\LA_Cnty\LA_Cnty_2019-12-10.mxd

Service Layer Credits: Esri, HERE, Garmin, © OpenStreetMap contributors, and the GIS user community

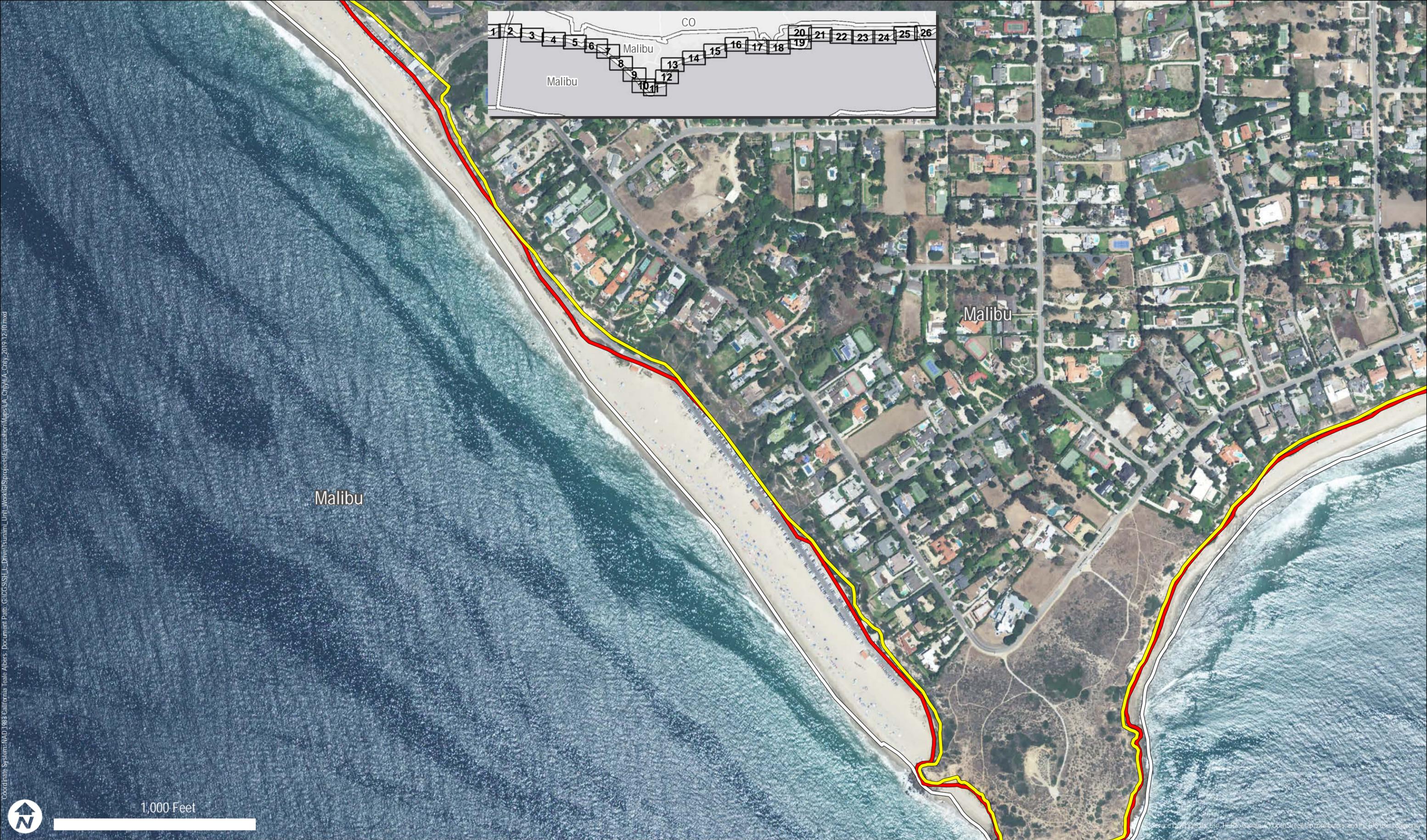


1,000 Feet



CGS Draft Tsunami Inundation Area - 9

- Los Angeles County 2019 Inundation Area [20191018]
- Malibu 2019 Tsunami Evacuation Line [FINAL]



Service Layer Credits: Esri, HERE, Garmin, © OpenStreetMap contributors, and the GIS user community

Coordinate System: NAD 1983 California State Albers; Document Path: G:\CCS\SHL\Drive\Tsunami\Unit_10\Work\GIS\projects\Evacuation\Map\LA_Cnty\LA_Cnty_2019-12-10.mxd



1,000 Feet

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CGS Draft Tsunami Inundation Area - 11

- Los Angeles County 2019 Inundation Area [20191018]
- Malibu 2019 Tsunami Evacuation Line [FINAL]



