APPENDIX H

Traffic Impact Analysis

Traffic Impact Analysis
Alta Oceanside, City of Oceanside

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1 INTRODUCTION

1.1 Purpose and Scope of the TIA

The purpose of this Traffic Impact Analysis (TIA) is to identify traffic impacts associated with the proposed Alta Oceanside mixed-use development project (proposed project) in the City of Oceanside (City). This TIA has been prepared per the *SANTEC/ITE Guidelines for Traffic Impact Studies in the San Diego Region* (March 2, 2000), and its scope of analysis has been approved by the City's Traffic Engineering Department. In addition, this TIA complies with the City of Oceanside General Plan Circulation Element requirements and, where applicable, Caltrans' *Guide for the Preparation of Traffic Impact Studies* (2002).

The objectives of this TIA are:

- Document existing traffic conditions, including roadway segment, intersection, and freeway mainline segment levels of service in the study area;
- Estimate trip generation, distribution, and assignment characteristics for the proposed project;
- Analyze the traffic impacts that would occur as a result of project traffic under the Existing, Near Term, and Buildout conditions;
- Describe the significance of the potential impacts under the Existing, Near Term, and Buildout conditions;
- Identify mitigation measures for any significantly impacted transportation facilities;
- Describe the adequacy of project access locations; and,
- Describe active transportation and transit facilities in the vicinity of the project site.

Dudek analyzed study area roadway segments and intersections for the following study scenarios:

Existing Condition

The TIA includes a description of existing traffic conditions in the site vicinity, including existing roadway system, existing weekday AM and PM peak hour traffic volumes, existing roadway segment daily traffic volumes, and traffic operations. The existing condition is representative of the year 2018.

Existing plus Project

This condition includes analysis of traffic operations under existing conditions with project-related traffic added to the existing AM and PM peak hour traffic volumes, and roadway segment daily traffic volumes. The traffic impacts specific to the project under this condition were used as the basis for determining project's direct impacts.

Existing plus Cumulative Projects

This condition includes a description of traffic conditions and operations within a short-term horizon period where the proposed project is constructed and fully occupied. This scenario is estimated by adding existing traffic volumes to traffic generated by other approved and pending projects in the study area. These approved or pending projects are developments in the review process, but not fully approved; or, projects that have been approved, but not fully constructed or occupied.

Existing plus Cumulative Projects plus Project

This condition includes analysis of traffic operations under the Existing plus Cumulative Projects (described above) condition with project-related traffic added to the AM and PM peak hour traffic volumes and roadway segment daily traffic volumes. The traffic impacts specific to the project under this condition were used as the basis for determining the project's contribution to cumulative impacts.

Buildout Year (2035)

This condition includes analysis of traffic operation under Buildout Year (2035) conditions within a long-term horizon period where the proposed project is constructed and fully occupied. This scenario assumes buildout of the land uses designated in the City's General Plan. The proposed project is consistent with the Residential, Commercial, and Mixed-Use land use designations in the General Plan. Buildout Year volumes were derived from the Future 2035 Conditions in the *Coast Highway Corridor Study* TIA (IBI Group, May 2017) and located in Appendix C, Cumulative Project and Future Year Data.

Buildout Year (2035) plus Project

This condition includes analysis of traffic operations under Buildout Year (2035) conditions with project-related traffic added to the AM and PM peak hour traffic volumes. The traffic impacts specific to the project under this condition were used as the basis for determining the project's contribution to cumulative impacts.

1.2 Project Description, Location and Study Area

The proposed project consists of the demolition of all existing development on the site, and construction of the new mixed-use project. The mixed-use development includes ground-level commercial/retail space adjacent to Coast Highway as well as residential apartment units with associated parking, open space and landscaping that incorporates and retains the permanent coastal access path previously granted to the public along Costa Pacifica Way. The site consists of 5.31 acres located near the north end of Oceanside's Downtown District, on the west side of North Coast Highway within the Townsite Neighborhood Planning Area in the Coastal Zone. Figure 1 shows the project location and study area, and Figure 2 illustrates the project's site plan.

The property includes five existing parcels that encompass both vacant and developed properties, along with a portion of Costa Pacifica Way, a private street (APNs 143-040-20, -22, -23, -26 and -54). The developed parcels front North Coast Highway and include an existing business (The Main Attraction) as well as buildings that are currently unused or not used by the general public. The vacant areas of the site are located behind these commercial buildings.

The proposed building will contain five stories of residential apartment units wrapped around an above-grade parking garage with approximately 5,422 square feet of commercial/retail space at the street level fronting North Coast Highway. There will be 309 total residential units, including 283 market rate apartments and 26 affordable apartments. Total parking for the site includes 528 spaces, with 503 in the garage structure, and 25 located in a surface parking lot on the south side of the building. Existing uses in the vicinity include a variety of commercial, restaurant, and hotel/motels, as well as some residential mobile home and multi-family developments, with the San Luis Rey River to the northwest and Interstate 5 (I-5) further east. North of Costa Pacifica Way is an approved but not constructed hotel project designed to replace an existing hotel on the site.

Pending final engineering plans, the proposed project would also construct street improvements along its frontages with Coast Highway and Costa Pacifica Way. These improvements would include: additional street dedications required by the City, where needed, along portions of the project frontage on Coast Highway; restriping to add a bike lane on southbound Coast Highway along the project's frontage; designate on-street parking along the project frontage between new bulb-outs on Coast Highway; and, new public sidewalk improvements along the project's frontage on Coast Highway and Costa Pacifica Way.

The project would also add a second approach lane on Costa Pacifica Way, in the form of a dedicated right-turn lane, at its intersection with North Coast Highway. This lane would start from the project's garage driveway, and extend to North Coast Highway. In addition, the existing striped median/two-way left-turn lane on North Coast Highway would be converted to a dedicated northbound left-turn lane (as part of the street segment mitigation measures described below), and the existing dedicated southbound turn lane into Costa Pacifica Way would be maintained.

1.2.1 General Plan Circulation Element Consistency

Street Segment Mitigation Measures

Per the City's General Plan Circulation Element, Chapter 3.8 – Traffic Impact Studies, subchapter 3.8.3 – Mitigation Measures (City of Oceanside 2012):

> …Any proposed development project that affects a street segment that already operates, or is projected to operate worse than LOS D, regardless of peak hour analysis,

> the developer shall propose, prepare and provide mitigation measure(s) for the City to review. If there are no feasible mitigation measures that would fully mitigate traffic impacts, the developer shall propose, prepare and provide various mitigation measures, such as Traffic Management Center tools and resources, which may not include physical improvements to the impacted facility. Where various mitigation measures have been prepared, agreed upon by the City, and will be implemented, yet are not sufficient to fully mitigate the traffic impacts, then LOS E during peak hour periods will be considered acceptable. A project's fair share contributions may also be considered by the City for predetermined project improvements (e.g. TMC, adaptive signals) in lieu of prepared and implemented mitigation measures…(p. 45)

These street segment measures are required by the General Plan Circulation Element (City of Oceanside 2017) since the two study area segments of North Coast Highway, from Harbor Drive to Costa Pacifica Way; and, from Costa Pacifica Way to SR-76, are forecast to operate worse than LOS D in the Buildout Year (2035) condition, without and with the proposed project. The proposed project has incorporated street segment mitigation measures in accordance with the General Plan Circulation Element.

With coordination and approval from the City, these measures include the installation of raised medians and refuge island on North Coast Highway between Costa Pacifica Way and the southerly In-N-Out driveway; "Keep Clear" pavement markings in the southbound direction at North Coast Highway/Costa Pacifica Way; a dedicated left-turn lane at North Coast Highway/Costa Pacifica Way; left-turn turn restrictions at the southerly In-N-Out driveway; and, required signage. The installation of a bulb-out, Continental (crosswalk) pedestrian crossing, and flashing beacons at North Coast Highway/Costa Pacifica Way are required per the Coast Highway Corridor Study, and are complemented with the street segment mitigation measures noted above. With the inclusion of these measures, the project would be consistent with this General Plan Circulation Element. In addition, these street segment mitigation measures would also serve as project mitigation measures under CEQA for the significantly impacted roadway segments under daily traffic conditions (see Sections 4.2, 5.2, and 6.2). Figure 3 illustrates a conceptual drawing of the street segment measures.

Driveway Access

Under Chapter 3.1 Policies and Implementation Strategies, of the City's Circulation Element (City of Oceanside 2017), the following policy and guidelines are related to driveway access for the proposed project:

> **Policy 3.9** The City shall review all project applications and reduce or eliminate residential driveways on all collector and busier streets. Access to commercial projects shall be designed to meet the City's

> standards and limited to the extent feasible. The City shall routinely review existing collector and higher streets to determine, as feasible, the closing, combining, or relocation of existing driveways.

The General Plan Circulation Element Policy 3.9 encourages the elimination and consolidation of driveways as feasible. The project would consolidate the five existing site driveways on North Coast Highway to one secondary driveway, and take primary access via the existing Costa Pacifica Way. The proposed primary access from Costa Pacifica Way would be consistent with this City policy, and the inclusion of the secondary access along North Coast Highway would not lead to any significant secondary traffic impacts (see analysis above).

1.2.2 Coast Highway Corridor Study

The City of Oceanside has recently approved the Coast Highway Corridor Study, which is proposing Complete Street improvements to accommodate all modes of travel within the existing public right-of-way on Coast Highway, throughout the City. Between Harbor Drive and the San Luis Rey River Bridge, Coast Highway would be one lane in each direction with a center two way left-turn lane (TWLTL). Class II striped bicycle lanes would be provided on both sides of the street and where street width permits, angled parking would be provided on the west side of street. On-street parking currently located along the eastern side of the roadway would be removed to accommodate the bicycle lane. The Harbor Drive and Coast Highway intersection would remain as a signalized intersection with no changes to lane geometry. South of the San Luis Rey River Bridge (including the segment along the project frontage), Coast Highway would remain as a two-lane roadway with a center two way left-turn lane (TWLTL) with Class II striped bicycle lanes on both sides of the street. On-street parking would continue to be provided on the west side of Coast Highway, south of Costa Pacifica Way. The roadway (Coast Highway) and the bridge would be restriped to provide a Class II bicycle lane in both directions. A two-lane roundabout is proposed at the intersection of Coast Highway and State Route 76, south of the project site.

Consistent with the approved corridor study, the proposed project will coordinate with the City Public Works Department on the planned crosswalk across Coast Highway, at Costa Pacifica, adjacent to the project site (i.e., south side of intersection), along with a proposed bulb-out on the southwest corner of the intersection as a traffic-calming feature. These improvements have been recommended in the corridor study.

1.2.3 Study Area

As illustrated in Figure 1, the study area is comprised of the following twelve intersections, four roadway segments, and two freeway mainline segments:

Intersections

1. Harbor Drive – Coast Highway/Interstate 5 (I-5) southbound ramps
2. Coast Highway/Costa Pacifica Way
3. San Luis Rey Mission Expressway – State Route 76 (SR-76)/I-5 northbound ramps
4. San Luis Rey Mission Expressway – SR-76/I-5 southbound ramps
5. San Luis Rey Mission Expressway – SR-76/Coast Highway
6. Coast Highway/Surfrider Way
7. Coast Highway/Civic Center Drive
8. Coast Highway/Pier View Way
9. Coast Highway/Mission Avenue
10. Coast Highway/Seagaze Drive
11. Project Driveway 1/Costa Pacifica Way (*does not exist*)
12. Coast Highway/Project Driveway 2 (*does not exist*)

Roadway Segments

1. Coast Highway, Harbor Drive to Costa Pacifica Way
2. Coast Highway, Costa Pacifica to San Luis Rey Mission Boulevard – SR-76
3. Coast Highway, Neptune Way to Windward Way

Freeway Mainline Segments

1. I-5, SR-76 to Mission Avenue
2. I-5, Mission Avenue to Oceanside Boulevard

A majority of project traffic that would use the I-5 freeway would be destined to/from the south, and would access the freeway via interchanges at SR-76 and Mission Avenue. Also, it should be noted that there are no ramp meters at the on-ramps at the I-5/SR-76 – San Luis Rey Mission Expressway interchange. And, there is no ramp meter at the on-ramp at the I-5 northbound ramps/Harbor Drive – Vandegrift Boulevard intersection. However, while there is a ramp meter at the on-ramp at the I-5 southbound ramps/Harbor Drive intersection, the proposed project would generate less than 20 peak hour trips at the on-ramp. Per SANTEC/ITE guidelines, a ramp metering analysis is required when a project would add 20 or more peak hour trips to an existing metered on-ramp. Therefore, a ramp metering analysis is not required at the on-ramp at the I-5 southbound ramps/Harbor Drive intersection.

Source: Google Maps, 09/2018

FIGURE 1

Project Location and Study Area

Alta Oceanside Project

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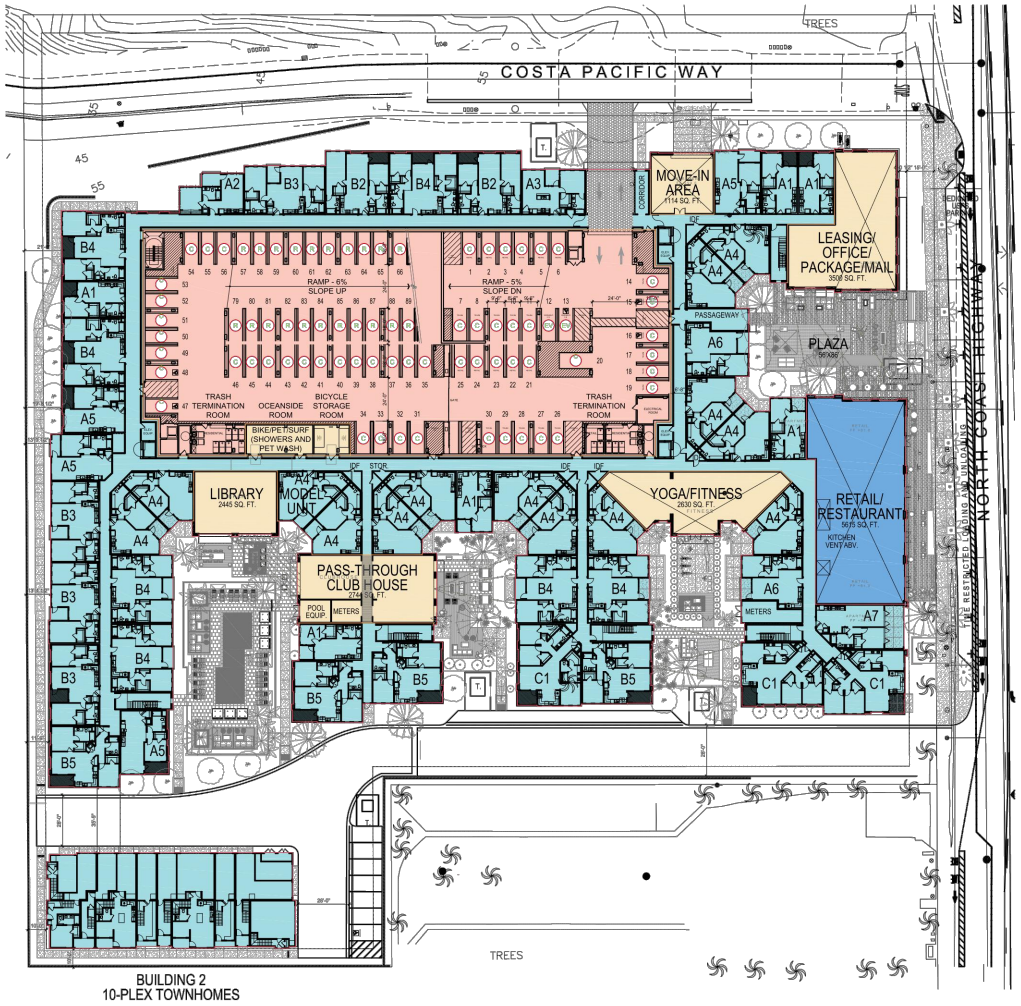


SITE PLAN NOTES

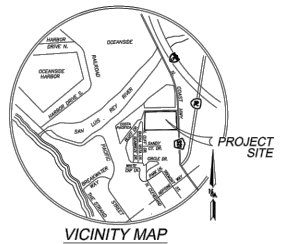
1. THIS ARCHITECTURAL SITE PLAN IS PROVIDED FOR OVERALL SITE REFERENCE. THE LOCATION OF ITEMS INCLUDED IN THIS SET OF PLANS IS FOR AGENCY DEPARTMENT USE ONLY.
2. THIS SITE PLAN IS FOR REFERENCE ONLY, AS AN ARCHITECTURAL PLAN FOR GENERAL LAYOUT AND IDENTIFICATION PURPOSES ONLY
3. FOR LOT LINE DIMENSIONS & HORIZONTAL CONTROL, SEE CIVIL DRAWINGS
4. FOR HARDSCAPE AND ALL SITE IMPROVEMENTS, SEE LANDSCAPE DRAWINGS
5. FOR PARKING GARAGE, SEE SEPARATE SUBMITTAL PACKAGE
6. FOR "FIRE LANE" DESIGN, SEE CIVIL AND LANDSCAPE DRAWINGS
7. FOR PERIMETER FENCING, SEE LANDSCAPE DRAWINGS
8. REFER TO CIVIL AND LANDSCAPE DRAWINGS FOR SPECIFIC SITE REQUIREMENTS
9. ALL PROPERTY LINES, EASEMENTS, AND BUILDINGS, EXISTING AND PROPOSED ARE SHOWN ON THIS PLAN BUT MUST BE VERIFIED WITH THE CIVIL PLANS
10. BUILDING SIGNAGE IS DESIGNED BY OTHERS AND INSTALLED BY THE GENERAL CONTRACTOR.
11. SITE SIGNAGE IS DESIGNED BY OTHERS AND INSTALLED BY THE CONTRACTOR.
12. SITE WALLS ARE DESIGNED BY OTHERS
13. DECORATIVE SITE LIGHTING IS DESIGNED BY OTHERS.
14. SURFACE WATER MUST DRAIN AWAY FROM BUILDING SEE CIVIL AND LANDSCAPE PLANS FOR DRAINAGE DESIGN.

GENERAL NOTES

1. SEE SHEETS L1 - L.11 FOR LANDSCAPE.
2. SEE SHEETS C-1.00 - C-2.00 FOR CIVIL.

LEGEND

- LEASING / AMENITY
- PARKING STRUCTURE
- RESIDENTIAL
- RETAIL



VICINITY MAP
NTS

NORTH
1"=30'-0"
0 15' 30' 60' 90'

SITE PLAN A1.2

DATE: 01-18-19
JOB NO.: 2018-207

ALTA OCEANSIDE
WOOD PARTNERS

OCEANSIDE, CA

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Source: Wood Partners, 2019

DUDEK

FIGURE 2
Project Site Plan
Alta Oceanside Project

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Source: Google Earth 2018

FIGURE 3

Coast Highway Street Segment Mitigation Measures

Alta Oceanside Residential Project

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1.3 Significance Thresholds

The study area intersections and roadway segments are located within the jurisdiction of the City of Oceanside, with the exception of the Harbor Drive – Coast Highway/I-5 southbound ramps intersection, located in Camp Pendleton. Camp Pendleton is a subdivision of San Diego County; therefore, significance criteria for both the City and County are used in this analysis. The significance criteria for the City of Oceanside and San Diego region, and Caltrans (for freeway mainline segments), are described in the section below.

1.3.1 City of Oceanside General Plan Circulation Element

This TIA uses the level of service thresholds provided in the City's Circulation Element of the General Plan. According to *Objective i* of the Circulation Element:

> "Aim for an acceptable Level of Service (LOS) D or better on all Circulation Element roadways on an average daily basis and at intersections during the AM and PM peak periods."

1.3.2 SANTEC/ITE Guidelines

The City of Oceanside uses the San Diego Traffic Engineers' Council (SANTEC)/Institute of Traffic Engineers (ITE) guidelines for the determination of significance of impacts. Significance thresholds are shown in Table 1. If the project's traffic impact causes the value in this table to be exceeded, it is determined to be a significant project impact. Mitigation for all identified significant impacts is required for any project that requires CEQA analysis.

1.3.3 Caltrans

The following intersections and freeway mainline segments in the study area are under the jurisdiction of Caltrans:

Intersections

1. Harbor Drive/Coast Highway – I-5 southbound ramps
3. San Luis Rey Mission Expressway – SR-76/I-5 northbound ramps
4. San Luis Rey Mission Expressway – SR-76/I-5 southbound ramps
5. San Luis Rey Mission Expressway – SR-76/Coast Highway

Freeway Mainline Segments

1. I-5, SR-76 to Mission Avenue
2. I-5, Mission Avenue to Oceanside Boulevard

As stated in the Caltrans (2002) *Guide for the Preparation of Traffic Impact Studies*, the level of service for operating State highway facilities is based upon measures of effectiveness (MOEs). These MOEs describe the measures best suited for analyzing State highway facilities (i.e., freeway segments, signalized intersections, on- or off-ramps, etc.). Caltrans endeavors to maintain a target LOS at the transition between LOS C and LOS D on State highway facilities; however, Caltrans acknowledges that this may not always be feasible and if an existing State highway facility is operating at less than the appropriate target LOS, the existing MOE should be maintained.

For the San Diego region, LOS D or better is considered acceptable and the SANTEC/ITE (2000) Guidelines for Traffic Impact Studies in the San Diego Region, is used for the determination of the significance of impacts for City and Caltrans maintained facilities.

Table 1
Measures of Significant Project Impacts

	Allowable Change due to Project Impact[b]				
	Freeways		*Roadway Segments*		*Intersections*
Level of Service with Project	*V/C*	*Speed (mph)*	*V/C*	*Speed (mph)*	*Delay (sec.)*
E and F	0.01	1	0.02	1	2

Source: City of Oceanside, SANTEC/ITE 2000.

[a] All level of service measurements are based upon HCM procedures for peak-hour conditions. However, V/C ratios for Roadway Segments may be estimated on an ADT/24-hour traffic volume basis (using Table 2 I or a similar LOS chart for each jurisdiction). The acceptable LOS for roadways and intersections is generally "D" ("C" for undeveloped or not densely developed locations per jurisdiction definitions).

[b] If a proposed project's traffic causes the values shown in the table to be exceeded, the impacts are deemed to be significant. These impact changes may be measured from appropriate computer programs or expanded manual spreadsheets. The project applicant shall then identify feasible mitigations (within the Traffic Impact Study [TIS] report) that will maintain the traffic facility at an acceptable LOS. If the LOS with the proposed project becomes unacceptable (see note "a" above), the project applicant shall be responsible for mitigating significant impact changes.

General Notes:

1 V/C = Volume to Capacity Ratio
2 Speed = Arterial speed measured in miles per hour
3 Delay = Average stopped delay per vehicle measured in seconds for intersections.
4 LOS = Level of Service

Mitigation Measures

SANTEC/ITE guidelines mention that not all mitigation measures can be new lanes or new capacity. Therefore, financing towards an Intelligent Transportation Systems (ITS) project, and/or recommending Transportation Demand Management (TDM) measures that include transit facilities, bike facilities, walkability, telecommuting, traffic rideshare programs, flex-time, carpool incentives, parking cash-out, etc. would be acceptable mitigation measures for significant project impacts.

1.4 Analysis Methodology

Level of service (LOS) is commonly used as a qualitative description of roadway segments and intersection operations and is based on the design capacity of the roadway segment or intersection configuration, compared to the volume of traffic using the roadway segment or intersection.

1.4.1 Roadway Segments

Roadway segment analysis is based upon the comparison of daily traffic volumes (ADTs) to the City of Oceanside's *Roadway Classification, Level of Service, and ADT Table.* This table provides level of service thresholds for different street classifications, based on traffic volumes, and travel lanes. Table 2 presents the roadway segment LOS thresholds by facility type in the study area per the City of Oceanside's standards.

Table 2
City of Oceanside Roadway Segment LOS Thresholds

Roadway Classification	No. of Travel Lanes	Cross Section[1]	Levels of Service				
			LOS A	*LOS B*	*LOS C*	*LOS D*	*LOS E*
Expressway	6	102/160 122/200	30,000	42,000	60,000	70,000	80,000
Expressway	4	102/160 122/200	25,000	35,000	50,000	55,000	60,000
Prime Arterial	6	104/124	25,000	35,000	50,000	55,000	60,000
6-Lane Major Arterial	6	104/124	20,000	28,000	40,000	45,000	50,000
5-Lane Major Arterial[2]	5	102/122	17,500	24,500	35,000	40,000	45,000
4-Lane Major Arterial	4	80/100	15,000	21,000	30,000	35,000	40,000
Secondary Collector (4 lanes with 2-way left-turn lane)	4	64/84	10,000	14,000	20,000	25,000	30,000
Secondary Collector (4 lanes without 2-way left-turn lane, with left turn pockets)	4	54/74, 60/80	9,000	13,000	18,000	22,000	25,000
Collector (commercial fronting, 2-lanes with 2-way left-turn lane) [3]	2	50/70	5,000	7,000	10,000	13,000	15,000
Collector (residential streets in the Circulation Element or industrial fronting)	2	40/60, 50/70	4,000	5,500	7,500	9,000	10,000
Local Street (residential streets NOT in the Circulation Element)	2	36/56, 40/60	—	—	2,200	—	—

Source: City of Oceanside 2012.

An arterial peak hour analysis was not performed for the Costa Pacifica Way segment as the Circulation Element does not provide a daily LOS E capacity for the "Local Street" classification. Furthermore, Costa Pacifica Way does not serve as a through street and would operate as an access road serving the existing Seacliff condominiums (96 units) and the proposed project (mixed-use

residential and commercial land uses). Therefore, it was determined that an arterial-level analysis would not be representative of roadway operations for Costa Pacifica Way.

The City of Oceanside Traffic Impact Study Guidelines indicate that an arterial peak hour analysis must be performed for roadway segments that operate at a deficient level of service (LOS E). As defined by the *Highway Capacity Manual* (HCM, 6th Edition), peak hour arterial LOS is based on arterial speed and urban street class:

I. **High Speed Principal Arterial** – Typically four or more lanes, divided, no on-street parking with signals spaced no closer than one every 0.5 miles. Speed limits range from 45-55 mph.

II. **Suburban Principal Arterial** – Typically four or more lanes, divided, no on-street parking with signals spaced no closer than one every mile. Speed limits range from 40-45 mph.

III. **Intermediate Minor Arterial** – Typically two lanes with some on-street parking. Traffic signals spaced no closer than one every five miles. Speed limits range from 30-45 mph.

IV. **Urban Minor Arterial** – Typically two lanes, undivided roadway with significant on-street parking. Traffic signals spaced at about one every six miles. Speed limits range from 25 to 35 mph.

The HCM methodology uses the results of signalized intersection analyses, the arterial classification, and free flow speed to calculate an average travel speed. The average travel speed is used to determine the arterial level of service. SimTraffic 10 software was used to calculate arterial speeds and evaluate peak hour arterial LOS for segments operating at a deficient LOS.

1.4.2 Intersections

The HCM intersection analysis methodology was used to analyze the operation of unsignalized study intersections. The HCM analysis methodology describes the operation of an intersection using a range of LOS from LOS A (free-flow conditions) to LOS F (severely congested conditions), based on the corresponding control delay experienced per vehicle for unsignalized intersections. The Synchro 10 LOS software was used to determine intersection LOS. Synchro is consistent with the HCM, 6th Edition (Transportation Research Board 2016).

Table 3 shows the LOS values by delay ranges for unsignalized and signalized intersections under the HCM methodology.

Table 3
Levels of Service for Intersections using HCM Methodology

Level of Service	Unsignalized Intersections Control Delay (in seconds)	Signalized Intersections Control Delay (in seconds)
A	< 10.0	< 10.0
B	> 10.0 to < 15.0	> 10.0 to < 20.0
C	> 15.0 to < 25.0	> 20.0 to < 35.0
D	> 25.0 to < 35.0	> 35.0 to < 55.0
E	> 35.0 to < 50.0	> 55.0 to < 80.0
F	> 50.0	> 80.0

Source: HCM, 6th Edition

1.4.3 Freeway Mainline Segments

The HCM freeway mainline segment analysis methodology, detailed in Chapter 12, Basic Freeway and Multilane Highway Segments (HCM, 6th Edition), was used to analyze the operations and LOS of the study area freeway mainline segments. The HCM freeway segment analysis methodology describes the operation of a mainline segment using a range of LOS from LOS A (free-flow conditions) to LOS F (severely congested conditions), based on the corresponding density flow rates (passenger-cars per hour per lane – pc/h/ln) experienced per segment, per direction of travel. The Highway Capacity Software (HCS) was used to determine intersection LOS. Synchro is consistent with the HCM, 6th Edition (Transportation Research Board 2010).

Highway Capacity Software (HCS, version 7.8) was used for this analysis. HCS includes modules that implement the HCM's procedures for basic freeway and multilane highway segments, two-lane highways, freeway weaving segments, freeway merge and diverge segments, freeway facilities, and freeway travel time reliability. Table 4 shows the LOS values by density flow rates under the HCM methodology.

Table 4
Levels of Service for Intersections using HCM Methodology

Level of Service	Density (passenger-cars per mile per lane)
A	≤ 11
B	> 11 – 18
C	> 18 – 26
D	> 26 – 35
E	> 35 – 45
F	Demand exceeds capacity OR density > 45

Source: HCM, 6th Edition

The freeway mainline segment analysis is contained in a separate chapter of this TIA (Chapter 10, Freeway Mainline Segments).

2 EXISTING CONDITIONS

This section describes existing conditions within the study area. Characteristics are provided for the existing roadway system, daily roadway segment traffic volumes, peak hour traffic volumes, and traffic operations.

2.1 Roadway System

The existing traffic controls and geometrics at the study area intersections are shown in Figure 4. All the intersections identified in the study area are unsignalized. Characteristics of the existing street system in the study are described below.

Interstate 5 (I-5) is located east of the project site. This freeway is a north-south interstate highway that extends from San Ysidro, California in the south, to Blaine, Washington in the north. The posted speed limit is 65 miles per hour (MPH), and interchanges in the study area are located at Harbor Drive and San Luis Rey Mission Expressway (SR-76).

State Route 76 (SR-76), also known as the San Luis Rey Mission Expressway, is located south and east of the project site. This roadway is identified as an east-west Expressway by the City of Oceanside General Plan – Circulation Element that extends from its junction with I-5 in Oceanside to the west, and ends at its junction with SR-79 near Lake Henshaw to the east. From SR-76, project traffic would access the site via Coast Highway.

Coast Highway is located east of and adjacent to the project site, beginning at Harbor Drive to the north and becoming Carlsbad Boulevard upon crossing the Carlsbad city boundary. The Circulation Element identifies Coast Highway as a Secondary Collector through downtown Oceanside to its intersection with SR-76, where it becomes a Collector Road until its termination at Harbor Drive. Adjacent to the project site, Coast Highway, is a two-lane road with a two-way left-turn lane (TWLTL) serving as the median. North of the project site, Coast Highway becomes a two-lane, undivided roadway; and, south of the project site it becomes a three-lane, divided road (two southbound lanes, one northbound lane, and a TWLTL). In front of the project site, on-street parking is permitted only on the west sides of the street, and the posted speed limit is 25 MPH. There is also an 80-foot long, dedicated right-turn lane on the southbound approach at its intersection of Costa Pacifica Way. Coast Highway would serve as the primary access road to the project site.

Costa Pacifica Way is a private street located north of and adjacent to the project site, beginning at Coast Highway and terminating in a dead-end approximately 1,000 feet to the west. Costa Pacifica Way would serve as the access road for the proposed project's parking structure, and the existing 96 dwelling unit Seacliff condominiums west of the project site.

Harbor Drive is located north of the project site and within the edge of the City and Camp Pendleton. It extends from Oceanside Harbor to its intersection with San Rafael Drive, where it becomes Vandergrift Boulevard, providing access to Camp Pendleton. Harbor Drive is a three-lane road (two westbound lanes and one eastbound lane) within the study area.

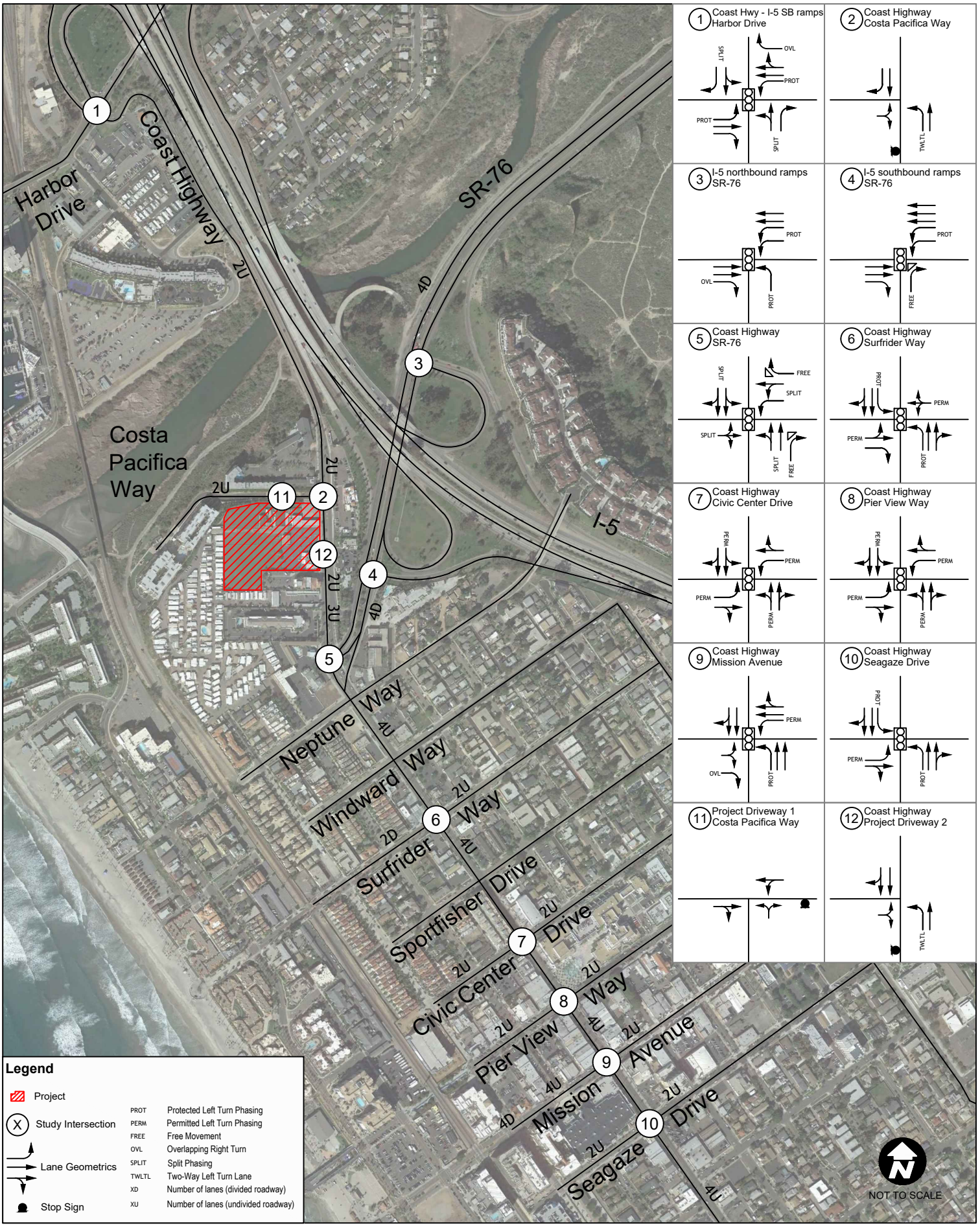
Surfrider Way is located south of the project site in downtown Oceanside and extends from The Strand to Horne Street. Surfrider Way is primarily a two-lane, undivided roadway with the exception of a stretch between Coast Highway and the Metrolink railroad tracks, where it becomes a two-lane, divided roadway. The Circulation Element identifies Surfrider Way as a Local Street.

Civic Center Drive is located south of the project site in downtown Oceanside and extends from Cleveland Street to McNeil Street, where its name becomes Bush Street and continues east until its termination at Canyon Drive. Civic Center Drive is a two-lane, undivided roadway and is identified as a Collector Road by the Circulation Element.

Pier View Way is located south of the project site in downtown Oceanside and extends from Cleveland Street to Horne Street. Pier View Way is a two-lane, undivided roadway and is identified as a Local Street by the Circulation Element.

Mission Avenue is located south of the project site in downtown Oceanside and extends from Pacific Street to Frazee Road. The Circulation Element identifies Mission Avenue as a Secondary Collector in downtown Oceanside until its intersection with Horne Street, where the roadway becomes a Major Arterial (4-lanes) to the east. Mission Avenue is a one-way street (westbound) between Clementine Street and Coast Highway.

Seagaze Drive is located south of the project site in downtown Oceanside and extends from Cleveland Street to Horne Street. Seagaze Drive is a two-lane, undivided roadway and is identified as a Local Street by the Circulation Element. Seagaze is a one-way street (eastbound) between Clementine Street and Coast Highway.



Source: Google Maps, 03/2018

FIGURE 4

Existing Traffic Controls and Geometrics

Alta Oceanside Project

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2.2 Transit System

The North County Transit District (NCTD) provides public transit service (bus and rail) in North San Diego County. NCTD transit services include:

- COASTER commuter rail service
- SPRINTER light rail
- BREEZE bus system
- FLEX rural and on-demand service
- LIFT paratransit

The Oceanside Transit Center, located approximately one mile south of the project site, serves the following routes:

- Riverside Transit Agency (RTA) Route 202
- BREEZE (101, 302, 303, 313, 318)
- FLEX (392, 395)
- COASTER
- SPRINTER
- Amtrak
- Metrolink
- Greyhound

NCTD FLEX bus routes 392 and 395 travel along Coast Highway in the project's vicinity with the closest bus stops at Coast Highway/Surfrider Way, located approximately 0.3 miles south of the project site.

Per NCTD's website for FLEX routes, "…*customers may board at any bus stop without reservations. Reservations are required for FLEX 392 or FLEX 395 for trips originating or terminating in areas in the FLEX zone that are not designated stops. Reservations are accepted on a first come, first served basis. Reservations may be scheduled 7 days in advance 4:30 a.m. to 9:00 p.m., 7 days a week*…"

2.3 Pedestrian and Bicycle Facilities

2.3.1 Pedestrian Facilities

The study area serves many active transportation users due to proximity to the beach and being part of a beach-oriented town with a pedestrian-scaled circulation system. Coast Highway is generally constructed with curbs, gutters, and sidewalks along both sides of the street, with the exception of the stretch of roadway between the bridge crossing of the San Luis Rey River to Harbor Drive, where a sidewalk is located only along the west side of the street.

As with the Coast Highway, all east-west roadways analyzed within the City center (Surfrider Way, Civic Center Drive, Pier View Way, Mission Avenue, and Seagaze Drive) are constructed with curbs, gutters, and sidewalks along both sides of the street. The San Luis Rey Mission Expressway – SR-76 only has pedestrian facilities along an approximately 330-foot stretch of roadway east of the Coast Highway; however, the San Luis Rey River Trail parallels SR-76 to the east. The San Luis Rey River Trail is discussed in more detail below in Bicycle Facilities.

2.3.2 Bicycle Facilities

As identified by Caltrans, the following classes are used to identify bicycle facilities within the City of Oceanside:

Class I Bike Paths *are hard-surface routes within an exclusive right-of-way physically separated from vehicular roadways and intended specifically for non-motorized use.*

Class II Bike Lanes *are marked bicycle lanes within roadways adjacent to the curb lane, delineated by appropriate striping and signage.*

Class III Bike Routes *are marked by a series of signs designating a preferred route between destinations such as residential neighborhoods and shopping areas. These routes share the right-of-way with on-road vehicles.*

The San Luis Rey River Trail is an approximately 9-mile Class I bike path that extends from two blocks east of the beach near the intersection of Sea Cottage Way/Neptune Way, to Andrew Jackson Street. In the vicinity of the project site, access to the San Luis Rey River Trail is available at the southern-most end of Costa Pacifica Way, next to the Seacliff condominiums.

In addition, Seagaze Drive, from the Coast Highway to Clementine Street, is designated as a Class II bike lane. Additionally, The Strand, Pacific Street, and Cleveland Street are designated as Class III bike routes.

2.4 Traffic Volumes

This traffic analysis is based on typical traffic conditions that occur in the project's study area for a majority of the year. Typical traffic conditions in the study area are based on weekday daily, and AM and PM peak hour local commuter traffic volumes generated by residents in the City and North County coastal areas, and servicemen/women and employees of Camp Pendleton. The base traffic counts used in the traffic analysis were collected during a mid-weekday (Thursday) in October 2018 while all adjacent schools were in session. Raw traffic count worksheets are provided in Appendix A. This analysis focuses on the weekday daily, AM (7:00 a.m. to 9:00 a.m.) and the PM (4:00 p.m. to 6:00 p.m.) peak periods. The peak periods represent the highest volume of traffic for the adjacent street system (Coast Highway).

Existing weekday ADT and AM and PM peak hour volumes are summarized on Figure 5. The existing 96 dwelling unit Seacliff condominium development is the only land use currently generating traffic on Costa Pacifica. Based on the existing traffic counts, the Seacliff condominiums are currently generating approximately 280 daily trips, 19 AM peak hour trips (5 inbound and 14 outbound), and 13 PM peak hour trips (7 inbound and 6 outbound). To provide for a conservative analysis, traffic volumes generated by the Seacliff condominiums were adjusted (increased) using SANDAG condominium trip rates. Per these rates, 96 condominium units generate approximately 768 daily trips, 61 AM peak hour trips (12 inbound and 49 outbound), and 77 PM peak hour trips (54 inbound and 23 outbound). For the traffic analysis, these trips replaced the lower trips counted on Costa Pacifica Way.

2.5 Roadway Operations

A roadway segment LOS analysis was prepared for the existing conditions using the roadway segment LOS methodologies as discussed in Section 1.4. Table 5 shows the results of the existing conditions LOS analysis for the study roadway segments. As shown in the table, all of the study area roadway segments are currently operating with satisfactory LOS (LOS D) or better under existing conditions.

Table 5
Existing Daily Roadway Segment Level of Service

Roadway Segment	Classification	LOS "E" ADT	Existing Conditions		
			ADT[1]	*V/C*[2]	*LOS*[3]
Coast Hwy, Harbor to Costa Pacifica	Collector Road (with TWLTL)	15,000	10,000	0.67	D
Coast Hwy, Costa Pacifica to SR-76	Collector Road (with TWLTL)	15,000	11,300	0.75	D
Coast Hwy, Neptune to Windward Way	Secondary Collector	25,000	18,700	0.75	D

Source: Dudek, ADT counts collected in November 2018
Note: LOS is based on City of Oceanside Roadway Segment LOS Thresholds
1 ADT – Average Daily Traffic
2 V/C – volume to capacity ratio
3 LOS – Level of Service

As shown in the table, all of the study area roadway segments are currently operating with satisfactory LOS (LOS D) or better under existing conditions.

2.6 Intersection Operations

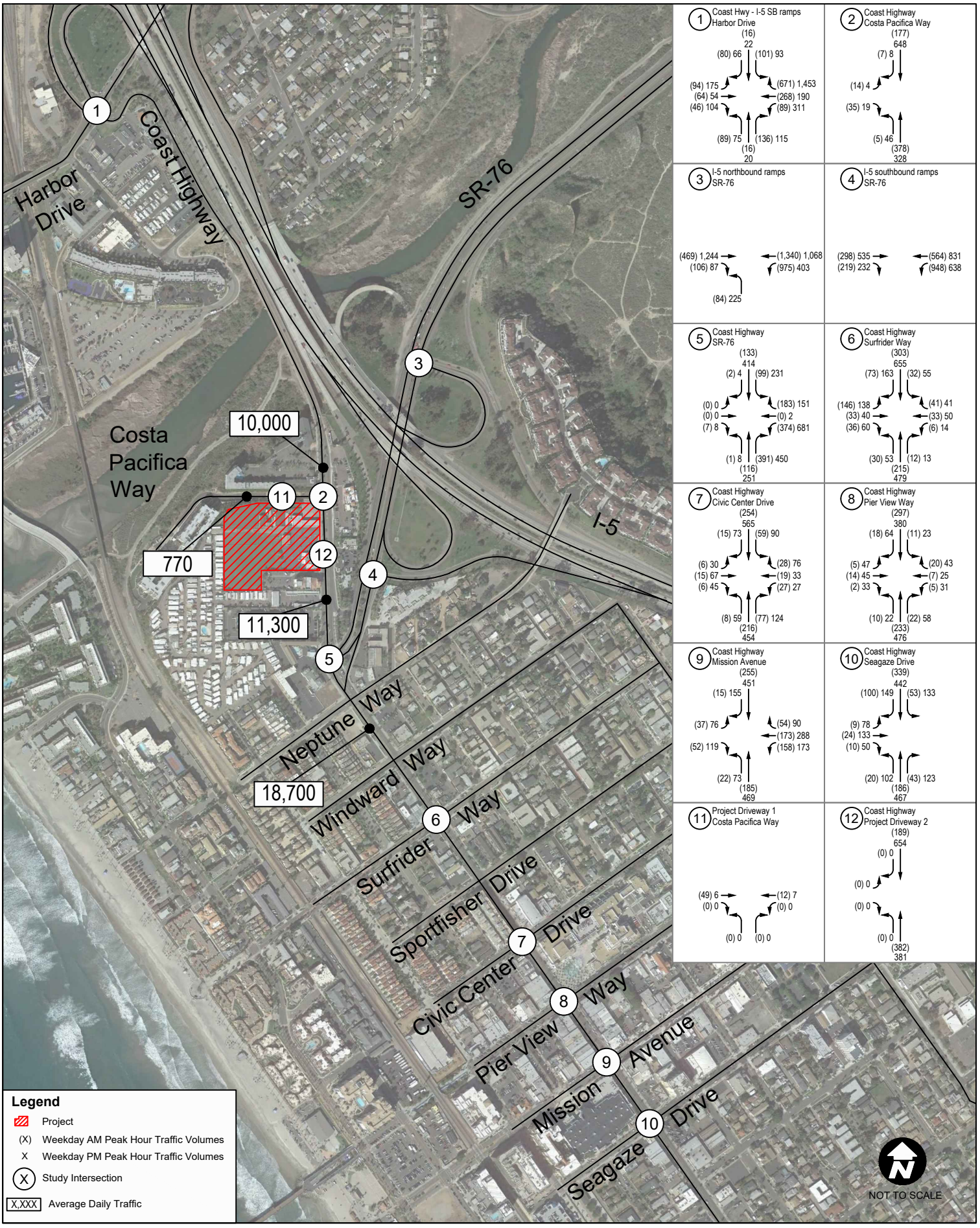
An intersection LOS analysis was prepared for the existing conditions using HCM, 6th Edition methodology via the Synchro LOS software as discussed in Section 1.4. Table 6 shows the results of the existing conditions LOS analysis. LOS worksheets are provided in Appendix B.

Table 6
Existing Weekday Peak Hour Intersection LOS

No.	Intersection	LOS Method	AM Peak		PM Peak	
			Delay[1]	*LOS*[2]	*Delay*[1]	*LOS*[2]
1	Harbor Drive/Coast Hwy – I-5 southbound ramps	HCM	22.1	C	39.3	D
2	Coast Highway/Costa Pacifica Way	HCM	10.2	B	14.0	B
3	San Luis Rey Mission Expwy-SR-76/I-5 NB ramps	HCM	13.3	B	19.1	B
4	San Luis Rey Mission Expwy-SR-76/I-5 NB ramps	HCM	17.7	B	13.0	B
5	San Luis Rey Mission Expwy-SR-76/Coast Hwy	HCM	24.0	C	32.0	C
6	Coast Highway/Surfrider Way	HCM	23.6	C	33.1	C
7	Coast Highway/Civic Center Drive	HCM	5.8	A	7.0	A
8	Coast Highway/Pier View Way	HCM	3.5	A	10.0	B
9	Coast Highway/Mission Avenue	HCM	18.2	B	15.5	B
10	Coast Highway/Seagaze Drive	HCM	9.9	A	17.7	B
11	Costa Pacifica Way/Project Driveway 1	HCM	*Does not exist*			
12	Coast Highway/Project Driveway 2	HCM	*Does not exist*			

Source: Dudek 2018.
HCM = Highway Capacity Manual; WBL = Westbound left; EBL = Eastbound left; SBL = Southbound left.
1 Delay in seconds per vehicle
2 Level of Service (LOS)

As shown in the table, all of the study area intersections are currently operating at LOS D or better under existing conditions, during both peak hours.



Source: Google Maps, 03/2018

FIGURE 5

Existing Traffic Volumes

Alta Oceanside Project

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3 PROJECT TRAFFIC

This section documents the trip generation, distribution, and assignment of project traffic.

3.1 Trip Generation

Trip generation estimates for the proposed project are based on daily and AM and PM peak hour trip generation rates obtained from the SANDAG *(Not So) Brief Guide of Vehicular Traffic Generation Rates for the San Diego Region* (2002). Trip generation estimates for the project are based on the trip generation rates for multi-family residential land uses as well as the sit-down, high turnover restaurant land use. The trip rates for the residential units were classified as multi-family >20 du/acre. The use of trip rates for the sit-down, high turnover restaurant land use is a conservative rate, as it represents the highest retail trip generator that could be developed on the project site. In addition, the square footage of the retail use was conservatively assumed to be 5,800 SF, and pending the final site plan, the retail use would be slightly smaller at 5,422 SF. Other retail uses that could utilize the ground floor retail space would generate less traffic. Trip generation rates and resulting trip generation estimates for the project are summarized in Table 7.

Table 7
Project Trip Generation for Alta Oceanside Mixed-Use Project

SANDAG Trip Generation Rates									
				AM Peak Hour			*PM Peak Hour*		
Land Use	*Size/Unit*		*Daily*	*% In*	*% Out*	*Total*	*% In*	*% Out*	*Total*
Residential Apartments (multi-family >20dua)	per DU		6	20%	80%	8%	70%	30%	9%
Restaurant - Sit-Down, High Turnover	per TSF		160	50%	50%	8%	60%	40%	8%
Trip Generation									
Apartment Units	309	DU	1,854	30	118	148	117	50	167
High-Turnover Restaurant	5.80	TSF	928	37	37	74	44	30	74
Total Trip Generation			**2,782**	**67**	**155**	**222**	**161**	**80**	**241**
Restaurant pass-by trips (10% Daily/AM, 20% PM)[1]			0	0	0	0	-9	-6	-15
Vehicle Trip Reduction (10%)[2]			-278	-7	-16	-23	-16	-8	-24
Total NET Trip Generation			**2,504**	**60**	**139**	**199**	**136**	**66**	**202**

Notes: TSF = 1000 square feet; DU = Dwelling Unit
Trip rates from the SANDAG 2002.

1 SANDAG does not provide daily and AM peak hour pass-by percentages. Daily and AM pass-by percentages were assumed to be one-half of the PM Peak Hour pass by percentages.

2 Consistent with SANDAG's regional "smart growth" policies, vehicle trip reductions were applied for mixed-use developments.

As shown in the Table 7, the project would generate 2,782 daily trips, 222 AM peak hour trips (67 inbound and 155 outbound), and 241 trips during the PM peak hour (161 inbound and 80 outbound).

However, applying the allowed trip reduction methods for pass-by trips (existing traffic that would pass-by the retail/restaurant use on their primary trips) and internal trip capture (trips that would

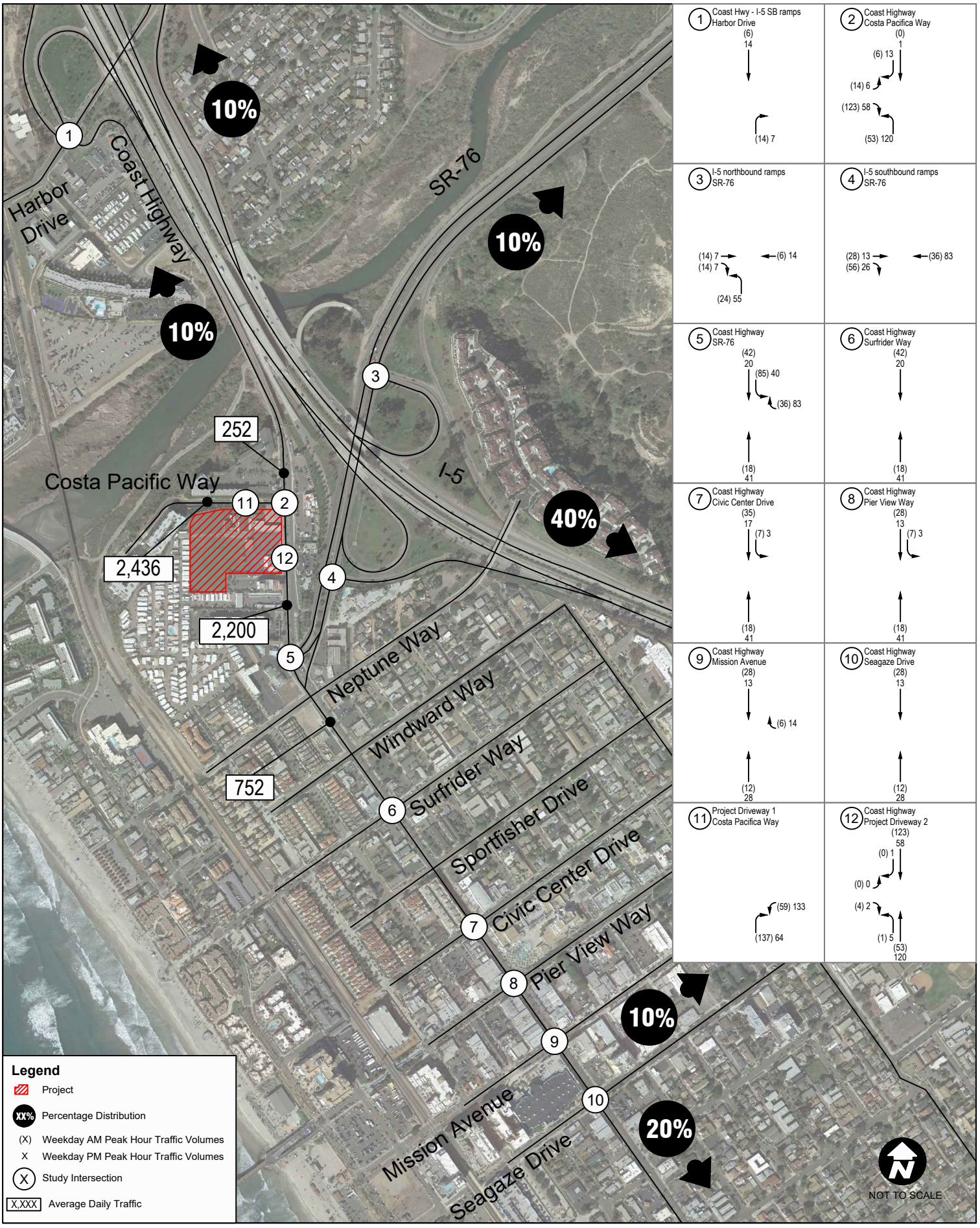
originate from the proposed residential uses), the project would generate approximately 2,504 net daily trips, 199 net AM peak hour net trips (60 inbound and 139 outbound), and 202 net PM peak hour net trips (136 inbound and 66 outbound). These trip reduction methods are consistent with SANDAG's regional "smart growth" policies for mixed-use developments.

3.2 Trip Distribution and Assignment

Project trip distribution percentages were based on logical travel paths to commute corridors in the study area; review of trip distribution percentages in the TIA prepared for the adjacent Marriot Residence Inn (LLG 2018), as well as other traffic studies for proposed developments in the City. City staff approved the project's trip distribution percentages prior to the initiation of the traffic analysis.

Project traffic for the restaurant and apartment uses in the main building will utilize the proposed driveway on Costa Pacifica to enter and exit the site; while, the smaller residential building project traffic will utilize a proposed driveway on Coast Highway. Approximately 60 percent of project traffic was assumed to be destined to/from I-5 during the peak hours.

Traffic travelling to/from I-5 southbound will comprise 40 percent of project traffic and use Coast Highway and then SR-76, while traffic travelling to/from I-5 northbound will be split equally to utilize both Harbor Drive and SR-76. Additionally, 20 percent of traffic travelling southbound to/from Coast Highway would be distributed towards to the south on Coast Highway, while 20 percent of traffic is assumed to travel inland (east), with 10 percent distributed along SR-76 and 10 percent distributed along Mission Avenue. Project trips were assigned to the study area intersections by applying the above-referenced project trip generation estimates to the trip distribution percentages at each study area roadway segment and intersection. The general project trip distribution percentages and resulting project trip assignment are shown in Figure 6.



Source: Google Maps, 03/2018

FIGURE 6

Project Trip Distribution and Assignment

Alta Oceanside Project

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4 EXISTING PLUS PROJECT CONDITIONS

This section describes project-specific impacts under Existing plus Project conditions within the study area for roadway segment and intersection operations, and analyzes significance based on the threshold criteria.

4.1 Traffic Volumes

Project traffic volumes shown in Figure 6 were added to the Existing traffic volumes shown in Figure 5 to derive the Existing plus Project traffic condition. Figure 7 shows the Existing plus Project traffic volumes.

The existing roadway and intersection geometrics in the study area have been assumed to be maintained through the Existing plus Project traffic scenario, as shown in Figure 4. The exceptions are the second eastbound approach lane constructed by the proposed project at Coast Highway/Costa Pacifica Way to provide for a separate eastbound left-turn lane, and separate eastbound right-turn lane at the intersection; and, the left-turn restrictions at the southern In-N-Out driveway due to the street segment mitigation measures.

4.2 Roadway Operations

As shown in Table 8, with the addition of project traffic, the study area roadway segments of Coast Highway, Costa Pacifica Way to SR-76, would operate at LOS E. The segments of Coast Highway, from Harbor Drive to Costa Pacifica Way, and from, Neptune Way to Windward Way, would continue to operate with satisfactory LOS at a LOS D.

Based on the City's daily roadway segment significance criteria (Table 1), a project would have a significant impact if it causes a segment to drop to LOS E or F from LOS D or better; or, if it increases the V/C ratio by 0.02 V/C or more at a segment operating at LOS E or F without the project. The addition of project traffic would cause the LOS of the segment of Coast Highway, Costa Pacifica Way to SR-76, to degrade from LOS D to LOS E. Therefore, the project would result in a significant direct impact to Coast Highway, Costa Pacifica Way to SR-76, under the Existing plus Project condition.

Per the City of Oceanside Traffic Impact Study Detailed Guidelines, if a roadway segment would have an LOS E or F based on daily capacity, an additional arterial peak hour analysis should be performed to determine the segment's travel speed and peak hour LOS operations. The results of the arterial peak hour analysis for the Coast Highway segment between Costa Pacifica Way and SR-76 are shown in Table 9. As shown in that table, the Existing plus Project arterial peak hour analysis indicates that the segment would operate at LOS C or better. Therefore, the roadway segment would not be considered to have a significant impact during the peak hours under Existing plus Project conditions.

As previously discussed, an arterial peak hour analysis was not performed for the Costa Pacifica Way segment as the Circulation Element does not provide a daily LOS E capacity for the "Local Street" classification. Furthermore, Costa Pacifica Way does not serve as a through street and would operate as an access road serving the existing Seacliff condominiums (96 units) and the proposed project (mixed-use residential and commercial land uses). Therefore, it was determined that an arterial-level analysis would not be representative of roadway operations for Costa Pacifica Way. The intersection of Coast Highway/Costa Pacifica Way was found to operate with satisfactory LOS, at LOS B and LOS C, during the AM and PM peak hours, respectively, in the Existing plus Project condition.

Table 8
Existing plus Project Roadway Segment Level of Service

Roadway Segment	Classification	LOS "E" ADT	Existing			Project Traffic	Existing plus Project			Change in V/C	Potentially Significant Impact[4]
			ADT[1]	V/C[2]	LOS[3]		ADT[1]	V/C[2]	LOS[3]		
Coast Hwy, Harbor Dr to Costa Pacifica Way	Collector Road (with TWLTL)	15,000	10,000	0.67	D	250	10,250	0.68	D	0.02	no
Coast Hwy, Costa Pacifica Way to SR-76	Collector Road (with TWLTL)	15,000	11,300	0.75	D	2,254	13,554	**0.90**	**E**	0.15	**yes**
Coast Hwy, Neptune Way to Windward Way	Secondary Collector	25,000	18,700	0.75	D	751	19,451	0.78	D	0.03	no

Source: Dudek 2018, ADT counts collected in November 2018
Note: Capacity and LOS based is on City of Oceanside Roadway Segment LOS Thresholds
1 ADT – Average Daily Traffic
2 V/C – Volumes to Capacity Ratio
3 LOS – Level of Service
4 Per the City's Circulation Element, if a roadway segment would have an LOS E or F daily capacity, an additional arterial peak hour analysis should be performed to determine the segment's peak hour LOS operations.

Table 9
Existing plus Project HCM Peak Hour Arterial Progression Analysis

Roadway Segment	Urban Street Class	Direction	Existing				Existing plus Project				Change in Speed		Significant Impact?	
			AM Peak		PM Peak		AM Peak		PM Peak					
			Speed[1]	LOS[2]	Speed[1]	LOS[2]	Speed[1]	LOS[2]	Speed[1]	LOS[2]	AM	PM	AM	PM
Coast Hwy, Costa Pacifica Way to SR-76	IV	NB	26	A	23	B	24	B	19	C	-2	-4	no	no
		SB	26	A	24	B	26	B	24	B	0	0	no	no

Source: Dudek 2018
1 Speed is expressed in miles per hour (MPH)
2 LOS is Level of Service

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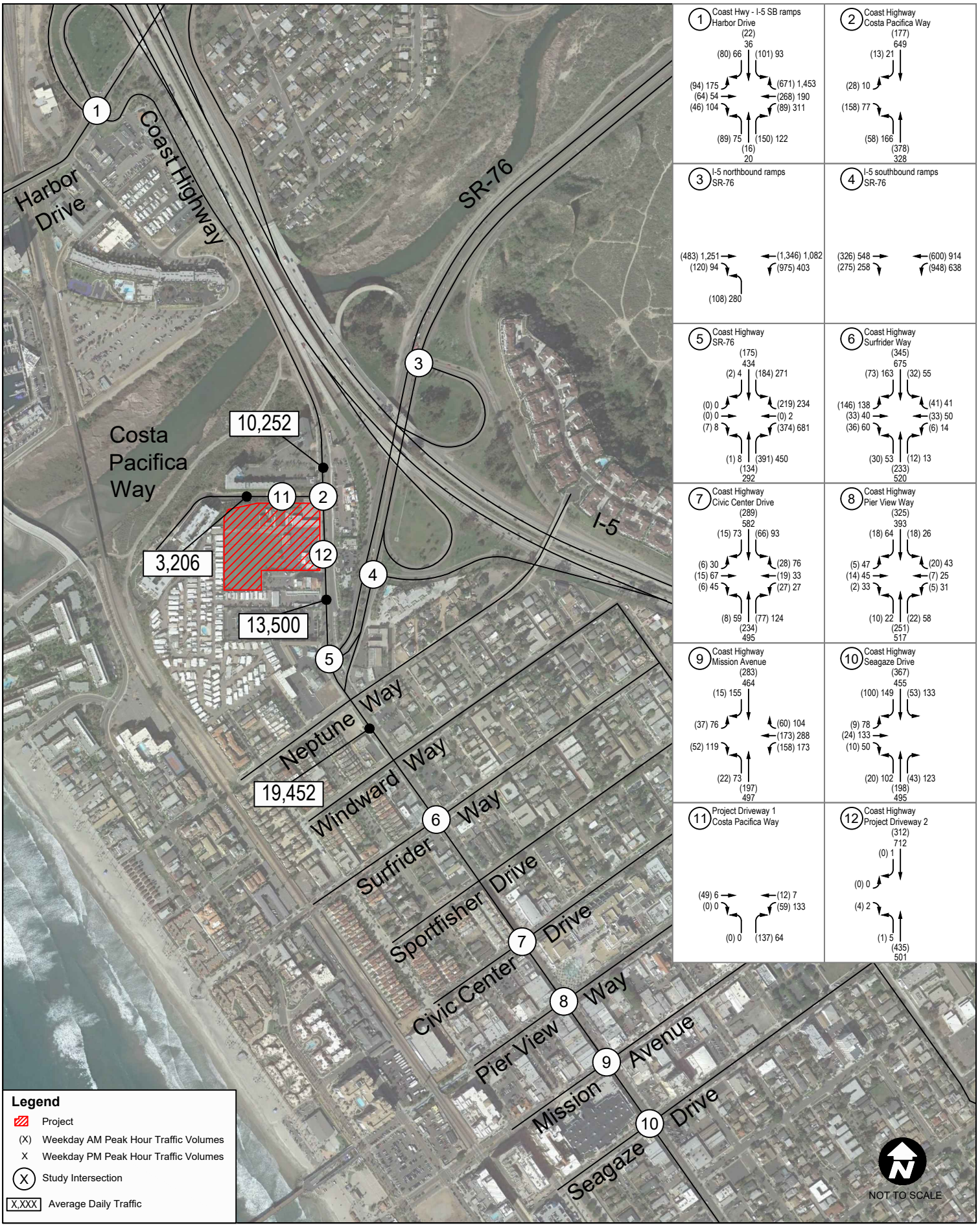

Source: Google Maps, 03/2018

FIGURE 7

Existing plus Project Traffic Volumes

Alta Oceanside Project

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4.3 Intersection Operations

An intersection LOS analysis was prepared for the Existing plus Project condition using the HCM, 6th Edition methodology for unsignalized intersections. Table 10 summarizes the results of the Existing plus Project intersection analysis for the AM and PM peak hours. Detailed LOS calculation worksheets are included in Appendix B.

As shown in Table 10, all of the study area intersections are forecast to continue to operate with satisfactory LOS, at LOS D or better, under Existing plus Project conditions during both peak hours. As shown in the table, the change in delay with addition of the project results in slightly reduced delays at some of the study intersections due to signal timing optimization. These changes are less than 1.0 seconds at intersections that are operating at LOS D or better, and therefore are considered to be insignificant changes. Since all study area intersections are forecast to operate at LOS D or better, the project is not considered to have an impact under Existing plus Project conditions.

Table 10
Existing plus Project Peak Hour Intersection Level of Service

No.	Intersection	LOS Method	Existing				Existing plus Project				Change in Delay		Significant Impact?	
			AM Peak		PM Peak		AM Peak		PM Peak					
			Delay[1]	LOS[2]	Delay[1]	LOS[2]	Delay[1]	LOS[2]	Delay[1]	LOS[2]	AM	PM	AM	PM
1	Harbor Drive-Coast Hwy/I-5 southbound ramps	HCM	22.1	C	39.3	D	22.7	C	39.7	D	0.6	0.4	no	no
2	Coast Highway/Costa Pacifica Way	HCM	10.2	B	14.0	B	12.6	B	19.2	C	2.4	5.2	no	no
3	San Luis Rey Mission Exwy-SR-76/I-5 NB ramps	HCM	13.3	B	19.1	B	14.1	B	19.2	B	0.8	0.1	no	no
4	San Luis Rey Mission Exwy-SR-76/I-5 NB ramps	HCM	17.7	B	13.0	B	17.3	B	12.6	B	-0.4	-0.4	no	no
5	San Luis Rey Mission Exwy-SR-76/Coast Hwy	HCM	24.0	C	32.0	C	28.6	C	34.7	C	4.6	2.7	no	no
6	Coast Highway/Surfrider Way	HCM	23.6	C	33.1	C	22.8	C	33.1	C	-0.8	0	no	no
7	Coast Highway/Civic Center Drive	HCM	5.8	A	7.0	A	5.4	A	6.8	A	-0.4	-0.2	no	no
8	Coast Highway/Pier View Way	HCM	3.5	A	10.0	B	3.3	A	9.9	A	-0.2	-0.1	no	no
9	Coast Highway/Mission Avenue	HCM	18.2	B	15.5	B	17.6	B	15.4	B	-0.6	-0.1	no	no
10	Coast Highway/Seagaze Drive	HCM	9.9	A	17.7	B	9.6	A	17.5	B	-0.3	-0.2	no	no
11	Project Driveway 1/Costa Pacifica Way	HCM	*Does not Exist*				9.2	A	8.6	A	*n/a*	*n/a*	no	no
12	Coast Highway/Project Driveway 2	HCM	*Does not Exist*				9.3	A	10.9	B	*n/a*	*n/a*	no	no

Source: Dudek 2018
Note: HCM = Highway Capacity Manual; Int. = Intersection
[1] Delay in seconds per vehicle
[2] Level of Service (LOS)

5 EXISTING PLUS CUMULATIVE PROJECTS CONDITIONS

This section presents the results of a cumulative condition analysis that was conducted for a short-term horizon year where the proposed project is constructed and fully occupied. The Existing plus Cumulative Project conditions are based on the addition of traffic from approved and pending projects in the study area, to the existing 2018 traffic volumes.

5.1 Cumulative Projects

The cumulative projects are projects that are proposed and in the review process, but not yet fully approved; or, projects that have been approved, but not fully constructed or occupied. A list of cumulative projects with data from their respective TIAs were obtained from the City of Oceanside Planning Department. Based on review of the cumulative projects and their TIAs and/or environmental documents, nine cumulative projects were identified that would potentially add traffic to the roadways and intersections within the study area. Figure 8 shows the locations of these cumulative projects. Table 11 provides a brief description of the cumulative projects.

Table 11
Cumulative Projects Trip Generation Summary

No.	Project	Daily Trips	AM Peak Hour			PM Peak Hour		
			In	*Out*	*Total*	*In*	*Out*	*Total*
1	Marriott Residence Inn[1]	370	13	9	22	18	12	30
2	Oceanside Beach Resort[1]	4,832	166	151	317	239	148	387
3	Block 5[1]	2,741	41	107	148	169	95	264
4	Block 20[1]							
5	Block 18[1]							
6	Block 19[1]							
7	Coast Highway Starbucks[1]	1,441	56	56	112	27	25	52
8	Lot 23[1]	803	15	32	47	46	30	76
9	Belvedere Hotel & Residence[2]	2,110	79	59	138	97	82	179
Total Trip Generation		**12,297**	**370**	**414**	**784**	**596**	**392**	**988**

Notes:
1 Net trip generation per LLG 2018.
2 Net trip generation per Fehr & Peers 2015.

5.1.1 Trip Generation

Project trip generation estimates for the cumulative projects were taken from traffic studies prepared for the recent development projects. Table 11 also provides the summary of trip generation estimates for the cumulative projects. As shown in Table 11, the cumulative projects are forecast to generate approximately 12,297 daily trips, 784 AM peak hour trips, and 988 PM peak hour trips.

5.1.2 Trip Distribution and Assignment

Trip distributions and assignments for the cumulative projects were obtained from traffic studies prepared for recent development projects, and/or assuming logical commute corridors. The trips generated by the cumulative projects were distributed through the study area network, then added to the existing traffic volumes. Worksheets showing the cumulative projects distributions and assignments are provided in Appendix C.

5.2 Traffic Volumes

Existing plus Cumulative Projects traffic volumes were estimated by adding traffic from cumulative projects to the existing traffic volumes. Figure 9 illustrates the Existing plus Cumulative Projects (no project) traffic volumes for the daily and peak hour conditions.

5.3 Roadway Operations

A roadway segment operations analysis was prepared for the Existing plus Cumulative Projects conditions using the roadway capacity thresholds for average daily traffic as discussed in Chapter 1. Table 12 shows the results of the Existing plus Cumulative Projects conditions analysis for the study area roadway segments.

Table 12
Existing plus Cumulative Projects Daily Roadway Segment Level of Service

Roadway Segment	Classification	LOS "E" ADT	Existing plus Cumulative Projects		
			ADT[1]	V/C[2]	LOS[3]
Coast Hwy, Harbor to Costa Pacifica	Collector Road (with TWLTL)	15,000	10,300	0.69	D
Coast Hwy, Costa Pacifica to SR-76	Collector Road (with TWLTL)	15,000	11,800	0.79	D
Coast Hwy, Neptune to Windward Way	Secondary Collector	25,000	20,600	0.82	D

Source: Dudek, ADT counts collected in November 2018
Note: LOS is based on City of Oceanside Roadway Segment LOS Thresholds
1 ADT – Average Daily Traffic
2 V/C – volume to capacity ratio
3 LOS – Level of Service

As shown in Table 12, all roadway segments are forecast to operate at LOS D or better under Existing plus Cumulative Projects conditions.

Source: Google Maps, 03/2018

FIGURE 8

Locations of Cumulative Projects

Alta Oceanside Project

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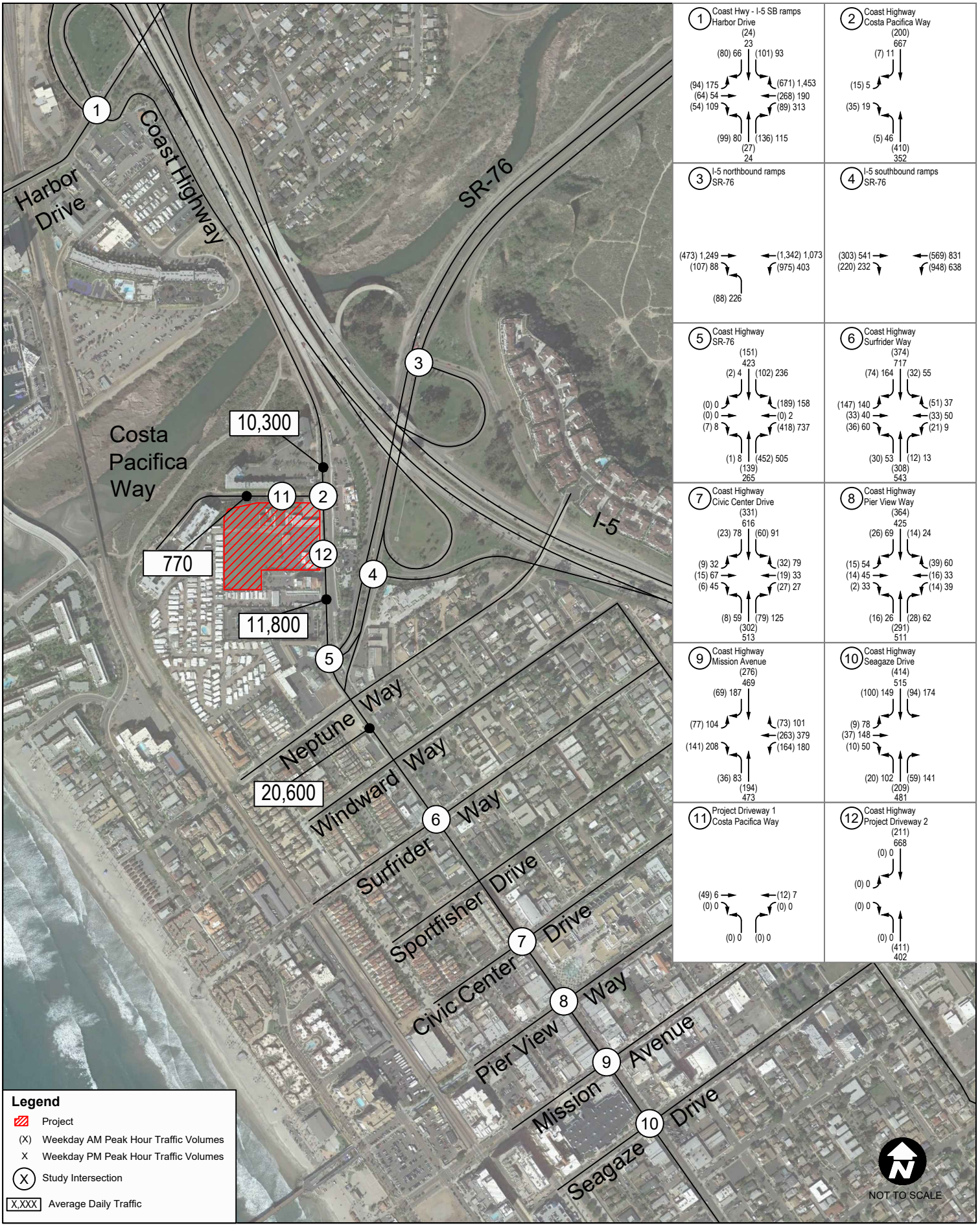

Source: Google Maps, 03/2018

FIGURE 9

Existing plus Cumulative Projects Traffic Volumes

Alta Oceanside Project

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5.4 Intersection Operations

An intersection LOS analysis was prepared for the Existing plus Cumulative Projects conditions using HCM, 6th Edition methodology. As described in Chapter 1, Synchro (version 10) was utilized to calculate delay for unsignalized intersections. Table 13 shows the results of the Existing plus Cumulative Projects conditions LOS analysis, detailed LOS worksheets are included in Appendix B.

Table 13
Existing plus Cumulative Projects Peak Hour Intersection Level of Service

No.	Intersection	LOS Method	AM Peak Hour		PM Peak Hour	
			Delay[1]	*LOS*[2]	*Delay*[1]	*LOS*[2]
1	Harbor Drive-Coast Hwy/I-5 southbound ramps	HCM	22.4	C	39.4	D
2	Coast Highway/Costa Pacifica Way	HCM	10.5	B	14.4	B
3	San Luis Rey Mission Exwy-SR-76/I-5 NB ramps	HCM	13.3	B	19.2	B
4	San Luis Rey Mission Exwy-SR-76/I-5 NB ramps	HCM	17.6	B	13.0	B
5	San Luis Rey Mission Exwy-SR-76/Coast Hwy	HCM	24.3	C	32.3	C
6	Coast Highway/Surfrider Way	HCM	27.8	C	35.0	C
7	Coast Highway/Civic Center Drive	HCM	5.0	A	6.7	A
8	Coast Highway/Pier View Way	HCM	5.1	A	12.9	B
9	Coast Highway/Mission Avenue	HCM	19.1	B	23.5	C
10	Coast Highway/Seagaze Drive	HCM	11.5	B	16.5	B
11	Project Driveway 1/Costa Pacifica Way	HCM	*Does not Exist*			
12	Coast Highway/Project Driveway 2	HCM	*Does not Exist*			

Source: Dudek 2018
Note: HCM = Highway Capacity Manual; Int. = Intersection
1 Delay in seconds per vehicle
2 Level of Service (LOS)

As shown in Table 13, all of the study area intersections are forecast to continue to operate with satisfactory LOS, at LOS D or better, under Existing plus Cumulative Projects conditions during both peak hours.

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6 EXISTING PLUS CUMULATIVE PROJECTS PLUS PROJECT CONDITIONS

This section describes cumulative impacts under Existing plus Cumulative Projects plus Project conditions within the study area for roadway segment and intersection operations, and analyzes significance based on the threshold criteria.

6.1 Traffic Volumes

The project trip assignment, as shown in Figure 6, was added to the Existing plus Cumulative Projects traffic volumes, as shown in Figure 9, to derive the Existing plus Cumulative Projects plus Project traffic volumes. Figure 10 shows the Existing plus Cumulative Projects plus Project traffic volumes.

As with Existing plus Cumulative Projects conditions, the existing roadway and intersection geometrics in the study area have been assumed to be maintained through the Existing plus Cumulative Projects plus Project traffic scenario. The exceptions are the second eastbound approach lane constructed by the proposed project at Coast Highway/Costa Pacifica Way to provide for a separate eastbound left-turn lane, and separate eastbound right-turn lane at the intersection; and, the left-turn restrictions at the southern In-N-Out driveway due to the street segment mitigation measures.

6.2 Roadway Operations

As shown in Table 14, with the addition of project traffic, the study area roadway segment of Coast Highway, Costa Pacifica Way to SR-76, would operate at LOS E. The segments of Coast Highway, from Harbor Drive to Costa Pacifica Way, and from, Neptune Way to Windward Way, would continue to operate with satisfactory LOS at a LOS D.

Based on the City's daily roadway segment significance criteria (Table 1), a project would have a significant impact if it causes a segment to drop to LOS E or F from LOS D or better; or, if it increases the V/C ratio by 0.02 V/C or more at a segment operating at LOS E or F without the project. The addition of project traffic would cause the LOS of the segment of Coast Highway, Costa Pacifica Way to SR-76, to degrade from LOS D to LOS E. Thus, the project would result in a significant direct impact to Coast Highway, Costa Pacifica Way to SR-76, under the Existing plus Cumulative Projects plus Project condition.

Per the City of Oceanside Traffic Impact Study Detailed Guidelines, if a roadway segment would have an LOS E or F based on daily capacity, an additional arterial peak hour analysis should be performed to determine the segment's travel speed and peak hour LOS operations. The results of the arterial peak hour analysis for the Coast Highway segment between Costa Pacifica Way and SR-76 are shown in Table 15. As shown in that table, the Existing plus Cumulative Projects plus Project arterial peak hour analysis indicates that the segment would operate at LOS C or better. Therefore,

the roadway segment would not be considered to have a significant impact during the peak hours under Existing plus Cumulative Projects plus Project conditions.

As previously discussed, an arterial peak hour analysis was not performed for the Costa Pacifica Way segment as the Circulation Element does not provide a daily LOS E capacity for the "Local Street" classification. Furthermore, Costa Pacifica Way does not serve as a through street and would operate as an access road serving the existing Seacliff condominiums (96 units) and the proposed project (mixed-use residential and commercial land uses). Therefore, it was determined that an arterial-level analysis would not be representative of roadway operations for Costa Pacifica Way. The intersection of Coast Highway/Costa Pacifica Way was found to operate with satisfactory LOS, at LOS B and LOS C, during the AM and PM peak hours, respectively, in the Existing plus Cumulative Projects plus Project condition.

6.3 Intersection Operations

An intersection LOS analysis was prepared for the Existing plus Cumulative Projects plus Project condition using HCM, 6th Edition methodology. Table 15 summarizes the results of the Existing plus Cumulative Projects plus Project intersection analysis for the AM and PM peak hours. Detailed LOS calculation worksheets are included in Appendix B.

As shown in Table 16, all of the study area intersections are forecast to continue to operate with satisfactory LOS, at LOS D or better, under Existing plus Cumulative Projects plus Project conditions during both peak hours. As shown in the table, the change in delay with addition of the project results in slightly reduced delays at some of the study intersections due to signal timing optimization. These changes are less than 1.0 seconds at intersections that are operating at LOS D or better, and therefore are considered to be insignificant changes. Since all the intersections operate at LOS D or better, the project is not considered to have an impact under Existing plus Cumulative Projects plus Project conditions.

Table 14
Existing plus Cumulative Projects plus Project Roadway Segment Level of Service

Roadway Segment	Classification	LOS "E" ADT	Existing plus Cumulative Projects			Project Traffic	Existing plus Cumulative Projects plus Project			Change in V/C	Potentially Significant Impact
			ADT[1]	*V/C*[2]	*LOS*[3]		*ADT*[1]	*V/C*[2]	*LOS*[3]		
Coast Hwy, Harbor Dr to Costa Pacifica Way	Collector Road (with TWLTL)	15,000	10,300	0.69	D	2,50	10,550	0.70	D	0.02	no
Coast Hwy, Costa Pacifica Way to SR-76	Collector Road (with TWLTL)	15,000	11,800	0.79	D	2,254	14,054	**0.94**	**E**	0.15	**yes**
Coast Hwy, Neptune Way to Windward Way	Secondary Collector	25,000	20,600	0.82	D	751	21,351	0.85	D	0.03	no

Source: Dudek 2018, ADT counts collected in November 2018
Note: Capacity and LOS based is on City of Oceanside Roadway Segment LOS Thresholds
1 ADT – Average Daily Traffic
2 V/C – Volumes to Capacity Ratio
3 LOS – Level of Service
4 Per the City's Circulation Element, if a roadway segment would have an LOS E or F daily capacity, an additional arterial peak hour analysis should be performed to determine the segment's peak hour LOS operations.

Table 15
Existing plus Cumulative Projects plus Project HCM Peak Hour Arterial Progression Analysis

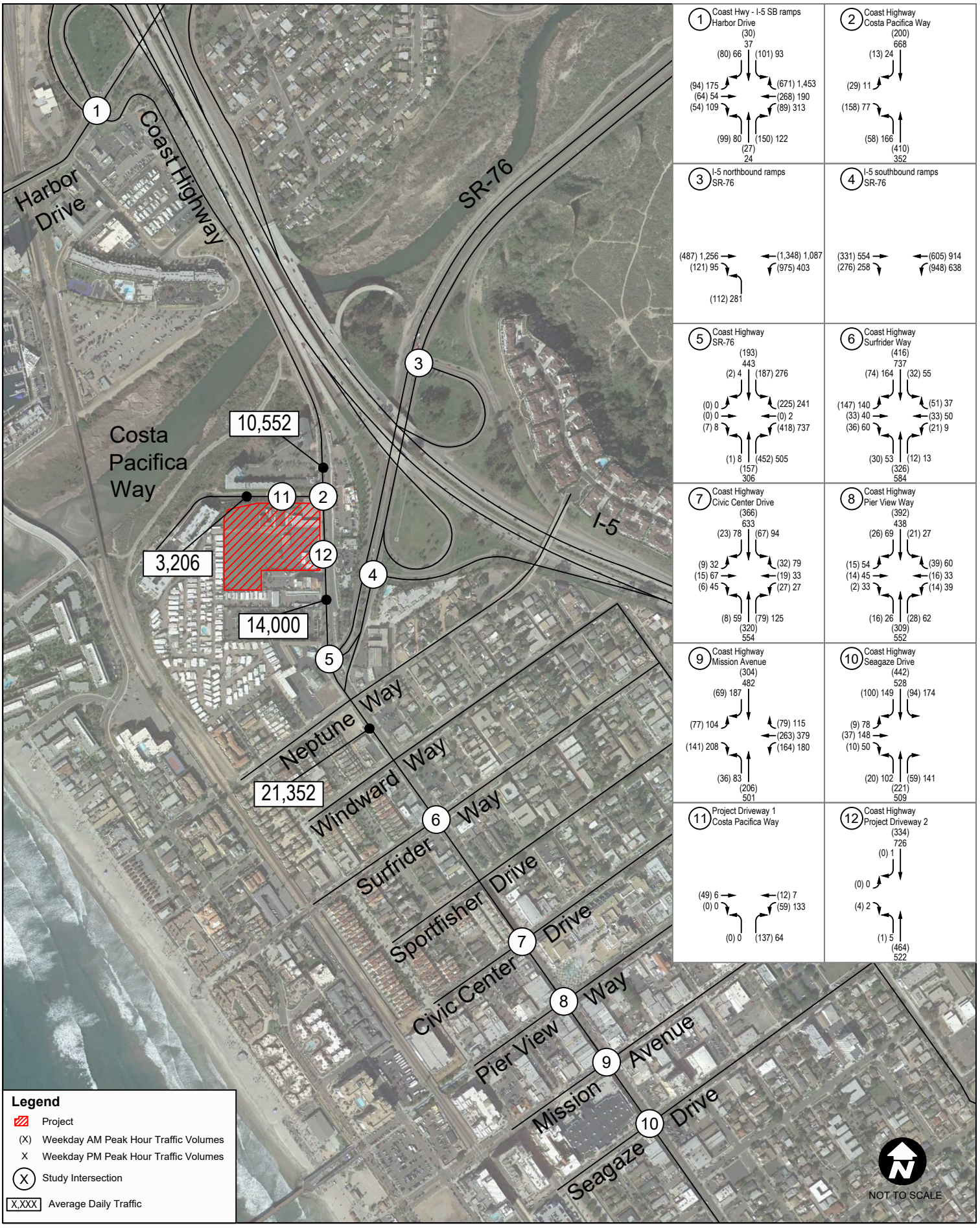
Roadway Segment	Urban Street Class	Direction	Existing plus Cumulative Projects				Existing plus Cumulative Projects plus Project				Change in Speed		Significant Impact?	
			AM Peak		*PM Peak*		*AM Peak*		*PM Peak*					
			Speed[1]	*LOS*[2]	*Speed*[1]	*LOS*[2]	*Speed*[1]	*LOS*[2]	*Speed*[1]	*LOS*[2]	*AM*	*PM*	*AM*	*PM*
Coast Hwy, Costa Pacifica Way to SR-76	IV	NB	26	A	22	B	24	B	18	C	-2	-4	no	no
		SB	26	A	24	B	25	B	24	B	-1	0	no	no

Source: Dudek 2018
1 Speed is expressed in miles per hour (MPH)
2 LOS is Level of Service

Table 16
Existing plus Cumulative Projects plus Project Intersection Level of Service

No.	Intersection	LOS Method	Existing plus Cumulative Projects				Existing plus Cumulative Projects plus Project				Change in Delay		Significant Impact	
			AM Peak		PM Peak		AM Peak		PM Peak					
			Delay[1]	LOS[2]	Delay[1]	LOS[2]	Delay[1]	LOS[2]	Delay[1]	LOS[2]	AM	PM	AM	PM
1	Harbor Drive-Coast Hwy/I-5 southbound ramps	HCM	22.4	C	39.4	D	22.9	C	39.8	D	0.5	0.4	no	no
2	Coast Highway/Costa Pacifica Way	HCM	10.5	B	14.4	B	13.0	B	19.9	C	2.5	5.5	no	no
3	San Luis Rey Mission Exwy-SR-76/I-5 NB ramps	HCM	13.3	B	19.2	B	14.2	B	19.2	B	0.9	0.0	no	no
4	San Luis Rey Mission Exwy-SR-76/I-5 NB ramps	HCM	17.6	B	13.0	B	17.3	B	12.5	B	-0.3	-0.5	no	no
5	San Luis Rey Mission Exwy-SR-76/Coast Hwy	HCM	24.3	C	32.3	C	29.1	C	35.1	D	4.8	2.8	no	no
6	Coast Highway/Surfrider Way	HCM	27.8	C	35.0	C	27.6	C	34.9	C	-0.2	-0.1	no	no
7	Coast Highway/Civic Center Drive	HCM	5.0	A	6.7	A	4.8	A	6.5	A	-0.2	-0.2	no	no
8	Coast Highway/Pier View Way	HCM	5.1	A	12.9	B	5.5	A	12.9	B	0.4	0.0	no	no
9	Coast Highway/Mission Avenue	HCM	19.1	B	23.5	C	20.0	B	23.4	C	0.9	-0.1	no	no
10	Coast Highway/Seagaze Drive	HCM	11.5	B	16.5	B	11.2	B	16.4	B	-0.3	-0.1	no	no
11	Project Driveway 1/Costa Pacifica Way	HCM	*Does not Exist*				9.2	A	8.6	A	*n/a*	*n/a*	no	no
12	Coast Highway/Project Driveway 2	HCM	*Does not Exist*				9.4	A	11.0	B	*n/a*	*n/a*	no	no

Source: Dudek 2018
Note: HCM = Highway Capacity Manual; Int. = Intersection
1 Delay in seconds per vehicle
2 Level of Service (LOS)



Source: Google Maps, 03/2018

FIGURE 10

Existing plus Cumulative Projects plus Project Traffic Volumes

Alta Oceanside Project

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7 BUILDOUT YEAR (2035) CONDITIONS

This section presents the results of a General Plan buildout condition analysis that was conducted for a long-term horizon year where the proposed project is constructed and fully occupied. As directed by the City, Buildout Year conditions are based on traffic volumes forecasts for the Future 2035 Conditions (No Project) from the *Coast Highway Corridor Study* TIA (IBI Group 2017).

7.1 Traffic Volumes

Per the Coast Highway Corridor Study, roadway segment volumes for 2035 conditions were obtained based on the Series 12 volumes provided by the San Diego Association of Governments (SANDAG) forecast model runs using the General Plan and Modified Vision Plan land uses. Figure 11 illustrates the Buildout Year (2035) traffic volumes (no project) for the daily and peak hour conditions.

The existing roadway segment and intersection configurations (shown in Figure 4) have been assumed to be preserved under the Buildout Year conditions. The exceptions are the second eastbound approach lane constructed by the proposed project at Coast Highway/Costa Pacifica Way to provide for a separate eastbound left-turn lane, and separate eastbound right-turn lane at the intersection; and, the left-turn restrictions at the southern In-N-Out driveway due to the street segment mitigation measures (discussed above).

7.2 Roadway Operations

A roadway segment operations analysis was prepared for the Buildout Year conditions using the roadway capacity thresholds for average daily traffic as discussed in Section 1. Table 17 shows the results of the Buildout Year (2035) conditions analysis for the study area roadway segments.

Table 17
Buildout Year (2035) Daily Roadway Segment Level of Service

Roadway Segment	Classification	LOS "E" ADT	Existing plus Cumulative Projects		
			ADT[1]	*V/C*[2]	*LOS*[3]
Coast Hwy, Harbor to Costa Pacifica	Collector Road (with TWLTL)	15,000	17,300	**1.15**	**F**
Coast Hwy, Costa Pacifica to SR-76	Collector Road (with TWLTL)	15,000	15,400	**1.03**	**F**
Coast Hwy, Neptune to Windward Way	Secondary Collector	25,000	19,600	0.78	D

Source: Dudek, ADT counts collected in November 2018; IBI Group 2017.
Note: LOS is based on City of Oceanside Roadway Segment LOS Thresholds
1 ADT – Average Daily Traffic
2 V/C – volume to capacity ratio
3 LOS – Level of Service

As shown in Table 16, the Coast Highway segments of Harbor Drive to Costa Pacifica Way, and Neptune Way to Windward Way, are forecast to operate at LOS F under Buildout Year (2035) conditions (no project).

Per the City of Oceanside Traffic Impact Study Detailed Guidelines, an arterial peak hour analysis should be performed for roadway segments that operate at a deficient level of service (LOS E) to determine their travel speed and peak hour LOS. Results of the arterial peak hour analysis for both impacted segments are shown in Table 18 below.

Table 18
Buildout Year (2035) HCM Peak Hour Arterial Progression Analysis

Roadway Segment	Urban Street Class	Direction	Buildout Year (2035)				Significant Impact?	
			AM Peak		*PM Peak*			
			Speed[1]	*LOS*[2]	*Speed*[1]	*LOS*[2]	*AM*	*PM*
Coast Hwy, Harbor Drive to Costa Pacifica Way	IV	NB	29	A	8	E	no	no
		SB	27	A	25	B	no	no
Coast Hwy, Costa Pacifica Way to SR-76	IV	NB	25	B	8	E	no	no
		SB	25	B	23	B	no	no

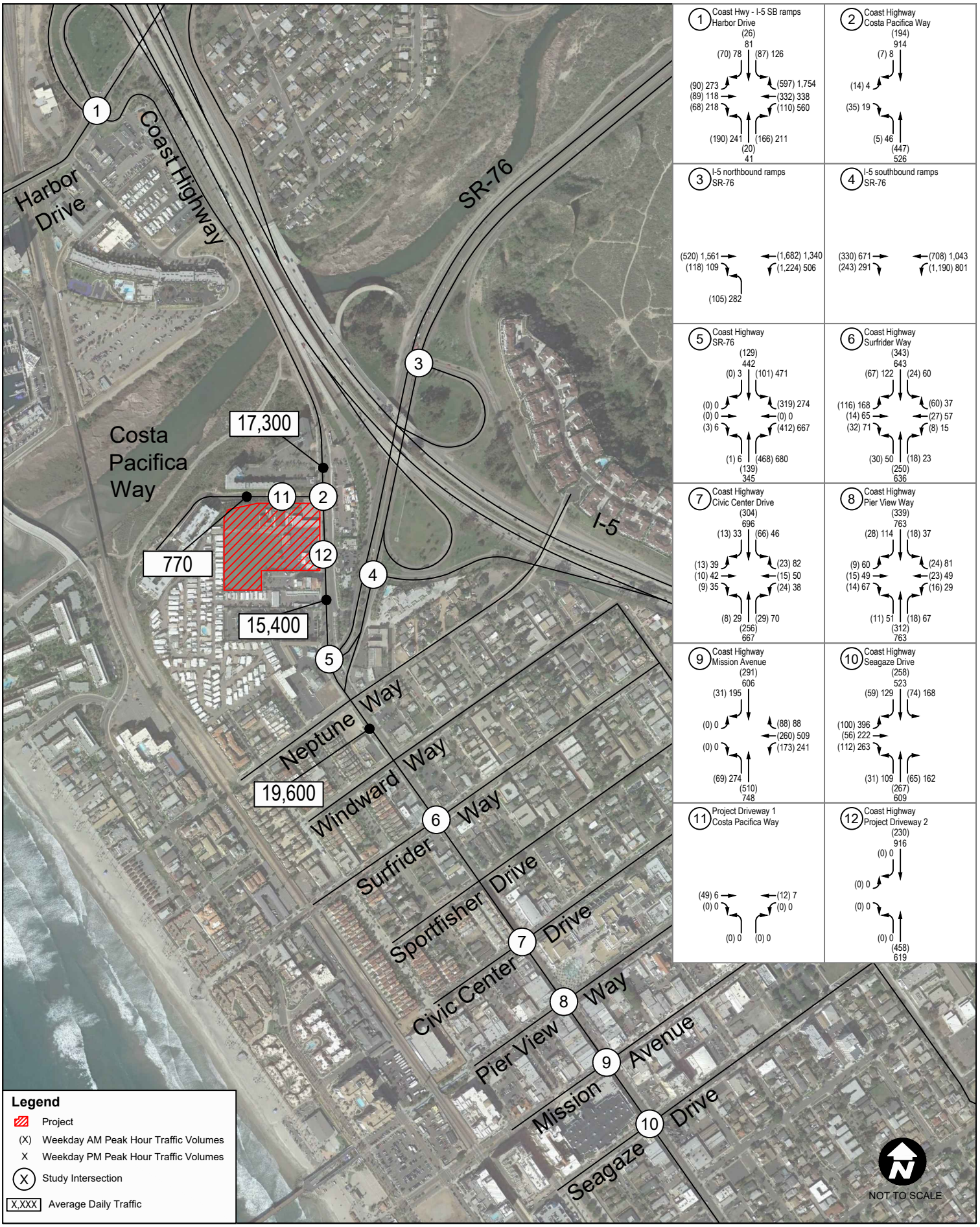
Source: Dudek 2018
1 Speed is expressed in miles per hour (MPH)
2 LOS is Level of Service

As shown in the table, the Buildout Year arterial peak hour analysis indicates that the segments are forecast to operate at a LOS E in the northbound direction, during the PM peak hour.

7.3 Intersection Operations

An intersection LOS analysis was prepared for the Buildout Year (2035) conditions (no project) using the HCM, 6th Edition methodology for unsignalized and signalized intersections. As described in Chapter 1, Synchro (version 10) was utilized to calculate delay for unsignalized intersections. Table 19 shows the results of the Buildout Year conditions LOS analysis, detailed LOS worksheets are included in Appendix B.

As shown in Table 19, most of the study area intersections are forecast to continue to operate at LOS D or better under Buildout Year (2035) during both peak hour conditions with the exception of Harbor Drive/Coast Highway – I-5 southbound ramps, which is forecast to operate at LOS F in PM peak hour.



Source: Google Maps, 03/2018

FIGURE 11

Buildout Year (2035) Traffic Volumes

Alta Oceanside Project

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Table 19
Buildout Year (2035) Peak Hour Intersection Level of Service

No.	Intersection	LOS Method	AM Peak Hour		PM Peak Hour	
			Delay	*LOS*	*Delay*	*LOS*
1	Harbor Drive-Coast Hwy/I-5 southbound ramps	HCM	24.1	C	**115.7**	**F**
2	Coast Highway/Costa Pacifica Way	HCM	10.6	B	19.1	C
3	San Luis Rey Mission Exwy-SR-76/I-5 NB ramps	HCM	13.1	B	49.8	D
4	San Luis Rey Mission Exwy-SR-76/I-5 NB ramps	HCM	18.0	B	13.7	B
5	San Luis Rey Mission Exwy-SR-76/Coast Hwy	HCM	24.0	C	37.9	D
6	Coast Highway/Surfrider Way	HCM	27.9	C	39.8	D
7	Coast Highway/Civic Center Drive	HCM	5.1	A	12.5	B
8	Coast Highway/Pier View Way	HCM	5.1	A	6.4	A
9	Coast Highway/Mission Avenue	HCM	17.4	B	30.3	C
10	Coast Highway/Seagaze Drive	HCM	19.5	B	41.0	D
11	Project Driveway 1/Costa Pacifica Way	HCM	*Does not Exist*			
12	Coast Highway/Project Driveway 2	HCM	*Does not Exist*			

Source: Dudek 2018
Note: HCM = Highway Capacity Manual; Int. = Intersection
[1] Delay in seconds per vehicle
[2] Level of Service (LOS)

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8 BUILDOUT YEAR (2035) PLUS PROJECT CONDITIONS

This section describes cumulative impacts under Buildout Year (2035) plus Project conditions within the study area for roadway segment and intersection operations, and analyzes significance based on the threshold criteria.

8.1 Traffic Volumes

The project trip assignment, as shown in Figure 6, was added to the Buildout Year (2035) traffic volumes, as shown in Figure 11, to derive the Buildout Year (2035) plus Project traffic volumes. Figure 12 shows the Buildout Year (2035) plus Project traffic volumes.

As with Buildout Year (without project) conditions, the existing roadway and intersection geometrics in the study area have been assumed to be maintained through the Buildout Year traffic scenario. The exception is the second eastbound approach lane constructed by the proposed project at Coast Highway/Costa Pacifica Way to provide for a separate eastbound left-turn lane, and separate eastbound right-turn lane at the intersection.

8.2 Roadway Operations

As shown in Table 20, with the addition of project traffic, the study area roadway segments of Coast Highway, Harbor Drive to Costa Pacifica Way; and, Coast Highway, Costa Pacifica Way to SR-76, are forecast to operate at LOS F. The Coast Highway segment from Neptune Way to Windward Way is forecast to continue to operate at a LOS D.

Based on the City's daily roadway segment significance criteria (Table 1), a project would have a significant impact if it causes a segment to drop from LOS E or F from LOS D or better; or, if it increases the V/C ratio by 0.02 V/C or more at a segment operating at LOS E or F without the project. The project would increase the V/C ratio at the Coast Highway, Harbor Drive to Costa Pacifica Way segment, and the Costa Pacifica Way to SR-76 segment, by 0.02 V/C and 0.15 V/C, respectively (Table 20). Since both segments are forecast to operate at LOS F without the project and the project would increase the V/C in exceedance of the significance criteria, the project would result in a significant cumulative impact to these segments under the Buildout Year (2035) plus Project condition.

Per the City of Oceanside Traffic Impact Study Detailed Guidelines, if a roadway segment would have an LOS E or F based on daily capacity, an additional arterial peak hour analysis should be performed to determine the segment's travel speed and peak hour LOS operations. The results of the arterial peak hour analysis for the Coast Highway segment between Costa Pacifica Way and SR-76 are shown in Table 21. As shown in that table, the Buildout Year (2035) plus Project arterial peak hour analysis indicates that the segments would continue to operate at a LOS E with the addition of project traffic,

however there is no decrease in the speed of the segments. Therefore, the roadway segments would not be considered to be significantly impacted during the peak hours under Buildout Year (2035) plus Project conditions.

As previously discussed, an arterial peak hour analysis was not performed for the Costa Pacifica Way segment as the Circulation Element does not provide a daily LOS E capacity for the "Local Street" classification. Furthermore, Costa Pacifica Way does not serve as a through street and would operate as an access road serving the existing Seacliff condominiums (96 units) and the proposed project (mixed-use residential and commercial land uses). Therefore, it was determined that an arterial-level analysis would not be representative of roadway operations for Costa Pacifica Way. The intersection of Coast Highway/Costa Pacifica Way was found to operate with satisfactory LOS, at LOS B and LOS C, during the AM and PM peak hours, respectively, in the Buildout Year (2035) plus Project condition.

8.3 Intersection Operations

An intersection LOS analysis was prepared for the Buildout Year plus Project condition using HCM, 6th Edition methodology. Table 22 summarizes the results of the Buildout Year plus Project intersection analysis for the AM and PM peak hours. Detailed LOS calculation worksheets are included in Appendix B.

As shown in Table 22, most of the study area intersections are forecast to continue to operate at LOS D or better under Buildout Year plus Project conditions during both peak hours with the exception of Harbor Drive/Coast Highway – I-5 southbound ramps. This intersection is forecast to continue to operate at LOS F in the PM peak hour with addition of project traffic. However, the project's increase in delay during the PM peak hour is less than 1.0 seconds (+0.3 seconds), and this would be below the City's significance criteria. Therefore, the project is not considered to have an impact under Buildout Year (2035) plus Project conditions.

As shown in the table, the change in delay with addition of the project results in slightly reduced delays at some of the study intersections due to signal timing optimization. These changes are less than 1.0 seconds at intersections that are operating at LOS D or better, and therefore are considered to be insignificant changes.

Table 20
Buildout Year (2035) plus Project Roadway Segment Level of Service

Roadway Segment	Classification	LOS "E" ADT	Buildout Year (2035)			Project Traffic	Buildout Year (2035) plus Project			Change in V/C	Potentially Significant Impact
			ADT[1]	*V/C*[2]	*LOS*[3]		*ADT*[1]	*V/C*[2]	*LOS*[3]		
Coast Hwy, Harbor Dr to Costa Pacifica Way	Collector Road (with TWLTL)	15,000	17,300	**1.15**	**F**	2,50	17,550	**1.17**	**F**	**0.02**	**yes**
Coast Hwy, Costa Pacifica Way to SR-76	Collector Road (with TWLTL)	15,000	15,400	**1.03**	**F**	2,254	17,654	**1.18**	**F**	**0.15**	**yes**
Coast Hwy, Neptune Way to Windward Way	Secondary Collector	25,000	19,650	0.79	D	751	20,401	0.82	D	0.03	no

Source: Dudek 2018, ADT counts collected in November 2018
Note: Capacity and LOS based is on City of Oceanside Roadway Segment LOS Thresholds
1 ADT – Average Daily Traffic
2 V/C – Volumes to Capacity Ratio
3 LOS – Level of Service
4 Per the City's Circulation Element, if a roadway segment would have an LOS E or F daily capacity, an additional arterial peak hour analysis should be performed to determine the segment's peak hour LOS operations.

Table 21
Buildout Year (2035) plus Project HCM Peak Hour Arterial Progression Analysis

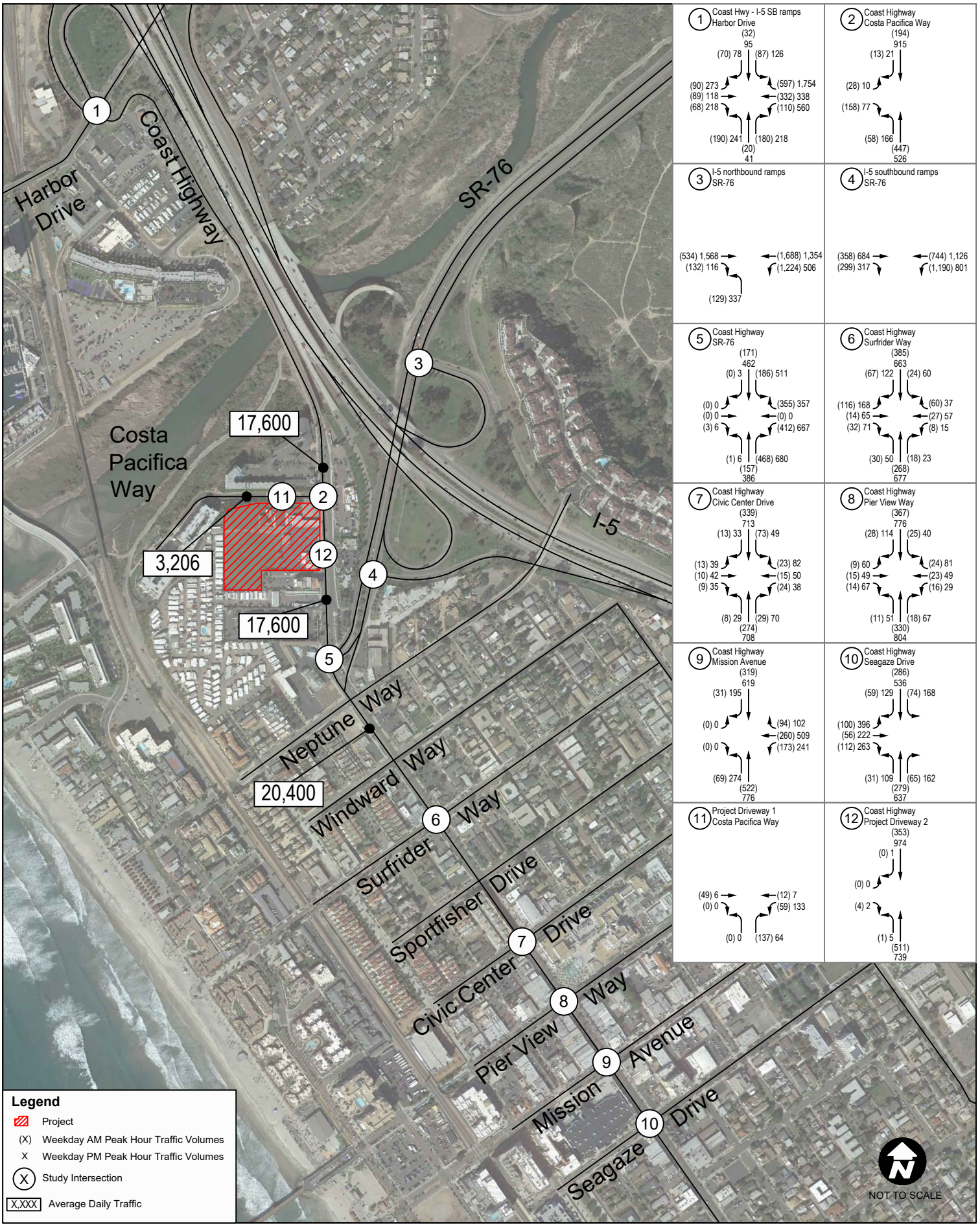
Roadway Segment	Urban Street Class	Direction	Buildout Year (2035)				Buildout Year (2035) plus Project				Change in Speed		Significant Impact?	
			AM Peak		*PM Peak*		*AM Peak*		*PM Peak*					
			Speed[1]	*LOS*[2]	*Speed*[1]	*LOS*[2]	*Speed*[1]	*LOS*[2]	*Speed*[1]	*LOS*[2]	*AM*	*PM*	*AM*	*PM*
Coast Hwy, Harbor Drive to Costa Pacifica Way	IV	NB	29	A	8	E	29	A	8	E	0	0	no	no
		SB	27	A	25	B	26	A	24	B	-1	-1	no	no
Coast Hwy, Costa Pacifica Way to SR-76	IV	NB	25	B	8	E	24	B	8	E	-1	0	no	no
		SB	25	B	23	B	25	B	22	B	0	-1	no	no

Note: HCM = Highway Capacity Manual; Int. = Intersection
1 Delay in seconds per vehicle
2 Level of Service (LOS)

Table 22
Buildout Year (2035) plus Project Peak Hour Intersection Level of Service

No.	Intersection	LOS Method	Buildout Year (2035)				Buildout Year (2035) plus Project				Change in Delay		Significant Impact [3]	
			AM Peak		PM Peak		AM Peak		PM Peak					
			Delay[1]	LOS[2]	Delay[1]	LOS[2]	Delay[1]	LOS[2]	Delay[1]	LOS[2]	AM	PM	AM	PM
1	Harbor Drive-Coast Hwy/I-5 SB ramps	HCM	24.1	C	**115.7**	**F**	24.3	C	**116.0**	**F**	0.2	0.3	no	no
2	Coast Highway/Costa Pacifica Way	HCM	10.6	B[3]	19.1	C[3]	13.7	B[3]	29.1	D[3]	3.1	10.0	no	no
	Northbound approach	HCM	0.1	A	0.9	A	0.9	A	2.9	A	0.8	2.0	no	no
	Southbound approach	HCM	0.0	A	0.0	A	0.0	A	0.0	A	0.0	0.0	no	no
	Eastbound approach	HCM	10.6	B	19.1	C	11.0	B	22.6	C	0.4	3.5	no	no
3	San Luis Rey Mission Expwy/I-5 NB ramps	HCM	13.1	B	49.8	D	13.8	B	50.5	D	0.7	0.7	no	no
4	San Luis Rey Mission Expwy/I-5 NB ramps	HCM	18.0	B	13.7	B	18.0	B	13.3	B	0.0	-0.4	no	no
5	San Luis Rey Mission Expwy/Coast Hwy	HCM	24.0	C	37.9	D	29.0	C	43.7	D	5.0	5.8	no	no
6	Coast Highway/Surfrider Way	HCM	27.9	C	39.8	D	27.6	C	39.4	D	-0.3	-0.4	no	no
7	Coast Highway/Civic Center Drive	HCM	5.1	A	12.5	B	4.7	A	12.3	B	-0.4	-0.2	no	no
8	Coast Highway/Pier View Way	HCM	5.1	A	6.4	A	4.8	A	6.3	A	-0.3	-0.1	no	no
9	Coast Highway/Mission Avenue	HCM	17.4	B	30.3	C	17.1	B	30.8	C	-0.3	0.5	no	no
10	Coast Highway/Seagaze Drive	HCM	19.5	B	41.0	D	19.0	B	41.6	D	-0.5	0.6	no	no
11	Project Driveway 1/Costa Pacifica Way	HCM	*Does not exist*				9.2	A	8.6	A	*n/a*	*n/a*	no	no
12	Coast Highway/Project Driveway 2	HCM	*Does not exist*				9.4	A	12.3	B	*n/a*	*n/a*	no	no

Source: Dudek 2018
Note: HCM = Highway Capacity Manual; Int. = Intersection
1 Delay in seconds per vehicle
2 Level of Service (LOS)
3 For unsignalized intersections that are not all-way stop controlled, the movement with the highest delay is reported.



Source: Google Maps, 03/2018

FIGURE 12

Buildout Year (2035) plus Project Traffic Volumes

Alta Oceanside Project

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9 PROJECT ACCESS AND CIRCULATION

9.1 Project Access

As shown on the site plan (Figure 2), primary site access, including entry to the parking garage, will be from a new driveway on Costa Pacifica Way. Costa Pacifica Way also provides access to the Seacliff residential condominium units to the west, but is not a through street. There is also a driveway on Coast Highway on the southeastern corner of the property to serve a 25 space surface parking lot. This secondary access into the site will be along the southern boundary of the property to serve as a required fire lane and for access to the 25 space surface parking lot. There is also an existing public coastal access along Costa Pacifica Way for both pedestrians and bicycles which will be retained by the project.

Both of the project access driveways were analyzed as two-way stop-controlled intersections. The two private driveways would operate as one-way stop-control on the approaches from the project site. Both private driveways of the proposed project are intended to serve project traffic only (i.e., no through traffic). As shown in Tables 9, 15, and 21, both project access driveways are forecast to operate with satisfactory LOS, at LOS B or better, during both peak hours under all study scenarios. The detailed LOS worksheets for project access intersections are included in Appendix B.

9.1.1 Traffic Signal Warrant

The Existing, Existing plus Cumulative Projects, and Buildout Year (2035) plus Project scenarios found that the intersection of Coast Highway/Costa Pacifica Way would continue to operate with satisfactory LOS (LOS B and C in the AM and PM peak hours, respectively, for all scenarios) with the addition of project traffic in its current unsignalized configuration, with stop-control on the Costa Pacifica Way approach.

A peak traffic signal warrant per the California Manual of Uniform Traffic Control Devices (CA MUTCD) was reviewed to determine whether the installation of a traffic signal may be warranted at the Coast Highway/Costa Pacifica Way intersection. The highest minor street (Costa Pacifica Way) approach volume occurs in the AM peak hour with approximately 190 vehicles, with 712 vehicles on the major street (both approaches on Coast Highway). Based on the minimum volume requirements of the peak hour signal warrant, the buildout peak hour traffic volumes at the intersection would not warrant traffic signal installation. Per the peak hour warrant, approximately 200 vehicles on the minor street approach, and 1,000 vehicles per hour on both major street approaches, would be the minimum volume requirements for signalization.

9.1.2 Coast Highway Corridor Plan

Consistent with the Coast Highway Corridor Plan, the proposed project will coordinate with the City Public Works Department on the planned crosswalk across Coast Highway, at Costa Pacifica Way, adjacent to the project site (i.e., south side of intersection), along with a proposed bulb-out on the southwest corner of the intersection as a traffic-calming feature. These improvements have been recommended in the corridor plan which was recently approved by the City.

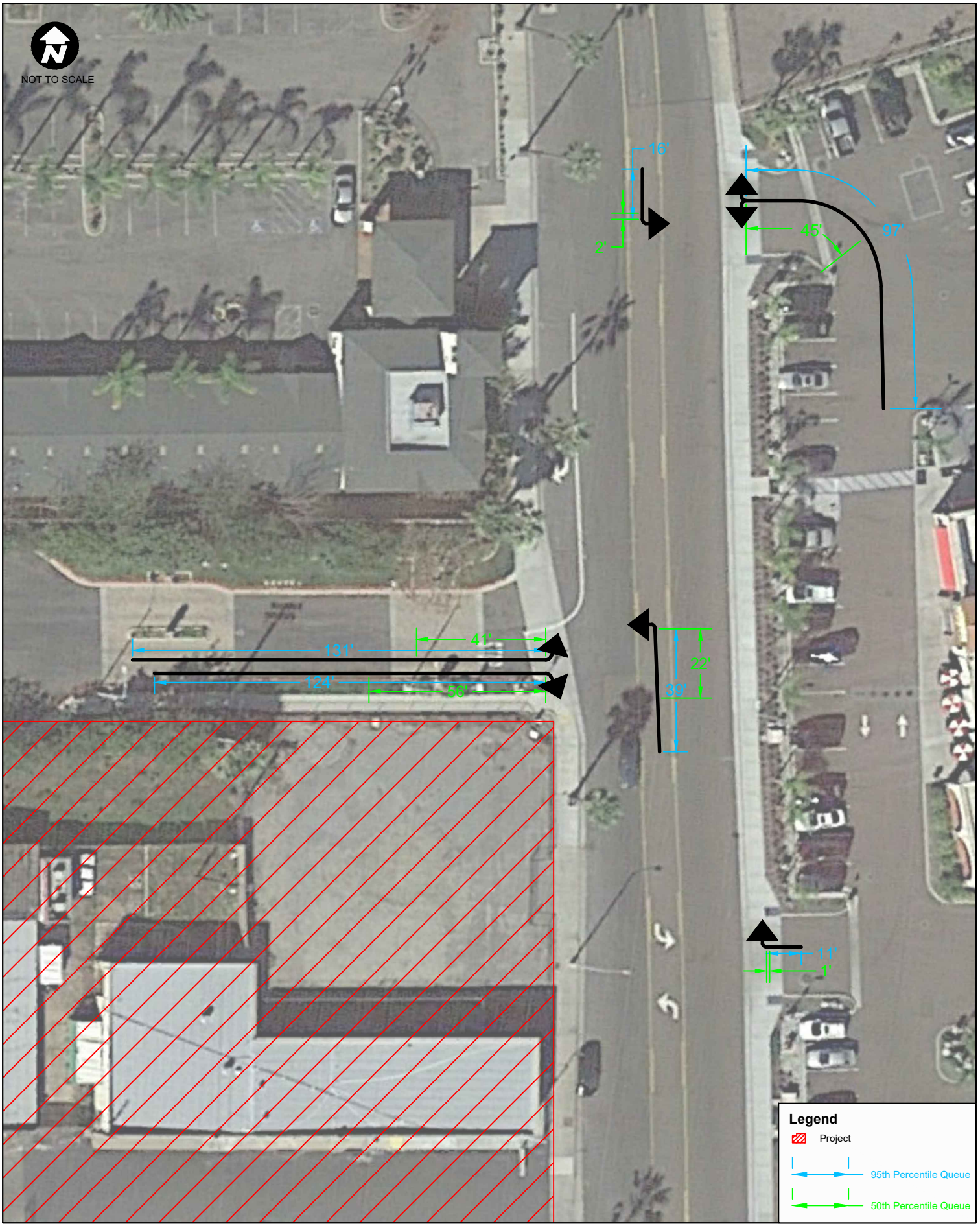
The City of Oceanside has recently approved the Coast Highway Corridor Study, which is proposing Complete Street improvements to accommodate all modes of travel within the existing public right-of-way on Coast Highway, throughout the City. In the project vicinity, Coast Highway is shown to remain as a two-lane roadway with Class II striped bicycle lanes on both sides of the street. On-street parking would continue to be provided on the west side of the street. The roadway and the bridge would be restriped to provide a Class II bicycle lane in both directions. A mid-block crosswalk is proposed across Coast Highway at Costa Pacifica Way. A two-lane roundabout is proposed at the intersection of Coast Highway and State Route 76.

9.2 Queuing Analysis

A queuing analysis was prepared for the proposed driveways on Costa Pacifica Way and Coast Highway, as well as the two driveways for the In-N-Out fast-food restaurant located on the east side of Coast Highway, across from the project site.

As shown in Table 23, the highest calculated 95th percentile (design) queue for the Buildout Year (2035) with Project condition was in the PM peak hour at the intersection of Coast Highway/Costa Pacifica Way at 131 feet (or approximately 7 cars, assuming 20 feet per car) for the eastbound dedicated left-turn lane. As shown in Table 23, the forecast queues at all driveways and intersections do not exceed the storage length, indicating that sufficient space exists for on-site queuing, and that queues would not spill out onto Coast Highway.

Figure 13 illustrates both, the PM peak hour 95th percentile and average queues, along Coast Highway in the vicinity of the In-N-Out restaurant across from the project site. In-N-Out driveways analyzed were measured with a storage length from the end of the drive-thru exit on the northern portion of the site. The highest calculated 95th percentile queue for the Buildout with Project condition were both in the PM peak hour at the northern In-N-Out Driveway at 97 feet (or approximately 5 cars, assuming 20 feet per car) for the westbound turn lanes, and the southern driveway at 11 feet (approximately 1 car). This assumes that the project's street segment mitigation measures are in place, which includes left turn restrictions at the southern In-N-Out driveway due to the raised median on Coast Highway.



Source: Google Maps, 03/2018

FIGURE 13

Buildout Year (2035) plus Project Queues on Coast Highway

Alta Oceanside Project

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Table 23
Buildout Year (2035) plus Project Queuing Summary

Intersection	Movement	Vehicle Storage Length[2]	Buildout 2035 plus Project[1]		Exceeds Vehicle Storage Length?	
			AM	*PM*	*AM*	*PM*
Coast Highway/Costa Pacifica Way	EBL[3]	n/a	39	131	no	no
	EBR	115	61	124	no	no
	NBL[4]	100	28	39	no	no
Project Driveway 1/Costa Pacifica Way	WBLT[3]	170	16	0	no	no
	EBTR	n/a	0	32	no	no
	NBLR[5]	200	63	166	no	no
Coast Highway/Driveway 2	EBLR	400	20	13	no	no
	NBL[6]	110	0	11	no	no
Coast Highway/In-N-Out Driveway 1 (northern driveway)	WBLR[7]	125	12	97	no	no
	SBL[8]	80	0	16	no	no
Coast Highway/In-N-Out Driveway 2 (southern driveway)	WBR[7]	220	0	11	no	no

Notes:

1 Based on 95th percentile (design) queue length in SimTraffic 10.
2 Measured in feet.
3 Vehicles may queue the entire length of the (private) street; there is over 500 feet of street before it curves into the Seacliff development
4 Length measured in Coast Highway new dedicated left-turn lane per the project's street segment mitigation measures
5 Length measured from Costa Pacifica Way into parking garage
6 Length measured from driveway to next adjacent driveway to the south
7 Length measured from Coast Highway into restaurant's drive aisle
8 Length measured within the TWLTL from the driveway
XX Queue exceeds storage length.

In the PM peak hour, the new (raised) dedicated northbound left-turn lane at Coast Highway/Costa Pacifica Way would also accommodate the 95th percentile queue of 39 feet (approximately 2 cars) for the northbound left turns on to Costa Pacifica Way. Per the street segment mitigation measures, this existing section of TWLTL on Coast Highway would be converted to a dedicated northbound left-turn lane since there is a potential for conflicts between northbound left turning vehicles to Costa Pacifica Way and (existing) southbound left turning vehicles to In-N-Out within the existing TWLTL. While these movements are currently permitted in the TWLTL, the City-approved street segment mitigation measures would restrict southbound left turns into, and westbound left turn out of, the southern In-N-Out driveway due to the increase in future volumes on Coast Highway. Existing southbound left turns at the In-N-Out southern driveway could be re-distributed to the existing In-N-Out northern driveway, north of Costa Pacifica Way, where there are no potential vehicular conflicts in the TWLTL. With the southbound left turning volumes at the southern driveway redistributed to the

northern driveway, the increase in queue at the northern driveway would be a total of 16 feet, which could still be accommodated within the available queuing area of 80 feet in the TWLTL.

Therefore, all existing and proposed storage lanes at the proposed project's driveways, the turn pockets at Coast Highway/Costa Pacifica Way, and the In-N-Out driveways are forecast to adequately serve queued vehicles with no spillover on to Coast Highway.

10 CALTRANS FREEWAY MAINLINE SEGMENTS

A mainline freeway segment analysis was prepared for weekday AM and PM peak hour conditions along two segments adjacent to the project site. The analyses were conducted using HCS 7.8 software which utilizes the HCM 6th Edition methodology described in Section 1 of this TIA. This section identifies the following assumptions and project inputs, and presents the results of the mainline analysis. Appendix E contains the freeway mainline LOS worksheets.

The Caltrans Performance Measurement System (PeMS) Data Source, Version 19.0.0, was used to gather existing demand volumes, truck percentages, speed, and to verify the number of mainline lanes along each freeway segment.

Data was gathered at the two locations during the AM and PM peak hours based on aggregate data collected over one year, from October 2018 to October 2019, using the time of day series provided by the PeMS database. Monday, Friday, weekend, and holiday days were eliminated from the search criteria. The highest mean between the AM peak hours (7:00 a.m. - 9:00 a.m.) and PM peak hours (4:00 p.m. - 6:00 p.m.) for existing volumes and truck proportions was used in this analysis. Additionally, the maximum speed during each peak hour was also recorded from the PeMS database and used as the measured free-flow speed in the HCS analysis. The terrain type is assumed to be "level" along these segments, and the driver population was adjusted to "mostly familiar" for this area. No other adjustment factors were applied to the mainline analysis.

10.1 Existing plus Project Condition

Table 26 presents the Existing and Existing plus Project freeway mainline conditions along the I-5 corridor adjacent to the project site. As shown in the table, the two study area mainline segments would continue to operate at LOS C in Existing plus Project condition. Therefore, since both study area freeway mainline segments are forecast to continue to operate at LOS D or better with the addition of project traffic, there would be no significant freeway mainline segment impacts in the Existing plus Project condition.

10.2 Existing plus Cumulative Projects plus Project Condition

Table 27 presents Existing plus Cumulative Projects and Existing plus Cumulative Projects plus Project freeway mainline conditions along the I-5 corridor adjacent to the project site. As shown in the table, the two study area mainline segments would continue to operate at LOS D or better in the Existing plus Cumulative Projects plus Project condition. Therefore, the addition of project traffic to the Existing plus Cumulative Projects volumes on the study area mainline segments would result in no significant impacts.

10.3 Buildout Year plus Project Conditions

Table 28 presents Buildout Year (2035) Baseline and Buildout Year (2035) plus Project mainline segment operations along the I-5 corridor adjacent to the project site. As shown in the table, the two mainline segments would continue to operate at LOS D or better in the Buildout Year plus Project conditions. Therefore, the addition of project traffic to the Buildout Year (2035) condition would result in no significant freeway mainline impacts to the study area segments.

Table 24
Existing plus Project Freeway Mainline Operations

Freeway Segment	Dir	# of Lanes[1]	Peak Hour	Existing					Existing plus Project					Δ V/C	Δ Speed	Significant Impact?
				Volume	*V/C*	*Density*[2]	*LOS*	*Speed*[3]	*Volume*	*V/C*	*Density*[2]	*LOS*	*Speed*[3]			
Interstate 5																
SR-76 to Mission Avenue	NB	4M	AM	5,009	0.60	20.5	C	67.8	5,033	0.60	20.6	C	67.8	0.00	0.0	No
			PM	4,516	0.54	18.8	C	66.1	4,571	0.55	19.0	C	66.1	0.01	0.0	No
	SB	4M	AM	4,248	0.53	18.6	C	64.9	4,304	0.54	18.8	C	64.9	0.01	0.0	No
			PM	5,514	0.67	23.6	C	65.6	5,540	0.68	23.7	C	65.5	0.01	-0.1	No
Mission Avenue to Oceanside Boulevard	NB	4M	AM	5,422	0.64	21.8	C	67.2	5,446	0.64	21.8	C	67.1	0.00	-0.1	No
			PM	5,516	0.65	22.6	C	65.9	5,571	0.66	22.9	C	65.8	0.01	-0.1	No
	SB	4M	AM	5,344	0.63	21.5	C	67.0	5,400	0.63	21.8	C	66.9	0.00	-0.1	No
			PM	6,104	0.72	25.6	C	64.2	6,130	0.72	25.7	C	64.1	0.00	-0.1	No

Notes: M = Mainline Lanes; V/C = Volume-to-Capacity Ratio; LOS = Level of Service

1 Lane geometry taken from PeMS lane configurations at corresponding postmile.

2 Density reported as pc/mi/ln (passenger cars per mile per lane).

3 Speed reported as average speed, mi/h (miles per hour)

Table 25
Existing plus Cumulative Projects plus Project Freeway Mainline Operations

Freeway Segment	Dir	# of Lanes[1]	Peak Hour	Existing plus Cumulative Projects					Existing plus Cumulative Projects plus Project					Δ V/C	Δ Speed	Significant Impact?
				Volume	*V/C*	*Density*[2]	*LOS*	*Speed*[3]	*Volume*	*V/C*	*Density*[2]	*LOS*	*Speed*[3]			
Interstate 5																
SR-76 to Mission Avenue	NB	4M	AM	5,076	0.61	20.8	C	67.7	5,100	0.61	20.9	C	67.7	0.00	0.0	No
			PM	4,574	0.55	19.0	C	66.1	4,629	0.56	19.3	C	66.1	0.01	0.0	No
	SB	4M	AM	4,314	0.54	18.9	C	64.9	4,370	0.55	19.1	C	64.9	0.01	0.0	No
			PM	5,587	0.68	23.9	C	65.4	5,613	0.69	24.1	C	65.3	0.01	-0.1	No
Mission Avenue to Oceanside Boulevard	NB	4M	AM	5,494	0.64	22.2	C	67.0	5,518	0.65	22.3	C	67.0	0.01	0.0	No
			PM	5,586	0.66	22.9	C	65.8	5,641	0.66	23.2	C	65.7	0.00	-0.1	No
	SB	4M	AM	5,424	0.64	21.9	C	66.9	5,480	0.64	22.1	C	66.8	0.00	-0.1	No
			PM	6,185	0.73	26.1	D	63.9	6,211	0.73	26.2	D	63.8	0.00	-0.1	No

Notes: M = Mainline Lanes; V/C = Volume-to-Capacity Ratio; LOS = Level of Service

1 Lane geometry taken from PeMS lane configurations at corresponding postmile.

2 Density reported as pc/mi/ln (passenger cars per mile per lane).

3 Speed reported as average speed, mi/h (miles per hour)

Table 26
Buildout Year plus Project Freeway Mainline Operations

Freeway Segment	Dir	# of Lanes[1]	Peak Hour	Buildout Year (2035) Baseline					Buildout Year plus Project					Δ V/C	Δ Speed	Significant Impact?
				Volume	*V/C*	*Density*[2]	*LOS*	*Speed*[3]	*Volume*	*V/C*	*Density*[2]	*LOS*	*Speed*[3]			
Interstate 5																
SR-76 to Mission Avenue	NB	4M	AM	5,545	0.67	23.0	C	66.7	5,569	0.67	23.1	C	66.7	0.00	0.0	No
			PM	5,000	0.60	20.9	C	65.9	5,055	0.61	21.1	C	65.9	0.01	0.0	No
	SB	4M	AM	4,703	0.59	20.6	C	64.9	4,759	0.59	20.8	C	64.9	0.00	0.0	No
			PM	6,104	0.75	26.9	C	63.7	6,130	0.75	27.0	D	63.6	0.00	-0.1	No
Mission Avenue to Oceanside Boulevard	NB	4M	AM	6,002	0.70	24.8	C	65.6	6,026	0.71	24.8	C	65.6	0.01	0.0	No
			PM	6,106	0.72	25.6	C	64.4	6,161	0.73	25.9	C	64.3	0.01	-0.1	No
	SB	4M	AM	5,916	0.69	24.3	C	65.7	5,972	0.70	24.6	C	65.5	0.01	-0.2	No
			PM	6,757	0.80	29.5	D	61.7	6,783	0.80	29.6	D	61.6	0.00	-0.1	No

Notes: M = Mainline Lanes; V/C = Volume-to-Capacity Ratio; LOS = Level of Service

1 Lane geometry taken from PeMS lane configurations at corresponding postmile.

2 Density reported as pc/mi/ln (passenger cars per mile per lane).

3 Speed reported as average speed, mi/h (miles per hour)

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11 CONSTRUCTION TRAFFIC

Construction of the proposed project would have the potential to create temporary traffic impacts by the generation of construction-related traffic (construction workers, and vendor and haul trucks) to and from the project site. The traffic generated by the construction phase would be removed from the street network once the project is constructed. All construction related traffic would access the project site via existing and proposed driveways along North Coast Highway and Costa Pacifica Way; and most of the construction activities would occur on project site. For any potential construction related activities in the public right-of-way during the construction period, two-way traffic would be maintained pursuant to a Traffic Control Plan (TCP) be prepared by the project's contractor and approved by the City consistent with City regulations and policies.

The SANDAG guide to traffic generation (2002) and the ITE (2017) *Trip Generation Manual, 10th Edition* do not contain trip rates for the construction-related activities. Therefore, the project's general construction phasing and schedule provided from the CalEEMod Air Quality analysis was utilized to estimate the proposed project's peak daily and peak hour construction traffic generation. Based on the estimated peak number of workers, vendor and haul truck trips across the various phases and months of the proposed project, the peak construction phase was identified as the Building Construction phase. During this phase, while there would be many different combinations of construction related trips, the maximum number of daily on-site workers would be 206 workers, and the maximum number of trucks would be 53 vendor or equipment delivery trucks, and 2 haul trucks, for a total of 55 trucks per day.

Based on hours of construction operations, all workers would arrive at the site before 7:00 a.m., (i.e., before the AM peak period) and leave by 4:00 p.m. (i.e., during the PM peak period). The truck trips would generally be equally distributed over an 8-hour construction period. Additionally, approximately 10% of the workers are anticipated to carpool to/from the project site. Based on these assumptions, Table 27 provides the projects' trip generation for the peak construction phase.

Table 27
Construction Trip Generation

Vehicle Type	Daily Quantity	Daily Trips	AM Peak Hour			PM Peak Hour		
			In	*Out*	*Total*	*In*	*Out*	*Total*
Trip Generation								
Construction Workers (cars) [1]	186 Cars	372	0	0	0	0	186	186
Vendor and Haul Trucks[2]	55 Trucks	110	7	7	14	7	7	14
	Total	**482**	**7**	**7**	**14**	**7**	**193**	**200**

Source: Dudek 2019.

1 A carpool factor of 1.1 (i.e., 10 percent) was utilized to estimate number of worker passenger cars generated in the peak hours. Assuming 10% of the 206 workers carpool, there would be approximately 186 worker vehicles. Assuming 2 daily trips per workers (one inbound trip and one outbound trip), the daily trip generation for workers would be 372 daily trips (186 workers X 2 trips). All workers are assumed to arrive before the AM peak period, however they would depart during the PM peak period.

2 All trucks are assumed to generate 2 trips per day (one inbound trip and one outbound trip), and all truck trips are equally distributed over an 8-hour construction period.

As shown in Table 23, during the peak construction phase, the project would temporarily generate approximately 482 daily trips, 14 AM peak hour trips (7 inbound and 7 outbound), and 200 PM peak hour trips (7 inbound and 193 outbound). The construction worker trips would be distributed similar to the local and regional distribution as the proposed project, while truck traffic would primarily access the site on Coast Highway, via the SR-76 interchange to the south.

As shown in Table 6 (above), the project would generate approximately 2,504 net daily trips, 199 net AM peak hour net trips (60 inbound and 139 outbound), and 202 net PM peak hour net trips (136 inbound and 66 outbound). As shown in the level of service analysis in this section, the project has a significant daily roadway segment impact at Coast Highway, Costa Pacifica Way to SR-76, and less than significant impact at the remaining study area roadway segments and all intersections. Since the daily construction trip generation is significantly lower than the proposed project's daily and AM peak hour trip generation, and equal to the net PM peak hour trip generation of the proposed project, the construction of the project would also have a less than significant impact to the surrounding street network.

For any potential construction related activities in the public right-of-way during the construction period, two-way traffic would be maintained and the City would require a Traffic Control Plan (TCP) be prepared by the project's contractor.

12 PROJECT IMPACTS

12.1 Direct Impacts

Roadway Operations

The project's direct impacts to roadway segments would be less than significant with the exception of the following impact that would occur under both the Existing plus Project and the Existing plus Cumulative Projects plus Project conditions:

- Coast Highway, Costa Pacifica Way to SR-76

Intersection Operations

As discussed under Sections 4.3 and 6.3, the project would have a less than significant direct impact to intersections under both the Existing plus Project and the Existing plus Cumulative Projects plus Project conditions.

Project Access and Circulation

The proposed project traffic would not satisfy a peak hour traffic signal warrant at the Costa Pacifica Way and North Coast Highway intersection in the Existing plus Project and Existing plus Cumulative Projects plus Project conditions. Nonetheless, the project includes the provision of street segment mitigation measures at this intersection consistent with the General Plan Circulation Element, Section 3.8.3 – Mitigation Measures and the recently approved Coast Highway Corridor Plan. The street segment mitigation measures include: installation of raised medians and refuge island on North Coast Highway between Costa Pacifica Way and the southerly In-N-Out driveway; "Keep Clear" pavement markings in the southbound direction at North Coast Highway/Costa Pacifica Way; a dedicated left-turn lane at North Coast Highway/Costa Pacifica Way; left-turn turn restrictions at the southerly In-N-Out driveway; and, required signage. The required improvement from the Coast Highway Corridor Plan include the provision of a crosswalk and a bulb-out on the southwest corner of this intersection.

All existing and proposed storage lanes at the proposed project's driveways, the turn pockets at Coast Highway/Costa Pacifica Way, and the In-N-Out driveways are forecast to adequately serve queued vehicles with no spillover on to Coast Highway and Costa Pacifica Way during the Existing plus Project and Existing plus Cumulative Projects plus Project conditions.

Freeway Mainline Segments

As discussed in Section 10.1 and 10.2, the two study area mainline segments would continue to operate at LOS D or better in the Existing plus Project and Existing plus Cumulative Projects plus

Project conditions. Therefore, the addition of project traffic to the study area mainline segments would result in no significant direct impacts.

Construction Traffic

During the peak construction phase, the project would temporarily generate approximately 482 daily trips, 14 AM peak hour trips, and 200 PM peak hour trips. The construction worker trips would be distributed similar to the local and regional distribution as the proposed project, while truck traffic would primarily access the site on Coast Highway, via the SR-76 interchange to the south. In comparison, the proposed project would generate 2,504 net daily trips, 199 net AM peak hour net trips, and 202 net PM peak hour net trips. As shown in the level of service analysis in this section, the proposed project has a significant daily roadway segment impact on Coast Highway, Costa Pacifica Way to SR-76, and a less than significant impact at remaining study area roadway segments and all intersections. Since the daily and AM peak hour construction trip generation is significantly lower than the proposed project, and the equal to the net peak hour trip generation of the proposed project, the construction of the project would also have a less than significant direct impact to the surrounding street network.

12.2 Cumulative Impacts

Roadway Operations

The project's cumulative impacts to roadway segments would be less than significant with the exception of the following impact that would occur under the Buildout Year (2035) plus Project condition (Section 8.2):

- Coast Highway, Harbor Drive to Costa Pacifica Way
- Coast Highway, Costa Pacifica Way to SR-76

Intersection Operations

As discussed under Section 8.3, the project would have a less than significant direct impact to intersections under the Buildout Year (2035) plus Project condition.

Project Access and Circulation

The proposed project traffic would not satisfy a peak hour traffic signal warrant at the Costa Pacifica Way and North Coast Highway intersection in the Buildout Year (2035) plus Project condition. Nonetheless, the project includes the provision of street segment mitigation measures at this intersection consistent with the General Plan Circulation Element, Section 3.8.3 – Mitigation Measures and the recently approved Coast Highway Corridor Plan. All existing and

proposed storage lanes at the proposed project's driveways, the turn pockets at Coast Highway/Costa Pacifica Way, and the In-N-Out driveways are forecast to adequately serve queued vehicles with no spillover on to Coast Highway and Costa Pacifica Way during the Buildout Year (2035) plus Project condition.

Freeway Mainline Segments

As discussed in Section 10.3, the two study area mainline segments would continue to operate at LOS D or better in the Buildout Year (2035) plus Project condition. Therefore, the addition of project traffic to the study area mainline segments would result in no significant cumulative impacts.

Construction Traffic

The proposed project would be built out, and be in full operation by the Buildout Year (2035) condition. Therefore, there would be no significant cumulative traffic impacts related to the construction phase of the proposed project.

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13 MITIGATION AND LEVEL OF SIGNIFICANCE AFTER MITIGATION

13.1 Mitigation Measures

The project would have a direct and cumulative impact to the Coast Highway, Costa Pacifica Way to SR-76, roadway segment. To reduce this impact, the project proposes the following mitigation measure:

TRF-1 Prior to the issuance of occupancy permits, the following improvements shall be completed by the applicant to the satisfaction of the City of Oceanside:

- Provide a dedicated northbound left turn lane at the Coast Highway/Costa Pacifica Way intersection;
- Install raised medians on Coast Highway, between Costa Pacifica Way and south of the southerly In-N-Out driveway, which includes raised medians on both sides of the left turn lane; and,
- Install signage indicating left turn restrictions at the southerly In-N-Out driveway.

These improvements would reduce the project's impact by improving traffic flow on the northbound travel lane of the Coast Highway roadway segment.

The project would result in a cumulative impact to the segment of North Coast Highway, Harbor Drive to Costa Pacifica Way. To reduce this impact, the following mitigation measure shall be implemented:

TRF-2 Prior to the issuance of occupancy permits, the following improvements shall be completed by the applicant to the satisfaction of the City of Oceanside:

- Construct a refuge median (pork chop) for left-turning vehicles on Costa Pacifica Way destined to travel northbound Coast Highway; and,
- Add "Keep Clear" pavement markings on the southbound approach at the intersection of Coast Highway/Costa Pacifica Way.

These improvements would reduce the project's impact by improving traffic flow on the southbound travel lane of the Coast Highway roadway segment.

13.2 Significance after Mitigation

With the implementation of mitigation measure TRF-1 above, the project's direct impact to Coast Highway, Costa Pacifica Way to SR-76, would remain significant. The City's roadway segment V/C and LOS analysis methodology utilized in this TIA is related to the availability of roadway segment capacity of the segment. The proposed mitigation (TRF-1) would improve traffic flow and efficiency through this segment by organizing movements and vehicle queuing through this area of Coast Highway. However, these improvements would not increase the daily capacity of this segment. The only way to increase the daily roadway segment capacity of this segment would be to add additional through lanes. However, the City General Plan and the recently approved Coast Highway Corridor Plan identifies the ultimate buildout of this segment of Coast Highway as a two-lane Collector Road (with TWLTL), and the addition of roadway lanes beyond two lanes (one lane in each direction) would not be feasible to complete. Therefore, the project's direct impact to the segment of Coast Highway, Costa Pacifica Way to SR-76, would remain significant.

Similar to as described above for the direct impacts, the cumulative impacts to the significantly impacted segments of Coast Highway (Costa Pacifica Way to SR-76 and Harbor Drive to Costa Pacifica Way) would remain significant due to the inability to increase roadway segment daily capacity. The proposed mitigation measures TRF-1 and TRF-2 would improve southbound traffic flow through the area by reducing the potential for traffic turning from Costa Pacifica Way, to northbound Coast Highway by providing refuge in the center turn lane via a new refuge island (pork chop) and "Keep Clear" pavement markings. Northbound Coast Highway traffic would also benefit by the mitigation measures by the provision of a dedicated northbound left turn lane at Coast Highway/Costa Pacifica Way, and restricted inbound and outbound left turn access at the southern In-N-Out driveway, which would allow for efficient northbound traffic flow on Coast Highway. However, these improvements would not increase the daily capacity of those segments, and therefore the two cumulatively impacted Coast Highway segments would continue to be identified as significantly impacted per the City's significance determination criteria (Table 1).

Widening of these segments of Coast Highway would not be feasible to complete, as these segments are already built to the two-lane Collector Road (with TWLTL) designation identified in the General Plan and the approved Coast Highway Corridor Plan. Thus, the cumulative impacts to the Coast Highway, Costa Pacifica Way to SR-76, and the Coast Highway, Harbor Drive to Costa Pacifica Way, segments would remain significant.

While not utilized to determine impact significance per the City's significance criteria (Table 1), the City of Oceanside Traffic Impact Study Detailed Guidelines indicate that an arterial peak hour analysis should be performed if a roadway segment would have an LOS E or F based on daily capacity. Based on this analysis (Section 4.2, 6.2, and 7.3), the Coast Highway segments would not be significantly impacted by the proposed project (in the peak hours).

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APPENDIX A

Traffic Counts

INTERSECTION TURNING MOVEMENT COUNTS

T218

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

DATE: Thu, Oct 25, 18

LOCATION: Oceanside
NORTH & SOUTH: I-5 SB Ramps
EAST & WEST: Harbor

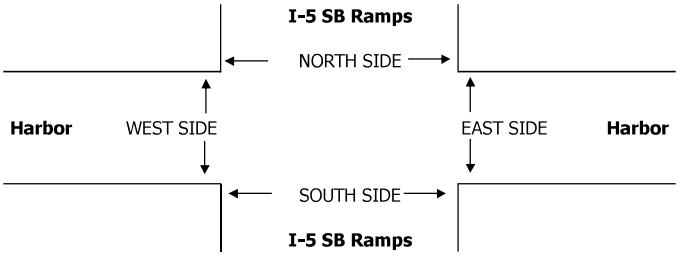
PROJECT #: SC1958
LOCATION #: 1
CONTROL: SIGNAL

NOTES:

AM / PM / MD / OTHER / OTHER — ▲ N ◄ W E ► S ▼

☑ Add U-Turns to Left Turns

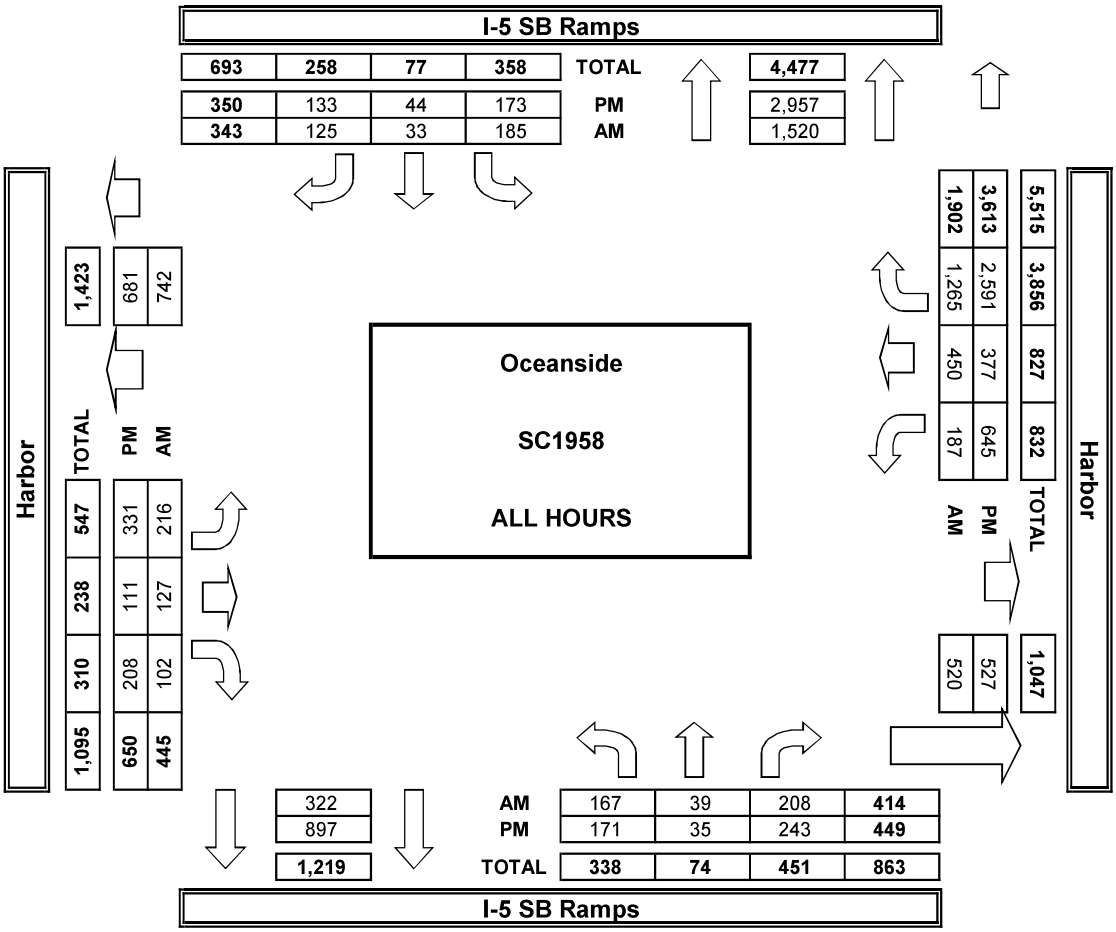
		NORTHBOUND I-5 SB Ramps			SOUTHBOUND I-5 SB Ramps			EASTBOUND Harbor			WESTBOUND Harbor				U-TURNS				
	LANES:	NL 0.5	NT 0.5	NR 1	SL 0.5	ST 0.5	SR 1	EL 1	ET 1	ER 1	WL 1	WT 1.5	WR 1.5	TOTAL	NB 0	SB 0	EB 0	WB 0	TTL
AM	7:00 AM	19	3	35	24	2	18	19	23	15	23	70	151	402	0	0	0	0	0
	7:15 AM	30	4	51	22	4	25	23	11	8	19	81	189	467	0	0	0	0	0
	7:30 AM	18	8	29	35	2	21	28	14	13	23	66	160	417	0	0	0	0	0
	7:45 AM	22	1	21	20	8	16	24	16	10	24	51	171	384	0	0	0	0	0
	8:00 AM	22	4	24	19	8	7	30	22	18	24	58	160	396	0	0	0	0	0
	8:15 AM	22	4	17	21	3	16	24	18	10	30	46	166	377	0	0	0	0	0
	8:30 AM	13	8	21	23	3	12	42	14	15	20	50	136	357	0	0	0	0	0
	8:45 AM	21	7	10	21	3	10	26	9	13	24	28	132	304	0	0	0	0	0
	VOLUMES	167	39	208	185	33	125	216	127	102	187	450	1,265	3,104	0	0	0	0	0
	APPROACH %	40%	9%	50%	54%	10%	36%	49%	29%	23%	10%	24%	67%						
	APP/DEPART	414	/	1,520	343	/	322	445	/	520	1,902	/	742	0					
	BEGIN PEAK HR		7:00 AM																
	VOLUMES	89	16	136	101	16	80	94	64	46	89	268	671	1,670					
	APPROACH %	37%	7%	56%	51%	8%	41%	46%	31%	23%	9%	26%	65%						
	PEAK HR FACTOR		0.709			0.849			0.895			0.889		0.894					
	APP/DEPART	241	/	781	197	/	151	204	/	301	1,028	/	437	0					
PM	4:00 PM	19	5	24	19	6	11	47	16	26	82	33	366	654	0	0	0	0	0
	4:15 PM	22	3	30	20	4	7	45	11	21	65	46	386	660	0	0	0	0	0
	4:30 PM	16	5	32	28	6	32	44	8	29	80	52	390	722	0	0	0	0	0
	4:45 PM	18	7	29	26	6	16	39	19	28	84	59	311	642	0	0	0	0	0
	5:00 PM	19	3	38	23	5	15	37	12	29	85	49	327	642	0	0	0	0	0
	5:15 PM	22	5	25	20	5	20	39	10	25	95	40	294	600	0	0	0	0	0
	5:30 PM	34	3	27	21	6	17	44	18	27	69	45	275	586	0	0	0	0	0
	5:45 PM	21	4	38	16	6	15	36	17	23	85	53	242	556	0	0	0	0	0
	VOLUMES	171	35	243	173	44	133	331	111	208	645	377	2,591	5,062	0	0	0	0	0
	APPROACH %	38%	8%	54%	49%	13%	38%	51%	17%	32%	18%	10%	72%						
	APP/DEPART	449	/	2,957	350	/	897	650	/	527	3,613	/	681	0					
	BEGIN PEAK HR		4:00 PM																
	VOLUMES	75	20	115	93	22	66	175	54	104	311	190	1,453	2,678					
	APPROACH %	36%	10%	55%	51%	12%	36%	53%	16%	31%	16%	10%	74%						
	PEAK HR FACTOR		0.955			0.686			0.935			0.936		0.927					
	APP/DEPART	210	/	1,648	181	/	437	333	/	262	1,954	/	331	0					

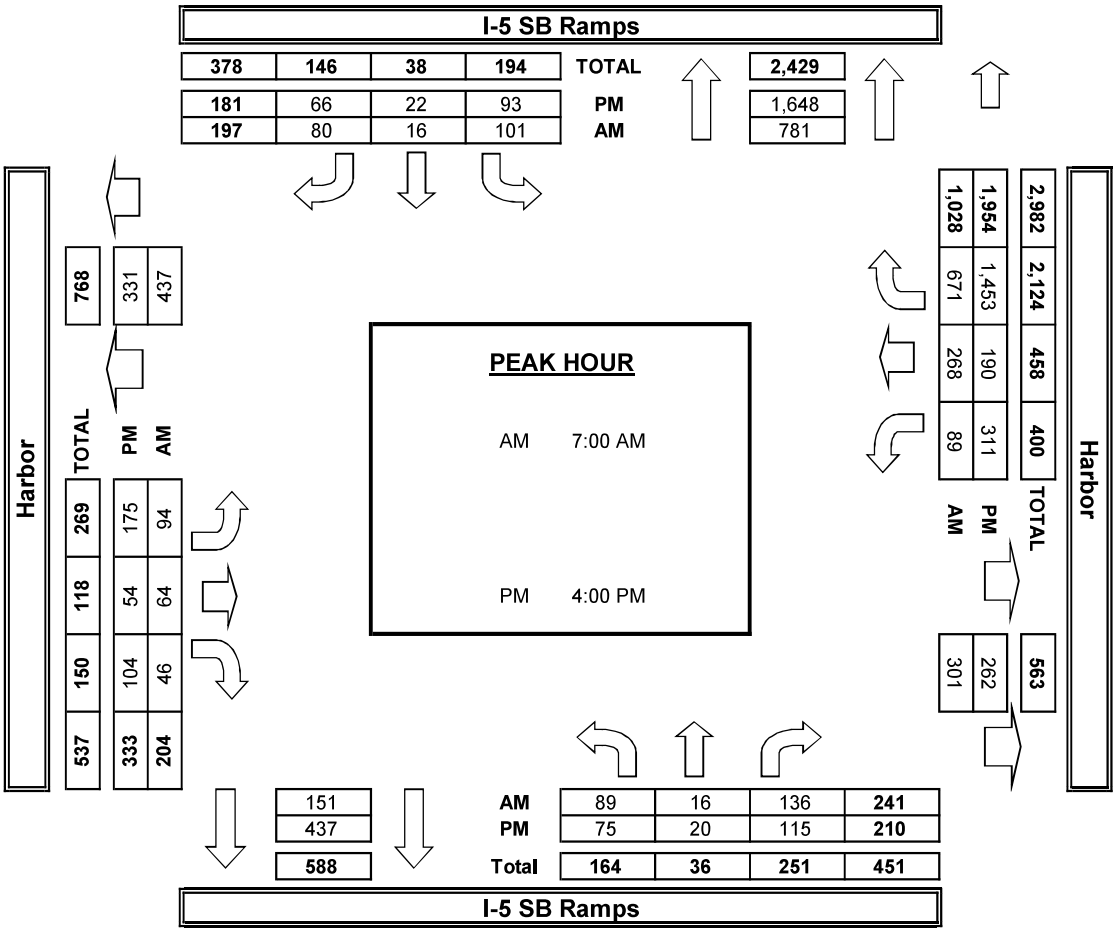


		PEDESTRIAN + BIKE CROSSINGS					PEDESTRIAN CROSSINGS					BICYCLE CROSSINGS				
		N SIDE	S SIDE	E SIDE	W SIDE	TOTAL	N SIDE	S SIDE	E SIDE	W SIDE	TOTAL	NS	SS	ES	WS	TOTAL
AM	7:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	7:15 AM	0	2	0	0	2	0	0	0	0	0	0	2	0	0	2
	7:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	7:45 AM	0	2	0	0	2	0	0	0	0	0	0	2	0	0	2
	8:00 AM	0	1	0	0	1	0	0	0	0	0	0	1	0	0	1
	8:15 AM	0	1	0	0	1	0	0	0	0	0	0	1	0	0	1
	8:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	8:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	TOTAL	0	6	0	0	6	0	0	0	0	0	0	6	0	0	6
	AM BEGIN PEAK HR	7:00 AM					0	0	0	0	0					
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	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	4:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	5:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	5:15 PM	1	0	0	0	1	0	0	0	0	0	1	0	0	0	1
	5:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	5:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	TOTAL	1	0	0	0	1	0	0	0	0	0	1	0	0	0	1
	PM BEGIN PEAK HR	4:00 PM					0	0	0	0	0					

AimTD LLC

TURNING MOVEMENT COUNTS





INTERSECTION TURNING MOVEMENT COUNTS

T218

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

DATE: Thu, Oct 25, 18

LOCATION: Oceanside
NORTH & SOUTH: Coast
EAST & WEST: Costa Pacifica

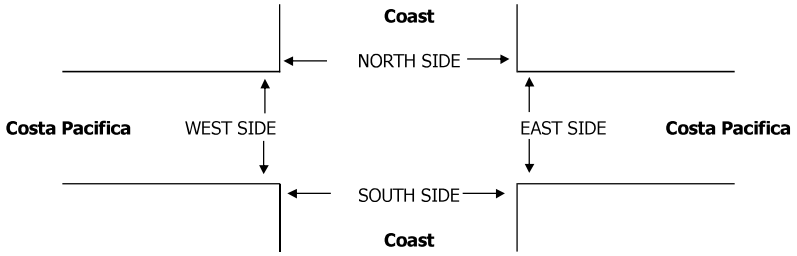
PROJECT #: SC1958
LOCATION #: 2
CONTROL: STOP E

NOTES:

AM / PM / MD / OTHER / OTHER — ▲ N ◄ W E ► S ▼

☐ Add U-Turns to Left Turns

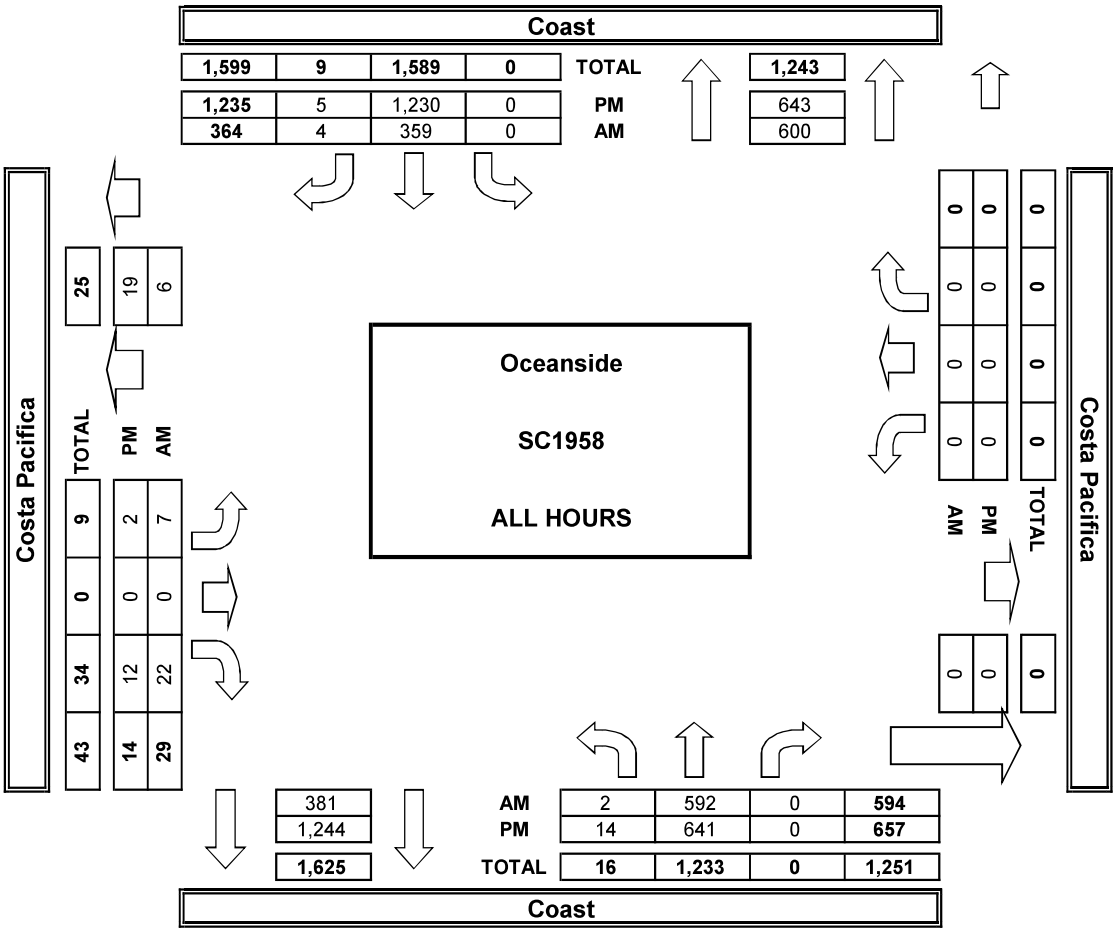
		NORTHBOUND Coast			SOUTHBOUND Coast			EASTBOUND Costa Pacifica			WESTBOUND Costa Pacifica				U-TURNS				
	LANES:	NL 1	NT 1	NR X	SL X	ST 1	SR 1	EL 0	ET X	ER 0	WL X	WT X	WR X	TOTAL	NB 0	SB 0	EB 0	WB 0	TTL
AM	7:00 AM	1	96	0	0	47	1	3	0	0	0	0	0	148	0	0	0	0	0
	7:15 AM	0	110	0	0	34	0	0	0	3	0	0	0	147	0	0	0	0	0
	7:30 AM	0	100	0	0	44	1	0	0	4	0	0	0	149	0	0	0	0	0
	7:45 AM	1	72	0	0	52	1	1	0	3	0	0	0	130	0	1	0	0	1
	8:00 AM	0	52	0	0	44	0	0	0	4	0	0	0	100	0	0	0	0	0
	8:15 AM	0	57	0	0	45	1	1	0	2	0	0	0	106	0	0	0	0	0
	8:30 AM	0	45	0	0	48	0	2	0	1	0	0	0	96	0	0	0	0	0
	8:45 AM	0	60	0	0	45	0	0	0	5	0	0	0	110	0	0	0	0	0
	VOLUMES	2	592	0	0	359	4	7	0	22	0	0	0	987	0	1	0	0	1
	APPROACH %	0%	100%	0%	0%	99%	1%	24%	0%	76%	0%	0%	0%						
	APP/DEPART	594	/	600	364	/	381	29	/	0	0	/	6	0					
	BEGIN PEAK HR		7:00 AM																
	VOLUMES	2	378	0	0	177	3	4	0	10	0	0	0	575					
	APPROACH %	1%	99%	0%	0%	98%	2%	29%	0%	71%	0%	0%	0%						
	PEAK HR FACTOR		0.864			0.838			0.875			0.000		0.965					
	APP/DEPART	380	/	383	181	/	187	14	/	0	0	/	5	0					
PM	4:00 PM	1	70	0	0	136	0	0	0	3	0	0	0	210	0	0	0	0	0
	4:15 PM	2	81	0	0	152	2	0	0	0	0	0	0	237	0	0	0	0	0
	4:30 PM	2	82	0	0	172	1	0	0	3	0	0	0	260	0	0	0	0	0
	4:45 PM	1	85	0	0	166	0	0	0	0	0	0	0	252	0	0	0	0	0
	5:00 PM	3	83	0	0	140	0	1	0	0	0	0	0	227	0	0	0	0	0
	5:15 PM	0	78	0	0	170	0	0	0	2	0	0	0	250	1	0	0	0	1
	5:30 PM	4	82	0	0	158	2	1	0	0	0	0	0	247	1	0	0	0	1
	5:45 PM	1	80	0	0	136	0	0	0	4	0	0	0	221	0	0	0	0	0
	VOLUMES	14	641	0	0	1,230	5	2	0	12	0	0	0	1,906	2	0	0	0	2
	APPROACH %	2%	98%	0%	0%	100%	0%	14%	0%	86%	0%	0%	0%						
	APP/DEPART	657	/	643	1,235	/	1,244	14	/	0	0	/	19	0					
	BEGIN PEAK HR		4:30 PM																
	VOLUMES	6	328	0	0	648	1	1	0	5	0	0	0	990					
	APPROACH %	2%	98%	0%	0%	100%	0%	17%	0%	83%	0%	0%	0%						
	PEAK HR FACTOR		0.974			0.938			0.500			0.000		0.952					
	APP/DEPART	335	/	329	649	/	654	6	/	0	0	/	7	0					

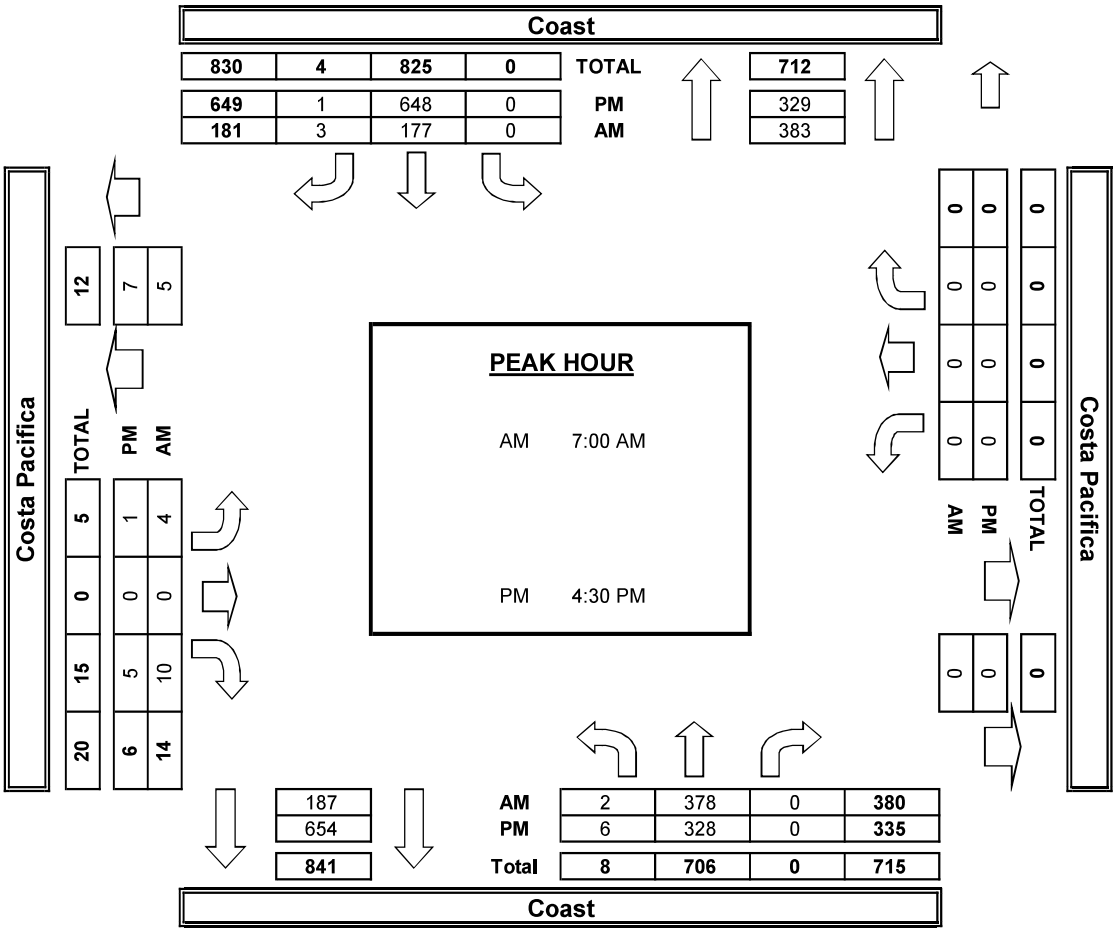


		PEDESTRIAN + BIKE CROSSINGS					PEDESTRIAN CROSSINGS					BICYCLE CROSSINGS				
		N SIDE	S SIDE	E SIDE	W SIDE	TOTAL	N SIDE	S SIDE	E SIDE	W SIDE	TOTAL	NS	SS	ES	WS	TOTAL
AM	7:00 AM	1	0	2	3	6	1	0	1	3	5	0	0	1	0	1
	7:15 AM	0	0	0	4	4	0	0	0	3	3	0	0	0	1	1
	7:30 AM	1	0	1	4	6	1	0	0	3	4	0	0	1	1	2
	7:45 AM	1	0	2	4	7	1	0	0	2	3	0	0	2	2	4
	8:00 AM	0	0	3	1	4	0	0	3	0	3	0	0	0	1	1
	8:15 AM	1	0	0	3	4	1	0	0	3	4	0	0	0	0	0
	8:30 AM	1	0	1	4	6	1	0	1	4	6	0	0	0	0	0
	8:45 AM	0	0	0	4	4	0	0	0	3	3	0	0	0	1	1
	TOTAL	5	0	9	27	41	5	0	5	21	31	0	0	4	6	10
	AM BEGIN PEAK HR			7:00 AM			3	0	1	11	15					
PM	4:00 PM	0	0	2	4	6	0	0	2	1	3	0	0	0	3	3
	4:15 PM	0	0	1	8	9	0	0	0	6	6	0	0	1	2	3
	4:30 PM	0	0	2	4	6	0	0	0	3	3	0	0	2	1	3
	4:45 PM	0	0	1	4	5	0	0	1	3	4	0	0	0	1	1
	5:00 PM	1	0	1	6	8	1	0	1	3	5	0	0	0	3	3
	5:15 PM	0	0	0	3	3	0	0	0	2	2	0	0	0	1	1
	5:30 PM	0	0	1	6	7	0	0	0	4	4	0	0	1	2	3
	5:45 PM	1	0	1	0	2	1	0	1	0	2	0	0	0	0	0
	TOTAL	2	0	9	35	46	2	0	5	22	29	0	0	4	13	17
	PM BEGIN PEAK HR			4:30 PM			1	0	2	11	14					

AimTD LLC

TURNING MOVEMENT COUNTS





INTERSECTION TURNING MOVEMENT COUNTS

T218

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

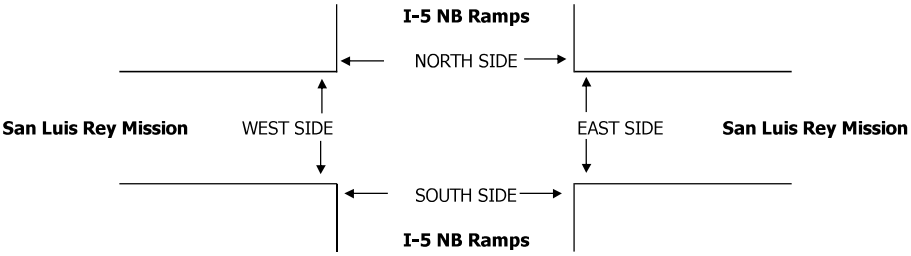
DATE:					
Thu, Oct 25, 18	LOCATION:	Oceanside	PROJECT #:	SC1958
	NORTH & SOUTH:	I-5 NB Ramps	LOCATION #:	3
	EAST & WEST:	San Luis Rey Mission	CONTROL:	SIGNAL

NOTES:

AM / PM / MD / OTHER / OTHER — ▲ N ◄ W E ► S ▼

Add U-Turns to Left Turns

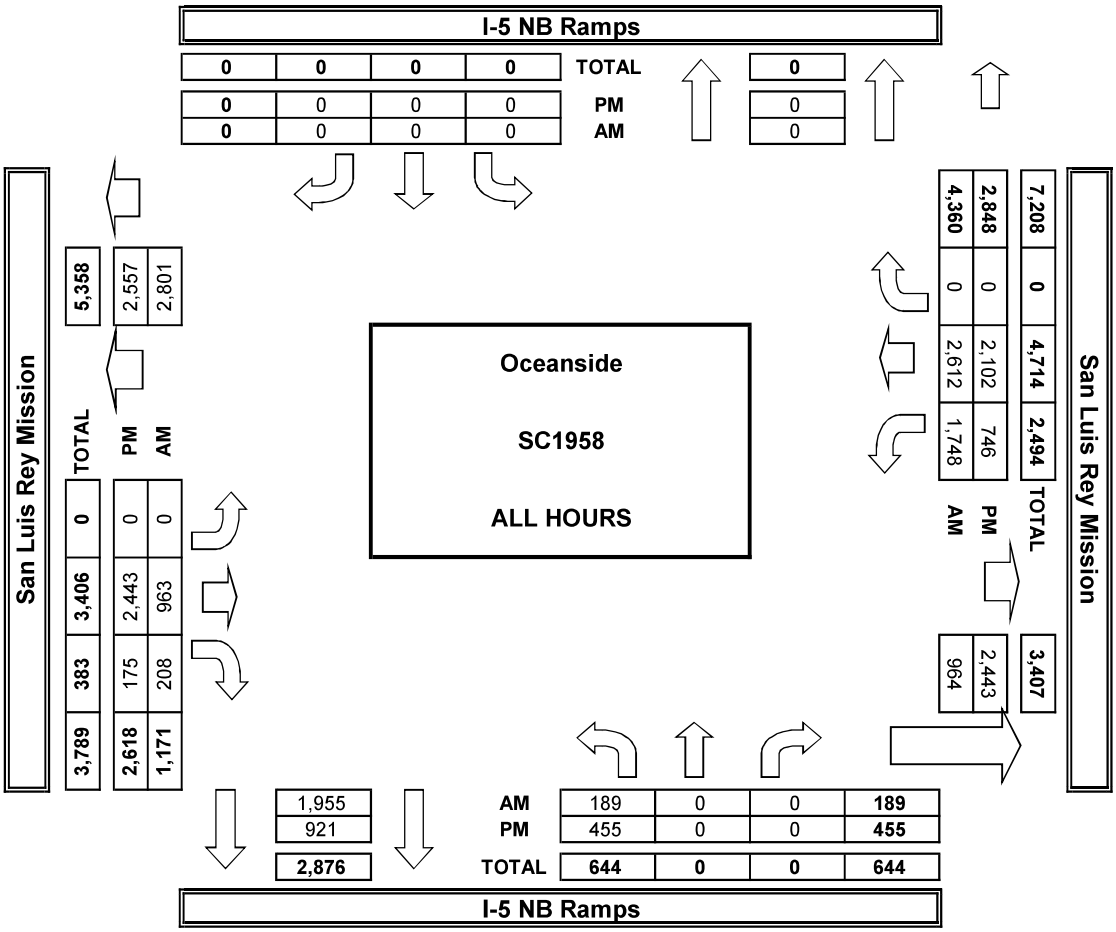
		NORTHBOUND I-5 NB Ramps			SOUTHBOUND I-5 NB Ramps			EASTBOUND San Luis Rey Mission			WESTBOUND San Luis Rey Mission				U-TURNS				
	LANES:	NL 1	NT X	NR X	SL X	ST X	SR X	EL X	ET 2	ER 1	WL 2	WT 2	WR X	TOTAL	NB 0	SB 0	EB 0	WB 0	TTL
AM	7:00 AM	12	0	0	0	0	0	0	120	23	269	347	0	771	0	0	0	0	0
	7:15 AM	28	0	0	0	0	0	0	100	32	246	350	0	756	0	0	0	1	1
	7:30 AM	15	0	0	0	0	0	0	122	25	226	320	0	708	0	0	0	0	0
	7:45 AM	29	0	0	0	0	0	0	127	26	234	323	0	739	0	0	0	0	0
	8:00 AM	21	0	0	0	0	0	0	126	29	224	321	0	721	0	0	0	0	0
	8:15 AM	34	0	0	0	0	0	0	133	23	185	315	0	690	0	0	0	0	0
	8:30 AM	25	0	0	0	0	0	0	119	20	189	347	0	700	0	0	0	0	0
	8:45 AM	25	0	0	0	0	0	0	116	30	175	289	0	635	0	0	0	0	0
	VOLUMES	189	0	0	0	0	0	0	963	208	1,748	2,612	0	5,720	0	0	0	1	1
	APPROACH %	100%	0%	0%	0%	0%	0%	0%	82%	18%	40%	60%	0%						
	APP/DEPART	189	/	0	0	/	1,955	1,171	/	964	4,360	/	2,801	0					
	BEGIN PEAK HR		7:00 AM																
	VOLUMES	84	0	0	0	0	0	0	469	106	975	1,340	0	2,974					
	APPROACH %	100%	0%	0%	0%	0%	0%	0%	82%	18%	42%	58%	0%						
	PEAK HR FACTOR		0.724			0.000			0.940			0.940		0.964					
	APP/DEPART	84	/	0	0	/	1,080	575	/	470	2,315	/	1,424	0					
PM	4:00 PM	59	0	0	0	0	0	0	314	21	94	247	0	735	0	0	0	0	0
	4:15 PM	61	0	0	0	0	0	0	310	22	98	231	0	722	0	0	0	0	0
	4:30 PM	47	0	0	0	0	0	0	324	27	110	247	0	755	0	0	0	0	0
	4:45 PM	54	0	0	0	0	0	0	299	23	96	267	0	739	0	0	0	0	0
	5:00 PM	60	0	0	0	0	0	0	310	22	98	285	0	775	0	0	0	0	0
	5:15 PM	64	0	0	0	0	0	0	311	15	99	269	0	758	0	0	0	0	0
	5:30 PM	39	0	0	0	0	0	0	293	26	73	264	0	695	0	0	0	0	0
	5:45 PM	71	0	0	0	0	0	0	282	19	78	292	0	742	0	0	0	0	0
	VOLUMES	455	0	0	0	0	0	0	2,443	175	746	2,102	0	5,921	0	0	0	0	0
	APPROACH %	100%	0%	0%	0%	0%	0%	0%	93%	7%	26%	74%	0%						
	APP/DEPART	455	/	0	0	/	921	2,618	/	2,443	2,848	/	2,557	0					
	BEGIN PEAK HR		4:30 PM																
	VOLUMES	225	0	0	0	0	0	0	1,244	87	403	1,068	0	3,027					
	APPROACH %	100%	0%	0%	0%	0%	0%	0%	93%	7%	27%	73%	0%						
	PEAK HR FACTOR		0.879			0.000			0.948			0.960		0.976					
	APP/DEPART	225	/	0	0	/	490	1,331	/	1,244	1,471	/	1,293	0					

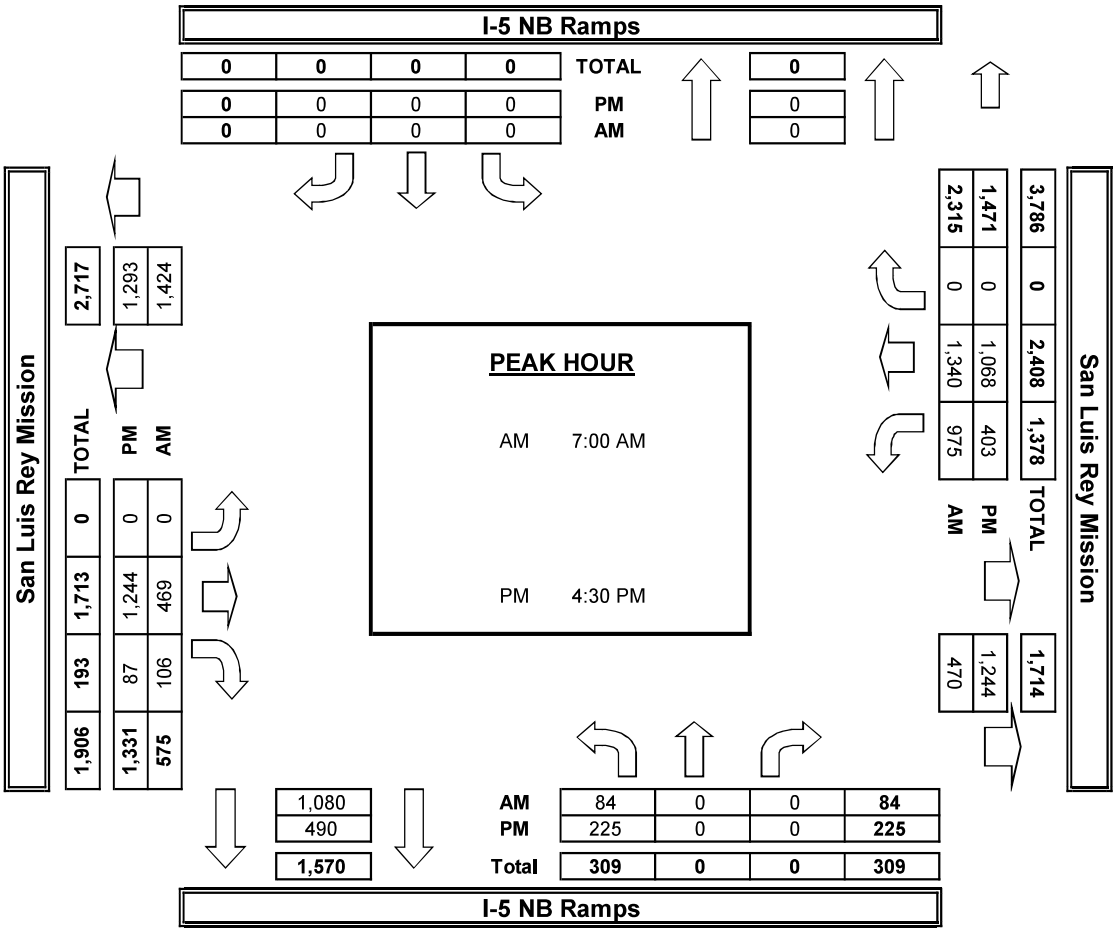


		PEDESTRIAN + BIKE CROSSINGS					PEDESTRIAN CROSSINGS					BICYCLE CROSSINGS				
		N SIDE	S SIDE	E SIDE	W SIDE	TOTAL	N SIDE	S SIDE	E SIDE	W SIDE	TOTAL	NS	SS	ES	WS	TOTAL
AM	7:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	7:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	7:30 AM	0	1	0	0	1	0	1	0	0	1	0	0	0	0	0
	7:45 AM	0	1	0	0	1	0	0	0	0	0	0	1	0	0	1
	8:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	8:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	8:30 AM	1	0	0	0	1	0	0	0	0	0	1	0	0	0	1
	8:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	TOTAL	1	2	0	0	3	0	1	0	0	1	1	1	0	0	2
	AM BEGIN PEAK HR	7:00 AM					0	1	0	0	1					
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	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	4:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	5:00 PM	0	2	0	0	2	0	2	0	0	2	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	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	TOTAL	0	2	0	0	2	0	2	0	0	2	0	0	0	0	0
	PM BEGIN PEAK HR	4:30 PM					0	2	0	0	2					