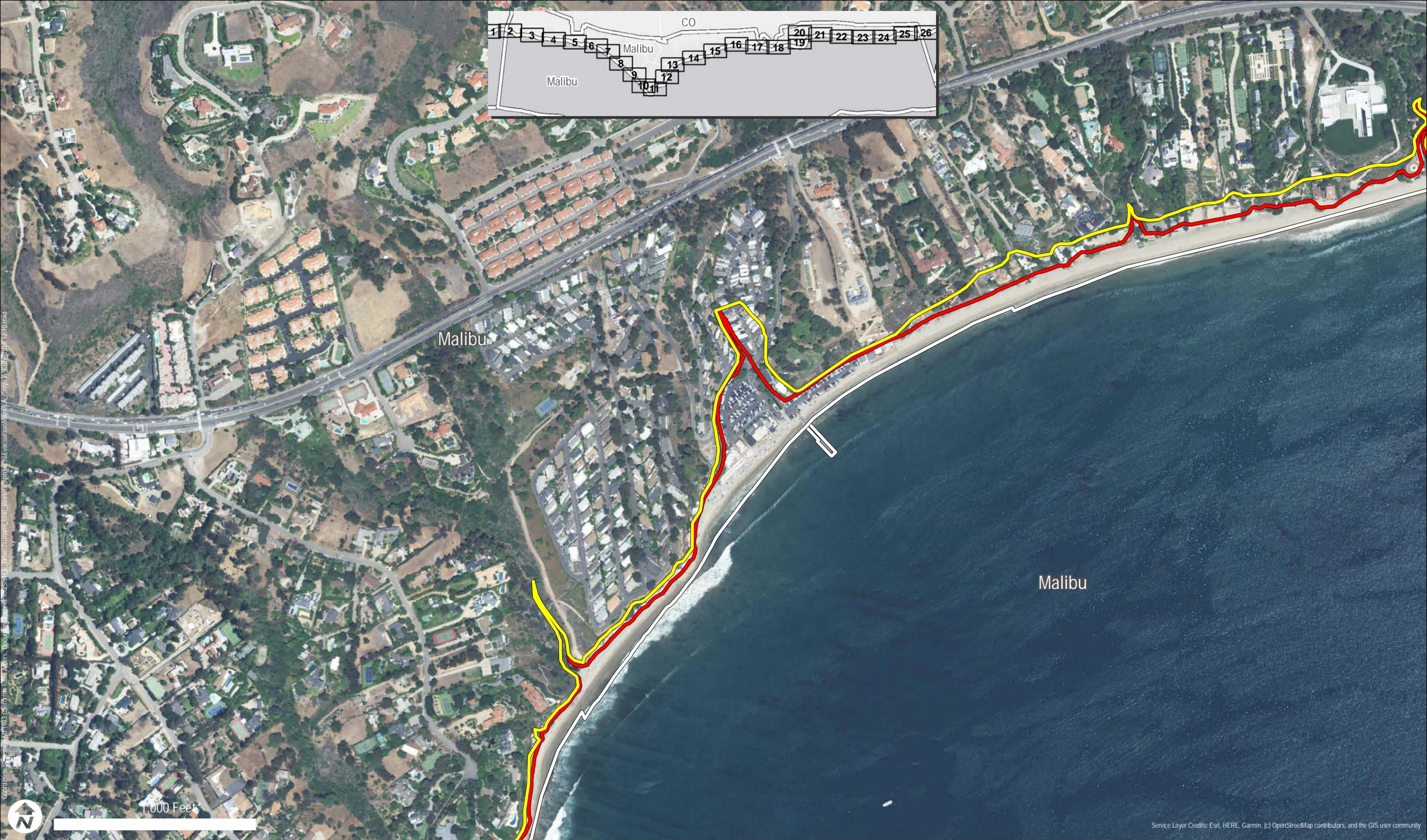
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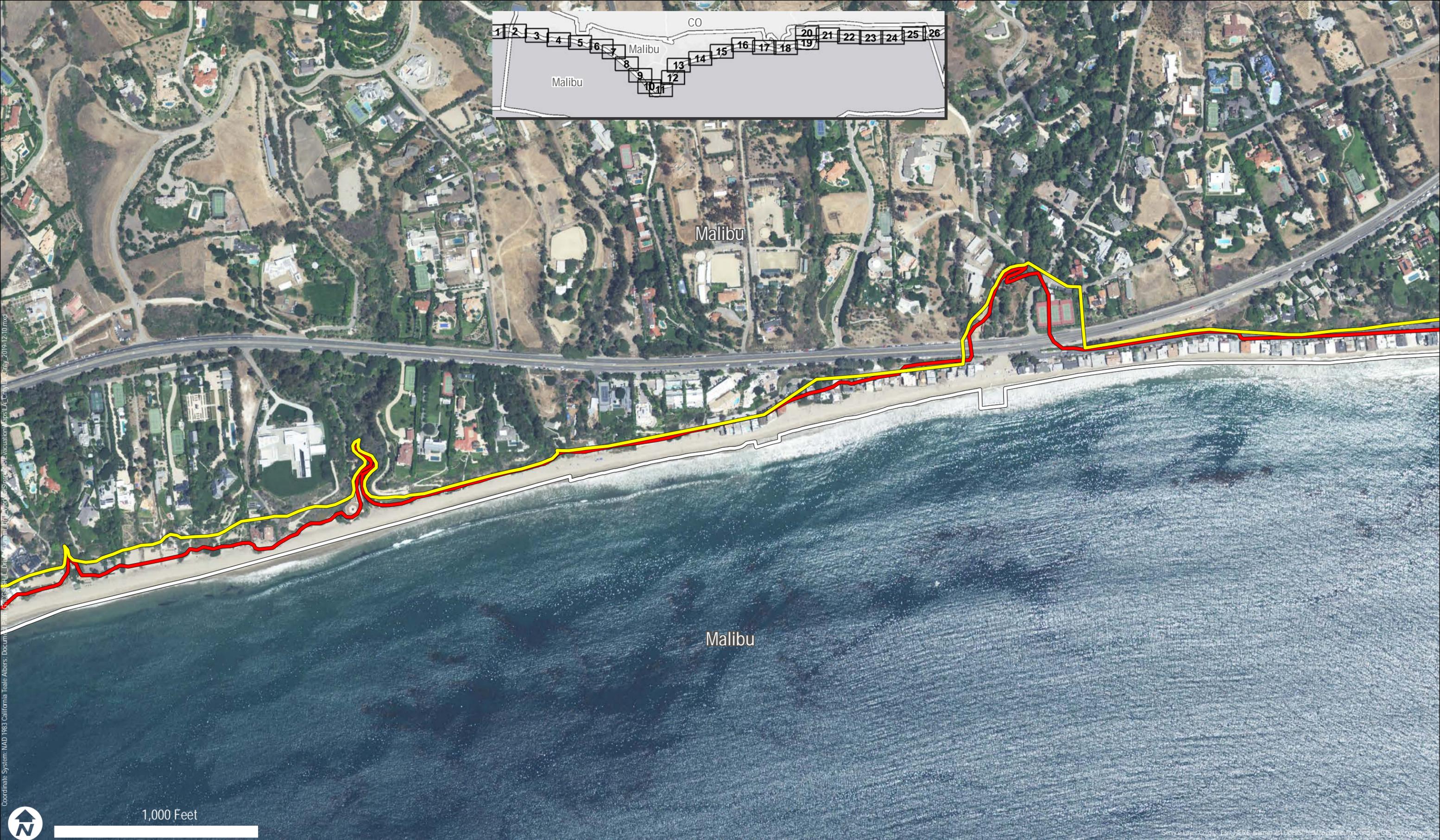
Service Layer Credits: Esri, HERE, Garmin, (c) OpenStreetMap contributors, and the GIS user community