AimTD LLC

TURNING MOVEMENT COUNTS





INTERSECTION TURNING MOVEMENT COUNTS

T218

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

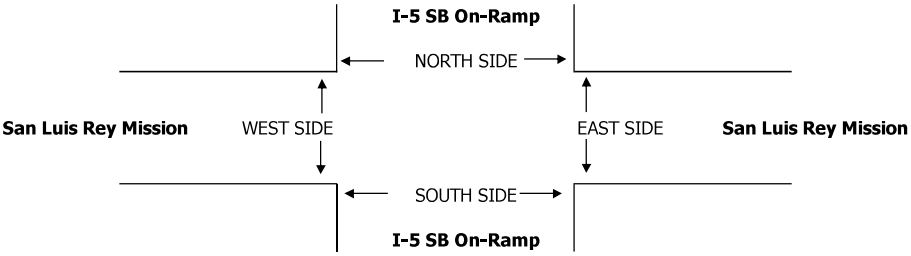
DATE:			
Thu, Oct 25, 18	LOCATION:	Oceanside	PROJECT #: SC1958
	NORTH & SOUTH:	I-5 SB On-Ramp	LOCATION #: 4
	EAST & WEST:	San Luis Rey Mission	CONTROL: SIGNAL

NOTES:

AM / PM / MD / OTHER / OTHER — ▲ N, ◄ W, E ►, S ▼

☐ Add U-Turns to Left Turns

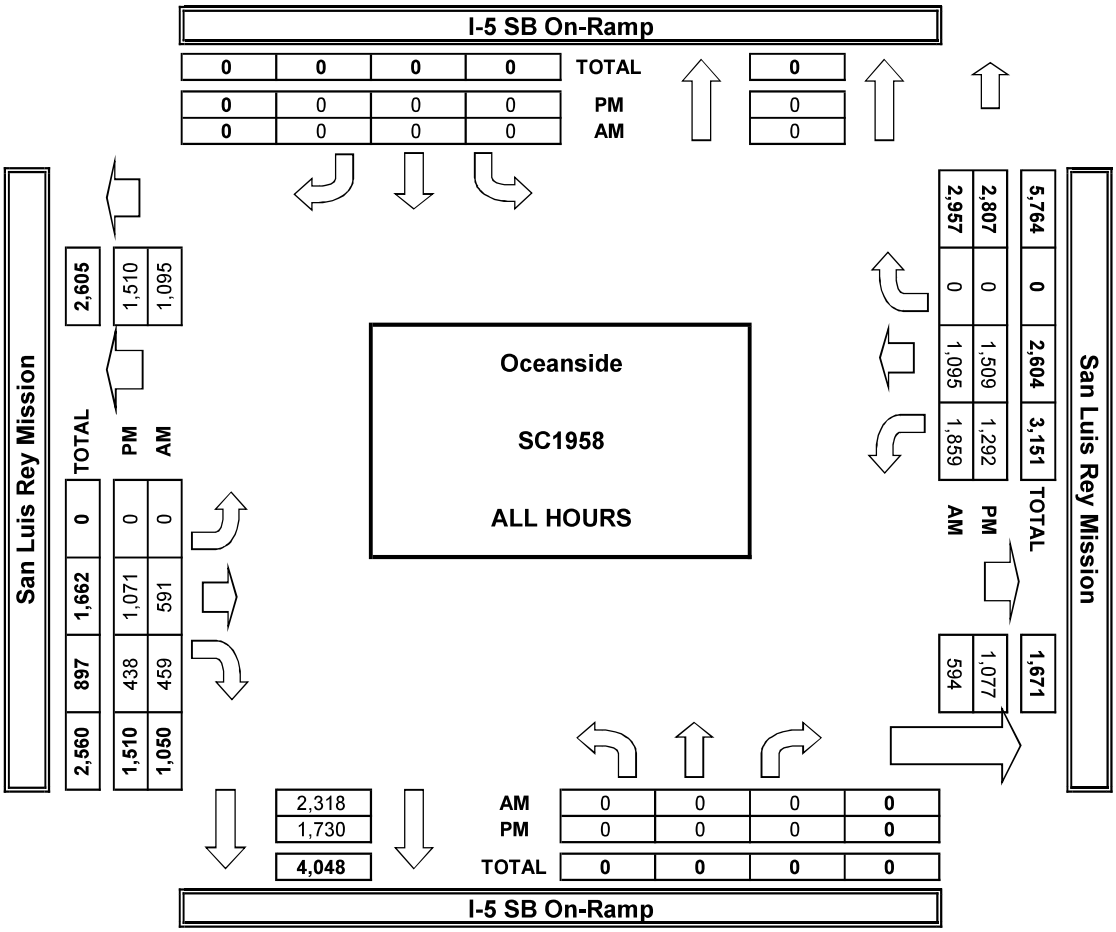
		NORTHBOUND I-5 SB On-Ramp			SOUTHBOUND I-5 SB On-Ramp			EASTBOUND San Luis Rey Mission			WESTBOUND San Luis Rey Mission				U-TURNS				
	LANES:	NL X	NT X	NR X	SL X	ST X	SR X	EL X	ET 2	ER 1	WL 2	WT 3	WR X	TOTAL	NB 0	SB 0	EB 0	WB 0	TTL
AM	7:00 AM	0	0	0	0	0	0	0	68	52	208	141	0	469	0	0	0	0	0
	7:15 AM	0	0	0	0	0	0	0	73	52	246	156	0	527	0	0	0	1	1
	7:30 AM	0	0	0	0	0	0	0	74	63	237	136	0	510	0	0	0	0	0
	7:45 AM	0	0	0	0	0	0	0	70	51	230	143	0	494	0	0	0	0	0
	8:00 AM	0	0	0	0	0	0	0	81	53	235	129	0	498	0	0	0	1	1
	8:15 AM	0	0	0	0	0	0	0	76	64	214	152	0	506	0	0	0	0	0
	8:30 AM	0	0	0	0	0	0	0	71	73	255	123	0	522	0	0	0	1	1
	8:45 AM	0	0	0	0	0	0	0	78	51	234	115	0	478	0	0	0	0	0
	VOLUMES	0	0	0	0	0	0	0	591	459	1,859	1,095	0	4,007	0	0	0	3	3
	APPROACH %	0%	0%	0%	0%	0%	0%	0%	56%	44%	63%	37%	0%						
	APP/DEPART	0	/	0	0	/	2,318	1,050	/	594	2,957	/	1,095	0					
	BEGIN PEAK HR		7:15 AM																
	VOLUMES	0	0	0	0	0	0	0	298	219	948	564	0	2,031					
	APPROACH %	0%	0%	0%	0%	0%	0%	0%	58%	42%	63%	37%	0%						
	PEAK HR FACTOR		0.000			0.000			0.943			0.939		0.962					
	APP/DEPART	0	/	0	0	/	1,167	517	/	300	1,514	/	564	0					
PM	4:00 PM	0	0	0	0	0	0	0	147	51	162	174	0	534	0	0	0	2	2
	4:15 PM	0	0	0	0	0	0	0	120	48	161	160	0	489	0	0	0	1	1
	4:30 PM	0	0	0	0	0	0	0	141	55	148	167	0	511	0	0	0	2	2
	4:45 PM	0	0	0	0	0	0	0	128	52	183	177	0	540	0	0	0	0	0
	5:00 PM	0	0	0	0	0	0	0	148	58	188	195	0	589	0	0	0	0	0
	5:15 PM	0	0	0	0	0	0	0	119	55	131	222	0	527	0	0	0	1	1
	5:30 PM	0	0	0	0	0	0	0	142	64	161	173	0	540	0	0	1	0	1
	5:45 PM	0	0	0	0	0	0	0	126	55	158	241	0	580	0	0	0	0	0
	VOLUMES	0	0	0	0	0	0	0	1,071	438	1,292	1,509	0	4,317	0	0	1	6	7
	APPROACH %	0%	0%	0%	0%	0%	0%	0%	71%	29%	46%	54%	0%						
	APP/DEPART	0	/	0	0	/	1,730	1,510	/	1,077	2,807	/	1,510	0					
	BEGIN PEAK HR		5:00 PM																
	VOLUMES	0	0	0	0	0	0	0	535	232	638	831	0	2,238					
	APPROACH %	0%	0%	0%	0%	0%	0%	0%	70%	30%	43%	57%	0%						
	PEAK HR FACTOR		0.000			0.000			0.928			0.921		0.950					
	APP/DEPART	0	/	0	0	/	870	768	/	536	1,470	/	832	0					

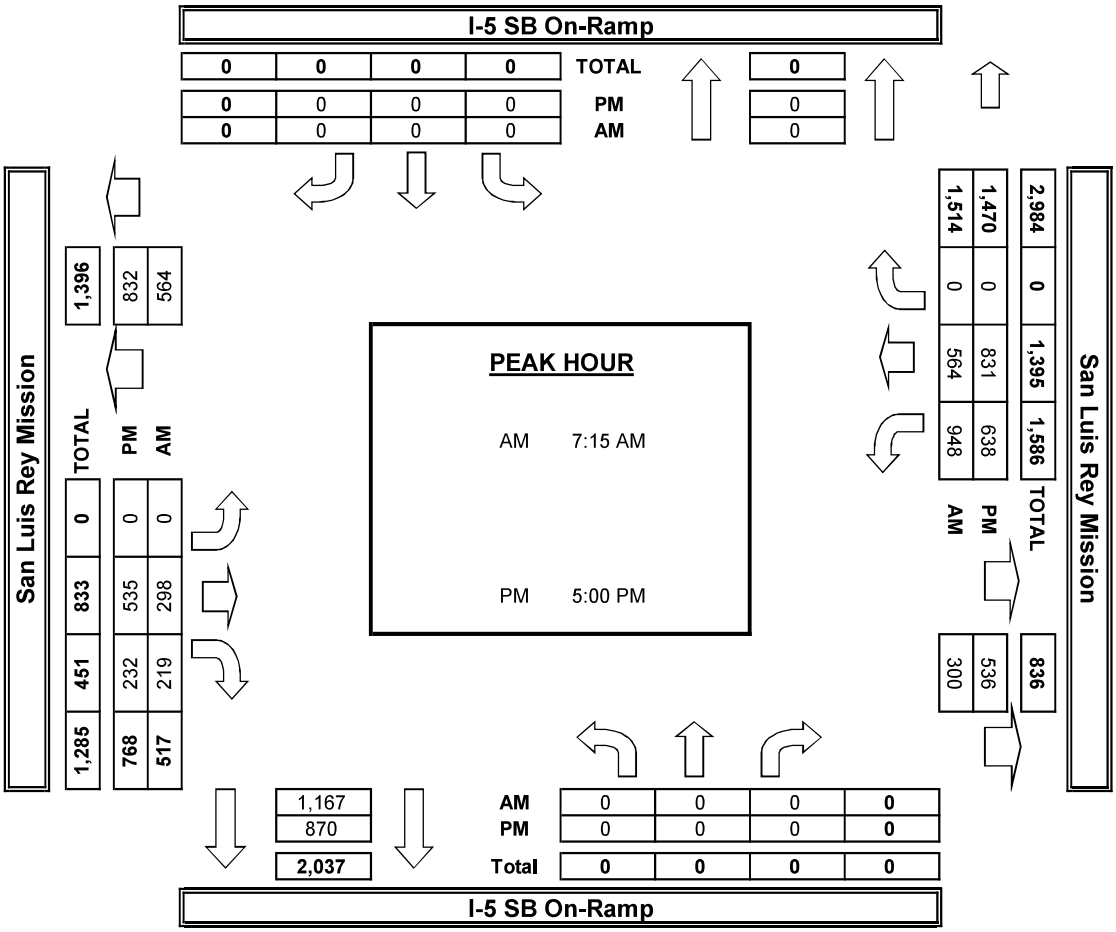


		PEDESTRIAN + BIKE CROSSINGS					PEDESTRIAN CROSSINGS					BICYCLE CROSSINGS				
		N SIDE	S SIDE	E SIDE	W SIDE	TOTAL	N SIDE	S SIDE	E SIDE	W SIDE	TOTAL	NS	SS	ES	WS	TOTAL
AM	7:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	7:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	7:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	7:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	8:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	8:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	8:30 AM	1	0	0	0	1	0	0	0	0	0	1	0	0	0	1
	8:45 AM	2	0	0	0	2	2	0	0	0	2	0	0	0	0	0
	TOTAL	3	0	0	0	3	2	0	0	0	2	1	0	0	0	1
	AM BEGIN PEAK HR	7:15 AM					0	0	0	0	0					
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	1	0	0	0	1	1	0	0	0	1	0	0	0	0	0
	4:45 PM	0	2	0	0	2	0	2	0	0	2	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	1	0	0	0	1	0	0	0	0	0	1	0	0	0	1
	TOTAL	2	2	0	0	4	1	2	0	0	3	1	0	0	0	1
	PM BEGIN PEAK HR	5:00 PM					0	0	0	0	0					

AimTD LLC

TURNING MOVEMENT COUNTS





INTERSECTION TURNING MOVEMENT COUNTS

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

DATE:	LOCATION:	Oceanside	PROJECT #:	SC1958
Thu, Oct 25, 18	NORTH & SOUTH:	Coast	LOCATION #:	5
	EAST & WEST:	San Luis Rey Mission	CONTROL:	SIGNAL

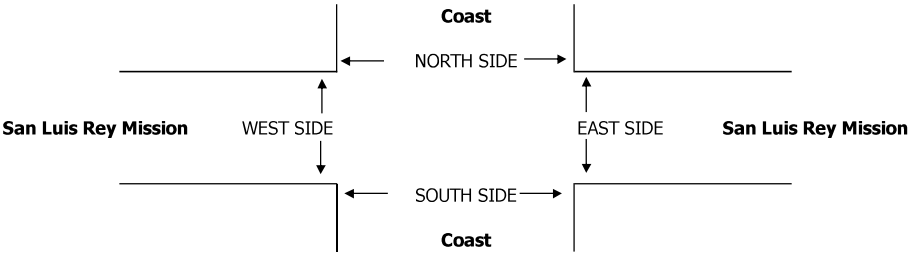
NOTES:

NR illegal

AM / PM / MD / OTHER / OTHER — ▲ N, ◄ W, E ►, S ▼

☑ Add U-Turns to Left Turns

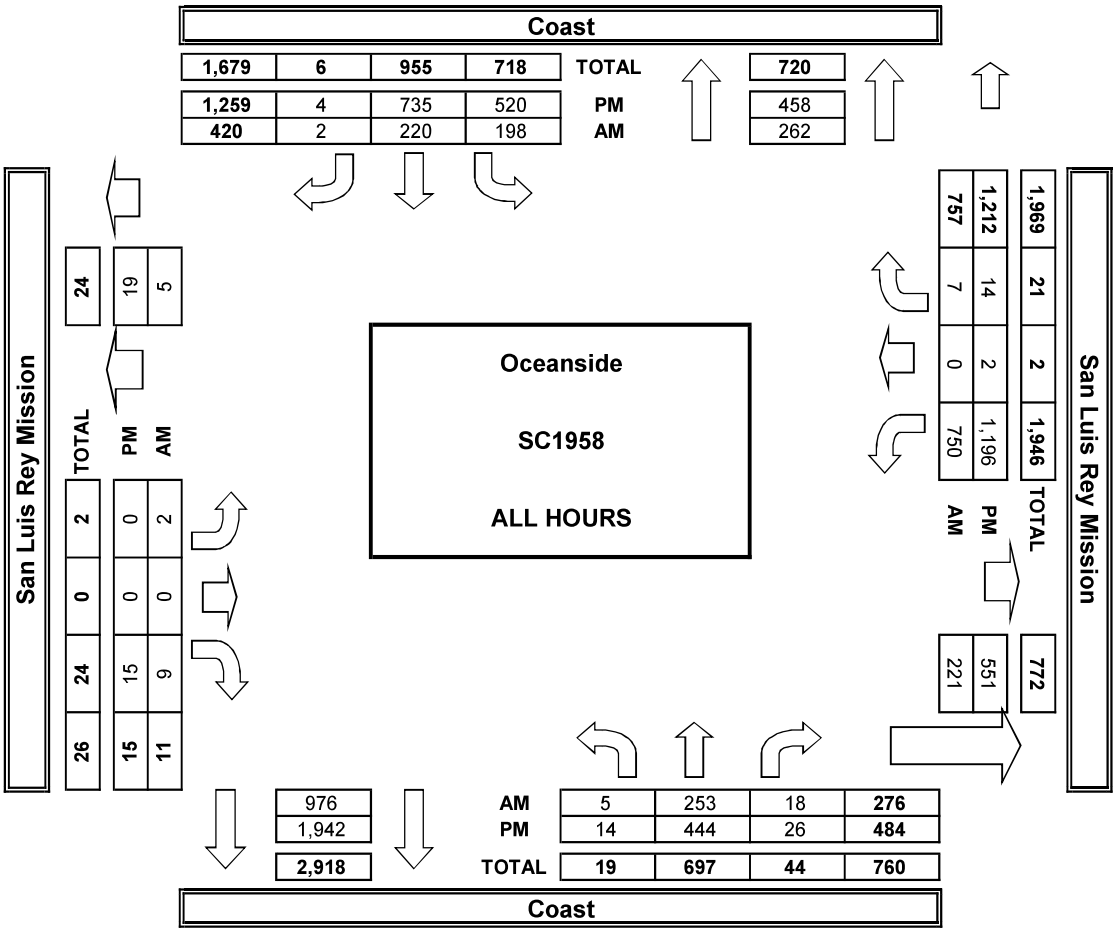
		NORTHBOUND Coast			SOUTHBOUND Coast			EASTBOUND San Luis Rey Mission			WESTBOUND San Luis Rey Mission				U-TURNS				
	LANES:	NL 0	NT 2	NR 0	SL 0	ST 2	SR 0	EL 0	ET X	ER 0	WL 2	WT 0	WR 0	TOTAL	NB 0	SB 0	EB 0	WB 0	TTL
AM	7:00 AM	0	29	3	26	26	0	1	0	0	95	0	0	180	0	0	0	0	0
	7:15 AM	1	45	2	24	15	0	0	0	0	98	0	2	187	0	0	0	2	2
	7:30 AM	2	36	1	25	25	0	0	0	2	93	0	1	185	1	0	0	0	1
	7:45 AM	1	27	0	24	21	0	0	0	0	90	0	0	163	0	0	0	1	1
	8:00 AM	0	36	3	20	41	0	1	0	2	90	0	2	195	0	0	0	1	1
	8:15 AM	1	18	4	26	26	0	0	0	1	111	0	1	188	1	0	0	1	2
	8:30 AM	0	29	2	23	33	1	0	0	1	85	0	1	175	0	0	0	0	0
	8:45 AM	0	33	3	30	33	1	0	0	3	88	0	0	191	0	0	0	0	0
	VOLUMES	5	253	18	198	220	2	2	0	9	750	0	7	1,464	2	0	0	5	7
	APPROACH %	2%	92%	7%	47%	52%	0%	18%	0%	82%	99%	0%	1%						
	APP/DEPART	276	/	262	420	/	976	11	/	221	757	/	5	0					
	BEGIN PEAK HR		8:00 AM																
	VOLUMES	1	116	12	99	133	2	1	0	7	374	0	4	749					
	APPROACH %	1%	90%	9%	42%	57%	1%	13%	0%	88%	99%	0%	1%						
	PEAK HR FACTOR		0.827			0.914			0.667			0.844		0.960					
	APP/DEPART	129	/	121	234	/	513	8	/	113	378	/	2	0					
PM	4:00 PM	1	36	1	72	83	0	0	0	2	138	0	3	336	0	0	0	0	0
	4:15 PM	3	54	8	66	59	0	0	0	2	125	0	3	320	1	0	0	0	1
	4:30 PM	2	50	3	83	88	0	0	0	0	124	0	1	351	0	0	0	2	2
	4:45 PM	0	53	7	68	91	0	0	0	3	128	0	3	353	0	0	0	1	1
	5:00 PM	3	57	0	58	94	0	0	0	1	161	1	1	376	0	0	0	1	1
	5:15 PM	1	55	1	66	106	0	0	0	3	169	0	1	402	0	0	0	0	0
	5:30 PM	1	64	5	66	104	3	0	0	3	147	0	0	393	0	0	0	0	0
	5:45 PM	3	75	1	41	110	1	0	0	1	204	1	2	439	0	0	0	1	1
	VOLUMES	14	444	26	520	735	4	0	0	15	1,196	2	14	2,970	1	0	0	5	6
	APPROACH %	3%	92%	5%	41%	58%	0%	0%	0%	100%	99%	0%	1%						
	APP/DEPART	484	/	458	1,259	/	1,942	15	/	551	1,212	/	19	0					
	BEGIN PEAK HR		5:00 PM																
	VOLUMES	8	251	7	231	414	4	0	0	8	681	2	4	1,610					
	APPROACH %	3%	94%	3%	36%	64%	1%	0%	0%	100%	99%	0%	1%						
	PEAK HR FACTOR		0.842			0.938			0.667			0.830		0.917					
	APP/DEPART	266	/	255	649	/	1,101	8	/	240	687	/	14	0					

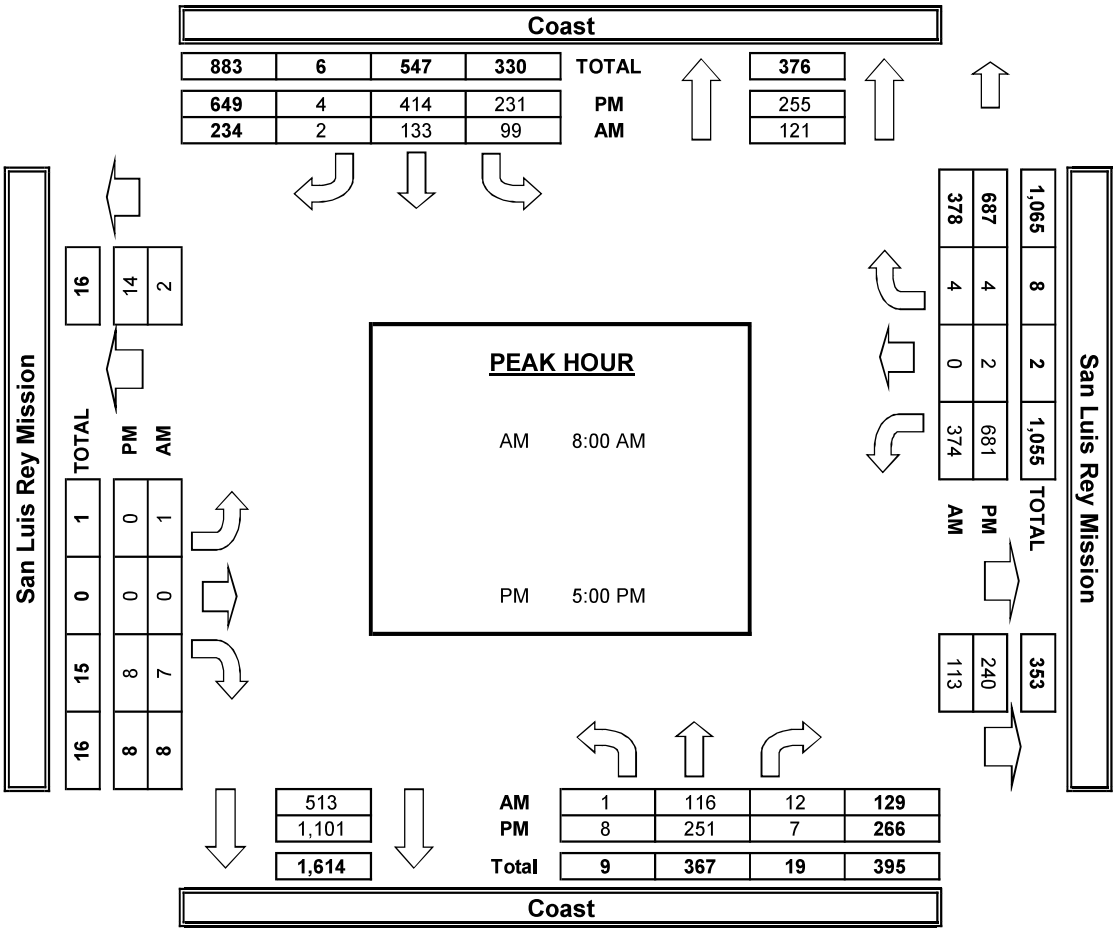


		PEDESTRIAN + BIKE CROSSINGS					PEDESTRIAN CROSSINGS					BICYCLE CROSSINGS				
		N SIDE	S SIDE	E SIDE	W SIDE	TOTAL	N SIDE	S SIDE	E SIDE	W SIDE	TOTAL	NS	SS	ES	WS	TOTAL
AM	7:00 AM	1	0	1	2	4	1	0	0	1	2	0	0	1	1	2
	7:15 AM	0	0	0	2	2	0	0	0	2	2	0	0	0	0	0
	7:30 AM	1	0	1	3	5	1	0	1	3	5	0	0	0	0	0
	7:45 AM	0	0	2	5	7	0	0	2	3	5	0	0	0	2	2
	8:00 AM	0	0	0	5	5	0	0	0	3	3	0	0	0	2	2
	8:15 AM	1	0	1	4	6	1	0	1	4	6	0	0	0	0	0
	8:30 AM	1	0	1	8	10	1	0	1	8	10	0	0	0	0	0
	8:45 AM	0	0	7	6	13	0	0	2	3	5	0	0	5	3	8
	TOTAL	4	0	13	35	52	4	0	7	27	38	0	0	6	8	14
	AM BEGIN PEAK HR			8:00 AM			2	0	4	18	24					
PM	4:00 PM	2	0	1	10	13	2	0	1	8	11	0	0	0	2	2
	4:15 PM	4	0	3	3	10	4	0	3	3	10	0	0	0	0	0
	4:30 PM	2	0	3	10	15	2	0	3	10	15	0	0	0	0	0
	4:45 PM	2	0	2	5	9	2	0	2	5	9	0	0	0	0	0
	5:00 PM	0	0	0	10	10	0	0	0	7	7	0	0	0	3	3
	5:15 PM	0	0	2	2	4	0	0	1	1	2	0	0	1	1	2
	5:30 PM	2	0	3	7	12	2	0	3	7	12	0	0	0	0	0
	5:45 PM	1	0	7	9	17	1	0	7	9	17	0	0	0	0	0
	TOTAL	13	0	21	56	90	13	0	20	50	83	0	0	1	6	7
	PM BEGIN PEAK HR			5:00 PM			3	0	11	24	38					

AimTD LLC

TURNING MOVEMENT COUNTS





INTERSECTION TURNING MOVEMENT COUNTS

T218

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

DATE:			
Thu, Oct 25, 18	LOCATION:	Oceanside	PROJECT #: SC1958
	NORTH & SOUTH:	Coast	LOCATION #: 5a
	EAST & WEST:	Driveway	CONTROL: SIGNAL

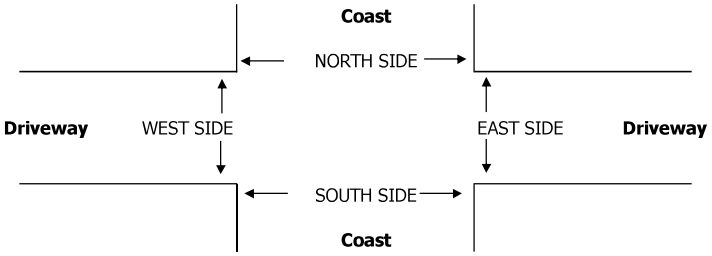
NOTES:

Queue PM SB. NL/WI/WT illegal

AM / PM / MD / OTHER / OTHER — ▲ N, ◄ W, E ►, S ▼

☐ Add U-Turns to Left Turns

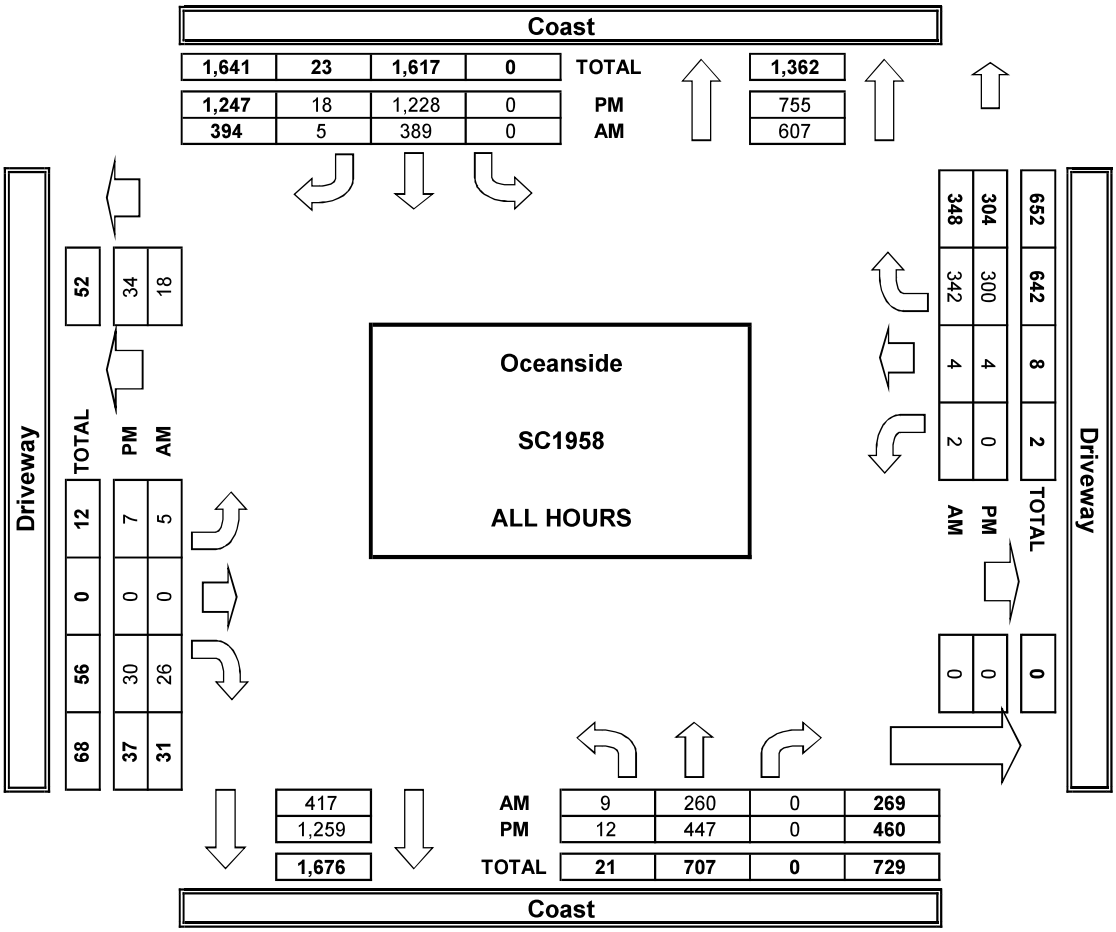
		NORTHBOUND Coast			SOUTHBOUND Coast			EASTBOUND Driveway			WESTBOUND Driveway				U-TURNS				
	LANES:	NL X	NT 1	NR X	SL X	ST 2	SR 0	EL 0	ET X	ER 0	WL X	WT X	WR 1	TOTAL	NB 0	SB 0	EB 0	WB 0	TTL
AM	7:00 AM	0	35	0	0	42	0	0	0	2	0	0	55	134	0	0	0	0	0
	7:15 AM	1	46	0	0	37	0	0	0	2	0	0	55	141	0	0	0	0	0
	7:30 AM	0	37	0	0	45	1	1	0	4	0	1	42	131	0	0	0	0	0
	7:45 AM	0	25	0	0	44	0	1	0	4	0	0	50	124	0	0	0	0	0
	8:00 AM	2	39	0	0	55	1	0	0	5	1	1	36	140	0	0	0	0	0
	8:15 AM	0	18	0	0	51	2	1	0	4	0	1	40	117	0	0	0	0	0
	8:30 AM	2	31	0	0	56	1	2	0	3	1	1	35	132	0	0	0	0	0
	8:45 AM	4	29	0	0	59	0	0	0	2	0	0	29	123	0	0	0	0	0
	VOLUMES	9	260	0	0	389	5	5	0	26	2	4	342	1,042	0	0	0	0	0
	APPROACH %	3%	97%	0%	0%	99%	1%	16%	0%	84%	1%	1%	98%						
	APP/DEPART	269	/	607	394	/	417	31	/	0	348	/	18	0					
	BEGIN PEAK HR		7:15 AM																
	VOLUMES	3	147	0	0	181	2	2	0	15	1	2	183	536					
	APPROACH %	2%	98%	0%	0%	99%	1%	12%	0%	88%	1%	1%	98%						
	PEAK HR FACTOR		0.798			0.817			0.850			0.845		0.950					
	APP/DEPART	150	/	332	183	/	197	17	/	0	186	/	7	0					
PM	4:00 PM	1	47	0	0	159	1	0	0	4	0	0	34	246	0	0	0	0	0
	4:15 PM	1	51	0	0	125	1	1	0	4	0	0	35	218	1	1	0	0	2
	4:30 PM	2	51	0	0	170	3	2	0	4	0	0	46	278	0	0	0	0	0
	4:45 PM	1	54	0	0	149	4	1	0	2	0	1	34	246	0	0	0	0	0
	5:00 PM	2	55	0	0	165	0	1	0	4	0	0	38	265	0	0	0	0	0
	5:15 PM	3	52	0	0	153	4	1	0	5	0	1	42	261	0	0	0	0	0
	5:30 PM	1	68	0	0	155	3	1	0	4	0	0	33	265	0	0	0	0	0
	5:45 PM	1	69	0	0	152	2	0	0	3	0	2	38	267	0	0	0	0	0
	VOLUMES	12	447	0	0	1,228	18	7	0	30	0	4	300	2,048	1	1	0	0	2
	APPROACH %	3%	97%	0%	0%	98%	1%	19%	0%	81%	0%	1%	99%						
	APP/DEPART	460	/	755	1,247	/	1,259	37	/	0	304	/	34	0					
	BEGIN PEAK HR		5:00 PM																
	VOLUMES	7	244	0	0	625	9	3	0	16	0	3	151	1,058					
	APPROACH %	3%	97%	0%	0%	99%	1%	16%	0%	84%	0%	2%	98%						
	PEAK HR FACTOR		0.896			0.961			0.792			0.895		0.991					
	APP/DEPART	251	/	398	634	/	641	19	/	0	154	/	19	0					

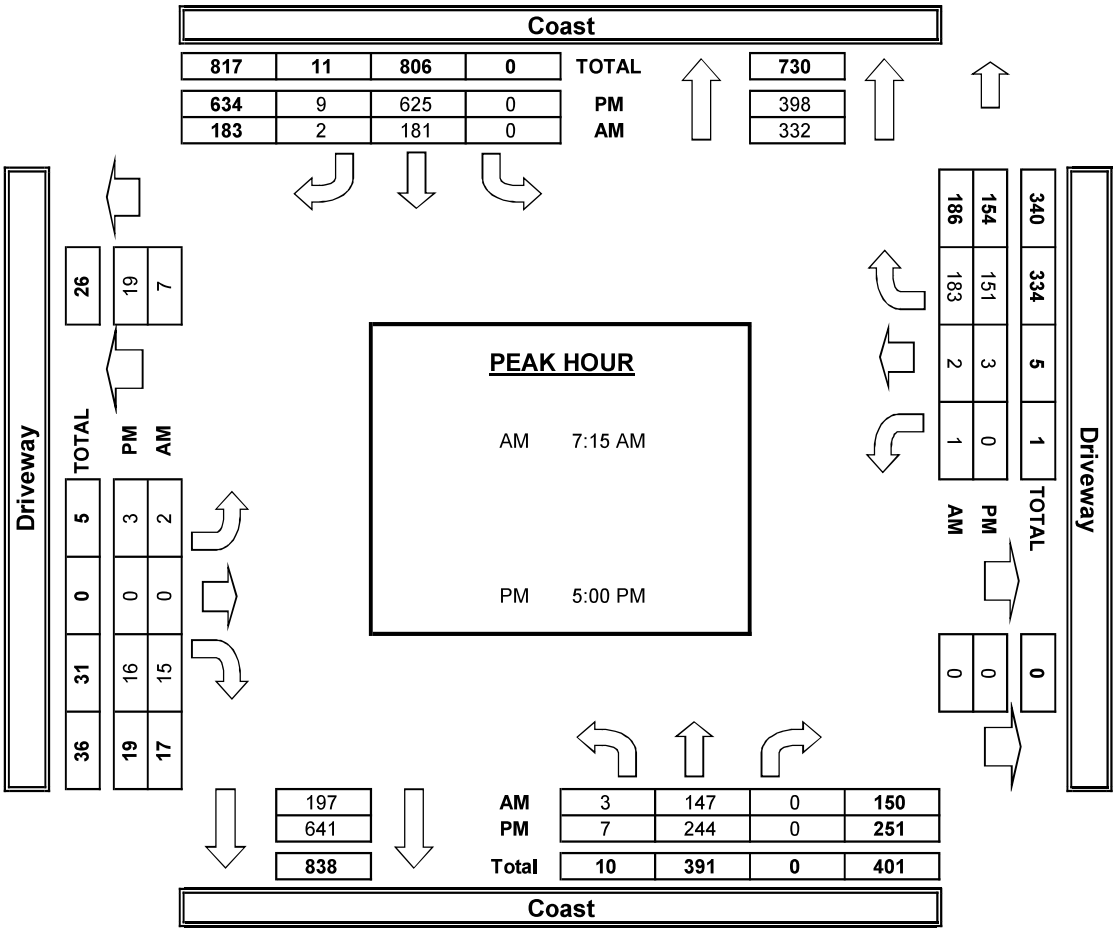


		PEDESTRIAN + BIKE CROSSINGS					PEDESTRIAN CROSSINGS					BICYCLE CROSSINGS				
		N SIDE	S SIDE	E SIDE	W SIDE	TOTAL	N SIDE	S SIDE	E SIDE	W SIDE	TOTAL	NS	SS	ES	WS	TOTAL
AM	7:00 AM	0	0	2	2	4	0	0	1	1	2	0	0	1	1	2
	7:15 AM	0	0	0	3	3	0	0	0	3	3	0	0	0	0	0
	7:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	7:45 AM	0	0	2	6	8	0	0	2	3	5	0	0	0	3	3
	8:00 AM	0	0	0	3	3	0	0	0	3	3	0	0	0	0	0
	8:15 AM	1	0	0	5	6	1	0	0	5	6	0	0	0	0	0
	8:30 AM	0	0	0	5	5	0	0	0	5	5	0	0	0	0	0
	8:45 AM	0	1	4	5	10	0	0	1	3	4	0	1	3	2	6
	TOTAL	1	1	8	29	39	1	0	4	23	28	0	1	4	6	11
	AM BEGIN PEAK HR			7:15 AM			0	0	2	9	11					
PM	4:00 PM	0	0	1	10	11	0	0	1	8	9	0	0	0	2	2
	4:15 PM	0	0	1	4	5	0	0	1	4	5	0	0	0	0	0
	4:30 PM	0	0	1	8	9	0	0	1	8	9	0	0	0	0	0
	4:45 PM	0	0	0	8	8	0	0	0	8	8	0	0	0	0	0
	5:00 PM	1	1	1	11	14	0	1	1	9	11	1	0	0	2	3
	5:15 PM	0	0	1	1	2	0	0	0	0	0	0	0	1	1	2
	5:30 PM	0	0	3	7	10	0	0	3	7	10	0	0	0	0	0
	5:45 PM	0	0	5	10	15	0	0	5	10	15	0	0	0	0	0
	TOTAL	1	1	13	59	74	0	1	12	54	67	1	0	1	5	7
	PM BEGIN PEAK HR			5:00 PM			0	1	9	26	36					

AimTD LLC

TURNING MOVEMENT COUNTS





INTERSECTION TURNING MOVEMENT COUNTS

T218

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

DATE: Thu, Oct 25, 18

LOCATION: Oceanside
NORTH & SOUTH: Coast
EAST & WEST: San Luis Rey Mission

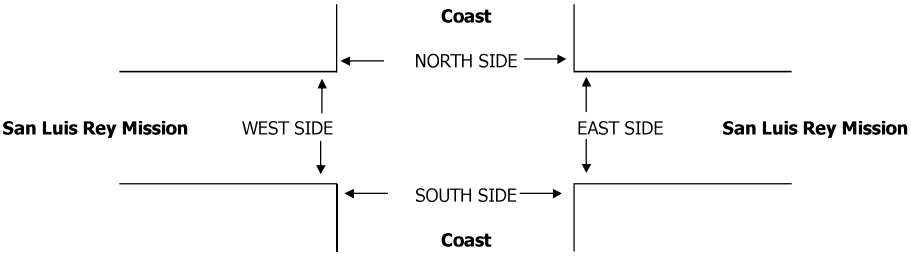
PROJECT #: SC1958
LOCATION #: 5b
CONTROL:

NOTES:

AM / PM / MD / OTHER / OTHER — ▲ N, ◄ W, E ►, S ▼

☑ Add U-Turns to Left Turns

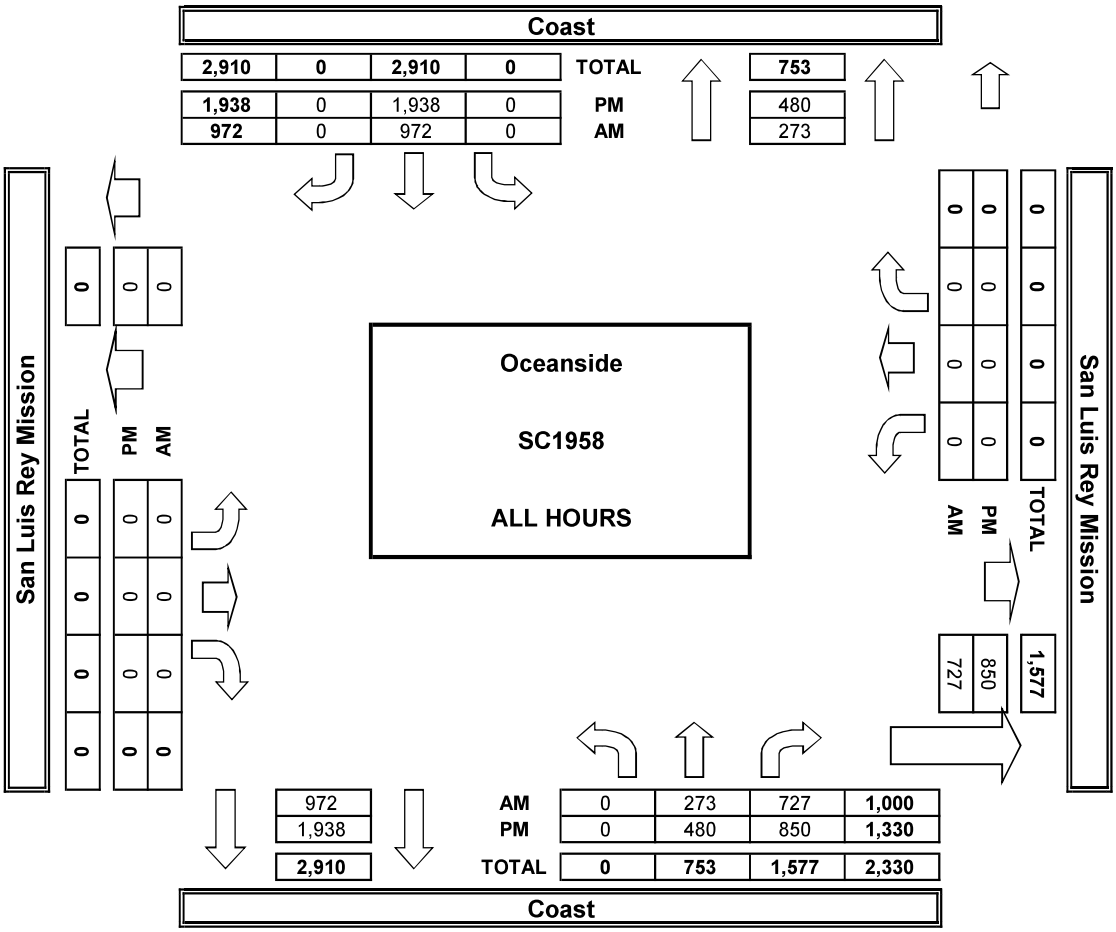
		NORTHBOUND Coast			SOUTHBOUND Coast			EASTBOUND San Luis Rey Mission			WESTBOUND San Luis Rey Mission				U-TURNS				
	LANES:	NL X	NT 2	NR 0	SL X	ST 2	SR X	EL X	ET X	ER X	WL X	WT X	WR X	TOTAL	NB 0	SB 0	EB 0	WB 0	TTL
AM	7:00 AM	0	32	86	0	121	0	0	0	0	0	0	0	239	0	0	0	0	0
	7:15 AM	0	46	78	0	111	0	0	0	0	0	0	0	235	0	0	0	0	0
	7:30 AM	0	38	95	0	121	0	0	0	0	0	0	0	254	0	0	0	0	0
	7:45 AM	0	28	77	0	110	0	0	0	0	0	0	0	215	0	0	0	0	0
	8:00 AM	0	39	99	0	132	0	0	0	0	0	0	0	270	0	0	0	0	0
	8:15 AM	0	23	97	0	134	0	0	0	0	0	0	0	254	0	0	0	0	0
	8:30 AM	0	31	111	0	119	0	0	0	0	0	0	0	261	0	0	0	0	0
	8:45 AM	0	36	84	0	124	0	0	0	0	0	0	0	244	0	0	0	0	0
	VOLUMES	0	273	727	0	972	0	0	0	0	0	0	0	1,972	0	0	0	0	0
	APPROACH %	0%	27%	73%	0%	100%	0%	0%	0%	0%	0%	0%	0%						
	APP/DEPART	1,000	/	273	972	/	972	0	/	727	0	/	0	0					
	BEGIN PEAK HR		8:00 AM																
	VOLUMES	0	129	391	0	509	0	0	0	0	0	0	0	1,029					
	APPROACH %	0%	25%	75%	0%	100%	0%	0%	0%	0%	0%	0%	0%						
	PEAK HR FACTOR		0.915			0.950			0.000			0.000		0.953					
	APP/DEPART	520	/	129	509	/	509	0	/	391	0	/	0	0					
PM	4:00 PM	0	37	112	0	223	0	0	0	0	0	0	0	372	0	0	0	0	0
	4:15 PM	0	64	85	0	187	0	0	0	0	0	0	0	336	0	0	0	0	0
	4:30 PM	0	54	98	0	210	0	0	0	0	0	0	0	362	0	0	0	0	0
	4:45 PM	0	59	105	0	221	0	0	0	0	0	0	0	385	0	0	0	0	0
	5:00 PM	0	63	124	0	255	0	0	0	0	0	0	0	442	0	0	0	0	0
	5:15 PM	0	56	91	0	276	0	0	0	0	0	0	0	423	0	0	0	0	0
	5:30 PM	0	69	118	0	254	0	0	0	0	0	0	0	441	0	0	0	0	0
	5:45 PM	0	78	117	0	312	0	0	0	0	0	0	0	507	0	0	0	0	0
	VOLUMES	0	480	850	0	1,938	0	0	0	0	0	0	0	3,268	0	0	0	0	0
	APPROACH %	0%	36%	64%	0%	100%	0%	0%	0%	0%	0%	0%	0%						
	APP/DEPART	1,330	/	480	1,938	/	1,938	0	/	850	0	/	0	0					
	BEGIN PEAK HR		5:00 PM																
	VOLUMES	0	266	450	0	1,097	0	0	0	0	0	0	0	1,813					
	APPROACH %	0%	37%	63%	0%	100%	0%	0%	0%	0%	0%	0%	0%						
	PEAK HR FACTOR		0.918			0.879			0.000			0.000		0.894					
	APP/DEPART	716	/	266	1,097	/	1,097	0	/	450	0	/	0	0					

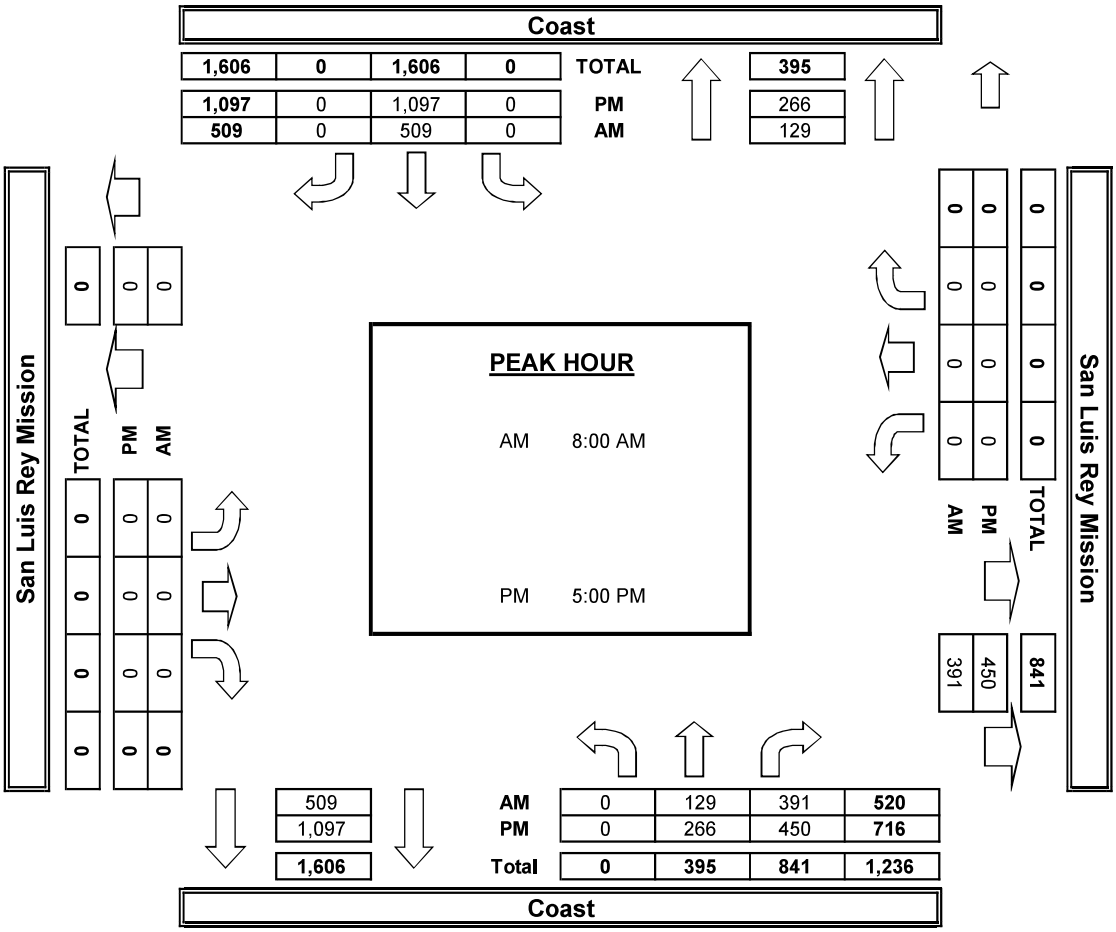


		PEDESTRIAN + BIKE CROSSINGS					PEDESTRIAN CROSSINGS					BICYCLE CROSSINGS				
		N SIDE	S SIDE	E SIDE	W SIDE	TOTAL	N SIDE	S SIDE	E SIDE	W SIDE	TOTAL	NS	SS	ES	WS	TOTAL
AM	7:00 AM	0	0	1	0	1	0	0	1	0	1	0	0	0	0	0
	7:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	7:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	7:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	8:00 AM	0	0	1	0	1	0	0	1	0	1	0	0	0	0	0
	8:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	8:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	8:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	TOTAL	0	0	2	0	2	0	0	2	0	2	0	0	0	0	0
	AM BEGIN PEAK HR			8:00 AM			0	0	1	0	1					
PM	4:00 PM	0	0	1	0	1	0	0	1	0	1	0	0	0	0	0
	4:15 PM	0	0	2	0	2	0	0	2	0	2	0	0	0	0	0
	4:30 PM	0	0	3	0	3	0	0	3	0	3	0	0	0	0	0
	4:45 PM	0	0	2	0	2	0	0	2	0	2	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	2	0	2	0	0	1	0	1	0	0	1	0	1
	5:30 PM	0	0	3	0	3	0	0	3	0	3	0	0	0	0	0
	5:45 PM	0	0	6	0	6	0	0	6	0	6	0	0	0	0	0
	TOTAL	0	0	19	0	19	0	0	18	0	18	0	0	1	0	1
	PM BEGIN PEAK HR			5:00 PM			0	0	10	0	10					

AimTD LLC

TURNING MOVEMENT COUNTS





INTERSECTION TURNING MOVEMENT COUNTS

T218

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

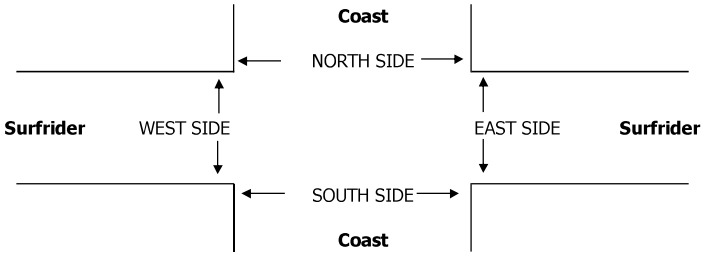
DATE:					
Thu, Oct 25, 18	LOCATION:	Oceanside	PROJECT #:	SC1958
	NORTH & SOUTH:	Coast	LOCATION #:	6
	EAST & WEST:	Surfrider	CONTROL:	SIGNAL

NOTES:

AM / PM / MD / OTHER / OTHER — ▲ N ◄ W E ► S ▼

Add U-Turns to Left Turns

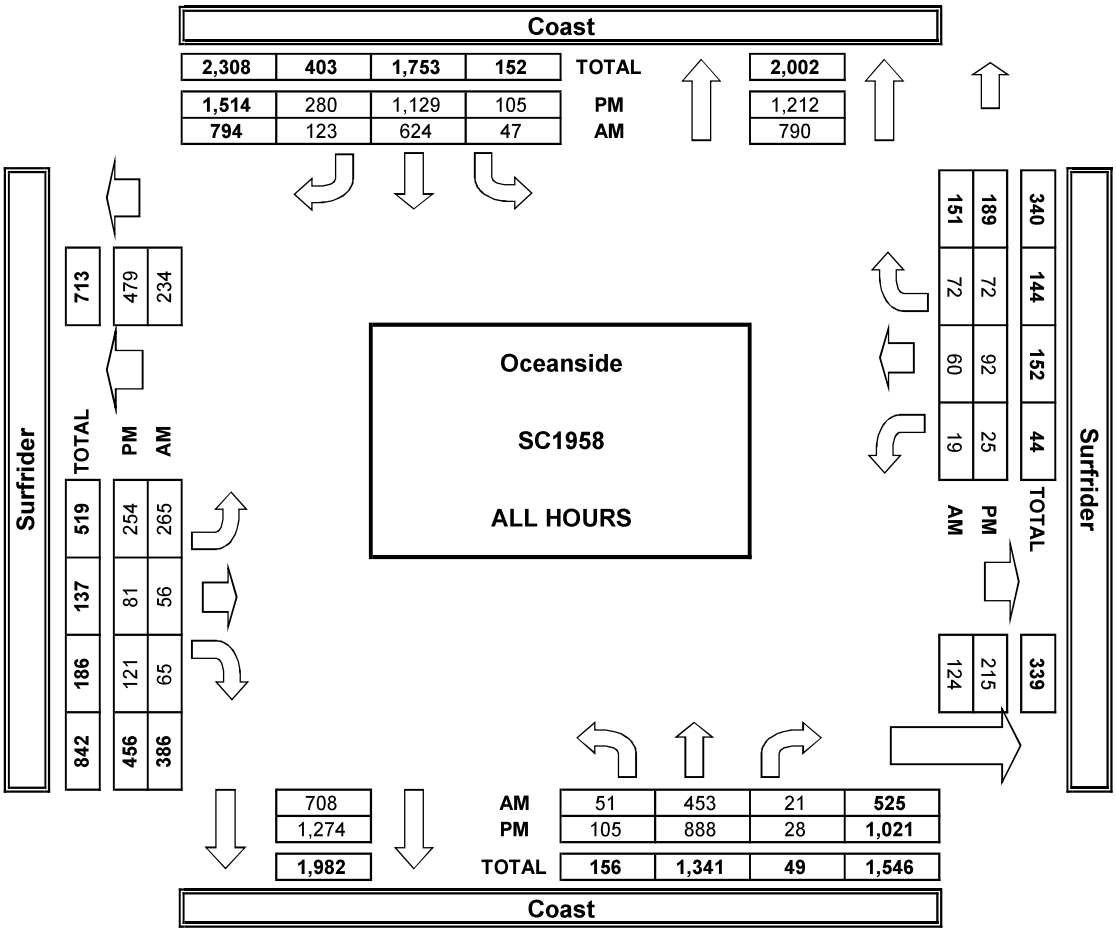
		NORTHBOUND Coast			SOUTHBOUND Coast			EASTBOUND Surfrider			WESTBOUND Surfrider				U-TURNS				
	LANES:	NL 1	NT 2	NR 0	SL 1	ST 2	SR 0	EL 0.5	ET 0.5	ER 1	WL 0	WT 1	WR 0	TOTAL	NB 0	SB 0	EB 0	WB 0	TTL
AM	7:00 AM	5	55	2	3	94	7	32	1	8	4	2	11	224	0	0	0	0	0
	7:15 AM	6	70	0	4	84	10	27	8	5	4	5	10	233	0	0	0	0	0
	7:30 AM	4	60	2	4	70	20	35	6	9	3	12	6	231	0	0	0	0	0
	7:45 AM	6	53	5	4	73	13	25	8	7	2	8	4	208	0	0	0	0	0
	8:00 AM	9	64	4	14	75	21	32	11	6	2	6	13	257	0	0	0	0	0
	8:15 AM	9	49	5	4	67	24	30	10	11	2	8	7	226	0	0	0	0	0
	8:30 AM	5	53	2	5	84	15	56	9	10	2	7	8	256	0	0	0	0	0
	8:45 AM	7	49	1	9	77	13	28	3	9	0	12	13	221	0	0	0	0	0
	VOLUMES	51	453	21	47	624	123	265	56	65	19	60	72	1,856	0	0	0	0	0
	APPROACH %	10%	86%	4%	6%	79%	15%	69%	15%	17%	13%	40%	48%						
	APP/DEPART	525	/	790	794	/	708	386	/	124	151	/	234	0					
	BEGIN PEAK HR		8:00 AM																
	VOLUMES	30	215	12	32	303	73	146	33	36	6	33	41	960					
	APPROACH %	12%	84%	5%	8%	74%	18%	68%	15%	17%	8%	41%	51%						
	PEAK HR FACTOR		0.834			0.927			0.717			0.800		0.934					
	APP/DEPART	257	/	402	408	/	345	215	/	77	80	/	136	0					
PM	4:00 PM	14	101	3	14	120	26	34	15	16	3	11	9	366	0	0	0	0	0
	4:15 PM	13	97	5	14	101	28	25	4	15	2	10	5	319	0	0	0	0	0
	4:30 PM	13	108	2	8	116	36	26	11	13	3	14	7	357	0	0	0	0	0
	4:45 PM	12	103	5	14	137	27	31	11	17	3	7	10	377	0	0	0	0	0
	5:00 PM	11	137	2	12	147	38	35	5	12	2	11	9	421	0	0	1	0	1
	5:15 PM	12	88	5	16	177	31	28	15	21	3	14	10	420	0	0	0	0	0
	5:30 PM	15	128	2	7	155	40	36	5	15	2	8	12	425	0	0	1	0	1
	5:45 PM	15	126	4	20	176	54	39	15	12	7	17	10	495	0	0	0	1	1
	VOLUMES	105	888	28	105	1,129	280	254	81	121	25	92	72	3,180	0	0	2	1	3
	APPROACH %	10%	87%	3%	7%	75%	18%	56%	18%	27%	13%	49%	38%						
	APP/DEPART	1,021	/	1,212	1,514	/	1,274	456	/	215	189	/	479	0					
	BEGIN PEAK HR		5:00 PM																
	VOLUMES	53	479	13	55	655	163	138	40	60	14	50	41	1,761					
	APPROACH %	10%	88%	2%	6%	75%	19%	58%	17%	25%	13%	48%	39%						
	PEAK HR FACTOR		0.908			0.873			0.902			0.772		0.889					
	APP/DEPART	545	/	656	873	/	728	238	/	109	105	/	268	0					

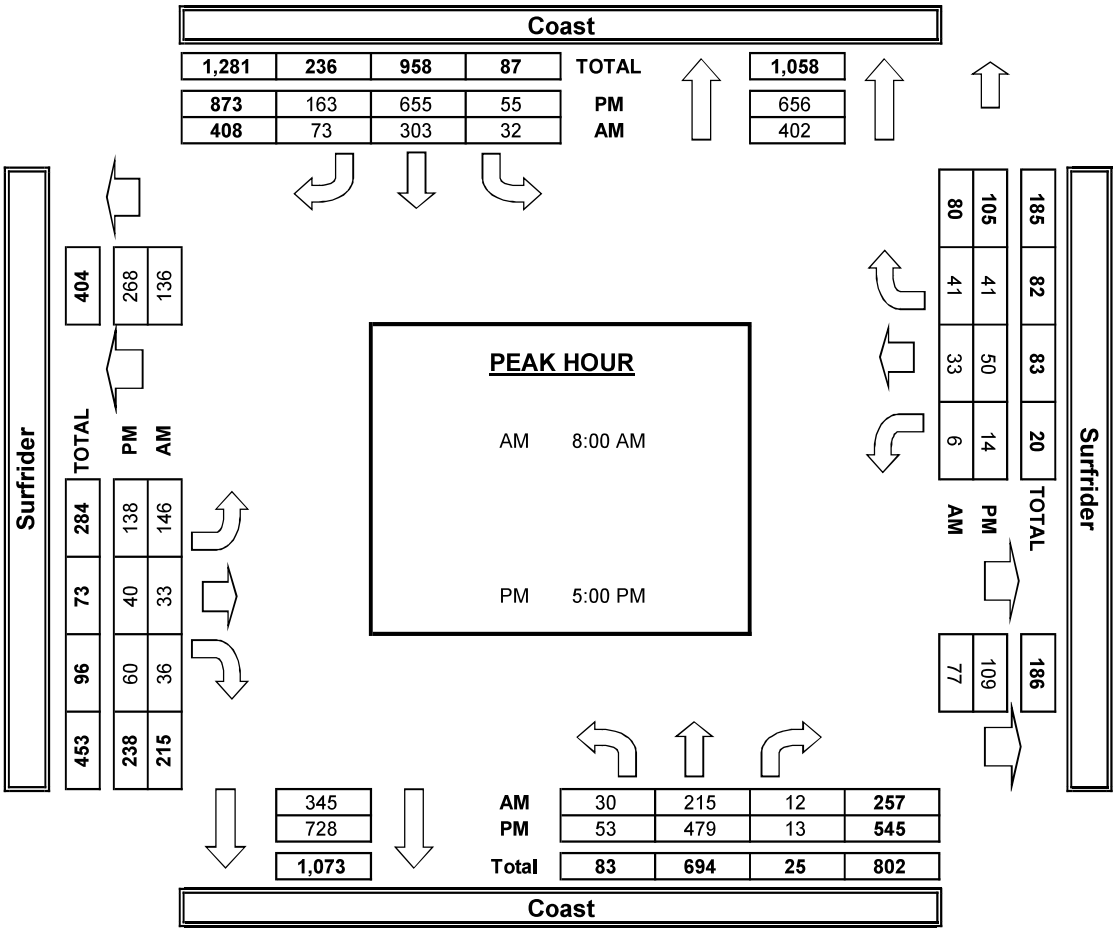


		PEDESTRIAN + BIKE CROSSINGS					PEDESTRIAN CROSSINGS					BICYCLE CROSSINGS				
		N SIDE	S SIDE	E SIDE	W SIDE	TOTAL	N SIDE	S SIDE	E SIDE	W SIDE	TOTAL	NS	SS	ES	WS	TOTAL
AM	7:00 AM	4	1	0	2	7	2	1	0	2	5	2	0	0	0	2
	7:15 AM	2	1	1	0	4	1	1	1	0	3	1	0	0	0	1
	7:30 AM	3	2	0	3	8	3	2	0	3	8	0	0	0	0	0
	7:45 AM	4	1	2	2	9	3	1	2	1	7	1	0	0	1	2
	8:00 AM	1	4	1	1	7	1	4	1	1	7	0	0	0	0	0
	8:15 AM	2	6	0	2	10	1	6	0	2	9	1	0	0	0	1
	8:30 AM	1	3	5	1	10	0	2	2	1	5	1	1	3	0	5
	8:45 AM	2	4	6	4	16	2	0	1	4	7	0	4	5	0	9
	TOTAL	19	22	15	15	71	13	17	7	14	51	6	5	8	1	20
	AM BEGIN PEAK HR	8:00 AM					4	12	4	8	28					
PM	4:00 PM	6	5	1	9	21	5	5	1	8	19	1	0	0	1	2
	4:15 PM	4	3	6	3	16	4	1	4	3	12	0	2	2	0	4
	4:30 PM	9	3	0	6	18	6	3	0	6	15	3	0	0	0	3
	4:45 PM	7	4	3	7	21	7	3	3	7	20	0	1	0	0	1
	5:00 PM	3	5	4	17	29	2	4	4	16	26	1	1	0	1	3
	5:15 PM	6	5	2	4	17	6	2	2	3	13	0	3	0	1	4
	5:30 PM	7	4	4	5	20	5	4	4	5	18	2	0	0	0	2
	5:45 PM	8	7	5	4	24	5	7	5	3	20	3	0	0	1	4
	TOTAL	50	36	25	55	166	40	29	23	51	143	10	7	2	4	23
	PM BEGIN PEAK HR	5:00 PM					18	17	15	27	77					

AimTD LLC

TURNING MOVEMENT COUNTS





INTERSECTION TURNING MOVEMENT COUNTS

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

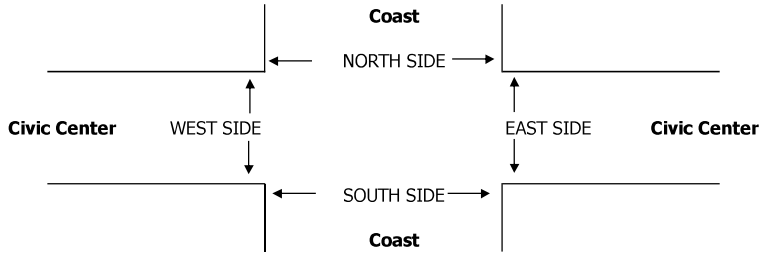
DATE:					
Thu, Oct 25, 18	LOCATION:	Oceanside	PROJECT #:	SC1958
	NORTH & SOUTH:	Coast	LOCATION #:	7
	EAST & WEST:	Civic Center	CONTROL:	SIGNAL

NOTES:

AM / PM / MD / OTHER / OTHER — ▲ N ◄ W E ► S ▼

☑ Add U-Turns to Left Turns

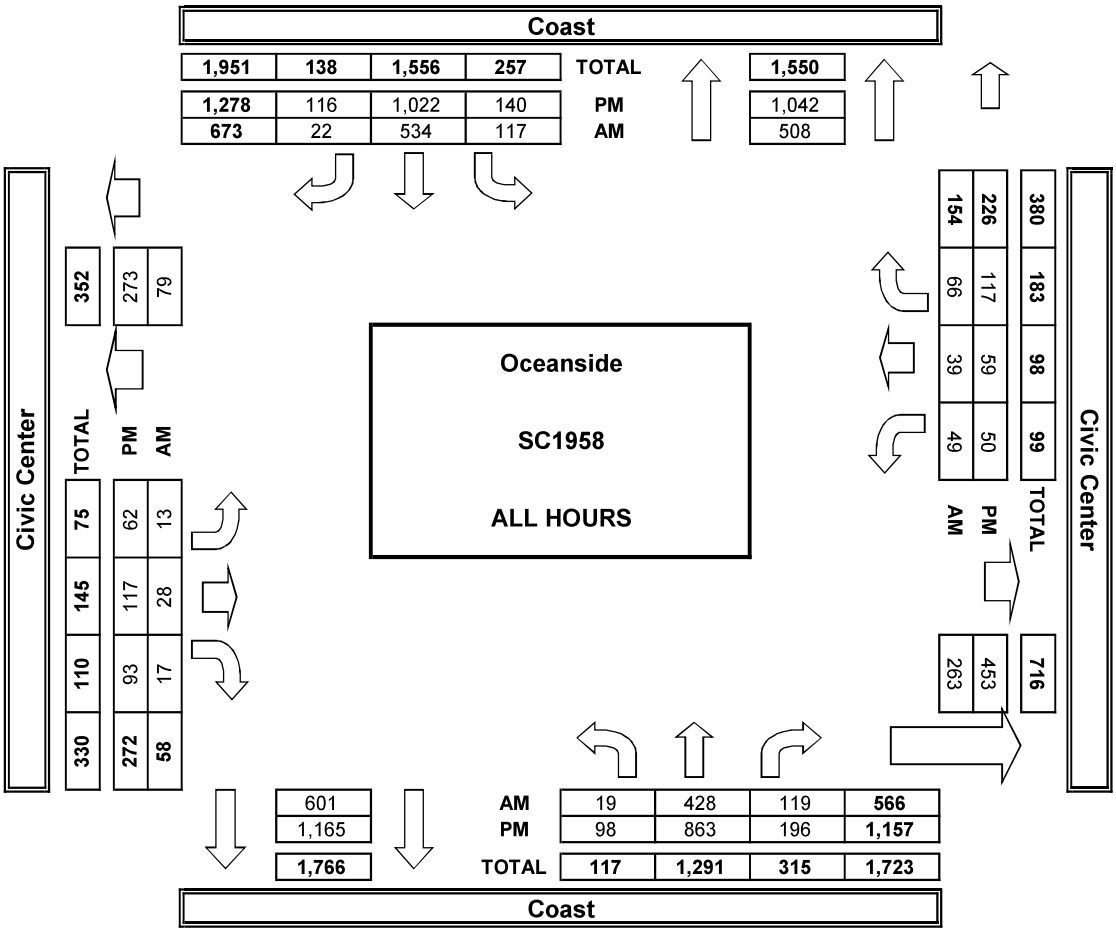
		NORTHBOUND Coast			SOUTHBOUND Coast			EASTBOUND Civic Center			WESTBOUND Civic Center				U-TURNS				
	LANES:	NL 0	NT 2	NR 0	SL 0	ST 2	SR 0	EL 1	ET 1	ER 0	WL 1	WT 1	WR 0	TOTAL	NB 0	SB 0	EB 0	WB 0	TTL
AM	7:00 AM	2	49	7	15	87	0	1	2	4	4	5	9	185	0	0	0	0	0
	7:15 AM	1	55	13	22	66	3	1	1	3	6	1	10	182	0	0	0	0	0
	7:30 AM	3	62	11	13	63	4	0	4	2	6	6	8	182	0	0	0	0	0
	7:45 AM	5	46	11	8	64	0	5	6	2	6	8	11	172	0	0	0	0	0
	8:00 AM	0	57	16	13	68	1	1	5	1	8	3	9	182	0	0	0	0	0
	8:15 AM	2	51	12	18	60	6	3	4	1	9	4	7	177	0	0	0	0	0
	8:30 AM	3	52	21	12	70	0	2	4	2	5	6	9	186	0	0	0	0	0
	8:45 AM	3	56	28	16	56	8	0	2	2	5	6	3	185	1	1	0	0	2
	VOLUMES	19	428	119	117	534	22	13	28	17	49	39	66	1,451	1	1	0	0	2
	APPROACH %	3%	76%	21%	17%	79%	3%	22%	48%	29%	32%	25%	43%						
	APP/DEPART	566	/	508	673	/	601	58	/	263	154	/	79	0					
	BEGIN PEAK HR		8:00 AM																
	VOLUMES	8	216	77	59	254	15	6	15	6	27	19	28	730					
	APPROACH %	3%	72%	26%	18%	77%	5%	22%	56%	22%	36%	26%	38%						
	PEAK HR FACTOR		0.865			0.976			0.844			0.925		0.981					
	APP/DEPART	301	/	251	328	/	288	27	/	150	74	/	41	0					
PM	4:00 PM	9	87	14	11	123	6	8	9	9	6	9	13	304	0	0	0	0	0
	4:15 PM	9	102	11	10	96	7	9	20	11	3	6	7	291	0	0	0	0	0
	4:30 PM	8	108	18	9	115	12	9	15	12	7	5	11	329	0	0	0	0	0
	4:45 PM	13	112	29	20	123	18	6	6	16	7	6	10	366	0	0	0	0	0
	5:00 PM	14	108	29	23	123	15	6	15	12	6	7	28	386	0	0	0	0	0
	5:15 PM	8	99	32	28	157	16	6	13	13	6	5	6	389	0	0	0	0	0
	5:30 PM	23	128	25	12	133	20	8	21	12	4	5	17	408	0	0	0	0	0
	5:45 PM	14	119	38	27	152	22	10	18	8	11	16	25	460	0	0	0	0	0
	VOLUMES	98	863	196	140	1,022	116	62	117	93	50	59	117	2,933	0	0	0	0	0
	APPROACH %	8%	75%	17%	11%	80%	9%	23%	43%	34%	22%	26%	52%						
	APP/DEPART	1,157	/	1,042	1,278	/	1,165	272	/	453	226	/	273	0					
	BEGIN PEAK HR		5:00 PM																
	VOLUMES	59	454	124	90	565	73	30	67	45	27	33	76	1,643					
	APPROACH %	9%	71%	19%	12%	78%	10%	21%	47%	32%	20%	24%	56%						
	PEAK HR FACTOR		0.905			0.905			0.866			0.654		0.893					
	APP/DEPART	637	/	560	728	/	637	142	/	281	136	/	165	0					

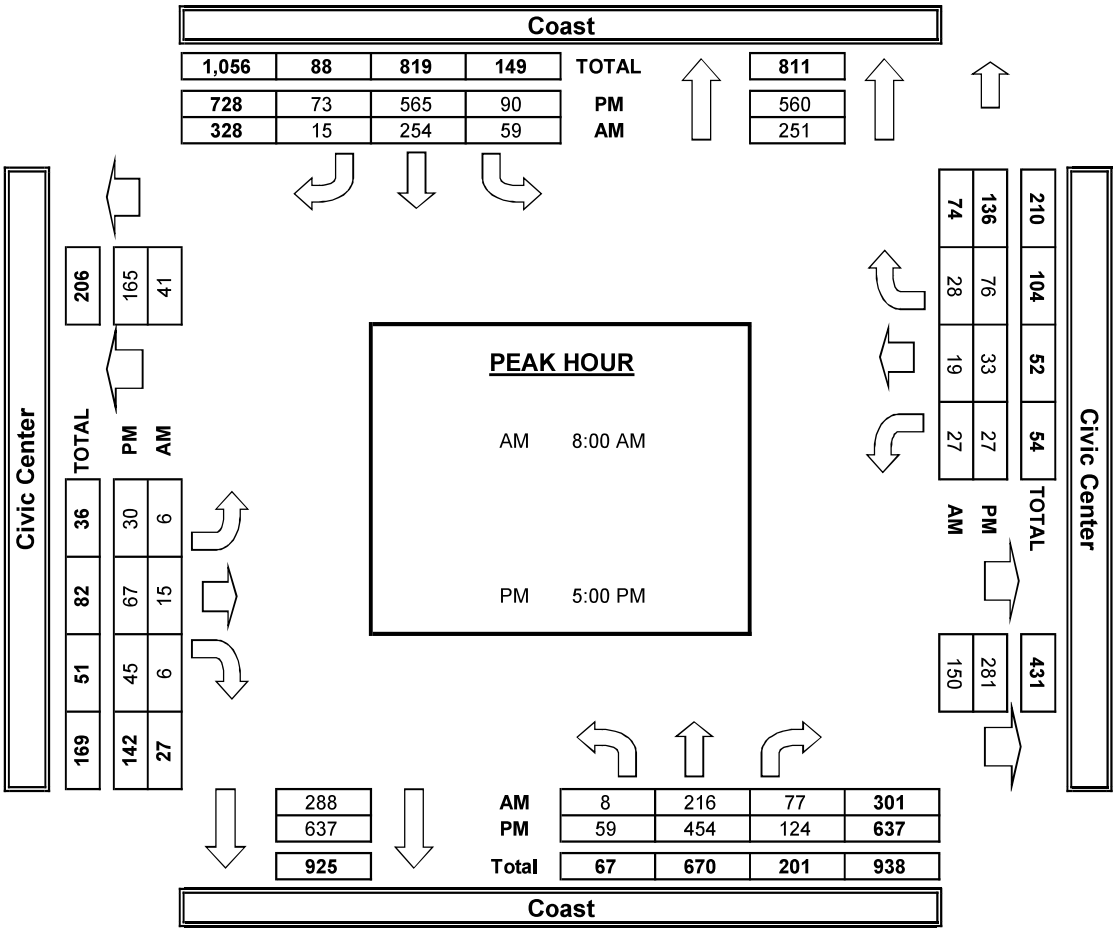


		PEDESTRIAN + BIKE CROSSINGS					PEDESTRIAN CROSSINGS					BICYCLE CROSSINGS				
		N SIDE	S SIDE	E SIDE	W SIDE	TOTAL	N SIDE	S SIDE	E SIDE	W SIDE	TOTAL	NS	SS	ES	WS	TOTAL
AM	7:00 AM	1	1	2	2	6	0	1	1	2	4	1	0	1	0	2
	7:15 AM	4	1	1	3	9	3	1	1	3	8	1	0	0	0	1
	7:30 AM	1	1	1	4	7	1	1	1	4	7	0	0	0	0	0
	7:45 AM	0	7	2	3	12	0	6	2	2	10	0	1	0	1	2
	8:00 AM	2	8	3	3	16	2	7	3	3	15	0	1	0	0	1
	8:15 AM	0	2	1	1	4	0	2	0	1	3	0	0	1	0	1
	8:30 AM	2	3	5	2	12	1	3	2	2	8	1	0	3	0	4
	8:45 AM	3	8	4	4	19	3	7	4	4	18	0	1	0	0	1
	TOTAL	13	31	19	22	85	10	28	14	21	73	3	3	5	1	12
	AM BEGIN PEAK HR			8:00 AM			6	19	9	10	44					
PM	4:00 PM	12	6	11	15	44	8	6	9	13	36	4	0	2	2	8
	4:15 PM	6	11	6	11	34	5	11	6	9	31	1	0	0	2	3
	4:30 PM	15	43	20	11	89	12	43	19	10	84	3	0	1	1	5
	4:45 PM	8	27	8	9	52	8	27	8	9	52	0	0	0	0	0
	5:00 PM	32	21	11	14	78	32	20	11	13	76	0	1	0	1	2
	5:15 PM	41	65	21	24	151	40	64	21	23	148	1	1	0	1	3
	5:30 PM	41	72	20	29	162	41	72	20	29	162	0	0	0	0	0
	5:45 PM	28	30	33	26	117	28	30	33	26	117	0	0	0	0	0
	TOTAL	183	275	130	139	727	174	273	127	132	706	9	2	3	7	21
	PM BEGIN PEAK HR			5:00 PM			141	186	85	91	503					

AimTD LLC

TURNING MOVEMENT COUNTS





INTERSECTION TURNING MOVEMENT COUNTS

T218

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

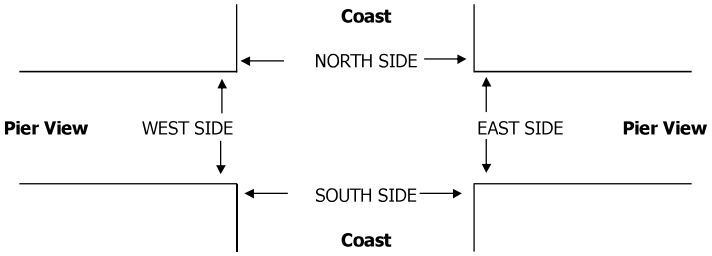
DATE:			
Tue, Oct 30, 18	LOCATION:	Oceanside	PROJECT #: SC1958
	NORTH & SOUTH:	Coast	LOCATION #: 8
	EAST & WEST:	Pier View	CONTROL: SIGNAL

NOTES:

AM / PM / MD / OTHER / OTHER — ▲ N, ◄ W, E ►, S ▼

☑ Add U-Turns to Left Turns

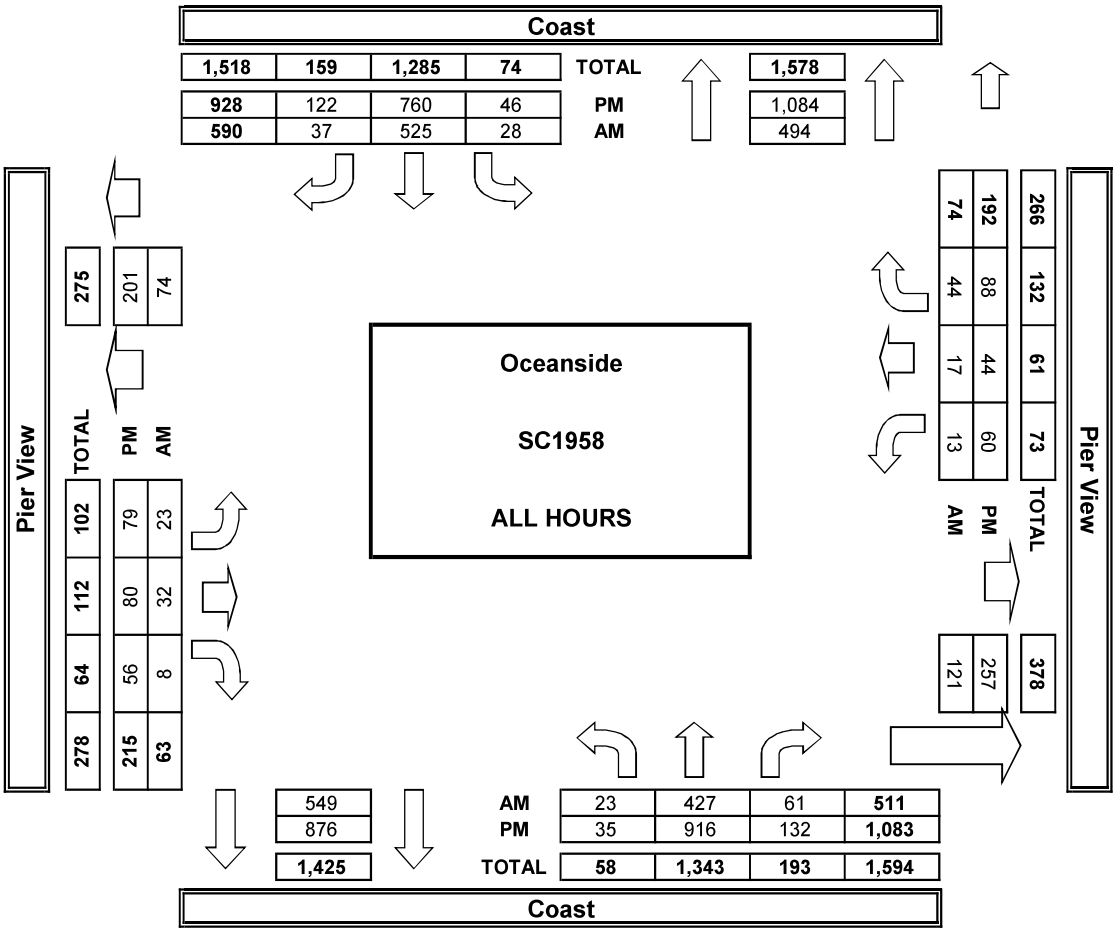
		NORTHBOUND Coast			SOUTHBOUND Coast			EASTBOUND Pier View			WESTBOUND Pier View				U-TURNS				
	LANES:	NL 0	NT 2	NR 0	SL 0	ST 2	SR 0	EL 1	ET 1	ER 0	WL 1	WT 1	WR 0	TOTAL	NB 0	SB 0	EB 0	WB 0	TTL
AM	7:00 AM	0	54	3	4	102	1	2	8	0	2	1	5	182	0	0	0	0	0
	7:15 AM	1	63	3	1	68	3	0	2	0	0	3	6	150	0	0	0	0	0
	7:30 AM	5	62	6	0	65	4	1	2	2	2	0	4	153	1	0	0	0	1
	7:45 AM	4	54	10	6	62	10	2	2	0	1	3	5	159	0	0	0	0	0
	8:00 AM	5	33	10	3	54	1	6	3	3	1	1	4	124	0	0	0	0	0
	8:15 AM	1	43	7	3	57	6	4	4	0	5	2	2	134	0	0	0	0	0
	8:30 AM	3	55	10	6	66	6	5	4	1	0	3	9	168	0	0	0	0	0
	8:45 AM	4	63	12	5	51	6	3	7	2	2	4	9	168	2	0	0	0	2
	VOLUMES	23	427	61	28	525	37	23	32	8	13	17	44	1,238	3	0	0	0	3
	APPROACH %	5%	84%	12%	5%	89%	6%	37%	51%	13%	18%	23%	59%						
	APP/DEPART	511	/	494	590	/	549	63	/	121	74	/	74	0					
	BEGIN PEAK HR		7:00 AM																
	VOLUMES	10	233	22	11	297	18	5	14	2	5	7	20	644					
	APPROACH %	4%	88%	8%	3%	91%	6%	24%	67%	10%	16%	22%	63%						
	PEAK HR FACTOR		0.908			0.762			0.525			0.889		0.885					
	APP/DEPART	265	/	258	326	/	305	21	/	47	32	/	34	0					
PM	4:00 PM	1	108	19	5	98	6	9	12	7	5	4	13	287	0	1	0	0	1
	4:15 PM	6	101	15	5	83	14	5	8	5	8	5	16	271	0	0	0	0	0
	4:30 PM	1	96	19	2	100	19	10	7	5	10	7	10	286	0	0	0	0	0
	4:45 PM	5	135	21	11	99	19	8	8	6	6	3	6	327	0	0	0	0	0
	5:00 PM	7	122	11	6	76	14	12	8	5	12	5	11	289	0	0	0	0	0
	5:15 PM	6	106	12	3	92	18	7	9	10	6	6	5	280	0	0	0	0	0
	5:30 PM	5	131	14	5	103	15	14	16	8	8	4	14	337	0	0	0	0	0
	5:45 PM	4	117	21	9	109	17	14	12	10	5	10	13	341	0	0	0	0	0
	VOLUMES	35	916	132	46	760	122	79	80	56	60	44	88	2,418	0	1	0	0	1
	APPROACH %	3%	85%	12%	5%	82%	13%	37%	37%	26%	31%	23%	46%						
	APP/DEPART	1,083	/	1,084	928	/	876	215	/	257	192	/	201	0					
	BEGIN PEAK HR		5:00 PM																
	VOLUMES	22	476	58	23	380	64	47	45	33	31	25	43	1,247					
	APPROACH %	4%	86%	10%	5%	81%	14%	38%	36%	26%	31%	25%	43%						
	PEAK HR FACTOR		0.927			0.865			0.822			0.884		0.914					
	APP/DEPART	556	/	566	467	/	444	125	/	126	99	/	111	0					

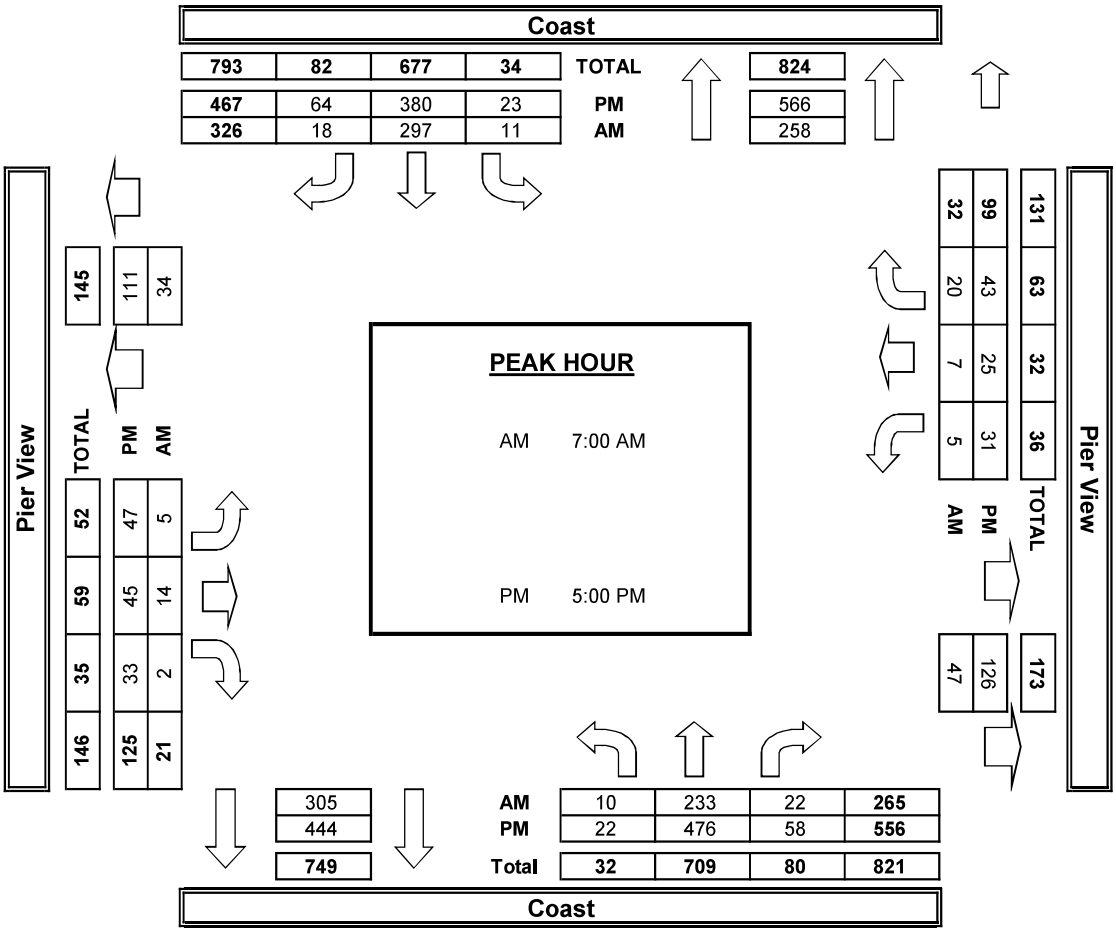


		PEDESTRIAN + BIKE CROSSINGS					PEDESTRIAN CROSSINGS					BICYCLE CROSSINGS				
		N SIDE	S SIDE	E SIDE	W SIDE	TOTAL	N SIDE	S SIDE	E SIDE	W SIDE	TOTAL	NS	SS	ES	WS	TOTAL
AM	7:00 AM	0	2	2	2	6	0	2	2	2	6	0	0	0	0	0
	7:15 AM	1	3	2	2	8	1	3	1	2	7	0	0	1	0	1
	7:30 AM	4	1	2	1	8	4	1	2	1	8	0	0	0	0	0
	7:45 AM	7	4	4	2	17	7	4	4	2	17	0	0	0	0	0
	8:00 AM	5	5	3	5	18	5	4	3	5	17	0	1	0	0	1
	8:15 AM	4	2	2	2	10	4	2	1	2	9	0	0	1	0	1
	8:30 AM	8	1	2	1	12	8	1	2	0	11	0	0	0	1	1
	8:45 AM	9	4	3	2	18	9	4	3	2	18	0	0	0	0	0
	TOTAL	38	22	20	17	97	38	21	18	16	93	0	1	2	1	4
	AM BEGIN PEAK HR	7:00 AM					12	10	9	7	38					
PM	4:00 PM	12	15	6	4	37	11	14	6	4	35	1	1	0	0	2
	4:15 PM	12	13	11	15	51	12	13	10	14	49	0	0	1	1	2
	4:30 PM	2	7	8	10	27	2	7	6	9	24	0	0	2	1	3
	4:45 PM	4	7	17	12	40	4	7	16	11	38	0	0	1	1	2
	5:00 PM	18	12	18	23	71	14	10	15	22	61	4	2	3	1	10
	5:15 PM	20	14	13	16	63	17	14	12	16	59	3	0	1	0	4
	5:30 PM	12	10	13	11	46	12	8	13	10	43	0	2	0	1	3
	5:45 PM	28	18	9	14	69	27	18	9	14	68	1	0	0	0	1
	TOTAL	108	96	95	105	404	99	91	87	100	377	9	5	8	5	27
	PM BEGIN PEAK HR	5:00 PM					70	50	49	62	231					