CGS Draft Tsunami Inundation Area - 12

- Los Angeles County 2019 Inundation Area [20191018]
- Malibu 2019 Tsunami Evacuation Line [FINAL]





Coordinate System: NAD 1983 California State Albers; Document Path: C:\Users\albers\Documents\CGS\BTL_Draft_Tsunami_Inundation_Area_Vacation\Map14_Crnl_Vis_Vacation_Map14_Crnl_Vis_Vacation.mxd

Service Layer Credits: Esri, HERE, DeLorme, Mapbox, OpenStreetMap contributors, and the GIS user community

1,000 Feet



CGS Draft Tsunami Inundation Area - 14

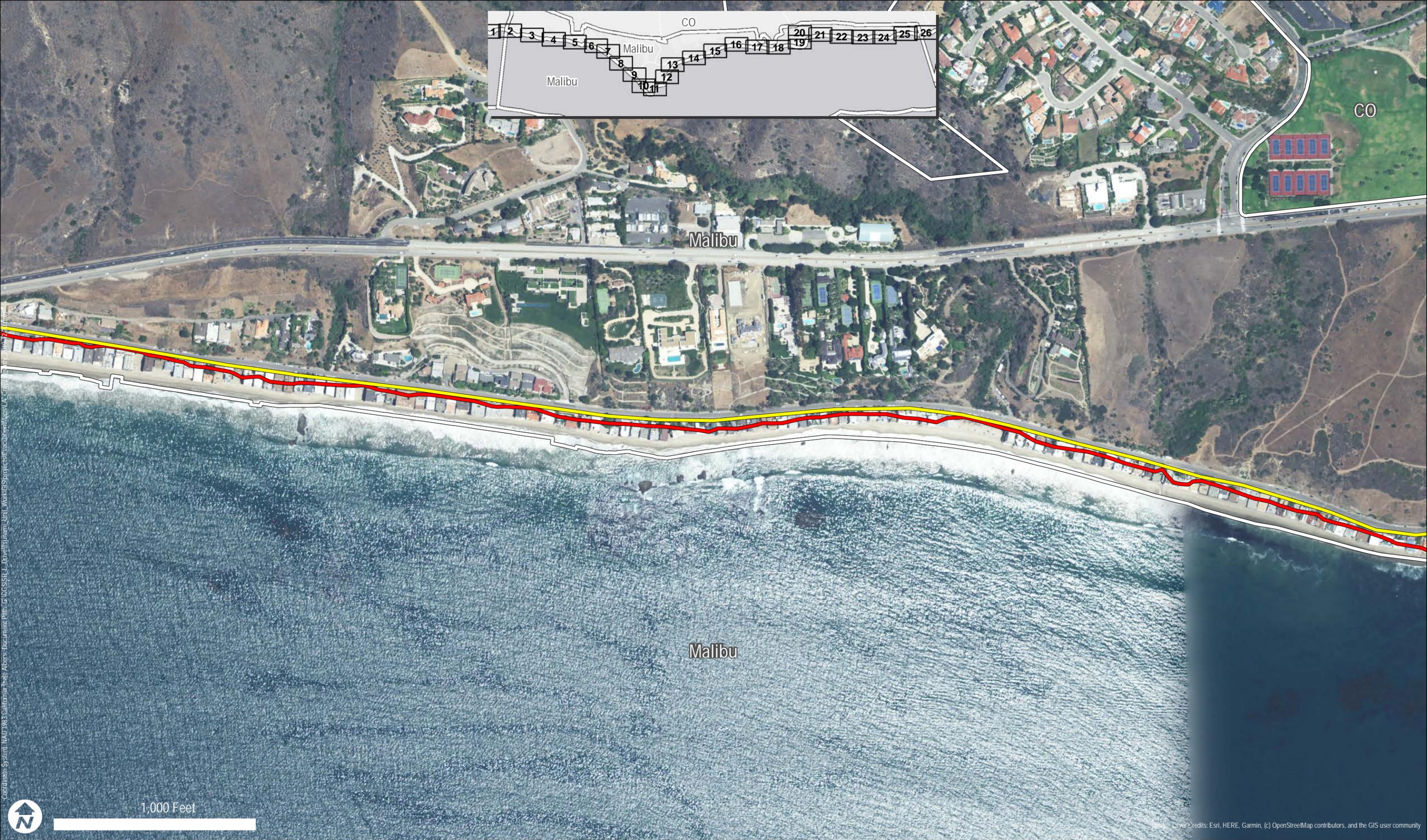
- Los Angeles County 2019 Inundation Area [20191018]
- Malibu 2019 Tsunami Evacuation Line [FINAL]

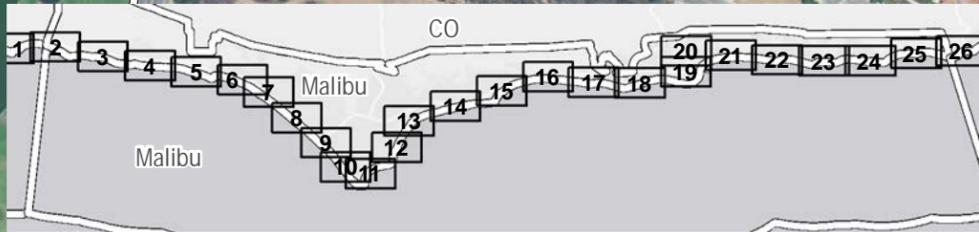




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Service Layer Credits: Esri, HERE, Garmin, © OpenStreetMap contributors, and the GIS user community





1,000 Feet

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CGS Draft Tsunami Inundation Area - 18