AimTD LLC

TURNING MOVEMENT COUNTS





INTERSECTION TURNING MOVEMENT COUNTS

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

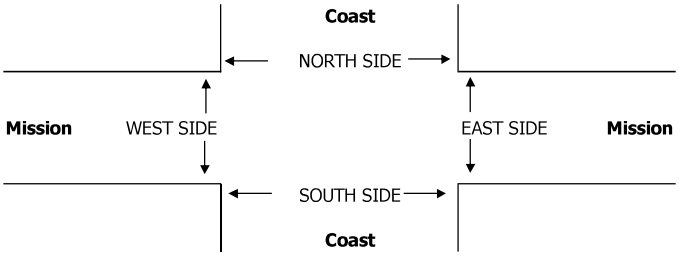
DATE:			
Thu, Oct 25, 18	LOCATION:	Oceanside	PROJECT #: SC1958
	NORTH & SOUTH:	Coast	LOCATION #: 9
	EAST & WEST:	Mission	CONTROL: SIGNAL

NOTES:

AM / PM / MD / OTHER / OTHER — ▲ N, ◄ W, E ►, S ▼

☑ Add U-Turns to Left Turns

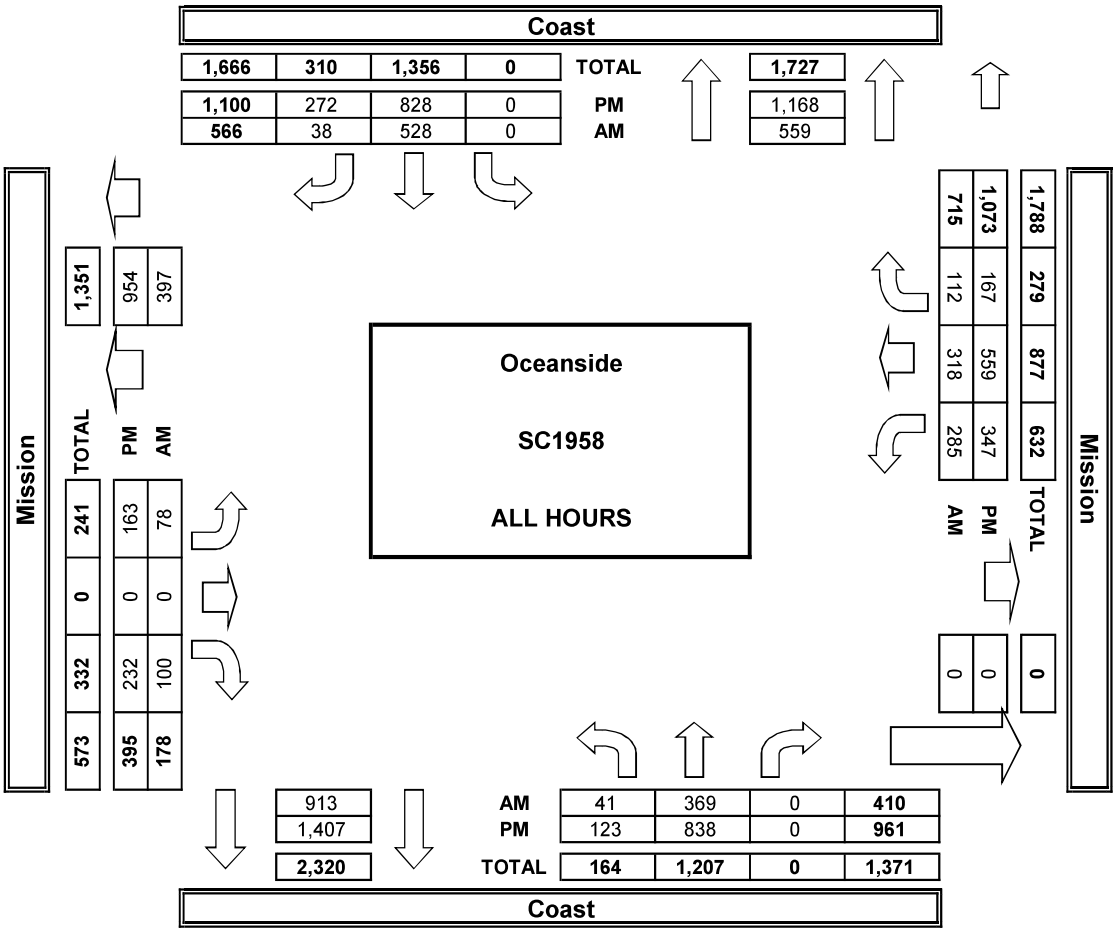
		NORTHBOUND Coast			SOUTHBOUND Coast			EASTBOUND Mission			WESTBOUND Mission				U-TURNS				
	LANES:	NL 1	NT 2	NR X	SL X	ST 2	SR 0	EL 0.5	ET X	ER 1.5	WL 1	WT 1.5	WR 0.5	TOTAL	NB 0	SB 0	EB 0	WB 0	TTL
AM	7:00 AM	3	39	0	0	87	7	5	0	5	35	29	7	217	0	0	0	0	0
	7:15 AM	6	43	0	0	65	1	6	0	10	47	38	17	233	0	0	0	0	0
	7:30 AM	5	52	0	0	71	3	13	0	14	38	56	14	266	0	0	0	0	0
	7:45 AM	5	42	0	0	64	5	6	0	15	43	39	15	234	0	0	0	0	0
	8:00 AM	6	48	0	0	55	6	12	0	13	30	40	8	218	0	0	0	0	0
	8:15 AM	4	43	0	0	66	4	12	0	16	28	32	15	220	0	0	0	0	0
	8:30 AM	6	39	0	0	69	6	16	0	13	29	37	14	229	0	0	0	0	0
	8:45 AM	6	63	0	0	51	6	8	0	14	35	47	22	252	0	0	0	0	0
	VOLUMES	41	369	0	0	528	38	78	0	100	285	318	112	1,869	0	0	0	0	0
	APPROACH %	10%	90%	0%	0%	93%	7%	44%	0%	56%	40%	44%	16%						
	APP/DEPART	410	/	559	566	/	913	178	/	0	715	/	397	0					
	BEGIN PEAK HR		7:15 AM																
	VOLUMES	22	185	0	0	255	15	37	0	52	158	173	54	951					
	APPROACH %	11%	89%	0%	0%	94%	6%	42%	0%	58%	41%	45%	14%						
	PEAK HR FACTOR		0.908			0.912			0.824			0.891		0.894					
	APP/DEPART	207	/	276	270	/	465	89	/	0	385	/	210	0					
PM	4:00 PM	4	94	0	0	106	23	17	0	33	43	55	17	392	0	0	0	0	0
	4:15 PM	10	77	0	0	93	24	27	0	25	49	66	23	394	0	0	0	0	0
	4:30 PM	13	95	0	0	85	36	17	0	28	41	61	19	395	0	0	0	0	0
	4:45 PM	23	103	0	0	93	34	26	0	27	41	89	18	454	0	0	0	0	0
	5:00 PM	19	122	0	0	122	39	19	0	24	41	63	25	474	0	0	0	0	0
	5:15 PM	17	99	0	0	112	34	15	0	36	48	76	14	451	0	0	0	0	0
	5:30 PM	24	134	0	0	108	44	19	0	31	36	67	21	484	0	0	0	0	0
	5:45 PM	13	114	0	0	109	38	23	0	28	48	82	30	485	0	0	0	0	0
	VOLUMES	123	838	0	0	828	272	163	0	232	347	559	167	3,529	0	0	0	0	0
	APPROACH %	13%	87%	0%	0%	75%	25%	41%	0%	59%	32%	52%	16%						
	APP/DEPART	961	/	1,168	1,100	/	1,407	395	/	0	1,073	/	954	0					
	BEGIN PEAK HR		5:00 PM																
	VOLUMES	73	469	0	0	451	155	76	0	119	173	288	90	1,894					
	APPROACH %	13%	87%	0%	0%	74%	26%	39%	0%	61%	31%	52%	16%						
	PEAK HR FACTOR		0.858			0.941			0.956			0.861		0.976					
	APP/DEPART	542	/	635	606	/	743	195	/	0	551	/	516	0					

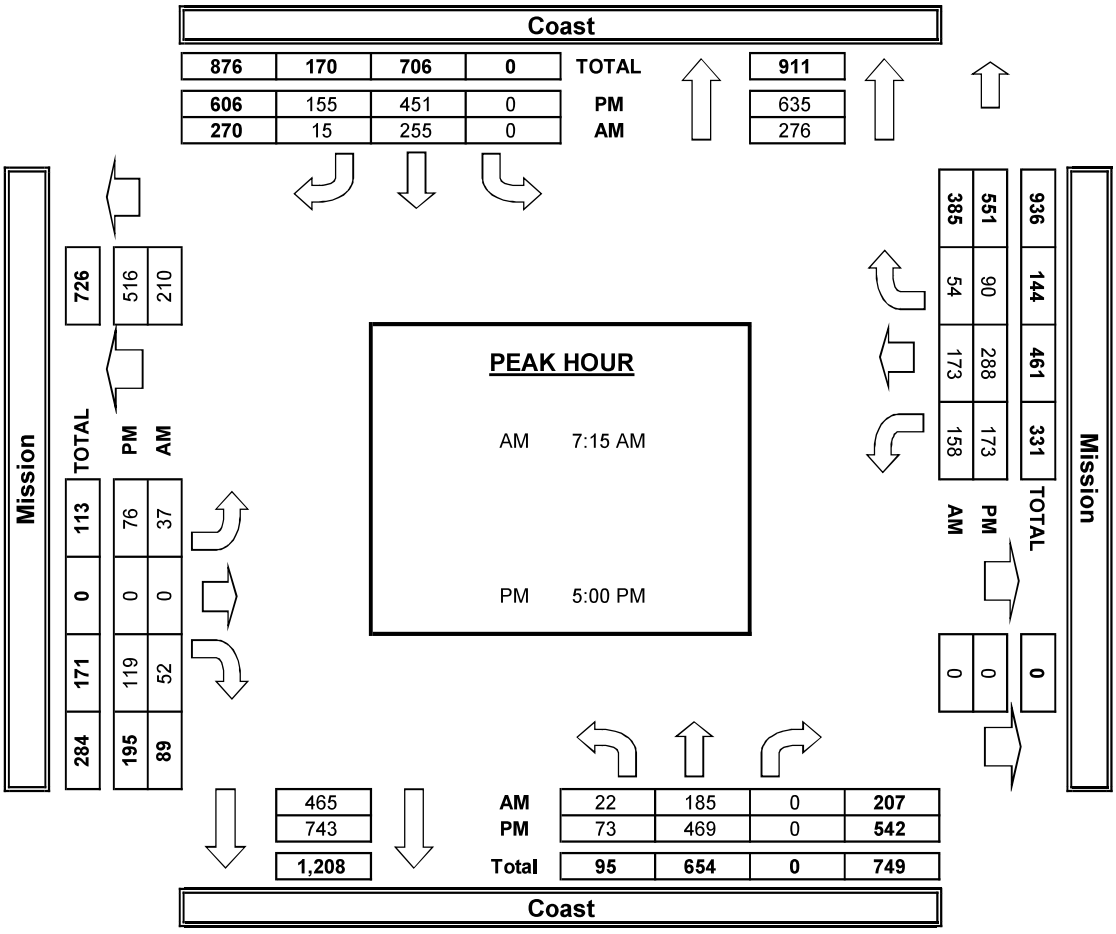


		PEDESTRIAN + BIKE CROSSINGS					PEDESTRIAN CROSSINGS					BICYCLE CROSSINGS				
		N SIDE	S SIDE	E SIDE	W SIDE	TOTAL	N SIDE	S SIDE	E SIDE	W SIDE	TOTAL	NS	SS	ES	WS	TOTAL
AM	7:00 AM	2	0	1	1	4	2	0	1	1	4	0	0	0	0	0
	7:15 AM	7	5	1	5	18	5	4	0	5	14	2	1	1	0	4
	7:30 AM	3	5	3	4	15	3	5	3	4	15	0	0	0	0	0
	7:45 AM	8	3	0	7	18	7	2	0	7	16	1	1	0	0	2
	8:00 AM	2	0	3	4	9	2	0	3	4	9	0	0	0	0	0
	8:15 AM	4	1	3	0	8	4	1	3	0	8	0	0	0	0	0
	8:30 AM	3	2	6	5	16	3	2	3	5	13	0	0	3	0	3
	8:45 AM	10	7	2	0	19	9	7	2	0	18	1	0	0	0	1
	TOTAL	39	23	19	26	107	35	21	15	26	97	4	2	4	0	10
	AM BEGIN PEAK HR	7:15 AM					17	11	6	20	54					
PM	4:00 PM	19	15	14	18	66	17	14	10	18	59	2	1	4	0	7
	4:15 PM	15	19	13	11	58	15	15	11	11	52	0	4	2	0	6
	4:30 PM	25	6	10	21	62	24	4	9	18	55	1	2	1	3	7
	4:45 PM	24	16	7	19	66	24	16	7	18	65	0	0	0	1	1
	5:00 PM	34	18	17	39	108	31	18	17	38	104	3	0	0	1	4
	5:15 PM	43	9	15	24	91	43	9	14	22	88	0	0	1	2	3
	5:30 PM	42	46	10	24	122	42	45	10	24	121	0	1	0	0	1
	5:45 PM	42	42	17	31	132	42	41	16	31	130	0	1	1	0	2
	TOTAL	244	171	103	187	705	238	162	94	180	674	6	9	9	7	31
	PM BEGIN PEAK HR	5:00 PM					158	113	57	115	443					

AimTD LLC

TURNING MOVEMENT COUNTS





INTERSECTION TURNING MOVEMENT COUNTS

T218

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

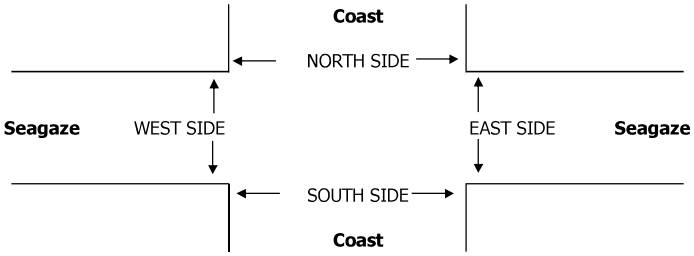
DATE:					
Thu, Oct 25, 18	LOCATION:	Oceanside	PROJECT #:	SC1958
	NORTH & SOUTH:	Coast	LOCATION #:	10
	EAST & WEST:	Seagaze	CONTROL:	SIGNAL

NOTES:

AM / PM / MD / OTHER / OTHER — ◄ W — ▲ N — S ▼ — E ►

☑ Add U-Turns to Left Turns

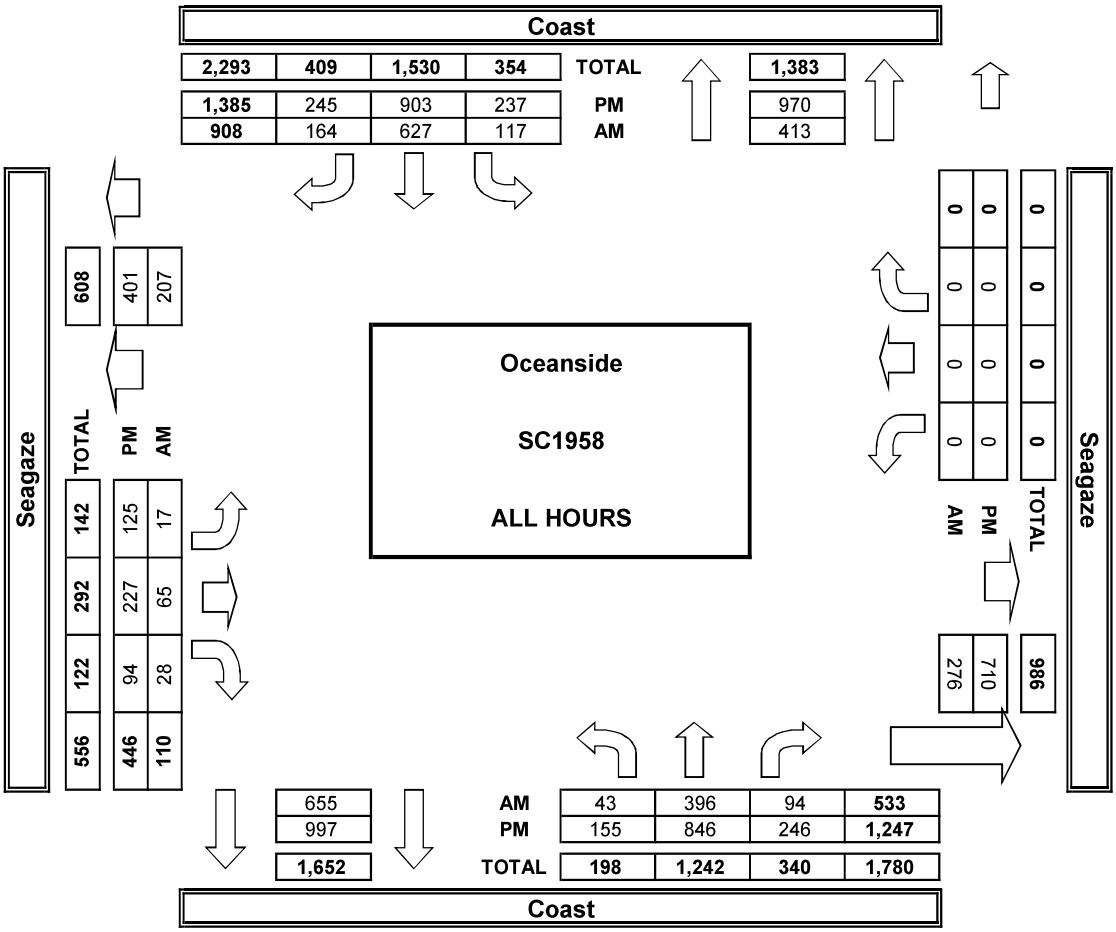
		NORTHBOUND Coast			SOUTHBOUND Coast			EASTBOUND Seagaze			WESTBOUND Seagaze				U-TURNS				
	LANES:	NL 1	NT 2	NR 0	SL 1	ST 2	SR 0	EL 1	ET 1	ER 0	WL X	WT X	WR X	TOTAL	NB 0	SB 0	EB 0	WB 0	TTL
AM	7:00 AM	4	44	15	16	79	31	3	5	3	0	0	0	200	0	0	0	0	0
	7:15 AM	5	48	17	15	85	22	1	4	2	0	0	0	199	0	0	0	0	0
	7:30 AM	6	52	7	9	83	28	2	8	4	0	0	0	199	0	0	0	0	0
	7:45 AM	5	42	4	13	92	19	3	7	1	0	0	0	186	0	0	0	0	0
	8:00 AM	5	54	14	16	70	13	1	14	4	0	0	0	191	0	0	0	0	0
	8:15 AM	8	44	13	14	78	12	2	14	4	0	0	0	189	0	0	0	0	0
	8:30 AM	3	52	14	22	72	17	0	9	7	0	0	0	196	0	0	0	0	0
	8:45 AM	7	60	10	12	68	22	5	4	3	0	0	0	191	0	0	0	0	0
	VOLUMES	43	396	94	117	627	164	17	65	28	0	0	0	1,551	0	0	0	0	0
	APPROACH %	8%	74%	18%	13%	69%	18%	15%	59%	25%	0%	0%	0%						
	APP/DEPART	533	/	413	908	/	655	110	/	276	0	/	207	0					
	BEGIN PEAK HR		7:00 AM																
	VOLUMES	20	186	43	53	339	100	9	24	10	0	0	0	784					
	APPROACH %	8%	75%	17%	11%	69%	20%	21%	56%	23%	0%	0%	0%						
	PEAK HR FACTOR		0.889			0.976			0.768			0.000		0.980					
	APP/DEPART	249	/	195	492	/	349	43	/	120	0	/	120	0					
PM	4:00 PM	11	85	28	34	132	19	11	27	10	0	0	0	357	0	0	0	0	0
	4:15 PM	8	85	27	26	114	24	8	17	6	0	0	0	315	0	0	0	0	0
	4:30 PM	11	93	30	18	107	26	8	19	17	0	0	0	329	0	0	0	0	0
	4:45 PM	23	116	38	26	108	27	20	31	11	0	0	0	400	0	0	0	0	0
	5:00 PM	20	117	32	29	120	30	15	42	12	0	0	0	417	0	0	0	0	0
	5:15 PM	30	108	22	36	105	48	14	21	7	0	0	0	391	0	0	1	0	1
	5:30 PM	28	132	31	37	103	40	28	31	9	0	0	0	439	0	0	0	0	0
	5:45 PM	24	110	38	31	114	31	21	39	22	0	0	0	430	0	0	0	0	0
	VOLUMES	155	846	246	237	903	245	125	227	94	0	0	0	3,078	0	0	1	0	1
	APPROACH %	12%	68%	20%	17%	65%	18%	28%	51%	21%	0%	0%	0%						
	APP/DEPART	1,247	/	970	1,385	/	997	446	/	710	0	/	401	0					
	BEGIN PEAK HR		5:00 PM																
	VOLUMES	102	467	123	133	442	149	78	133	50	0	0	0	1,677					
	APPROACH %	15%	67%	18%	18%	61%	21%	30%	51%	19%	0%	0%	0%						
	PEAK HR FACTOR		0.906			0.958			0.796			0.000		0.955					
	APP/DEPART	692	/	544	724	/	492	261	/	389	0	/	252	0					

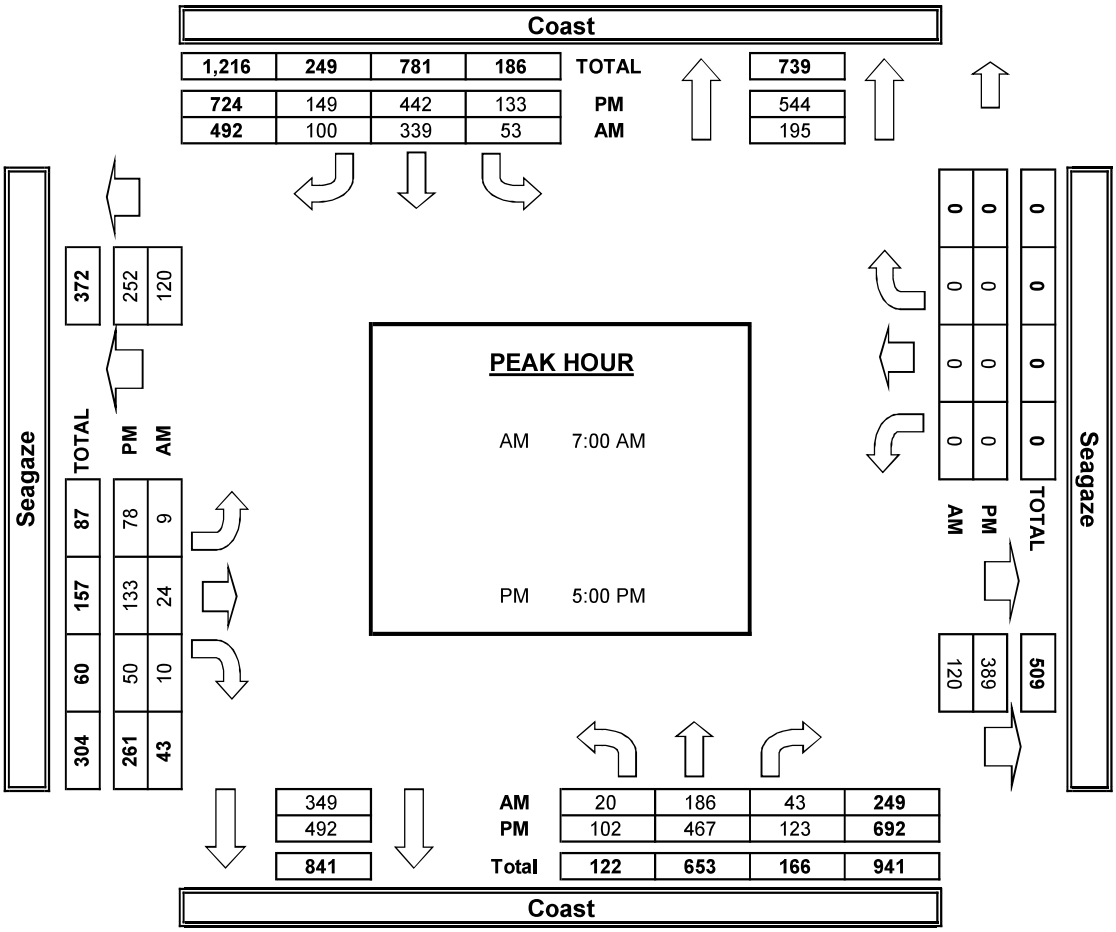


		PEDESTRIAN + BIKE CROSSINGS					PEDESTRIAN CROSSINGS					BICYCLE CROSSINGS				
		N SIDE	S SIDE	E SIDE	W SIDE	TOTAL	N SIDE	S SIDE	E SIDE	W SIDE	TOTAL	NS	SS	ES	WS	TOTAL
AM	7:00 AM	2	15	1	1	19	2	14	0	1	17	0	1	1	0	2
	7:15 AM	4	10	1	4	19	4	8	1	3	16	0	2	0	1	3
	7:30 AM	7	1	1	4	13	7	1	1	4	13	0	0	0	0	0
	7:45 AM	6	3	1	4	14	6	3	1	4	14	0	0	0	0	0
	8:00 AM	5	0	1	3	9	4	0	1	2	7	1	0	0	1	2
	8:15 AM	4	1	0	1	6	4	1	0	1	6	0	0	0	0	0
	8:30 AM	4	2	4	3	13	4	2	1	1	8	0	0	3	2	5
	8:45 AM	2	6	1	1	10	2	4	1	1	8	0	2	0	0	2
	TOTAL	34	38	10	21	103	33	33	6	17	89	1	5	4	4	14
	AM BEGIN PEAK HR	7:00 AM					19	26	3	12	60					
PM	4:00 PM	7	15	15	5	42	7	15	11	5	38	0	0	4	0	4
	4:15 PM	8	7	10	7	32	7	6	8	5	26	1	1	2	2	6
	4:30 PM	9	5	12	7	33	9	4	11	7	31	0	1	1	0	2
	4:45 PM	4	11	6	16	37	3	9	5	16	33	1	2	1	0	4
	5:00 PM	20	1	15	10	46	20	1	15	10	46	0	0	0	0	0
	5:15 PM	19	6	5	14	44	17	4	4	12	37	2	2	1	2	7
	5:30 PM	11	8	7	18	44	11	8	7	18	44	0	0	0	0	0
	5:45 PM	7	8	11	19	45	7	7	11	19	44	0	1	0	0	1
	TOTAL	85	61	81	96	323	81	54	72	92	299	4	7	9	4	24
	PM BEGIN PEAK HR	5:00 PM					55	20	37	59	171					

AimTD LLC

TURNING MOVEMENT COUNTS





INTERSECTION TURNING MOVEMENT COUNTS

T218

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

DATE: Thu, Oct 25, 18

LOCATION: Oceanside
NORTH & SOUTH: Coast
EAST & WEST: Driveway 1

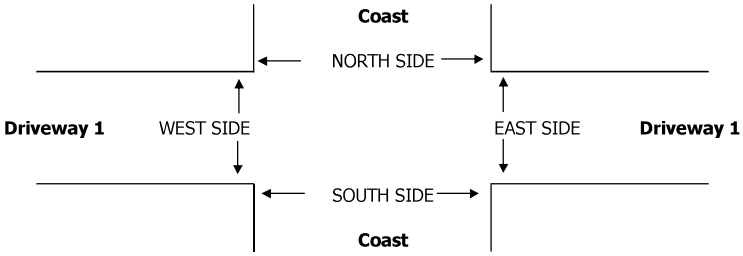
PROJECT #: SC1958
LOCATION #: 11
CONTROL: STOP E/W

NOTES:

AM / PM / MD / OTHER / OTHER — ▲ N, ◄ W, E ►, S ▼

☑ Add U-Turns to Left Turns

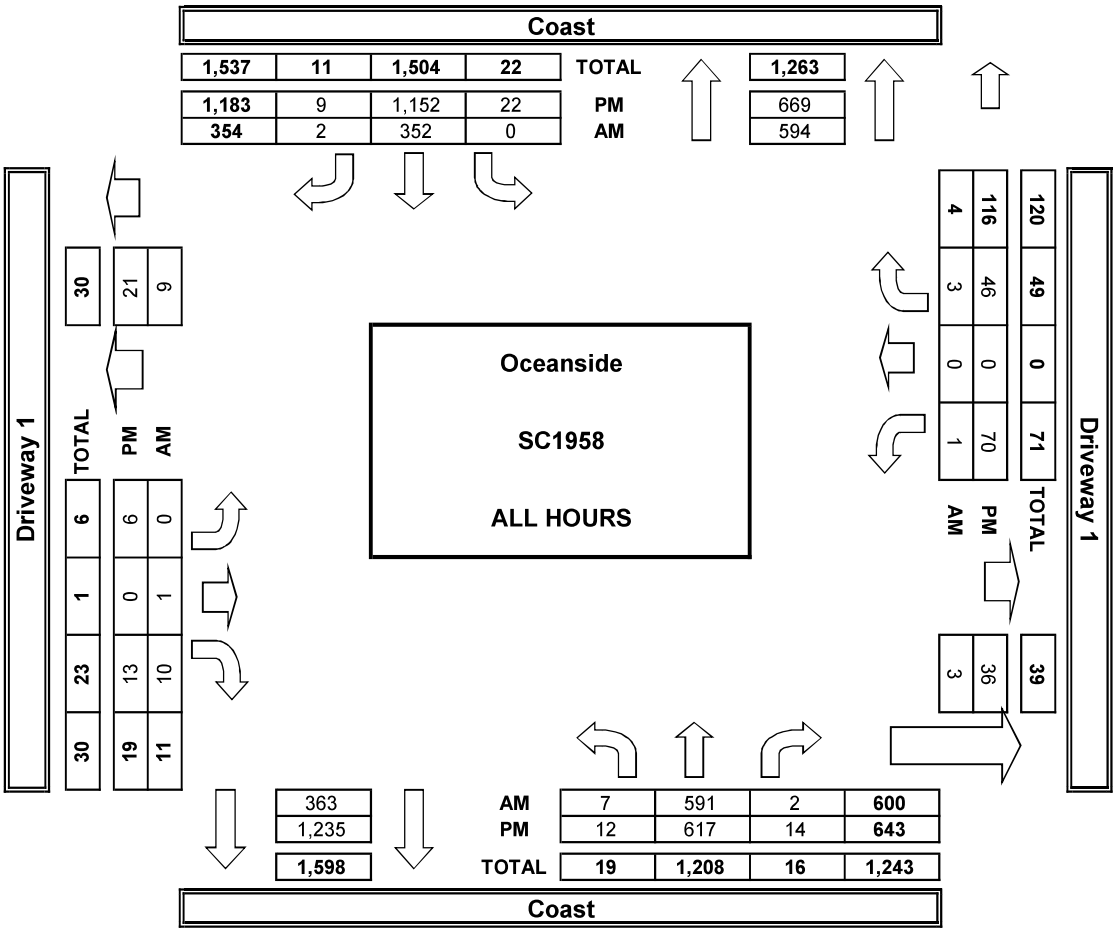
		NORTHBOUND Coast			SOUTHBOUND Coast			EASTBOUND Driveway 1			WESTBOUND Driveway 1				U-TURNS				
	LANES:	NL 0	NT 1	NR 0	SL 0	ST 1	SR 0	EL 0	ET 1	ER 0	WL 0	WT 1	WR 0	TOTAL	NB 0	SB 0	EB 0	WB 0	TTL
AM	7:00 AM	3	95	1	0	46	1	0	1	2	0	0	2	151	0	0	0	0	0
AM	7:15 AM	0	105	0	0	32	0	0	0	3	0	0	0	140	0	0	0	0	0
AM	7:30 AM	0	100	0	0	45	0	0	0	0	0	0	0	145	0	0	0	0	0
AM	7:45 AM	0	74	0	0	48	1	0	0	2	0	0	0	125	0	0	0	0	0
AM	8:00 AM	0	55	0	0	44	0	0	0	1	1	0	0	101	0	0	0	0	0
AM	8:15 AM	2	57	0	0	46	0	0	0	0	0	0	0	105	0	0	0	0	0
AM	8:30 AM	0	48	0	0	47	0	0	0	1	0	0	0	96	0	0	0	0	0
AM	8:45 AM	2	57	1	0	44	0	0	0	1	0	0	1	106	0	0	0	0	0
AM	VOLUMES	7	591	2	0	352	2	0	1	10	1	0	3	969	0	0	0	0	0
AM	APPROACH %	1%	99%	0%	0%	99%	1%	0%	9%	91%	25%	0%	75%						
AM	APP/DEPART	600	/	594	354	/	363	11	/	3	4	/	9	0					
AM	BEGIN PEAK HR		7:00 AM																
AM	VOLUMES	3	374	1	0	171	2	0	1	7	0	0	2	561					
AM	APPROACH %	1%	99%	0%	0%	99%	1%	0%	13%	88%	0%	0%	100%						
AM	PEAK HR FACTOR		0.900			0.883			0.667			0.250		0.929					
AM	APP/DEPART	378	/	376	173	/	178	8	/	2	2	/	5	0					
PM	4:00 PM	0	70	0	5	133	0	0	0	0	3	0	5	216	0	0	0	0	0
PM	4:15 PM	2	78	1	4	144	0	0	0	1	11	0	8	249	0	0	0	0	0
PM	4:30 PM	4	79	1	1	160	2	2	0	5	8	0	7	269	0	0	0	0	0
PM	4:45 PM	1	83	1	1	156	0	0	0	1	9	0	2	254	0	0	0	0	0
PM	5:00 PM	0	82	2	2	132	0	2	0	0	8	0	2	230	0	0	0	0	0
PM	5:15 PM	3	70	3	2	153	3	1	0	3	13	0	3	254	0	0	0	0	0
PM	5:30 PM	1	80	2	3	151	4	1	0	0	8	0	6	256	0	0	0	0	0
PM	5:45 PM	1	75	4	4	123	0	0	0	3	10	0	13	233	0	0	0	0	0
PM	VOLUMES	12	617	14	22	1,152	9	6	0	13	70	0	46	1,961	0	0	0	0	0
PM	APPROACH %	2%	96%	2%	2%	97%	1%	32%	0%	68%	60%	0%	40%						
PM	APP/DEPART	643	/	669	1,183	/	1,235	19	/	36	116	/	21	0					
PM	BEGIN PEAK HR		4:30 PM																
PM	VOLUMES	8	314	7	6	601	5	5	0	9	38	0	14	1,007					
PM	APPROACH %	2%	95%	2%	1%	98%	1%	36%	0%	64%	73%	0%	27%						
PM	PEAK HR FACTOR		0.968			0.939			0.500			0.813		0.936					
PM	APP/DEPART	329	/	333	612	/	648	14	/	13	52	/	13	0					

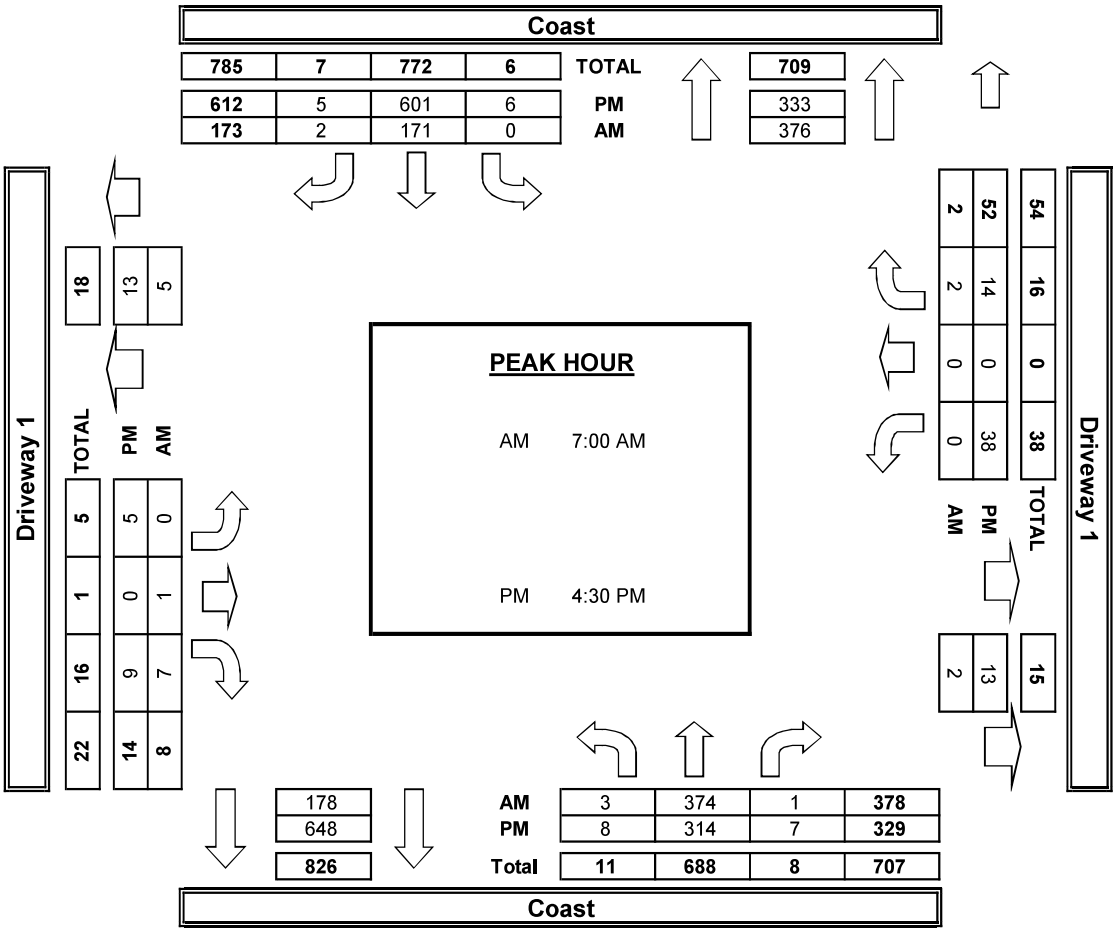


		PEDESTRIAN + BIKE CROSSINGS					PEDESTRIAN CROSSINGS					BICYCLE CROSSINGS				
		N SIDE	S SIDE	E SIDE	W SIDE	TOTAL	N SIDE	S SIDE	E SIDE	W SIDE	TOTAL	NS	SS	ES	WS	TOTAL
AM	7:00 AM	0	0	3	0	3	0	0	2	0	2	0	0	1	0	1
AM	7:15 AM	0	0	2	3	5	0	0	2	2	4	0	0	0	1	1
AM	7:30 AM	0	0	1	1	2	0	0	0	1	1	0	0	1	0	1
AM	7:45 AM	0	0	2	4	6	0	0	0	2	2	0	0	2	2	4
AM	8:00 AM	0	0	2	1	3	0	0	2	0	2	0	0	0	1	1
AM	8:15 AM	0	0	0	2	2	0	0	0	2	2	0	0	0	0	0
AM	8:30 AM	0	0	1	3	4	0	0	1	3	4	0	0	0	0	0
AM	8:45 AM	0	0	2	1	3	0	0	2	0	2	0	0	0	1	1
AM	TOTAL	0	0	13	15	28	0	0	9	10	19	0	0	4	5	9
AM	AM BEGIN PEAK HR	7:00 AM					0	0	4	5	9					
PM	4:00 PM	0	0	2	4	6	0	0	2	2	4	0	0	0	2	2
PM	4:15 PM	0	0	1	8	9	0	0	0	5	5	0	0	1	3	4
PM	4:30 PM	0	0	2	4	6	0	0	0	3	3	0	0	2	1	3
PM	4:45 PM	0	0	0	4	4	0	0	0	3	3	0	0	0	1	1
PM	5:00 PM	0	0	2	7	9	0	0	2	4	6	0	0	0	3	3
PM	5:15 PM	1	0	1	3	5	1	0	1	3	5	0	0	0	0	0
PM	5:30 PM	0	0	1	6	7	0	0	0	4	4	0	0	1	2	3
PM	5:45 PM	0	0	2	0	2	0	0	1	0	1	0	0	1	0	1
PM	TOTAL	1	0	11	36	48	1	0	6	24	31	0	0	5	12	17
PM	PM BEGIN PEAK HR	4:30 PM					1	0	3	13	17					

AimTD LLC

TURNING MOVEMENT COUNTS





INTERSECTION TURNING MOVEMENT COUNTS

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

DATE: Thu, Oct 25, 18

LOCATION: Oceanside
NORTH & SOUTH: Coast
EAST & WEST: Driveway 2

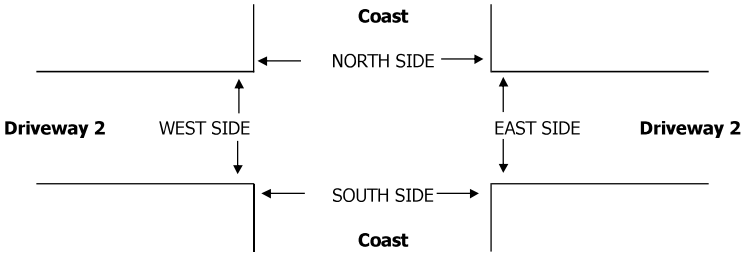
PROJECT #: SC1958
LOCATION #: 12
CONTROL: STOP W

NOTES:

AM / PM / MD / OTHER / OTHER — ▲ N ◄ W E ► S ▼

☑ Add U-Turns to Left Turns

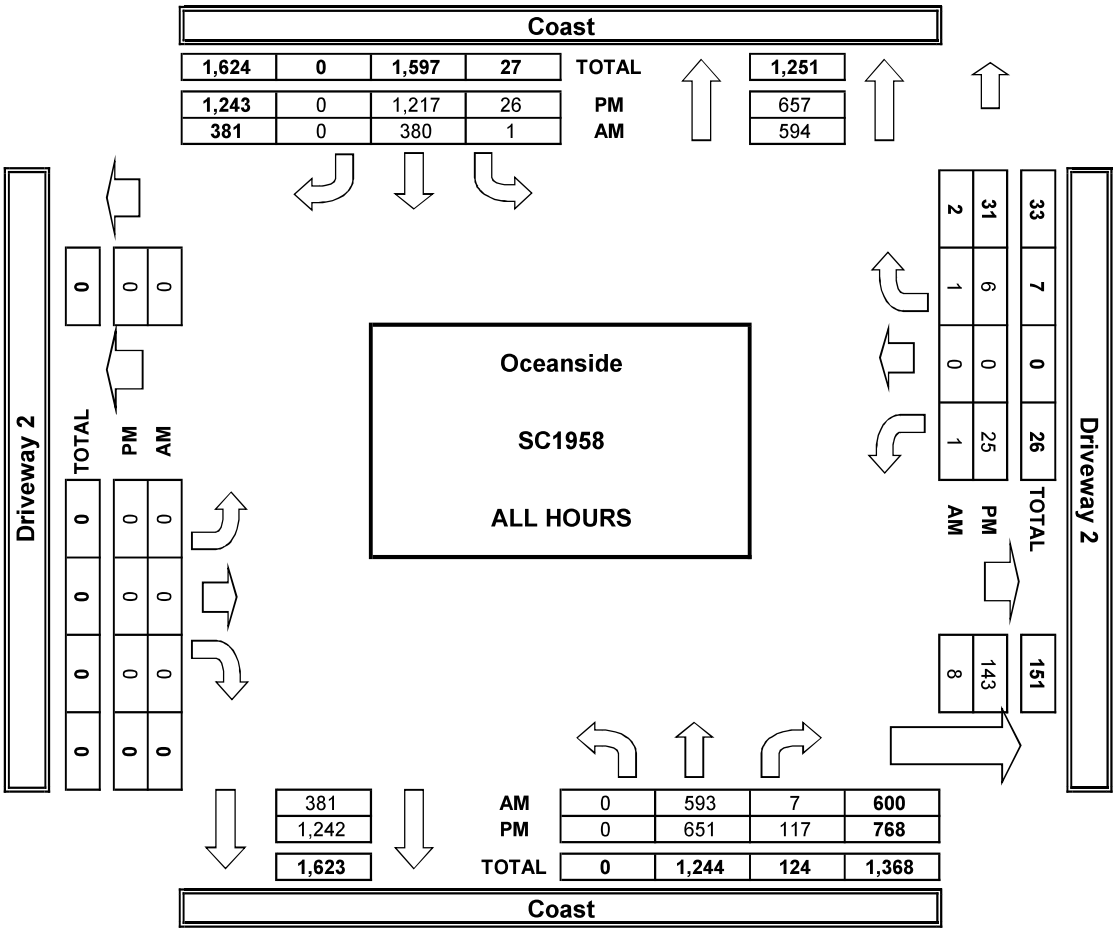
		NORTHBOUND Coast			SOUTHBOUND Coast			EASTBOUND Driveway 2			WESTBOUND Driveway 2				U-TURNS				
	LANES:	NL X	NT 1	NR 0	SL 1	ST 1	SR X	EL X	ET X	ER X	WL 0	WT X	WR 0	TOTAL	NB 0	SB 0	EB 0	WB 0	TTL
AM	7:00 AM	0	97	0	0	47	0	0	0	0	0	0	0	144	0	0	0	0	0
	7:15 AM	0	106	0	0	38	0	0	0	0	0	0	0	144	0	0	0	0	0
	7:30 AM	0	100	2	0	48	0	0	0	0	1	0	0	151	0	0	0	0	0
	7:45 AM	0	73	4	0	55	0	0	0	0	0	0	0	132	0	0	0	0	0
	8:00 AM	0	54	0	0	48	0	0	0	0	0	0	0	102	0	0	0	0	0
	8:15 AM	0	58	0	0	50	0	0	0	0	0	0	0	108	0	0	0	0	0
	8:30 AM	0	46	1	0	45	0	0	0	0	0	0	0	92	0	0	0	0	0
	8:45 AM	0	59	0	1	49	0	0	0	0	0	0	1	110	0	0	0	0	0
	VOLUMES	0	593	7	1	380	0	0	0	0	1	0	1	983	0	0	0	0	0
	APPROACH %	0%	99%	1%	0%	100%	0%	0%	0%	0%	50%	0%	50%						
	APP/DEPART	600	/	594	381	/	381	0	/	8	2	/	0	0					
	BEGIN PEAK HR		7:00 AM																
	VOLUMES	0	376	6	0	188	0	0	0	0	1	0	0	571					
	APPROACH %	0%	98%	2%	0%	100%	0%	0%	0%	0%	100%	0%	0%						
	PEAK HR FACTOR		0.901			0.855			0.000			0.250		0.945					
	APP/DEPART	382	/	376	188	/	189	0	/	6	1	/	0	0					
PM	4:00 PM	0	70	19	2	139	0	0	0	0	3	0	2	235	0	0	0	0	0
	4:15 PM	0	82	13	3	150	0	0	0	0	2	0	1	251	0	0	0	0	0
	4:30 PM	0	80	8	2	173	0	0	0	0	7	0	1	271	0	0	0	0	0
	4:45 PM	0	85	13	0	166	0	0	0	0	1	0	1	266	0	0	0	0	0
	5:00 PM	0	86	13	5	138	0	0	0	0	1	0	0	243	0	0	0	0	0
	5:15 PM	0	81	15	10	163	0	0	0	0	5	0	0	274	0	0	0	0	0
	5:30 PM	0	86	15	3	149	0	0	0	0	2	0	1	256	0	0	0	0	0
	5:45 PM	0	81	21	1	139	0	0	0	0	4	0	0	246	0	0	0	0	0
	VOLUMES	0	651	117	26	1,217	0	0	0	0	25	0	6	2,042	0	0	0	0	0
	APPROACH %	0%	85%	15%	2%	98%	0%	0%	0%	0%	81%	0%	19%						
	APP/DEPART	768	/	657	1,243	/	1,242	0	/	143	31	/	0	0					
	BEGIN PEAK HR		4:30 PM																
	VOLUMES	0	332	49	17	640	0	0	0	0	14	0	2	1,054					
	APPROACH %	0%	87%	13%	3%	97%	0%	0%	0%	0%	88%	0%	13%						
	PEAK HR FACTOR		0.962			0.939			0.000			0.500		0.962					
	APP/DEPART	381	/	334	657	/	654	0	/	66	16	/	0	0					

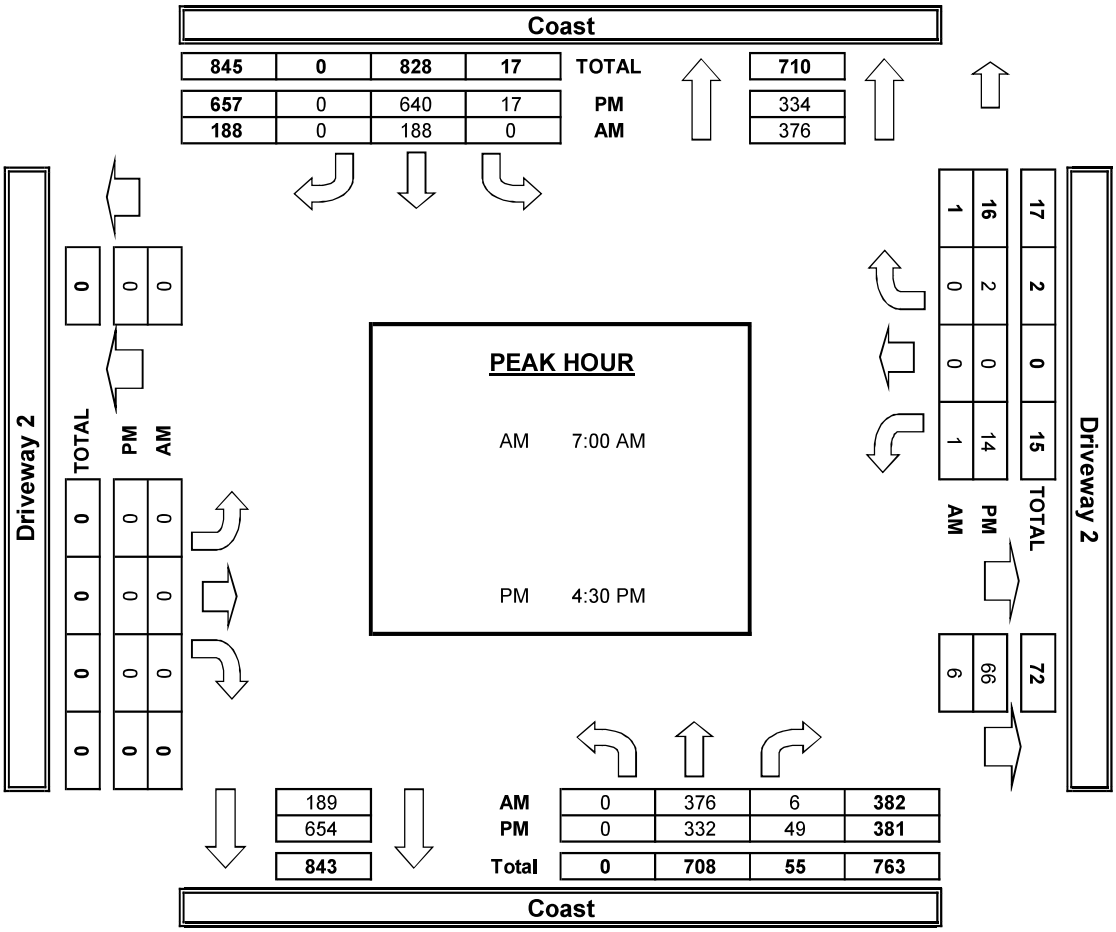


		PEDESTRIAN + BIKE CROSSINGS					PEDESTRIAN CROSSINGS					BICYCLE CROSSINGS				
		N SIDE	S SIDE	E SIDE	W SIDE	TOTAL	N SIDE	S SIDE	E SIDE	W SIDE	TOTAL	NS	SS	ES	WS	TOTAL
AM	7:00 AM	0	0	2	3	5	0	0	1	3	4	0	0	1	0	1
	7:15 AM	0	0	0	4	4	0	0	0	3	3	0	0	0	1	1
	7:30 AM	0	0	2	5	7	0	0	1	4	5	0	0	1	1	2
	7:45 AM	0	0	2	4	6	0	0	0	2	2	0	0	2	2	4
	8:00 AM	0	0	3	1	4	0	0	3	0	3	0	0	0	1	1
	8:15 AM	0	0	0	3	3	0	0	0	3	3	0	0	0	0	0
	8:30 AM	0	0	1	4	5	0	0	1	4	5	0	0	0	0	0
	8:45 AM	0	0	0	3	3	0	0	0	2	2	0	0	0	1	1
	TOTAL	0	0	10	27	37	0	0	6	21	27	0	0	4	6	10
	AM BEGIN PEAK HR	7:00 AM					0	0	2	12	14					
PM	4:00 PM	0	0	2	4	6	0	0	2	1	3	0	0	0	3	3
	4:15 PM	0	0	0	7	7	0	0	0	4	4	0	0	0	3	3
	4:30 PM	0	0	2	3	5	0	0	0	2	2	0	0	2	1	3
	4:45 PM	0	0	1	4	5	0	0	1	3	4	0	0	0	1	1
	5:00 PM	0	0	2	6	8	0	0	2	3	5	0	0	0	3	3
	5:15 PM	0	0	0	5	5	0	0	0	4	4	0	0	0	1	1
	5:30 PM	0	0	1	7	8	0	0	0	5	5	0	0	1	2	3
	5:45 PM	0	0	1	0	1	0	0	1	0	1	0	0	0	0	0
	TOTAL	0	0	9	36	45	0	0	6	22	28	0	0	3	14	17
	PM BEGIN PEAK HR	4:30 PM					0	0	3	12	15					

AimTD LLC

TURNING MOVEMENT COUNTS





Thursday, October 25, 2018 CITY: Oceanside PROJECT: SC1958

ADT1 Coast between Harbor and Costa Pacifica. Prepared by: Field Data Services of Arizona **Prepared by AimTD LLC tel. 714 253 7888**

AM Period	NB		SB		EB		WB			PM Period	NB		SB		EB		WB		
0:00	14		10		0		0			12:00	85		78		0		0		
0:15	6		3		0		0			12:15	91		77		0		0		
0:30	19		13		0		0			12:30	113		71		0		0		
0:45	5	44	10	36	0	0	0	0	80	12:45	85	374	73	299	0	0	0	0	673
1:00	7		5		0		0			13:00	75		94		0		0		
1:15	2		6		0		0			13:15	87		87		0		0		
1:30	4		3		0		0			13:30	77		75		0		0		
1:45	6	19	6	20	0	0	0	0	39	13:45	67	306	81	337	0	0	0	0	643
2:00	5		4		0		0			14:00	66		69		0		0		
2:15	4		3		0		0			14:15	54		76		0		0		
2:30	0		1		0		0			14:30	56		73		0		0		
2:45	2	11	3	11	0	0	0	0	22	14:45	79	255	76	294	0	0	0	0	549
3:00	6		0		0		0			15:00	62		95		0		0		
3:15	6		2		0		0			15:15	73		98		0		0		
3:30	5		4		0		0			15:30	75		107		0		0		
3:45	14	31	2	8	0	0	0	0	39	15:45	72	282	125	425	0	0	0	0	707
4:00	6		5		0		0			16:00	75		138		0		0		
4:15	6		2		0		0			16:15	86		148		0		0		
4:30	15		4		0		0			16:30	88		163		0		0		
4:45	8	35	4	15	0	0	0	0	50	16:45	85	334	157	606	0	0	0	0	940
5:00	10		3		0		0			17:00	86		134		0		0		
5:15	20		8		0		0			17:15	74		158		0		0		
5:30	32		3		0		0			17:30	87		158		0		0		
5:45	36	98	16	30	0	0	0	0	128	17:45	88	335	127	577	0	0	0	0	912
6:00	42		15		0		0			18:00	84		124		0		0		
6:15	63		14		0		0			18:15	98		124		0		0		
6:30	69		18		0		0			18:30	94		114		0		0		
6:45	87	261	25	72	0	0	0	0	333	18:45	94	370	102	464	0	0	0	0	834
7:00	97		47		0		0			19:00	101		44		0		0		
7:15	105		32		0		0			19:15	114		28		0		0		
7:30	100		45		0		0			19:30	110		40		0		0		
7:45	74	376	49	173	0	0	0	0	549	19:45	78	403	49	161	0	0	0	0	564
8:00	55		44		0		0			20:00	54		39		0		0		
8:15	57		46		0		0			20:15	59		45		0		0		
8:30	48		47		0		0			20:30	55		42		0		0		
8:45	58	218	44	181	0	0	0	0	399	20:45	59	227	40	166	0	0	0	0	393
9:00	51		40		0		0			21:00	44		48		0		0		
9:15	56		39		0		0			21:15	42		40		0		0		
9:30	45		61		0		0			21:30	38		31		0		0		
9:45	45	197	54	194	0	0	0	0	391	21:45	43	167	45	164	0	0	0	0	331
10:00	51		40		0		0			22:00	41		33		0		0		
10:15	51		54		0		0			22:15	44		22		0		0		
10:30	55		69		0		0			22:30	32		19		0		0		
10:45	64	221	60	223	0	0	0	0	444	22:45	18	135	21	95	0	0	0	0	230
11:00	64		59		0		0			23:00	23		16		0		0		
11:15	60		85		0		0			23:15	18		14		0		0		
11:30	102		98		0		0			23:30	8		16		0		0		
11:45	100	326	84	326	0	0	0	0	652	23:45	11	60	13	59	0	0	0	0	119
Total Vol.		1837		1289					**3126**			3248		3647					**6895**

Daily Totals

NB	SB	EB	WB	Combined
5085	4936			**10021**

	AM			PM		
Split %	58.8%	41.2%	**31.2%**	47.1%	52.9%	**68.8%**
Peak Hour	6:45	11:15	**11:30**	18:45	16:30	**16:15**
Volume	389	345	**715**	419	612	**947**
P.H.F.	0.93	0.88	**0.89**	0.93	0.94	**0.94**

cs@aimtd.com Tell. 714 253 7888

Thursday, October 25, 2018 | CITY: Oceanside | PROJECT: SC1958

ADT2 Costa Pacifica west of Coast. | Prepared by: Field Data Services of Arizona | **Prepared by AimTD LLC tel. 714 253 7888**

AM Period	NB		SB		EB		WB			PM Period	NB		SB		EB		WB		
0:00	0		0		0		0			12:00	0		0		2		1		
0:15	0		0		0		0			12:15	0		0		1		1		
0:30	0		0		0		0			12:30	0		0		2		3		
0:45	0	0	0	0	0	0	1	1	1	12:45	0	0	0	0	3	8	2	7	15
1:00	0		0		0		0			13:00	0		0		2		0		
1:15	0		0		0		0			13:15	0		0		3		2		
1:30	0		0		0		0			13:30	0		0		3		5		
1:45	0	0	0	0	0	0	0	0		13:45	0	0	0	0	2	10	1	8	18
2:00	0		0		0		0			14:00	0		0		3		3		
2:15	0		0		0		0			14:15	0		0		2		9		
2:30	0		0		0		0			14:30	0		0		3		1		
2:45	0	0	0	0	0	0	0	0		14:45	0	0	0	0	0	8	8	21	29
3:00	0		0		0		0			15:00	0		0		1		1		
3:15	0		0		0		0			15:15	0		0		4		3		
3:30	0		0		0		0			15:30	0		0		1		2		
3:45	0	0	0	0	0	0	0	0		15:45	0	0	0	0	2	8	3	9	17
4:00	0		0		0		0			16:00	0		0		3		1		
4:15	0		0		0		1			16:15	0		0		0		4		
4:30	0		0		1		0			16:30	0		0		3		3		
4:45	0	0	0	0	1	2	0	1	3	16:45	0	0	0	0	0	6	1	9	15
5:00	0		0		0		0			17:00	0		0		1		3		
5:15	0		0		0		0			17:15	0		0		2		0		
5:30	0		0		0		0			17:30	0		0		1		6		
5:45	0	0	0	0	4	4	0	0	4	17:45	0	0	0	0	4	8	1	10	18
6:00	0		0		0		0			18:00	0		0		3		4		
6:15	0		0		1		0			18:15	0		0		1		3		
6:30	0		0		3		1			18:30	0		0		3		2		
6:45	0	0	0	0	2	6	0	1	7	18:45	0	0	0	0	0	7	5	14	21
7:00	0		0		3		2			19:00	0		0		1		7		
7:15	0		0		3		0			19:15	0		0		1		3		
7:30	0		0		4		1			19:30	0		0		1		3		
7:45	0	0	0	0	4	14	2	5	19	19:45	0	0	0	0	1	4	5	18	22
8:00	0		0		4		0			20:00	0		0		0		2		
8:15	0		0		3		1			20:15	0		0		0		2		
8:30	0		0		3		0			20:30	0		0		1		0		
8:45	0	0	0	0	5	15	0	1	16	20:45	0	0	0	0	1	2	2	6	8
9:00	0		0		6		1			21:00	0		0		0		0		
9:15	0		0		3		1			21:15	0		0		2		4		
9:30	0		0		3		0			21:30	0		0		0		2		
9:45	0	0	0	0	1	13	0	2	15	21:45	0	0	0	0	0	2	1	7	9
10:00	0		0		1		1			22:00	0		0		0		1		
10:15	0		0		3		1			22:15	0		0		0		2		
10:30	0		0		1		2			22:30	0		0		0		2		
10:45	0	0	0	0	1	6	1	5	11	22:45	0	0	0	0	1	1	0	5	6
11:00	0		0		3		3			23:00	0		0		0		0		
11:15	0		0		3		4			23:15	0		0		0		1		
11:30	0		0		3		1			23:30	0		0		0		0		
11:45	0	0	0	0	5	14	0	8	22	23:45	0	0	0	0	0	0	0	1	1
Total Vol.						74		24	**98**							64		115	**179**

Daily Totals

NB	SB	EB	WB	Combined
		138	139	**277**

	AM			PM		
Split %	75.5%	24.5%	**35.4%**	35.8%	64.2%	**64.6%**
Peak Hour	8:15	10:30	**11:00**	12:45	14:00	**14:00**
Volume	17	10	**22**	11	21	**29**
P.H.F.	0.71	0.63	**0.79**	0.92	0.58	**0.66**

cs@aimtd.com Tell. 714 253 7888

Thursday, October 25, 2018 CITY: Oceanside PROJECT: SC1958

Prepared by: Field Data Services of Arizona

ADT3 Coast between Costa Pacifica and San Luis Rey Mission. **Prepared by AimTD LLC tel. 714 253 7888**

AM Period	NB		SB		EB		WB			PM Period	NB		SB		EB		WB		
0:00	16		15		0		0			12:00	93		74		0		0		
0:15	12		10		0		0			12:15	109		90		0		0		
0:30	16		15		0		0			12:30	126		84		0		0		
0:45	9	53	10	50	0	0	0	0	103	12:45	105	433	98	346	0	0	0	0	779
1:00	5		6		0		0			13:00	88		110		0		0		
1:15	2		6		0		0			13:15	93		105		0		0		
1:30	4		4		0		0			13:30	92		83		0		0		
1:45	6	17	6	22	0	0	0	0	39	13:45	71	344	96	394	0	0	0	0	738
2:00	5		8		0		0			14:00	85		87		0		0		
2:15	4		4		0		0			14:15	71		95		0		0		
2:30	0		1		0		0			14:30	61		79		0		0		
2:45	3	12	4	17	0	0	0	0	29	14:45	92	309	85	346	0	0	0	0	655
3:00	7		1		0		0			15:00	76		104		0		0		
3:15	6		2		0		0			15:15	73		110		0		0		
3:30	5		4		0		0			15:30	86		111		0		0		
3:45	15	33	3	10	0	0	0	0	43	15:45	82	317	134	459	0	0	0	0	776
4:00	7		4		0		0			16:00	89		142		0		0		
4:15	9		2		0		0			16:15	95		152		0		0		
4:30	13		4		0		0			16:30	88		180		0		0		
4:45	12	41	6	16	0	0	0	0	57	16:45	98	370	167	641	0	0	0	0	1011
5:00	11		4		0		0			17:00	99		139		0		0		
5:15	20		8		0		0			17:15	96		168		0		0		
5:30	30		3		0		0			17:30	101		151		0		0		
5:45	36	97	20	35	0	0	0	0	132	17:45	102	398	143	601	0	0	0	0	999
6:00	39		16		0		0			18:00	106		147		0		0		
6:15	64		16		0		0			18:15	106		128		0		0		
6:30	67		19		0		0			18:30	106		122		0		0		
6:45	87	257	28	79	0	0	0	0	336	18:45	106	424	118	515	0	0	0	0	939
7:00	97		47		0		0			19:00	114		105		0		0		
7:15	106		38		0		0			19:15	97		93		0		0		
7:30	102		49		0		0			19:30	75		99		0		0		
7:45	77	382	55	189	0	0	0	0	571	19:45	65	351	63	360	0	0	0	0	711
8:00	54		48		0		0			20:00	73		66		0		0		
8:15	58		50		0		0			20:15	66		51		0		0		
8:30	47		45		0		0			20:30	48		52		0		0		
8:45	59	218	49	192	0	0	0	0	410	20:45	68	255	73	242	0	0	0	0	497
9:00	52		49		0		0			21:00	50		50		0		0		
9:15	58		43		0		0			21:15	54		53		0		0		
9:30	52		64		0		0			21:30	50		40		0		0		
9:45	44	206	57	213	0	0	0	0	419	21:45	48	202	46	189	0	0	0	0	391
10:00	55		50		0		0			22:00	55		41		0		0		
10:15	56		60		0		0			22:15	44		38		0		0		
10:30	63		66		0		0			22:30	42		26		0		0		
10:45	67	241	64	240	0	0	0	0	481	22:45	27	168	34	139	0	0	0	0	307
11:00	70		70		0		0			23:00	29		22		0		0		
11:15	76		84		0		0			23:15	23		22		0		0		
11:30	103		100		0		0			23:30	13		23		0		0		
11:45	102	351	99	353	0	0	0	0	704	23:45	18	83	18	85	0	0	0	0	168
Total Vol.		1908		1416					**3324**			3654		4317					**7971**

Daily Totals

NB	SB	EB	WB	**Combined**
5562	5733			**11295**

	AM			**PM**		
Split %	57.4%	42.6%	**29.4%**	45.8%	54.2%	**70.6%**
Peak Hour	11:45	11:30	**11:45**	12:00	16:30	**16:30**
Volume	430	363	**777**	433	654	**1035**
P.H.F.	0.85	0.91	**0.93**	0.90	0.91	**0.97**

cs@aimtd.com Tell. 714 253 7888

Thursday, October 25, 2018 | CITY: Oceanside | PROJECT: SC1958

ADT4 Coast Hwy north of Surfrider | Prepared by: Field Data Services of Arizona | **Prepared by AimTD LLC tel. 714 253 7888**

AM Period	NB		SB		EB		WB			PM Period	NB		SB		EB		WB		
0:00	25		20		0		0			12:00	170		149		0		0		
0:15	18		24		0		0			12:15	158		129		0		0		
0:30	20		19		0		0			12:30	175		138		0		0		
0:45	26	89	15	78	0	0	0	0	167	12:45	148	651	112	528	0	0	0	0	1179
1:00	25		15		0		0			13:00	159		136		0		0		
1:15	17		14		0		0			13:15	158		112		0		0		
1:30	22		13		0		0			13:30	159		116		0		0		
1:45	31	95	15	57	0	0	0	0	152	13:45	144	620	146	510	0	0	0	0	1130
2:00	13		13		0		0			14:00	158		129		0		0		
2:15	9		6		0		0			14:15	181		127		0		0		
2:30	11		3		0		0			14:30	133		127		0		0		
2:45	8	41	4	26	0	0	0	0	67	14:45	147	619	119	502	0	0	0	0	1121
3:00	7		9		0		0			15:00	146		121		0		0		
3:15	3		2		0		0			15:15	147		159		0		0		
3:30	9		5		0		0			15:30	139		126		0		0		
3:45	3	22	8	24	0	0	0	0	46	15:45	159	591	147	553	0	0	0	0	1144
4:00	11		11		0		0			16:00	144		160		0		0		
4:15	12		14		0		0			16:15	127		143		0		0		
4:30	10		35		0		0			16:30	141		160		0		0		
4:45	15	48	28	88	0	0	0	0	136	16:45	144	556	178	641	0	0	0	0	1197
5:00	26		19		0		0			17:00	180		197		0		0		
5:15	20		27		0		0			17:15	126		224		0		0		
5:30	26		42		0		0			17:30	175		202		0		0		
5:45	40	112	65	153	0	0	0	0	265	17:45	175	656	250	873	0	0	0	0	1529
6:00	45		66		0		0			18:00	185		217		0		0		
6:15	78		71		0		0			18:15	205		208		0		0		
6:30	78		56		0		0			18:30	225		209		0		0		
6:45	59	260	104	297	0	0	0	0	557	18:45	228	843	172	806	0	0	0	0	1649
7:00	98		104		0		0			19:00	243		187		0		0		
7:15	107		98		0		0			19:15	191		150		0		0		
7:30	101		94		0		0			19:30	209		109		0		0		
7:45	82	388	90	386	0	0	0	0	774	19:45	212	855	131	577	0	0	0	0	1432
8:00	109		110		0		0			20:00	195		100		0		0		
8:15	86		95		0		0			20:15	185		114		0		0		
8:30	117		104		0		0			20:30	171		70		0		0		
8:45	90	402	99	408	0	0	0	0	810	20:45	161	712	77	361	0	0	0	0	1073
9:00	89		121		0		0			21:00	159		66		0		0		
9:15	103		87		0		0			21:15	133		47		0		0		
9:30	119		98		0		0			21:30	119		57		0		0		
9:45	108	419	103	409	0	0	0	0	828	21:45	99	510	51	221	0	0	0	0	731
10:00	110		113		0		0			22:00	95		29		0		0		
10:15	101		104		0		0			22:15	89		43		0		0		
10:30	112		110		0		0			22:30	75		42		0		0		
10:45	109	432	138	465	0	0	0	0	897	22:45	47	306	38	152	0	0	0	0	458
11:00	123		117		0		0			23:00	41		36		0		0		
11:15	125		133		0		0			23:15	25		30		0		0		
11:30	153		154		0		0			23:30	23		30		0		0		
11:45	154	555	134	538	0	0	0	0	1093	23:45	23	112	17	113	0	0	0	0	225
Total Vol.		2863		2929					**5792**			7031		5837					**12868**

Daily Totals

NB	SB	EB	WB	Combined
9894	8766			**18660**

	AM			PM		
Split %	49.4%	50.6%	**31.0%**	54.6%	45.4%	**69.0%**
Peak Hour	11:45	11:15	**11:45**	18:15	17:15	**18:15**
Volume	657	570	**1207**	901	893	**1677**
P.H.F.	0.94	0.93	**0.95**	0.97	0.89	**0.97**

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APPENDIX B

LOS Worksheets

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	94	64	46	89	268	671	89	16	136	101	16	80
Future Volume (veh/h)	94	64	46	89	268	671	89	16	136	101	16	80
Number	5	2	12	1	6	16	3	8	18	7	4	14
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1863	1863	1863	1863	1900	1863	1863	1900	1863	1863
Adj Flow Rate, veh/h	106	72	52	100	301	754	100	18	153	113	18	90
Adj No. of Lanes	1	1	1	1	1	2	0	1	1	0	1	1
Peak Hour Factor	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	139	520	442	160	542	1303	205	37	214	186	30	191
Arrive On Green	0.08	0.28	0.28	0.09	0.29	0.29	0.14	0.14	0.14	0.12	0.12	0.12
Sat Flow, veh/h	1774	1863	1583	1774	1863	3167	1514	273	1583	1540	245	1583
Grp Volume(v), veh/h	106	72	52	100	301	754	118	0	153	131	0	90
Grp Sat Flow(s),veh/h/ln	1774	1863	1583	1774	1863	1583	1787	0	1583	1786	0	1583
Q Serve(g_s), s	3.8	1.9	1.6	3.5	8.9	12.0	4.0	0.0	6.0	4.5	0.0	3.4
Cycle Q Clear(g_c), s	3.8	1.9	1.6	3.5	8.9	12.0	4.0	0.0	6.0	4.5	0.0	3.4
Prop In Lane	1.00		1.00	1.00		1.00	0.85		1.00	0.86		1.00
Lane Grp Cap(c), veh/h	139	520	442	160	542	1303	242	0	214	216	0	191
V/C Ratio(X)	0.76	0.14	0.12	0.63	0.56	0.58	0.49	0.00	0.71	0.61	0.00	0.47
Avail Cap(c_a), veh/h	447	1140	969	297	982	2052	505	0	448	453	0	402
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	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	29.4	17.6	17.5	28.5	19.5	14.8	26.0	0.0	26.9	27.1	0.0	26.7
Incr Delay (d2), s/veh	8.4	0.1	0.1	4.0	0.9	0.4	1.5	0.0	4.4	2.8	0.0	1.8
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.2	1.0	0.7	1.9	4.6	6.4	2.1	0.0	2.9	2.4	0.0	1.6
LnGrp Delay(d),s/veh	37.8	17.7	17.6	32.5	20.4	15.2	27.6	0.0	31.3	29.9	0.0	28.5
LnGrp LOS	D	B	B	C	C	B	C		C	C		C
Approach Vol, veh/h		230			1155			271			221	
Approach Delay, s/veh		26.9			18.1			29.7			29.3	
Approach LOS		C			B			C			C	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4	5	6		8
Phs Duration (G+Y+Rc), s	12.0	24.2		14.0	11.2	25.0		14.9
Change Period (Y+Rc), s	6.1	6.1		6.1	6.1	6.1		6.1
Max Green Setting (Gmax), s	10.9	39.8		16.5	16.4	34.3		18.4
Max Q Clear Time (g_c+I1), s	5.5	3.9		6.5	5.8	14.0		8.0
Green Ext Time (p_c), s	0.1	0.5		0.6	0.2	4.9		0.8

Intersection Summary			
HCM 2010 Ctrl Delay		22.1	
HCM 2010 LOS		C	

Notes

User approved volume balancing among the lanes for turning movement.

Intersection	
Int Delay, s/veh	0.9

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	14	35	5	378	177	7
Future Vol, veh/h	14	35	5	378	177	7
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	1	-	-	0
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	96	96	96	96	96	96
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	15	36	5	394	184	7

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	588	184	191	0	-	0
Stage 1	184	-	-	-	-	-
Stage 2	404	-	-	-	-	-
Critical Hdwy	6.42	6.22	4.12	-	-	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	2.218	-	-	-
Pot Cap-1 Maneuver	471	858	1383	-	-	-
Stage 1	848	-	-	-	-	-
Stage 2	674	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	469	858	1383	-	-	-
Mov Cap-2 Maneuver	547	-	-	-	-	-
Stage 1	845	-	-	-	-	-
Stage 2	674	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	10.2	0.1	0
HCM LOS	B		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	1383	-	738	-	-
HCM Lane V/C Ratio	0.004	-	0.069	-	-
HCM Control Delay (s)	7.6	-	10.2	-	-
HCM Lane LOS	A	-	B	-	-
HCM 95th %tile Q(veh)	0	-	0.2	-	-

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (veh/h)	469	106	975	1340	84	0
Future Volume (veh/h)	469	106	975	1340	84	0
Number	2	12	1	6	3	18
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)		1.00	1.00		1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1863	1863	1863	0
Adj Flow Rate, veh/h	489	110	1016	1396	88	0
Adj No. of Lanes	2	1	2	2	1	0
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96
Percent Heavy Veh, %	2	2	2	2	2	0
Cap, veh/h	608	140	2277	3244	0	0
Arrive On Green	0.17	0.17	0.66	0.92	0.00	0.00
Sat Flow, veh/h	3632	1583	3442	3632	0	0
Grp Volume(v), veh/h	489	110	1016	1396	0	0
Grp Sat Flow(s),veh/h/ln	1770	1583	1721	1770	0	0
Q Serve(g_s), s	12.0	6.1	12.8	4.9	0.0	0.0
Cycle Q Clear(g_c), s	12.0	6.1	12.8	4.9	0.0	0.0
Prop In Lane		1.00	1.00		0.00	0.00
Lane Grp Cap(c), veh/h	608	140	2277	3244	0	0
V/C Ratio(X)	0.80	0.79	0.45	0.43	0.00	0.00
Avail Cap(c_a), veh/h	763	209	2277	3244	0	0
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	0.00	0.00
Uniform Delay (d), s/veh	35.8	40.2	7.3	0.5	0.0	0.0
Incr Delay (d2), s/veh	10.8	34.7	0.1	0.4	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	6.8	3.8	6.0	2.3	0.0	0.0
LnGrp Delay(d),s/veh	46.7	74.9	7.5	0.9	0.0	0.0
LnGrp LOS	D	E	A	A		
Approach Vol, veh/h	599			2412	0	
Approach Delay, s/veh	51.8			3.7	0.0	
Approach LOS	D			A		

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2				6		8
Phs Duration (G+Y+Rc), s	67.0	23.0				90.0		0.0
Change Period (Y+Rc), s	7.5	7.5				7.5		7.5
Max Green Setting (Gmax), s	31.5	19.4				58.4		16.6
Max Q Clear Time (g_c+I1), s	14.8	14.0				6.9		0.0
Green Ext Time (p_c), s	3.6	1.5				12.6		0.0

Intersection Summary	
HCM 2010 Ctrl Delay	13.3
HCM 2010 LOS	B

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (veh/h)	298	219	948	564	0	0
Future Volume (veh/h)	298	219	948	564	0	0
Number	2	12	1	6		
Initial Q (Qb), veh	0	0	0	0		
Ped-Bike Adj(A_pbT)		1.00	1.00			
Parking Bus, Adj	1.00	1.00	1.00	1.00		
Adj Sat Flow, veh/h/ln	1863	1863	1863	1863		
Adj Flow Rate, veh/h	310	228	988	588		
Adj No. of Lanes	2	1	2	3		
Peak Hour Factor	0.96	0.96	0.96	0.96		
Percent Heavy Veh, %	2	2	2	2		
Cap, veh/h	1829	818	1143	4701		
Arrive On Green	0.52	0.52	0.33	0.92		
Sat Flow, veh/h	3632	1583	3442	5253		
Grp Volume(v), veh/h	310	228	988	588		
Grp Sat Flow(s),veh/h/ln	1770	1583	1721	1695		
Q Serve(g_s), s	4.2	7.3	24.2	0.9		
Cycle Q Clear(g_c), s	4.2	7.3	24.2	0.9		
Prop In Lane		1.00	1.00			
Lane Grp Cap(c), veh/h	1829	818	1143	4701		
V/C Ratio(X)	0.17	0.28	0.86	0.13		
Avail Cap(c_a), veh/h	1829	818	1805	4701		
HCM Platoon Ratio	1.00	1.00	1.00	1.00		
Upstream Filter(I)	0.98	0.98	1.00	1.00		
Uniform Delay (d), s/veh	11.5	12.3	28.1	0.3		
Incr Delay (d2), s/veh	0.2	0.8	2.8	0.1		
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0		
%ile BackOfQ(50%),veh/ln	2.1	3.4	12.0	0.4		
LnGrp Delay(d),s/veh	11.7	13.1	30.9	0.3		
LnGrp LOS	B	B	C	A		
Approach Vol, veh/h	538			1576		
Approach Delay, s/veh	12.3			19.5		
Approach LOS	B			B		

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2				6		
Phs Duration (G+Y+Rc), s	36.7	53.3				90.0		
Change Period (Y+Rc), s	6.8	6.8				6.8		
Max Green Setting (Gmax), s	47.3	29.2				83.2		
Max Q Clear Time (g_c+I1), s	26.2	9.3				2.9		
Green Ext Time (p_c), s	3.7	2.8				3.8		

Intersection Summary	
HCM 2010 Ctrl Delay	17.7
HCM 2010 LOS	B

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	0	7	374	0	183	1	116	391	99	133	2
Future Volume (veh/h)	0	0	7	374	0	183	1	116	391	99	133	2
Number				1	6	16	3	8	18	7	4	14
Initial Q (Qb), veh				0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)				1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj				1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln				1863	1863	1863	1900	1863	1863	1900	1863	1900
Adj Flow Rate, veh/h				390	0	0	1	121	0	103	139	2
Adj No. of Lanes				2	0	1	0	2	1	0	2	0
Peak Hour Factor				0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Percent Heavy Veh, %				2	2	2	2	2	2	2	2	2
Cap, veh/h				2317	0	1034	2	280	123	144	214	3
Arrive On Green				0.65	0.00	0.00	0.08	0.08	0.00	0.10	0.10	0.10
Sat Flow, veh/h				3548	0	1583	28	3602	1583	1455	2161	32
Grp Volume(v), veh/h				390	0	0	65	57	0	127	0	117
Grp Sat Flow(s),veh/h/ln				1774	0	1583	1861	1770	1583	1790	0	1857
Q Serve(g_s), s				3.9	0.0	0.0	3.0	2.7	0.0	6.2	0.0	5.5
Cycle Q Clear(g_c), s				3.9	0.0	0.0	3.0	2.7	0.0	6.2	0.0	5.5
Prop In Lane				1.00		1.00	0.02		1.00	0.81		0.02
Lane Grp Cap(c), veh/h				2317	0	1034	145	138	123	177	0	184
V/C Ratio(X)				0.17	0.00	0.00	0.45	0.41	0.00	0.71	0.00	0.64
Avail Cap(c_a), veh/h				2317	0	1034	515	490	438	316	0	328
HCM Platoon Ratio				1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)				1.00	0.00	0.00	1.00	1.00	0.00	1.00	0.00	1.00
Uniform Delay (d), s/veh				6.1	0.0	0.0	39.7	39.5	0.0	39.3	0.0	39.0
Incr Delay (d2), s/veh				0.2	0.0	0.0	2.2	2.0	0.0	5.3	0.0	3.6
Initial Q Delay(d3),s/veh				0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln				1.9	0.0	0.0	1.6	1.4	0.0	3.3	0.0	3.0
LnGrp Delay(d),s/veh				6.2	0.0	0.0	41.9	41.5	0.0	44.6	0.0	42.6
LnGrp LOS				A			D	D		D		D
Approach Vol, veh/h					390			122			244	
Approach Delay, s/veh					6.2			41.7			43.6	
Approach LOS					A			D			D	

Timer	1	2	3	4	5	6	7	8
Assigned Phs				4		6		8
Phs Duration (G+Y+Rc), s				14.0		63.9		12.1
Change Period (Y+Rc), s				5.1		5.1		5.1
Max Green Setting (Gmax), s				15.9		33.9		24.9
Max Q Clear Time (g_c+I1), s				8.2		5.9		5.0
Green Ext Time (p_c), s				0.8		1.4		0.5

Intersection Summary	
HCM 2010 Ctrl Delay	24.0
HCM 2010 LOS	C

Notes

User approved volume balancing among the lanes for turning movement.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	146	33	36	6	33	41	30	215	12	32	303	73
Future Volume (veh/h)	146	33	36	6	33	41	30	215	12	32	303	73
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1900	1863	1863	1900	1863	1900	1863	1863	1900	1863	1863	1900
Adj Flow Rate, veh/h	157	35	39	6	35	44	32	231	13	34	326	78
Adj No. of Lanes	0	1	1	0	1	0	1	2	0	1	2	0
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	296	49	288	52	141	159	34	2100	118	37	1756	414
Arrive On Green	0.18	0.18	0.18	0.18	0.18	0.18	0.01	0.20	0.20	0.02	0.62	0.62
Sat Flow, veh/h	1213	270	1583	41	774	875	1774	3408	191	1774	2843	671
Grp Volume(v), veh/h	192	0	39	85	0	0	32	119	125	34	201	203
Grp Sat Flow(s),veh/h/ln	1484	0	1583	1691	0	0	1774	1770	1829	1774	1770	1744
Q Serve(g_s), s	6.4	0.0	1.8	0.0	0.0	0.0	1.6	4.7	4.8	1.6	4.2	4.3
Cycle Q Clear(g_c), s	10.1	0.0	1.8	3.7	0.0	0.0	1.6	4.7	4.8	1.6	4.2	4.3
Prop In Lane	0.82		1.00	0.07		0.52	1.00		0.10	1.00		0.38
Lane Grp Cap(c), veh/h	346	0	288	352	0	0	34	1091	1127	37	1093	1077
V/C Ratio(X)	0.56	0.00	0.14	0.24	0.00	0.00	0.93	0.11	0.11	0.93	0.18	0.19
Avail Cap(c_a), veh/h	633	0	615	696	0	0	165	1091	1127	186	1093	1077
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	0.33	0.33	0.33	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	0.00	1.00	1.00	1.00	0.93	0.93	0.93
Uniform Delay (d), s/veh	32.6	0.0	29.5	30.3	0.0	0.0	42.7	15.0	15.0	42.0	7.1	7.1
Incr Delay (d2), s/veh	6.3	0.0	1.0	1.6	0.0	0.0	54.2	0.2	0.2	49.4	0.3	0.4
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	4.9	0.0	0.9	1.9	0.0	0.0	1.3	2.4	2.5	1.3	2.1	2.2
LnGrp Delay(d),s/veh	38.9	0.0	30.5	31.9	0.0	0.0	96.8	15.2	15.2	91.4	7.4	7.5
LnGrp LOS	D		C	C			F	B	B	F	A	A
Approach Vol, veh/h		231			85			276			438	
Approach Delay, s/veh		37.5			31.9			24.7			14.0	
Approach LOS		D			C			C			B	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4	5	6		8
Phs Duration (G+Y+Rc), s	7.8	58.0		20.2	7.7	58.1		20.2
Change Period (Y+Rc), s	5.0	5.0		4.6	5.0	5.0		4.6
Max Green Setting (Gmax), s	10.8	28.0		33.4	9.0	29.0		33.4
Max Q Clear Time (g_c+I1), s	3.6	6.8		12.1	3.6	6.3		5.7
Green Ext Time (p_c), s	0.0	1.4		3.6	0.0	6.9		1.3

Intersection Summary	
HCM 2010 Ctrl Delay	23.6
HCM 2010 LOS	C

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	6	15	6	27	19	28	8	216	77	59	254	15
Future Volume (veh/h)	6	15	6	27	19	28	8	216	77	59	254	15
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1900	1863	1863	1900	1900	1863	1900	1900	1863	1900
Adj Flow Rate, veh/h	6	15	6	28	19	29	8	220	79	60	259	15
Adj No. of Lanes	1	1	0	1	1	0	0	2	0	0	2	0
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	133	81	32	157	43	65	83	2039	703	475	2066	123
Arrive On Green	0.06	0.06	0.06	0.06	0.06	0.06	1.00	1.00	1.00	1.00	1.00	1.00
Sat Flow, veh/h	1352	1267	507	1385	666	1017	48	2473	853	506	2506	149
Grp Volume(v), veh/h	6	0	21	28	0	48	164	0	143	166	0	168
Grp Sat Flow(s),veh/h/ln	1352	0	1773	1385	0	1683	1830	0	1545	1492	0	1669
Q Serve(g_s), s	0.4	0.0	1.0	1.7	0.0	2.4	0.0	0.0	0.0	0.0	0.0	0.0
Cycle Q Clear(g_c), s	2.7	0.0	1.0	2.6	0.0	2.4	0.0	0.0	0.0	0.0	0.0	0.0
Prop In Lane	1.00		0.29	1.00		0.60	0.05		0.55	0.36		0.09
Lane Grp Cap(c), veh/h	133	0	113	157	0	107	1553	0	1274	1287	0	1376
V/C Ratio(X)	0.05	0.00	0.19	0.18	0.00	0.45	0.11	0.00	0.11	0.13	0.00	0.12
Avail Cap(c_a), veh/h	493	0	586	526	0	556	1553	0	1274	1287	0	1376
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	2.00	2.00	2.00	2.00	2.00	2.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00	0.99	0.00	0.99
Uniform Delay (d), s/veh	40.1	0.0	38.1	39.4	0.0	38.8	0.0	0.0	0.0	0.0	0.0	0.0
Incr Delay (d2), s/veh	0.1	0.0	0.8	0.5	0.0	2.9	0.1	0.0	0.2	0.2	0.0	0.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.1	0.0	0.5	0.7	0.0	1.2	0.1	0.0	0.1	0.1	0.0	0.1
LnGrp Delay(d),s/veh	40.2	0.0	38.9	39.9	0.0	41.7	0.1	0.0	0.2	0.2	0.0	0.2
LnGrp LOS	D		D	D		D	A		A	A		A
Approach Vol, veh/h		27			76			307			334	
Approach Delay, s/veh		39.2			41.0			0.2			0.2	
Approach LOS		D			D			A			A	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2		4		6		8
Phs Duration (G+Y+Rc), s		75.9		10.1		75.9		10.1
Change Period (Y+Rc), s		5.0		4.6		5.0		4.6
Max Green Setting (Gmax), s		48.0		28.4		48.0		28.4
Max Q Clear Time (g_c+I1), s		2.0		4.7		2.0		4.6
Green Ext Time (p_c), s		4.2		0.1		4.7		0.3

Intersection Summary	
HCM 2010 Ctrl Delay	5.8
HCM 2010 LOS	A

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	5	14	2	5	7	20	10	233	22	11	297	18
Future Volume (veh/h)	5	14	2	5	7	20	10	233	22	11	297	18
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1900	1863	1863	1900	1900	1863	1900	1900	1863	1900
Adj Flow Rate, veh/h	6	16	2	6	8	22	11	262	25	12	334	20
Adj No. of Lanes	1	1	0	1	1	0	0	2	0	0	2	0
Peak Hour Factor	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	133	86	11	144	23	64	113	2563	242	103	2685	159
Arrive On Green	0.05	0.05	0.05	0.05	0.05	0.05	1.00	1.00	1.00	1.00	1.00	1.00
Sat Flow, veh/h	1374	1624	203	1389	440	1209	82	3068	289	70	3214	190
Grp Volume(v), veh/h	6	0	18	6	0	30	156	0	142	191	0	175
Grp Sat Flow(s),veh/h/ln	1374	0	1827	1389	0	1649	1795	0	1644	1813	0	1662
Q Serve(g_s), s	0.4	0.0	0.8	0.4	0.0	1.5	0.0	0.0	0.0	0.0	0.0	0.0
Cycle Q Clear(g_c), s	1.9	0.0	0.8	1.2	0.0	1.5	0.0	0.0	0.0	0.0	0.0	0.0
Prop In Lane	1.00		0.11	1.00		0.73	0.07		0.18	0.06		0.11
Lane Grp Cap(c), veh/h	133	0	97	144	0	88	1544	0	1373	1559	0	1388
V/C Ratio(X)	0.05	0.00	0.19	0.04	0.00	0.34	0.10	0.00	0.10	0.12	0.00	0.13
Avail Cap(c_a), veh/h	481	0	561	497	0	506	1544	0	1373	1559	0	1388
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	2.00	2.00	2.00	2.00	2.00	2.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	40.2	0.0	38.9	39.5	0.0	39.3	0.0	0.0	0.0	0.0	0.0	0.0
Incr Delay (d2), s/veh	0.1	0.0	0.9	0.1	0.0	2.3	0.1	0.0	0.2	0.2	0.0	0.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.1	0.0	0.4	0.1	0.0	0.7	0.1	0.0	0.1	0.1	0.0	0.1
LnGrp Delay(d),s/veh	40.3	0.0	39.8	39.6	0.0	41.6	0.1	0.0	0.2	0.2	0.0	0.2
LnGrp LOS	D		D	D		D	A		A	A		A
Approach Vol, veh/h		24			36			298			366	
Approach Delay, s/veh		40.0			41.2			0.1			0.2	
Approach LOS		D			D			A			A	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2		4		6		8
Phs Duration (G+Y+Rc), s		76.8		9.2		76.8		9.2
Change Period (Y+Rc), s		5.0		4.6		5.0		4.6
Max Green Setting (Gmax), s		50.0		26.4		50.0		26.4
Max Q Clear Time (g_c+I1), s		2.0		3.9		2.0		3.5
Green Ext Time (p_c), s		4.0		0.1		5.0		0.1

Intersection Summary	
HCM 2010 Ctrl Delay	3.5
HCM 2010 LOS	A

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	37	0	52	158	173	54	22	185	0	0	255	15
Future Volume (veh/h)	37	0	52	158	173	54	22	185	0	0	255	15
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1900	1863	1863	1863	1863	1900	1863	1863	0	0	1863	1900
Adj Flow Rate, veh/h	42	12	50	178	194	61	25	208	0	0	287	17
Adj No. of Lanes	0	1	1	1	2	0	1	2	0	0	2	0
Peak Hour Factor	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	0	0	2	2
Cap, veh/h	0	330	314	313	474	145	37	2500	0	0	2131	126
Arrive On Green	0.00	0.18	0.18	0.18	0.18	0.18	0.02	0.71	0.00	0.00	1.00	1.00
Sat Flow, veh/h	0	1863	1583	1335	2672	817	1774	3632	0	0	3490	200
Grp Volume(v), veh/h	0	12	50	178	127	128	25	208	0	0	149	155
Grp Sat Flow(s),veh/h/ln	0	1863	1583	1335	1770	1719	1774	1770	0	0	1770	1827
Q Serve(g_s), s	0.0	0.5	2.2	11.0	5.5	5.7	1.2	1.6	0.0	0.0	0.0	0.0
Cycle Q Clear(g_c), s	0.0	0.5	2.2	11.4	5.5	5.7	1.2	1.6	0.0	0.0	0.0	0.0
Prop In Lane	0.00		1.00	1.00		0.48	1.00		0.00	0.00		0.11
Lane Grp Cap(c), veh/h	0	330	314	313	314	305	37	2500	0	0	1110	1146
V/C Ratio(X)	0.00	0.04	0.16	0.57	0.40	0.42	0.67	0.08	0.00	0.00	0.13	0.14
Avail Cap(c_a), veh/h	0	812	724	511	576	560	165	2500	0	0	1110	1146
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	2.00	2.00
Upstream Filter(I)	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	0.00	1.00	1.00
Uniform Delay (d), s/veh	0.0	29.3	28.5	34.0	31.3	31.5	41.8	3.9	0.0	0.0	0.0	0.0
Incr Delay (d2), s/veh	0.0	0.0	0.2	1.6	0.8	0.9	19.1	0.1	0.0	0.0	0.3	0.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.0	0.2	1.0	4.2	2.7	2.8	0.8	0.8	0.0	0.0	0.1	0.1
LnGrp Delay(d),s/veh	0.0	29.3	28.8	35.6	32.2	32.4	60.9	4.0	0.0	0.0	0.3	0.2
LnGrp LOS		C	C	D	C	C	E	A			A	A
Approach Vol, veh/h		62			433			233			304	
Approach Delay, s/veh		28.9			33.7			10.1			0.2	
Approach LOS		C			C			B			A	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2		4	5	6	7	8
Phs Duration (G+Y+Rc), s		65.8		20.2	6.8	59.0	0.0	20.2
Change Period (Y+Rc), s		5.0		5.0	5.0	5.0	4.5	5.0
Max Green Setting (Gmax), s		38.5		37.5	8.0	25.5	5.0	28.0
Max Q Clear Time (g_c+I1), s		3.6		4.2	3.2	2.0	0.0	13.4
Green Ext Time (p_c), s		2.1		0.2	0.0	2.6	0.0	1.8

Intersection Summary	
HCM 2010 Ctrl Delay	18.2
HCM 2010 LOS	B

Notes

User approved volume balancing among the lanes for turning movement.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	9	24	10	0	0	0	20	186	43	53	339	100
Future Volume (veh/h)	9	24	10	0	0	0	20	186	43	53	339	100
Number	7	4	14				5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0				0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00				1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00				1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1900				1863	1863	1900	1863	1863	1900
Adj Flow Rate, veh/h	9	24	10				20	190	44	54	346	102
Adj No. of Lanes	1	1	0				1	2	0	1	2	0
Peak Hour Factor	0.98	0.98	0.98				0.98	0.98	0.98	0.98	0.98	0.98
Percent Heavy Veh, %	2	2	2				2	2	2	2	2	2
Cap, veh/h	79	56	23				39	2119	480	75	2054	597
Arrive On Green	0.04	0.04	0.04				0.02	0.74	0.74	0.04	0.76	0.76
Sat Flow, veh/h	1774	1250	521				1774	2868	650	1774	2707	787
Grp Volume(v), veh/h	9	0	34				20	116	118	54	224	224
Grp Sat Flow(s),veh/h/ln	1774	0	1771				1774	1770	1748	1774	1770	1724
Q Serve(g_s), s	0.4	0.0	1.6				1.0	1.6	1.6	2.6	3.0	3.1
Cycle Q Clear(g_c), s	0.4	0.0	1.6				1.0	1.6	1.6	2.6	3.0	3.1
Prop In Lane	1.00		0.29				1.00		0.37	1.00		0.46
Lane Grp Cap(c), veh/h	79	0	79				39	1307	1291	75	1343	1308
V/C Ratio(X)	0.11	0.00	0.43				0.51	0.09	0.09	0.72	0.17	0.17
Avail Cap(c_a), veh/h	474	0	474				186	1307	1291	454	1343	1308
HCM Platoon Ratio	1.00	1.00	1.00				1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00				1.00	1.00	1.00	0.96	0.96	0.96
Uniform Delay (d), s/veh	39.4	0.0	40.0				41.6	3.1	3.2	40.7	2.9	2.9
Incr Delay (d2), s/veh	0.6	0.0	3.6				9.9	0.1	0.1	11.8	0.3	0.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0				0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.2	0.0	0.9				0.6	0.8	0.8	1.5	1.5	1.5
LnGrp Delay(d),s/veh	40.1	0.0	43.6				51.5	3.3	3.3	52.5	3.1	3.1
LnGrp LOS	D		D				D	A	A	D	A	A
Approach Vol, veh/h		43						254			502	
Approach Delay, s/veh		42.9						7.1			8.4	
Approach LOS		D						A			A	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4	5	6		
Phs Duration (G+Y+Rc), s	8.6	68.5		8.9	6.9	70.2		
Change Period (Y+Rc), s	5.0	5.0		5.0	5.0	5.0		
Max Green Setting (Gmax), s	22.6	26.0		23.0	9.0	39.0		
Max Q Clear Time (g_c+I1), s	4.6	3.6		3.6	3.0	5.1		
Green Ext Time (p_c), s	0.1	1.9		0.1	0.0	4.5		

Intersection Summary	
HCM 2010 Ctrl Delay	9.9
HCM 2010 LOS	A

Intersection	
Int Delay, s/veh	0

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	49	0	0	12	0	0
Future Vol, veh/h	49	0	0	12	0	0
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	53	0	0	13	0	0

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	53	0	66	53
Stage 1	-	-	-	-	53	-
Stage 2	-	-	-	-	13	-
Critical Hdwy	-	-	4.12	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	-	-	2.218	-	3.518	3.318
Pot Cap-1 Maneuver	-	-	1553	-	939	1014
Stage 1	-	-	-	-	970	-
Stage 2	-	-	-	-	1010	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	1553	-	939	1014
Mov Cap-2 Maneuver	-	-	-	-	939	-
Stage 1	-	-	-	-	970	-
Stage 2	-	-	-	-	1010	-

Approach	EB	WB	NB
HCM Control Delay, s	0	0	0
HCM LOS			A

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	-	-	-	1553	-
HCM Lane V/C Ratio	-	-	-	-	-
HCM Control Delay (s)	0	-	-	0	-
HCM Lane LOS	A	-	-	A	-
HCM 95th %tile Q(veh)	-	-	-	0	-

Intersection	
Int Delay, s/veh	0

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	0	0	0	382	189	0
Future Vol, veh/h	0	0	0	382	189	0
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	1	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	0	0	0	415	205	0

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	620	103	205	0	-	0
Stage 1	205	-	-	-	-	-
Stage 2	415	-	-	-	-	-
Critical Hdwy	6.63	6.93	4.13	-	-	-
Critical Hdwy Stg 1	5.83	-	-	-	-	-
Critical Hdwy Stg 2	5.43	-	-	-	-	-
Follow-up Hdwy	3.519	3.319	2.219	-	-	-
Pot Cap-1 Maneuver	435	932	1365	-	-	-
Stage 1	810	-	-	-	-	-
Stage 2	665	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	435	932	1365	-	-	-
Mov Cap-2 Maneuver	527	-	-	-	-	-
Stage 1	810	-	-	-	-	-
Stage 2	665	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	0	0	0
HCM LOS	A		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	1365	-	-	-	-
HCM Lane V/C Ratio	-	-	-	-	-
HCM Control Delay (s)	0	-	0	-	-
HCM Lane LOS	A	-	A	-	-
HCM 95th %tile Q(veh)	0	-	-	-	-

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	175	54	104	311	190	1453	75	20	115	93	22	66
Future Volume (veh/h)	175	54	104	311	190	1453	75	20	115	93	22	66
Number	5	2	12	1	6	16	3	8	18	7	4	14
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1863	1863	1863	1863	1900	1863	1863	1900	1863	1863
Adj Flow Rate, veh/h	188	58	112	334	204	1562	81	22	124	100	24	71
Adj No. of Lanes	1	1	1	1	1	2	0	1	1	0	1	1
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	226	623	530	368	772	1609	147	40	165	135	32	148
Arrive On Green	0.13	0.33	0.33	0.21	0.41	0.41	0.10	0.10	0.10	0.09	0.09	0.09
Sat Flow, veh/h	1774	1863	1583	1774	1863	3167	1409	383	1583	1444	347	1583
Grp Volume(v), veh/h	188	58	112	334	204	1562	103	0	124	124	0	71
Grp Sat Flow(s),veh/h/ln	1774	1863	1583	1774	1863	1583	1792	0	1583	1791	0	1583
Q Serve(g_s), s	9.7	2.0	4.7	17.2	6.7	38.8	5.1	0.0	7.1	6.3	0.0	4.0
Cycle Q Clear(g_c), s	9.7	2.0	4.7	17.2	6.7	38.8	5.1	0.0	7.1	6.3	0.0	4.0
Prop In Lane	1.00		1.00	1.00		1.00	0.79		1.00	0.81		1.00
Lane Grp Cap(c), veh/h	226	623	530	368	772	1609	186	0	165	167	0	148
V/C Ratio(X)	0.83	0.09	0.21	0.91	0.26	0.97	0.55	0.00	0.75	0.74	0.00	0.48
Avail Cap(c_a), veh/h	407	784	666	396	772	1609	352	0	311	323	0	286
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	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	39.9	21.4	22.3	36.2	18.0	20.9	39.9	0.0	40.8	41.3	0.0	40.3
Incr Delay (d2), s/veh	7.7	0.1	0.2	23.4	0.2	16.1	2.5	0.0	6.8	6.3	0.0	2.4
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	5.2	1.0	2.1	10.8	3.5	23.5	2.6	0.0	3.4	3.4	0.0	1.8
LnGrp Delay(d),s/veh	47.6	21.5	22.5	59.6	18.2	36.9	42.4	0.0	47.6	47.6	0.0	42.7
LnGrp LOS	D	C	C	E	B	D	D		D	D		D
Approach Vol, veh/h		358			2100			227			195	
Approach Delay, s/veh		35.5			38.7			45.2			45.8	
Approach LOS		D			D			D			D	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4	5	6		8
Phs Duration (G+Y+Rc), s	25.5	37.4		14.8	18.0	44.9		15.8
Change Period (Y+Rc), s	6.1	6.1		6.1	6.1	6.1		6.1
Max Green Setting (Gmax), s	20.9	39.4		16.9	21.5	38.8		18.4
Max Q Clear Time (g_c+I1), s	19.2	6.7		8.3	11.7	40.8		9.1
Green Ext Time (p_c), s	0.2	0.6		0.5	0.3	0.0		0.6

Intersection Summary	
HCM 2010 Ctrl Delay	39.3
HCM 2010 LOS	D

Notes

User approved volume balancing among the lanes for turning movement.

Intersection	
Int Delay, s/veh	0.7

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	4	19	46	328	648	8
Future Vol, veh/h	4	19	46	328	648	8
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	1	-	-	0
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	95	95	95	95	95	95
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	4	20	48	345	682	8

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	1123	682	690	0	-	0
Stage 1	682	-	-	-	-	-
Stage 2	441	-	-	-	-	-
Critical Hdwy	6.42	6.22	4.12	-	-	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	2.218	-	-	-
Pot Cap-1 Maneuver	227	450	905	-	-	-
Stage 1	502	-	-	-	-	-
Stage 2	648	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	215	450	905	-	-	-
Mov Cap-2 Maneuver	338	-	-	-	-	-
Stage 1	475	-	-	-	-	-
Stage 2	648	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	14	1.1	0
HCM LOS	B		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	905	-	425	-	-
HCM Lane V/C Ratio	0.054	-	0.057	-	-
HCM Control Delay (s)	9.2	-	14	-	-
HCM Lane LOS	A	-	B	-	-
HCM 95th %tile Q(veh)	0.2	-	0.2	-	-

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (veh/h)	1244	87	403	1068	225	0
Future Volume (veh/h)	1244	87	403	1068	225	0
Number	2	12	1	6	3	18
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)		1.00	1.00		1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1863	1863	1863	0
Adj Flow Rate, veh/h	1269	89	411	1090	230	0
Adj No. of Lanes	2	1	2	2	1	0
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98
Percent Heavy Veh, %	2	2	2	2	2	0
Cap, veh/h	1402	495	1504	3244	0	0
Arrive On Green	0.40	0.40	0.44	0.92	0.00	0.00
Sat Flow, veh/h	3632	1583	3442	3632	0	0
Grp Volume(v), veh/h	1269	89	411	1090	0	0
Grp Sat Flow(s),veh/h/ln	1770	1583	1721	1770	0	0
Q Serve(g_s), s	30.4	3.7	6.9	3.3	0.0	0.0
Cycle Q Clear(g_c), s	30.4	3.7	6.9	3.3	0.0	0.0
Prop In Lane		1.00	1.00		0.00	0.00
Lane Grp Cap(c), veh/h	1402	495	1504	3244	0	0
V/C Ratio(X)	0.90	0.18	0.27	0.34	0.00	0.00
Avail Cap(c_a), veh/h	1471	526	1504	3244	0	0
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	0.00	0.00
Uniform Delay (d), s/veh	25.6	22.5	16.2	0.5	0.0	0.0
Incr Delay (d2), s/veh	9.9	0.8	0.1	0.3	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	16.7	1.5	3.3	1.6	0.0	0.0
LnGrp Delay(d),s/veh	35.5	23.3	16.3	0.7	0.0	0.0
LnGrp LOS	D	C	B	A		
Approach Vol, veh/h	1358			1501	0	
Approach Delay, s/veh	34.7			5.0	0.0	
Approach LOS	C			A		

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2				6		8
Phs Duration (G+Y+Rc), s	46.8	43.2				90.0		0.0
Change Period (Y+Rc), s	7.5	7.5				7.5		7.5
Max Green Setting (Gmax), s	13.5	37.4				58.4		16.6
Max Q Clear Time (g_c+I1), s	8.9	32.4				5.3		0.0
Green Ext Time (p_c), s	0.6	3.3				8.4		0.0

Intersection Summary	
HCM 2010 Ctrl Delay	19.1
HCM 2010 LOS	B

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (veh/h)	535	232	638	831	0	0
Future Volume (veh/h)	535	232	638	831	0	0
Number	2	12	1	6		
Initial Q (Qb), veh	0	0	0	0		
Ped-Bike Adj(A_pbT)		1.00	1.00			
Parking Bus, Adj	1.00	1.00	1.00	1.00		
Adj Sat Flow, veh/h/ln	1863	1863	1863	1863		
Adj Flow Rate, veh/h	563	244	672	875		
Adj No. of Lanes	2	1	2	3		
Peak Hour Factor	0.95	0.95	0.95	0.95		
Percent Heavy Veh, %	2	2	2	2		
Cap, veh/h	2176	974	805	4701		
Arrive On Green	0.61	0.61	0.23	0.92		
Sat Flow, veh/h	3632	1583	3442	5253		
Grp Volume(v), veh/h	563	244	672	875		
Grp Sat Flow(s),veh/h/ln	1770	1583	1721	1695		
Q Serve(g_s), s	6.6	6.3	16.7	1.4		
Cycle Q Clear(g_c), s	6.6	6.3	16.7	1.4		
Prop In Lane		1.00	1.00			
Lane Grp Cap(c), veh/h	2176	974	805	4701		
V/C Ratio(X)	0.26	0.25	0.83	0.19		
Avail Cap(c_a), veh/h	2176	974	1576	4701		
HCM Platoon Ratio	1.00	1.00	1.00	1.00		
Upstream Filter(I)	0.96	0.96	1.00	1.00		
Uniform Delay (d), s/veh	7.9	7.9	32.8	0.3		
Incr Delay (d2), s/veh	0.3	0.6	2.4	0.1		
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0		
%ile BackOfQ(50%),veh/ln	3.3	2.9	8.2	0.7		
LnGrp Delay(d),s/veh	8.2	8.5	35.2	0.4		
LnGrp LOS	A	A	D	A		
Approach Vol, veh/h	807			1547		
Approach Delay, s/veh	8.3			15.5		
Approach LOS	A			B		

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2				6		
Phs Duration (G+Y+Rc), s	7.9	62.1				90.0		
Change Period (Y+Rc), s	6.8	6.8				6.8		
Max Green Setting (Gmax), s	1.2	35.2				83.2		
Max Q Clear Time (g_c+I1), s	8.7	8.6				3.4		
Green Ext Time (p_c), s	2.3	5.3				6.2		

Intersection Summary	
HCM 2010 Ctrl Delay	13.0
HCM 2010 LOS	B

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	0	8	681	2	151	8	251	450	231	414	4
Future Volume (veh/h)	0	0	8	681	2	151	8	251	450	231	414	4
Number				1	6	16	3	8	18	7	4	14
Initial Q (Qb), veh				0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)				1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj				1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln				1863	1863	1863	1900	1863	1863	1900	1863	1900
Adj Flow Rate, veh/h				741	0	0	9	273	0	251	450	4
Adj No. of Lanes				2	0	1	0	2	1	0	2	0
Peak Hour Factor				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
Cap, veh/h				1713	0	765	13	404	182	289	557	5
Arrive On Green				0.48	0.00	0.00	0.11	0.11	0.00	0.23	0.23	0.23
Sat Flow, veh/h				3548	0	1583	111	3516	1583	1242	2396	22
Grp Volume(v), veh/h				741	0	0	151	131	0	364	0	341
Grp Sat Flow(s),veh/h/ln				1774	0	1583	1857	1770	1583	1801	0	1859
Q Serve(g_s), s				12.3	0.0	0.0	7.1	6.4	0.0	17.5	0.0	15.5
Cycle Q Clear(g_c), s				12.3	0.0	0.0	7.1	6.4	0.0	17.5	0.0	15.5
Prop In Lane				1.00		1.00	0.06		1.00	0.69		0.01
Lane Grp Cap(c), veh/h				1713	0	765	213	203	182	418	0	432
V/C Ratio(X)				0.43	0.00	0.00	0.71	0.64	0.00	0.87	0.00	0.79
Avail Cap(c_a), veh/h				1713	0	765	468	446	399	458	0	473
HCM Platoon Ratio				1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)				0.99	0.00	0.00	0.96	0.96	0.00	1.00	0.00	1.00
Uniform Delay (d), s/veh				15.2	0.0	0.0	38.4	38.1	0.0	33.2	0.0	32.5
Incr Delay (d2), s/veh				0.8	0.0	0.0	4.1	3.3	0.0	15.4	0.0	8.1
Initial Q Delay(d3),s/veh				0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln				6.2	0.0	0.0	3.9	3.3	0.0	10.5	0.0	8.9
LnGrp Delay(d),s/veh				16.0	0.0	0.0	42.5	41.3	0.0	48.7	0.0	40.6
LnGrp LOS				B			D	D		D		D
Approach Vol, veh/h					741			282			705	
Approach Delay, s/veh					16.0			42.0			44.7	
Approach LOS					B			D			D	

Timer	1	2	3	4	5	6	7	8
Assigned Phs				4		6		8
Phs Duration (G+Y+Rc), s				26.0		48.6		15.4
Change Period (Y+Rc), s				5.1		5.1		5.1
Max Green Setting (Gmax), s				22.9		29.1		22.7
Max Q Clear Time (g_c+I1), s				19.5		14.3		9.1
Green Ext Time (p_c), s				1.4		2.6		1.3

Intersection Summary	
HCM 2010 Ctrl Delay	32.0
HCM 2010 LOS	C

Notes

User approved volume balancing among the lanes for turning movement.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	138	40	60	14	50	41	53	479	13	55	655	163
Future Volume (veh/h)	138	40	60	14	50	41	53	479	13	55	655	163
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1900	1863	1863	1900	1863	1900	1863	1863	1900	1863	1863	1900
Adj Flow Rate, veh/h	155	45	67	16	56	46	60	538	15	62	736	183
Adj No. of Lanes	0	1	1	0	1	0	1	2	0	1	2	0
Peak Hour Factor	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	199	49	615	48	144	92	58	1396	39	59	1117	278
Arrive On Green	0.39	0.39	0.39	0.39	0.39	0.39	0.01	0.13	0.13	0.03	0.40	0.40
Sat Flow, veh/h	320	125	1583	0	370	237	1774	3517	98	1774	2810	699
Grp Volume(v), veh/h	200	0	67	118	0	0	60	270	283	62	463	456
Grp Sat Flow(s),veh/h/ln	446	0	1583	607	0	0	1774	1770	1845	1774	1770	1739
Q Serve(g_s), s	0.0	0.0	2.3	0.0	0.0	0.0	2.8	12.0	12.1	2.9	18.4	18.4
Cycle Q Clear(g_c), s	33.4	0.0	2.3	33.4	0.0	0.0	2.8	12.0	12.1	2.9	18.4	18.4
Prop In Lane	0.77		1.00	0.14		0.39	1.00		0.05	1.00		0.40
Lane Grp Cap(c), veh/h	247	0	615	283	0	0	58	702	733	59	704	692
V/C Ratio(X)	0.81	0.00	0.11	0.42	0.00	0.00	1.04	0.39	0.39	1.05	0.66	0.66
Avail Cap(c_a), veh/h	247	0	615	283	0	0	165	702	733	186	704	692
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	0.33	0.33	0.33	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	0.00	0.95	0.95	0.95	0.65	0.65	0.65
Uniform Delay (d), s/veh	27.7	0.0	16.8	20.0	0.0	0.0	42.5	27.8	27.8	41.6	21.1	21.1
Incr Delay (d2), s/veh	24.0	0.0	0.4	4.5	0.0	0.0	63.4	1.5	1.5	57.5	3.1	3.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.7	0.0	0.0	1.3	0.0	0.0
%ile BackOfQ(50%),veh/ln	6.4	0.0	1.1	2.2	0.0	0.0	2.4	6.2	6.5	2.3	9.5	9.3
LnGrp Delay(d),s/veh	51.7	0.0	17.2	24.5	0.0	0.0	106.6	29.3	29.2	100.4	24.3	24.3
LnGrp LOS	D		B	C			F	C	C	F	C	C
Approach Vol, veh/h		267			118			613			981	
Approach Delay, s/veh		43.0			24.5			36.8			29.1	
Approach LOS		D			C			D			C	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4	5	6		8
Phs Duration (G+Y+Rc), s	8.9	39.1		38.0	8.8	39.2		38.0
Change Period (Y+Rc), s	5.0	5.0		4.6	5.0	5.0		4.6
Max Green Setting (Gmax), s	10.0	28.0		33.4	9.0	29.0		33.4
Max Q Clear Time (g_c+I1), s	4.9	14.1		35.4	4.8	20.4		35.4
Green Ext Time (p_c), s	0.0	3.0		0.0	0.0	6.9		0.0

Intersection Summary	
HCM 2010 Ctrl Delay	33.1
HCM 2010 LOS	C

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	30	67	45	27	33	76	59	454	124	90	565	73
Future Volume (veh/h)	30	67	45	27	33	76	59	454	124	90	565	73
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1900	1863	1863	1900	1900	1863	1900	1900	1863	1900
Adj Flow Rate, veh/h	34	75	51	30	37	85	66	510	139	101	635	82
Adj No. of Lanes	1	1	0	1	1	0	0	2	0	0	2	0
Peak Hour Factor	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	157	131	89	158	64	147	230	1709	461	305	1832	234
Arrive On Green	0.13	0.13	0.13	0.13	0.13	0.13	1.00	1.00	1.00	1.00	1.00	1.00
Sat Flow, veh/h	1264	1035	704	1260	503	1156	236	2245	605	330	2406	308
Grp Volume(v), veh/h	34	0	126	30	0	122	350	0	365	381	0	437
Grp Sat Flow(s),veh/h/ln	1264	0	1739	1260	0	1659	1497	0	1588	1403	0	1641
Q Serve(g_s), s	2.2	0.0	5.9	2.0	0.0	6.0	0.0	0.0	0.0	0.0	0.0	0.0
Cycle Q Clear(g_c), s	8.2	0.0	5.9	7.8	0.0	6.0	0.0	0.0	0.0	0.0	0.0	0.0
Prop In Lane	1.00		0.40	1.00		0.70	0.19		0.38	0.27		0.19
Lane Grp Cap(c), veh/h	157	0	221	158	0	211	1190	0	1209	1121	0	1249
V/C Ratio(X)	0.22	0.00	0.57	0.19	0.00	0.58	0.29	0.00	0.30	0.34	0.00	0.35
Avail Cap(c_a), veh/h	414	0	574	414	0	548	1190	0	1209	1121	0	1249
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	2.00	2.00	2.00	2.00	2.00	2.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	1.00	0.98	0.00	0.98	0.86	0.00	0.86
Uniform Delay (d), s/veh	39.2	0.0	35.3	39.0	0.0	35.4	0.0	0.0	0.0	0.0	0.0	0.0
Incr Delay (d2), s/veh	0.7	0.0	2.3	0.6	0.0	2.5	0.6	0.0	0.6	0.7	0.0	0.7
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.8	0.0	2.9	0.7	0.0	2.9	0.2	0.0	0.2	0.2	0.0	0.2
LnGrp Delay(d),s/veh	39.9	0.0	37.6	39.6	0.0	37.9	0.6	0.0	0.6	0.7	0.0	0.7
LnGrp LOS	D		D	D		D	A		A	A		A
Approach Vol, veh/h		160			152			715			818	
Approach Delay, s/veh		38.1			38.2			0.6			0.7	
Approach LOS		D			D			A			A	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2		4		6		8
Phs Duration (G+Y+Rc), s		70.5		15.5		70.5		15.5
Change Period (Y+Rc), s		5.0		4.6		5.0		4.6
Max Green Setting (Gmax), s		48.0		28.4		48.0		28.4
Max Q Clear Time (g_c+I1), s		2.0		10.2		2.0		9.8
Green Ext Time (p_c), s		12.2		0.7		14.6		0.7

Intersection Summary		
HCM 2010 Ctrl Delay		7.0
HCM 2010 LOS		A

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	47	45	33	31	25	43	22	476	58	23	380	64
Future Volume (veh/h)	47	45	33	31	25	43	22	476	58	23	380	64
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1900	1863	1863	1900	1900	1863	1900	1900	1863	1900
Adj Flow Rate, veh/h	52	49	36	34	27	47	24	523	64	25	418	70
Adj No. of Lanes	1	1	0	1	1	0	0	2	0	0	2	0
Peak Hour Factor	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	173	108	80	165	66	115	112	2309	279	134	2156	357
Arrive On Green	0.11	0.11	0.11	0.11	0.11	0.11	0.52	0.52	0.52	1.00	1.00	1.00
Sat Flow, veh/h	1320	999	734	1307	611	1064	86	2961	357	113	2764	457
Grp Volume(v), veh/h	52	0	85	34	0	74	319	0	292	266	0	247
Grp Sat Flow(s),veh/h/ln	1320	0	1733	1307	0	1675	1772	0	1632	1720	0	1614
Q Serve(g_s), s	3.3	0.0	4.0	2.2	0.0	3.5	0.0	0.0	8.4	0.0	0.0	0.0
Cycle Q Clear(g_c), s	6.8	0.0	4.0	6.1	0.0	3.5	7.9	0.0	8.4	0.0	0.0	0.0
Prop In Lane	1.00		0.42	1.00		0.64	0.08		0.22	0.09		0.28
Lane Grp Cap(c), veh/h	173	0	188	165	0	182	1427	0	1273	1387	0	1259
V/C Ratio(X)	0.30	0.00	0.45	0.21	0.00	0.41	0.22	0.00	0.23	0.19	0.00	0.20
Avail Cap(c_a), veh/h	435	0	532	425	0	514	1427	0	1273	1387	0	1259
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	0.67	0.67	0.67	2.00	2.00	2.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	1.00	0.99	0.00	0.99	0.93	0.00	0.93
Uniform Delay (d), s/veh	38.9	0.0	35.9	38.8	0.0	35.8	6.4	0.0	6.5	0.0	0.0	0.0
Incr Delay (d2), s/veh	1.0	0.0	1.7	0.6	0.0	1.5	0.4	0.0	0.4	0.3	0.0	0.3
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	1.2	0.0	2.0	0.8	0.0	1.7	4.2	0.0	3.9	0.1	0.0	0.1
LnGrp Delay(d),s/veh	39.9	0.0	37.6	39.4	0.0	37.2	6.8	0.0	6.9	0.3	0.0	0.3
LnGrp LOS	D		D	D		D	A		A	A		A
Approach Vol, veh/h		137			108			611			513	
Approach Delay, s/veh		38.5			37.9			6.8			0.3	
Approach LOS		D			D			A			A	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2		4		6		8
Phs Duration (G+Y+Rc), s		72.1		13.9		72.1		13.9
Change Period (Y+Rc), s		5.0		4.6		5.0		4.6
Max Green Setting (Gmax), s		50.0		26.4		50.0		26.4
Max Q Clear Time (g_c+I1), s		10.4		8.8		2.0		8.1
Green Ext Time (p_c), s		9.1		0.5		7.7		0.4

Intersection Summary	
HCM 2010 Ctrl Delay	10.0
HCM 2010 LOS	B

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	76	0	119	173	288	90	73	469	0	0	451	155
Future Volume (veh/h)	76	0	119	173	288	90	73	469	0	0	451	155
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1900	1863	1863	1863	1863	1900	1863	1863	0	0	1863	1900
Adj Flow Rate, veh/h	78	32	100	177	294	92	74	479	0	0	460	158
Adj No. of Lanes	0	1	1	1	2	0	1	2	0	0	2	0
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	0	0	2	2
Cap, veh/h	0	374	403	318	536	165	95	2417	0	0	1480	505
Arrive On Green	0.00	0.20	0.20	0.20	0.20	0.20	0.05	0.68	0.00	0.00	1.00	1.00
Sat Flow, veh/h	0	1863	1583	1253	2668	819	1774	3632	0	0	2686	884
Grp Volume(v), veh/h	0	32	100	177	193	193	74	479	0	0	313	305
Grp Sat Flow(s),veh/h/ln	0	1863	1583	1253	1770	1718	1774	1770	0	0	1770	1707
Q Serve(g_s), s	0.0	1.2	4.3	11.5	8.4	8.7	3.5	4.3	0.0	0.0	0.0	0.0
Cycle Q Clear(g_c), s	0.0	1.2	4.3	12.7	8.4	8.7	3.5	4.3	0.0	0.0	0.0	0.0
Prop In Lane	0.00		1.00	1.00		0.48	1.00		0.00	0.00		0.52
Lane Grp Cap(c), veh/h	0	374	403	318	355	345	95	2417	0	0	1011	975
V/C Ratio(X)	0.00	0.09	0.25	0.56	0.54	0.56	0.78	0.20	0.00	0.00	0.31	0.31
Avail Cap(c_a), veh/h	0	812	775	474	576	559	165	2417	0	0	1011	975
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	2.00	2.00
Upstream Filter(I)	0.00	1.00	1.00	1.00	1.00	1.00	0.95	0.95	0.00	0.00	0.99	0.99
Uniform Delay (d), s/veh	0.0	27.9	25.5	33.1	30.8	30.9	40.2	5.0	0.0	0.0	0.0	0.0
Incr Delay (d2), s/veh	0.0	0.1	0.3	1.5	1.3	1.4	12.0	0.2	0.0	0.0	0.8	0.8
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.0	0.6	1.9	4.1	4.3	4.3	2.0	2.1	0.0	0.0	0.2	0.2
LnGrp Delay(d),s/veh	0.0	28.0	25.8	34.6	32.1	32.4	52.2	5.2	0.0	0.0	0.8	0.8
LnGrp LOS		C	C	C	C	C	D	A			A	A
Approach Vol, veh/h		132			563			553			618	
Approach Delay, s/veh		26.4			33.0			11.5			0.8	
Approach LOS		C			C			B			A	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2		4	5	6	7	8
Phs Duration (G+Y+Rc), s		63.7		22.3	9.6	54.1	0.0	22.3
Change Period (Y+Rc), s		5.0		5.0	5.0	5.0	4.5	5.0
Max Green Setting (Gmax), s		38.5		37.5	8.0	25.5	5.0	28.0
Max Q Clear Time (g_c+I1), s		6.3		6.3	5.5	2.0	0.0	14.7
Green Ext Time (p_c), s		5.2		0.5	0.0	5.9	0.0	2.6

Intersection Summary	
HCM 2010 Ctrl Delay	15.5
HCM 2010 LOS	B

Notes

User approved volume balancing among the lanes for turning movement.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	78	133	50	0	0	0	102	467	123	133	442	149
Future Volume (veh/h)	78	133	50	0	0	0	102	467	123	133	442	149
Number	7	4	14				5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0				0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00				1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00				1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1900				1863	1863	1900	1863	1863	1900
Adj Flow Rate, veh/h	82	140	53				107	492	129	140	465	157
Adj No. of Lanes	1	1	0				1	2	0	1	2	0
Peak Hour Factor	0.95	0.95	0.95				0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	2	2	2				2	2	2	2	2	2
Cap, veh/h	249	181	68				136	1629	425	176	1586	532
Arrive On Green	0.14	0.14	0.14				0.08	0.59	0.59	0.13	0.81	0.81
Sat Flow, veh/h	1774	1289	488				1774	2780	725	1774	2605	873
Grp Volume(v), veh/h	82	0	193				107	312	309	140	315	307
Grp Sat Flow(s),veh/h/ln	1774	0	1777				1774	1770	1735	1774	1770	1709
Q Serve(g_s), s	3.6	0.0	9.0				5.1	7.6	7.7	6.6	3.8	3.9
Cycle Q Clear(g_c), s	3.6	0.0	9.0				5.1	7.6	7.7	6.6	3.8	3.9
Prop In Lane	1.00		0.27				1.00		0.42	1.00		0.51
Lane Grp Cap(c), veh/h	249	0	249				136	1037	1017	176	1077	1040
V/C Ratio(X)	0.33	0.00	0.78				0.79	0.30	0.30	0.79	0.29	0.30
Avail Cap(c_a), veh/h	474	0	475				186	1037	1017	454	1077	1040
HCM Platoon Ratio	1.00	1.00	1.00				1.00	1.00	1.00	1.33	1.33	1.33
Upstream Filter(I)	1.00	0.00	1.00				1.00	1.00	1.00	0.94	0.94	0.94
Uniform Delay (d), s/veh	33.3	0.0	35.7				39.0	8.9	9.0	36.5	3.6	3.6
Incr Delay (d2), s/veh	0.8	0.0	5.1				14.4	0.7	0.8	7.3	0.6	0.7
Initial Q Delay(d3),s/veh	0.0	0.0	0.0				0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.8	0.0	4.8				3.0	3.9	3.9	3.5	2.0	2.0
LnGrp Delay(d),s/veh	34.1	0.0	40.8				53.4	9.7	9.7	43.8	4.2	4.2
LnGrp LOS	C		D				D	A	A	D	A	A
Approach Vol, veh/h		275						728			762	
Approach Delay, s/veh		38.8						16.1			11.5	
Approach LOS		D						B			B	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4	5	6		
Phs Duration (G+Y+Rc), s	13.6	55.4		17.1	11.6	57.4		
Change Period (Y+Rc), s	5.0	5.0		5.0	5.0	5.0		
Max Green Setting (Gmax), s	22.6	26.0		23.0	9.0	39.0		
Max Q Clear Time (g_c+I1), s	8.6	9.7		11.0	7.1	5.9		
Green Ext Time (p_c), s	0.3	5.0		1.1	0.0	6.6		

Intersection Summary	
HCM 2010 Ctrl Delay	17.7
HCM 2010 LOS	B

Intersection	
Int Delay, s/veh	0

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	6	0	0	7	0	0
Future Vol, veh/h	6	0	0	7	0	0
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	7	0	0	8	0	0

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	7	0	15	7
Stage 1	-	-	-	-	7	-
Stage 2	-	-	-	-	8	-
Critical Hdwy	-	-	4.12	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	-	-	2.218	-	3.518	3.318
Pot Cap-1 Maneuver	-	-	1614	-	1004	1075
Stage 1	-	-	-	-	1016	-
Stage 2	-	-	-	-	1015	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	1614	-	1004	1075
Mov Cap-2 Maneuver	-	-	-	-	1004	-
Stage 1	-	-	-	-	1016	-
Stage 2	-	-	-	-	1015	-

Approach	EB	WB	NB
HCM Control Delay, s	0	0	0
HCM LOS			A

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	-	-	-	1614	-
HCM Lane V/C Ratio	-	-	-	-	-
HCM Control Delay (s)	0	-	-	0	-
HCM Lane LOS	A	-	-	A	-
HCM 95th %tile Q(veh)	-	-	-	0	-

Intersection	
Int Delay, s/veh	0

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	0	0	0	381	654	0
Future Vol, veh/h	0	0	0	381	654	0
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	1	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	0	0	0	414	711	0

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	1125	356	711	0	-	0
Stage 1	711	-	-	-	-	-
Stage 2	414	-	-	-	-	-
Critical Hdwy	6.63	6.93	4.13	-	-	-
Critical Hdwy Stg 1	5.83	-	-	-	-	-
Critical Hdwy Stg 2	5.43	-	-	-	-	-
Follow-up Hdwy	3.519	3.319	2.219	-	-	-
Pot Cap-1 Maneuver	212	641	886	-	-	-
Stage 1	449	-	-	-	-	-
Stage 2	666	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	212	641	886	-	-	-
Mov Cap-2 Maneuver	336	-	-	-	-	-
Stage 1	449	-	-	-	-	-
Stage 2	666	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	0	0	0
HCM LOS	A		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	886	-	-	-	-
HCM Lane V/C Ratio	-	-	-	-	-
HCM Control Delay (s)	0	-	0	-	-
HCM Lane LOS	A	-	A	-	-
HCM 95th %tile Q(veh)	0	-	-	-	-

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	94	64	46	89	268	671	89	16	150	101	22	80
Future Volume (veh/h)	94	64	46	89	268	671	89	16	150	101	22	80
Number	5	2	12	1	6	16	3	8	18	7	4	14
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1863	1863	1863	1863	1900	1863	1863	1900	1863	1863
Adj Flow Rate, veh/h	106	72	52	100	301	754	100	18	169	113	25	90
Adj No. of Lanes	1	1	1	1	1	2	0	1	1	0	1	1
Peak Hour Factor	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	139	519	441	158	539	1294	219	39	229	174	39	188
Arrive On Green	0.08	0.28	0.28	0.09	0.29	0.29	0.14	0.14	0.14	0.12	0.12	0.12
Sat Flow, veh/h	1774	1863	1583	1774	1863	3167	1514	273	1583	1465	324	1583
Grp Volume(v), veh/h	106	72	52	100	301	754	118	0	169	138	0	90
Grp Sat Flow(s),veh/h/ln	1774	1863	1583	1774	1863	1583	1787	0	1583	1789	0	1583
Q Serve(g_s), s	3.9	1.9	1.6	3.6	9.1	12.2	4.0	0.0	6.8	4.9	0.0	3.5
Cycle Q Clear(g_c), s	3.9	1.9	1.6	3.6	9.1	12.2	4.0	0.0	6.8	4.9	0.0	3.5
Prop In Lane	1.00		1.00	1.00		1.00	0.85		1.00	0.82		1.00
Lane Grp Cap(c), veh/h	139	519	441	158	539	1294	258	0	229	213	0	188
V/C Ratio(X)	0.76	0.14	0.12	0.63	0.56	0.58	0.46	0.00	0.74	0.65	0.00	0.48
Avail Cap(c_a), veh/h	440	1120	952	292	965	2018	497	0	440	446	0	395
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	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	29.9	17.9	17.8	29.1	19.9	15.2	25.9	0.0	27.1	27.8	0.0	27.2
Incr Delay (d2), s/veh	8.4	0.1	0.1	4.2	0.9	0.4	1.3	0.0	4.6	3.3	0.0	1.9
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.2	1.0	0.7	1.9	4.7	6.5	2.1	0.0	3.2	2.6	0.0	1.6
LnGrp Delay(d),s/veh	38.3	18.0	17.9	33.3	20.8	15.6	27.2	0.0	31.7	31.1	0.0	29.1
LnGrp LOS	D	B	B	C	C	B	C		C	C		C
Approach Vol, veh/h		230			1155			287			228	
Approach Delay, s/veh		27.4			18.5			29.8			30.3	
Approach LOS		C			B			C			C	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4	5	6		8
Phs Duration (G+Y+Rc), s	12.0	24.5		14.0	11.3	25.3		15.7
Change Period (Y+Rc), s	6.1	6.1		6.1	6.1	6.1		6.1
Max Green Setting (Gmax), s	10.9	39.8		16.5	16.4	34.3		18.4
Max Q Clear Time (g_c+I1), s	5.6	3.9		6.9	5.9	14.2		8.8
Green Ext Time (p_c), s	0.1	0.5		0.6	0.2	4.9		0.9

Intersection Summary	
HCM 2010 Ctrl Delay	22.7
HCM 2010 LOS	C

Notes

User approved volume balancing among the lanes for turning movement.

Intersection	
Int Delay, s/veh	3

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	28	158	58	378	177	13
Future Vol, veh/h	28	158	58	378	177	13
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	115	1	-	-	0
Veh in Median Storage, #	2	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	96	96	96	96	96	96
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	29	165	60	394	184	14

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	698	184	198	0	-	0
Stage 1	184	-	-	-	-	-
Stage 2	514	-	-	-	-	-
Critical Hdwy	6.42	6.22	4.12	-	-	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	2.218	-	-	-
Pot Cap-1 Maneuver	407	858	1375	-	-	-
Stage 1	848	-	-	-	-	-
Stage 2	600	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	389	858	1375	-	-	-
Mov Cap-2 Maneuver	500	-	-	-	-	-
Stage 1	811	-	-	-	-	-
Stage 2	600	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	10.6	1	0
HCM LOS	B		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	EBLn2	SBT	SBR
Capacity (veh/h)	1375	-	500	858	-	-
HCM Lane V/C Ratio	0.044	-	0.058	0.192	-	-
HCM Control Delay (s)	7.7	-	12.6	10.2	-	-
HCM Lane LOS	A	-	B	B	-	-
HCM 95th %tile Q(veh)	0.1	-	0.2	0.7	-	-

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (veh/h)	483	120	975	1346	108	0
Future Volume (veh/h)	483	120	975	1346	108	0
Number	2	12	1	6	3	18
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)		1.00	1.00		1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1863	1863	1863	0
Adj Flow Rate, veh/h	503	125	1016	1402	112	0
Adj No. of Lanes	2	1	2	2	1	0
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96
Percent Heavy Veh, %	2	2	2	2	2	0
Cap, veh/h	621	146	2264	3244	0	0
Arrive On Green	0.18	0.18	0.66	0.92	0.00	0.00
Sat Flow, veh/h	3632	1583	3442	3632	0	0
Grp Volume(v), veh/h	503	125	1016	1402	0	0
Grp Sat Flow(s),veh/h/ln	1770	1583	1721	1770	0	0
Q Serve(g_s), s	12.3	7.0	12.9	4.9	0.0	0.0
Cycle Q Clear(g_c), s	12.3	7.0	12.9	4.9	0.0	0.0
Prop In Lane		1.00	1.00		0.00	0.00
Lane Grp Cap(c), veh/h	621	146	2264	3244	0	0
V/C Ratio(X)	0.81	0.86	0.45	0.43	0.00	0.00
Avail Cap(c_a), veh/h	763	209	2264	3244	0	0
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	0.00	0.00
Uniform Delay (d), s/veh	35.7	40.3	7.5	0.5	0.0	0.0
Incr Delay (d2), s/veh	10.9	43.8	0.1	0.4	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	7.0	4.6	6.1	2.3	0.0	0.0
LnGrp Delay(d),s/veh	46.6	84.1	7.6	0.9	0.0	0.0
LnGrp LOS	D	F	A	A		
Approach Vol, veh/h	628			2418	0	
Approach Delay, s/veh	54.1			3.7	0.0	
Approach LOS	D			A		

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2				6		8
Phs Duration (G+Y+Rc), s	66.7	23.3				90.0		0.0
Change Period (Y+Rc), s	7.5	7.5				7.5		7.5
Max Green Setting (Gmax), s	31.5	19.4				58.4		16.6
Max Q Clear Time (g_c+I1), s	14.9	14.3				6.9		0.0
Green Ext Time (p_c), s	3.6	1.5				12.7		0.0

Intersection Summary	
HCM 2010 Ctrl Delay	14.1
HCM 2010 LOS	B

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (veh/h)	326	275	948	600	0	0
Future Volume (veh/h)	326	275	948	600	0	0
Number	2	12	1	6		
Initial Q (Qb), veh	0	0	0	0		
Ped-Bike Adj(A_pbT)		1.00	1.00			
Parking Bus, Adj	1.00	1.00	1.00	1.00		
Adj Sat Flow, veh/h/ln	1863	1863	1863	1863		
Adj Flow Rate, veh/h	340	286	988	625		
Adj No. of Lanes	2	1	2	3		
Peak Hour Factor	0.96	0.96	0.96	0.96		
Percent Heavy Veh, %	2	2	2	2		
Cap, veh/h	1829	818	1143	4701		
Arrive On Green	0.52	0.52	0.33	0.92		
Sat Flow, veh/h	3632	1583	3442	5253		
Grp Volume(v), veh/h	340	286	988	625		
Grp Sat Flow(s),veh/h/ln	1770	1583	1721	1695		
Q Serve(g_s), s	4.6	9.6	24.2	1.0		
Cycle Q Clear(g_c), s	4.6	9.6	24.2	1.0		
Prop In Lane		1.00	1.00			
Lane Grp Cap(c), veh/h	1829	818	1143	4701		
V/C Ratio(X)	0.19	0.35	0.86	0.13		
Avail Cap(c_a), veh/h	1829	818	1805	4701		
HCM Platoon Ratio	1.00	1.00	1.00	1.00		
Upstream Filter(I)	0.98	0.98	1.00	1.00		
Uniform Delay (d), s/veh	11.6	12.8	28.1	0.3		
Incr Delay (d2), s/veh	0.2	1.2	2.8	0.1		
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0		
%ile BackOfQ(50%),veh/ln	2.3	4.4	12.0	0.4		
LnGrp Delay(d),s/veh	11.8	14.0	30.9	0.4		
LnGrp LOS	B	B	C	A		
Approach Vol, veh/h	626			1613		
Approach Delay, s/veh	12.8			19.1		
Approach LOS	B			B		

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2				6		
Phs Duration (G+Y+Rc), s	36.7	53.3				90.0		
Change Period (Y+Rc), s	6.8	6.8				6.8		
Max Green Setting (Gmax), s	47.3	29.2				83.2		
Max Q Clear Time (g_c+I1), s	26.2	11.6				3.0		
Green Ext Time (p_c), s	3.7	3.2				4.1		

Intersection Summary	
HCM 2010 Ctrl Delay	17.3
HCM 2010 LOS	B

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	0	7	374	0	219	1	134	391	184	175	2
Future Volume (veh/h)	0	0	7	374	0	219	1	134	391	184	175	2
Number				1	6	16	3	8	18	7	4	14
Initial Q (Qb), veh				0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)				1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj				1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln				1863	1863	1863	1900	1863	1863	1900	1863	1900
Adj Flow Rate, veh/h				390	0	0	1	140	0	192	182	2
Adj No. of Lanes				2	0	1	0	2	1	0	2	0
Peak Hour Factor				0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Percent Heavy Veh, %				2	2	2	2	2	2	2	2	2
Cap, veh/h				2181	0	973	2	281	123	242	256	3
Arrive On Green				0.61	0.00	0.00	0.08	0.08	0.00	0.14	0.14	0.14
Sat Flow, veh/h				3548	0	1583	25	3607	1583	1756	1858	20
Grp Volume(v), veh/h				390	0	0	76	65	0	194	0	182
Grp Sat Flow(s),veh/h/ln				1774	0	1583	1862	1770	1583	1775	0	1859
Q Serve(g_s), s				4.3	0.0	0.0	3.5	3.2	0.0	9.5	0.0	8.4
Cycle Q Clear(g_c), s				4.3	0.0	0.0	3.5	3.2	0.0	9.5	0.0	8.4
Prop In Lane				1.00		1.00	0.01		1.00	0.99		0.01
Lane Grp Cap(c), veh/h				2181	0	973	145	138	123	244	0	256
V/C Ratio(X)				0.18	0.00	0.00	0.52	0.48	0.00	0.79	0.00	0.71
Avail Cap(c_a), veh/h				2181	0	973	515	490	438	314	0	328
HCM Platoon Ratio				1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)				1.00	0.00	0.00	1.00	1.00	0.00	1.00	0.00	1.00
Uniform Delay (d), s/veh				7.5	0.0	0.0	39.9	39.7	0.0	37.6	0.0	37.1
Incr Delay (d2), s/veh				0.2	0.0	0.0	2.9	2.5	0.0	10.3	0.0	5.0
Initial Q Delay(d3),s/veh				0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln				2.1	0.0	0.0	1.9	1.7	0.0	5.4	0.0	4.7
LnGrp Delay(d),s/veh				7.7	0.0	0.0	42.8	42.3	0.0	47.9	0.0	42.1
LnGrp LOS				A			D	D		D		D
Approach Vol, veh/h					390			141			376	
Approach Delay, s/veh					7.7			42.5			45.1	
Approach LOS					A			D			D	

Timer	1	2	3	4	5	6	7	8
Assigned Phs				4		6		8
Phs Duration (G+Y+Rc), s				17.5		60.4		12.1
Change Period (Y+Rc), s				5.1		5.1		5.1
Max Green Setting (Gmax), s				15.9		33.9		24.9
Max Q Clear Time (g_c+I1), s				11.5		6.3		5.5
Green Ext Time (p_c), s				0.9		1.4		0.6

Intersection Summary	
HCM 2010 Ctrl Delay	28.6
HCM 2010 LOS	C

Notes

User approved volume balancing among the lanes for turning movement.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	146	33	36	6	33	41	30	233	12	32	345	73
Future Volume (veh/h)	146	33	36	6	33	41	30	233	12	32	345	73
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1900	1863	1863	1900	1863	1900	1863	1863	1900	1863	1863	1900
Adj Flow Rate, veh/h	157	35	39	6	35	44	32	251	13	34	371	78
Adj No. of Lanes	0	1	1	0	1	0	1	2	0	1	2	0
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	296	49	288	52	141	159	34	2110	109	37	1802	375
Arrive On Green	0.18	0.18	0.18	0.18	0.18	0.18	0.01	0.20	0.20	0.02	0.62	0.62
Sat Flow, veh/h	1213	270	1583	41	774	875	1774	3425	177	1774	2918	607
Grp Volume(v), veh/h	192	0	39	85	0	0	32	129	135	34	224	225
Grp Sat Flow(s),veh/h/ln	1484	0	1583	1691	0	0	1774	1770	1832	1774	1770	1756
Q Serve(g_s), s	6.4	0.0	1.8	0.0	0.0	0.0	1.6	5.1	5.2	1.6	4.8	4.8
Cycle Q Clear(g_c), s	10.1	0.0	1.8	3.7	0.0	0.0	1.6	5.1	5.2	1.6	4.8	4.8
Prop In Lane	0.82		1.00	0.07		0.52	1.00		0.10	1.00		0.35
Lane Grp Cap(c), veh/h	346	0	288	352	0	0	34	1091	1129	37	1093	1084
V/C Ratio(X)	0.56	0.00	0.14	0.24	0.00	0.00	0.93	0.12	0.12	0.93	0.20	0.21
Avail Cap(c_a), veh/h	633	0	615	696	0	0	165	1091	1129	186	1093	1084
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	0.33	0.33	0.33	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	0.00	1.00	1.00	1.00	0.86	0.86	0.86
Uniform Delay (d), s/veh	32.6	0.0	29.5	30.3	0.0	0.0	42.7	15.2	15.2	42.0	7.2	7.2
Incr Delay (d2), s/veh	6.3	0.0	1.0	1.6	0.0	0.0	54.2	0.2	0.2	47.0	0.4	0.4
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	4.9	0.0	0.9	1.9	0.0	0.0	1.3	2.6	2.7	1.3	2.4	2.4
LnGrp Delay(d),s/veh	38.9	0.0	30.5	31.9	0.0	0.0	96.8	15.4	15.4	89.1	7.6	7.6
LnGrp LOS	D		C	C			F	B	B	F	A	A
Approach Vol, veh/h		231			85			296			483	
Approach Delay, s/veh		37.5			31.9			24.2			13.3	
Approach LOS		D			C			C			B	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4	5	6		8
Phs Duration (G+Y+Rc), s	7.8	58.0		20.2	7.7	58.1		20.2
Change Period (Y+Rc), s	5.0	5.0		4.6	5.0	5.0		4.6
Max Green Setting (Gmax), s	10.8	28.0		33.4	9.0	29.0		33.4
Max Q Clear Time (g_c+I1), s	3.6	7.2		12.1	3.6	6.8		5.7
Green Ext Time (p_c), s	0.0	1.5		3.6	0.0	7.6		1.3

Intersection Summary	
HCM 2010 Ctrl Delay	22.8
HCM 2010 LOS	C

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	6	15	6	27	19	28	8	234	77	66	289	15
Future Volume (veh/h)	6	15	6	27	19	28	8	234	77	66	289	15
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1900	1863	1863	1900	1900	1863	1900	1900	1863	1900
Adj Flow Rate, veh/h	6	15	6	28	19	29	8	239	79	67	295	15
Adj No. of Lanes	1	1	0	1	1	0	0	2	0	0	2	0
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	133	81	32	157	43	65	80	2088	666	470	2078	108
Arrive On Green	0.06	0.06	0.06	0.06	0.06	0.06	1.00	1.00	1.00	1.00	1.00	1.00
Sat Flow, veh/h	1352	1267	507	1385	666	1017	43	2532	807	501	2521	131
Grp Volume(v), veh/h	6	0	21	28	0	48	174	0	152	186	0	191
Grp Sat Flow(s),veh/h/ln	1352	0	1773	1385	0	1683	1830	0	1553	1481	0	1672
Q Serve(g_s), s	0.4	0.0	1.0	1.7	0.0	2.4	0.0	0.0	0.0	0.0	0.0	0.0
Cycle Q Clear(g_c), s	2.7	0.0	1.0	2.6	0.0	2.4	0.0	0.0	0.0	0.0	0.0	0.0
Prop In Lane	1.00		0.29	1.00		0.60	0.05		0.52	0.36		0.08
Lane Grp Cap(c), veh/h	133	0	113	157	0	107	1553	0	1280	1278	0	1379
V/C Ratio(X)	0.05	0.00	0.19	0.18	0.00	0.45	0.11	0.00	0.12	0.15	0.00	0.14
Avail Cap(c_a), veh/h	493	0	586	526	0	556	1553	0	1280	1278	0	1379
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	2.00	2.00	2.00	2.00	2.00	2.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00	0.98	0.00	0.98
Uniform Delay (d), s/veh	40.1	0.0	38.1	39.4	0.0	38.8	0.0	0.0	0.0	0.0	0.0	0.0
Incr Delay (d2), s/veh	0.1	0.0	0.8	0.5	0.0	2.9	0.1	0.0	0.2	0.2	0.0	0.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.1	0.0	0.5	0.7	0.0	1.2	0.1	0.0	0.1	0.1	0.0	0.1
LnGrp Delay(d),s/veh	40.2	0.0	38.9	39.9	0.0	41.7	0.1	0.0	0.2	0.2	0.0	0.2
LnGrp LOS	D		D	D		D	A		A	A		A
Approach Vol, veh/h		27			76			326			377	
Approach Delay, s/veh		39.2			41.0			0.2			0.2	
Approach LOS		D			D			A			A	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2		4		6		8
Phs Duration (G+Y+Rc), s		75.9		10.1		75.9		10.1
Change Period (Y+Rc), s		5.0		4.6		5.0		4.6
Max Green Setting (Gmax), s		48.0		28.4		48.0		28.4
Max Q Clear Time (g_c+I1), s		2.0		4.7		2.0		4.6
Green Ext Time (p_c), s		4.5		0.1		5.4		0.3

Intersection Summary	
HCM 2010 Ctrl Delay	5.4
HCM 2010 LOS	A

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	5	14	2	5	7	20	10	251	22	18	325	18
Future Volume (veh/h)	5	14	2	5	7	20	10	251	22	18	325	18
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1900	1863	1863	1900	1900	1863	1900	1900	1863	1900
Adj Flow Rate, veh/h	6	16	2	6	8	22	11	282	25	20	365	20
Adj No. of Lanes	1	1	0	1	1	0	0	2	0	0	2	0
Peak Hour Factor	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	133	86	11	144	23	64	107	2588	227	149	2625	143
Arrive On Green	0.05	0.05	0.05	0.05	0.05	0.05	1.00	1.00	1.00	1.00	1.00	1.00
Sat Flow, veh/h	1374	1624	203	1389	440	1209	75	3099	272	123	3142	171
Grp Volume(v), veh/h	6	0	18	6	0	30	166	0	152	210	0	195
Grp Sat Flow(s),veh/h/ln	1374	0	1827	1389	0	1649	1798	0	1647	1771	0	1665
Q Serve(g_s), s	0.4	0.0	0.8	0.4	0.0	1.5	0.0	0.0	0.0	0.0	0.0	0.0
Cycle Q Clear(g_c), s	1.9	0.0	0.8	1.2	0.0	1.5	0.0	0.0	0.0	0.0	0.0	0.0
Prop In Lane	1.00		0.11	1.00		0.73	0.07		0.16	0.10		0.10
Lane Grp Cap(c), veh/h	133	0	97	144	0	88	1546	0	1376	1525	0	1391
V/C Ratio(X)	0.05	0.00	0.19	0.04	0.00	0.34	0.11	0.00	0.11	0.14	0.00	0.14
Avail Cap(c_a), veh/h	481	0	561	497	0	506	1546	0	1376	1525	0	1391
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	2.00	2.00	2.00	2.00	2.00	2.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00	0.99	0.00	0.99
Uniform Delay (d), s/veh	40.2	0.0	38.9	39.5	0.0	39.3	0.0	0.0	0.0	0.0	0.0	0.0
Incr Delay (d2), s/veh	0.1	0.0	0.9	0.1	0.0	2.3	0.1	0.0	0.2	0.2	0.0	0.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.1	0.0	0.4	0.1	0.0	0.7	0.1	0.0	0.1	0.1	0.0	0.1
LnGrp Delay(d),s/veh	40.3	0.0	39.8	39.6	0.0	41.6	0.1	0.0	0.2	0.2	0.0	0.2
LnGrp LOS	D		D	D		D	A		A	A		A
Approach Vol, veh/h		24			36			318			405	
Approach Delay, s/veh		40.0			41.2			0.2			0.2	
Approach LOS		D			D			A			A	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2		4		6		8
Phs Duration (G+Y+Rc), s		76.8		9.2		76.8		9.2
Change Period (Y+Rc), s		5.0		4.6		5.0		4.6
Max Green Setting (Gmax), s		50.0		26.4		50.0		26.4
Max Q Clear Time (g_c+I1), s		2.0		3.9		2.0		3.5
Green Ext Time (p_c), s		4.3		0.1		5.7		0.1

Intersection Summary	
HCM 2010 Ctrl Delay	3.3
HCM 2010 LOS	A

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	37	0	52	158	173	60	22	197	0	0	283	15
Future Volume (veh/h)	37	0	52	158	173	60	22	197	0	0	283	15
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1900	1863	1863	1863	1863	1900	1863	1863	0	0	1863	1900
Adj Flow Rate, veh/h	42	12	50	178	194	67	25	221	0	0	318	17
Adj No. of Lanes	0	1	1	1	2	0	1	2	0	0	2	0
Peak Hour Factor	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	0	0	2	2
Cap, veh/h	0	331	314	314	463	155	37	2499	0	0	2143	114
Arrive On Green	0.00	0.18	0.18	0.18	0.18	0.18	0.02	0.71	0.00	0.00	1.00	1.00
Sat Flow, veh/h	0	1863	1583	1335	2606	873	1774	3632	0	0	3511	182
Grp Volume(v), veh/h	0	12	50	178	130	131	25	221	0	0	164	171
Grp Sat Flow(s),veh/h/ln	0	1863	1583	1335	1770	1709	1774	1770	0	0	1770	1831
Q Serve(g_s), s	0.0	0.5	2.2	11.0	5.6	5.9	1.2	1.7	0.0	0.0	0.0	0.0
Cycle Q Clear(g_c), s	0.0	0.5	2.2	11.4	5.6	5.9	1.2	1.7	0.0	0.0	0.0	0.0
Prop In Lane	0.00		1.00	1.00		0.51	1.00		0.00	0.00		0.10
Lane Grp Cap(c), veh/h	0	331	314	314	314	304	37	2499	0	0	1110	1148
V/C Ratio(X)	0.00	0.04	0.16	0.57	0.41	0.43	0.67	0.09	0.00	0.00	0.15	0.15
Avail Cap(c_a), veh/h	0	812	724	511	576	556	165	2499	0	0	1110	1148
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	2.00	2.00
Upstream Filter(I)	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	0.00	1.00	1.00
Uniform Delay (d), s/veh	0.0	29.3	28.5	34.0	31.4	31.5	41.8	4.0	0.0	0.0	0.0	0.0
Incr Delay (d2), s/veh	0.0	0.0	0.2	1.6	0.9	1.0	19.1	0.1	0.0	0.0	0.3	0.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.0	0.2	1.0	4.2	2.8	2.9	0.8	0.8	0.0	0.0	0.1	0.1
LnGrp Delay(d),s/veh	0.0	29.3	28.8	35.6	32.2	32.5	60.9	4.0	0.0	0.0	0.3	0.3
LnGrp LOS		C	C	D	C	C	E	A			A	A
Approach Vol, veh/h		62			439			246			335	
Approach Delay, s/veh		28.9			33.7			9.8			0.3	
Approach LOS		C			C			A			A	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2		4	5	6	7	8
Phs Duration (G+Y+Rc), s		65.7		20.3	6.8	58.9	0.0	20.3
Change Period (Y+Rc), s		5.0		5.0	5.0	5.0	4.5	5.0
Max Green Setting (Gmax), s		38.5		37.5	8.0	25.5	5.0	28.0
Max Q Clear Time (g_c+I1), s		3.7		4.2	3.2	2.0	0.0	13.4
Green Ext Time (p_c), s		2.2		0.2	0.0	2.9	0.0	1.9

Intersection Summary	
HCM 2010 Ctrl Delay	17.6
HCM 2010 LOS	B

Notes

User approved volume balancing among the lanes for turning movement.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	9	24	10	0	0	0	20	198	43	53	367	100
Future Volume (veh/h)	9	24	10	0	0	0	20	198	43	53	367	100
Number	7	4	14				5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0				0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00				1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00				1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1900				1863	1863	1900	1863	1863	1900
Adj Flow Rate, veh/h	9	24	10				20	202	44	54	374	102
Adj No. of Lanes	1	1	0				1	2	0	1	2	0
Peak Hour Factor	0.98	0.98	0.98				0.98	0.98	0.98	0.98	0.98	0.98
Percent Heavy Veh, %	2	2	2				2	2	2	2	2	2
Cap, veh/h	79	56	23				39	2144	458	75	2092	564
Arrive On Green	0.04	0.04	0.04				0.02	0.74	0.74	0.04	0.76	0.76
Sat Flow, veh/h	1774	1250	521				1774	2903	620	1774	2758	743
Grp Volume(v), veh/h	9	0	34				20	122	124	54	238	238
Grp Sat Flow(s),veh/h/ln	1774	0	1771				1774	1770	1753	1774	1770	1732
Q Serve(g_s), s	0.4	0.0	1.6				1.0	1.7	1.7	2.6	3.2	3.3
Cycle Q Clear(g_c), s	0.4	0.0	1.6				1.0	1.7	1.7	2.6	3.2	3.3
Prop In Lane	1.00		0.29				1.00		0.35	1.00		0.43
Lane Grp Cap(c), veh/h	79	0	79				39	1307	1295	75	1343	1314
V/C Ratio(X)	0.11	0.00	0.43				0.51	0.09	0.10	0.72	0.18	0.18
Avail Cap(c_a), veh/h	474	0	474				186	1307	1295	454	1343	1314
HCM Platoon Ratio	1.00	1.00	1.00				1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00				1.00	1.00	1.00	0.96	0.96	0.96
Uniform Delay (d), s/veh	39.4	0.0	40.0				41.6	3.2	3.2	40.7	2.9	2.9
Incr Delay (d2), s/veh	0.6	0.0	3.6				9.9	0.1	0.1	11.8	0.3	0.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0				0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.2	0.0	0.9				0.6	0.9	0.9	1.5	1.6	1.6
LnGrp Delay(d),s/veh	40.1	0.0	43.6				51.5	3.3	3.3	52.5	3.2	3.2
LnGrp LOS	D		D				D	A	A	D	A	A
Approach Vol, veh/h		43						266			530	
Approach Delay, s/veh		42.9						6.9			8.2	
Approach LOS		D						A			A	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4	5	6		
Phs Duration (G+Y+Rc), s	8.6	68.5		8.9	6.9	70.2		
Change Period (Y+Rc), s	5.0	5.0		5.0	5.0	5.0		
Max Green Setting (Gmax), s	22.6	26.0		23.0	9.0	39.0		
Max Q Clear Time (g_c+I1), s	4.6	3.7		3.6	3.0	5.3		
Green Ext Time (p_c), s	0.1	2.0		0.1	0.0	4.8		

Intersection Summary	
HCM 2010 Ctrl Delay	9.6
HCM 2010 LOS	A

Intersection	
Int Delay, s/veh	6.6

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	49	0	59	12	0	137
Future Vol, veh/h	49	0	59	12	0	137
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	53	0	64	13	0	149

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	53	0	194	53
Stage 1	-	-	-	-	53	-
Stage 2	-	-	-	-	141	-
Critical Hdwy	-	-	4.12	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	-	-	2.218	-	3.518	3.318
Pot Cap-1 Maneuver	-	-	1553	-	795	1014
Stage 1	-	-	-	-	970	-
Stage 2	-	-	-	-	886	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	1553	-	762	1014
Mov Cap-2 Maneuver	-	-	-	-	762	-
Stage 1	-	-	-	-	929	-
Stage 2	-	-	-	-	886	-

Approach	EB	WB	NB
HCM Control Delay, s	0	6.2	9.2
HCM LOS			A

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	1014	-	-	1553	-
HCM Lane V/C Ratio	0.147	-	-	0.041	-
HCM Control Delay (s)	9.2	-	-	7.4	0
HCM Lane LOS	A	-	-	A	A
HCM 95th %tile Q(veh)	0.5	-	-	0.1	-

Intersection	
Int Delay, s/veh	0

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	0	4	1	435	312	0
Future Vol, veh/h	0	4	1	435	312	0
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	1	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	0	4	1	473	339	0

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	814	170	339	0	-	0
Stage 1	339	-	-	-	-	-
Stage 2	475	-	-	-	-	-
Critical Hdwy	6.63	6.93	4.13	-	-	-
Critical Hdwy Stg 1	5.83	-	-	-	-	-
Critical Hdwy Stg 2	5.43	-	-	-	-	-
Follow-up Hdwy	3.519	3.319	2.219	-	-	-
Pot Cap-1 Maneuver	331	845	1219	-	-	-
Stage 1	694	-	-	-	-	-
Stage 2	625	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	331	845	1219	-	-	-
Mov Cap-2 Maneuver	450	-	-	-	-	-
Stage 1	693	-	-	-	-	-
Stage 2	625	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	9.3	0	0
HCM LOS	A		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	1219	-	845	-	-
HCM Lane V/C Ratio	0.001	-	0.005	-	-
HCM Control Delay (s)	8	-	9.3	-	-
HCM Lane LOS	A	-	A	-	-
HCM 95th %tile Q(veh)	0	-	0	-	-

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	175	54	104	311	190	1453	75	20	122	93	36	66
Future Volume (veh/h)	175	54	104	311	190	1453	75	20	122	93	36	66
Number	5	2	12	1	6	16	3	8	18	7	4	14
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1863	1863	1863	1863	1900	1863	1863	1900	1863	1863
Adj Flow Rate, veh/h	188	58	112	334	204	1562	81	22	131	100	39	71
Adj No. of Lanes	1	1	1	1	1	2	0	1	1	0	1	1
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	225	611	519	367	759	1611	152	41	171	131	51	160
Arrive On Green	0.13	0.33	0.33	0.21	0.41	0.41	0.11	0.11	0.11	0.10	0.10	0.10
Sat Flow, veh/h	1774	1863	1583	1774	1863	3167	1409	383	1583	1294	504	1583
Grp Volume(v), veh/h	188	58	112	334	204	1562	103	0	131	139	0	71
Grp Sat Flow(s),veh/h/ln	1774	1863	1583	1774	1863	1583	1792	0	1583	1798	0	1583
Q Serve(g_s), s	9.9	2.1	4.9	17.5	6.9	38.8	5.2	0.0	7.7	7.2	0.0	4.0
Cycle Q Clear(g_c), s	9.9	2.1	4.9	17.5	6.9	38.8	5.2	0.0	7.7	7.2	0.0	4.0
Prop In Lane	1.00		1.00	1.00		1.00	0.79		1.00	0.72		1.00
Lane Grp Cap(c), veh/h	225	611	519	367	759	1611	193	0	171	182	0	160
V/C Ratio(X)	0.83	0.09	0.22	0.91	0.27	0.97	0.53	0.00	0.77	0.76	0.00	0.44
Avail Cap(c_a), veh/h	401	771	655	389	759	1611	346	0	306	319	0	281
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	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	40.6	22.2	23.1	36.9	18.8	21.0	40.2	0.0	41.3	41.7	0.0	40.3
Incr Delay (d2), s/veh	7.8	0.1	0.2	24.3	0.2	15.7	2.3	0.0	7.0	6.5	0.0	1.9
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	5.3	1.1	2.1	11.0	3.6	23.9	2.7	0.0	3.7	3.9	0.0	1.8
LnGrp Delay(d),s/veh	48.4	22.3	23.3	61.2	19.0	36.8	42.5	0.0	48.3	48.2	0.0	42.2
LnGrp LOS	D	C	C	E	B	D	D		D	D		D
Approach Vol, veh/h		358			2100			234			210	
Approach Delay, s/veh		36.3			38.9			45.7			46.1	
Approach LOS		D			D			D			D	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4	5	6		8
Phs Duration (G+Y+Rc), s	25.8	37.3		15.7	18.2	44.9		16.4
Change Period (Y+Rc), s	6.1	6.1		6.1	6.1	6.1		6.1
Max Green Setting (Gmax), s	20.9	39.4		16.9	21.5	38.8		18.4
Max Q Clear Time (g_c+I1), s	19.5	6.9		9.2	11.9	40.8		9.7
Green Ext Time (p_c), s	0.2	0.6		0.5	0.3	0.0		0.6

Intersection Summary	
HCM 2010 Ctrl Delay	39.7
HCM 2010 LOS	D

Notes

User approved volume balancing among the lanes for turning movement.

Intersection	
Int Delay, s/veh	2.4

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	10	77	166	328	649	21
Future Vol, veh/h	10	77	166	328	649	21
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	115	1	-	-	0
Veh in Median Storage, #	2	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	95	95	95	95	95	95
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	11	81	175	345	683	22

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	1378	683	705	0	-	0
Stage 1	683	-	-	-	-	-
Stage 2	695	-	-	-	-	-
Critical Hdwy	6.42	6.22	4.12	-	-	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	2.218	-	-	-
Pot Cap-1 Maneuver	160	449	893	-	-	-
Stage 1	502	-	-	-	-	-
Stage 2	495	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	129	449	893	-	-	-
Mov Cap-2 Maneuver	264	-	-	-	-	-
Stage 1	404	-	-	-	-	-
Stage 2	495	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	15.3	3.4	0
HCM LOS	C		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	EBLn2	SBT	SBR
Capacity (veh/h)	893	-	264	449	-	-
HCM Lane V/C Ratio	0.196	-	0.04	0.181	-	-
HCM Control Delay (s)	10	-	19.2	14.8	-	-
HCM Lane LOS	B	-	C	B	-	-
HCM 95th %tile Q(veh)	0.7	-	0.1	0.7	-	-

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (veh/h)	1251	94	403	1082	280	0
Future Volume (veh/h)	1251	94	403	1082	280	0
Number	2	12	1	6	3	18
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)		1.00	1.00		1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1863	1863	1863	0
Adj Flow Rate, veh/h	1277	96	411	1104	286	0
Adj No. of Lanes	2	1	2	2	1	0
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98
Percent Heavy Veh, %	2	2	2	2	2	0
Cap, veh/h	1407	498	1500	3244	0	0
Arrive On Green	0.40	0.40	0.44	0.92	0.00	0.00
Sat Flow, veh/h	3632	1583	3442	3632	0	0
Grp Volume(v), veh/h	1277	96	411	1104	0	0
Grp Sat Flow(s),veh/h/ln	1770	1583	1721	1770	0	0
Q Serve(g_s), s	30.6	4.0	6.9	3.4	0.0	0.0
Cycle Q Clear(g_c), s	30.6	4.0	6.9	3.4	0.0	0.0
Prop In Lane		1.00	1.00		0.00	0.00
Lane Grp Cap(c), veh/h	1407	498	1500	3244	0	0
V/C Ratio(X)	0.91	0.19	0.27	0.34	0.00	0.00
Avail Cap(c_a), veh/h	1471	526	1500	3244	0	0
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	0.00	0.00
Uniform Delay (d), s/veh	25.6	22.5	16.3	0.5	0.0	0.0
Incr Delay (d2), s/veh	10.1	0.9	0.1	0.3	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	16.9	1.6	3.3	1.7	0.0	0.0
LnGrp Delay(d),s/veh	35.7	23.4	16.4	0.7	0.0	0.0
LnGrp LOS	D	C	B	A		
Approach Vol, veh/h	1373			1515	0	
Approach Delay, s/veh	34.8			5.0	0.0	
Approach LOS	C			A		

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2				6		8
Phs Duration (G+Y+Rc), s	46.7	43.3				90.0		0.0
Change Period (Y+Rc), s	7.5	7.5				7.5		7.5
Max Green Setting (Gmax), s	13.5	37.4				58.4		16.6
Max Q Clear Time (g_c+I1), s	8.9	32.6				5.4		0.0
Green Ext Time (p_c), s	0.6	3.2				8.6		0.0

Intersection Summary	
HCM 2010 Ctrl Delay	19.2
HCM 2010 LOS	B

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (veh/h)	548	258	638	914	0	0
Future Volume (veh/h)	548	258	638	914	0	0
Number	2	12	1	6		
Initial Q (Qb), veh	0	0	0	0		
Ped-Bike Adj(A_pbT)		1.00	1.00			
Parking Bus, Adj	1.00	1.00	1.00	1.00		
Adj Sat Flow, veh/h/ln	1863	1863	1863	1863		
Adj Flow Rate, veh/h	577	272	672	962		
Adj No. of Lanes	2	1	2	3		
Peak Hour Factor	0.95	0.95	0.95	0.95		
Percent Heavy Veh, %	2	2	2	2		
Cap, veh/h	2176	974	805	4701		
Arrive On Green	0.61	0.61	0.23	0.92		
Sat Flow, veh/h	3632	1583	3442	5253		
Grp Volume(v), veh/h	577	272	672	962		
Grp Sat Flow(s),veh/h/ln	1770	1583	1721	1695		
Q Serve(g_s), s	6.8	7.2	16.7	1.6		
Cycle Q Clear(g_c), s	6.8	7.2	16.7	1.6		
Prop In Lane		1.00	1.00			
Lane Grp Cap(c), veh/h	2176	974	805	4701		
V/C Ratio(X)	0.27	0.28	0.83	0.20		
Avail Cap(c_a), veh/h	2176	974	1576	4701		
HCM Platoon Ratio	1.00	1.00	1.00	1.00		
Upstream Filter(I)	0.96	0.96	1.00	1.00		
Uniform Delay (d), s/veh	8.0	8.1	32.8	0.3		
Incr Delay (d2), s/veh	0.3	0.7	2.4	0.1		
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0		
%ile BackOfQ(50%),veh/ln	3.4	3.3	8.2	0.8		
LnGrp Delay(d),s/veh	8.3	8.7	35.2	0.4		
LnGrp LOS	A	A	D	A		
Approach Vol, veh/h	849			1634		
Approach Delay, s/veh	8.4			14.7		
Approach LOS	A			B		

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2				6		
Phs Duration (G+Y+Rc), s	27.9	62.1				90.0		
Change Period (Y+Rc), s	6.8	6.8				6.8		
Max Green Setting (Gmax), s	41.3	35.2				83.2		
Max Q Clear Time (g_c+I1), s	18.7	9.2				3.6		
Green Ext Time (p_c), s	2.3	5.5				7.0		

Intersection Summary	
HCM 2010 Ctrl Delay	12.6
HCM 2010 LOS	B

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	0	8	681	2	234	8	292	450	271	434	4
Future Volume (veh/h)	0	0	8	681	2	234	8	292	450	271	434	4
Number				1	6	16	3	8	18	7	4	14
Initial Q (Qb), veh				0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)				1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj				1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln				1863	1863	1863	1900	1863	1863	1900	1863	1900
Adj Flow Rate, veh/h				741	0	0	9	317	0	295	472	4
Adj No. of Lanes				2	0	1	0	2	1	0	2	0
Peak Hour Factor				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
Cap, veh/h				1617	0	722	12	455	204	327	565	5
Arrive On Green				0.46	0.00	0.00	0.13	0.13	0.00	0.25	0.25	0.25
Sat Flow, veh/h				3548	0	1583	96	3532	1583	1334	2302	20
Grp Volume(v), veh/h				741	0	0	175	151	0	397	0	374
Grp Sat Flow(s),veh/h/ln				1774	0	1583	1858	1770	1583	1796	0	1859
Q Serve(g_s), s				12.9	0.0	0.0	8.1	7.3	0.0	19.3	0.0	17.1
Cycle Q Clear(g_c), s				12.9	0.0	0.0	8.1	7.3	0.0	19.3	0.0	17.1
Prop In Lane				1.00		1.00	0.05		1.00	0.74		0.01
Lane Grp Cap(c), veh/h				1617	0	722	239	228	204	441	0	456
V/C Ratio(X)				0.46	0.00	0.00	0.73	0.66	0.00	0.90	0.00	0.82
Avail Cap(c_a), veh/h				1617	0	722	469	446	399	457	0	473
HCM Platoon Ratio				1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)				0.99	0.00	0.00	0.95	0.95	0.00	1.00	0.00	1.00
Uniform Delay (d), s/veh				16.8	0.0	0.0	37.7	37.3	0.0	32.9	0.0	32.1
Incr Delay (d2), s/veh				0.9	0.0	0.0	4.1	3.1	0.0	20.4	0.0	10.6
Initial Q Delay(d3),s/veh				0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln				6.5	0.0	0.0	4.4	3.8	0.0	12.1	0.0	10.1
LnGrp Delay(d),s/veh				17.8	0.0	0.0	41.8	40.5	0.0	53.3	0.0	42.7
LnGrp LOS				B			D	D		D		D
Approach Vol, veh/h					741			326			771	
Approach Delay, s/veh					17.8			41.2			48.1	
Approach LOS					B			D			D	

Timer	1	2	3	4	5	6	7	8
Assigned Phs				4		6		8
Phs Duration (G+Y+Rc), s				27.2		46.1		16.7
Change Period (Y+Rc), s				5.1		5.1		5.1
Max Green Setting (Gmax), s				22.9		29.1		22.7
Max Q Clear Time (g_c+I1), s				21.3		14.9		10.1
Green Ext Time (p_c), s				0.8		2.5		1.5

Intersection Summary	
HCM 2010 Ctrl Delay	34.7
HCM 2010 LOS	C

Notes

User approved volume balancing among the lanes for turning movement.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	138	40	60	14	50	41	53	520	13	55	675	163
Future Volume (veh/h)	138	40	60	14	50	41	53	520	13	55	675	163
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1900	1863	1863	1900	1863	1900	1863	1863	1900	1863	1863	1900
Adj Flow Rate, veh/h	155	45	67	16	56	46	60	584	15	62	758	183
Adj No. of Lanes	0	1	1	0	1	0	1	2	0	1	2	0
Peak Hour Factor	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	199	49	615	48	144	92	58	1400	36	59	1125	272
Arrive On Green	0.39	0.39	0.39	0.39	0.39	0.39	0.01	0.13	0.13	0.03	0.40	0.40
Sat Flow, veh/h	320	125	1583	0	370	237	1774	3526	91	1774	2829	683
Grp Volume(v), veh/h	200	0	67	118	0	0	60	293	306	62	474	467
Grp Sat Flow(s),veh/h/ln	446	0	1583	607	0	0	1774	1770	1847	1774	1770	1742
Q Serve(g_s), s	0.0	0.0	2.3	0.0	0.0	0.0	2.8	13.1	13.1	2.9	19.0	19.0
Cycle Q Clear(g_c), s	33.4	0.0	2.3	33.4	0.0	0.0	2.8	13.1	13.1	2.9	19.0	19.0
Prop In Lane	0.77		1.00	0.14		0.39	1.00		0.05	1.00		0.39
Lane Grp Cap(c), veh/h	247	0	615	283	0	0	58	702	733	59	704	693
V/C Ratio(X)	0.81	0.00	0.11	0.42	0.00	0.00	1.04	0.42	0.42	1.05	0.67	0.67
Avail Cap(c_a), veh/h	247	0	615	283	0	0	165	702	733	186	704	693
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	0.33	0.33	0.33	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	0.00	0.95	0.95	0.95	0.60	0.60	0.60
Uniform Delay (d), s/veh	27.7	0.0	16.8	20.0	0.0	0.0	42.5	28.2	28.2	41.6	21.3	21.3
Incr Delay (d2), s/veh	24.0	0.0	0.4	4.5	0.0	0.0	63.1	1.7	1.7	55.8	3.1	3.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.7	0.0	0.0	1.3	0.0	0.0
%ile BackOfQ(50%),veh/ln	6.4	0.0	1.1	2.2	0.0	0.0	2.4	6.7	7.0	2.3	9.8	9.7
LnGrp Delay(d),s/veh	51.7	0.0	17.2	24.5	0.0	0.0	106.4	29.9	29.9	98.7	24.4	24.5
LnGrp LOS	D		B	C			F	C	C	F	C	C
Approach Vol, veh/h		267			118			659			1003	
Approach Delay, s/veh		43.0			24.5			36.9			29.0	
Approach LOS		D			C			D			C	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4	5	6		8
Phs Duration (G+Y+Rc), s	8.9	39.1		38.0	8.8	39.2		38.0
Change Period (Y+Rc), s	5.0	5.0		4.6	5.0	5.0		4.6
Max Green Setting (Gmax), s	10.0	28.0		33.4	9.0	29.0		33.4
Max Q Clear Time (g_c+I1), s	4.9	15.1		35.4	4.8	21.0		35.4
Green Ext Time (p_c), s	0.0	3.1		0.0	0.0	6.5		0.0

Intersection Summary	
HCM 2010 Ctrl Delay	33.1
HCM 2010 LOS	C

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	30	67	45	27	33	76	59	495	124	93	582	73
Future Volume (veh/h)	30	67	45	27	33	76	59	495	124	93	582	73
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1900	1863	1863	1900	1900	1863	1900	1900	1863	1900
Adj Flow Rate, veh/h	34	75	51	30	37	85	66	556	139	104	654	82
Adj No. of Lanes	1	1	0	1	1	0	0	2	0	0	2	0
Peak Hour Factor	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	157	131	89	158	64	147	217	1762	435	303	1820	226
Arrive On Green	0.13	0.13	0.13	0.13	0.13	0.13	1.00	1.00	1.00	1.00	1.00	1.00
Sat Flow, veh/h	1264	1035	704	1260	503	1156	221	2314	571	328	2390	297
Grp Volume(v), veh/h	34	0	126	30	0	122	373	0	388	386	0	454
Grp Sat Flow(s),veh/h/ln	1264	0	1739	1260	0	1659	1511	0	1594	1372	0	1643
Q Serve(g_s), s	2.2	0.0	5.9	2.0	0.0	6.0	0.0	0.0	0.0	0.0	0.0	0.0
Cycle Q Clear(g_c), s	8.2	0.0	5.9	7.8	0.0	6.0	0.0	0.0	0.0	0.0	0.0	0.0
Prop In Lane	1.00		0.40	1.00		0.70	0.18		0.36	0.27		0.18
Lane Grp Cap(c), veh/h	157	0	221	158	0	211	1200	0	1214	1098	0	1251
V/C Ratio(X)	0.22	0.00	0.57	0.19	0.00	0.58	0.31	0.00	0.32	0.35	0.00	0.36
Avail Cap(c_a), veh/h	414	0	574	414	0	548	1200	0	1214	1098	0	1251
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	2.00	2.00	2.00	2.00	2.00	2.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	1.00	0.98	0.00	0.98	0.85	0.00	0.85
Uniform Delay (d), s/veh	39.2	0.0	35.3	39.0	0.0	35.4	0.0	0.0	0.0	0.0	0.0	0.0
Incr Delay (d2), s/veh	0.7	0.0	2.3	0.6	0.0	2.5	0.7	0.0	0.7	0.8	0.0	0.7
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.8	0.0	2.9	0.7	0.0	2.9	0.2	0.0	0.2	0.2	0.0	0.2
LnGrp Delay(d),s/veh	39.9	0.0	37.6	39.6	0.0	37.9	0.7	0.0	0.7	0.8	0.0	0.7
LnGrp LOS	D		D	D		D	A		A	A		A
Approach Vol, veh/h		160			152			761			840	
Approach Delay, s/veh		38.1			38.2			0.7			0.7	
Approach LOS		D			D			A			A	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2		4		6		8
Phs Duration (G+Y+Rc), s		70.5		15.5		70.5		15.5
Change Period (Y+Rc), s		5.0		4.6		5.0		4.6
Max Green Setting (Gmax), s		48.0		28.4		48.0		28.4
Max Q Clear Time (g_c+I1), s		2.0		10.2		2.0		9.8
Green Ext Time (p_c), s		13.2		0.7		15.3		0.7

Intersection Summary		
HCM 2010 Ctrl Delay		6.8
HCM 2010 LOS		A

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	47	45	33	31	25	43	22	517	58	26	393	64
Future Volume (veh/h)	47	45	33	31	25	43	22	517	58	26	393	64
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1900	1863	1863	1900	1900	1863	1900	1900	1863	1900
Adj Flow Rate, veh/h	52	49	36	34	27	47	24	568	64	29	432	70
Adj No. of Lanes	1	1	0	1	1	0	0	2	0	0	2	0
Peak Hour Factor	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	173	108	80	165	66	115	105	2342	260	148	2132	342
Arrive On Green	0.11	0.11	0.11	0.11	0.11	0.11	0.52	0.52	0.52	1.00	1.00	1.00
Sat Flow, veh/h	1320	999	734	1307	611	1064	78	3003	334	131	2734	439
Grp Volume(v), veh/h	52	0	85	34	0	74	342	0	314	273	0	258
Grp Sat Flow(s),veh/h/ln	1320	0	1733	1307	0	1675	1778	0	1636	1686	0	1618
Q Serve(g_s), s	3.3	0.0	4.0	2.2	0.0	3.5	0.0	0.0	9.0	0.0	0.0	0.0
Cycle Q Clear(g_c), s	6.8	0.0	4.0	6.1	0.0	3.5	8.6	0.0	9.0	0.0	0.0	0.0
Prop In Lane	1.00		0.42	1.00		0.64	0.07		0.20	0.11		0.27
Lane Grp Cap(c), veh/h	173	0	188	165	0	182	1432	0	1276	1361	0	1262
V/C Ratio(X)	0.30	0.00	0.45	0.21	0.00	0.41	0.24	0.00	0.25	0.20	0.00	0.20
Avail Cap(c_a), veh/h	435	0	532	425	0	514	1432	0	1276	1361	0	1262
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	0.67	0.67	0.67	2.00	2.00	2.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	1.00	0.98	0.00	0.98	0.92	0.00	0.92
Uniform Delay (d), s/veh	38.9	0.0	35.9	38.8	0.0	35.8	6.6	0.0	6.7	0.0	0.0	0.0
Incr Delay (d2), s/veh	1.0	0.0	1.7	0.6	0.0	1.5	0.4	0.0	0.5	0.3	0.0	0.3
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	1.2	0.0	2.0	0.8	0.0	1.7	4.6	0.0	4.2	0.1	0.0	0.1
LnGrp Delay(d),s/veh	39.9	0.0	37.6	39.4	0.0	37.2	7.0	0.0	7.1	0.3	0.0	0.3
LnGrp LOS	D		D	D		D	A		A	A		A
Approach Vol, veh/h		137			108			656			531	
Approach Delay, s/veh		38.5			37.9			7.0			0.3	
Approach LOS		D			D			A			A	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2		4		6		8
Phs Duration (G+Y+Rc), s		72.1		13.9		72.1		13.9
Change Period (Y+Rc), s		5.0		4.6		5.0		4.6
Max Green Setting (Gmax), s		50.0		26.4		50.0		26.4
Max Q Clear Time (g_c+I1), s		11.0		8.8		2.0		8.1
Green Ext Time (p_c), s		9.9		0.5		8.1		0.4

Intersection Summary	
HCM 2010 Ctrl Delay	9.9
HCM 2010 LOS	A

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	76	0	119	173	288	104	73	497	0	0	464	155
Future Volume (veh/h)	76	0	119	173	288	104	73	497	0	0	464	155
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1900	1863	1863	1863	1863	1900	1863	1863	0	0	1863	1900
Adj Flow Rate, veh/h	78	32	100	177	294	106	74	507	0	0	473	158
Adj No. of Lanes	0	1	1	1	2	0	1	2	0	0	2	0
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	0	0	2	2
Cap, veh/h	0	376	404	319	518	183	95	2414	0	0	1490	494
Arrive On Green	0.00	0.20	0.20	0.20	0.20	0.20	0.05	0.68	0.00	0.00	1.00	1.00
Sat Flow, veh/h	0	1863	1583	1253	2566	906	1774	3632	0	0	2706	867
Grp Volume(v), veh/h	0	32	100	177	201	199	74	507	0	0	319	312
Grp Sat Flow(s),veh/h/ln	0	1863	1583	1253	1770	1703	1774	1770	0	0	1770	1710
Q Serve(g_s), s	0.0	1.2	4.3	11.5	8.8	9.1	3.5	4.6	0.0	0.0	0.0	0.0
Cycle Q Clear(g_c), s	0.0	1.2	4.3	12.7	8.8	9.1	3.5	4.6	0.0	0.0	0.0	0.0
Prop In Lane	0.00		1.00	1.00		0.53	1.00		0.00	0.00		0.51
Lane Grp Cap(c), veh/h	0	376	404	319	357	343	95	2414	0	0	1009	975
V/C Ratio(X)	0.00	0.09	0.25	0.55	0.56	0.58	0.78	0.21	0.00	0.00	0.32	0.32
Avail Cap(c_a), veh/h	0	812	775	474	576	554	165	2414	0	0	1009	975
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	2.00	2.00
Upstream Filter(I)	0.00	1.00	1.00	1.00	1.00	1.00	0.95	0.95	0.00	0.00	0.99	0.99
Uniform Delay (d), s/veh	0.0	27.9	25.4	33.0	30.9	31.0	40.2	5.1	0.0	0.0	0.0	0.0
Incr Delay (d2), s/veh	0.0	0.1	0.3	1.5	1.4	1.6	12.0	0.2	0.0	0.0	0.8	0.9
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.0	0.6	1.9	4.1	4.4	4.4	2.0	2.2	0.0	0.0	0.2	0.2
LnGrp Delay(d),s/veh	0.0	28.0	25.8	34.5	32.3	32.6	52.2	5.3	0.0	0.0	0.8	0.9
LnGrp LOS		C	C	C	C	C	D	A			A	A
Approach Vol, veh/h		132			577			581			631	
Approach Delay, s/veh		26.3			33.1			11.2			0.8	
Approach LOS		C			C			B			A	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2		4	5	6	7	8
Phs Duration (G+Y+Rc), s		63.7		22.3	9.6	54.0	0.0	22.3
Change Period (Y+Rc), s		5.0		5.0	5.0	5.0	4.5	5.0
Max Green Setting (Gmax), s		38.5		37.5	8.0	25.5	5.0	28.0
Max Q Clear Time (g_c+I1), s		6.6		6.3	5.5	2.0	0.0	14.7
Green Ext Time (p_c), s		5.5		0.5	0.0	6.0	0.0	2.7

Intersection Summary	
HCM 2010 Ctrl Delay	15.4
HCM 2010 LOS	B

Notes

User approved volume balancing among the lanes for turning movement.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	78	133	50	0	0	0	102	495	123	133	455	149
Future Volume (veh/h)	78	133	50	0	0	0	102	495	123	133	455	149
Number	7	4	14				5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0				0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00				1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00				1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1900				1863	1863	1900	1863	1863	1900
Adj Flow Rate, veh/h	82	140	53				107	521	129	140	479	157
Adj No. of Lanes	1	1	0				1	2	0	1	2	0
Peak Hour Factor	0.95	0.95	0.95				0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	2	2	2				2	2	2	2	2	2
Cap, veh/h	249	181	68				136	1650	407	176	1599	521
Arrive On Green	0.14	0.14	0.14				0.08	0.59	0.59	0.13	0.81	0.81
Sat Flow, veh/h	1774	1289	488				1774	2816	694	1774	2626	855
Grp Volume(v), veh/h	82	0	193				107	327	323	140	322	314
Grp Sat Flow(s),veh/h/ln	1774	0	1777				1774	1770	1740	1774	1770	1712
Q Serve(g_s), s	3.6	0.0	9.0				5.1	8.1	8.1	6.6	3.9	4.0
Cycle Q Clear(g_c), s	3.6	0.0	9.0				5.1	8.1	8.1	6.6	3.9	4.0
Prop In Lane	1.00		0.27				1.00		0.40	1.00		0.50
Lane Grp Cap(c), veh/h	249	0	249				136	1037	1020	176	1077	1042
V/C Ratio(X)	0.33	0.00	0.78				0.79	0.31	0.32	0.79	0.30	0.30
Avail Cap(c_a), veh/h	474	0	475				186	1037	1020	454	1077	1042
HCM Platoon Ratio	1.00	1.00	1.00				1.00	1.00	1.00	1.33	1.33	1.33
Upstream Filter(I)	1.00	0.00	1.00				1.00	1.00	1.00	0.93	0.93	0.93
Uniform Delay (d), s/veh	33.3	0.0	35.7				39.0	9.0	9.1	36.5	3.6	3.6
Incr Delay (d2), s/veh	0.8	0.0	5.1				14.4	0.8	0.8	7.3	0.7	0.7
Initial Q Delay(d3),s/veh	0.0	0.0	0.0				0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.8	0.0	4.8				3.0	4.1	4.1	3.5	2.1	2.0
LnGrp Delay(d),s/veh	34.1	0.0	40.8				53.4	9.8	9.9	43.8	4.2	4.3
LnGrp LOS	C		D				D	A	A	D	A	A
Approach Vol, veh/h		275						757			776	
Approach Delay, s/veh		38.8						16.0			11.4	
Approach LOS		D						B			B	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4	5	6		
Phs Duration (G+Y+Rc), s	13.6	55.4		17.1	11.6	57.4		
Change Period (Y+Rc), s	5.0	5.0		5.0	5.0	5.0		
Max Green Setting (Gmax), s	22.6	26.0		23.0	9.0	39.0		
Max Q Clear Time (g_c+I1), s	8.6	10.1		11.0	7.1	6.0		
Green Ext Time (p_c), s	0.3	5.2		1.1	0.0	6.8		

Intersection Summary	
HCM 2010 Ctrl Delay	17.5
HCM 2010 LOS	B

Intersection	
Int Delay, s/veh	7.4

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	6	0	133	7	0	64
Future Vol, veh/h	6	0	133	7	0	64
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	7	0	145	8	0	70

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	7	0	305	7
Stage 1	-	-	-	-	7	-
Stage 2	-	-	-	-	298	-
Critical Hdwy	-	-	4.12	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	-	-	2.218	-	3.518	3.318
Pot Cap-1 Maneuver	-	-	1614	-	687	1075
Stage 1	-	-	-	-	1016	-
Stage 2	-	-	-	-	753	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	1614	-	625	1075
Mov Cap-2 Maneuver	-	-	-	-	625	-
Stage 1	-	-	-	-	925	-
Stage 2	-	-	-	-	753	-

Approach	EB	WB	NB
HCM Control Delay, s	0	7.1	8.6
HCM LOS			A

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	1075	-	-	1614	-
HCM Lane V/C Ratio	0.065	-	-	0.09	-
HCM Control Delay (s)	8.6	-	-	7.5	0
HCM Lane LOS	A	-	-	A	A
HCM 95th %tile Q(veh)	0.2	-	-	0.3	-

Intersection	
Int Delay, s/veh	0.1

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	0	2	5	501	712	1
Future Vol, veh/h	0	2	5	501	712	1
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	1	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	0	2	5	545	774	1

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	1330	388	775	0	-	0
Stage 1	775	-	-	-	-	-
Stage 2	555	-	-	-	-	-
Critical Hdwy	6.63	6.93	4.13	-	-	-
Critical Hdwy Stg 1	5.83	-	-	-	-	-
Critical Hdwy Stg 2	5.43	-	-	-	-	-
Follow-up Hdwy	3.519	3.319	2.219	-	-	-
Pot Cap-1 Maneuver	158	611	839	-	-	-
Stage 1	416	-	-	-	-	-
Stage 2	574	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	157	611	839	-	-	-
Mov Cap-2 Maneuver	288	-	-	-	-	-
Stage 1	414	-	-	-	-	-
Stage 2	574	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	10.9	0.1	0
HCM LOS	B		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	839	-	611	-	-
HCM Lane V/C Ratio	0.006	-	0.004	-	-
HCM Control Delay (s)	9.3	-	10.9	-	-
HCM Lane LOS	A	-	B	-	-
HCM 95th %tile Q(veh)	0	-	0	-	-

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	94	64	54	89	268	671	99	27	136	101	24	80
Future Volume (veh/h)	94	64	54	89	268	671	99	27	136	101	24	80
Number	5	2	12	1	6	16	3	8	18	7	4	14
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1863	1863	1863	1863	1900	1863	1863	1900	1863	1863
Adj Flow Rate, veh/h	106	72	61	100	301	754	111	30	153	113	27	90
Adj No. of Lanes	1	1	1	1	1	2	0	1	1	0	1	1
Peak Hour Factor	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	139	519	442	159	541	1302	193	52	217	174	42	191
Arrive On Green	0.08	0.28	0.28	0.09	0.29	0.29	0.14	0.14	0.14	0.12	0.12	0.12
Sat Flow, veh/h	1774	1863	1583	1774	1863	3167	1411	381	1583	1445	345	1583
Grp Volume(v), veh/h	106	72	61	100	301	754	141	0	153	140	0	90
Grp Sat Flow(s),veh/h/ln	1774	1863	1583	1774	1863	1583	1792	0	1583	1790	0	1583
Q Serve(g_s), s	3.8	1.9	1.9	3.5	8.9	12.0	4.8	0.0	6.0	4.9	0.0	3.5
Cycle Q Clear(g_c), s	3.8	1.9	1.9	3.5	8.9	12.0	4.8	0.0	6.0	4.9	0.0	3.5
Prop In Lane	1.00		1.00	1.00		1.00	0.79		1.00	0.81		1.00
Lane Grp Cap(c), veh/h	139	519	442	159	541	1302	245	0	217	216	0	191
V/C Ratio(X)	0.76	0.14	0.14	0.63	0.56	0.58	0.57	0.00	0.71	0.65	0.00	0.47
Avail Cap(c_a), veh/h	446	1136	965	296	979	2046	505	0	446	453	0	400
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	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	29.5	17.7	17.7	28.7	19.6	14.9	26.4	0.0	26.9	27.4	0.0	26.8
Incr Delay (d2), s/veh	8.4	0.1	0.1	4.0	0.9	0.4	2.1	0.0	4.2	3.2	0.0	1.8
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.2	1.0	0.8	1.9	4.7	6.4	2.5	0.0	2.9	2.6	0.0	1.6
LnGrp Delay(d),s/veh	37.9	17.8	17.8	32.7	20.5	15.3	28.5	0.0	31.1	30.6	0.0	28.6
LnGrp LOS	D	B	B	C	C	B	C		C	C		C
Approach Vol, veh/h		239			1155			294			230	
Approach Delay, s/veh		26.7			18.1			29.8			29.8	
Approach LOS		C			B			C			C	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4	5	6		8
Phs Duration (G+Y+Rc), s	12.0	24.3		14.0	11.2	25.1		15.0
Change Period (Y+Rc), s	6.1	6.1		6.1	6.1	6.1		6.1
Max Green Setting (Gmax), s	10.9	39.8		16.5	16.4	34.3		18.4
Max Q Clear Time (g_c+I1), s	5.5	3.9		6.9	5.8	14.0		8.0
Green Ext Time (p_c), s	0.1	0.5		0.6	0.2	4.9		1.0

Intersection Summary			
HCM 2010 Ctrl Delay		22.4	
HCM 2010 LOS		C	

Notes

User approved volume balancing among the lanes for turning movement.