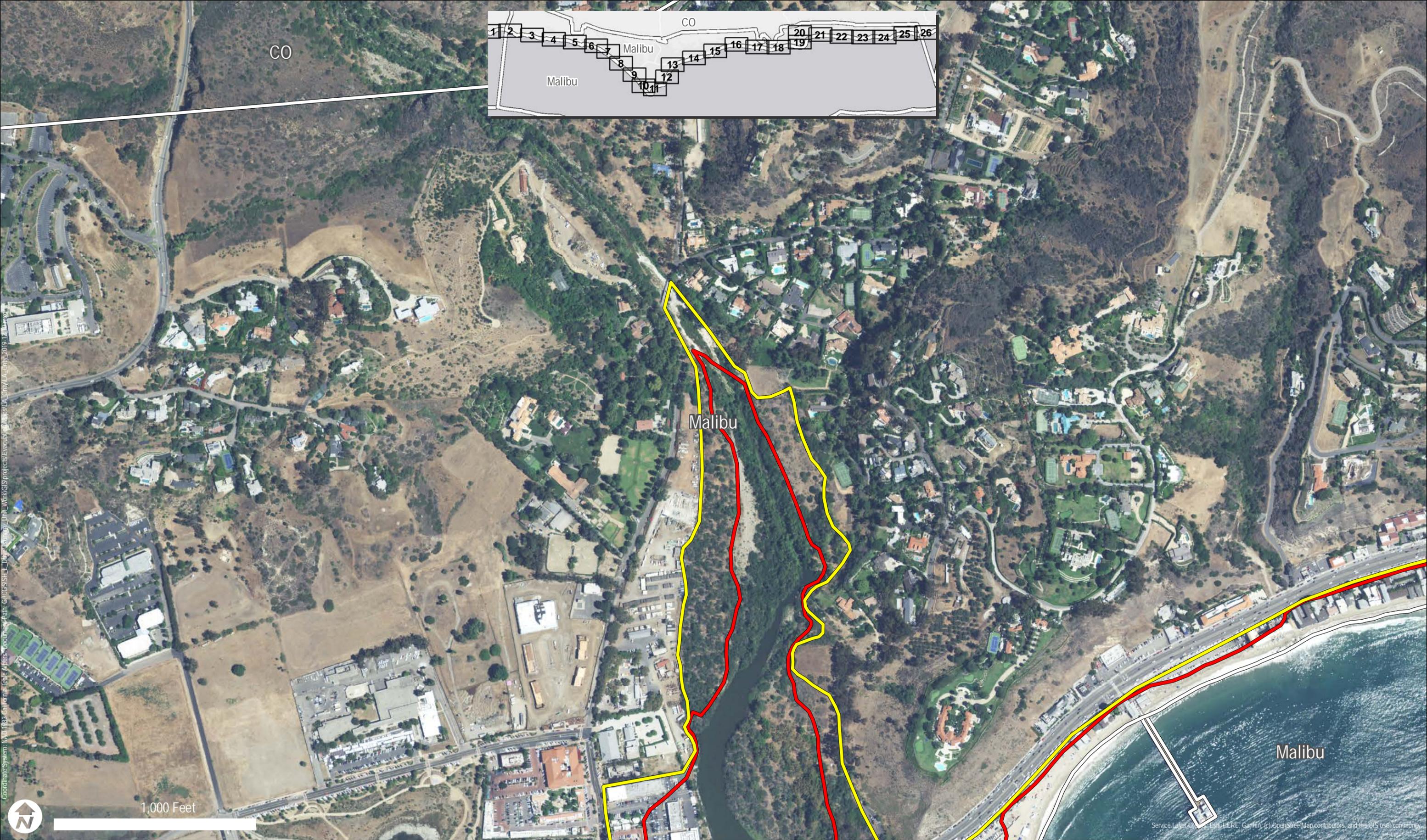
- Los Angeles County 2019 Inundation Area [20191018]
- Malibu 2019 Tsunami Evacuation Line [FINAL]



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Coordinate System: NAD 1983 California State Albers; Document Path: C:\GIS\SH...; File: L:\Work\CGS...; Date: 2019-12-10.mxd

Service Layer Credits: Esri, HERE, Garmin, © OpenStreetMap contributors, and the GIS user community