Intersection	
Int Delay, s/veh	0.8

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	15	35	5	410	200	7
Future Vol, veh/h	15	35	5	410	200	7
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	1	-	-	0
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	96	96	96	96	96	96
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	16	36	5	427	208	7

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	645	208	215	0	-	0
Stage 1	208	-	-	-	-	-
Stage 2	437	-	-	-	-	-
Critical Hdwy	6.42	6.22	4.12	-	-	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	2.218	-	-	-
Pot Cap-1 Maneuver	437	832	1355	-	-	-
Stage 1	827	-	-	-	-	-
Stage 2	651	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	435	832	1355	-	-	-
Mov Cap-2 Maneuver	522	-	-	-	-	-
Stage 1	824	-	-	-	-	-
Stage 2	651	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	10.5	0.1	0
HCM LOS	B		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	1355	-	706	-	-
HCM Lane V/C Ratio	0.004	-	0.074	-	-
HCM Control Delay (s)	7.7	-	10.5	-	-
HCM Lane LOS	A	-	B	-	-
HCM 95th %tile Q(veh)	0	-	0.2	-	-

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (veh/h)	473	107	975	1342	88	0
Future Volume (veh/h)	473	107	975	1342	88	0
Number	2	12	1	6	3	18
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)		1.00	1.00		1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1863	1863	1863	0
Adj Flow Rate, veh/h	493	111	1016	1398	92	0
Adj No. of Lanes	2	1	2	2	1	0
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96
Percent Heavy Veh, %	2	2	2	2	2	0
Cap, veh/h	611	142	2273	3244	0	0
Arrive On Green	0.17	0.17	0.66	0.92	0.00	0.00
Sat Flow, veh/h	3632	1583	3442	3632	0	0
Grp Volume(v), veh/h	493	111	1016	1398	0	0
Grp Sat Flow(s),veh/h/ln	1770	1583	1721	1770	0	0
Q Serve(g_s), s	12.0	6.2	12.8	4.9	0.0	0.0
Cycle Q Clear(g_c), s	12.0	6.2	12.8	4.9	0.0	0.0
Prop In Lane		1.00	1.00		0.00	0.00
Lane Grp Cap(c), veh/h	611	142	2273	3244	0	0
V/C Ratio(X)	0.81	0.78	0.45	0.43	0.00	0.00
Avail Cap(c_a), veh/h	763	209	2273	3244	0	0
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	0.00	0.00
Uniform Delay (d), s/veh	35.8	40.1	7.4	0.5	0.0	0.0
Incr Delay (d2), s/veh	10.9	34.1	0.1	0.4	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	6.8	3.8	6.0	2.3	0.0	0.0
LnGrp Delay(d),s/veh	46.7	74.2	7.5	0.9	0.0	0.0
LnGrp LOS	D	E	A	A		
Approach Vol, veh/h	604			2414	0	
Approach Delay, s/veh	51.7			3.7	0.0	
Approach LOS	D			A		

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2				6		8
Phs Duration (G+Y+Rc), s	66.9	23.1				90.0		0.0
Change Period (Y+Rc), s	7.5	7.5				7.5		7.5
Max Green Setting (Gmax), s	31.5	19.4				58.4		16.6
Max Q Clear Time (g_c+I1), s	14.8	14.0				6.9		0.0
Green Ext Time (p_c), s	3.6	1.5				12.6		0.0

Intersection Summary	
HCM 2010 Ctrl Delay	13.3
HCM 2010 LOS	B

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (veh/h)	303	220	948	569	0	0
Future Volume (veh/h)	303	220	948	569	0	0
Number	2	12	1	6		
Initial Q (Qb), veh	0	0	0	0		
Ped-Bike Adj(A_pbT)		1.00	1.00			
Parking Bus, Adj	1.00	1.00	1.00	1.00		
Adj Sat Flow, veh/h/ln	1863	1863	1863	1863		
Adj Flow Rate, veh/h	316	229	988	593		
Adj No. of Lanes	2	1	2	3		
Peak Hour Factor	0.96	0.96	0.96	0.96		
Percent Heavy Veh, %	2	2	2	2		
Cap, veh/h	1829	818	1143	4701		
Arrive On Green	0.52	0.52	0.33	0.92		
Sat Flow, veh/h	3632	1583	3442	5253		
Grp Volume(v), veh/h	316	229	988	593		
Grp Sat Flow(s),veh/h/ln	1770	1583	1721	1695		
Q Serve(g_s), s	4.3	7.4	24.2	0.9		
Cycle Q Clear(g_c), s	4.3	7.4	24.2	0.9		
Prop In Lane		1.00	1.00			
Lane Grp Cap(c), veh/h	1829	818	1143	4701		
V/C Ratio(X)	0.17	0.28	0.86	0.13		
Avail Cap(c_a), veh/h	1829	818	1805	4701		
HCM Platoon Ratio	1.00	1.00	1.00	1.00		
Upstream Filter(I)	0.97	0.97	1.00	1.00		
Uniform Delay (d), s/veh	11.5	12.3	28.1	0.3		
Incr Delay (d2), s/veh	0.2	0.8	2.8	0.1		
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0		
%ile BackOfQ(50%),veh/ln	2.1	3.4	12.0	0.4		
LnGrp Delay(d),s/veh	11.7	13.1	30.9	0.3		
LnGrp LOS	B	B	C	A		
Approach Vol, veh/h	545			1581		
Approach Delay, s/veh	12.3			19.5		
Approach LOS	B			B		

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2				6		
Phs Duration (G+Y+Rc), s	36.7	53.3				90.0		
Change Period (Y+Rc), s	6.8	6.8				6.8		
Max Green Setting (Gmax), s	47.3	29.2				83.2		
Max Q Clear Time (g_c+I1), s	26.2	9.4				2.9		
Green Ext Time (p_c), s	3.7	2.9				3.8		

Intersection Summary	
HCM 2010 Ctrl Delay	17.6
HCM 2010 LOS	B

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	0	7	418	0	189	1	139	452	102	151	2
Future Volume (veh/h)	0	0	7	418	0	189	1	139	452	102	151	2
Number				1	6	16	3	8	18	7	4	14
Initial Q (Qb), veh				0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)				1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj				1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln				1863	1863	1863	1900	1863	1863	1900	1863	1900
Adj Flow Rate, veh/h				435	0	0	1	145	0	106	157	2
Adj No. of Lanes				2	0	1	0	2	1	0	2	0
Peak Hour Factor				0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Percent Heavy Veh, %				2	2	2	2	2	2	2	2	2
Cap, veh/h				2295	0	1024	2	281	123	146	236	3
Arrive On Green				0.65	0.00	0.00	0.08	0.08	0.00	0.11	0.11	0.11
Sat Flow, veh/h				3548	0	1583	24	3607	1583	1381	2241	29
Grp Volume(v), veh/h				435	0	0	78	68	0	138	0	127
Grp Sat Flow(s),veh/h/ln				1774	0	1583	1862	1770	1583	1794	0	1858
Q Serve(g_s), s				4.4	0.0	0.0	3.6	3.3	0.0	6.7	0.0	5.9
Cycle Q Clear(g_c), s				4.4	0.0	0.0	3.6	3.3	0.0	6.7	0.0	5.9
Prop In Lane				1.00		1.00	0.01		1.00	0.77		0.02
Lane Grp Cap(c), veh/h				2295	0	1024	145	138	123	189	0	196
V/C Ratio(X)				0.19	0.00	0.00	0.54	0.49	0.00	0.73	0.00	0.65
Avail Cap(c_a), veh/h				2295	0	1024	515	490	438	317	0	328
HCM Platoon Ratio				1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)				1.00	0.00	0.00	0.99	0.99	0.00	1.00	0.00	1.00
Uniform Delay (d), s/veh				6.4	0.0	0.0	40.0	39.8	0.0	39.0	0.0	38.7
Incr Delay (d2), s/veh				0.2	0.0	0.0	3.1	2.7	0.0	5.3	0.0	3.6
Initial Q Delay(d3),s/veh				0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln				2.2	0.0	0.0	2.0	1.7	0.0	3.6	0.0	3.2
LnGrp Delay(d),s/veh				6.6	0.0	0.0	43.0	42.5	0.0	44.3	0.0	42.3
LnGrp LOS				A			D	D		D		D
Approach Vol, veh/h					435			146			265	
Approach Delay, s/veh					6.6			42.8			43.3	
Approach LOS					A			D			D	

Timer	1	2	3	4	5	6	7	8
Assigned Phs				4		6		8
Phs Duration (G+Y+Rc), s				14.6		63.3		12.1
Change Period (Y+Rc), s				5.1		5.1		5.1
Max Green Setting (Gmax), s				15.9		33.9		24.9
Max Q Clear Time (g_c+I1), s				8.7		6.4		5.6
Green Ext Time (p_c), s				0.8		1.6		0.7

Intersection Summary	
HCM 2010 Ctrl Delay	24.3
HCM 2010 LOS	C

Notes

User approved volume balancing among the lanes for turning movement.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	147	33	36	21	33	51	30	308	12	32	374	74
Future Volume (veh/h)	147	33	36	21	33	51	30	308	12	32	374	74
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1900	1863	1863	1900	1863	1900	1863	1863	1900	1863	1863	1900
Adj Flow Rate, veh/h	158	35	39	23	35	55	32	331	13	34	402	80
Adj No. of Lanes	0	1	1	0	1	0	1	2	0	1	2	0
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	248	48	615	62	97	103	34	1422	56	37	1211	239
Arrive On Green	0.39	0.39	0.39	0.39	0.39	0.39	0.01	0.14	0.14	0.02	0.41	0.41
Sat Flow, veh/h	442	123	1583	31	249	265	1774	3472	136	1774	2948	582
Grp Volume(v), veh/h	193	0	39	113	0	0	32	168	176	34	240	242
Grp Sat Flow(s),veh/h/ln	564	0	1583	545	0	0	1774	1770	1839	1774	1770	1760
Q Serve(g_s), s	0.0	0.0	1.3	1.7	0.0	0.0	1.6	7.3	7.3	1.6	7.9	8.1
Cycle Q Clear(g_c), s	30.2	0.0	1.3	31.9	0.0	0.0	1.6	7.3	7.3	1.6	7.9	8.1
Prop In Lane	0.82		1.00	0.20		0.49	1.00		0.07	1.00		0.33
Lane Grp Cap(c), veh/h	295	0	615	262	0	0	34	725	753	37	727	723
V/C Ratio(X)	0.65	0.00	0.06	0.43	0.00	0.00	0.93	0.23	0.23	0.93	0.33	0.33
Avail Cap(c_a), veh/h	295	0	615	262	0	0	165	725	753	186	727	723
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	0.33	0.33	0.33	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	0.00	0.99	0.99	0.99	0.92	0.92	0.92
Uniform Delay (d), s/veh	24.8	0.0	16.5	20.4	0.0	0.0	42.7	25.1	25.1	42.0	17.3	17.3
Incr Delay (d2), s/veh	10.7	0.0	0.2	5.1	0.0	0.0	54.1	0.7	0.7	49.0	1.1	1.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	5.3	0.0	0.6	2.1	0.0	0.0	1.3	3.7	3.9	1.3	4.1	4.1
LnGrp Delay(d),s/veh	35.5	0.0	16.7	25.5	0.0	0.0	96.8	25.9	25.9	91.0	18.4	18.5
LnGrp LOS	D		B	C			F	C	C	F	B	B
Approach Vol, veh/h		232			113			376			516	
Approach Delay, s/veh		32.4			25.5			31.9			23.2	
Approach LOS		C			C			C			C	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4	5	6		8
Phs Duration (G+Y+Rc), s	7.8	40.2		38.0	7.7	40.3		38.0
Change Period (Y+Rc), s	5.0	5.0		4.6	5.0	5.0		4.6
Max Green Setting (Gmax), s	10.8	28.0		33.4	9.0	29.0		33.4
Max Q Clear Time (g_c+I1), s	3.6	9.3		32.2	3.6	10.1		33.9
Green Ext Time (p_c), s	0.0	1.9		0.3	0.0	7.5		0.0

Intersection Summary	
HCM 2010 Ctrl Delay	27.8
HCM 2010 LOS	C

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	9	15	6	27	19	32	8	302	79	60	331	23
Future Volume (veh/h)	9	15	6	27	19	32	8	302	79	60	331	23
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1900	1863	1863	1900	1900	1863	1900	1900	1863	1900
Adj Flow Rate, veh/h	9	15	6	28	19	33	8	308	81	61	338	23
Adj No. of Lanes	1	1	0	1	1	0	0	2	0	0	2	0
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	131	82	33	158	40	69	70	2215	567	388	2130	147
Arrive On Green	0.06	0.06	0.06	0.06	0.06	0.06	1.00	1.00	1.00	1.00	1.00	1.00
Sat Flow, veh/h	1347	1267	507	1385	612	1063	32	2690	689	405	2586	179
Grp Volume(v), veh/h	9	0	21	28	0	52	212	0	185	208	0	214
Grp Sat Flow(s),veh/h/ln	1347	0	1773	1385	0	1675	1836	0	1574	1506	0	1664
Q Serve(g_s), s	0.6	0.0	1.0	1.7	0.0	2.6	0.0	0.0	0.0	0.0	0.0	0.0
Cycle Q Clear(g_c), s	3.1	0.0	1.0	2.6	0.0	2.6	0.0	0.0	0.0	0.0	0.0	0.0
Prop In Lane	1.00		0.29	1.00		0.63	0.04		0.44	0.29		0.11
Lane Grp Cap(c), veh/h	131	0	115	158	0	108	1556	0	1296	1295	0	1370
V/C Ratio(X)	0.07	0.00	0.18	0.18	0.00	0.48	0.14	0.00	0.14	0.16	0.00	0.16
Avail Cap(c_a), veh/h	488	0	586	526	0	553	1556	0	1296	1295	0	1370
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	2.00	2.00	2.00	2.00	2.00	2.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00	0.98	0.00	0.98
Uniform Delay (d), s/veh	40.3	0.0	38.1	39.3	0.0	38.8	0.0	0.0	0.0	0.0	0.0	0.0
Incr Delay (d2), s/veh	0.2	0.0	0.8	0.5	0.0	3.3	0.2	0.0	0.2	0.3	0.0	0.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.2	0.0	0.5	0.7	0.0	1.3	0.1	0.0	0.1	0.1	0.0	0.1
LnGrp Delay(d),s/veh	40.6	0.0	38.8	39.8	0.0	42.1	0.2	0.0	0.2	0.3	0.0	0.2
LnGrp LOS	D		D	D		D	A		A	A		A
Approach Vol, veh/h		30			80			397			422	
Approach Delay, s/veh		39.3			41.3			0.2			0.2	
Approach LOS		D			D			A			A	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2		4		6		8
Phs Duration (G+Y+Rc), s		75.8		10.2		75.8		10.2
Change Period (Y+Rc), s		5.0		4.6		5.0		4.6
Max Green Setting (Gmax), s		48.0		28.4		48.0		28.4
Max Q Clear Time (g_c+I1), s		2.0		5.1		2.0		4.6
Green Ext Time (p_c), s		5.6		0.1		6.1		0.3

Intersection Summary	
HCM 2010 Ctrl Delay	5.0
HCM 2010 LOS	A

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	15	14	2	14	16	39	16	291	28	14	364	26
Future Volume (veh/h)	15	14	2	14	16	39	16	291	28	14	364	26
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1900	1863	1863	1900	1900	1863	1900	1900	1863	1900
Adj Flow Rate, veh/h	17	16	2	16	18	44	18	327	31	16	409	29
Adj No. of Lanes	1	1	0	1	1	0	0	2	0	0	2	0
Peak Hour Factor	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	126	110	14	165	33	80	140	2461	231	107	2591	182
Arrive On Green	0.07	0.07	0.07	0.07	0.07	0.07	1.00	1.00	1.00	1.00	1.00	1.00
Sat Flow, veh/h	1335	1624	203	1389	481	1175	115	2999	282	76	3158	221
Grp Volume(v), veh/h	17	0	18	16	0	62	195	0	181	237	0	217
Grp Sat Flow(s),veh/h/ln	1335	0	1827	1389	0	1655	1751	0	1645	1799	0	1656
Q Serve(g_s), s	1.1	0.0	0.8	0.9	0.0	3.1	0.0	0.0	0.0	0.0	0.0	0.0
Cycle Q Clear(g_c), s	4.2	0.0	0.8	1.7	0.0	3.1	0.0	0.0	0.0	0.0	0.0	0.0
Prop In Lane	1.00		0.11	1.00		0.71	0.09		0.17	0.07		0.13
Lane Grp Cap(c), veh/h	126	0	124	165	0	113	1483	0	1350	1521	0	1359
V/C Ratio(X)	0.13	0.00	0.14	0.10	0.00	0.55	0.13	0.00	0.13	0.16	0.00	0.16
Avail Cap(c_a), veh/h	445	0	561	497	0	508	1483	0	1350	1521	0	1359
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	2.00	2.00	2.00	2.00	2.00	2.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00	0.99	0.00	0.99
Uniform Delay (d), s/veh	40.8	0.0	37.7	38.5	0.0	38.8	0.0	0.0	0.0	0.0	0.0	0.0
Incr Delay (d2), s/veh	0.5	0.0	0.5	0.3	0.0	4.1	0.2	0.0	0.2	0.2	0.0	0.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.4	0.0	0.4	0.4	0.0	1.6	0.1	0.0	0.1	0.1	0.0	0.1
LnGrp Delay(d),s/veh	41.3	0.0	38.3	38.8	0.0	43.0	0.2	0.0	0.2	0.2	0.0	0.2
LnGrp LOS	D		D	D		D	A		A	A		A
Approach Vol, veh/h		35			78			376			454	
Approach Delay, s/veh		39.7			42.1			0.2			0.2	
Approach LOS		D			D			A			A	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2		4		6		8
Phs Duration (G+Y+Rc), s		75.6		10.4		75.6		10.4
Change Period (Y+Rc), s		5.0		4.6		5.0		4.6
Max Green Setting (Gmax), s		50.0		26.4		50.0		26.4
Max Q Clear Time (g_c+I1), s		2.0		6.2		2.0		5.1
Green Ext Time (p_c), s		5.3		0.1		6.5		0.3

Intersection Summary	
HCM 2010 Ctrl Delay	5.1
HCM 2010 LOS	A

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	77	0	141	164	263	73	36	194	0	0	276	69
Future Volume (veh/h)	77	0	141	164	263	73	36	194	0	0	276	69
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1900	1863	1863	1863	1863	1900	1863	1863	0	0	1863	1900
Adj Flow Rate, veh/h	87	53	122	184	296	82	40	218	0	0	310	78
Adj No. of Lanes	0	1	1	1	2	0	1	2	0	0	2	0
Peak Hour Factor	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	0	0	2	2
Cap, veh/h	0	408	392	320	602	164	51	2353	0	0	1625	403
Arrive On Green	0.00	0.22	0.22	0.22	0.22	0.22	0.03	0.66	0.00	0.00	1.00	1.00
Sat Flow, veh/h	0	1863	1583	1205	2751	749	1774	3632	0	0	2905	697
Grp Volume(v), veh/h	0	53	122	184	189	189	40	218	0	0	193	195
Grp Sat Flow(s),veh/h/ln	0	1863	1583	1205	1770	1731	1774	1770	0	0	1770	1740
Q Serve(g_s), s	0.0	2.0	5.4	12.5	8.0	8.3	1.9	1.9	0.0	0.0	0.0	0.0
Cycle Q Clear(g_c), s	0.0	2.0	5.4	14.4	8.0	8.3	1.9	1.9	0.0	0.0	0.0	0.0
Prop In Lane	0.00		1.00	1.00		0.43	1.00		0.00	0.00		0.40
Lane Grp Cap(c), veh/h	0	408	392	320	388	379	51	2353	0	0	1023	1006
V/C Ratio(X)	0.00	0.13	0.31	0.58	0.49	0.50	0.79	0.09	0.00	0.00	0.19	0.19
Avail Cap(c_a), veh/h	0	812	736	448	576	563	165	2353	0	0	1023	1006
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	2.00	2.00
Upstream Filter(I)	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	0.00	0.99	0.99
Uniform Delay (d), s/veh	0.0	27.0	26.4	32.8	29.4	29.5	41.5	5.2	0.0	0.0	0.0	0.0
Incr Delay (d2), s/veh	0.0	0.1	0.4	1.6	0.9	1.0	22.9	0.1	0.0	0.0	0.4	0.4
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.0	1.0	2.4	4.3	4.0	4.1	1.3	0.9	0.0	0.0	0.1	0.1
LnGrp Delay(d),s/veh	0.0	27.1	26.8	34.4	30.3	30.5	64.4	5.2	0.0	0.0	0.4	0.4
LnGrp LOS		C	C	C	C	C	E	A			A	A
Approach Vol, veh/h		175			562			258			388	
Approach Delay, s/veh		26.9			31.7			14.4			0.4	
Approach LOS		C			C			B			A	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2		4	5	6	7	8
Phs Duration (G+Y+Rc), s		62.2		23.8	7.5	54.7	0.0	23.8
Change Period (Y+Rc), s		5.0		5.0	5.0	5.0	4.5	5.0
Max Green Setting (Gmax), s		38.5		37.5	8.0	25.5	5.0	28.0
Max Q Clear Time (g_c+I1), s		3.9		7.4	3.9	2.0	0.0	16.4
Green Ext Time (p_c), s		2.2		0.7	0.0	3.4	0.0	2.4

Intersection Summary	
HCM 2010 Ctrl Delay	19.1
HCM 2010 LOS	B

Notes

User approved volume balancing among the lanes for turning movement.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	9	37	10	0	0	0	20	209	59	94	414	100
Future Volume (veh/h)	9	37	10	0	0	0	20	209	59	94	414	100
Number	7	4	14				5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0				0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00				1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00				1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1900				1863	1863	1900	1863	1863	1900
Adj Flow Rate, veh/h	9	38	10				20	213	60	96	422	102
Adj No. of Lanes	1	1	0				1	2	0	1	2	0
Peak Hour Factor	0.98	0.98	0.98				0.98	0.98	0.98	0.98	0.98	0.98
Percent Heavy Veh, %	2	2	2				2	2	2	2	2	2
Cap, veh/h	92	74	19				39	1930	531	125	2130	510
Arrive On Green	0.05	0.05	0.05				0.02	0.70	0.70	0.07	0.75	0.75
Sat Flow, veh/h	1774	1422	374				1774	2745	755	1774	2834	679
Grp Volume(v), veh/h	9	0	48				20	135	138	96	262	262
Grp Sat Flow(s),veh/h/ln	1774	0	1797				1774	1770	1730	1774	1770	1743
Q Serve(g_s), s	0.4	0.0	2.2				1.0	2.1	2.2	4.6	3.7	3.8
Cycle Q Clear(g_c), s	0.4	0.0	2.2				1.0	2.1	2.2	4.6	3.7	3.8
Prop In Lane	1.00		0.21				1.00		0.44	1.00		0.39
Lane Grp Cap(c), veh/h	92	0	93				39	1244	1216	125	1330	1310
V/C Ratio(X)	0.10	0.00	0.51				0.51	0.11	0.11	0.77	0.20	0.20
Avail Cap(c_a), veh/h	474	0	481				186	1244	1216	454	1330	1310
HCM Platoon Ratio	1.00	1.00	1.00				1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00				1.00	1.00	1.00	0.97	0.97	0.97
Uniform Delay (d), s/veh	38.9	0.0	39.7				41.6	4.1	4.1	39.3	3.1	3.1
Incr Delay (d2), s/veh	0.5	0.0	4.3				9.9	0.2	0.2	9.0	0.3	0.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0				0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.2	0.0	1.2				0.6	1.1	1.1	2.6	1.9	1.9
LnGrp Delay(d),s/veh	39.3	0.0	44.1				51.5	4.3	4.3	48.3	3.4	3.5
LnGrp LOS	D		D				D	A	A	D	A	A
Approach Vol, veh/h		57						293			620	
Approach Delay, s/veh		43.3						7.5			10.4	
Approach LOS		D						A			B	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4	5	6		
Phs Duration (G+Y+Rc), s	11.1	65.5		9.5	6.9	69.6		
Change Period (Y+Rc), s	5.0	5.0		5.0	5.0	5.0		
Max Green Setting (Gmax), s	22.6	26.0		23.0	9.0	39.0		
Max Q Clear Time (g_c+I1), s	6.6	4.2		4.2	3.0	5.8		
Green Ext Time (p_c), s	0.2	2.2		0.2	0.0	5.3		

Intersection Summary	
HCM 2010 Ctrl Delay	11.5
HCM 2010 LOS	B

Intersection	
Int Delay, s/veh	0

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	49	0	0	12	0	0
Future Vol, veh/h	49	0	0	12	0	0
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	53	0	0	13	0	0

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	53	0	66	53
Stage 1	-	-	-	-	53	-
Stage 2	-	-	-	-	13	-
Critical Hdwy	-	-	4.12	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	-	-	2.218	-	3.518	3.318
Pot Cap-1 Maneuver	-	-	1553	-	939	1014
Stage 1	-	-	-	-	970	-
Stage 2	-	-	-	-	1010	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	1553	-	939	1014
Mov Cap-2 Maneuver	-	-	-	-	939	-
Stage 1	-	-	-	-	970	-
Stage 2	-	-	-	-	1010	-

Approach	EB	WB	NB
HCM Control Delay, s	0	0	0
HCM LOS			A

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	-	-	-	1553	-
HCM Lane V/C Ratio	-	-	-	-	-
HCM Control Delay (s)	0	-	-	0	-
HCM Lane LOS	A	-	-	A	-
HCM 95th %tile Q(veh)	-	-	-	0	-

Intersection	
Int Delay, s/veh	0

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	0	0	0	411	211	0
Future Vol, veh/h	0	0	0	411	211	0
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	1	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	0	0	0	447	229	0

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	676	115	229	0	-	0
Stage 1	229	-	-	-	-	-
Stage 2	447	-	-	-	-	-
Critical Hdwy	6.63	6.93	4.13	-	-	-
Critical Hdwy Stg 1	5.83	-	-	-	-	-
Critical Hdwy Stg 2	5.43	-	-	-	-	-
Follow-up Hdwy	3.519	3.319	2.219	-	-	-
Pot Cap-1 Maneuver	403	916	1338	-	-	-
Stage 1	788	-	-	-	-	-
Stage 2	643	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	403	916	1338	-	-	-
Mov Cap-2 Maneuver	503	-	-	-	-	-
Stage 1	788	-	-	-	-	-
Stage 2	643	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	0	0	0
HCM LOS	A		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	1338	-	-	-	-
HCM Lane V/C Ratio	-	-	-	-	-
HCM Control Delay (s)	0	-	0	-	-
HCM Lane LOS	A	-	A	-	-
HCM 95th %tile Q(veh)	0	-	-	-	-

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	175	54	109	313	190	1453	80	24	115	93	23	66
Future Volume (veh/h)	175	54	109	313	190	1453	80	24	115	93	23	66
Number	5	2	12	1	6	16	3	8	18	7	4	14
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1863	1863	1863	1863	1900	1863	1863	1900	1863	1863
Adj Flow Rate, veh/h	188	58	117	337	204	1562	86	26	124	100	25	71
Adj No. of Lanes	1	1	1	1	1	2	0	1	1	0	1	1
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	226	619	527	370	771	1608	144	43	165	135	34	149
Arrive On Green	0.13	0.33	0.33	0.21	0.41	0.41	0.10	0.10	0.10	0.09	0.09	0.09
Sat Flow, veh/h	1774	1863	1583	1774	1863	3167	1377	416	1583	1433	358	1583
Grp Volume(v), veh/h	188	58	117	337	204	1562	112	0	124	125	0	71
Grp Sat Flow(s),veh/h/ln	1774	1863	1583	1774	1863	1583	1794	0	1583	1791	0	1583
Q Serve(g_s), s	9.7	2.0	5.0	17.4	6.8	38.8	5.6	0.0	7.1	6.4	0.0	4.0
Cycle Q Clear(g_c), s	9.7	2.0	5.0	17.4	6.8	38.8	5.6	0.0	7.1	6.4	0.0	4.0
Prop In Lane	1.00		1.00	1.00		1.00	0.77		1.00	0.80		1.00
Lane Grp Cap(c), veh/h	226	619	527	370	771	1608	187	0	165	168	0	149
V/C Ratio(X)	0.83	0.09	0.22	0.91	0.26	0.97	0.60	0.00	0.75	0.74	0.00	0.48
Avail Cap(c_a), veh/h	407	783	666	396	771	1608	352	0	311	323	0	285
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	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	39.9	21.5	22.5	36.2	18.1	20.9	40.1	0.0	40.8	41.4	0.0	40.3
Incr Delay (d2), s/veh	7.7	0.1	0.2	23.8	0.2	16.1	3.0	0.0	6.7	6.3	0.0	2.4
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	5.2	1.0	2.2	11.0	3.5	23.5	2.9	0.0	3.4	3.5	0.0	1.8
LnGrp Delay(d),s/veh	47.7	21.6	22.8	60.0	18.3	37.0	43.1	0.0	47.4	47.7	0.0	42.6
LnGrp LOS	D	C	C	E	B	D	D		D	D		D
Approach Vol, veh/h		363			2103			236			196	
Approach Delay, s/veh		35.5			38.8			45.4			45.9	
Approach LOS		D			D			D			D	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4	5	6		8
Phs Duration (G+Y+Rc), s	25.7	37.3		14.9	18.0	44.9		15.9
Change Period (Y+Rc), s	6.1	6.1		6.1	6.1	6.1		6.1
Max Green Setting (Gmax), s	20.9	39.4		16.9	21.5	38.8		18.4
Max Q Clear Time (g_c+I1), s	19.4	7.0		8.4	11.7	40.8		9.1
Green Ext Time (p_c), s	0.2	0.6		0.5	0.3	0.0		0.7

Intersection Summary	
HCM 2010 Ctrl Delay	39.4
HCM 2010 LOS	D

Notes

User approved volume balancing among the lanes for turning movement.

Intersection	
Int Delay, s/veh	0.7

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	5	19	46	352	667	11
Future Vol, veh/h	5	19	46	352	667	11
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	1	-	-	0
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	95	95	95	95	95	95
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	5	20	48	371	702	12

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	1169	702	714	0	-	0
Stage 1	702	-	-	-	-	-
Stage 2	467	-	-	-	-	-
Critical Hdwy	6.42	6.22	4.12	-	-	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	2.218	-	-	-
Pot Cap-1 Maneuver	213	438	886	-	-	-
Stage 1	491	-	-	-	-	-
Stage 2	631	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	201	438	886	-	-	-
Mov Cap-2 Maneuver	326	-	-	-	-	-
Stage 1	464	-	-	-	-	-
Stage 2	631	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	14.4	1.1	0
HCM LOS	B		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	886	-	409	-	-
HCM Lane V/C Ratio	0.055	-	0.062	-	-
HCM Control Delay (s)	9.3	-	14.4	-	-
HCM Lane LOS	A	-	B	-	-
HCM 95th %tile Q(veh)	0.2	-	0.2	-	-

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (veh/h)	1249	88	403	1073	226	0
Future Volume (veh/h)	1249	88	403	1073	226	0
Number	2	12	1	6	3	18
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)		1.00	1.00		1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1863	1863	1863	0
Adj Flow Rate, veh/h	1274	90	411	1095	231	0
Adj No. of Lanes	2	1	2	2	1	0
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98
Percent Heavy Veh, %	2	2	2	2	2	0
Cap, veh/h	1405	497	1502	3244	0	0
Arrive On Green	0.40	0.40	0.44	0.92	0.00	0.00
Sat Flow, veh/h	3632	1583	3442	3632	0	0
Grp Volume(v), veh/h	1274	90	411	1095	0	0
Grp Sat Flow(s),veh/h/ln	1770	1583	1721	1770	0	0
Q Serve(g_s), s	30.5	3.7	6.9	3.4	0.0	0.0
Cycle Q Clear(g_c), s	30.5	3.7	6.9	3.4	0.0	0.0
Prop In Lane		1.00	1.00		0.00	0.00
Lane Grp Cap(c), veh/h	1405	497	1502	3244	0	0
V/C Ratio(X)	0.91	0.18	0.27	0.34	0.00	0.00
Avail Cap(c_a), veh/h	1471	526	1502	3244	0	0
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	0.00	0.00
Uniform Delay (d), s/veh	25.6	22.5	16.2	0.5	0.0	0.0
Incr Delay (d2), s/veh	10.0	0.8	0.1	0.3	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	16.8	1.5	3.3	1.6	0.0	0.0
LnGrp Delay(d),s/veh	35.6	23.3	16.3	0.7	0.0	0.0
LnGrp LOS	D	C	B	A		
Approach Vol, veh/h	1364			1506	0	
Approach Delay, s/veh	34.8			5.0	0.0	
Approach LOS	C			A		

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2				6		8
Phs Duration (G+Y+Rc), s	46.8	43.2				90.0		0.0
Change Period (Y+Rc), s	7.5	7.5				7.5		7.5
Max Green Setting (Gmax), s	13.5	37.4				58.4		16.6
Max Q Clear Time (g_c+I1), s	8.9	32.5				5.4		0.0
Green Ext Time (p_c), s	0.6	3.2				8.5		0.0

Intersection Summary	
HCM 2010 Ctrl Delay	19.2
HCM 2010 LOS	B

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (veh/h)	541	232	638	831	0	0
Future Volume (veh/h)	541	232	638	831	0	0
Number	2	12	1	6		
Initial Q (Qb), veh	0	0	0	0		
Ped-Bike Adj(A_pbT)		1.00	1.00			
Parking Bus, Adj	1.00	1.00	1.00	1.00		
Adj Sat Flow, veh/h/ln	1863	1863	1863	1863		
Adj Flow Rate, veh/h	569	244	672	875		
Adj No. of Lanes	2	1	2	3		
Peak Hour Factor	0.95	0.95	0.95	0.95		
Percent Heavy Veh, %	2	2	2	2		
Cap, veh/h	2176	974	805	4701		
Arrive On Green	0.61	0.61	0.23	0.92		
Sat Flow, veh/h	3632	1583	3442	5253		
Grp Volume(v), veh/h	569	244	672	875		
Grp Sat Flow(s),veh/h/ln	1770	1583	1721	1695		
Q Serve(g_s), s	6.6	6.3	16.7	1.4		
Cycle Q Clear(g_c), s	6.6	6.3	16.7	1.4		
Prop In Lane		1.00	1.00			
Lane Grp Cap(c), veh/h	2176	974	805	4701		
V/C Ratio(X)	0.26	0.25	0.83	0.19		
Avail Cap(c_a), veh/h	2176	974	1576	4701		
HCM Platoon Ratio	1.00	1.00	1.00	1.00		
Upstream Filter(I)	0.95	0.95	1.00	1.00		
Uniform Delay (d), s/veh	8.0	7.9	32.8	0.3		
Incr Delay (d2), s/veh	0.3	0.6	2.4	0.1		
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0		
%ile BackOfQ(50%),veh/ln	3.3	2.9	8.2	0.7		
LnGrp Delay(d),s/veh	8.2	8.5	35.2	0.4		
LnGrp LOS	A	A	D	A		
Approach Vol, veh/h	813			1547		
Approach Delay, s/veh	8.3			15.5		
Approach LOS	A			B		

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2				6		
Phs Duration (G+Y+Rc), s	7.9	62.1				90.0		
Change Period (Y+Rc), s	6.8	6.8				6.8		
Max Green Setting (Gmax), s	11.2	35.2				83.2		
Max Q Clear Time (g_c+I1), s	8.7	8.6				3.4		
Green Ext Time (p_c), s	2.3	5.3				6.2		

Intersection Summary	
HCM 2010 Ctrl Delay	13.0
HCM 2010 LOS	B

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	0	8	737	2	158	8	265	505	236	423	4
Future Volume (veh/h)	0	0	8	737	2	158	8	265	505	236	423	4
Number				1	6	16	3	8	18	7	4	14
Initial Q (Qb), veh				0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)				1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj				1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln				1863	1863	1863	1900	1863	1863	1900	1863	1900
Adj Flow Rate, veh/h				802	0	0	9	288	0	257	460	4
Adj No. of Lanes				2	0	1	0	2	1	0	2	0
Peak Hour Factor				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
Cap, veh/h				1685	0	752	13	421	189	293	564	5
Arrive On Green				0.47	0.00	0.00	0.12	0.12	0.00	0.24	0.24	0.24
Sat Flow, veh/h				3548	0	1583	105	3522	1583	1244	2395	21
Grp Volume(v), veh/h				802	0	0	159	138	0	372	0	349
Grp Sat Flow(s),veh/h/ln				1774	0	1583	1857	1770	1583	1801	0	1859
Q Serve(g_s), s				13.8	0.0	0.0	7.4	6.7	0.0	17.9	0.0	15.9
Cycle Q Clear(g_c), s				13.8	0.0	0.0	7.4	6.7	0.0	17.9	0.0	15.9
Prop In Lane				1.00		1.00	0.06		1.00	0.69		0.01
Lane Grp Cap(c), veh/h				1685	0	752	222	212	189	424	0	438
V/C Ratio(X)				0.48	0.00	0.00	0.72	0.65	0.00	0.88	0.00	0.80
Avail Cap(c_a), veh/h				1685	0	752	469	446	399	458	0	473
HCM Platoon Ratio				1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)				0.99	0.00	0.00	0.94	0.94	0.00	1.00	0.00	1.00
Uniform Delay (d), s/veh				16.0	0.0	0.0	38.2	37.8	0.0	33.1	0.0	32.4
Incr Delay (d2), s/veh				1.0	0.0	0.0	4.1	3.2	0.0	16.4	0.0	8.6
Initial Q Delay(d3),s/veh				0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln				6.9	0.0	0.0	4.1	3.4	0.0	10.8	0.0	9.2
LnGrp Delay(d),s/veh				17.0	0.0	0.0	42.2	41.0	0.0	49.6	0.0	41.0
LnGrp LOS				B			D	D		D		D
Approach Vol, veh/h					802			297			721	
Approach Delay, s/veh					17.0			41.7			45.4	
Approach LOS					B			D			D	

Timer	1	2	3	4	5	6	7	8
Assigned Phs				4		6		8
Phs Duration (G+Y+Rc), s				26.3		47.8		15.9
Change Period (Y+Rc), s				5.1		5.1		5.1
Max Green Setting (Gmax), s				22.9		29.1		22.7
Max Q Clear Time (g_c+I1), s				19.9		15.8		9.4
Green Ext Time (p_c), s				1.3		2.7		1.3

Intersection Summary	
HCM 2010 Ctrl Delay	32.3
HCM 2010 LOS	C

Notes

User approved volume balancing among the lanes for turning movement.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	140	40	60	9	50	37	53	543	13	55	717	164
Future Volume (veh/h)	140	40	60	9	50	37	53	543	13	55	717	164
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1900	1863	1863	1900	1863	1900	1863	1863	1900	1863	1863	1900
Adj Flow Rate, veh/h	157	45	67	10	56	42	60	610	15	62	806	184
Adj No. of Lanes	0	1	1	0	1	0	1	2	0	1	2	0
Peak Hour Factor	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	182	43	615	46	195	124	58	1401	34	59	1138	260
Arrive On Green	0.39	0.39	0.39	0.39	0.39	0.39	0.01	0.13	0.13	0.03	0.40	0.40
Sat Flow, veh/h	276	111	1583	0	502	319	1774	3530	87	1774	2863	654
Grp Volume(v), veh/h	202	0	67	108	0	0	60	306	319	62	498	492
Grp Sat Flow(s),veh/h/ln	387	0	1583	821	0	0	1774	1770	1847	1774	1770	1747
Q Serve(g_s), s	0.0	0.0	2.3	0.0	0.0	0.0	2.8	13.7	13.7	2.9	20.3	20.3
Cycle Q Clear(g_c), s	33.4	0.0	2.3	33.4	0.0	0.0	2.8	13.7	13.7	2.9	20.3	20.3
Prop In Lane	0.78		1.00	0.09		0.39	1.00		0.05	1.00		0.37
Lane Grp Cap(c), veh/h	225	0	615	365	0	0	58	702	733	59	704	695
V/C Ratio(X)	0.90	0.00	0.11	0.30	0.00	0.00	1.04	0.44	0.44	1.05	0.71	0.71
Avail Cap(c_a), veh/h	225	0	615	365	0	0	165	702	733	186	704	695
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	0.33	0.33	0.33	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	0.00	0.94	0.94	0.94	0.62	0.62	0.62
Uniform Delay (d), s/veh	29.8	0.0	16.8	19.0	0.0	0.0	42.5	28.5	28.5	41.6	21.7	21.7
Incr Delay (d2), s/veh	38.6	0.0	0.4	2.1	0.0	0.0	63.0	1.8	1.8	56.4	3.7	3.8
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.7	0.0	0.0	1.3	0.0	0.0
%ile BackOfQ(50%),veh/ln	7.2	0.0	1.1	1.9	0.0	0.0	2.4	7.1	7.4	2.3	10.6	10.4
LnGrp Delay(d),s/veh	68.3	0.0	17.2	21.0	0.0	0.0	106.2	30.3	30.3	99.3	25.4	25.5
LnGrp LOS	E		B	C			F	C	C	F	C	C
Approach Vol, veh/h		269			108			685			1052	
Approach Delay, s/veh		55.6			21.0			36.9			29.8	
Approach LOS		E			C			D			C	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4	5	6		8
Phs Duration (G+Y+Rc), s	8.9	39.1		38.0	8.8	39.2		38.0
Change Period (Y+Rc), s	5.0	5.0		4.6	5.0	5.0		4.6
Max Green Setting (Gmax), s	10.0	28.0		33.4	9.0	29.0		33.4
Max Q Clear Time (g_c+I1), s	4.9	15.7		35.4	4.8	22.3		35.4
Green Ext Time (p_c), s	0.0	3.2		0.0	0.0	5.6		0.0

Intersection Summary	
HCM 2010 Ctrl Delay	35.0
HCM 2010 LOS	C

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	32	67	45	27	33	79	59	513	125	91	616	78
Future Volume (veh/h)	32	67	45	27	33	79	59	513	125	91	616	78
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1900	1863	1863	1900	1900	1863	1900	1900	1863	1900
Adj Flow Rate, veh/h	36	75	51	30	37	89	66	576	140	102	692	88
Adj No. of Lanes	1	1	0	1	1	0	0	2	0	0	2	0
Peak Hour Factor	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	158	135	92	163	64	153	210	1763	423	283	1835	231
Arrive On Green	0.13	0.13	0.13	0.13	0.13	0.13	1.00	1.00	1.00	1.00	1.00	1.00
Sat Flow, veh/h	1260	1035	704	1260	486	1170	213	2327	558	305	2423	305
Grp Volume(v), veh/h	36	0	126	30	0	126	381	0	401	408	0	474
Grp Sat Flow(s),veh/h/ln	1260	0	1739	1260	0	1656	1501	0	1597	1391	0	1641
Q Serve(g_s), s	2.4	0.0	5.8	2.0	0.0	6.2	0.0	0.0	0.0	0.0	0.0	0.0
Cycle Q Clear(g_c), s	8.5	0.0	5.8	7.8	0.0	6.2	0.0	0.0	0.0	0.0	0.0	0.0
Prop In Lane	1.00		0.40	1.00		0.71	0.17		0.35	0.25		0.19
Lane Grp Cap(c), veh/h	158	0	228	163	0	217	1186	0	1209	1106	0	1243
V/C Ratio(X)	0.23	0.00	0.55	0.18	0.00	0.58	0.32	0.00	0.33	0.37	0.00	0.38
Avail Cap(c_a), veh/h	410	0	574	414	0	547	1186	0	1209	1106	0	1243
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	2.00	2.00	2.00	2.00	2.00	2.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	1.00	0.97	0.00	0.97	0.83	0.00	0.83
Uniform Delay (d), s/veh	39.2	0.0	35.0	38.7	0.0	35.2	0.0	0.0	0.0	0.0	0.0	0.0
Incr Delay (d2), s/veh	0.7	0.0	2.1	0.5	0.0	2.5	0.7	0.0	0.7	0.8	0.0	0.7
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.9	0.0	2.9	0.7	0.0	2.9	0.2	0.0	0.2	0.2	0.0	0.3
LnGrp Delay(d),s/veh	39.9	0.0	37.1	39.2	0.0	37.6	0.7	0.0	0.7	0.8	0.0	0.7
LnGrp LOS	D		D	D		D	A		A	A		A
Approach Vol, veh/h		162			156			782			882	
Approach Delay, s/veh		37.7			37.9			0.7			0.8	
Approach LOS		D			D			A			A	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2		4		6		8
Phs Duration (G+Y+Rc), s		70.1		15.9		70.1		15.9
Change Period (Y+Rc), s		5.0		4.6		5.0		4.6
Max Green Setting (Gmax), s		48.0		28.4		48.0		28.4
Max Q Clear Time (g_c+I1), s		2.0		10.5		2.0		9.8
Green Ext Time (p_c), s		13.7		0.7		16.3		0.7

Intersection Summary	
HCM 2010 Ctrl Delay	6.7
HCM 2010 LOS	A

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	54	45	33	39	33	60	26	511	62	24	425	69
Future Volume (veh/h)	54	45	33	39	33	60	26	511	62	24	425	69
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1900	1863	1863	1900	1900	1863	1900	1900	1863	1900
Adj Flow Rate, veh/h	59	49	36	43	36	66	29	562	68	26	467	76
Adj No. of Lanes	1	1	0	1	1	0	0	2	0	0	2	0
Peak Hour Factor	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	179	130	96	195	77	141	120	2223	265	123	2115	340
Arrive On Green	0.13	0.13	0.13	0.13	0.13	0.13	0.25	0.25	0.25	1.00	1.00	1.00
Sat Flow, veh/h	1287	999	734	1307	590	1082	99	2932	350	103	2790	448
Grp Volume(v), veh/h	59	0	85	43	0	102	341	0	318	295	0	274
Grp Sat Flow(s),veh/h/ln	1287	0	1733	1307	0	1672	1747	0	1633	1724	0	1616
Q Serve(g_s), s	3.8	0.0	3.9	2.7	0.0	4.9	0.0	0.0	13.4	0.0	0.0	0.0
Cycle Q Clear(g_c), s	8.7	0.0	3.9	6.5	0.0	4.9	12.6	0.0	13.4	0.0	0.0	0.0
Prop In Lane	1.00		0.42	1.00		0.65	0.08		0.21	0.09		0.28
Lane Grp Cap(c), veh/h	179	0	226	195	0	218	1370	0	1238	1353	0	1225
V/C Ratio(X)	0.33	0.00	0.38	0.22	0.00	0.47	0.25	0.00	0.26	0.22	0.00	0.22
Avail Cap(c_a), veh/h	406	0	532	426	0	513	1370	0	1238	1353	0	1225
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	0.33	0.33	0.33	2.00	2.00	2.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	1.00	0.95	0.00	0.95	0.91	0.00	0.91
Uniform Delay (d), s/veh	38.7	0.0	34.2	37.2	0.0	34.6	12.5	0.0	12.8	0.0	0.0	0.0
Incr Delay (d2), s/veh	1.1	0.0	1.0	0.6	0.0	1.6	0.4	0.0	0.5	0.3	0.0	0.4
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	1.4	0.0	1.9	1.0	0.0	2.3	6.7	0.0	6.2	0.1	0.0	0.1
LnGrp Delay(d),s/veh	39.7	0.0	35.2	37.8	0.0	36.2	12.9	0.0	13.3	0.3	0.0	0.4
LnGrp LOS	D		D	D		D	B		B	A		A
Approach Vol, veh/h		144			145			659			569	
Approach Delay, s/veh		37.1			36.7			13.1			0.4	
Approach LOS		D			D			B			A	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2		4		6		8
Phs Duration (G+Y+Rc), s		70.2		15.8		70.2		15.8
Change Period (Y+Rc), s		5.0		4.6		5.0		4.6
Max Green Setting (Gmax), s		50.0		26.4		50.0		26.4
Max Q Clear Time (g_c+I1), s		15.4		10.7		2.0		8.5
Green Ext Time (p_c), s		9.6		0.5		8.8		0.6

Intersection Summary	
HCM 2010 Ctrl Delay	12.9
HCM 2010 LOS	B

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	104	0	208	180	379	101	83	473	0	0	469	187
Future Volume (veh/h)	104	0	208	180	379	101	83	473	0	0	469	187
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1900	1863	1863	1863	1863	1900	1863	1863	0	0	1863	1900
Adj Flow Rate, veh/h	106	80	159	184	387	103	85	483	0	0	479	191
Adj No. of Lanes	0	1	1	1	2	0	1	2	0	0	2	0
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	0	0	2	2
Cap, veh/h	0	452	482	321	673	177	109	2268	0	0	1292	512
Arrive On Green	0.00	0.24	0.24	0.24	0.24	0.24	0.06	0.64	0.00	0.00	0.17	0.17
Sat Flow, veh/h	0	1863	1583	1136	2773	730	1774	3632	0	0	2571	982
Grp Volume(v), veh/h	0	80	159	184	245	245	85	483	0	0	341	329
Grp Sat Flow(s),veh/h/ln	0	1863	1583	1136	1770	1734	1774	1770	0	0	1770	1690
Q Serve(g_s), s	0.0	2.9	6.7	13.1	10.5	10.7	4.1	4.9	0.0	0.0	14.7	14.8
Cycle Q Clear(g_c), s	0.0	2.9	6.7	16.1	10.5	10.7	4.1	4.9	0.0	0.0	14.7	14.8
Prop In Lane	0.00		1.00	1.00		0.42	1.00		0.00	0.00		0.58
Lane Grp Cap(c), veh/h	0	452	482	321	430	421	109	2268	0	0	922	881
V/C Ratio(X)	0.00	0.18	0.33	0.57	0.57	0.58	0.78	0.21	0.00	0.00	0.37	0.37
Avail Cap(c_a), veh/h	0	812	788	415	576	565	165	2268	0	0	922	881
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.33	0.33
Upstream Filter(I)	0.00	1.00	1.00	1.00	1.00	1.00	0.94	0.94	0.00	0.00	0.98	0.98
Uniform Delay (d), s/veh	0.0	25.8	23.1	32.1	28.6	28.7	39.8	6.4	0.0	0.0	23.1	23.2
Incr Delay (d2), s/veh	0.0	0.2	0.4	1.6	1.2	1.3	11.7	0.2	0.0	0.0	1.1	1.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.0	1.5	3.0	4.3	5.3	5.2	2.3	2.4	0.0	0.0	7.5	7.2
LnGrp Delay(d),s/veh	0.0	25.9	23.5	33.7	29.8	30.0	51.4	6.6	0.0	0.0	24.2	24.4
LnGrp LOS		C	C	C	C	C	D	A			C	C
Approach Vol, veh/h		239			674			568			670	
Approach Delay, s/veh		24.3			30.9			13.3			24.3	
Approach LOS		C			C			B			C	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2		4	5	6	7	8
Phs Duration (G+Y+Rc), s		60.1		25.9	10.3	49.8	0.0	25.9
Change Period (Y+Rc), s		5.0		5.0	5.0	5.0	4.5	5.0
Max Green Setting (Gmax), s		38.5		37.5	8.0	25.5	5.0	28.0
Max Q Clear Time (g_c+I1), s		6.9		8.7	6.1	16.8	0.0	18.1
Green Ext Time (p_c), s		5.2		1.0	0.0	3.7	0.0	2.8

Intersection Summary	
HCM 2010 Ctrl Delay	23.5
HCM 2010 LOS	C

Notes

User approved volume balancing among the lanes for turning movement.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	78	148	50	0	0	0	102	481	141	174	515	149
Future Volume (veh/h)	78	148	50	0	0	0	102	481	141	174	515	149
Number	7	4	14				5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0				0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00				1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00				1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1900				1863	1863	1900	1863	1863	1900
Adj Flow Rate, veh/h	82	156	53				107	506	148	183	542	157
Adj No. of Lanes	1	1	0				1	2	0	1	2	0
Peak Hour Factor	0.95	0.95	0.95				0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	2	2	2				2	2	2	2	2	2
Cap, veh/h	264	198	67				136	1496	435	220	1627	470
Arrive On Green	0.15	0.15	0.15				0.08	0.55	0.55	0.25	1.00	1.00
Sat Flow, veh/h	1774	1331	452				1774	2706	787	1774	2712	782
Grp Volume(v), veh/h	82	0	209				107	330	324	183	353	346
Grp Sat Flow(s),veh/h/ln	1774	0	1783				1774	1770	1724	1774	1770	1725
Q Serve(g_s), s	3.5	0.0	9.7				5.1	8.8	8.9	8.4	0.0	0.0
Cycle Q Clear(g_c), s	3.5	0.0	9.7				5.1	8.8	8.9	8.4	0.0	0.0
Prop In Lane	1.00		0.25				1.00		0.46	1.00		0.45
Lane Grp Cap(c), veh/h	264	0	266				136	978	953	220	1062	1035
V/C Ratio(X)	0.31	0.00	0.79				0.79	0.34	0.34	0.83	0.33	0.33
Avail Cap(c_a), veh/h	474	0	477				186	978	953	454	1062	1035
HCM Platoon Ratio	1.00	1.00	1.00				1.00	1.00	1.00	2.00	2.00	2.00
Upstream Filter(I)	1.00	0.00	1.00				1.00	1.00	1.00	0.82	0.82	0.82
Uniform Delay (d), s/veh	32.6	0.0	35.3				39.0	10.6	10.6	31.5	0.0	0.0
Incr Delay (d2), s/veh	0.7	0.0	5.1				14.4	0.9	1.0	6.6	0.7	0.7
Initial Q Delay(d3),s/veh	0.0	0.0	0.0				0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.8	0.0	5.1				3.0	4.6	4.5	4.5	0.2	0.2
LnGrp Delay(d),s/veh	33.3	0.0	40.4				53.4	11.5	11.6	38.1	0.7	0.7
LnGrp LOS	C		D				D	B	B	D	A	A
Approach Vol, veh/h		291						761			882	
Approach Delay, s/veh		38.4						17.4			8.5	
Approach LOS		D						B			A	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4	5	6		
Phs Duration (G+Y+Rc), s	15.6	52.5		17.8	11.6	56.6		
Change Period (Y+Rc), s	5.0	5.0		5.0	5.0	5.0		
Max Green Setting (Gmax), s	22.6	26.0		23.0	9.0	39.0		
Max Q Clear Time (g_c+I1), s	10.4	10.9		11.7	7.1	2.0		
Green Ext Time (p_c), s	0.4	5.1		1.1	0.0	7.8		

Intersection Summary	
HCM 2010 Ctrl Delay	16.5
HCM 2010 LOS	B

Intersection	
Int Delay, s/veh	0

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	6	0	0	7	0	0
Future Vol, veh/h	6	0	0	7	0	0
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	7	0	0	8	0	0

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	7	0	15	7
Stage 1	-	-	-	-	7	-
Stage 2	-	-	-	-	8	-
Critical Hdwy	-	-	4.12	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	-	-	2.218	-	3.518	3.318
Pot Cap-1 Maneuver	-	-	1614	-	1004	1075
Stage 1	-	-	-	-	1016	-
Stage 2	-	-	-	-	1015	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	1614	-	1004	1075
Mov Cap-2 Maneuver	-	-	-	-	1004	-
Stage 1	-	-	-	-	1016	-
Stage 2	-	-	-	-	1015	-

Approach	EB	WB	NB
HCM Control Delay, s	0	0	0
HCM LOS			A

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	-	-	-	1614	-
HCM Lane V/C Ratio	-	-	-	-	-
HCM Control Delay (s)	0	-	-	0	-
HCM Lane LOS	A	-	-	A	-
HCM 95th %tile Q(veh)	-	-	-	0	-

Intersection	
Int Delay, s/veh	0

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	0	0	0	402	668	0
Future Vol, veh/h	0	0	0	402	668	0
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	1	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	0	0	0	437	726	0

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	1163	363	726	0	-	0
Stage 1	726	-	-	-	-	-
Stage 2	437	-	-	-	-	-
Critical Hdwy	6.63	6.93	4.13	-	-	-
Critical Hdwy Stg 1	5.83	-	-	-	-	-
Critical Hdwy Stg 2	5.43	-	-	-	-	-
Follow-up Hdwy	3.519	3.319	2.219	-	-	-
Pot Cap-1 Maneuver	201	635	875	-	-	-
Stage 1	441	-	-	-	-	-
Stage 2	650	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	201	635	875	-	-	-
Mov Cap-2 Maneuver	326	-	-	-	-	-
Stage 1	441	-	-	-	-	-
Stage 2	650	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	0	0	0
HCM LOS	A		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	875	-	-	-	-
HCM Lane V/C Ratio	-	-	-	-	-
HCM Control Delay (s)	0	-	0	-	-
HCM Lane LOS	A	-	A	-	-
HCM 95th %tile Q(veh)	0	-	-	-	-

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	94	64	54	89	268	671	99	27	150	101	30	80
Future Volume (veh/h)	94	64	54	89	268	671	99	27	150	101	30	80
Number	5	2	12	1	6	16	3	8	18	7	4	14
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1863	1863	1863	1863	1900	1863	1863	1900	1863	1863
Adj Flow Rate, veh/h	106	72	61	100	301	754	111	30	169	113	34	90
Adj No. of Lanes	1	1	1	1	1	2	0	1	1	0	1	1
Peak Hour Factor	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	139	519	441	157	539	1293	206	56	231	164	49	188
Arrive On Green	0.08	0.28	0.28	0.09	0.29	0.29	0.15	0.15	0.15	0.12	0.12	0.12
Sat Flow, veh/h	1774	1863	1583	1774	1863	3167	1411	381	1583	1379	415	1583
Grp Volume(v), veh/h	106	72	61	100	301	754	141	0	169	147	0	90
Grp Sat Flow(s),veh/h/ln	1774	1863	1583	1774	1863	1583	1792	0	1583	1794	0	1583
Q Serve(g_s), s	3.9	1.9	1.9	3.6	9.1	12.3	4.8	0.0	6.8	5.2	0.0	3.5
Cycle Q Clear(g_c), s	3.9	1.9	1.9	3.6	9.1	12.3	4.8	0.0	6.8	5.2	0.0	3.5
Prop In Lane	1.00		1.00	1.00		1.00	0.79		1.00	0.77		1.00
Lane Grp Cap(c), veh/h	139	519	441	157	539	1293	262	0	231	213	0	188
V/C Ratio(X)	0.76	0.14	0.14	0.64	0.56	0.58	0.54	0.00	0.73	0.69	0.00	0.48
Avail Cap(c_a), veh/h	438	1116	949	291	962	2012	497	0	439	446	0	393
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	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	30.0	18.0	18.0	29.2	20.0	15.3	26.3	0.0	27.1	28.1	0.0	27.3
Incr Delay (d2), s/veh	8.4	0.1	0.1	4.2	0.9	0.4	1.7	0.0	4.4	3.9	0.0	1.9
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.2	1.0	0.8	2.0	4.8	6.5	2.5	0.0	3.2	2.8	0.0	1.6
LnGrp Delay(d),s/veh	38.4	18.1	18.1	33.4	20.9	15.7	28.0	0.0	31.5	32.0	0.0	29.2
LnGrp LOS	D	B	B	C	C	B	C		C	C		C
Approach Vol, veh/h		239			1155			310			237	
Approach Delay, s/veh		27.1			18.6			29.9			30.9	
Approach LOS		C			B			C			C	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4	5	6		8
Phs Duration (G+Y+Rc), s	12.0	24.6		14.0	11.3	25.3		15.8
Change Period (Y+Rc), s	6.1	6.1		6.1	6.1	6.1		6.1
Max Green Setting (Gmax), s	10.9	39.8		16.5	16.4	34.3		18.4
Max Q Clear Time (g_c+I1), s	5.6	3.9		7.2	5.9	14.3		8.8
Green Ext Time (p_c), s	0.1	0.5		0.7	0.2	4.9		1.0

Intersection Summary	
HCM 2010 Ctrl Delay	22.9
HCM 2010 LOS	C

Notes

User approved volume balancing among the lanes for turning movement.

Intersection	
Int Delay, s/veh	2.9

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	29	158	58	410	200	13
Future Vol, veh/h	29	158	58	410	200	13
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	115	1	-	-	0
Veh in Median Storage, #	2	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	96	96	96	96	96	96
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	30	165	60	427	208	14

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	755	208	222	0	-	0
Stage 1	208	-	-	-	-	-
Stage 2	547	-	-	-	-	-
Critical Hdwy	6.42	6.22	4.12	-	-	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	2.218	-	-	-
Pot Cap-1 Maneuver	376	832	1347	-	-	-
Stage 1	827	-	-	-	-	-
Stage 2	580	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	359	832	1347	-	-	-
Mov Cap-2 Maneuver	479	-	-	-	-	-
Stage 1	790	-	-	-	-	-
Stage 2	580	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	10.8	1	0
HCM LOS	B		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	EBLn2	SBT	SBR
Capacity (veh/h)	1347	-	479	832	-	-
HCM Lane V/C Ratio	0.045	-	0.063	0.198	-	-
HCM Control Delay (s)	7.8	-	13	10.4	-	-
HCM Lane LOS	A	-	B	B	-	-
HCM 95th %tile Q(veh)	0.1	-	0.2	0.7	-	-

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (veh/h)	487	121	975	1348	112	0
Future Volume (veh/h)	487	121	975	1348	112	0
Number	2	12	1	6	3	18
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)		1.00	1.00		1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1863	1863	1863	0
Adj Flow Rate, veh/h	507	126	1016	1404	117	0
Adj No. of Lanes	2	1	2	2	1	0
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96
Percent Heavy Veh, %	2	2	2	2	2	0
Cap, veh/h	625	148	2261	3244	0	0
Arrive On Green	0.18	0.18	0.66	0.92	0.00	0.00
Sat Flow, veh/h	3632	1583	3442	3632	0	0
Grp Volume(v), veh/h	507	126	1016	1404	0	0
Grp Sat Flow(s),veh/h/ln	1770	1583	1721	1770	0	0
Q Serve(g_s), s	12.4	7.1	12.9	4.9	0.0	0.0
Cycle Q Clear(g_c), s	12.4	7.1	12.9	4.9	0.0	0.0
Prop In Lane		1.00	1.00		0.00	0.00
Lane Grp Cap(c), veh/h	625	148	2261	3244	0	0
V/C Ratio(X)	0.81	0.85	0.45	0.43	0.00	0.00
Avail Cap(c_a), veh/h	763	209	2261	3244	0	0
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	0.00	0.00
Uniform Delay (d), s/veh	35.6	40.2	7.5	0.5	0.0	0.0
Incr Delay (d2), s/veh	11.0	43.1	0.1	0.4	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	7.0	4.6	6.1	2.3	0.0	0.0
LnGrp Delay(d),s/veh	46.6	83.3	7.7	0.9	0.0	0.0
LnGrp LOS	D	F	A	A		
Approach Vol, veh/h	633			2420	0	
Approach Delay, s/veh	53.9			3.8	0.0	
Approach LOS	D			A		

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2				6		8
Phs Duration (G+Y+Rc), s	66.6	23.4				90.0		0.0
Change Period (Y+Rc), s	7.5	7.5				7.5		7.5
Max Green Setting (Gmax), s	31.5	19.4				58.4		16.6
Max Q Clear Time (g_c+I1), s	14.9	14.4				6.9		0.0
Green Ext Time (p_c), s	3.6	1.5				12.7		0.0

Intersection Summary	
HCM 2010 Ctrl Delay	14.2
HCM 2010 LOS	B

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (veh/h)	331	276	948	605	0	0
Future Volume (veh/h)	331	276	948	605	0	0
Number	2	12	1	6		
Initial Q (Qb), veh	0	0	0	0		
Ped-Bike Adj(A_pbT)		1.00	1.00			
Parking Bus, Adj	1.00	1.00	1.00	1.00		
Adj Sat Flow, veh/h/ln	1863	1863	1863	1863		
Adj Flow Rate, veh/h	345	288	988	630		
Adj No. of Lanes	2	1	2	3		
Peak Hour Factor	0.96	0.96	0.96	0.96		
Percent Heavy Veh, %	2	2	2	2		
Cap, veh/h	1829	818	1143	4701		
Arrive On Green	0.52	0.52	0.33	0.92		
Sat Flow, veh/h	3632	1583	3442	5253		
Grp Volume(v), veh/h	345	288	988	630		
Grp Sat Flow(s),veh/h/ln	1770	1583	1721	1695		
Q Serve(g_s), s	4.7	9.7	24.2	1.0		
Cycle Q Clear(g_c), s	4.7	9.7	24.2	1.0		
Prop In Lane		1.00	1.00			
Lane Grp Cap(c), veh/h	1829	818	1143	4701		
V/C Ratio(X)	0.19	0.35	0.86	0.13		
Avail Cap(c_a), veh/h	1829	818	1805	4701		
HCM Platoon Ratio	1.00	1.00	1.00	1.00		
Upstream Filter(I)	0.97	0.97	1.00	1.00		
Uniform Delay (d), s/veh	11.6	12.8	28.1	0.3		
Incr Delay (d2), s/veh	0.2	1.1	2.8	0.1		
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0		
%ile BackOfQ(50%),veh/ln	2.4	4.4	12.0	0.4		
LnGrp Delay(d),s/veh	11.9	14.0	30.9	0.4		
LnGrp LOS	B	B	C	A		
Approach Vol, veh/h	633			1618		
Approach Delay, s/veh	12.8			19.0		
Approach LOS	B			B		

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2				6		
Phs Duration (G+Y+Rc), s	36.7	53.3				90.0		
Change Period (Y+Rc), s	6.8	6.8				6.8		
Max Green Setting (Gmax), s	47.3	29.2				83.2		
Max Q Clear Time (g_c+I1), s	26.2	11.7				3.0		
Green Ext Time (p_c), s	3.7	3.2				4.1		

Intersection Summary	
HCM 2010 Ctrl Delay	17.3
HCM 2010 LOS	B

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	0	7	418	0	225	1	157	452	187	193	2
Future Volume (veh/h)	0	0	7	418	0	225	1	157	452	187	193	2
Number				1	6	16	3	8	18	7	4	14
Initial Q (Qb), veh				0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)				1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj				1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln				1863	1863	1863	1900	1863	1863	1900	1863	1900
Adj Flow Rate, veh/h				435	0	0	1	164	0	195	201	2
Adj No. of Lanes				2	0	1	0	2	1	0	2	0
Peak Hour Factor				0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Percent Heavy Veh, %				2	2	2	2	2	2	2	2	2
Cap, veh/h				2161	0	964	2	281	123	242	277	3
Arrive On Green				0.61	0.00	0.00	0.08	0.08	0.00	0.14	0.14	0.14
Sat Flow, veh/h				3548	0	1583	21	3610	1583	1688	1931	19
Grp Volume(v), veh/h				435	0	0	88	77	0	205	0	193
Grp Sat Flow(s),veh/h/ln				1774	0	1583	1862	1770	1583	1778	0	1859
Q Serve(g_s), s				4.9	0.0	0.0	4.1	3.8	0.0	10.1	0.0	8.9
Cycle Q Clear(g_c), s				4.9	0.0	0.0	4.1	3.8	0.0	10.1	0.0	8.9
Prop In Lane				1.00		1.00	0.01		1.00	0.95		0.01
Lane Grp Cap(c), veh/h				2161	0	964	145	138	123	255	0	266
V/C Ratio(X)				0.20	0.00	0.00	0.61	0.56	0.00	0.81	0.00	0.72
Avail Cap(c_a), veh/h				2161	0	964	515	490	438	314	0	328
HCM Platoon Ratio				1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)				1.00	0.00	0.00	0.99	0.99	0.00	1.00	0.00	1.00
Uniform Delay (d), s/veh				7.8	0.0	0.0	40.2	40.0	0.0	37.3	0.0	36.8
Incr Delay (d2), s/veh				0.2	0.0	0.0	4.1	3.4	0.0	11.9	0.0	5.9
Initial Q Delay(d3),s/veh				0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln				2.4	0.0	0.0	2.3	2.0	0.0	5.8	0.0	5.0
LnGrp Delay(d),s/veh				8.1	0.0	0.0	44.3	43.4	0.0	49.2	0.0	42.7
LnGrp LOS				A			D	D		D		D
Approach Vol, veh/h					435			165			398	
Approach Delay, s/veh					8.1			43.9			46.1	
Approach LOS					A			D			D	

Timer	1	2	3	4	5	6	7	8
Assigned Phs				4		6		8
Phs Duration (G+Y+Rc), s				18.0		59.9		12.1
Change Period (Y+Rc), s				5.1		5.1		5.1
Max Green Setting (Gmax), s				15.9		33.9		24.9
Max Q Clear Time (g_c+I1), s				12.1		6.9		6.1
Green Ext Time (p_c), s				0.8		1.6		0.8

Intersection Summary	
HCM 2010 Ctrl Delay	29.1
HCM 2010 LOS	C

Notes

User approved volume balancing among the lanes for turning movement.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	147	33	36	21	33	51	30	326	12	32	416	74
Future Volume (veh/h)	147	33	36	21	33	51	30	326	12	32	416	74
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1900	1863	1863	1900	1863	1900	1863	1863	1900	1863	1863	1900
Adj Flow Rate, veh/h	158	35	39	23	35	55	32	351	13	34	447	80
Adj No. of Lanes	0	1	1	0	1	0	1	2	0	1	2	0
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	248	48	615	62	97	103	34	1426	53	37	1234	219
Arrive On Green	0.39	0.39	0.39	0.39	0.39	0.39	0.01	0.14	0.14	0.02	0.41	0.41
Sat Flow, veh/h	442	123	1583	31	249	265	1774	3481	129	1774	3004	534
Grp Volume(v), veh/h	193	0	39	113	0	0	32	178	186	34	262	265
Grp Sat Flow(s),veh/h/ln	564	0	1583	545	0	0	1774	1770	1840	1774	1770	1768
Q Serve(g_s), s	0.0	0.0	1.3	1.7	0.0	0.0	1.6	7.7	7.8	1.6	8.8	8.9
Cycle Q Clear(g_c), s	30.2	0.0	1.3	31.9	0.0	0.0	1.6	7.7	7.8	1.6	8.8	8.9
Prop In Lane	0.82		1.00	0.20		0.49	1.00		0.07	1.00		0.30
Lane Grp Cap(c), veh/h	295	0	615	262	0	0	34	725	754	37	727	726
V/C Ratio(X)	0.65	0.00	0.06	0.43	0.00	0.00	0.93	0.25	0.25	0.93	0.36	0.36
Avail Cap(c_a), veh/h	295	0	615	262	0	0	165	725	754	186	727	726
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	0.33	0.33	0.33	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	0.00	0.99	0.99	0.99	0.85	0.85	0.85
Uniform Delay (d), s/veh	24.8	0.0	16.5	20.4	0.0	0.0	42.7	25.3	25.3	42.0	17.5	17.6
Incr Delay (d2), s/veh	10.7	0.0	0.2	5.1	0.0	0.0	54.1	0.8	0.8	46.6	1.2	1.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	5.3	0.0	0.6	2.1	0.0	0.0	1.3	4.0	4.1	1.3	4.5	4.6
LnGrp Delay(d),s/veh	35.5	0.0	16.7	25.5	0.0	0.0	96.7	26.1	26.1	88.7	18.7	18.8
LnGrp LOS	D		B	C			F	C	C	F	B	B
Approach Vol, veh/h		232			113			396			561	
Approach Delay, s/veh		32.4			25.5			31.8			23.0	
Approach LOS		C			C			C			C	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4	5	6		8
Phs Duration (G+Y+Rc), s	7.8	40.2		38.0	7.7	40.3		38.0
Change Period (Y+Rc), s	5.0	5.0		4.6	5.0	5.0		4.6
Max Green Setting (Gmax), s	10.8	28.0		33.4	9.0	29.0		33.4
Max Q Clear Time (g_c+I1), s	3.6	9.8		32.2	3.6	10.9		33.9
Green Ext Time (p_c), s	0.0	2.1		0.3	0.0	7.9		0.0

Intersection Summary	
HCM 2010 Ctrl Delay	27.6
HCM 2010 LOS	C

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	9	15	6	27	19	32	8	320	79	67	366	23
Future Volume (veh/h)	9	15	6	27	19	32	8	320	79	67	366	23
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1900	1863	1863	1900	1900	1863	1900	1900	1863	1900
Adj Flow Rate, veh/h	9	15	6	28	19	33	8	327	81	68	373	23
Adj No. of Lanes	1	1	0	1	1	0	0	2	0	0	2	0
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	131	82	33	158	40	69	68	2246	543	392	2127	133
Arrive On Green	0.06	0.06	0.06	0.06	0.06	0.06	1.00	1.00	1.00	1.00	1.00	1.00
Sat Flow, veh/h	1347	1267	507	1385	612	1063	29	2727	659	410	2583	161
Grp Volume(v), veh/h	9	0	21	28	0	52	222	0	194	226	0	238
Grp Sat Flow(s),veh/h/ln	1347	0	1773	1385	0	1675	1837	0	1579	1488	0	1667
Q Serve(g_s), s	0.6	0.0	1.0	1.7	0.0	2.6	0.0	0.0	0.0	0.0	0.0	0.0
Cycle Q Clear(g_c), s	3.1	0.0	1.0	2.6	0.0	2.6	0.0	0.0	0.0	0.0	0.0	0.0
Prop In Lane	1.00		0.29	1.00		0.63	0.04		0.42	0.30		0.10
Lane Grp Cap(c), veh/h	131	0	115	158	0	108	1556	0	1300	1280	0	1373
V/C Ratio(X)	0.07	0.00	0.18	0.18	0.00	0.48	0.14	0.00	0.15	0.18	0.00	0.17
Avail Cap(c_a), veh/h	488	0	586	526	0	553	1556	0	1300	1280	0	1373
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	2.00	2.00	2.00	2.00	2.00	2.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	1.00	0.99	0.00	0.99	0.97	0.00	0.97
Uniform Delay (d), s/veh	40.3	0.0	38.1	39.3	0.0	38.8	0.0	0.0	0.0	0.0	0.0	0.0
Incr Delay (d2), s/veh	0.2	0.0	0.8	0.5	0.0	3.3	0.2	0.0	0.2	0.3	0.0	0.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.2	0.0	0.5	0.7	0.0	1.3	0.1	0.0	0.1	0.1	0.0	0.1
LnGrp Delay(d),s/veh	40.6	0.0	38.8	39.8	0.0	42.1	0.2	0.0	0.2	0.3	0.0	0.3
LnGrp LOS	D		D	D		D	A		A	A		A
Approach Vol, veh/h		30			80			416			464	
Approach Delay, s/veh		39.3			41.3			0.2			0.3	
Approach LOS		D			D			A			A	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2		4		6		8
Phs Duration (G+Y+Rc), s		75.8		10.2		75.8		10.2
Change Period (Y+Rc), s		5.0		4.6		5.0		4.6
Max Green Setting (Gmax), s		48.0		28.4		48.0		28.4
Max Q Clear Time (g_c+I1), s		2.0		5.1		2.0		4.6
Green Ext Time (p_c), s		5.9		0.1		6.9		0.3

Intersection Summary	
HCM 2010 Ctrl Delay	4.8
HCM 2010 LOS	A

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	15	14	2	14	16	39	16	309	28	21	392	26
Future Volume (veh/h)	15	14	2	14	16	39	16	309	28	21	392	26
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1900	1863	1863	1900	1900	1863	1900	1900	1863	1900
Adj Flow Rate, veh/h	17	16	2	16	18	44	18	347	31	24	440	29
Adj No. of Lanes	1	1	0	1	1	0	0	2	0	0	2	0
Peak Hour Factor	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	126	110	14	165	33	80	134	2482	220	144	2541	166
Arrive On Green	0.07	0.07	0.07	0.07	0.07	0.07	0.82	0.82	0.82	1.00	1.00	1.00
Sat Flow, veh/h	1335	1624	203	1389	481	1175	107	3025	268	119	3098	202
Grp Volume(v), veh/h	17	0	18	16	0	62	205	0	191	255	0	238
Grp Sat Flow(s),veh/h/ln	1335	0	1827	1389	0	1655	1753	0	1648	1760	0	1659
Q Serve(g_s), s	1.1	0.0	0.8	0.9	0.0	3.1	0.0	0.0	2.0	0.0	0.0	0.0
Cycle Q Clear(g_c), s	4.2	0.0	0.8	1.7	0.0	3.1	1.9	0.0	2.0	0.0	0.0	0.0
Prop In Lane	1.00		0.11	1.00		0.71	0.09		0.16	0.09		0.12
Lane Grp Cap(c), veh/h	126	0	124	165	0	113	1484	0	1352	1490	0	1361
V/C Ratio(X)	0.13	0.00	0.14	0.10	0.00	0.55	0.14	0.00	0.14	0.17	0.00	0.17
Avail Cap(c_a), veh/h	445	0	561	497	0	508	1484	0	1352	1490	0	1361
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	2.00	2.00	2.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00	0.99	0.00	0.99
Uniform Delay (d), s/veh	40.8	0.0	37.7	38.5	0.0	38.8	1.6	0.0	1.6	0.0	0.0	0.0
Incr Delay (d2), s/veh	0.5	0.0	0.5	0.3	0.0	4.1	0.2	0.0	0.2	0.2	0.0	0.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.4	0.0	0.4	0.4	0.0	1.6	1.1	0.0	1.0	0.1	0.0	0.1
LnGrp Delay(d),s/veh	41.3	0.0	38.3	38.8	0.0	43.0	1.8	0.0	1.8	0.2	0.0	0.3
LnGrp LOS	D		D	D		D	A		A	A		A
Approach Vol, veh/h		35			78			396			493	
Approach Delay, s/veh		39.7			42.1			1.8			0.3	
Approach LOS		D			D			A			A	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2		4		6		8
Phs Duration (G+Y+Rc), s		75.6		10.4		75.6		10.4
Change Period (Y+Rc), s		5.0		4.6		5.0		4.6
Max Green Setting (Gmax), s		50.0		26.4		50.0		26.4
Max Q Clear Time (g_c+I1), s		4.0		6.2		2.0		5.1
Green Ext Time (p_c), s		5.6		0.1		7.2		0.3

Intersection Summary	
HCM 2010 Ctrl Delay	5.5
HCM 2010 LOS	A

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	77	0	141	164	263	79	36	206	0	0	304	69
Future Volume (veh/h)	77	0	141	164	263	79	36	206	0	0	304	69
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1900	1863	1863	1863	1863	1900	1863	1863	0	0	1863	1900
Adj Flow Rate, veh/h	87	53	122	184	296	89	40	231	0	0	342	78
Adj No. of Lanes	0	1	1	1	2	0	1	2	0	0	2	0
Peak Hour Factor	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	0	0	2	2
Cap, veh/h	0	409	393	320	591	175	51	2351	0	0	1658	374
Arrive On Green	0.00	0.22	0.22	0.22	0.22	0.22	0.03	0.66	0.00	0.00	0.77	0.77
Sat Flow, veh/h	0	1863	1583	1205	2696	796	1774	3632	0	0	2964	647
Grp Volume(v), veh/h	0	53	122	184	192	193	40	231	0	0	209	211
Grp Sat Flow(s),veh/h/ln	0	1863	1583	1205	1770	1722	1774	1770	0	0	1770	1749
Q Serve(g_s), s	0.0	2.0	5.4	12.5	8.2	8.5	1.9	2.0	0.0	0.0	2.8	2.9
Cycle Q Clear(g_c), s	0.0	2.0	5.4	14.4	8.2	8.5	1.9	2.0	0.0	0.0	2.8	2.9
Prop In Lane	0.00		1.00	1.00		0.46	1.00		0.00	0.00		0.37
Lane Grp Cap(c), veh/h	0	409	393	320	388	378	51	2351	0	0	1022	1010
V/C Ratio(X)	0.00	0.13	0.31	0.57	0.50	0.51	0.79	0.10	0.00	0.00	0.20	0.21
Avail Cap(c_a), veh/h	0	812	736	448	576	561	165	2351	0	0	1022	1010
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.33	1.33
Upstream Filter(I)	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	0.00	0.99	0.99
Uniform Delay (d), s/veh	0.0	27.0	26.3	32.8	29.4	29.5	41.5	5.2	0.0	0.0	4.5	4.5
Incr Delay (d2), s/veh	0.0	0.1	0.4	1.6	1.0	1.1	22.9	0.1	0.0	0.0	0.4	0.5
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.0	1.0	2.4	4.3	4.1	4.1	1.3	1.0	0.0	0.0	1.5	1.5
LnGrp Delay(d),s/veh	0.0	27.1	26.8	34.4	30.4	30.6	64.4	5.3	0.0	0.0	5.0	5.0
LnGrp LOS		C	C	C	C	C	E	A			A	A
Approach Vol, veh/h		175			569			271			420	
Approach Delay, s/veh		26.9			31.7			14.0			5.0	
Approach LOS		C			C			B			A	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2		4	5	6	7	8
Phs Duration (G+Y+Rc), s		62.1		23.9	7.5	54.7	0.0	23.9
Change Period (Y+Rc), s		5.0		5.0	5.0	5.0	4.5	5.0
Max Green Setting (Gmax), s		38.5		37.5	8.0	25.5	5.0	28.0
Max Q Clear Time (g_c+I1), s		4.0		7.4	3.9	4.9	0.0	16.4
Green Ext Time (p_c), s		2.3		0.7	0.0	3.6	0.0	2.4

Intersection Summary		
HCM 2010 Ctrl Delay		20.0
HCM 2010 LOS		B

Notes

User approved volume balancing among the lanes for turning movement.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	9	37	10	0	0	0	20	221	59	94	442	100
Future Volume (veh/h)	9	37	10	0	0	0	20	221	59	94	442	100
Number	7	4	14				5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0				0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00				1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00				1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1900				1863	1863	1900	1863	1863	1900
Adj Flow Rate, veh/h	9	38	10				20	226	60	96	451	102
Adj No. of Lanes	1	1	0				1	2	0	1	2	0
Peak Hour Factor	0.98	0.98	0.98				0.98	0.98	0.98	0.98	0.98	0.98
Percent Heavy Veh, %	2	2	2				2	2	2	2	2	2
Cap, veh/h	92	74	19				39	1956	508	125	2160	485
Arrive On Green	0.05	0.05	0.05				0.02	0.70	0.70	0.07	0.75	0.75
Sat Flow, veh/h	1774	1422	374				1774	2782	723	1774	2873	645
Grp Volume(v), veh/h	9	0	48				20	142	144	96	277	276
Grp Sat Flow(s),veh/h/ln	1774	0	1797				1774	1770	1735	1774	1770	1749
Q Serve(g_s), s	0.4	0.0	2.2				1.0	2.2	2.3	4.6	4.0	4.0
Cycle Q Clear(g_c), s	0.4	0.0	2.2				1.0	2.2	2.3	4.6	4.0	4.0
Prop In Lane	1.00		0.21				1.00		0.42	1.00		0.37
Lane Grp Cap(c), veh/h	92	0	93				39	1244	1220	125	1330	1314
V/C Ratio(X)	0.10	0.00	0.51				0.51	0.11	0.12	0.77	0.21	0.21
Avail Cap(c_a), veh/h	474	0	481				186	1244	1220	454	1330	1314
HCM Platoon Ratio	1.00	1.00	1.00				1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00				1.00	1.00	1.00	0.96	0.96	0.96
Uniform Delay (d), s/veh	38.9	0.0	39.7				41.6	4.1	4.1	39.3	3.1	3.2
Incr Delay (d2), s/veh	0.5	0.0	4.3				9.9	0.2	0.2	9.0	0.3	0.4
Initial Q Delay(d3),s/veh	0.0	0.0	0.0				0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.2	0.0	1.2				0.6	1.1	1.1	2.6	2.0	2.0
LnGrp Delay(d),s/veh	39.3	0.0	44.1				51.5	4.3	4.3	48.3	3.5	3.5
LnGrp LOS	D		D				D	A	A	D	A	A
Approach Vol, veh/h		57						306			649	
Approach Delay, s/veh		43.3						7.4			10.1	
Approach LOS		D						A			B	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4	5	6		
Phs Duration (G+Y+Rc), s	11.1	65.5		9.5	6.9	69.6		
Change Period (Y+Rc), s	5.0	5.0		5.0	5.0	5.0		
Max Green Setting (Gmax), s	22.6	26.0		23.0	9.0	39.0		
Max Q Clear Time (g_c+I1), s	6.6	4.3		4.2	3.0	6.0		
Green Ext Time (p_c), s	0.2	2.4		0.2	0.0	5.7		

Intersection Summary	
HCM 2010 Ctrl Delay	11.2
HCM 2010 LOS	B

Intersection	
Int Delay, s/veh	6.6

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	49	0	59	12	0	137
Future Vol, veh/h	49	0	59	12	0	137
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	53	0	64	13	0	149

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	53	0	194	53
Stage 1	-	-	-	-	53	-
Stage 2	-	-	-	-	141	-
Critical Hdwy	-	-	4.12	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	-	-	2.218	-	3.518	3.318
Pot Cap-1 Maneuver	-	-	1553	-	795	1014
Stage 1	-	-	-	-	970	-
Stage 2	-	-	-	-	886	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	1553	-	762	1014
Mov Cap-2 Maneuver	-	-	-	-	762	-
Stage 1	-	-	-	-	929	-
Stage 2	-	-	-	-	886	-

Approach	EB	WB	NB
HCM Control Delay, s	0	6.2	9.2
HCM LOS			A

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	1014	-	-	1553	-
HCM Lane V/C Ratio	0.147	-	-	0.041	-
HCM Control Delay (s)	9.2	-	-	7.4	0
HCM Lane LOS	A	-	-	A	A
HCM 95th %tile Q(veh)	0.5	-	-	0.1	-

Intersection	
Int Delay, s/veh	0

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	0	4	1	464	334	0
Future Vol, veh/h	0	4	1	464	334	0
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	1	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	0	4	1	504	363	0

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	869	182	363	0	-	0
Stage 1	363	-	-	-	-	-
Stage 2	506	-	-	-	-	-
Critical Hdwy	6.63	6.93	4.13	-	-	-
Critical Hdwy Stg 1	5.83	-	-	-	-	-
Critical Hdwy Stg 2	5.43	-	-	-	-	-
Follow-up Hdwy	3.519	3.319	2.219	-	-	-
Pot Cap-1 Maneuver	306	830	1194	-	-	-
Stage 1	675	-	-	-	-	-
Stage 2	605	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	306	830	1194	-	-	-
Mov Cap-2 Maneuver	430	-	-	-	-	-
Stage 1	674	-	-	-	-	-
Stage 2	605	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	9.4	0	0
HCM LOS	A		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	1194	-	830	-	-
HCM Lane V/C Ratio	0.001	-	0.005	-	-
HCM Control Delay (s)	8	-	9.4	-	-
HCM Lane LOS	A	-	A	-	-
HCM 95th %tile Q(veh)	0	-	0	-	-

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	175	54	109	313	190	1453	80	24	122	93	37	66
Future Volume (veh/h)	175	54	109	313	190	1453	80	24	122	93	37	66
Number	5	2	12	1	6	16	3	8	18	7	4	14
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1863	1863	1863	1863	1900	1863	1863	1900	1863	1863
Adj Flow Rate, veh/h	188	58	117	337	204	1562	86	26	131	100	40	71
Adj No. of Lanes	1	1	1	1	1	2	0	1	1	0	1	1
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	225	607	516	369	758	1611	149	45	171	131	52	161
Arrive On Green	0.13	0.33	0.33	0.21	0.41	0.41	0.11	0.11	0.11	0.10	0.10	0.10
Sat Flow, veh/h	1774	1863	1583	1774	1863	3167	1377	416	1583	1285	514	1583
Grp Volume(v), veh/h	188	58	117	337	204	1562	112	0	131	140	0	71
Grp Sat Flow(s),veh/h/ln	1774	1863	1583	1774	1863	1583	1794	0	1583	1799	0	1583
Q Serve(g_s), s	9.9	2.1	5.1	17.7	7.0	38.8	5.7	0.0	7.7	7.2	0.0	4.0
Cycle Q Clear(g_c), s	9.9	2.1	5.1	17.7	7.0	38.8	5.7	0.0	7.7	7.2	0.0	4.0
Prop In Lane	1.00		1.00	1.00		1.00	0.77		1.00	0.71		1.00
Lane Grp Cap(c), veh/h	225	607	516	369	758	1611	194	0	171	183	0	161
V/C Ratio(X)	0.83	0.10	0.23	0.91	0.27	0.97	0.58	0.00	0.76	0.76	0.00	0.44
Avail Cap(c_a), veh/h	400	770	654	389	758	1611	346	0	306	319	0	281
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	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	40.6	22.4	23.4	36.9	18.8	21.0	40.4	0.0	41.3	41.7	0.0	40.3
Incr Delay (d2), s/veh	7.9	0.1	0.2	24.7	0.2	15.8	2.7	0.0	6.9	6.5	0.0	1.9
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	5.3	1.1	2.3	11.1	3.6	23.9	2.9	0.0	3.7	3.9	0.0	1.8
LnGrp Delay(d),s/veh	48.5	22.4	23.6	61.6	19.0	36.8	43.1	0.0	48.2	48.2	0.0	42.2
LnGrp LOS	D	C	C	E	B	D	D		D	D		D
Approach Vol, veh/h		363			2103			243			211	
Approach Delay, s/veh		36.3			39.0			45.9			46.2	
Approach LOS		D			D			D			D	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4	5	6		8
Phs Duration (G+Y+Rc), s	25.9	37.2		15.8	18.2	44.9		16.4
Change Period (Y+Rc), s	6.1	6.1		6.1	6.1	6.1		6.1
Max Green Setting (Gmax), s	20.9	39.4		16.9	21.5	38.8		18.4
Max Q Clear Time (g_c+I1), s	19.7	7.1		9.2	11.9	40.8		9.7
Green Ext Time (p_c), s	0.1	0.6		0.5	0.3	0.0		0.7

Intersection Summary	
HCM 2010 Ctrl Delay	39.8
HCM 2010 LOS	D

Notes

User approved volume balancing among the lanes for turning movement.

Intersection	
Int Delay, s/veh	2.3

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	11	77	166	352	668	24
Future Vol, veh/h	11	77	166	352	668	24
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	115	1	-	-	0
Veh in Median Storage, #	2	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	95	95	95	95	95	95
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	12	81	175	371	703	25

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	1424	703	728	0	-	0
Stage 1	703	-	-	-	-	-
Stage 2	721	-	-	-	-	-
Critical Hdwy	6.42	6.22	4.12	-	-	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	2.218	-	-	-
Pot Cap-1 Maneuver	150	438	876	-	-	-
Stage 1	491	-	-	-	-	-
Stage 2	482	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	120	438	876	-	-	-
Mov Cap-2 Maneuver	253	-	-	-	-	-
Stage 1	393	-	-	-	-	-
Stage 2	482	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	15.7	3.2	0
HCM LOS	C		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	EBLn2	SBT	SBR
Capacity (veh/h)	876	-	253	438	-	-
HCM Lane V/C Ratio	0.199	-	0.046	0.185	-	-
HCM Control Delay (s)	10.1	-	19.9	15.1	-	-
HCM Lane LOS	B	-	C	C	-	-
HCM 95th %tile Q(veh)	0.7	-	0.1	0.7	-	-

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (veh/h)	1256	95	403	1087	281	0
Future Volume (veh/h)	1256	95	403	1087	281	0
Number	2	12	1	6	3	18
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)		1.00	1.00		1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1863	1863	1863	0
Adj Flow Rate, veh/h	1282	97	411	1109	287	0
Adj No. of Lanes	2	1	2	2	1	0
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98
Percent Heavy Veh, %	2	2	2	2	2	0
Cap, veh/h	1410	499	1497	3244	0	0
Arrive On Green	0.40	0.40	0.43	0.92	0.00	0.00
Sat Flow, veh/h	3632	1583	3442	3632	0	0
Grp Volume(v), veh/h	1282	97	411	1109	0	0
Grp Sat Flow(s),veh/h/ln	1770	1583	1721	1770	0	0
Q Serve(g_s), s	30.8	4.0	6.9	3.4	0.0	0.0
Cycle Q Clear(g_c), s	30.8	4.0	6.9	3.4	0.0	0.0
Prop In Lane		1.00	1.00		0.00	0.00
Lane Grp Cap(c), veh/h	1410	499	1497	3244	0	0
V/C Ratio(X)	0.91	0.19	0.27	0.34	0.00	0.00
Avail Cap(c_a), veh/h	1471	526	1497	3244	0	0
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	0.00	0.00
Uniform Delay (d), s/veh	25.5	22.5	16.3	0.5	0.0	0.0
Incr Delay (d2), s/veh	10.2	0.9	0.1	0.3	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	17.0	1.7	3.3	1.7	0.0	0.0
LnGrp Delay(d),s/veh	35.8	23.4	16.4	0.7	0.0	0.0
LnGrp LOS	D	C	B	A		
Approach Vol, veh/h	1379			1520	0	
Approach Delay, s/veh	34.9			5.0	0.0	
Approach LOS	C			A		

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2				6		8
Phs Duration (G+Y+Rc), s	46.6	43.4				90.0		0.0
Change Period (Y+Rc), s	7.5	7.5				7.5		7.5
Max Green Setting (Gmax), s	13.5	37.4				58.4		16.6
Max Q Clear Time (g_c+I1), s	8.9	32.8				5.4		0.0
Green Ext Time (p_c), s	0.6	3.1				8.7		0.0

Intersection Summary	
HCM 2010 Ctrl Delay	19.2
HCM 2010 LOS	B

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (veh/h)	554	258	638	914	0	0
Future Volume (veh/h)	554	258	638	914	0	0
Number	2	12	1	6		
Initial Q (Qb), veh	0	0	0	0		
Ped-Bike Adj(A_pbT)		1.00	1.00			
Parking Bus, Adj	1.00	1.00	1.00	1.00		
Adj Sat Flow, veh/h/ln	1863	1863	1863	1863		
Adj Flow Rate, veh/h	583	272	672	962		
Adj No. of Lanes	2	1	2	3		
Peak Hour Factor	0.95	0.95	0.95	0.95		
Percent Heavy Veh, %	2	2	2	2		
Cap, veh/h	2176	974	805	4701		
Arrive On Green	0.61	0.61	0.23	0.92		
Sat Flow, veh/h	3632	1583	3442	5253		
Grp Volume(v), veh/h	583	272	672	962		
Grp Sat Flow(s),veh/h/ln	1770	1583	1721	1695		
Q Serve(g_s), s	6.8	7.2	16.7	1.6		
Cycle Q Clear(g_c), s	6.8	7.2	16.7	1.6		
Prop In Lane		1.00	1.00			
Lane Grp Cap(c), veh/h	2176	974	805	4701		
V/C Ratio(X)	0.27	0.28	0.83	0.20		
Avail Cap(c_a), veh/h	2176	974	1576	4701		
HCM Platoon Ratio	1.00	1.00	1.00	1.00		
Upstream Filter(I)	0.95	0.95	1.00	1.00		
Uniform Delay (d), s/veh	8.0	8.1	32.8	0.3		
Incr Delay (d2), s/veh	0.3	0.7	2.4	0.1		
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0		
%ile BackOfQ(50%),veh/ln	3.4	3.3	8.2	0.8		
LnGrp Delay(d),s/veh	8.3	8.7	35.2	0.4		
LnGrp LOS	A	A	D	A		
Approach Vol, veh/h	855			1634		
Approach Delay, s/veh	8.4			14.7		
Approach LOS	A			B		

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2				6		
Phs Duration (G+Y+Rc), s	27.9	62.1				90.0		
Change Period (Y+Rc), s	6.8	6.8				6.8		
Max Green Setting (Gmax), s	41.3	35.2				83.2		
Max Q Clear Time (g_c+I1), s	18.7	9.2				3.6		
Green Ext Time (p_c), s	2.3	5.5				7.0		

Intersection Summary	
HCM 2010 Ctrl Delay	12.5
HCM 2010 LOS	B

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	0	8	737	2	241	8	306	505	276	443	4
Future Volume (veh/h)	0	0	8	737	2	241	8	306	505	276	443	4
Number				1	6	16	3	8	18	7	4	14
Initial Q (Qb), veh				0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)				1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj				1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln				1863	1863	1863	1900	1863	1863	1900	1863	1900
Adj Flow Rate, veh/h				802	0	0	9	333	0	300	482	4
Adj No. of Lanes				2	0	1	0	2	1	0	2	0
Peak Hour Factor				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
Cap, veh/h				1591	0	710	12	473	212	330	572	5
Arrive On Green				0.45	0.00	0.00	0.13	0.13	0.00	0.25	0.25	0.25
Sat Flow, veh/h				3548	0	1583	91	3537	1583	1331	2305	20
Grp Volume(v), veh/h				802	0	0	183	159	0	405	0	381
Grp Sat Flow(s),veh/h/ln				1774	0	1583	1858	1770	1583	1796	0	1859
Q Serve(g_s), s				14.5	0.0	0.0	8.5	7.7	0.0	19.7	0.0	17.4
Cycle Q Clear(g_c), s				14.5	0.0	0.0	8.5	7.7	0.0	19.7	0.0	17.4
Prop In Lane				1.00		1.00	0.05		1.00	0.74		0.01
Lane Grp Cap(c), veh/h				1591	0	710	249	237	212	445	0	461
V/C Ratio(X)				0.50	0.00	0.00	0.74	0.67	0.00	0.91	0.00	0.83
Avail Cap(c_a), veh/h				1591	0	710	469	446	399	457	0	473
HCM Platoon Ratio				1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)				0.99	0.00	0.00	0.93	0.93	0.00	1.00	0.00	1.00
Uniform Delay (d), s/veh				17.7	0.0	0.0	37.5	37.1	0.0	32.9	0.0	32.0
Incr Delay (d2), s/veh				1.1	0.0	0.0	4.0	3.1	0.0	21.7	0.0	11.3
Initial Q Delay(d3),s/veh				0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln				7.3	0.0	0.0	4.7	3.9	0.0	12.5	0.0	10.3
LnGrp Delay(d),s/veh				18.8	0.0	0.0	41.4	40.1	0.0	54.6	0.0	43.3
LnGrp LOS				B			D	D		D		D
Approach Vol, veh/h					802			342			786	
Approach Delay, s/veh					18.8			40.8			49.1	
Approach LOS					B			D			D	

Timer	1	2	3	4	5	6	7	8
Assigned Phs				4		6		8
Phs Duration (G+Y+Rc), s				27.4		45.4		17.1
Change Period (Y+Rc), s				5.1		5.1		5.1
Max Green Setting (Gmax), s				22.9		29.1		22.7
Max Q Clear Time (g_c+I1), s				21.7		16.5		10.5
Green Ext Time (p_c), s				0.6		2.7		1.5

Intersection Summary	
HCM 2010 Ctrl Delay	35.1
HCM 2010 LOS	D

Notes

User approved volume balancing among the lanes for turning movement.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	140	40	60	9	50	37	53	584	13	55	737	164
Future Volume (veh/h)	140	40	60	9	50	37	53	584	13	55	737	164
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1900	1863	1863	1900	1863	1900	1863	1863	1900	1863	1863	1900
Adj Flow Rate, veh/h	157	45	67	10	56	42	60	656	15	62	828	184
Adj No. of Lanes	0	1	1	0	1	0	1	2	0	1	2	0
Peak Hour Factor	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	182	43	615	46	195	124	58	1404	32	59	1145	254
Arrive On Green	0.39	0.39	0.39	0.39	0.39	0.39	0.01	0.13	0.13	0.03	0.40	0.40
Sat Flow, veh/h	276	111	1583	0	502	319	1774	3537	81	1774	2880	640
Grp Volume(v), veh/h	202	0	67	108	0	0	60	328	343	62	509	503
Grp Sat Flow(s),veh/h/ln	387	0	1583	821	0	0	1774	1770	1848	1774	1770	1750
Q Serve(g_s), s	0.0	0.0	2.3	0.0	0.0	0.0	2.8	14.8	14.8	2.9	20.9	20.9
Cycle Q Clear(g_c), s	33.4	0.0	2.3	33.4	0.0	0.0	2.8	14.8	14.8	2.9	20.9	20.9
Prop In Lane	0.78		1.00	0.09		0.39	1.00		0.04	1.00		0.37
Lane Grp Cap(c), veh/h	225	0	615	365	0	0	58	702	734	59	704	696
V/C Ratio(X)	0.90	0.00	0.11	0.30	0.00	0.00	1.04	0.47	0.47	1.05	0.72	0.72
Avail Cap(c_a), veh/h	225	0	615	365	0	0	165	702	734	186	704	696
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	0.33	0.33	0.33	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	0.00	0.93	0.93	0.93	0.56	0.56	0.56
Uniform Delay (d), s/veh	29.8	0.0	16.8	19.0	0.0	0.0	42.5	28.9	29.0	41.6	21.9	21.9
Incr Delay (d2), s/veh	38.6	0.0	0.4	2.1	0.0	0.0	62.8	2.1	2.0	54.2	3.6	3.6
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.7	0.0	0.0	1.3	0.0	0.0
%ile BackOfQ(50%),veh/ln	7.2	0.0	1.1	1.9	0.0	0.0	2.4	7.6	8.0	2.3	10.9	10.8
LnGrp Delay(d),s/veh	68.3	0.0	17.2	21.0	0.0	0.0	106.0	31.0	30.9	97.1	25.5	25.6
LnGrp LOS	E		B	C			F	C	C	F	C	C
Approach Vol, veh/h		269			108			731			1074	
Approach Delay, s/veh		55.6			21.0			37.1			29.7	
Approach LOS		E			C			D			C	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4	5	6		8
Phs Duration (G+Y+Rc), s	8.9	39.1		38.0	8.8	39.2		38.0
Change Period (Y+Rc), s	5.0	5.0		4.6	5.0	5.0		4.6
Max Green Setting (Gmax), s	10.0	28.0		33.4	9.0	29.0		33.4
Max Q Clear Time (g_c+I1), s	4.9	16.8		35.4	4.8	22.9		35.4
Green Ext Time (p_c), s	0.0	3.3		0.0	0.0	5.2		0.0

Intersection Summary	
HCM 2010 Ctrl Delay	34.9
HCM 2010 LOS	C

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	32	67	45	27	33	79	59	554	125	94	633	78
Future Volume (veh/h)	32	67	45	27	33	79	59	554	125	94	633	78
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1900	1863	1863	1900	1900	1863	1900	1900	1863	1900
Adj Flow Rate, veh/h	36	75	51	30	37	89	66	622	140	106	711	88
Adj No. of Lanes	1	1	0	1	1	0	0	2	0	0	2	0
Peak Hour Factor	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	158	135	92	163	64	153	200	1808	401	284	1818	222
Arrive On Green	0.13	0.13	0.13	0.13	0.13	0.13	1.00	1.00	1.00	1.00	1.00	1.00
Sat Flow, veh/h	1260	1035	704	1260	486	1170	199	2387	529	306	2400	294
Grp Volume(v), veh/h	36	0	126	30	0	126	404	0	424	412	0	493
Grp Sat Flow(s),veh/h/ln	1260	0	1739	1260	0	1656	1514	0	1602	1356	0	1643
Q Serve(g_s), s	2.4	0.0	5.8	2.0	0.0	6.2	0.0	0.0	0.0	0.0	0.0	0.0
Cycle Q Clear(g_c), s	8.5	0.0	5.8	7.8	0.0	6.2	0.0	0.0	0.0	0.0	0.0	0.0
Prop In Lane	1.00		0.40	1.00		0.71	0.16		0.33	0.26		0.18
Lane Grp Cap(c), veh/h	158	0	228	163	0	217	1195	0	1213	1080	0	1245
V/C Ratio(X)	0.23	0.00	0.55	0.18	0.00	0.58	0.34	0.00	0.35	0.38	0.00	0.40
Avail Cap(c_a), veh/h	410	0	574	414	0	547	1195	0	1213	1080	0	1245
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	2.00	2.00	2.00	2.00	2.00	2.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	1.00	0.97	0.00	0.97	0.82	0.00	0.82
Uniform Delay (d), s/veh	39.2	0.0	35.0	38.7	0.0	35.2	0.0	0.0	0.0	0.0	0.0	0.0
Incr Delay (d2), s/veh	0.7	0.0	2.1	0.5	0.0	2.5	0.7	0.0	0.8	0.8	0.0	0.8
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.9	0.0	2.9	0.7	0.0	2.9	0.2	0.0	0.3	0.3	0.0	0.3
LnGrp Delay(d),s/veh	39.9	0.0	37.1	39.2	0.0	37.6	0.7	0.0	0.8	0.8	0.0	0.8
LnGrp LOS	D		D	D		D	A		A	A		A
Approach Vol, veh/h		162			156			828			905	
Approach Delay, s/veh		37.7			37.9			0.8			0.8	
Approach LOS		D			D			A			A	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2		4		6		8
Phs Duration (G+Y+Rc), s		70.1		15.9		70.1		15.9
Change Period (Y+Rc), s		5.0		4.6		5.0		4.6
Max Green Setting (Gmax), s		48.0		28.4		48.0		28.4
Max Q Clear Time (g_c+I1), s		2.0		10.5		2.0		9.8
Green Ext Time (p_c), s		14.8		0.7		17.0		0.7

Intersection Summary	
HCM 2010 Ctrl Delay	6.5
HCM 2010 LOS	A

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	54	45	33	39	33	60	26	552	62	27	438	69
Future Volume (veh/h)	54	45	33	39	33	60	26	552	62	27	438	69
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1900	1863	1863	1900	1900	1863	1900	1900	1863	1900
Adj Flow Rate, veh/h	59	49	36	43	36	66	29	607	68	30	481	76
Adj No. of Lanes	1	1	0	1	1	0	0	2	0	0	2	0
Peak Hour Factor	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	179	130	96	195	77	141	114	2254	249	136	2093	327
Arrive On Green	0.13	0.13	0.13	0.13	0.13	0.13	0.25	0.25	0.25	1.00	1.00	1.00
Sat Flow, veh/h	1287	999	734	1307	590	1082	90	2973	328	119	2761	431
Grp Volume(v), veh/h	59	0	85	43	0	102	365	0	339	301	0	286
Grp Sat Flow(s),veh/h/ln	1287	0	1733	1307	0	1672	1755	0	1637	1691	0	1619
Q Serve(g_s), s	3.8	0.0	3.9	2.7	0.0	4.9	0.0	0.0	14.3	0.0	0.0	0.0
Cycle Q Clear(g_c), s	8.7	0.0	3.9	6.5	0.0	4.9	13.5	0.0	14.3	0.0	0.0	0.0
Prop In Lane	1.00		0.42	1.00		0.65	0.08		0.20	0.10		0.27
Lane Grp Cap(c), veh/h	179	0	226	195	0	218	1376	0	1241	1328	0	1228
V/C Ratio(X)	0.33	0.00	0.38	0.22	0.00	0.47	0.27	0.00	0.27	0.23	0.00	0.23
Avail Cap(c_a), veh/h	406	0	532	426	0	513	1376	0	1241	1328	0	1228
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	0.33	0.33	0.33	2.00	2.00	2.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	1.00	0.95	0.00	0.95	0.90	0.00	0.90
Uniform Delay (d), s/veh	38.7	0.0	34.2	37.2	0.0	34.6	12.9	0.0	13.2	0.0	0.0	0.0
Incr Delay (d2), s/veh	1.1	0.0	1.0	0.6	0.0	1.6	0.4	0.0	0.5	0.4	0.0	0.4
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	1.4	0.0	1.9	1.0	0.0	2.3	7.2	0.0	6.7	0.1	0.0	0.1
LnGrp Delay(d),s/veh	39.7	0.0	35.2	37.8	0.0	36.2	13.3	0.0	13.7	0.4	0.0	0.4
LnGrp LOS	D		D	D		D	B		B	A		A
Approach Vol, veh/h		144			145			704			587	
Approach Delay, s/veh		37.1			36.7			13.5			0.4	
Approach LOS		D			D			B			A	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2		4		6		8
Phs Duration (G+Y+Rc), s		70.2		15.8		70.2		15.8
Change Period (Y+Rc), s		5.0		4.6		5.0		4.6
Max Green Setting (Gmax), s		50.0		26.4		50.0		26.4
Max Q Clear Time (g_c+I1), s		16.3		10.7		2.0		8.5
Green Ext Time (p_c), s		10.3		0.5		9.2		0.6

Intersection Summary	
HCM 2010 Ctrl Delay	12.9
HCM 2010 LOS	B

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	104	0	208	180	379	115	83	501	0	0	482	187
Future Volume (veh/h)	104	0	208	180	379	115	83	501	0	0	482	187
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1900	1863	1863	1863	1863	1900	1863	1863	0	0	1863	1900
Adj Flow Rate, veh/h	106	80	159	184	387	117	85	511	0	0	492	191
Adj No. of Lanes	0	1	1	1	2	0	1	2	0	0	2	0
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	0	0	2	2
Cap, veh/h	0	454	483	322	654	196	109	2266	0	0	1300	502
Arrive On Green	0.00	0.24	0.24	0.24	0.24	0.24	0.06	0.64	0.00	0.00	0.17	0.17
Sat Flow, veh/h	0	1863	1583	1136	2688	803	1774	3632	0	0	2591	964
Grp Volume(v), veh/h	0	80	159	184	253	251	85	511	0	0	348	335
Grp Sat Flow(s),veh/h/ln	0	1863	1583	1136	1770	1721	1774	1770	0	0	1770	1693
Q Serve(g_s), s	0.0	2.9	6.7	13.1	10.9	11.1	4.1	5.2	0.0	0.0	15.0	15.1
Cycle Q Clear(g_c), s	0.0	2.9	6.7	16.1	10.9	11.1	4.1	5.2	0.0	0.0	15.0	15.1
Prop In Lane	0.00		1.00	1.00		0.47	1.00		0.00	0.00		0.57
Lane Grp Cap(c), veh/h	0	454	483	322	431	419	109	2266	0	0	921	881
V/C Ratio(X)	0.00	0.18	0.33	0.57	0.59	0.60	0.78	0.23	0.00	0.00	0.38	0.38
Avail Cap(c_a), veh/h	0	812	788	415	576	560	165	2266	0	0	921	881
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.33	0.33
Upstream Filter(I)	0.00	1.00	1.00	1.00	1.00	1.00	0.93	0.93	0.00	0.00	0.98	0.98
Uniform Delay (d), s/veh	0.0	25.7	23.1	32.1	28.7	28.8	39.8	6.5	0.0	0.0	23.3	23.3
Incr Delay (d2), s/veh	0.0	0.2	0.4	1.6	1.3	1.4	11.6	0.2	0.0	0.0	1.2	1.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.0	1.5	3.0	4.2	5.4	5.5	2.3	2.6	0.0	0.0	7.7	7.4
LnGrp Delay(d),s/veh	0.0	25.9	23.5	33.7	30.0	30.2	51.4	6.7	0.0	0.0	24.4	24.6
LnGrp LOS		C	C	C	C	C	D	A			C	C
Approach Vol, veh/h		239			688			596			683	
Approach Delay, s/veh		24.3			31.0			13.1			24.5	
Approach LOS		C			C			B			C	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2		4	5	6	7	8
Phs Duration (G+Y+Rc), s		60.1		25.9	10.3	49.8	0.0	25.9
Change Period (Y+Rc), s		5.0		5.0	5.0	5.0	4.5	5.0
Max Green Setting (Gmax), s		38.5		37.5	8.0	25.5	5.0	28.0
Max Q Clear Time (g_c+I1), s		7.2		8.7	6.1	17.1	0.0	18.1
Green Ext Time (p_c), s		5.5		1.0	0.0	3.7	0.0	2.9

Intersection Summary	
HCM 2010 Ctrl Delay	23.4
HCM 2010 LOS	C

Notes

User approved volume balancing among the lanes for turning movement.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	78	148	50	0	0	0	102	509	141	174	528	149
Future Volume (veh/h)	78	148	50	0	0	0	102	509	141	174	528	149
Number	7	4	14				5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0				0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00				1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00				1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1900				1863	1863	1900	1863	1863	1900
Adj Flow Rate, veh/h	82	156	53				107	536	148	183	556	157
Adj No. of Lanes	1	1	0				1	2	0	1	2	0
Peak Hour Factor	0.95	0.95	0.95				0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	2	2	2				2	2	2	2	2	2
Cap, veh/h	264	198	67				136	1517	417	220	1637	461
Arrive On Green	0.15	0.15	0.15				0.08	0.55	0.55	0.25	1.00	1.00
Sat Flow, veh/h	1774	1331	452				1774	2744	755	1774	2729	768
Grp Volume(v), veh/h	82	0	209				107	345	339	183	360	353
Grp Sat Flow(s),veh/h/ln	1774	0	1783				1774	1770	1730	1774	1770	1727
Q Serve(g_s), s	3.5	0.0	9.7				5.1	9.3	9.4	8.4	0.0	0.0
Cycle Q Clear(g_c), s	3.5	0.0	9.7				5.1	9.3	9.4	8.4	0.0	0.0
Prop In Lane	1.00		0.25				1.00		0.44	1.00		0.44
Lane Grp Cap(c), veh/h	264	0	266				136	978	956	220	1062	1036
V/C Ratio(X)	0.31	0.00	0.79				0.79	0.35	0.35	0.83	0.34	0.34
Avail Cap(c_a), veh/h	474	0	477				186	978	956	454	1062	1036
HCM Platoon Ratio	1.00	1.00	1.00				1.00	1.00	1.00	2.00	2.00	2.00
Upstream Filter(I)	1.00	0.00	1.00				1.00	1.00	1.00	0.81	0.81	0.81
Uniform Delay (d), s/veh	32.6	0.0	35.3				39.0	10.7	10.7	31.5	0.0	0.0
Incr Delay (d2), s/veh	0.7	0.0	5.1				14.4	1.0	1.0	6.6	0.7	0.7
Initial Q Delay(d3),s/veh	0.0	0.0	0.0				0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.8	0.0	5.1				3.0	4.8	4.7	4.5	0.2	0.2
LnGrp Delay(d),s/veh	33.3	0.0	40.4				53.4	11.7	11.7	38.1	0.7	0.7
LnGrp LOS	C		D				D	B	B	D	A	A
Approach Vol, veh/h		291						791			896	
Approach Delay, s/veh		38.4						17.3			8.3	
Approach LOS		D						B			A	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4	5	6		
Phs Duration (G+Y+Rc), s	15.6	52.5		17.8	11.6	56.6		
Change Period (Y+Rc), s	5.0	5.0		5.0	5.0	5.0		
Max Green Setting (Gmax), s	22.6	26.0		23.0	9.0	39.0		
Max Q Clear Time (g_c+I1), s	10.4	11.4		11.7	7.1	2.0		
Green Ext Time (p_c), s	0.4	5.2		1.1	0.0	8.0		

Intersection Summary	
HCM 2010 Ctrl Delay	16.4
HCM 2010 LOS	B

Intersection	
Int Delay, s/veh	7.4

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	6	0	133	7	0	64
Future Vol, veh/h	6	0	133	7	0	64
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	7	0	145	8	0	70

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	7	0	305	7
Stage 1	-	-	-	-	7	-
Stage 2	-	-	-	-	298	-
Critical Hdwy	-	-	4.12	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	-	-	2.218	-	3.518	3.318
Pot Cap-1 Maneuver	-	-	1614	-	687	1075
Stage 1	-	-	-	-	1016	-
Stage 2	-	-	-	-	753	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	1614	-	625	1075
Mov Cap-2 Maneuver	-	-	-	-	625	-
Stage 1	-	-	-	-	925	-
Stage 2	-	-	-	-	753	-

Approach	EB	WB	NB
HCM Control Delay, s	0	7.1	8.6
HCM LOS			A

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	1075	-	-	1614	-
HCM Lane V/C Ratio	0.065	-	-	0.09	-
HCM Control Delay (s)	8.6	-	-	7.5	0
HCM Lane LOS	A	-	-	A	A
HCM 95th %tile Q(veh)	0.2	-	-	0.3	-

Intersection	
Int Delay, s/veh	0.1

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	0	2	5	522	726	1
Future Vol, veh/h	0	2	5	522	726	1
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	1	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	0	2	5	567	789	1

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	1367	395	790	0	-	0
Stage 1	790	-	-	-	-	-
Stage 2	577	-	-	-	-	-
Critical Hdwy	6.63	6.93	4.13	-	-	-
Critical Hdwy Stg 1	5.83	-	-	-	-	-
Critical Hdwy Stg 2	5.43	-	-	-	-	-
Follow-up Hdwy	3.519	3.319	2.219	-	-	-
Pot Cap-1 Maneuver	150	605	828	-	-	-
Stage 1	409	-	-	-	-	-
Stage 2	561	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	149	605	828	-	-	-
Mov Cap-2 Maneuver	280	-	-	-	-	-
Stage 1	407	-	-	-	-	-
Stage 2	561	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	11	0.1	0
HCM LOS	B		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	828	-	605	-	-
HCM Lane V/C Ratio	0.007	-	0.004	-	-
HCM Control Delay (s)	9.4	-	11	-	-
HCM Lane LOS	A	-	B	-	-
HCM 95th %tile Q(veh)	0	-	0	-	-

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	90	89	68	110	332	597	190	20	166	87	26	70
Future Volume (veh/h)	90	89	68	110	332	597	190	20	166	87	26	70
Number	5	2	12	1	6	16	3	8	18	7	4	14
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1863	1863	1863	1863	1900	1863	1863	1900	1863	1863
Adj Flow Rate, veh/h	98	97	74	120	361	649	207	22	180	95	28	76
Adj No. of Lanes	1	1	1	1	1	2	0	1	1	0	1	1
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	128	475	404	165	514	1242	276	29	271	161	48	184
Arrive On Green	0.07	0.26	0.26	0.09	0.28	0.28	0.17	0.17	0.17	0.12	0.12	0.12
Sat Flow, veh/h	1774	1863	1583	1774	1863	3167	1611	171	1583	1385	408	1583
Grp Volume(v), veh/h	98	97	74	120	361	649	229	0	180	123	0	76
Grp Sat Flow(s),veh/h/ln	1774	1863	1583	1774	1863	1583	1782	0	1583	1793	0	1583
Q Serve(g_s), s	3.6	2.7	2.4	4.4	11.7	10.5	8.2	0.0	7.1	4.4	0.0	3.0
Cycle Q Clear(g_c), s	3.6	2.7	2.4	4.4	11.7	10.5	8.2	0.0	7.1	4.4	0.0	3.0
Prop In Lane	1.00		1.00	1.00		1.00	0.90		1.00	0.77		1.00
Lane Grp Cap(c), veh/h	128	475	404	165	514	1242	305	0	271	209	0	184
V/C Ratio(X)	0.76	0.20	0.18	0.73	0.70	0.52	0.75	0.00	0.66	0.59	0.00	0.41
Avail Cap(c_a), veh/h	434	1106	940	288	953	1989	489	0	435	441	0	390
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	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	30.5	19.6	19.5	29.6	21.8	15.6	26.4	0.0	26.0	28.1	0.0	27.5
Incr Delay (d2), s/veh	9.0	0.2	0.2	5.9	1.8	0.3	3.7	0.0	2.8	2.6	0.0	1.5
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.1	1.4	1.1	2.4	6.3	5.5	4.3	0.0	3.3	2.3	0.0	1.4
LnGrp Delay(d),s/veh	39.6	19.8	19.7	35.5	23.6	15.9	30.1	0.0	28.7	30.7	0.0	29.0
LnGrp LOS	D	B	B	D	C	B	C		C	C		C
Approach Vol, veh/h		269			1130			409			199	
Approach Delay, s/veh		27.0			20.4			29.5			30.1	
Approach LOS		C			C			C			C	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4	5	6		8
Phs Duration (G+Y+Rc), s	12.4	23.2		13.9	10.9	24.6		17.6
Change Period (Y+Rc), s	6.1	6.1		6.1	6.1	6.1		6.1
Max Green Setting (Gmax), s	10.9	39.8		16.5	16.4	34.3		18.4
Max Q Clear Time (g_c+I1), s	6.4	4.7		6.4	5.6	13.7		10.2
Green Ext Time (p_c), s	0.1	0.7		0.6	0.1	4.8		1.3

Intersection Summary	
HCM 2010 Ctrl Delay	24.1
HCM 2010 LOS	C

Notes

User approved volume balancing among the lanes for turning movement.

Intersection	
Int Delay, s/veh	0.8

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	14	35	5	447	194	7
Future Vol, veh/h	14	35	5	447	194	7
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	1	-	-	0
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	15	38	5	486	211	8

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	707	211	219	0	-	0
Stage 1	211	-	-	-	-	-
Stage 2	496	-	-	-	-	-
Critical Hdwy	6.42	6.22	4.12	-	-	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	2.218	-	-	-
Pot Cap-1 Maneuver	402	829	1350	-	-	-
Stage 1	824	-	-	-	-	-
Stage 2	612	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	400	829	1350	-	-	-
Mov Cap-2 Maneuver	492	-	-	-	-	-
Stage 1	821	-	-	-	-	-
Stage 2	612	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	10.6	0.1	0
HCM LOS	B		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	1350	-	693	-	-
HCM Lane V/C Ratio	0.004	-	0.077	-	-
HCM Control Delay (s)	7.7	-	10.6	-	-
HCM Lane LOS	A	-	B	-	-
HCM 95th %tile Q(veh)	0	-	0.2	-	-

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (veh/h)	520	118	1224	1682	105	0
Future Volume (veh/h)	520	118	1224	1682	105	0
Number	2	12	1	6	3	18
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)		1.00	1.00		1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1863	1863	1863	0
Adj Flow Rate, veh/h	565	128	1330	1828	114	0
Adj No. of Lanes	2	1	2	2	1	0
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	0
Cap, veh/h	673	169	2214	3244	0	0
Arrive On Green	0.19	0.19	0.64	0.92	0.00	0.00
Sat Flow, veh/h	3632	1583	3442	3632	0	0
Grp Volume(v), veh/h	565	128	1330	1828	0	0
Grp Sat Flow(s),veh/h/ln	1770	1583	1721	1770	0	0
Q Serve(g_s), s	13.8	7.1	20.2	8.0	0.0	0.0
Cycle Q Clear(g_c), s	13.8	7.1	20.2	8.0	0.0	0.0
Prop In Lane		1.00	1.00		0.00	0.00
Lane Grp Cap(c), veh/h	673	169	2214	3244	0	0
V/C Ratio(X)	0.84	0.76	0.60	0.56	0.00	0.00
Avail Cap(c_a), veh/h	763	209	2214	3244	0	0
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	0.00	0.00
Uniform Delay (d), s/veh	35.1	39.1	9.3	0.6	0.0	0.0
Incr Delay (d2), s/veh	12.0	26.7	0.5	0.7	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	7.9	4.1	9.6	3.9	0.0	0.0
LnGrp Delay(d),s/veh	47.1	65.7	9.8	1.4	0.0	0.0
LnGrp LOS	D	E	A	A		
Approach Vol, veh/h	693			3158	0	
Approach Delay, s/veh	50.6			4.9	0.0	
Approach LOS	D			A		

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2				6		8
Phs Duration (G+Y+Rc), s	65.4	24.6				90.0		0.0
Change Period (Y+Rc), s	7.5	7.5				7.5		7.5
Max Green Setting (Gmax), s	31.5	19.4				58.4		16.6
Max Q Clear Time (g_c+I1), s	22.2	15.8				10.0		0.0
Green Ext Time (p_c), s	3.8	1.3				20.3		0.0

Intersection Summary	
HCM 2010 Ctrl Delay	13.1
HCM 2010 LOS	B

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (veh/h)	330	243	1190	708	0	0
Future Volume (veh/h)	330	243	1190	708	0	0
Number	2	12	1	6		
Initial Q (Qb), veh	0	0	0	0		
Ped-Bike Adj(A_pbT)		1.00	1.00			
Parking Bus, Adj	1.00	1.00	1.00	1.00		
Adj Sat Flow, veh/h/ln	1863	1863	1863	1863		
Adj Flow Rate, veh/h	359	264	1293	770		
Adj No. of Lanes	2	1	2	3		
Peak Hour Factor	0.92	0.92	0.92	0.92		
Percent Heavy Veh, %	2	2	2	2		
Cap, veh/h	1507	674	1456	4701		
Arrive On Green	0.43	0.43	0.42	0.92		
Sat Flow, veh/h	3632	1583	3442	5253		
Grp Volume(v), veh/h	359	264	1293	770		
Grp Sat Flow(s),veh/h/ln	1770	1583	1721	1695		
Q Serve(g_s), s	5.8	10.3	31.2	1.2		
Cycle Q Clear(g_c), s	5.8	10.3	31.2	1.2		
Prop In Lane		1.00	1.00			
Lane Grp Cap(c), veh/h	1507	674	1456	4701		
V/C Ratio(X)	0.24	0.39	0.89	0.16		
Avail Cap(c_a), veh/h	1507	674	1881	4701		
HCM Platoon Ratio	1.00	1.00	1.00	1.00		
Upstream Filter(I)	0.96	0.96	1.00	1.00		
Uniform Delay (d), s/veh	16.5	17.8	24.0	0.3		
Incr Delay (d2), s/veh	0.4	1.6	4.6	0.1		
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0		
%ile BackOfQ(50%),veh/ln	2.9	4.8	15.7	0.5		
LnGrp Delay(d),s/veh	16.9	19.4	28.6	0.4		
LnGrp LOS	B	B	C	A		
Approach Vol, veh/h	623			2063		
Approach Delay, s/veh	18.0			18.0		
Approach LOS	B			B		

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2				6		
Phs Duration (G+Y+Rc), s	44.9	45.1				90.0		
Change Period (Y+Rc), s	6.8	6.8				6.8		
Max Green Setting (Gmax), s	49.3	27.2				83.2		
Max Q Clear Time (g_c+I1), s	33.2	12.3				3.2		
Green Ext Time (p_c), s	4.8	3.0				5.2		

Intersection Summary	
HCM 2010 Ctrl Delay	18.0
HCM 2010 LOS	B

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	0	3	412	0	319	1	139	468	101	129	0
Future Volume (veh/h)	0	0	3	412	0	319	1	139	468	101	129	0
Number				1	6	16	3	8	18	7	4	14
Initial Q (Qb), veh				0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)				1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj				1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln				1863	1863	1863	1900	1863	1863	1900	1863	1900
Adj Flow Rate, veh/h				448	0	0	1	151	0	110	140	0
Adj No. of Lanes				2	0	1	0	2	1	0	2	0
Peak Hour Factor				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
Cap, veh/h				2305	0	1029	2	281	123	152	213	0
Arrive On Green				0.65	0.00	0.00	0.08	0.08	0.00	0.10	0.10	0.00
Sat Flow, veh/h				3548	0	1583	23	3608	1583	1480	2171	0
Grp Volume(v), veh/h				448	0	0	82	70	0	133	117	0
Grp Sat Flow(s),veh/h/ln				1774	0	1583	1862	1770	1583	1789	1770	0
Q Serve(g_s), s				4.6	0.0	0.0	3.8	3.4	0.0	6.5	5.7	0.0
Cycle Q Clear(g_c), s				4.6	0.0	0.0	3.8	3.4	0.0	6.5	5.7	0.0
Prop In Lane				1.00		1.00	0.01		1.00	0.83		0.00
Lane Grp Cap(c), veh/h				2305	0	1029	145	138	123	183	181	0
V/C Ratio(X)				0.19	0.00	0.00	0.56	0.51	0.00	0.72	0.64	0.00
Avail Cap(c_a), veh/h				2305	0	1029	515	490	438	316	313	0
HCM Platoon Ratio				1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)				0.99	0.00	0.00	1.00	1.00	0.00	1.00	1.00	0.00
Uniform Delay (d), s/veh				6.3	0.0	0.0	40.0	39.9	0.0	39.2	38.8	0.0
Incr Delay (d2), s/veh				0.2	0.0	0.0	3.4	2.9	0.0	5.3	3.8	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
%ile BackOfQ(50%),veh/ln				2.3	0.0	0.0	2.1	1.8	0.0	3.5	3.0	0.0
LnGrp Delay(d),s/veh				6.5	0.0	0.0	43.4	42.8	0.0	44.5	42.6	0.0
LnGrp LOS				A			D	D		D	D	
Approach Vol, veh/h					448			152			250	
Approach Delay, s/veh					6.5			43.1			43.6	
Approach LOS					A			D			D	

Timer	1	2	3	4	5	6	7	8
Assigned Phs				4		6		8
Phs Duration (G+Y+Rc), s				14.3		63.6		12.1
Change Period (Y+Rc), s				5.1		5.1		5.1
Max Green Setting (Gmax), s				15.9		33.9		24.9
Max Q Clear Time (g_c+I1), s				8.5		6.6		5.8
Green Ext Time (p_c), s				0.8		1.6		0.7

Intersection Summary	
HCM 2010 Ctrl Delay	24.0
HCM 2010 LOS	C

Notes

User approved volume balancing among the lanes for turning movement.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	116	14	32	8	27	60	30	250	18	24	343	67
Future Volume (veh/h)	116	14	32	8	27	60	30	250	18	24	343	67
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1900	1863	1863	1900	1863	1900	1863	1863	1900	1863	1863	1900
Adj Flow Rate, veh/h	126	15	35	9	29	65	33	272	20	26	373	73
Adj No. of Lanes	0	1	1	0	1	0	1	2	0	1	2	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	194	19	612	46	120	207	36	1394	102	27	1218	236
Arrive On Green	0.39	0.39	0.39	0.39	0.39	0.39	0.01	0.14	0.14	0.02	0.41	0.41
Sat Flow, veh/h	298	49	1583	2	311	536	1774	3345	244	1774	2958	573
Grp Volume(v), veh/h	141	0	35	103	0	0	33	143	149	26	222	224
Grp Sat Flow(s),veh/h/ln	347	0	1583	849	0	0	1774	1770	1820	1774	1770	1762
Q Serve(g_s), s	0.6	0.0	1.2	0.5	0.0	0.0	1.6	6.2	6.2	1.3	7.2	7.4
Cycle Q Clear(g_c), s	33.2	0.0	1.2	33.2	0.0	0.0	1.6	6.2	6.2	1.3	7.2	7.4
Prop In Lane	0.89		1.00	0.09		0.63	1.00		0.13	1.00		0.33
Lane Grp Cap(c), veh/h	213	0	612	374	0	0	36	737	758	27	729	726
V/C Ratio(X)	0.66	0.00	0.06	0.28	0.00	0.00	0.93	0.19	0.20	0.96	0.30	0.31
Avail Cap(c_a), veh/h	216	0	615	377	0	0	165	737	758	186	729	726
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	0.33	0.33	0.33	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	0.00	1.00	1.00	1.00	0.92	0.92	0.92
Uniform Delay (d), s/veh	27.5	0.0	16.5	18.9	0.0	0.0	42.7	24.3	24.3	42.3	17.0	17.0
Incr Delay (d2), s/veh	15.0	0.0	0.2	1.8	0.0	0.0	52.8	0.6	0.6	67.1	1.0	1.0
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	4.2	0.0	0.6	1.8	0.0	0.0	1.3	3.1	3.3	1.1	3.7	3.8
LnGrp Delay(d),s/veh	42.5	0.0	16.7	20.7	0.0	0.0	95.5	24.9	24.9	109.5	18.0	18.1
LnGrp LOS	D		B	C			F	C	C	F	B	B
Approach Vol, veh/h		176			103			325			472	
Approach Delay, s/veh		37.3			20.7			32.1			23.1	
Approach LOS		D			C			C			C	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4	5	6		8
Phs Duration (G+Y+Rc), s	7.3	40.8		37.9	7.7	40.3		37.9
Change Period (Y+Rc), s	5.0	5.0		4.6	5.0	5.0		4.6
Max Green Setting (Gmax), s	10.6	28.0		33.4	9.0	29.0		33.4
Max Q Clear Time (g_c+I1), s	3.3	8.2		35.2	3.6	9.4		35.2
Green Ext Time (p_c), s	0.0	1.6		0.0	0.0	7.1		0.0

Intersection Summary	
HCM 2010 Ctrl Delay	27.9
HCM 2010 LOS	C

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	13	10	9	24	15	23	8	256	29	66	304	13
Future Volume (veh/h)	13	10	9	24	15	23	8	256	29	66	304	13
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1900	1863	1863	1900	1900	1863	1900	1900	1863	1900
Adj Flow Rate, veh/h	14	11	10	26	16	25	9	278	32	72	330	14
Adj No. of Lanes	1	1	0	1	1	0	0	2	0	0	2	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	139	57	52	156	42	65	89	2517	285	463	2116	91
Arrive On Green	0.06	0.06	0.06	0.06	0.06	0.06	1.00	1.00	1.00	1.00	1.00	1.00
Sat Flow, veh/h	1360	900	818	1385	656	1025	55	3052	346	493	2566	111
Grp Volume(v), veh/h	14	0	21	26	0	41	168	0	151	204	0	212
Grp Sat Flow(s),veh/h/ln	1360	0	1718	1385	0	1682	1819	0	1634	1494	0	1676
Q Serve(g_s), s	0.9	0.0	1.0	1.6	0.0	2.0	0.0	0.0	0.0	0.0	0.0	0.0
Cycle Q Clear(g_c), s	2.9	0.0	1.0	2.6	0.0	2.0	0.0	0.0	0.0	0.0	0.0	0.0
Prop In Lane	1.00		0.48	1.00		0.61	0.05		0.21	0.35		0.07
Lane Grp Cap(c), veh/h	139	0	109	156	0	107	1544	0	1348	1288	0	1382
V/C Ratio(X)	0.10	0.00	0.19	0.17	0.00	0.38	0.11	0.00	0.11	0.16	0.00	0.15
Avail Cap(c_a), veh/h	501	0	567	525	0	555	1544	0	1348	1288	0	1382
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	2.00	2.00	2.00	2.00	2.00	2.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00	0.99	0.00	0.99
Uniform Delay (d), s/veh	40.0	0.0	38.2	39.4	0.0	38.6	0.0	0.0	0.0	0.0	0.0	0.0
Incr Delay (d2), s/veh	0.3	0.0	0.8	0.5	0.0	2.2	0.1	0.0	0.2	0.3	0.0	0.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.3	0.0	0.5	0.6	0.0	1.0	0.1	0.0	0.1	0.1	0.0	0.1
LnGrp Delay(d),s/veh	40.3	0.0	39.0	39.9	0.0	40.9	0.1	0.0	0.2	0.3	0.0	0.2
LnGrp LOS	D		D	D		D	A		A	A		A
Approach Vol, veh/h		35			67			319			416	
Approach Delay, s/veh		39.5			40.5			0.2			0.2	
Approach LOS		D			D			A			A	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2		4		6		8
Phs Duration (G+Y+Rc), s		75.9		10.1		75.9		10.1
Change Period (Y+Rc), s		5.0		4.6		5.0		4.6
Max Green Setting (Gmax), s		48.0		28.4		48.0		28.4
Max Q Clear Time (g_c+I1), s		2.0		4.9		2.0		4.6
Green Ext Time (p_c), s		4.3		0.1		6.0		0.2

Intersection Summary	
HCM 2010 Ctrl Delay	5.1
HCM 2010 LOS	A

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	9	15	14	16	23	24	11	312	18	18	339	28
Future Volume (veh/h)	9	15	14	16	23	24	11	312	18	18	339	28
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1900	1863	1863	1900	1900	1863	1900	1900	1863	1900
Adj Flow Rate, veh/h	10	16	15	17	25	26	12	339	20	20	368	30
Adj No. of Lanes	1	1	0	1	1	0	0	2	0	0	2	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	132	57	54	149	54	56	100	2644	154	142	2516	203
Arrive On Green	0.06	0.06	0.06	0.06	0.06	0.06	1.00	1.00	1.00	1.00	1.00	1.00
Sat Flow, veh/h	1348	886	830	1373	838	871	67	3209	187	116	3055	247
Grp Volume(v), veh/h	10	0	31	17	0	51	194	0	177	217	0	201
Grp Sat Flow(s),veh/h/ln	1348	0	1716	1373	0	1709	1802	0	1662	1766	0	1652
Q Serve(g_s), s	0.6	0.0	1.5	1.0	0.0	2.5	0.0	0.0	0.0	0.0	0.0	0.0
Cycle Q Clear(g_c), s	3.1	0.0	1.5	2.5	0.0	2.5	0.0	0.0	0.0	0.0	0.0	0.0
Prop In Lane	1.00		0.48	1.00		0.51	0.06		0.11	0.09		0.15
Lane Grp Cap(c), veh/h	132	0	111	149	0	110	1529	0	1369	1501	0	1360
V/C Ratio(X)	0.08	0.00	0.28	0.11	0.00	0.46	0.13	0.00	0.13	0.14	0.00	0.15
Avail Cap(c_a), veh/h	459	0	527	482	0	525	1529	0	1369	1501	0	1360
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	2.00	2.00	2.00	2.00	2.00	2.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	1.00	0.98	0.00	0.98	0.99	0.00	0.99
Uniform Delay (d), s/veh	40.3	0.0	38.3	39.5	0.0	38.8	0.0	0.0	0.0	0.0	0.0	0.0
Incr Delay (d2), s/veh	0.2	0.0	1.4	0.3	0.0	3.0	0.2	0.0	0.2	0.2	0.0	0.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.2	0.0	0.7	0.4	0.0	1.3	0.1	0.0	0.1	0.1	0.0	0.1
LnGrp Delay(d),s/veh	40.5	0.0	39.7	39.8	0.0	41.8	0.2	0.0	0.2	0.2	0.0	0.2
LnGrp LOS	D		D	D		D	A		A	A		A
Approach Vol, veh/h		41			68			371			418	
Approach Delay, s/veh		39.9			41.3			0.2			0.2	
Approach LOS		D			D			A			A	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2		4		6		8
Phs Duration (G+Y+Rc), s		75.8		10.2		75.8		10.2
Change Period (Y+Rc), s		5.0		4.6		5.0		4.6
Max Green Setting (Gmax), s		50.0		26.4		50.0		26.4
Max Q Clear Time (g_c+I1), s		2.0		5.1		2.0		4.5
Green Ext Time (p_c), s		5.1		0.1		5.9		0.3

Intersection Summary	
HCM 2010 Ctrl Delay	5.1
HCM 2010 LOS	A

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	0	0	173	260	88	69	510	0	0	291	31
Future Volume (veh/h)	0	0	0	173	260	88	69	510	0	0	291	31
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1900	1863	1863	1863	1863	1900	1863	1863	0	0	1863	1900
Adj Flow Rate, veh/h	0	0	0	188	283	96	75	554	0	0	316	34
Adj No. of Lanes	0	1	1	1	2	0	1	2	0	0	2	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	0	0	2	2
Cap, veh/h	0	297	338	366	416	138	97	2564	0	0	1975	211
Arrive On Green	0.00	0.00	0.00	0.16	0.16	0.16	0.05	0.72	0.00	0.00	1.00	1.00
Sat Flow, veh/h	0	1863	1583	1774	2612	868	1774	3632	0	0	3320	345
Grp Volume(v), veh/h	0	0	0	188	190	189	75	554	0	0	172	178
Grp Sat Flow(s),veh/h/ln	0	1863	1583	1774	1770	1710	1774	1770	0	0	1770	1802
Q Serve(g_s), s	0.0	0.0	0.0	8.6	8.7	9.0	3.6	4.4	0.0	0.0	0.0	0.0
Cycle Q Clear(g_c), s	0.0	0.0	0.0	8.6	8.7	9.0	3.6	4.4	0.0	0.0	0.0	0.0
Prop In Lane	0.00		1.00	1.00		0.51	1.00		0.00	0.00		0.19
Lane Grp Cap(c), veh/h	0	297	338	366	282	272	97	2564	0	0	1083	1103
V/C Ratio(X)	0.00	0.00	0.00	0.51	0.67	0.69	0.78	0.22	0.00	0.00	0.16	0.16
Avail Cap(c_a), veh/h	0	812	777	661	576	557	165	2564	0	0	1083	1103
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	2.00	2.00
Upstream Filter(I)	0.00	0.00	0.00	1.00	1.00	1.00	0.98	0.98	0.00	0.00	0.99	0.99
Uniform Delay (d), s/veh	0.0	0.0	0.0	34.0	34.0	34.2	40.1	3.9	0.0	0.0	0.0	0.0
Incr Delay (d2), s/veh	0.0	0.0	0.0	1.1	2.8	3.2	12.2	0.2	0.0	0.0	0.3	0.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.0	0.0	0.0	4.3	4.4	4.5	2.1	2.1	0.0	0.0	0.1	0.1
LnGrp Delay(d),s/veh	0.0	0.0	0.0	35.1	36.8	37.4	52.4	4.1	0.0	0.0	0.3	0.3
LnGrp LOS				D	D	D	D	A			A	A
Approach Vol, veh/h		0			567			629			350	
Approach Delay, s/veh		0.0			36.4			9.8			0.3	
Approach LOS					D			A			A	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2		4	5	6	7	8
Phs Duration (G+Y+Rc), s		67.3		18.7	9.7	57.6	0.0	18.7
Change Period (Y+Rc), s		5.0		5.0	5.0	5.0	4.5	5.0
Max Green Setting (Gmax), s		38.5		37.5	8.0	25.5	5.0	28.0
Max Q Clear Time (g_c+I1), s		6.4		0.0	5.6	2.0	0.0	11.0
Green Ext Time (p_c), s		6.1		0.0	0.0	3.0	0.0	2.7

Intersection Summary	
HCM 2010 Ctrl Delay	17.4
HCM 2010 LOS	B

Notes

User approved volume balancing among the lanes for turning movement.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	100	56	112	0	0	0	31	267	65	74	258	59
Future Volume (veh/h)	100	56	112	0	0	0	31	267	65	74	258	59
Number	7	4	14				5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0				0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00				1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00				1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1900				1863	1863	1900	1863	1863	1900
Adj Flow Rate, veh/h	109	61	122				34	290	71	80	280	64
Adj No. of Lanes	1	1	0				1	2	0	1	2	0
Peak Hour Factor	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
Cap, veh/h	252	79	158				57	1768	426	105	1871	421
Arrive On Green	0.14	0.14	0.14				0.03	0.62	0.62	0.06	0.65	0.65
Sat Flow, veh/h	1774	556	1111				1774	2830	682	1774	2872	646
Grp Volume(v), veh/h	109	0	183				34	180	181	80	171	173
Grp Sat Flow(s),veh/h/ln	1774	0	1667				1774	1770	1742	1774	1770	1749
Q Serve(g_s), s	4.8	0.0	9.1				1.6	3.6	3.8	3.8	3.2	3.3
Cycle Q Clear(g_c), s	4.8	0.0	9.1				1.6	3.6	3.8	3.8	3.2	3.3
Prop In Lane	1.00		0.67				1.00		0.39	1.00		0.37
Lane Grp Cap(c), veh/h	252	0	237				57	1105	1088	105	1153	1139
V/C Ratio(X)	0.43	0.00	0.77				0.59	0.16	0.17	0.76	0.15	0.15
Avail Cap(c_a), veh/h	474	0	446				186	1105	1088	454	1153	1139
HCM Platoon Ratio	1.00	1.00	1.00				1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00				1.00	1.00	1.00	0.96	0.96	0.96
Uniform Delay (d), s/veh	33.7	0.0	35.6				41.1	6.7	6.8	39.9	5.8	5.8
Incr Delay (d2), s/veh	1.2	0.0	5.3				9.4	0.3	0.3	10.5	0.3	0.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0				0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.4	0.0	4.5				0.9	1.8	1.9	2.2	1.6	1.7
LnGrp Delay(d),s/veh	34.9	0.0	40.9				50.4	7.1	7.1	50.3	6.0	6.1
LnGrp LOS	C		D				D	A	A	D	A	A
Approach Vol, veh/h		292						395			424	
Approach Delay, s/veh		38.7						10.8			14.4	
Approach LOS		D						B			B	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4	5	6		
Phs Duration (G+Y+Rc), s	10.1	58.7		17.2	7.8	61.0		
Change Period (Y+Rc), s	5.0	5.0		5.0	5.0	5.0		
Max Green Setting (Gmax), s	22.0	26.0		23.0	9.0	39.0		
Max Q Clear Time (g_c+I1), s	5.8	5.8		11.1	3.6	5.3		
Green Ext Time (p_c), s	0.1	3.0		1.1	0.0	3.3		

Intersection Summary	
HCM 2010 Ctrl Delay	19.5
HCM 2010 LOS	B

Intersection	
Int Delay, s/veh	0

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	49	0	0	12	0	0
Future Vol, veh/h	49	0	0	12	0	0
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	53	0	0	13	0	0

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	53	0	66	53
Stage 1	-	-	-	-	53	-
Stage 2	-	-	-	-	13	-
Critical Hdwy	-	-	4.12	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	-	-	2.218	-	3.518	3.318
Pot Cap-1 Maneuver	-	-	1553	-	939	1014
Stage 1	-	-	-	-	970	-
Stage 2	-	-	-	-	1010	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	1553	-	939	1014
Mov Cap-2 Maneuver	-	-	-	-	939	-
Stage 1	-	-	-	-	970	-
Stage 2	-	-	-	-	1010	-

Approach	EB	WB	NB
HCM Control Delay, s	0	0	0
HCM LOS			A

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	-	-	-	1553	-
HCM Lane V/C Ratio	-	-	-	-	-
HCM Control Delay (s)	0	-	-	0	-
HCM Lane LOS	A	-	-	A	-
HCM 95th %tile Q(veh)	-	-	-	0	-

Intersection	
Int Delay, s/veh	0

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	0	0	0	458	230	0
Future Vol, veh/h	0	0	0	458	230	0
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	1	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	0	0	0	498	250	0

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	748	125	250	0	-	0
Stage 1	250	-	-	-	-	-
Stage 2	498	-	-	-	-	-
Critical Hdwy	6.63	6.93	4.13	-	-	-
Critical Hdwy Stg 1	5.83	-	-	-	-	-
Critical Hdwy Stg 2	5.43	-	-	-	-	-
Follow-up Hdwy	3.519	3.319	2.219	-	-	-
Pot Cap-1 Maneuver	364	903	1314	-	-	-
Stage 1	769	-	-	-	-	-
Stage 2	610	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	364	903	1314	-	-	-
Mov Cap-2 Maneuver	472	-	-	-	-	-
Stage 1	769	-	-	-	-	-
Stage 2	610	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	0	0	0
HCM LOS	A		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	1314	-	-	-	-
HCM Lane V/C Ratio	-	-	-	-	-
HCM Control Delay (s)	0	-	0	-	-
HCM Lane LOS	A	-	A	-	-
HCM 95th %tile Q(veh)	0	-	-	-	-

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	273	118	218	560	338	1754	241	41	211	126	81	78
Future Volume (veh/h)	273	118	218	560	338	1754	241	41	211	126	81	78
Number	5	2	12	1	6	16	3	8	18	7	4	14
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1863	1863	1863	1863	1900	1863	1863	1900	1863	1863
Adj Flow Rate, veh/h	297	128	237	609	367	1907	262	45	229	137	88	85
Adj No. of Lanes	1	1	1	1	1	2	0	1	1	0	1	1
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	314	525	447	476	696	1619	225	39	233	152	97	218
Arrive On Green	0.18	0.28	0.28	0.27	0.37	0.37	0.15	0.15	0.15	0.14	0.14	0.14
Sat Flow, veh/h	1774	1863	1583	1774	1863	3167	1525	262	1583	1101	707	1583
Grp Volume(v), veh/h	297	128	237	609	367	1907	307	0	229	225	0	85
Grp Sat Flow(s),veh/h/ln	1774	1863	1583	1774	1863	1583	1787	0	1583	1808	0	1583
Q Serve(g_s), s	24.6	7.9	18.8	39.9	22.8	55.5	21.9	0.0	21.4	18.2	0.0	7.3
Cycle Q Clear(g_c), s	24.6	7.9	18.8	39.9	22.8	55.5	21.9	0.0	21.4	18.2	0.0	7.3
Prop In Lane	1.00		1.00	1.00		1.00	0.85		1.00	0.61		1.00
Lane Grp Cap(c), veh/h	314	525	447	476	696	1619	263	0	233	249	0	218
V/C Ratio(X)	0.95	0.24	0.53	1.28	0.53	1.18	1.17	0.00	0.98	0.90	0.00	0.39
Avail Cap(c_a), veh/h	314	525	447	476	696	1619	263	0	233	266	0	233
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	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	60.4	41.1	45.0	54.3	36.3	31.3	63.3	0.0	63.1	63.1	0.0	58.4
Incr Delay (d2), s/veh	36.6	0.2	1.2	140.6	0.7	86.8	107.8	0.0	53.4	30.2	0.0	1.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	15.2	4.1	8.4	38.1	11.9	52.6	18.6	0.0	12.9	11.2	0.0	3.3
LnGrp Delay(d),s/veh	97.0	41.4	46.2	195.0	37.0	118.1	171.2	0.0	116.5	93.3	0.0	59.5
LnGrp LOS	F	D	D	F	D	F	F		F	F		E
Approach Vol, veh/h		662			2883			536			310	
Approach Delay, s/veh		68.1			124.0			147.8			84.0	
Approach LOS		E			F			F			F	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4	5	6		8
Phs Duration (G+Y+Rc), s	46.0	48.0		26.6	32.4	61.6		28.0
Change Period (Y+Rc), s	6.1	6.1		6.1	6.1	6.1		6.1
Max Green Setting (Gmax), s	39.9	41.9		21.9	26.3	55.5		21.9
Max Q Clear Time (g_c+I1), s	41.9	20.8		20.2	26.6	57.5		23.9
Green Ext Time (p_c), s	0.0	1.4		0.3	0.0	0.0		0.0

Intersection Summary	
HCM 2010 Ctrl Delay	115.7
HCM 2010 LOS	F

Notes

User approved volume balancing among the lanes for turning movement.

Intersection	
Int Delay, s/veh	0.6

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	4	19	46	526	914	8
Future Vol, veh/h	4	19	46	526	914	8
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	1	-	-	0
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	4	21	50	572	993	9

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	1665	993	1002	0	-	0
Stage 1	993	-	-	-	-	-
Stage 2	672	-	-	-	-	-
Critical Hdwy	6.42	6.22	4.12	-	-	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	2.218	-	-	-
Pot Cap-1 Maneuver	106	298	691	-	-	-
Stage 1	359	-	-	-	-	-
Stage 2	508	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	98	298	691	-	-	-
Mov Cap-2 Maneuver	219	-	-	-	-	-
Stage 1	333	-	-	-	-	-
Stage 2	508	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	19.1	0.9	0
HCM LOS	C		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	691	-	280	-	-
HCM Lane V/C Ratio	0.072	-	0.089	-	-
HCM Control Delay (s)	10.6	-	19.1	-	-
HCM Lane LOS	B	-	C	-	-
HCM 95th %tile Q(veh)	0.2	-	0.3	-	-

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (veh/h)	1561	109	506	1340	282	0
Future Volume (veh/h)	1561	109	506	1340	282	0
Number	2	12	1	6	3	18
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)		1.00	1.00		1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1863	1863	1863	0
Adj Flow Rate, veh/h	1697	118	550	1457	307	0
Adj No. of Lanes	2	1	2	2	1	0
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	0
Cap, veh/h	1471	526	1438	3244	0	0
Arrive On Green	0.42	0.42	0.42	0.92	0.00	0.00
Sat Flow, veh/h	3632	1583	3442	3632	0	0
Grp Volume(v), veh/h	1697	118	550	1457	0	0
Grp Sat Flow(s),veh/h/ln	1770	1583	1721	1770	0	0
Q Serve(g_s), s	37.4	4.8	10.0	5.2	0.0	0.0
Cycle Q Clear(g_c), s	37.4	4.8	10.0	5.2	0.0	0.0
Prop In Lane		1.00	1.00		0.00	0.00
Lane Grp Cap(c), veh/h	1471	526	1438	3244	0	0
V/C Ratio(X)	1.15	0.22	0.38	0.45	0.00	0.00
Avail Cap(c_a), veh/h	1471	526	1438	3244	0	0
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	0.00	0.00
Uniform Delay (d), s/veh	26.3	21.7	18.2	0.5	0.0	0.0
Incr Delay (d2), s/veh	77.4	1.0	0.2	0.5	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	34.0	2.0	4.8	2.6	0.0	0.0
LnGrp Delay(d),s/veh	103.7	22.7	18.3	1.0	0.0	0.0
LnGrp LOS	F	C	B	A		
Approach Vol, veh/h	1815			2007	0	
Approach Delay, s/veh	98.5			5.7	0.0	
Approach LOS	F			A		

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2				6		8
Phs Duration (G+Y+Rc), s	45.1	44.9				90.0		0.0
Change Period (Y+Rc), s	7.5	7.5				7.5		7.5
Max Green Setting (Gmax), s	13.5	37.4				58.4		16.6
Max Q Clear Time (g_c+I1), s	12.0	39.4				7.2		0.0
Green Ext Time (p_c), s	0.4	0.0				13.6		0.0

Intersection Summary	
HCM 2010 Ctrl Delay	49.8
HCM 2010 LOS	D

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (veh/h)	671	291	801	1043	0	0
Future Volume (veh/h)	671	291	801	1043	0	0
Number	2	12	1	6		
Initial Q (Qb), veh	0	0	0	0		
Ped-Bike Adj(A_pbT)		1.00	1.00			
Parking Bus, Adj	1.00	1.00	1.00	1.00		
Adj Sat Flow, veh/h/ln	1863	1863	1863	1863		
Adj Flow Rate, veh/h	729	316	871	1134		
Adj No. of Lanes	2	1	2	3		
Peak Hour Factor	0.92	0.92	0.92	0.92		
Percent Heavy Veh, %	2	2	2	2		
Cap, veh/h	1961	877	1015	4701		
Arrive On Green	0.55	0.55	0.29	0.92		
Sat Flow, veh/h	3632	1583	3442	5253		
Grp Volume(v), veh/h	729	316	871	1134		
Grp Sat Flow(s),veh/h/ln	1770	1583	1721	1695		
Q Serve(g_s), s	10.4	10.0	21.5	2.0		
Cycle Q Clear(g_c), s	10.4	10.0	21.5	2.0		
Prop In Lane		1.00	1.00			
Lane Grp Cap(c), veh/h	1961	877	1015	4701		
V/C Ratio(X)	0.37	0.36	0.86	0.24		
Avail Cap(c_a), veh/h	1961	877	1576	4701		
HCM Platoon Ratio	1.00	1.00	1.00	1.00		
Upstream Filter(I)	0.88	0.88	1.00	1.00		
Uniform Delay (d), s/veh	11.3	11.2	30.0	0.3		
Incr Delay (d2), s/veh	0.5	1.0	3.1	0.1		
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0		
%ile BackOfQ(50%),veh/ln	5.2	4.5	10.6	0.9		
LnGrp Delay(d),s/veh	11.8	12.2	33.0	0.5		
LnGrp LOS	B	B	C	A		
Approach Vol, veh/h	1045			2005		
Approach Delay, s/veh	11.9			14.6		
Approach LOS	B			B		

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2				6		
Phs Duration (G+Y+Rc), s	33.3	56.7				90.0		
Change Period (Y+Rc), s	6.8	6.8				6.8		
Max Green Setting (Gmax), s	41.3	35.2				83.2		
Max Q Clear Time (g_c+I1), s	23.5	12.4				4.0		
Green Ext Time (p_c), s	3.0	6.9				8.8		

Intersection Summary	
HCM 2010 Ctrl Delay	13.7
HCM 2010 LOS	B

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	0	6	667	0	274	6	345	680	471	442	3
Future Volume (veh/h)	0	0	6	667	0	274	6	345	680	471	442	3
Number				1	6	16	3	8	18	7	4	14
Initial Q (Qb), veh				0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)				1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj				1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln				1863	1863	1863	1900	1863	1863	1900	1863	1900
Adj Flow Rate, veh/h				725	0	0	7	375	0	512	480	3
Adj No. of Lanes				2	0	1	0	2	1	0	2	0
Peak Hour Factor				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
Cap, veh/h				1335	0	596	9	521	231	546	569	4
Arrive On Green				0.38	0.00	0.00	0.15	0.15	0.00	0.31	0.31	0.31
Sat Flow, veh/h				3548	0	1583	64	3566	1583	1774	1849	12
Grp Volume(v), veh/h				725	0	0	205	177	0	512	0	483
Grp Sat Flow(s),veh/h/ln				1774	0	1583	1860	1770	1583	1774	0	1861
Q Serve(g_s), s				14.4	0.0	0.0	9.5	8.6	0.0	25.3	0.0	21.8
Cycle Q Clear(g_c), s				14.4	0.0	0.0	9.5	8.6	0.0	25.3	0.0	21.8
Prop In Lane				1.00		1.00	0.03		1.00	1.00		0.01
Lane Grp Cap(c), veh/h				1335	0	596	272	259	231	546	0	572
V/C Ratio(X)				0.54	0.00	0.00	0.75	0.69	0.00	0.94	0.00	0.84
Avail Cap(c_a), veh/h				1335	0	596	467	444	398	550	0	577
HCM Platoon Ratio				1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)				0.98	0.00	0.00	0.91	0.91	0.00	1.00	0.00	1.00
Uniform Delay (d), s/veh				22.0	0.0	0.0	36.9	36.5	0.0	30.3	0.0	29.1
Incr Delay (d2), s/veh				1.6	0.0	0.0	3.9	2.9	0.0	24.0	0.0	11.0
Initial Q Delay(d3),s/veh				0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln				7.3	0.0	0.0	5.2	4.4	0.0	16.0	0.0	12.9
LnGrp Delay(d),s/veh				23.6	0.0	0.0	40.7	39.4	0.0	54.4	0.0	40.1
LnGrp LOS				C			D	D		D		D
Approach Vol, veh/h					725			382			995	
Approach Delay, s/veh					23.6			40.1			47.4	
Approach LOS					C			D			D	

Timer	1	2	3	4	5	6	7	8
Assigned Phs				4		6		8
Phs Duration (G+Y+Rc), s				32.8		39.0		18.2
Change Period (Y+Rc), s				5.1		5.1		5.1
Max Green Setting (Gmax), s				27.9		24.2		22.6
Max Q Clear Time (g_c+I1), s				27.3		16.4		11.5
Green Ext Time (p_c), s				0.4		1.9		1.6

Intersection Summary	
HCM 2010 Ctrl Delay	37.9
HCM 2010 LOS	D

Notes

User approved volume balancing among the lanes for turning movement.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	168	65	71	15	57	37	50	636	23	60	643	122
Future Volume (veh/h)	168	65	71	15	57	37	50	636	23	60	643	122
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1900	1863	1863	1900	1863	1900	1863	1863	1900	1863	1863	1900
Adj Flow Rate, veh/h	183	71	77	16	62	40	54	691	25	65	699	133
Adj No. of Lanes	0	1	1	0	1	0	1	2	0	1	2	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	187	51	541	48	152	78	237	1542	56	61	1019	194
Arrive On Green	0.34	0.34	0.34	0.34	0.34	0.34	0.04	0.15	0.15	0.03	0.34	0.34
Sat Flow, veh/h	336	150	1583	0	445	228	1774	3484	126	1774	2968	564
Grp Volume(v), veh/h	254	0	77	118	0	0	54	351	365	65	417	415
Grp Sat Flow(s),veh/h/ln	486	0	1583	673	0	0	1774	1770	1841	1774	1770	1763
Q Serve(g_s), s	0.0	0.0	2.9	0.0	0.0	0.0	2.5	15.6	15.6	2.9	17.4	17.4
Cycle Q Clear(g_c), s	29.4	0.0	2.9	29.4	0.0	0.0	2.5	15.6	15.6	2.9	17.4	17.4
Prop In Lane	0.72		1.00	0.14		0.34	1.00		0.07	1.00		0.32
Lane Grp Cap(c), veh/h	238	0	541	278	0	0	237	783	814	61	608	605
V/C Ratio(X)	1.07	0.00	0.14	0.43	0.00	0.00	0.23	0.45	0.45	1.07	0.69	0.69
Avail Cap(c_a), veh/h	238	0	541	278	0	0	237	783	814	165	700	697
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	0.33	0.33	0.33	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	0.00	0.95	0.95	0.95	0.44	0.44	0.44
Uniform Delay (d), s/veh	32.4	0.0	19.6	21.9	0.0	0.0	36.8	27.1	27.1	41.5	24.2	24.3
Incr Delay (d2), s/veh	77.0	0.0	0.6	4.7	0.0	0.0	0.5	1.8	1.7	56.2	2.8	2.8
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.9	0.0	0.0
%ile BackOfQ(50%),veh/ln	10.7	0.0	1.3	2.3	0.0	0.0	1.3	8.0	8.3	2.4	8.9	8.9
LnGrp Delay(d),s/veh	109.4	0.0	20.1	26.6	0.0	0.0	37.3	28.9	28.8	99.7	27.0	27.1
LnGrp LOS	F		C	C			D	C	C	F	C	C
Approach Vol, veh/h		331			118			770			897	
Approach Delay, s/veh		88.7			26.6			29.4			32.3	
Approach LOS		F			C			C			C	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4	5	6		8
Phs Duration (G+Y+Rc), s	8.9	43.1		34.0	17.5	34.5		34.0
Change Period (Y+Rc), s	5.0	5.0		4.6	5.0	5.0		4.6
Max Green Setting (Gmax), s	3.9	33.0		29.4	8.0	34.0		29.4
Max Q Clear Time (g_c+I1), s	4.9	17.6		31.4	4.5	19.4		31.4
Green Ext Time (p_c), s	0.0	4.2		0.0	0.0	10.1		0.0

Intersection Summary	
HCM 2010 Ctrl Delay	39.8
HCM 2010 LOS	D

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	39	42	35	38	50	82	29	667	70	46	696	33
Future Volume (veh/h)	39	42	35	38	50	82	29	667	70	46	696	33
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1900	1863	1863	1900	1900	1863	1900	1900	1863	1900
Adj Flow Rate, veh/h	42	46	38	41	54	89	32	725	76	50	757	36
Adj No. of Lanes	1	1	0	1	1	0	0	2	0	0	2	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	160	133	110	211	90	148	105	2225	230	154	2239	105
Arrive On Green	0.14	0.14	0.14	0.14	0.14	0.14	0.99	0.99	0.99	0.25	0.25	0.25
Sat Flow, veh/h	1240	945	780	1308	634	1045	80	2978	308	144	2997	141
Grp Volume(v), veh/h	42	0	84	41	0	143	428	0	405	415	0	428
Grp Sat Flow(s),veh/h/ln	1240	0	1725	1308	0	1678	1724	0	1641	1611	0	1670
Q Serve(g_s), s	2.8	0.0	3.8	2.5	0.0	6.9	0.0	0.0	0.2	1.5	0.0	18.1
Cycle Q Clear(g_c), s	9.7	0.0	3.8	6.3	0.0	6.9	0.2	0.0	0.2	15.9	0.0	18.1
Prop In Lane	1.00		0.45	1.00		0.62	0.07		0.19	0.12		0.08
Lane Grp Cap(c), veh/h	160	0	244	211	0	237	1333	0	1226	1250	0	1248
V/C Ratio(X)	0.26	0.00	0.34	0.19	0.00	0.60	0.32	0.00	0.33	0.33	0.00	0.34
Avail Cap(c_a), veh/h	365	0	530	428	0	515	1333	0	1226	1250	0	1248
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.33	1.33	1.33	0.33	0.33	0.33
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	1.00	0.90	0.00	0.90	0.90	0.00	0.90
Uniform Delay (d), s/veh	39.2	0.0	33.3	36.2	0.0	34.7	0.1	0.0	0.1	14.1	0.0	15.0
Incr Delay (d2), s/veh	0.9	0.0	0.8	0.4	0.0	2.5	0.6	0.0	0.7	0.6	0.0	0.7
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.0	0.0	1.9	0.9	0.0	3.3	0.3	0.0	0.3	8.3	0.0	8.6
LnGrp Delay(d),s/veh	40.1	0.0	34.2	36.6	0.0	37.1	0.6	0.0	0.7	14.7	0.0	15.7
LnGrp LOS	D		C	D		D	A		A	B		B
Approach Vol, veh/h		126			184			833			843	
Approach Delay, s/veh		36.1			37.0			0.7			15.2	
Approach LOS		D			D			A			B	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2		4		6		8
Phs Duration (G+Y+Rc), s		69.2		16.8		69.2		16.8
Change Period (Y+Rc), s		5.0		4.6		5.0		4.6
Max Green Setting (Gmax), s		50.0		26.4		50.0		26.4
Max Q Clear Time (g_c+I1), s		2.2		11.7		20.1		8.9
Green Ext Time (p_c), s		14.5		0.5		12.5		0.9

Intersection Summary		
HCM 2010 Ctrl Delay		12.5
HCM 2010 LOS		B

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	60	49	67	29	49	81	51	763	67	37	763	114
Future Volume (veh/h)	60	49	67	29	49	81	51	763	67	37	763	114
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1900	1863	1863	1900	1900	1863	1900	1900	1863	1900
Adj Flow Rate, veh/h	65	53	73	32	53	88	55	829	73	40	829	124
Adj No. of Lanes	1	1	0	1	1	0	0	2	0	0	2	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	185	113	156	199	100	166	144	2075	180	106	2056	303
Arrive On Green	0.16	0.16	0.16	0.16	0.16	0.16	1.00	1.00	1.00	1.00	1.00	1.00
Sat Flow, veh/h	1243	711	979	1260	631	1047	133	2844	246	83	2819	415
Grp Volume(v), veh/h	65	0	126	32	0	141	468	0	489	508	0	485
Grp Sat Flow(s),veh/h/ln	1243	0	1690	1260	0	1678	1572	0	1652	1695	0	1622
Q Serve(g_s), s	4.4	0.0	5.8	2.0	0.0	6.6	0.0	0.0	0.0	0.0	0.0	0.0
Cycle Q Clear(g_c), s	11.0	0.0	5.8	7.9	0.0	6.6	0.0	0.0	0.0	0.0	0.0	0.0
Prop In Lane	1.00		0.58	1.00		0.62	0.12		0.15	0.08		0.26
Lane Grp Cap(c), veh/h	185	0	269	199	0	267	1194	0	1205	1281	0	1183
V/C Ratio(X)	0.35	0.00	0.47	0.16	0.00	0.53	0.39	0.00	0.41	0.40	0.00	0.41
Avail Cap(c_a), veh/h	340	0	479	356	0	476	1194	0	1205	1281	0	1183
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	2.00	2.00	2.00	2.00	2.00	2.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	1.00	0.93	0.00	0.93	0.94	0.00	0.94
Uniform Delay (d), s/veh	38.3	0.0	32.9	36.4	0.0	33.2	0.0	0.0	0.0	0.0	0.0	0.0
Incr Delay (d2), s/veh	1.1	0.0	1.3	0.4	0.0	1.6	0.9	0.0	0.9	0.9	0.0	1.0
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	1.6	0.0	2.8	0.7	0.0	3.2	0.3	0.0	0.3	0.3	0.0	0.3
LnGrp Delay(d),s/veh	39.4	0.0	34.1	36.8	0.0	34.8	0.9	0.0	0.9	0.9	0.0	1.0
LnGrp LOS	D		C	D		C	A		A	A		A
Approach Vol, veh/h		191			173			957			993	
Approach Delay, s/veh		35.9			35.2			0.9			0.9	
Approach LOS		D			D			A			A	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2		4		6		8
Phs Duration (G+Y+Rc), s		67.7		18.3		67.7		18.3
Change Period (Y+Rc), s		5.0		4.6		5.0		4.6
Max Green Setting (Gmax), s		52.0		24.4		52.0		24.4
Max Q Clear Time (g_c+I1), s		2.0		13.0		2.0		9.9
Green Ext Time (p_c), s		18.4		0.7		19.2		0.7

Intersection Summary	
HCM 2010 Ctrl Delay	6.4
HCM 2010 LOS	A

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	0	0	241	509	88	274	748	0	0	606	195
Future Volume (veh/h)	0	0	0	241	509	88	274	748	0	0	606	195
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1900	1863	1863	1863	1863	1900	1863	1863	0	0	1863	1900
Adj Flow Rate, veh/h	0	0	0	262	553	96	298	813	0	0	659	212
Adj No. of Lanes	0	1	1	1	2	0	1	2	0	0	2	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	0	0	2	2
Cap, veh/h	0	402	876	467	652	113	598	2363	0	0	718	231
Arrive On Green	0.00	0.00	0.00	0.22	0.22	0.22	0.34	0.67	0.00	0.00	0.55	0.55
Sat Flow, veh/h	0	1863	1583	1774	3018	522	1774	3632	0	0	2729	847
Grp Volume(v), veh/h	0	0	0	262	324	325	298	813	0	0	442	429
Grp Sat Flow(s),veh/h/ln	0	1863	1583	1774	1770	1771	1774	1770	0	0	1770	1713
Q Serve(g_s), s	0.0	0.0	0.0	11.7	15.1	15.2	11.5	8.5	0.0	0.0	19.6	19.6
Cycle Q Clear(g_c), s	0.0	0.0	0.0	11.7	15.1	15.2	11.5	8.5	0.0	0.0	19.6	19.6
Prop In Lane	0.00		1.00	1.00		0.29	1.00		0.00	0.00		0.49
Lane Grp Cap(c), veh/h	0	402	876	467	382	382	598	2363	0	0	482	467
V/C Ratio(X)	0.00	0.00	0.00	0.56	0.85	0.85	0.50	0.34	0.00	0.00	0.92	0.92
Avail Cap(c_a), veh/h	0	639	1077	496	412	412	598	2363	0	0	504	488
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	2.00	2.00
Upstream Filter(I)	0.00	0.00	0.00	1.00	1.00	1.00	0.62	0.62	0.00	0.00	0.91	0.91
Uniform Delay (d), s/veh	0.0	0.0	0.0	31.0	32.3	32.4	22.7	6.2	0.0	0.0	18.7	18.7
Incr Delay (d2), s/veh	0.0	0.0	0.0	1.3	14.3	14.8	0.4	0.2	0.0	0.0	23.2	23.9
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.0	0.0	0.0	5.9	8.9	9.0	5.7	4.1	0.0	0.0	12.4	12.1
LnGrp Delay(d),s/veh	0.0	0.0	0.0	32.3	46.6	47.2	23.1	6.4	0.0	0.0	41.9	42.6
LnGrp LOS				C	D	D	C	A			D	D
Approach Vol, veh/h		0			911			1111			871	
Approach Delay, s/veh		0.0			42.7			10.9			42.2	
Approach LOS					D			B			D	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2		4	5	6	7	8
Phs Duration (G+Y+Rc), s		62.4		23.6	34.0	28.4	0.0	23.6
Change Period (Y+Rc), s		5.0		5.0	5.0	5.0	4.5	5.0
Max Green Setting (Gmax), s		46.5		29.5	17.0	24.5	5.0	20.0
Max Q Clear Time (g_c+I1), s		10.5		0.0	13.5	21.6	0.0	17.2
Green Ext Time (p_c), s		10.1		0.0	0.3	1.9	0.0	1.4

Intersection Summary	
HCM 2010 Ctrl Delay	30.3
HCM 2010 LOS	C

Notes

User approved volume balancing among the lanes for turning movement.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	396	222	263	0	0	0	109	609	162	168	523	129
Future Volume (veh/h)	396	222	263	0	0	0	109	609	162	168	523	129
Number	7	4	14				5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0				0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00				1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00				1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1900				1863	1863	1900	1863	1863	1900
Adj Flow Rate, veh/h	430	241	286				118	662	176	183	568	140
Adj No. of Lanes	1	1	0				1	2	0	1	2	0
Peak Hour Factor	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
Cap, veh/h	588	257	306				414	746	198	399	736	181
Arrive On Green	0.33	0.33	0.33				0.23	0.27	0.27	0.30	0.35	0.35
Sat Flow, veh/h	1774	777	923				1774	2767	735	1774	2818	692
Grp Volume(v), veh/h	430	0	527				118	423	415	183	356	352
Grp Sat Flow(s),veh/h/ln	1774	0	1700				1774	1770	1733	1774	1770	1741
Q Serve(g_s), s	18.4	0.0	25.8				4.7	19.7	19.8	7.2	15.4	15.5
Cycle Q Clear(g_c), s	18.4	0.0	25.8				4.7	19.7	19.8	7.2	15.4	15.5
Prop In Lane	1.00		0.54				1.00		0.42	1.00		0.40
Lane Grp Cap(c), veh/h	588	0	563				414	477	467	399	462	455
V/C Ratio(X)	0.73	0.00	0.94				0.29	0.89	0.89	0.46	0.77	0.77
Avail Cap(c_a), veh/h	598	0	573				414	494	484	399	617	607
HCM Platoon Ratio	1.00	1.00	1.00				1.00	1.00	1.00	1.33	1.33	1.33
Upstream Filter(I)	1.00	0.00	1.00				1.00	1.00	1.00	0.69	0.69	0.69
Uniform Delay (d), s/veh	25.4	0.0	27.9				27.1	30.2	30.2	25.9	25.8	25.8
Incr Delay (d2), s/veh	4.5	0.0	22.8				0.4	21.0	21.5	0.6	8.4	8.7
Initial Q Delay(d3),s/veh	0.0	0.0	0.0				0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	9.7	0.0	15.7				2.3	12.4	12.2	3.6	8.5	8.5
LnGrp Delay(d),s/veh	29.9	0.0	50.7				27.5	51.2	51.7	26.5	34.1	34.5
LnGrp LOS	C		D				C	D	D	C	C	C
Approach Vol, veh/h		957						956			891	
Approach Delay, s/veh		41.3						48.5			32.7	
Approach LOS		D						D			C	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4	5	6		
Phs Duration (G+Y+Rc), s	34.3	28.2		33.5	25.1	27.5		
Change Period (Y+Rc), s	5.0	5.0		5.0	5.0	5.0		
Max Green Setting (Gmax), s	18.6	24.0		29.0	12.0	30.0		
Max Q Clear Time (g_c+I1), s	19.2	21.8		27.8	6.7	17.5		
Green Ext Time (p_c), s	0.3	1.4		0.6	0.1	4.9		

Intersection Summary	
HCM 2010 Ctrl Delay	41.0
HCM 2010 LOS	D

Intersection	
Int Delay, s/veh	0

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	6	0	0	7	0	0
Future Vol, veh/h	6	0	0	7	0	0
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	7	0	0	8	0	0

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	7	0	15	7
Stage 1	-	-	-	-	7	-
Stage 2	-	-	-	-	8	-
Critical Hdwy	-	-	4.12	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	-	-	2.218	-	3.518	3.318
Pot Cap-1 Maneuver	-	-	1614	-	1004	1075
Stage 1	-	-	-	-	1016	-
Stage 2	-	-	-	-	1015	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	1614	-	1004	1075
Mov Cap-2 Maneuver	-	-	-	-	1004	-
Stage 1	-	-	-	-	1016	-
Stage 2	-	-	-	-	1015	-

Approach	EB	WB	NB
HCM Control Delay, s	0	0	0
HCM LOS			A

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	-	-	-	1614	-
HCM Lane V/C Ratio	-	-	-	-	-
HCM Control Delay (s)	0	-	-	0	-
HCM Lane LOS	A	-	-	A	-
HCM 95th %tile Q(veh)	-	-	-	0	-

Intersection	
Int Delay, s/veh	0

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	0	0	0	619	916	0
Future Vol, veh/h	0	0	0	619	916	0
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	1	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	0	0	0	673	996	0

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	1669	498	996	0	-	0
Stage 1	996	-	-	-	-	-
Stage 2	673	-	-	-	-	-
Critical Hdwy	6.63	6.93	4.13	-	-	-
Critical Hdwy Stg 1	5.83	-	-	-	-	-
Critical Hdwy Stg 2	5.43	-	-	-	-	-
Follow-up Hdwy	3.519	3.319	2.219	-	-	-
Pot Cap-1 Maneuver	96	519	692	-	-	-
Stage 1	319	-	-	-	-	-
Stage 2	506	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	96	519	692	-	-	-
Mov Cap-2 Maneuver	220	-	-	-	-	-
Stage 1	319	-	-	-	-	-
Stage 2	506	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	0	0	0
HCM LOS	A		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	692	-	-	-	-
HCM Lane V/C Ratio	-	-	-	-	-
HCM Control Delay (s)	0	-	0	-	-
HCM Lane LOS	A	-	A	-	-
HCM 95th %tile Q(veh)	0	-	-	-	-

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	90	89	68	110	332	597	190	20	180	87	32	70
Future Volume (veh/h)	90	89	68	110	332	597	190	20	180	87	32	70
Number	5	2	12	1	6	16	3	8	18	7	4	14
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1863	1863	1863	1863	1900	1863	1863	1900	1863	1863
Adj Flow Rate, veh/h	98	97	74	120	361	649	207	22	196	95	35	76
Adj No. of Lanes	1	1	1	1	1	2	0	1	1	0	1	1
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	128	475	404	165	514	1243	277	29	272	153	56	185
Arrive On Green	0.07	0.25	0.25	0.09	0.28	0.28	0.17	0.17	0.17	0.12	0.12	0.12
Sat Flow, veh/h	1774	1863	1583	1774	1863	3167	1611	171	1583	1313	484	1583
Grp Volume(v), veh/h	98	97	74	120	361	649	229	0	196	130	0	76
Grp Sat Flow(s),veh/h/ln	1774	1863	1583	1774	1863	1583	1782	0	1583	1797	0	1583
Q Serve(g_s), s	3.6	2.7	2.5	4.4	11.7	10.5	8.2	0.0	7.9	4.6	0.0	3.0
Cycle Q Clear(g_c), s	3.6	2.7	2.5	4.4	11.7	10.5	8.2	0.0	7.9	4.6	0.0	3.0
Prop In Lane	1.00		1.00	1.00		1.00	0.90		1.00	0.73		1.00
Lane Grp Cap(c), veh/h	128	475	404	165	514	1243	306	0	272	210	0	185
V/C Ratio(X)	0.76	0.20	0.18	0.73	0.70	0.52	0.75	0.00	0.72	0.62	0.00	0.41
Avail Cap(c_a), veh/h	433	1104	938	288	952	1987	488	0	434	442	0	389
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	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	30.6	19.7	19.5	29.6	21.8	15.6	26.4	0.0	26.3	28.2	0.0	27.5
Incr Delay (d2), s/veh	9.1	0.2	0.2	6.0	1.8	0.3	3.6	0.0	3.6	3.0	0.0	1.5
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.1	1.4	1.1	2.4	6.3	5.5	4.3	0.0	3.7	2.4	0.0	1.4
LnGrp Delay(d),s/veh	39.6	19.9	19.8	35.6	23.6	15.9	30.1	0.0	29.8	31.2	0.0	29.0
LnGrp LOS	D	B	B	D	C	B	C		C	C		C
Approach Vol, veh/h		269			1130			425			206	
Approach Delay, s/veh		27.0			20.5			30.0			30.4	
Approach LOS		C			C			C			C	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4	5	6		8
Phs Duration (G+Y+Rc), s	12.4	23.2		13.9	11.0	24.6		17.6
Change Period (Y+Rc), s	6.1	6.1		6.1	6.1	6.1		6.1
Max Green Setting (Gmax), s	10.9	39.8		16.5	16.4	34.3		18.4
Max Q Clear Time (g_c+I1), s	6.4	4.7		6.6	5.6	13.7		10.2
Green Ext Time (p_c), s	0.1	0.7		0.6	0.1	4.8		1.3

Intersection Summary	
HCM 2010 Ctrl Delay	24.3
HCM 2010 LOS	C

Notes

User approved volume balancing among the lanes for turning movement.