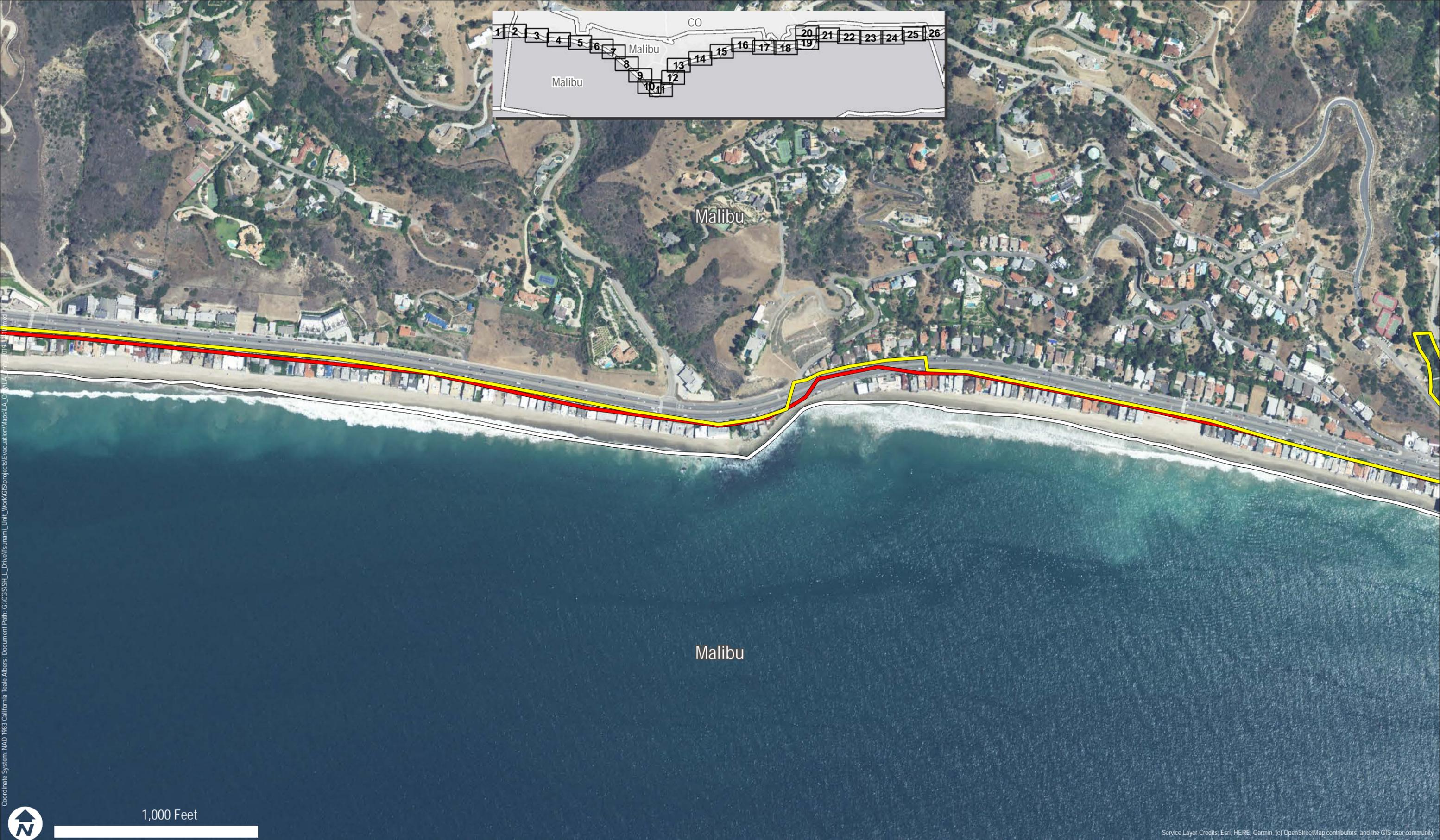
1,000 Feet



California
**Department of
Conservation**
California Geological Survey

CGS Draft Tsunami Inundation Area - 20

- Los Angeles County 2019 Inundation Area [20191018]
- Malibu 2019 Tsunami Evacuation Line [FINAL]



1,000 Feet

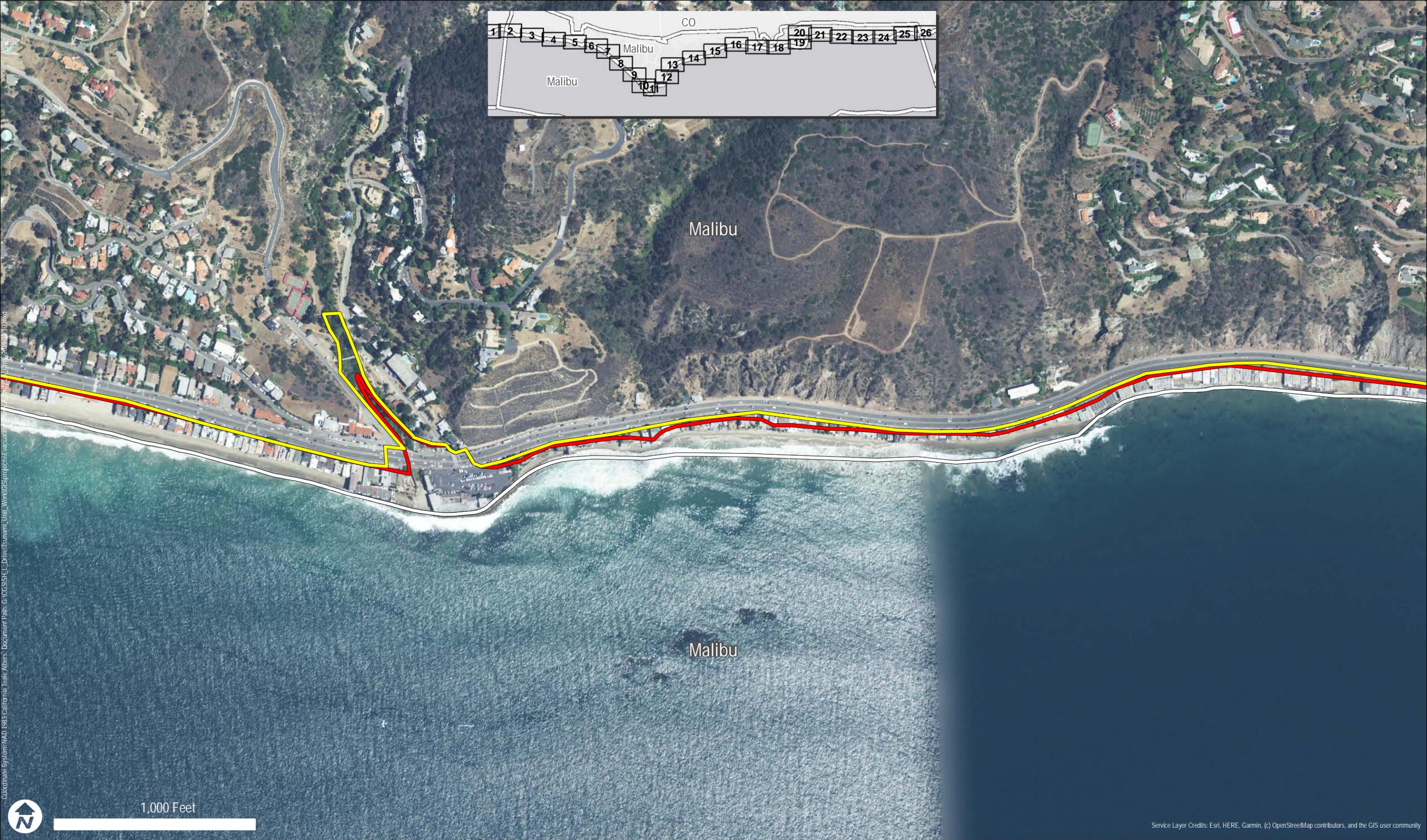


Service Layer Credits: Esri, HERE, Garmin, (c) OpenStreetMap contributors, and the GIS user community



CGS Draft Tsunami Inundation Area - 22

- Los Angeles County 2019 Inundation Area [20191018]
- Malibu 2019 Tsunami Evacuation Line [FINAL]



Coordinate System: NAD 1983 California State Albers; Document Path: G:\CCS\SHL_Drive\Tsunami_Unit_Work\GIS\projects\Evacuation\Map\Map_2019.aprx; Unit: Meter; Scale: 10m

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CGS Draft Tsunami Inundation Area - 23

- Los Angeles County 2019 Inundation Area [20191018]
- Malibu 2019 Tsunami Evacuation Line [FINAL]



Coordinate System: NAD 1983 California State Albers; Document Path: G:\CGS\SHL_Drive\Tsunami_Unit_Work\GIS\projects\Evacuation\Map\Map_2019_12_10.mxd

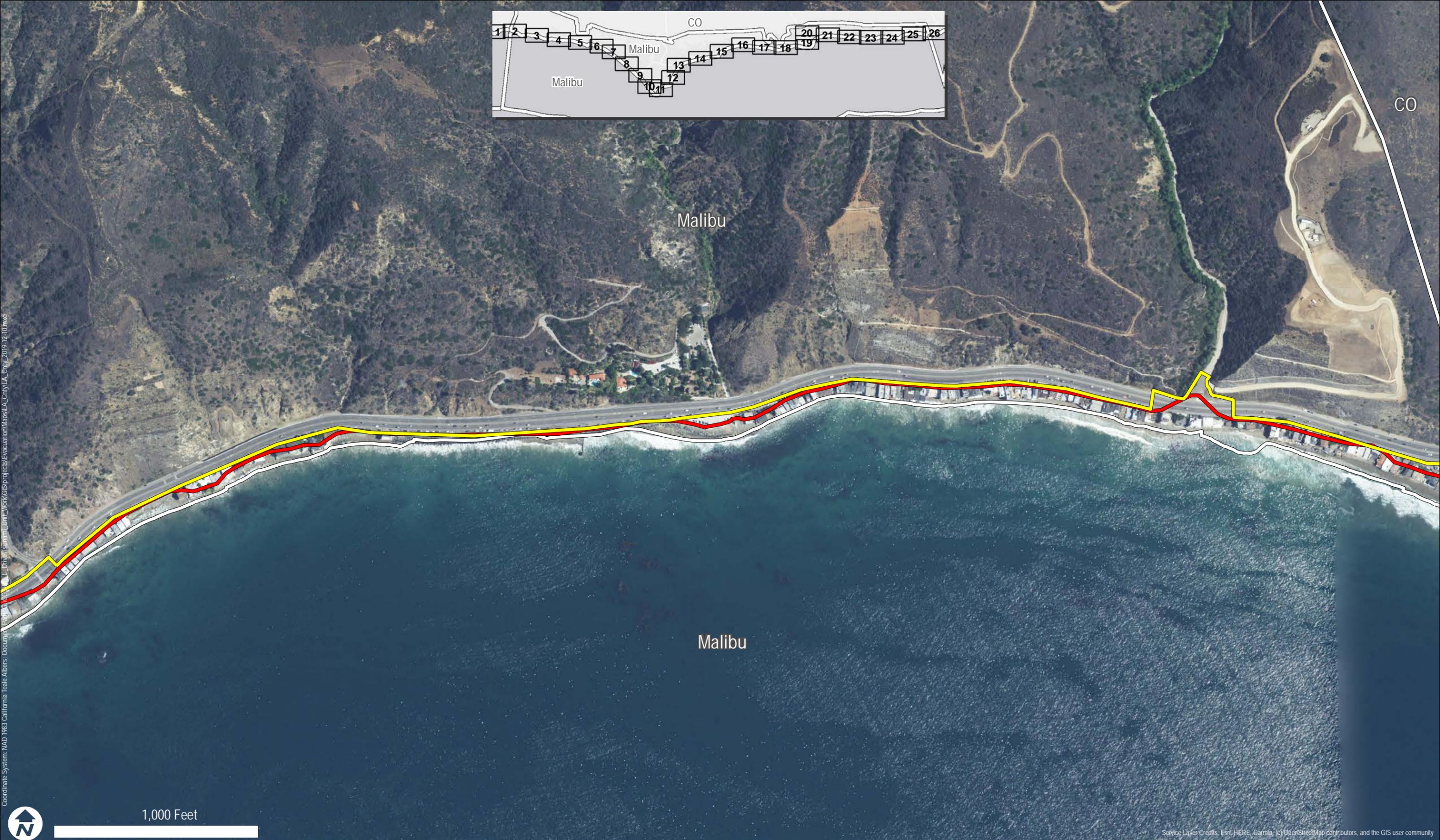


Service Layer Credits: Esri, HERE, Garmin, (c) OpenStreetMap contributors, and the GIS user community



CGS Draft Tsunami Inundation Area - 24

- Los Angeles County 2019 Inundation Area [20191018]
- Malibu 2019 Tsunami Evacuation Line [FINAL]



Coordinate System: NAD 1983 California State Albers; Document Path: C:\Users\albers\OneDrive\Work\GIS\Projects\Evacuation\Maps\LA_Cnty\LA_Cnty_2019-12-10.mxd



1,000 Feet

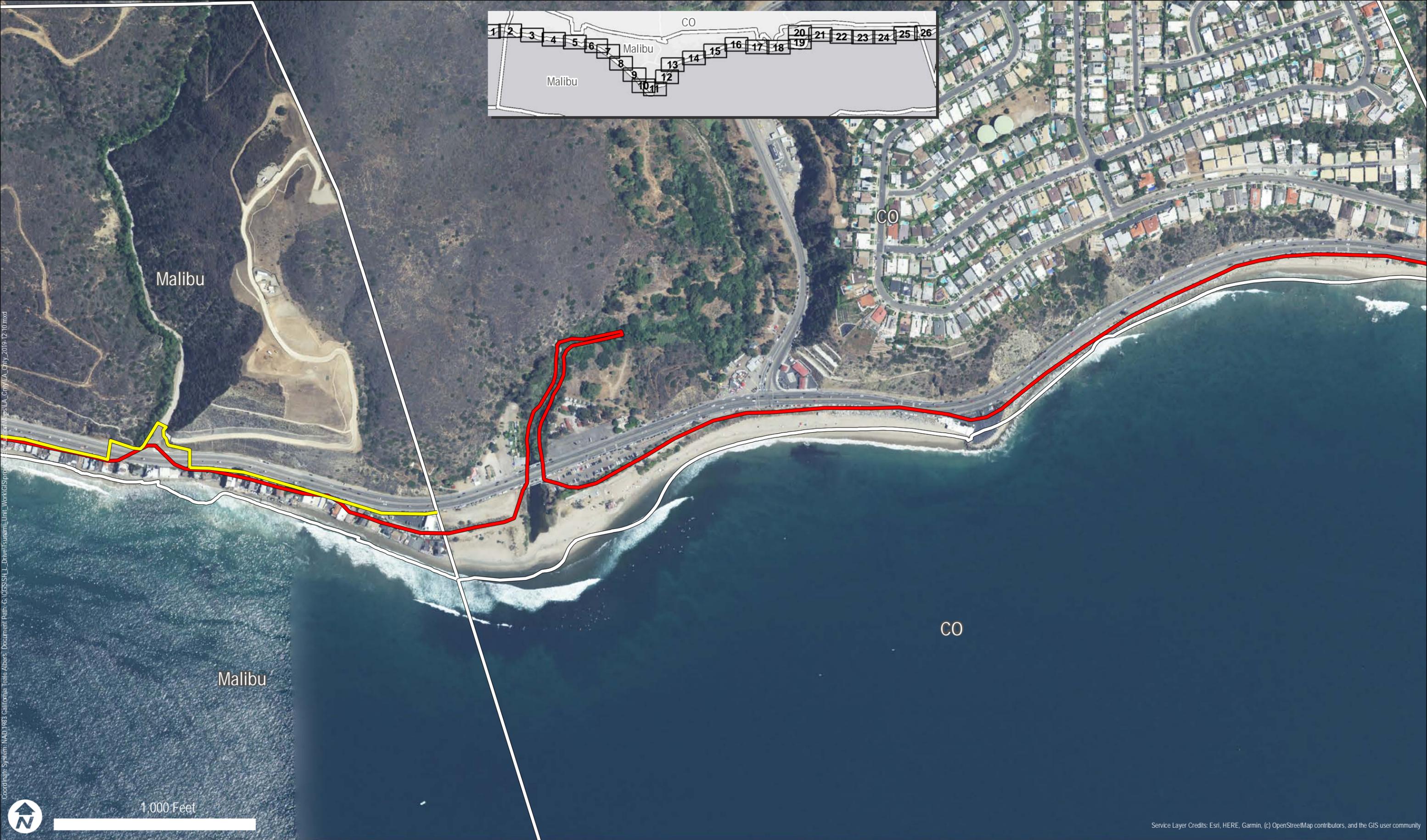


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CGS Draft Tsunami Inundation Area - 25

- Los Angeles County 2019 Inundation Area [20191018]
- Malibu 2019 Tsunami Evacuation Line [FINAL]



Coordinate System: NAD 1983 California State Albers; Document Path: G:\CGS\SHL_Drive\Tsunami_Unit_Work\GIS\prod\Map\Map\Map\LA_City_2019-12-10.mxd

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CGS Draft Tsunami Inundation Area - 26

- Los Angeles County 2019 Inundation Area [20191018]
- Malibu 2019 Tsunami Evacuation Line [FINAL]