Intersection	
Int Delay, s/veh	2.8

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	28	158	58	447	194	13
Future Vol, veh/h	28	158	58	447	194	13
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	115	1	-	-	0
Veh in Median Storage, #	2	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	30	172	63	486	211	14

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	823	211	225	0	-	0
Stage 1	211	-	-	-	-	-
Stage 2	612	-	-	-	-	-
Critical Hdwy	6.42	6.22	4.12	-	-	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	2.218	-	-	-
Pot Cap-1 Maneuver	343	829	1344	-	-	-
Stage 1	824	-	-	-	-	-
Stage 2	541	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	327	829	1344	-	-	-
Mov Cap-2 Maneuver	443	-	-	-	-	-
Stage 1	785	-	-	-	-	-
Stage 2	541	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	11	0.9	0
HCM LOS	B		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	EBLn2	SBT	SBR
Capacity (veh/h)	1344	-	443	829	-	-
HCM Lane V/C Ratio	0.047	-	0.069	0.207	-	-
HCM Control Delay (s)	7.8	-	13.7	10.5	-	-
HCM Lane LOS	A	-	B	B	-	-
HCM 95th %tile Q(veh)	0.1	-	0.2	0.8	-	-

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (veh/h)	534	132	1224	1688	129	0
Future Volume (veh/h)	534	132	1224	1688	129	0
Number	2	12	1	6	3	18
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)		1.00	1.00		1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1863	1863	1863	0
Adj Flow Rate, veh/h	580	143	1330	1835	140	0
Adj No. of Lanes	2	1	2	2	1	0
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	0
Cap, veh/h	685	175	2202	3244	0	0
Arrive On Green	0.19	0.19	0.64	0.92	0.00	0.00
Sat Flow, veh/h	3632	1583	3442	3632	0	0
Grp Volume(v), veh/h	580	143	1330	1835	0	0
Grp Sat Flow(s),veh/h/ln	1770	1583	1721	1770	0	0
Q Serve(g_s), s	14.2	8.0	20.4	8.1	0.0	0.0
Cycle Q Clear(g_c), s	14.2	8.0	20.4	8.1	0.0	0.0
Prop In Lane		1.00	1.00		0.00	0.00
Lane Grp Cap(c), veh/h	685	175	2202	3244	0	0
V/C Ratio(X)	0.85	0.82	0.60	0.57	0.00	0.00
Avail Cap(c_a), veh/h	763	209	2202	3244	0	0
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	0.00	0.00
Uniform Delay (d), s/veh	35.0	39.2	9.5	0.6	0.0	0.0
Incr Delay (d2), s/veh	12.3	33.2	0.5	0.7	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	8.1	4.7	9.7	3.9	0.0	0.0
LnGrp Delay(d),s/veh	47.3	72.3	10.0	1.4	0.0	0.0
LnGrp LOS	D	E	A	A		
Approach Vol, veh/h	723			3165	0	
Approach Delay, s/veh	52.3			5.0	0.0	
Approach LOS	D			A		

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2				6		8
Phs Duration (G+Y+Rc), s	65.1	24.9				90.0		0.0
Change Period (Y+Rc), s	7.5	7.5				7.5		7.5
Max Green Setting (Gmax), s	31.5	19.4				58.4		16.6
Max Q Clear Time (g_c+I1), s	22.4	16.2				10.1		0.0
Green Ext Time (p_c), s	3.8	1.2				20.4		0.0

Intersection Summary	
HCM 2010 Ctrl Delay	13.8
HCM 2010 LOS	B

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (veh/h)	358	299	1190	744	0	0
Future Volume (veh/h)	358	299	1190	744	0	0
Number	2	12	1	6		
Initial Q (Qb), veh	0	0	0	0		
Ped-Bike Adj(A_pbT)		1.00	1.00			
Parking Bus, Adj	1.00	1.00	1.00	1.00		
Adj Sat Flow, veh/h/ln	1863	1863	1863	1863		
Adj Flow Rate, veh/h	389	325	1293	809		
Adj No. of Lanes	2	1	2	3		
Peak Hour Factor	0.92	0.92	0.92	0.92		
Percent Heavy Veh, %	2	2	2	2		
Cap, veh/h	1507	674	1456	4701		
Arrive On Green	0.43	0.43	0.42	0.92		
Sat Flow, veh/h	3632	1583	3442	5253		
Grp Volume(v), veh/h	389	325	1293	809		
Grp Sat Flow(s),veh/h/ln	1770	1583	1721	1695		
Q Serve(g_s), s	6.4	13.3	31.2	1.3		
Cycle Q Clear(g_c), s	6.4	13.3	31.2	1.3		
Prop In Lane		1.00	1.00			
Lane Grp Cap(c), veh/h	1507	674	1456	4701		
V/C Ratio(X)	0.26	0.48	0.89	0.17		
Avail Cap(c_a), veh/h	1507	674	1881	4701		
HCM Platoon Ratio	1.00	1.00	1.00	1.00		
Upstream Filter(I)	0.96	0.96	1.00	1.00		
Uniform Delay (d), s/veh	16.7	18.7	24.0	0.3		
Incr Delay (d2), s/veh	0.4	2.4	4.6	0.1		
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0		
%ile BackOfQ(50%),veh/ln	3.2	6.2	15.7	0.6		
LnGrp Delay(d),s/veh	17.1	21.0	28.6	0.4		
LnGrp LOS	B	C	C	A		
Approach Vol, veh/h	714			2102		
Approach Delay, s/veh	18.9			17.7		
Approach LOS	B			B		

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2				6		
Phs Duration (G+Y+Rc), s	44.9	45.1				90.0		
Change Period (Y+Rc), s	6.8	6.8				6.8		
Max Green Setting (Gmax), s	49.3	27.2				83.2		
Max Q Clear Time (g_c+I1), s	33.2	15.3				3.3		
Green Ext Time (p_c), s	4.8	3.1				5.6		

Intersection Summary	
HCM 2010 Ctrl Delay	18.0
HCM 2010 LOS	B

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	0	3	412	0	355	1	157	468	186	171	0
Future Volume (veh/h)	0	0	3	412	0	355	1	157	468	186	171	0
Number				1	6	16	3	8	18	7	4	14
Initial Q (Qb), veh				0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)				1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj				1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln				1863	1863	1863	1900	1863	1863	1900	1863	1900
Adj Flow Rate, veh/h				448	0	0	1	171	0	202	186	0
Adj No. of Lanes				2	0	1	0	2	1	0	2	0
Peak Hour Factor				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
Cap, veh/h				2157	0	962	2	286	125	250	257	0
Arrive On Green				0.61	0.00	0.00	0.08	0.08	0.00	0.14	0.14	0.00
Sat Flow, veh/h				3548	0	1583	20	3611	1583	1748	1890	0
Grp Volume(v), veh/h				448	0	0	92	80	0	205	183	0
Grp Sat Flow(s),veh/h/ln				1774	0	1583	1862	1770	1583	1775	1770	0
Q Serve(g_s), s				5.1	0.0	0.0	4.3	3.9	0.0	10.1	8.9	0.0
Cycle Q Clear(g_c), s				5.1	0.0	0.0	4.3	3.9	0.0	10.1	8.9	0.0
Prop In Lane				1.00		1.00	0.01		1.00	0.98		0.00
Lane Grp Cap(c), veh/h				2157	0	962	147	140	125	254	253	0
V/C Ratio(X)				0.21	0.00	0.00	0.63	0.57	0.00	0.81	0.72	0.00
Avail Cap(c_a), veh/h				2157	0	962	515	490	438	314	313	0
HCM Platoon Ratio				1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)				0.99	0.00	0.00	0.99	0.99	0.00	1.00	1.00	0.00
Uniform Delay (d), s/veh				7.9	0.0	0.0	40.1	40.0	0.0	37.4	36.9	0.0
Incr Delay (d2), s/veh				0.2	0.0	0.0	4.3	3.6	0.0	12.0	6.2	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
%ile BackOfQ(50%),veh/ln				2.6	0.0	0.0	2.4	2.0	0.0	5.8	4.8	0.0
LnGrp Delay(d),s/veh				8.1	0.0	0.0	44.4	43.5	0.0	49.3	43.0	0.0
LnGrp LOS				A			D	D		D	D	
Approach Vol, veh/h					448			172			388	
Approach Delay, s/veh					8.1			44.0			46.4	
Approach LOS					A			D			D	

Timer	1	2	3	4	5	6	7	8
Assigned Phs				4		6		8
Phs Duration (G+Y+Rc), s				18.0		59.8		12.2
Change Period (Y+Rc), s				5.1		5.1		5.1
Max Green Setting (Gmax), s				15.9		33.9		24.9
Max Q Clear Time (g_c+I1), s				12.1		7.1		6.3
Green Ext Time (p_c), s				0.8		1.6		0.8

Intersection Summary	
HCM 2010 Ctrl Delay	29.0
HCM 2010 LOS	C

Notes

User approved volume balancing among the lanes for turning movement.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	116	14	32	8	27	60	30	268	18	24	385	67
Future Volume (veh/h)	116	14	32	8	27	60	30	268	18	24	385	67
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1900	1863	1863	1900	1863	1900	1863	1863	1900	1863	1863	1900
Adj Flow Rate, veh/h	126	15	35	9	29	65	33	291	20	26	418	73
Adj No. of Lanes	0	1	1	0	1	0	1	2	0	1	2	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	194	19	612	46	120	207	36	1401	96	27	1243	215
Arrive On Green	0.39	0.39	0.39	0.39	0.39	0.39	0.01	0.14	0.14	0.02	0.41	0.41
Sat Flow, veh/h	298	49	1583	2	311	536	1774	3362	230	1774	3017	523
Grp Volume(v), veh/h	141	0	35	103	0	0	33	152	159	26	244	247
Grp Sat Flow(s),veh/h/ln	347	0	1583	849	0	0	1774	1770	1822	1774	1770	1770
Q Serve(g_s), s	0.6	0.0	1.2	0.5	0.0	0.0	1.6	6.6	6.6	1.3	8.1	8.2
Cycle Q Clear(g_c), s	33.2	0.0	1.2	33.2	0.0	0.0	1.6	6.6	6.6	1.3	8.1	8.2
Prop In Lane	0.89		1.00	0.09		0.63	1.00		0.13	1.00		0.30
Lane Grp Cap(c), veh/h	213	0	612	374	0	0	36	737	759	27	729	729
V/C Ratio(X)	0.66	0.00	0.06	0.28	0.00	0.00	0.93	0.21	0.21	0.96	0.33	0.34
Avail Cap(c_a), veh/h	216	0	615	377	0	0	165	737	759	186	729	729
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	0.33	0.33	0.33	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	0.00	1.00	1.00	1.00	0.85	0.85	0.85
Uniform Delay (d), s/veh	27.5	0.0	16.5	18.9	0.0	0.0	42.7	24.5	24.5	42.3	17.2	17.3
Incr Delay (d2), s/veh	15.0	0.0	0.2	1.8	0.0	0.0	52.8	0.6	0.6	64.2	1.1	1.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	4.2	0.0	0.6	1.8	0.0	0.0	1.3	3.4	3.5	1.1	4.1	4.2
LnGrp Delay(d),s/veh	42.5	0.0	16.7	20.7	0.0	0.0	95.4	25.1	25.1	106.6	18.3	18.4
LnGrp LOS	D		B	C			F	C	C	F	B	B
Approach Vol, veh/h		176			103			344			517	
Approach Delay, s/veh		37.3			20.7			31.9			22.8	
Approach LOS		D			C			C			C	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4	5	6		8
Phs Duration (G+Y+Rc), s	7.3	40.8		37.9	7.7	40.3		37.9
Change Period (Y+Rc), s	5.0	5.0		4.6	5.0	5.0		4.6
Max Green Setting (Gmax), s	10.6	28.0		33.4	9.0	29.0		33.4
Max Q Clear Time (g_c+I1), s	3.3	8.6		35.2	3.6	10.2		35.2
Green Ext Time (p_c), s	0.0	1.8		0.0	0.0	7.6		0.0

Intersection Summary	
HCM 2010 Ctrl Delay	27.6
HCM 2010 LOS	C

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	13	10	9	24	15	23	8	274	29	73	339	13
Future Volume (veh/h)	13	10	9	24	15	23	8	274	29	73	339	13
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1900	1863	1863	1900	1900	1863	1900	1900	1863	1900
Adj Flow Rate, veh/h	14	11	10	26	16	25	9	298	32	79	368	14
Adj No. of Lanes	1	1	0	1	1	0	0	2	0	0	2	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	139	57	52	156	42	65	85	2541	269	459	2121	82
Arrive On Green	0.06	0.06	0.06	0.06	0.06	0.06	1.00	1.00	1.00	1.00	1.00	1.00
Sat Flow, veh/h	1360	900	818	1385	656	1025	50	3081	326	488	2572	99
Grp Volume(v), veh/h	14	0	21	26	0	41	178	0	161	224	0	237
Grp Sat Flow(s),veh/h/ln	1360	0	1718	1385	0	1682	1819	0	1638	1482	0	1678
Q Serve(g_s), s	0.9	0.0	1.0	1.6	0.0	2.0	0.0	0.0	0.0	0.0	0.0	0.0
Cycle Q Clear(g_c), s	2.9	0.0	1.0	2.6	0.0	2.0	0.0	0.0	0.0	0.0	0.0	0.0
Prop In Lane	1.00		0.48	1.00		0.61	0.05		0.20	0.35		0.06
Lane Grp Cap(c), veh/h	139	0	109	156	0	107	1544	0	1351	1278	0	1384
V/C Ratio(X)	0.10	0.00	0.19	0.17	0.00	0.38	0.12	0.00	0.12	0.18	0.00	0.17
Avail Cap(c_a), veh/h	501	0	567	525	0	555	1544	0	1351	1278	0	1384
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	2.00	2.00	2.00	2.00	2.00	2.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00	0.98	0.00	0.98
Uniform Delay (d), s/veh	40.0	0.0	38.2	39.4	0.0	38.6	0.0	0.0	0.0	0.0	0.0	0.0
Incr Delay (d2), s/veh	0.3	0.0	0.8	0.5	0.0	2.2	0.2	0.0	0.2	0.3	0.0	0.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.3	0.0	0.5	0.6	0.0	1.0	0.1	0.0	0.1	0.1	0.0	0.1
LnGrp Delay(d),s/veh	40.3	0.0	39.0	39.9	0.0	40.9	0.2	0.0	0.2	0.3	0.0	0.3
LnGrp LOS	D		D	D		D	A		A	A		A
Approach Vol, veh/h		35			67			339			461	
Approach Delay, s/veh		39.5			40.5			0.2			0.3	
Approach LOS		D			D			A			A	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2		4		6		8
Phs Duration (G+Y+Rc), s		75.9		10.1		75.9		10.1
Change Period (Y+Rc), s		5.0		4.6		5.0		4.6
Max Green Setting (Gmax), s		48.0		28.4		48.0		28.4
Max Q Clear Time (g_c+I1), s		2.0		4.9		2.0		4.6
Green Ext Time (p_c), s		4.6		0.1		6.8		0.2

Intersection Summary		
HCM 2010 Ctrl Delay		4.7
HCM 2010 LOS		A

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	9	15	14	16	23	24	11	330	18	25	367	28
Future Volume (veh/h)	9	15	14	16	23	24	11	330	18	25	367	28
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1900	1863	1863	1900	1900	1863	1900	1900	1863	1900
Adj Flow Rate, veh/h	10	16	15	17	25	26	12	359	20	27	399	30
Adj No. of Lanes	1	1	0	1	1	0	0	2	0	0	2	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	132	57	54	149	54	56	96	2658	147	173	2478	185
Arrive On Green	0.06	0.06	0.06	0.06	0.06	0.06	1.00	1.00	1.00	1.00	1.00	1.00
Sat Flow, veh/h	1348	886	830	1373	838	871	62	3227	178	153	3009	225
Grp Volume(v), veh/h	10	0	31	17	0	51	204	0	187	235	0	221
Grp Sat Flow(s),veh/h/ln	1348	0	1716	1373	0	1709	1803	0	1664	1731	0	1655
Q Serve(g_s), s	0.6	0.0	1.5	1.0	0.0	2.5	0.0	0.0	0.0	0.0	0.0	0.0
Cycle Q Clear(g_c), s	3.1	0.0	1.5	2.5	0.0	2.5	0.0	0.0	0.0	0.0	0.0	0.0
Prop In Lane	1.00		0.48	1.00		0.51	0.06		0.11	0.11		0.14
Lane Grp Cap(c), veh/h	132	0	111	149	0	110	1530	0	1370	1472	0	1364
V/C Ratio(X)	0.08	0.00	0.28	0.11	0.00	0.46	0.13	0.00	0.14	0.16	0.00	0.16
Avail Cap(c_a), veh/h	459	0	527	482	0	525	1530	0	1370	1472	0	1364
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	2.00	2.00	2.00	2.00	2.00	2.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	1.00	0.98	0.00	0.98	0.99	0.00	0.99
Uniform Delay (d), s/veh	40.3	0.0	38.3	39.5	0.0	38.8	0.0	0.0	0.0	0.0	0.0	0.0
Incr Delay (d2), s/veh	0.2	0.0	1.4	0.3	0.0	3.0	0.2	0.0	0.2	0.2	0.0	0.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.2	0.0	0.7	0.4	0.0	1.3	0.1	0.0	0.1	0.1	0.0	0.1
LnGrp Delay(d),s/veh	40.5	0.0	39.7	39.8	0.0	41.8	0.2	0.0	0.2	0.2	0.0	0.3
LnGrp LOS	D		D	D		D	A		A	A		A
Approach Vol, veh/h		41			68			391			456	
Approach Delay, s/veh		39.9			41.3			0.2			0.2	
Approach LOS		D			D			A			A	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2		4		6		8
Phs Duration (G+Y+Rc), s		75.8		10.2		75.8		10.2
Change Period (Y+Rc), s		5.0		4.6		5.0		4.6
Max Green Setting (Gmax), s		50.0		26.4		50.0		26.4
Max Q Clear Time (g_c+I1), s		2.0		5.1		2.0		4.5
Green Ext Time (p_c), s		5.5		0.1		6.6		0.3

Intersection Summary	
HCM 2010 Ctrl Delay	4.8
HCM 2010 LOS	A

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	0	0	173	260	94	69	522	0	0	319	31
Future Volume (veh/h)	0	0	0	173	260	94	69	522	0	0	319	31
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1900	1863	1863	1863	1863	1900	1863	1863	0	0	1863	1900
Adj Flow Rate, veh/h	0	0	0	188	283	102	75	567	0	0	347	34
Adj No. of Lanes	0	1	1	1	2	0	1	2	0	0	2	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	0	0	2	2
Cap, veh/h	0	301	342	370	415	146	97	2556	0	0	1987	193
Arrive On Green	0.00	0.00	0.00	0.16	0.16	0.16	0.05	0.72	0.00	0.00	1.00	1.00
Sat Flow, veh/h	0	1863	1583	1774	2567	905	1774	3632	0	0	3352	317
Grp Volume(v), veh/h	0	0	0	188	193	192	75	567	0	0	187	194
Grp Sat Flow(s),veh/h/ln	0	1863	1583	1774	1770	1703	1774	1770	0	0	1770	1807
Q Serve(g_s), s	0.0	0.0	0.0	8.5	8.8	9.2	3.6	4.6	0.0	0.0	0.0	0.0
Cycle Q Clear(g_c), s	0.0	0.0	0.0	8.5	8.8	9.2	3.6	4.6	0.0	0.0	0.0	0.0
Prop In Lane	0.00		1.00	1.00		0.53	1.00		0.00	0.00		0.18
Lane Grp Cap(c), veh/h	0	301	342	370	286	275	97	2556	0	0	1079	1101
V/C Ratio(X)	0.00	0.00	0.00	0.51	0.68	0.70	0.78	0.22	0.00	0.00	0.17	0.18
Avail Cap(c_a), veh/h	0	812	777	661	576	554	165	2556	0	0	1079	1101
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	2.00	2.00
Upstream Filter(I)	0.00	0.00	0.00	1.00	1.00	1.00	0.98	0.98	0.00	0.00	0.99	0.99
Uniform Delay (d), s/veh	0.0	0.0	0.0	33.8	33.9	34.1	40.1	4.0	0.0	0.0	0.0	0.0
Incr Delay (d2), s/veh	0.0	0.0	0.0	1.1	2.8	3.2	12.2	0.2	0.0	0.0	0.3	0.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.0	0.0	0.0	4.3	4.5	4.6	2.1	2.3	0.0	0.0	0.1	0.1
LnGrp Delay(d),s/veh	0.0	0.0	0.0	34.9	36.7	37.3	52.4	4.1	0.0	0.0	0.3	0.3
LnGrp LOS				C	D	D	D	A			A	A
Approach Vol, veh/h		0			573			642			381	
Approach Delay, s/veh		0.0			36.3			9.8			0.3	
Approach LOS					D			A			A	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2		4	5	6	7	8
Phs Duration (G+Y+Rc), s		67.1		18.9	9.7	57.4	0.0	18.9
Change Period (Y+Rc), s		5.0		5.0	5.0	5.0	4.5	5.0
Max Green Setting (Gmax), s		38.5		37.5	8.0	25.5	5.0	28.0
Max Q Clear Time (g_c+I1), s		6.6		0.0	5.6	2.0	0.0	11.2
Green Ext Time (p_c), s		6.3		0.0	0.0	3.3	0.0	2.7

Intersection Summary	
HCM 2010 Ctrl Delay	17.1
HCM 2010 LOS	B

Notes

User approved volume balancing among the lanes for turning movement.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	100	56	112	0	0	0	31	279	65	74	286	59
Future Volume (veh/h)	100	56	112	0	0	0	31	279	65	74	286	59
Number	7	4	14				5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0				0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00				1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00				1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1900				1863	1863	1900	1863	1863	1900
Adj Flow Rate, veh/h	109	61	122				34	303	71	80	311	64
Adj No. of Lanes	1	1	0				1	2	0	1	2	0
Peak Hour Factor	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
Cap, veh/h	252	79	158				57	1784	412	105	1910	388
Arrive On Green	0.14	0.14	0.14				0.03	0.62	0.62	0.06	0.65	0.65
Sat Flow, veh/h	1774	556	1111				1774	2856	660	1774	2932	596
Grp Volume(v), veh/h	109	0	183				34	186	188	80	186	189
Grp Sat Flow(s),veh/h/ln	1774	0	1667				1774	1770	1746	1774	1770	1758
Q Serve(g_s), s	4.8	0.0	9.1				1.6	3.8	3.9	3.8	3.5	3.6
Cycle Q Clear(g_c), s	4.8	0.0	9.1				1.6	3.8	3.9	3.8	3.5	3.6
Prop In Lane	1.00		0.67				1.00		0.38	1.00		0.34
Lane Grp Cap(c), veh/h	252	0	237				57	1105	1091	105	1153	1145
V/C Ratio(X)	0.43	0.00	0.77				0.59	0.17	0.17	0.76	0.16	0.16
Avail Cap(c_a), veh/h	474	0	446				186	1105	1091	454	1153	1145
HCM Platoon Ratio	1.00	1.00	1.00				1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00				1.00	1.00	1.00	0.96	0.96	0.96
Uniform Delay (d), s/veh	33.7	0.0	35.6				41.1	6.8	6.8	39.9	5.8	5.9
Incr Delay (d2), s/veh	1.2	0.0	5.3				9.4	0.3	0.3	10.4	0.3	0.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0				0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.4	0.0	4.5				0.9	1.9	2.0	2.2	1.8	1.8
LnGrp Delay(d),s/veh	34.9	0.0	40.9				50.4	7.1	7.1	50.3	6.1	6.2
LnGrp LOS	C		D				D	A	A	D	A	A
Approach Vol, veh/h		292						408			455	
Approach Delay, s/veh		38.7						10.7			13.9	
Approach LOS		D						B			B	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4	5	6		
Phs Duration (G+Y+Rc), s	10.1	58.7		17.2	7.8	61.0		
Change Period (Y+Rc), s	5.0	5.0		5.0	5.0	5.0		
Max Green Setting (Gmax), s	22.0	26.0		23.0	9.0	39.0		
Max Q Clear Time (g_c+I1), s	5.8	5.9		11.1	3.6	5.6		
Green Ext Time (p_c), s	0.1	3.1		1.1	0.0	3.6		

Intersection Summary	
HCM 2010 Ctrl Delay	19.0
HCM 2010 LOS	B

Intersection	
Int Delay, s/veh	6.6

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	49	0	59	12	0	137
Future Vol, veh/h	49	0	59	12	0	137
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	53	0	64	13	0	149

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	53	0	194	53
Stage 1	-	-	-	-	53	-
Stage 2	-	-	-	-	141	-
Critical Hdwy	-	-	4.12	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	-	-	2.218	-	3.518	3.318
Pot Cap-1 Maneuver	-	-	1553	-	795	1014
Stage 1	-	-	-	-	970	-
Stage 2	-	-	-	-	886	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	1553	-	762	1014
Mov Cap-2 Maneuver	-	-	-	-	762	-
Stage 1	-	-	-	-	929	-
Stage 2	-	-	-	-	886	-

Approach	EB	WB	NB
HCM Control Delay, s	0	6.2	9.2
HCM LOS			A

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	1014	-	-	1553	-
HCM Lane V/C Ratio	0.147	-	-	0.041	-
HCM Control Delay (s)	9.2	-	-	7.4	0
HCM Lane LOS	A	-	-	A	A
HCM 95th %tile Q(veh)	0.5	-	-	0.1	-

Intersection	
Int Delay, s/veh	0

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	0	4	1	511	353	0
Future Vol, veh/h	0	4	1	511	353	0
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	1	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	0	4	1	555	384	0

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	941	192	384	0	-	0
Stage 1	384	-	-	-	-	-
Stage 2	557	-	-	-	-	-
Critical Hdwy	6.63	6.93	4.13	-	-	-
Critical Hdwy Stg 1	5.83	-	-	-	-	-
Critical Hdwy Stg 2	5.43	-	-	-	-	-
Follow-up Hdwy	3.519	3.319	2.219	-	-	-
Pot Cap-1 Maneuver	277	818	1173	-	-	-
Stage 1	659	-	-	-	-	-
Stage 2	573	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	277	818	1173	-	-	-
Mov Cap-2 Maneuver	405	-	-	-	-	-
Stage 1	658	-	-	-	-	-
Stage 2	573	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	9.4	0	0
HCM LOS	A		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	1173	-	818	-	-
HCM Lane V/C Ratio	0.001	-	0.005	-	-
HCM Control Delay (s)	8.1	-	9.4	-	-
HCM Lane LOS	A	-	A	-	-
HCM 95th %tile Q(veh)	0	-	0	-	-

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	273	118	218	560	338	1754	241	41	218	126	95	78
Future Volume (veh/h)	273	118	218	560	338	1754	241	41	218	126	95	78
Number	5	2	12	1	6	16	3	8	18	7	4	14
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1863	1863	1863	1863	1900	1863	1863	1900	1863	1863
Adj Flow Rate, veh/h	297	128	237	609	367	1907	262	45	237	137	103	85
Adj No. of Lanes	1	1	1	1	1	2	0	1	1	0	1	1
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	312	521	443	473	690	1631	223	38	232	149	112	229
Arrive On Green	0.18	0.28	0.28	0.27	0.37	0.37	0.15	0.15	0.15	0.14	0.14	0.14
Sat Flow, veh/h	1774	1863	1583	1774	1863	3167	1525	262	1583	1034	777	1583
Grp Volume(v), veh/h	297	128	237	609	367	1907	307	0	237	240	0	85
Grp Sat Flow(s),veh/h/ln	1774	1863	1583	1774	1863	1583	1787	0	1583	1811	0	1583
Q Serve(g_s), s	24.8	8.0	19.0	39.9	23.1	55.5	21.9	0.0	21.9	19.6	0.0	7.3
Cycle Q Clear(g_c), s	24.8	8.0	19.0	39.9	23.1	55.5	21.9	0.0	21.9	19.6	0.0	7.3
Prop In Lane	1.00		1.00	1.00		1.00	0.85		1.00	0.57		1.00
Lane Grp Cap(c), veh/h	312	521	443	473	690	1631	261	0	232	262	0	229
V/C Ratio(X)	0.95	0.25	0.53	1.29	0.53	1.17	1.17	0.00	1.02	0.92	0.00	0.37
Avail Cap(c_a), veh/h	312	521	443	473	690	1631	261	0	232	265	0	232
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	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	61.1	41.7	45.7	54.9	36.9	31.1	63.9	0.0	63.9	63.2	0.0	57.9
Incr Delay (d2), s/veh	38.5	0.2	1.3	144.9	0.8	83.1	111.4	0.0	65.3	34.0	0.0	1.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	15.5	4.1	8.4	38.5	12.1	52.4	18.8	0.0	13.8	12.3	0.0	3.3
LnGrp Delay(d),s/veh	99.6	41.9	46.9	199.8	37.7	114.1	175.3	0.0	129.4	97.2	0.0	58.9
LnGrp LOS	F	D	D	F	D	F	F		F	F		E
Approach Vol, veh/h		662			2883			544			325	
Approach Delay, s/veh		69.6			122.5			155.3			87.2	
Approach LOS		E			F			F			F	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4	5	6		8
Phs Duration (G+Y+Rc), s	46.0	48.0		27.7	32.4	61.6		28.0
Change Period (Y+Rc), s	6.1	6.1		6.1	6.1	6.1		6.1
Max Green Setting (Gmax), s	39.9	41.9		21.9	26.3	55.5		21.9
Max Q Clear Time (g_c+I1), s	41.9	21.0		21.6	26.8	57.5		23.9
Green Ext Time (p_c), s	0.0	1.4		0.1	0.0	0.0		0.0

Intersection Summary	
HCM 2010 Ctrl Delay	116.0
HCM 2010 LOS	F

Notes

User approved volume balancing among the lanes for turning movement.

Intersection	
Int Delay, s/veh	2.3

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	10	77	166	526	915	21
Future Vol, veh/h	10	77	166	526	915	21
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	115	1	-	-	0
Veh in Median Storage, #	2	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	11	84	180	572	995	23

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	1927	995	1018	0	-	0
Stage 1	995	-	-	-	-	-
Stage 2	932	-	-	-	-	-
Critical Hdwy	6.42	6.22	4.12	-	-	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	2.218	-	-	-
Pot Cap-1 Maneuver	73	297	682	-	-	-
Stage 1	358	-	-	-	-	-
Stage 2	383	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	54	297	682	-	-	-
Mov Cap-2 Maneuver	160	-	-	-	-	-
Stage 1	263	-	-	-	-	-
Stage 2	383	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	22.6	2.9	0
HCM LOS	C		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	EBLn2	SBT	SBR
Capacity (veh/h)	682	-	160	297	-	-
HCM Lane V/C Ratio	0.265	-	0.068	0.282	-	-
HCM Control Delay (s)	12.2	-	29.1	21.8	-	-
HCM Lane LOS	B	-	D	C	-	-
HCM 95th %tile Q(veh)	1.1	-	0.2	1.1	-	-

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (veh/h)	1568	116	506	1354	337	0
Future Volume (veh/h)	1568	116	506	1354	337	0
Number	2	12	1	6	3	18
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)		1.00	1.00		1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1863	1863	1863	0
Adj Flow Rate, veh/h	1704	126	550	1472	366	0
Adj No. of Lanes	2	1	2	2	1	0
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	0
Cap, veh/h	1471	526	1438	3244	0	0
Arrive On Green	0.42	0.42	0.42	0.92	0.00	0.00
Sat Flow, veh/h	3632	1583	3442	3632	0	0
Grp Volume(v), veh/h	1704	126	550	1472	0	0
Grp Sat Flow(s),veh/h/ln	1770	1583	1721	1770	0	0
Q Serve(g_s), s	37.4	5.2	10.0	5.3	0.0	0.0
Cycle Q Clear(g_c), s	37.4	5.2	10.0	5.3	0.0	0.0
Prop In Lane		1.00	1.00		0.00	0.00
Lane Grp Cap(c), veh/h	1471	526	1438	3244	0	0
V/C Ratio(X)	1.16	0.24	0.38	0.45	0.00	0.00
Avail Cap(c_a), veh/h	1471	526	1438	3244	0	0
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	0.00	0.00
Uniform Delay (d), s/veh	26.3	21.8	18.2	0.5	0.0	0.0
Incr Delay (d2), s/veh	79.4	1.1	0.2	0.5	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	34.4	2.2	4.8	2.7	0.0	0.0
LnGrp Delay(d),s/veh	105.7	22.9	18.3	1.0	0.0	0.0
LnGrp LOS	F	C	B	A		
Approach Vol, veh/h	1830			2022	0	
Approach Delay, s/veh	100.0			5.7	0.0	
Approach LOS	F			A		

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2				6		8
Phs Duration (G+Y+Rc), s	45.1	44.9				90.0		0.0
Change Period (Y+Rc), s	7.5	7.5				7.5		7.5
Max Green Setting (Gmax), s	13.5	37.4				58.4		16.6
Max Q Clear Time (g_c+I1), s	12.0	39.4				7.3		0.0
Green Ext Time (p_c), s	0.4	0.0				13.8		0.0

Intersection Summary	
HCM 2010 Ctrl Delay	50.5
HCM 2010 LOS	D

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (veh/h)	684	317	801	1126	0	0
Future Volume (veh/h)	684	317	801	1126	0	0
Number	2	12	1	6		
Initial Q (Qb), veh	0	0	0	0		
Ped-Bike Adj(A_pbT)		1.00	1.00			
Parking Bus, Adj	1.00	1.00	1.00	1.00		
Adj Sat Flow, veh/h/ln	1863	1863	1863	1863		
Adj Flow Rate, veh/h	743	345	871	1224		
Adj No. of Lanes	2	1	2	3		
Peak Hour Factor	0.92	0.92	0.92	0.92		
Percent Heavy Veh, %	2	2	2	2		
Cap, veh/h	1961	877	1015	4701		
Arrive On Green	0.55	0.55	0.29	0.92		
Sat Flow, veh/h	3632	1583	3442	5253		
Grp Volume(v), veh/h	743	345	871	1224		
Grp Sat Flow(s),veh/h/ln	1770	1583	1721	1695		
Q Serve(g_s), s	10.7	11.2	21.5	2.2		
Cycle Q Clear(g_c), s	10.7	11.2	21.5	2.2		
Prop In Lane		1.00	1.00			
Lane Grp Cap(c), veh/h	1961	877	1015	4701		
V/C Ratio(X)	0.38	0.39	0.86	0.26		
Avail Cap(c_a), veh/h	1961	877	1576	4701		
HCM Platoon Ratio	1.00	1.00	1.00	1.00		
Upstream Filter(I)	0.88	0.88	1.00	1.00		
Uniform Delay (d), s/veh	11.3	11.4	30.0	0.3		
Incr Delay (d2), s/veh	0.5	1.2	3.1	0.1		
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0		
%ile BackOfQ(50%),veh/ln	5.3	5.2	10.6	1.0		
LnGrp Delay(d),s/veh	11.8	12.6	33.0	0.5		
LnGrp LOS	B	B	C	A		
Approach Vol, veh/h	1088			2095		
Approach Delay, s/veh	12.1			14.0		
Approach LOS	B			B		

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2				6		
Phs Duration (G+Y+Rc), s	13.3	56.7				90.0		
Change Period (Y+Rc), s	6.8	6.8				6.8		
Max Green Setting (Gmax), s	41.2	35.2				83.2		
Max Q Clear Time (g_c+I1), s	23.5	13.2				4.2		
Green Ext Time (p_c), s	3.0	7.0				9.9		

Intersection Summary	
HCM 2010 Ctrl Delay	13.3
HCM 2010 LOS	B

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	0	6	667	0	357	6	386	680	511	462	3
Future Volume (veh/h)	0	0	6	667	0	357	6	386	680	511	462	3
Number				1	6	16	3	8	18	7	4	14
Initial Q (Qb), veh				0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)				1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj				1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln				1863	1863	1863	1900	1863	1863	1900	1863	1900
Adj Flow Rate, veh/h				725	0	0	7	420	0	555	502	3
Adj No. of Lanes				2	0	1	0	2	1	0	2	0
Peak Hour Factor				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
Cap, veh/h				1278	0	570	9	571	253	550	573	3
Arrive On Green				0.36	0.00	0.00	0.16	0.16	0.00	0.31	0.31	0.31
Sat Flow, veh/h				3548	0	1583	57	3573	1583	1774	1850	11
Grp Volume(v), veh/h				725	0	0	229	198	0	555	0	505
Grp Sat Flow(s),veh/h/ln				1774	0	1583	1860	1770	1583	1774	0	1861
Q Serve(g_s), s				14.8	0.0	0.0	10.6	9.5	0.0	27.9	0.0	23.1
Cycle Q Clear(g_c), s				14.8	0.0	0.0	10.6	9.5	0.0	27.9	0.0	23.1
Prop In Lane				1.00		1.00	0.03		1.00	1.00		0.01
Lane Grp Cap(c), veh/h				1278	0	570	297	283	253	550	0	577
V/C Ratio(X)				0.57	0.00	0.00	0.77	0.70	0.00	1.01	0.00	0.88
Avail Cap(c_a), veh/h				1278	0	570	467	444	398	550	0	577
HCM Platoon Ratio				1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)				0.98	0.00	0.00	0.90	0.90	0.00	1.00	0.00	1.00
Uniform Delay (d), s/veh				23.1	0.0	0.0	36.2	35.8	0.0	31.1	0.0	29.4
Incr Delay (d2), s/veh				1.8	0.0	0.0	3.8	2.8	0.0	40.7	0.0	14.1
Initial Q Delay(d3),s/veh				0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln				7.6	0.0	0.0	5.8	4.9	0.0	19.8	0.0	14.0
LnGrp Delay(d),s/veh				24.9	0.0	0.0	40.0	38.6	0.0	71.7	0.0	43.5
LnGrp LOS				C			D	D		F		D
Approach Vol, veh/h					725			427			1060	
Approach Delay, s/veh					24.9			39.4			58.3	
Approach LOS					C			D			E	

Timer	1	2	3	4	5	6	7	8
Assigned Phs				4		6		8
Phs Duration (G+Y+Rc), s				33.0		37.5		19.5
Change Period (Y+Rc), s				5.1		5.1		5.1
Max Green Setting (Gmax), s				27.9		24.2		22.6
Max Q Clear Time (g_c+I1), s				29.9		16.8		12.6
Green Ext Time (p_c), s				0.0		1.8		1.8

Intersection Summary	
HCM 2010 Ctrl Delay	43.7
HCM 2010 LOS	D

Notes

User approved volume balancing among the lanes for turning movement.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	168	65	71	15	57	37	50	677	23	60	663	122
Future Volume (veh/h)	168	65	71	15	57	37	50	677	23	60	663	122
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1900	1863	1863	1900	1863	1900	1863	1863	1900	1863	1863	1900
Adj Flow Rate, veh/h	183	71	77	16	62	40	54	736	25	65	721	133
Adj No. of Lanes	0	1	1	0	1	0	1	2	0	1	2	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	187	51	541	48	152	78	229	1546	52	61	1038	191
Arrive On Green	0.34	0.34	0.34	0.34	0.34	0.34	0.04	0.15	0.15	0.03	0.35	0.35
Sat Flow, veh/h	336	150	1583	0	445	228	1774	3493	119	1774	2985	550
Grp Volume(v), veh/h	254	0	77	118	0	0	54	373	388	65	427	427
Grp Sat Flow(s),veh/h/ln	486	0	1583	673	0	0	1774	1770	1842	1774	1770	1766
Q Serve(g_s), s	0.0	0.0	2.9	0.0	0.0	0.0	2.5	16.6	16.6	2.9	17.9	17.9
Cycle Q Clear(g_c), s	29.4	0.0	2.9	29.4	0.0	0.0	2.5	16.6	16.6	2.9	17.9	17.9
Prop In Lane	0.72		1.00	0.14		0.34	1.00		0.06	1.00		0.31
Lane Grp Cap(c), veh/h	238	0	541	278	0	0	229	783	815	61	616	614
V/C Ratio(X)	1.07	0.00	0.14	0.43	0.00	0.00	0.24	0.48	0.48	1.07	0.69	0.69
Avail Cap(c_a), veh/h	238	0	541	278	0	0	229	783	815	165	700	698
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	0.33	0.33	0.33	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	0.00	0.94	0.94	0.94	0.38	0.38	0.38
Uniform Delay (d), s/veh	32.4	0.0	19.6	21.9	0.0	0.0	37.1	27.6	27.6	41.5	24.1	24.1
Incr Delay (d2), s/veh	77.0	0.0	0.6	4.7	0.0	0.0	0.5	2.0	1.9	53.8	2.5	2.5
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.9	0.0	0.0
%ile BackOfQ(50%),veh/ln	10.7	0.0	1.3	2.3	0.0	0.0	1.3	8.6	8.9	2.3	9.1	9.1
LnGrp Delay(d),s/veh	109.4	0.0	20.1	26.6	0.0	0.0	37.6	29.5	29.5	97.2	26.6	26.6
LnGrp LOS	F		C	C			D	C	C	F	C	C
Approach Vol, veh/h		331			118			815			919	
Approach Delay, s/veh		88.7			26.6			30.0			31.6	
Approach LOS		F			C			C			C	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4	5	6		8
Phs Duration (G+Y+Rc), s	8.9	43.1		34.0	17.1	34.9		34.0
Change Period (Y+Rc), s	5.0	5.0		4.6	5.0	5.0		4.6
Max Green Setting (Gmax), s	3.9	33.0		29.4	8.0	34.0		29.4
Max Q Clear Time (g_c+I1), s	4.9	18.6		31.4	4.5	19.9		31.4
Green Ext Time (p_c), s	0.0	4.3		0.0	0.0	10.0		0.0

Intersection Summary	
HCM 2010 Ctrl Delay	39.4
HCM 2010 LOS	D

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	39	42	35	38	50	82	29	708	70	49	713	33
Future Volume (veh/h)	39	42	35	38	50	82	29	708	70	49	713	33
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1900	1863	1863	1900	1900	1863	1900	1900	1863	1900
Adj Flow Rate, veh/h	42	46	38	41	54	89	32	770	76	53	775	36
Adj No. of Lanes	1	1	0	1	1	0	0	2	0	0	2	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	160	133	110	211	90	148	100	2247	219	158	2219	102
Arrive On Green	0.14	0.14	0.14	0.14	0.14	0.14	0.99	0.99	0.99	0.25	0.25	0.25
Sat Flow, veh/h	1240	945	780	1308	634	1045	74	3008	293	149	2970	136
Grp Volume(v), veh/h	42	0	84	41	0	143	451	0	427	422	0	442
Grp Sat Flow(s),veh/h/ln	1240	0	1725	1308	0	1678	1731	0	1643	1584	0	1671
Q Serve(g_s), s	2.8	0.0	3.8	2.5	0.0	6.9	0.0	0.0	0.2	2.7	0.0	18.8
Cycle Q Clear(g_c), s	9.7	0.0	3.8	6.3	0.0	6.9	0.2	0.0	0.2	16.4	0.0	18.8
Prop In Lane	1.00		0.45	1.00		0.62	0.07		0.18	0.13		0.08
Lane Grp Cap(c), veh/h	160	0	244	211	0	237	1338	0	1228	1230	0	1248
V/C Ratio(X)	0.26	0.00	0.34	0.19	0.00	0.60	0.34	0.00	0.35	0.34	0.00	0.35
Avail Cap(c_a), veh/h	365	0	530	428	0	515	1338	0	1228	1230	0	1248
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.33	1.33	1.33	0.33	0.33	0.33
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	1.00	0.89	0.00	0.89	0.89	0.00	0.89
Uniform Delay (d), s/veh	39.2	0.0	33.3	36.2	0.0	34.7	0.1	0.0	0.1	14.2	0.0	15.3
Incr Delay (d2), s/veh	0.9	0.0	0.8	0.4	0.0	2.5	0.6	0.0	0.7	0.7	0.0	0.7
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.0	0.0	1.9	0.9	0.0	3.3	0.3	0.0	0.3	8.5	0.0	9.0
LnGrp Delay(d),s/veh	40.1	0.0	34.2	36.6	0.0	37.1	0.7	0.0	0.8	14.9	0.0	16.0
LnGrp LOS	D		C	D		D	A		A	B		B
Approach Vol, veh/h		126			184			878			864	
Approach Delay, s/veh		36.1			37.0			0.7			15.4	
Approach LOS		D			D			A			B	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2		4		6		8
Phs Duration (G+Y+Rc), s		69.2		16.8		69.2		16.8
Change Period (Y+Rc), s		5.0		4.6		5.0		4.6
Max Green Setting (Gmax), s		50.0		26.4		50.0		26.4
Max Q Clear Time (g_c+I1), s		2.2		11.7		20.8		8.9
Green Ext Time (p_c), s		15.6		0.5		12.7		0.9

Intersection Summary		
HCM 2010 Ctrl Delay		12.3
HCM 2010 LOS		B

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	60	49	67	29	49	81	51	804	67	40	776	114
Future Volume (veh/h)	60	49	67	29	49	81	51	804	67	40	776	114
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1900	1863	1863	1900	1900	1863	1900	1900	1863	1900
Adj Flow Rate, veh/h	65	53	73	32	53	88	55	874	73	43	843	124
Adj No. of Lanes	1	1	0	1	1	0	0	2	0	0	2	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	185	113	156	199	100	166	138	2097	172	110	2042	295
Arrive On Green	0.16	0.16	0.16	0.16	0.16	0.16	1.00	1.00	1.00	1.00	1.00	1.00
Sat Flow, veh/h	1243	711	979	1260	631	1047	126	2875	236	89	2800	405
Grp Volume(v), veh/h	65	0	126	32	0	141	491	0	511	513	0	497
Grp Sat Flow(s),veh/h/ln	1243	0	1690	1260	0	1678	1584	0	1653	1670	0	1624
Q Serve(g_s), s	4.4	0.0	5.8	2.0	0.0	6.6	0.0	0.0	0.0	0.0	0.0	0.0
Cycle Q Clear(g_c), s	11.0	0.0	5.8	7.9	0.0	6.6	0.0	0.0	0.0	0.0	0.0	0.0
Prop In Lane	1.00		0.58	1.00		0.62	0.11		0.14	0.08		0.25
Lane Grp Cap(c), veh/h	185	0	269	199	0	267	1202	0	1206	1264	0	1184
V/C Ratio(X)	0.35	0.00	0.47	0.16	0.00	0.53	0.41	0.00	0.42	0.41	0.00	0.42
Avail Cap(c_a), veh/h	340	0	479	356	0	476	1202	0	1206	1264	0	1184
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	2.00	2.00	2.00	2.00	2.00	2.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	1.00	0.92	0.00	0.92	0.94	0.00	0.94
Uniform Delay (d), s/veh	38.3	0.0	32.9	36.4	0.0	33.2	0.0	0.0	0.0	0.0	0.0	0.0
Incr Delay (d2), s/veh	1.1	0.0	1.3	0.4	0.0	1.6	1.0	0.0	1.0	0.9	0.0	1.0
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	1.6	0.0	2.8	0.7	0.0	3.2	0.3	0.0	0.3	0.3	0.0	0.3
LnGrp Delay(d),s/veh	39.4	0.0	34.1	36.8	0.0	34.8	1.0	0.0	1.0	0.9	0.0	1.0
LnGrp LOS	D		C	D		C	A		A	A		A
Approach Vol, veh/h		191			173			1002			1010	
Approach Delay, s/veh		35.9			35.2			1.0			1.0	
Approach LOS		D			D			A			A	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2		4		6		8
Phs Duration (G+Y+Rc), s		67.7		18.3		67.7		18.3
Change Period (Y+Rc), s		5.0		4.6		5.0		4.6
Max Green Setting (Gmax), s		52.0		24.4		52.0		24.4
Max Q Clear Time (g_c+I1), s		2.0		13.0		2.0		9.9
Green Ext Time (p_c), s		19.7		0.7		19.7		0.7

Intersection Summary		
HCM 2010 Ctrl Delay		6.3
HCM 2010 LOS		A

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	0	0	241	509	102	274	776	0	0	619	195
Future Volume (veh/h)	0	0	0	241	509	102	274	776	0	0	619	195
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1900	1863	1863	1863	1863	1900	1863	1863	0	0	1863	1900
Adj Flow Rate, veh/h	0	0	0	262	553	111	298	843	0	0	673	212
Adj No. of Lanes	0	1	1	1	2	0	1	2	0	0	2	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	0	0	2	2
Cap, veh/h	0	408	872	472	644	129	588	2352	0	0	728	229
Arrive On Green	0.00	0.00	0.00	0.22	0.22	0.22	0.33	0.66	0.00	0.00	0.55	0.55
Sat Flow, veh/h	0	1863	1583	1774	2940	588	1774	3632	0	0	2744	835
Grp Volume(v), veh/h	0	0	0	262	332	332	298	843	0	0	449	436
Grp Sat Flow(s),veh/h/ln	0	1863	1583	1774	1770	1759	1774	1770	0	0	1770	1715
Q Serve(g_s), s	0.0	0.0	0.0	11.6	15.5	15.6	11.6	9.0	0.0	0.0	20.0	20.0
Cycle Q Clear(g_c), s	0.0	0.0	0.0	11.6	15.5	15.6	11.6	9.0	0.0	0.0	20.0	20.0
Prop In Lane	0.00		1.00	1.00		0.33	1.00		0.00	0.00		0.49
Lane Grp Cap(c), veh/h	0	408	872	472	388	385	588	2352	0	0	486	471
V/C Ratio(X)	0.00	0.00	0.00	0.55	0.86	0.86	0.51	0.36	0.00	0.00	0.92	0.92
Avail Cap(c_a), veh/h	0	639	1068	496	412	409	588	2352	0	0	504	489
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	2.00	2.00
Upstream Filter(I)	0.00	0.00	0.00	1.00	1.00	1.00	0.59	0.59	0.00	0.00	0.91	0.91
Uniform Delay (d), s/veh	0.0	0.0	0.0	30.8	32.3	32.3	23.1	6.3	0.0	0.0	18.5	18.6
Incr Delay (d2), s/veh	0.0	0.0	0.0	1.2	15.6	16.2	0.4	0.3	0.0	0.0	24.0	24.6
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.0	0.0	0.0	5.8	9.2	9.3	5.7	4.4	0.0	0.0	12.7	12.4
LnGrp Delay(d),s/veh	0.0	0.0	0.0	32.0	47.8	48.5	23.5	6.6	0.0	0.0	42.5	43.1
LnGrp LOS				C	D	D	C	A			D	D
Approach Vol, veh/h		0			926			1141			885	
Approach Delay, s/veh		0.0			43.6			11.0			42.8	
Approach LOS					D			B			D	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2		4	5	6	7	8
Phs Duration (G+Y+Rc), s		62.2		23.8	33.5	28.6	0.0	23.8
Change Period (Y+Rc), s		5.0		5.0	5.0	5.0	4.5	5.0
Max Green Setting (Gmax), s		46.5		29.5	17.0	24.5	5.0	20.0
Max Q Clear Time (g_c+I1), s		11.0		0.0	13.6	22.0	0.0	17.6
Green Ext Time (p_c), s		10.5		0.0	0.3	1.6	0.0	1.2

Intersection Summary	
HCM 2010 Ctrl Delay	30.8
HCM 2010 LOS	C

Notes

User approved volume balancing among the lanes for turning movement.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	396	222	263	0	0	0	109	637	162	168	536	129
Future Volume (veh/h)	396	222	263	0	0	0	109	637	162	168	536	129
Number	7	4	14				5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0				0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00				1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00				1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1900				1863	1863	1900	1863	1863	1900
Adj Flow Rate, veh/h	430	241	286				118	692	176	183	583	140
Adj No. of Lanes	1	1	0				1	2	0	1	2	0
Peak Hour Factor	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
Cap, veh/h	588	257	306				407	765	194	392	751	180
Arrive On Green	0.33	0.33	0.33				0.23	0.27	0.27	0.29	0.35	0.35
Sat Flow, veh/h	1774	777	923				1774	2796	711	1774	2834	679
Grp Volume(v), veh/h	430	0	527				118	438	430	183	363	360
Grp Sat Flow(s),veh/h/ln	1774	0	1700				1774	1770	1737	1774	1770	1743
Q Serve(g_s), s	18.4	0.0	25.8				4.7	20.5	20.6	7.3	15.7	15.8
Cycle Q Clear(g_c), s	18.4	0.0	25.8				4.7	20.5	20.6	7.3	15.7	15.8
Prop In Lane	1.00		0.54				1.00		0.41	1.00		0.39
Lane Grp Cap(c), veh/h	588	0	563				407	484	475	392	469	462
V/C Ratio(X)	0.73	0.00	0.94				0.29	0.90	0.91	0.47	0.77	0.78
Avail Cap(c_a), veh/h	598	0	573				407	494	485	392	617	608
HCM Platoon Ratio	1.00	1.00	1.00				1.00	1.00	1.00	1.33	1.33	1.33
Upstream Filter(I)	1.00	0.00	1.00				1.00	1.00	1.00	0.68	0.68	0.68
Uniform Delay (d), s/veh	25.4	0.0	27.9				27.4	30.2	30.2	26.2	25.6	25.6
Incr Delay (d2), s/veh	4.5	0.0	22.8				0.4	23.0	23.4	0.6	8.3	8.5
Initial Q Delay(d3),s/veh	0.0	0.0	0.0				0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	9.7	0.0	15.7				2.3	13.1	12.9	3.6	8.7	8.6
LnGrp Delay(d),s/veh	29.9	0.0	50.7				27.8	53.2	53.6	26.8	33.8	34.1
LnGrp LOS	C		D				C	D	D	C	C	C
Approach Vol, veh/h		957						986			906	
Approach Delay, s/veh		41.3						50.3			32.5	
Approach LOS		D						D			C	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4	5	6		
Phs Duration (G+Y+Rc), s	34.0	28.5		33.5	24.7	27.8		
Change Period (Y+Rc), s	5.0	5.0		5.0	5.0	5.0		
Max Green Setting (Gmax), s	18.6	24.0		29.0	12.0	30.0		
Max Q Clear Time (g_c+I1), s	19.3	22.6		27.8	6.7	17.8		
Green Ext Time (p_c), s	0.3	0.9		0.6	0.1	5.0		

Intersection Summary	
HCM 2010 Ctrl Delay	41.6
HCM 2010 LOS	D

Intersection	
Int Delay, s/veh	7.4

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	6	0	133	7	0	64
Future Vol, veh/h	6	0	133	7	0	64
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	7	0	145	8	0	70

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	7	0	305	7
Stage 1	-	-	-	-	7	-
Stage 2	-	-	-	-	298	-
Critical Hdwy	-	-	4.12	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	-	-	2.218	-	3.518	3.318
Pot Cap-1 Maneuver	-	-	1614	-	687	1075
Stage 1	-	-	-	-	1016	-
Stage 2	-	-	-	-	753	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	1614	-	625	1075
Mov Cap-2 Maneuver	-	-	-	-	625	-
Stage 1	-	-	-	-	925	-
Stage 2	-	-	-	-	753	-

Approach	EB	WB	NB
HCM Control Delay, s	0	7.1	8.6
HCM LOS			A

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	1075	-	-	1614	-
HCM Lane V/C Ratio	0.065	-	-	0.09	-
HCM Control Delay (s)	8.6	-	-	7.5	0
HCM Lane LOS	A	-	-	A	A
HCM 95th %tile Q(veh)	0.2	-	-	0.3	-

Intersection	
Int Delay, s/veh	0.1

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	0	2	5	739	974	1
Future Vol, veh/h	0	2	5	739	974	1
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	1	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	0	2	5	803	1059	1

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	1873	530	1060	0	-	0
Stage 1	1060	-	-	-	-	-
Stage 2	813	-	-	-	-	-
Critical Hdwy	6.63	6.93	4.13	-	-	-
Critical Hdwy Stg 1	5.83	-	-	-	-	-
Critical Hdwy Stg 2	5.43	-	-	-	-	-
Follow-up Hdwy	3.519	3.319	2.219	-	-	-
Pot Cap-1 Maneuver	71	494	655	-	-	-
Stage 1	295	-	-	-	-	-
Stage 2	435	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	70	494	655	-	-	-
Mov Cap-2 Maneuver	190	-	-	-	-	-
Stage 1	293	-	-	-	-	-
Stage 2	435	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	12.3	0.1	0
HCM LOS	B		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	655	-	494	-	-
HCM Lane V/C Ratio	0.008	-	0.004	-	-
HCM Control Delay (s)	10.5	-	12.3	-	-
HCM Lane LOS	B	-	B	-	-
HCM 95th %tile Q(veh)	0	-	0	-	-

Arterial Level of Service: NB Coast Highway

Cross Street	Node	Delay (s/veh)	Travel time (s)	Dist (mi)	Arterial Speed
Seagaze Drive	10	2.8	20.6	0.2	27
Mission Avenue	9	18.5	27.2	0.1	10
Pier View Way	8	2.2	10.5	0.1	24
Civic Center Drive	7	1.6	9.9	0.1	28
Surfrider Way	6	4.9	22.3	0.1	24
SR-76	5	35.4	53.8	0.2	13
	44	2.0	5.4	0.0	22
	43	1.4	7.0	0.0	23
Project Driveway 2	14	0.3	2.3	0.0	32
	41	0.3	3.1	0.0	25
In-N-Out Driveway 2	12	0.2	2.5	0.0	34
Costa Pacifica Way	2	0.2	2.7	0.0	26
In-N-Out Driveway 1	11	0.1	3.2	0.0	30
Harbor Drive	1	3.8	31.7	0.4	48
Total		73.6	202.1	1.3	23

Arterial Level of Service: SB Coast Highway

Cross Street	Node	Delay (s/veh)	Travel time (s)	Dist (mi)	Arterial Speed
Harbor Drive	1	39.5	46.1	0.1	5
Rodeway Inn Driveway	11	1.4	35.0	0.4	43
Costa Pacifica Way	2	0.2	3.5	0.0	27
In-N-Out Driveway 2	12	0.1	2.6	0.0	26
	41	0.1	3.3	0.0	26
Project Driveway 2	14	0.0	2.2	0.0	36
	43	0.1	3.0	0.0	24
	44	1.0	6.0	0.0	26
Motel 6 Driveway	5	32.9	36.4	0.0	3
Surfrider Way	6	7.4	27.7	0.2	24
Civic Center Drive	7	3.9	21.0	0.1	25
Pier View Way	8	1.8	10.3	0.1	27
Mission Avenue	9	16.3	24.1	0.1	11
Seagaze Drive	10	2.8	11.3	0.1	23
Total		107.5	232.4	1.2	19

Arterial Level of Service: NB Coast Highway

Cross Street	Node	Delay (s/veh)	Travel time (s)	Dist (mi)	Arterial Speed
Seagaze Drive	10	11.2	29.2	0.2	19
Mission Avenue	9	9.8	18.7	0.1	14
Pier View Way	8	2.2	10.3	0.1	25
Civic Center Drive	7	3.9	12.3	0.1	22
Surfrider Way	6	7.8	25.2	0.1	21
SR-76	5	34.2	55.5	0.2	12
	44	2.0	5.5	0.0	21
	43	1.4	7.0	0.0	22
Project Driveway 2	14	0.2	2.5	0.0	29
	41	0.6	3.4	0.0	23
In-N-Out Driveway 2	12	1.0	3.4	0.0	25
Costa Pacifica Way	2	0.7	3.1	0.0	23
In-N-Out Driveway 1	11	0.4	3.5	0.0	27
Harbor Drive	1	6.9	35.9	0.4	42
Total		82.5	215.4	1.3	22

Arterial Level of Service: SB Coast Highway

Cross Street	Node	Delay (s/veh)	Travel time (s)	Dist (mi)	Arterial Speed
Harbor Drive	1	38.7	45.3	0.1	5
Rodeway Inn Driveway	11	1.4	28.6	0.4	54
Costa Pacifica Way	2	0.5	3.8	0.0	25
In-N-Out Driveway 2	12	0.3	2.9	0.0	24
	41	0.2	3.4	0.0	25
Project Driveway 2	14	0.1	2.2	0.0	35
	43	0.2	3.1	0.0	23
	44	3.0	8.0	0.0	20
Motel 6 Driveway	5	25.8	29.0	0.0	4
Surfrider Way	6	10.4	30.9	0.2	22
Civic Center Drive	7	9.1	26.5	0.1	20
Pier View Way	8	3.5	11.4	0.1	24
Mission Avenue	9	19.3	26.2	0.1	10
Seagaze Drive	10	7.2	16.1	0.1	16
Total		119.7	237.5	1.2	19

Arterial Level of Service: NB Coast Highway

Cross Street	Node	Delay (s/veh)	Travel time (s)	Dist (mi)	Arterial Speed
Seagaze Drive	10	2.3	20.1	0.2	28
Mission Avenue	9	19.8	28.5	0.1	9
Pier View Way	8	2.3	10.6	0.1	24
Civic Center Drive	7	1.6	10.0	0.1	27
Surfrider Way	6	4.5	21.8	0.1	24
SR-76	5	36.0	54.3	0.2	12
	44	2.0	5.4	0.0	22
	43	1.4	7.1	0.0	22
Project Driveway 2	14	0.3	2.4	0.0	31
	41	0.4	3.2	0.0	25
In-N-Out Driveway 2	12	0.4	2.7	0.0	32
Costa Pacifica Way	2	0.3	2.8	0.0	24
In-N-Out Driveway 1	11	0.2	3.2	0.0	30
Harbor Drive	1	3.9	32.0	0.4	47
Total		75.5	204.3	1.3	23

Arterial Level of Service: SB Coast Highway

Cross Street	Node	Delay (s/veh)	Travel time (s)	Dist (mi)	Arterial Speed
Harbor Drive	1	33.2	40.4	0.1	6
Rodeway Inn Driveway	11	1.7	36.4	0.4	42
Costa Pacifica Way	2	0.4	3.7	0.0	26
In-N-Out Driveway 2	12	0.2	2.7	0.0	26
	41	0.1	3.4	0.0	25
Project Driveway 2	14	0.0	2.2	0.0	36
	43	0.1	3.0	0.0	24
	44	1.7	6.7	0.0	23
Motel 6 Driveway	5	28.5	32.2	0.0	4
Surfrider Way	6	7.7	28.2	0.2	24
Civic Center Drive	7	4.2	21.1	0.1	25
Pier View Way	8	2.2	10.8	0.1	25
Mission Avenue	9	15.9	23.8	0.1	11
Seagaze Drive	10	2.9	11.3	0.1	23
Total		98.7	225.9	1.2	20

Arterial Level of Service: NB Coast Highway

Cross Street	Node	Delay (s/veh)	Travel time (s)	Dist (mi)	Arterial Speed
Seagaze Drive	10	9.8	27.8	0.2	20
Mission Avenue	9	9.7	18.6	0.1	14
Pier View Way	8	2.4	10.5	0.1	24
Civic Center Drive	7	3.8	12.4	0.1	22
Surfrider Way	6	6.8	24.2	0.1	22
SR-76	5	33.7	55.2	0.2	12
	44	2.0	5.5	0.0	21
	43	1.8	7.5	0.0	21
Project Driveway 2	14	0.4	2.7	0.0	27
	41	0.9	3.7	0.0	21
In-N-Out Driveway 2	12	1.9	4.3	0.0	20
Costa Pacifica Way	2	1.2	3.7	0.0	19
In-N-Out Driveway 1	11	0.4	3.5	0.0	27
Harbor Drive	1	6.4	35.2	0.4	43
Total		81.4	214.8	1.3	22

Arterial Level of Service: SB Coast Highway

Cross Street	Node	Delay (s/veh)	Travel time (s)	Dist (mi)	Arterial Speed
Harbor Drive	1	45.9	52.9	0.1	5
Rodeway Inn Driveway	11	1.9	30.6	0.4	50
Costa Pacifica Way	2	0.7	4.0	0.0	24
In-N-Out Driveway 2	12	0.4	2.9	0.0	24
	41	0.2	3.4	0.0	25
Project Driveway 2	14	0.1	2.2	0.0	35
	43	0.3	3.2	0.0	23
	44	3.6	8.5	0.0	18
Motel 6 Driveway	5	25.9	29.1	0.0	4
Surfrider Way	6	10.1	30.3	0.2	22
Civic Center Drive	7	9.4	26.7	0.1	20
Pier View Way	8	3.4	11.4	0.1	24
Mission Avenue	9	18.9	26.0	0.1	10
Seagaze Drive	10	7.5	16.4	0.1	16
Total		128.2	247.6	1.2	18

Arterial Level of Service: NB Coast Highway

Cross Street	Node	Delay (s/veh)	Travel time (s)	Dist (mi)	Arterial Speed
Seagaze Drive	10	4.1	21.9	0.2	26
Mission Avenue	9	17.1	25.8	0.1	10
Pier View Way	8	2.2	10.6	0.1	24
Civic Center Drive	7	1.8	10.1	0.1	27
Surfrider Way	6	6.4	23.8	0.1	22
SR-76	5	31.9	51.3	0.2	13
	44	1.9	5.4	0.0	22
	43	1.4	7.0	0.0	22
Project Driveway 2	14	0.3	2.4	0.0	31
	41	0.3	3.1	0.0	25
In-N-Out Driveway 2	12	0.2	2.5	0.0	34
Costa Pacifica Way	2	0.2	2.7	0.0	26
In-N-Out Driveway 1	11	0.2	3.2	0.0	30
Harbor Drive	1	6.4	36.3	0.4	42
Total		74.5	206.3	1.3	23

Arterial Level of Service: SB Coast Highway

Cross Street	Node	Delay (s/veh)	Travel time (s)	Dist (mi)	Arterial Speed
Harbor Drive	1	33.2	40.1	0.1	6
Rodeway Inn Driveway	11	1.6	37.9	0.4	40
Costa Pacifica Way	2	0.2	3.5	0.0	27
In-N-Out Driveway 2	12	0.1	2.6	0.0	26
	41	0.1	3.3	0.0	26
Project Driveway 2	14	0.0	2.2	0.0	36
	43	0.1	3.0	0.0	24
	44	1.0	6.0	0.0	26
Motel 6 Driveway	5	33.2	36.5	0.0	3
Surfrider Way	6	7.9	28.3	0.2	24
Civic Center Drive	7	4.6	21.7	0.1	24
Pier View Way	8	3.0	11.6	0.1	23
Mission Avenue	9	16.2	24.0	0.1	11
Seagaze Drive	10	3.2	11.7	0.1	23
Total		104.4	232.4	1.2	19

Arterial Level of Service: NB Coast Highway

Cross Street	Node	Delay (s/veh)	Travel time (s)	Dist (mi)	Arterial Speed
Seagaze Drive	10	12.0	30.0	0.2	19
Mission Avenue	9	10.1	19.1	0.1	14
Pier View Way	8	2.7	10.8	0.1	24
Civic Center Drive	7	4.0	12.4	0.1	22
Surfrider Way	6	7.8	25.2	0.1	21
SR-76	5	32.7	53.8	0.2	12
	44	1.9	5.4	0.0	22
	43	1.4	7.1	0.0	22
Project Driveway 2	14	0.3	2.5	0.0	29
	41	0.6	3.4	0.0	23
In-N-Out Driveway 2	12	1.0	3.4	0.0	25
Costa Pacifica Way	2	0.7	3.1	0.0	22
In-N-Out Driveway 1	11	0.6	3.7	0.0	26
Harbor Drive	1	8.0	38.0	0.4	40
Total		83.9	217.9	1.3	22

Arterial Level of Service: SB Coast Highway

Cross Street	Node	Delay (s/veh)	Travel time (s)	Dist (mi)	Arterial Speed
Harbor Drive	1	36.8	43.3	0.1	6
Rodeway Inn Driveway	11	1.5	28.1	0.4	55
Costa Pacifica Way	2	0.5	3.9	0.0	25
In-N-Out Driveway 2	12	0.3	2.9	0.0	24
	41	0.2	3.4	0.0	25
Project Driveway 2	14	0.1	2.2	0.0	35
	43	0.2	3.1	0.0	23
	44	3.4	8.3	0.0	19
Motel 6 Driveway	5	27.6	30.8	0.0	4
Surfrider Way	6	10.8	31.1	0.2	22
Civic Center Drive	7	9.3	26.8	0.1	20
Pier View Way	8	4.6	12.6	0.1	22
Mission Avenue	9	20.5	27.6	0.1	9
Seagaze Drive	10	8.3	17.3	0.1	15
Total		124.1	241.3	1.2	18

Arterial Level of Service: NB Coast Highway

Cross Street	Node	Delay (s/veh)	Travel time (s)	Dist (mi)	Arterial Speed
Seagaze Drive	10	4.0	21.8	0.2	26
Mission Avenue	9	15.1	23.8	0.1	11
Pier View Way	8	2.1	10.5	0.1	24
Civic Center Drive	7	2.1	10.4	0.1	26
Surfrider Way	6	6.0	23.4	0.1	22
SR-76	5	35.6	55.2	0.2	12
	44	2.0	5.5	0.0	21
	43	1.5	7.1	0.0	22
Project Driveway 2	14	0.4	2.4	0.0	31
	41	0.4	3.2	0.0	24
In-N-Out Driveway 2	12	0.4	2.7	0.0	31
Costa Pacifica Way	2	0.3	2.9	0.0	24
In-N-Out Driveway 1	11	0.2	3.3	0.0	29
Harbor Drive	1	7.0	36.5	0.4	41
Total		77.1	208.7	1.3	23

Arterial Level of Service: SB Coast Highway

Cross Street	Node	Delay (s/veh)	Travel time (s)	Dist (mi)	Arterial Speed
Harbor Drive	1	35.6	42.5	0.1	6
Rodeway Inn Driveway	11	2.0	39.0	0.4	39
Costa Pacifica Way	2	0.4	3.7	0.0	26
In-N-Out Driveway 2	12	0.2	2.8	0.0	25
	41	0.1	3.4	0.0	25
Project Driveway 2	14	0.0	2.2	0.0	36
	43	0.1	3.0	0.0	24
	44	1.7	6.7	0.0	24
Motel 6 Driveway	5	28.1	31.6	0.0	4
Surfrider Way	6	7.4	28.2	0.2	24
Civic Center Drive	7	4.5	21.5	0.1	24
Pier View Way	8	2.8	11.4	0.1	24
Mission Avenue	9	18.1	26.1	0.1	10
Seagaze Drive	10	3.6	12.1	0.1	22
Total		104.6	234.3	1.2	19

Arterial Level of Service: NB Coast Highway

Cross Street	Node	Delay (s/veh)	Travel time (s)	Dist (mi)	Arterial Speed
Seagaze Drive	10	12.5	30.6	0.2	18
Mission Avenue	9	11.8	20.8	0.1	13
Pier View Way	8	2.5	10.6	0.1	24
Civic Center Drive	7	3.8	12.4	0.1	22
Surfrider Way	6	7.2	24.7	0.1	21
SR-76	5	35.0	56.3	0.2	12
	44	2.0	5.5	0.0	21
	43	1.8	7.5	0.0	21
Project Driveway 2	14	0.4	2.7	0.0	27
	41	1.1	3.9	0.0	20
In-N-Out Driveway 2	12	2.1	4.5	0.0	19
Costa Pacifica Way	2	1.4	3.9	0.0	18
In-N-Out Driveway 1	11	0.5	3.6	0.0	27
Harbor Drive	1	8.5	38.4	0.4	39
Total		90.9	225.1	1.3	21

Arterial Level of Service: SB Coast Highway

Cross Street	Node	Delay (s/veh)	Travel time (s)	Dist (mi)	Arterial Speed
Harbor Drive	1	45.4	52.4	0.1	5
Rodeway Inn Driveway	11	1.8	30.6	0.4	50
Costa Pacifica Way	2	0.6	3.9	0.0	24
In-N-Out Driveway 2	12	0.4	2.9	0.0	24
	41	0.2	3.4	0.0	25
Project Driveway 2	14	0.1	2.3	0.0	35
	43	0.3	3.2	0.0	23
	44	4.4	9.4	0.0	17
Motel 6 Driveway	5	26.2	29.4	0.0	4
Surfrider Way	6	11.2	31.8	0.2	21
Civic Center Drive	7	10.2	27.5	0.1	19
Pier View Way	8	4.0	12.1	0.1	23
Mission Avenue	9	22.3	29.5	0.1	9
Seagaze Drive	10	8.0	17.0	0.1	16
Total		135.0	255.3	1.2	17

Arterial Level of Service: NB Coast Highway

Cross Street	Node	Delay (s/veh)	Travel time (s)	Dist (mi)	Arterial Speed
Seagaze Drive	10	6.9	24.6	0.2	23
Mission Avenue	9	6.1	12.9	0.1	21
Pier View Way	8	1.8	8.8	0.1	29
Civic Center Drive	7	1.5	10.0	0.1	27
Surfrider Way	6	5.4	22.8	0.1	23
SR-76	5	34.7	52.3	0.2	13
	44	1.9	5.4	0.0	22
	43	1.5	7.1	0.0	22
Project Driveway 2	14	0.1	2.4	0.0	30
	41	0.2	3.0	0.0	27
In-N-Out Driveway 2	12	0.2	2.5	0.0	34
Costa Pacifica Way	2	0.2	2.7	0.0	25
In-N-Out Driveway 1	11	0.2	3.3	0.0	29
Harbor Drive	1	6.9	36.8	0.4	41
Total		67.6	194.7	1.3	24

Arterial Level of Service: SB Coast Highway

Cross Street	Node	Delay (s/veh)	Travel time (s)	Dist (mi)	Arterial Speed
Harbor Drive	1	35.6	42.5	0.1	6
Rodeway Inn Driveway	11	3.1	49.9	0.4	30
Costa Pacifica Way	2	0.2	3.6	0.0	27
In-N-Out Driveway 2	12	0.2	2.7	0.0	25
	41	0.1	3.3	0.0	26
Project Driveway 2	14	0.1	2.2	0.0	35
	43	0.1	3.0	0.0	24
	44	1.2	6.2	0.0	25
Motel 6 Driveway	5	30.9	34.1	0.0	3
Surfrider Way	6	7.0	26.7	0.2	25
Civic Center Drive	7	4.1	21.6	0.1	24
Pier View Way	8	2.6	10.9	0.1	25
Mission Avenue	9	6.3	14.1	0.1	18
Seagaze Drive	10	2.1	10.5	0.1	25
Total		93.4	231.4	1.2	19

Arterial Level of Service: NB Coast Highway

Cross Street	Node	Delay (s/veh)	Travel time (s)	Dist (mi)	Arterial Speed
Seagaze Drive	10	31.7	49.5	0.2	11
Mission Avenue	9	5.2	14.1	0.1	19
Pier View Way	8	8.1	16.4	0.1	16
Civic Center Drive	7	7.4	15.8	0.1	17
Surfrider Way	6	24.9	41.5	0.1	13
SR-76	5	77.0	113.7	0.2	7
	44	13.7	17.2	0.0	7
	43	22.4	27.1	0.0	5
Project Driveway 2	14	11.3	13.8	0.0	6
	41	16.0	20.1	0.0	6
In-N-Out Driveway 2	12	12.5	14.5	0.0	5
Costa Pacifica Way	2	6.1	8.6	0.0	8
In-N-Out Driveway 1	11	9.1	14.2	0.0	8
Harbor Drive	1	357.3	392.9	0.5	5
Total		602.8	759.4	1.4	7

Arterial Level of Service: SB Coast Highway

Cross Street	Node	Delay (s/veh)	Travel time (s)	Dist (mi)	Arterial Speed
Harbor Drive	1	97.3	133.5	0.1	2
Rodeway Inn Driveway	11	3.5	52.3	0.5	35
Costa Pacifica Way	2	0.5	3.9	0.0	25
In-N-Out Driveway 2	12	0.4	2.8	0.0	23
	41	0.5	3.2	0.0	23
Project Driveway 2	14	1.0	4.5	0.0	26
	43	2.5	5.6	0.0	14
	44	11.5	15.6	0.0	8
Motel 6 Driveway	5	25.2	28.4	0.0	4
Surfrider Way	6	10.5	30.2	0.2	22
Civic Center Drive	7	7.7	24.4	0.1	22
Pier View Way	8	6.6	14.8	0.1	19
Mission Avenue	9	17.9	25.8	0.1	10
Seagaze Drive	10	7.6	16.6	0.1	16
Total		192.7	361.5	1.3	14

Arterial Level of Service: NB Coast Highway

Cross Street	Node	Delay (s/veh)	Travel time (s)	Dist (mi)	Arterial Speed
Seagaze Drive	10	8.0	25.8	0.2	22
Mission Avenue	9	6.1	12.9	0.1	21
Pier View Way	8	1.9	9.0	0.1	28
Civic Center Drive	7	1.7	10.2	0.1	27
Surfrider Way	6	5.3	22.5	0.1	23
SR-76	5	33.9	51.7	0.2	13
	44	1.9	5.4	0.0	22
	43	1.5	7.2	0.0	22
Project Driveway 2	14	0.1	2.4	0.0	30
	41	0.3	3.0	0.0	26
In-N-Out Driveway 2	12	0.4	2.7	0.0	31
Costa Pacifica Way	2	0.3	2.9	0.0	24
In-N-Out Driveway 1	11	0.2	3.3	0.0	29
Harbor Drive	1	8.0	37.4	0.4	40
Total		69.6	196.5	1.3	24

Arterial Level of Service: SB Coast Highway

Cross Street	Node	Delay (s/veh)	Travel time (s)	Dist (mi)	Arterial Speed
Harbor Drive	1	37.1	44.2	0.1	5
Rodeway Inn Driveway	11	3.1	50.8	0.4	30
Costa Pacifica Way	2	0.4	3.7	0.0	26
In-N-Out Driveway 2	12	0.2	2.8	0.0	25
	41	0.1	3.5	0.0	25
Project Driveway 2	14	0.1	2.2	0.0	35
	43	0.1	3.1	0.0	24
	44	1.7	6.7	0.0	24
Motel 6 Driveway	5	27.3	30.5	0.0	4
Surfrider Way	6	7.4	28.1	0.2	24
Civic Center Drive	7	3.8	21.2	0.1	25
Pier View Way	8	3.0	11.4	0.1	24
Mission Avenue	9	6.6	14.4	0.1	18
Seagaze Drive	10	2.5	10.9	0.1	24
Total		93.4	233.4	1.2	19

Arterial Level of Service: NB Coast Highway

Cross Street	Node	Delay (s/veh)	Travel time (s)	Dist (mi)	Arterial Speed
Seagaze Drive	10	32.1	49.9	0.2	11
Mission Avenue	9	7.0	15.9	0.1	17
Pier View Way	8	6.7	15.2	0.1	17
Civic Center Drive	7	6.6	15.2	0.1	18
Surfrider Way	6	29.6	46.1	0.1	11
SR-76	5	105.2	192.3	0.2	5
	44	14.4	17.9	0.0	7
	43	21.0	25.8	0.0	5
Project Driveway 2	14	9.4	11.9	0.0	6
	41	14.1	18.2	0.0	6
In-N-Out Driveway 2	12	10.4	12.4	0.0	6
Costa Pacifica Way	2	5.5	7.9	0.0	8
In-N-Out Driveway 1	11	9.1	14.1	0.0	8
Harbor Drive	1	364.9	400.7	0.5	4
Total		636.1	843.5	1.4	6

Arterial Level of Service: SB Coast Highway

Cross Street	Node	Delay (s/veh)	Travel time (s)	Dist (mi)	Arterial Speed
Harbor Drive	1	129.0	258.3	0.1	2
Rodeway Inn Driveway	11	4.2	56.1	0.5	32
Costa Pacifica Way	2	0.7	4.1	0.0	24
In-N-Out Driveway 2	12	0.4	2.9	0.0	22
	41	0.4	3.2	0.0	23
Project Driveway 2	14	1.0	4.5	0.0	26
	43	2.8	5.9	0.0	13
	44	13.7	17.7	0.0	7
Motel 6 Driveway	5	27.7	30.9	0.0	4
Surfrider Way	6	11.9	31.0	0.2	22
Civic Center Drive	7	9.9	27.0	0.1	19
Pier View Way	8	5.9	14.0	0.1	20
Mission Avenue	9	18.4	26.3	0.1	10
Seagaze Drive	10	7.7	16.6	0.1	16
Total		233.9	498.7	1.3	13

Intersection: 2: Coast Highway & Costa Pacifica Way

Movement	EB	NB	NB	SB
Directions Served	LR	L	T	T
Maximum Queue (ft)	87	29	57	21
Average Queue (ft)	36	7	9	1
95th Queue (ft)	66	27	38	12
Link Distance (ft)	146		55	76
Upstream Blk Time (%)			0	
Queuing Penalty (veh)			1	
Storage Bay Dist (ft)		1		
Storage Blk Time (%)		1		
Queuing Penalty (veh)		2		

Intersection: 11: Project Driveway 1 & Costa Pacifica Way

Movement	WB	NB
Directions Served	LT	LR
Maximum Queue (ft)	31	76
Average Queue (ft)	2	39
95th Queue (ft)	15	63
Link Distance (ft)	146	169
Upstream Blk Time (%)		
Queuing Penalty (veh)		
Storage Bay Dist (ft)		
Storage Blk Time (%)		
Queuing Penalty (veh)		

Intersection: 12: Coast Highway & Project Driveway 2

Movement	EB	NB	NB	B44	B44
Directions Served	LR	L	T	T	T
Maximum Queue (ft)	24	6	6	6	51
Average Queue (ft)	3	0	0	0	3
95th Queue (ft)	18	4	4	4	21
Link Distance (ft)	431		73	55	55
Upstream Blk Time (%)					0
Queuing Penalty (veh)					0
Storage Bay Dist (ft)		1			
Storage Blk Time (%)		0			
Queuing Penalty (veh)		0			

Intersection: 13: Coast Highway & Rodeway Inn Driveway/In-N-Out Driveway 1

Movement	EB	WB	NB	NB
Directions Served	LTR	LTR	L	TR
Maximum Queue (ft)	28	29	12	12
Average Queue (ft)	5	2	1	1
95th Queue (ft)	23	12	7	8
Link Distance (ft)	221	52		76
Upstream Blk Time (%)				
Queuing Penalty (veh)				
Storage Bay Dist (ft)			1	
Storage Blk Time (%)			0	
Queuing Penalty (veh)			0	

Intersection: 14: Coast Highway & In-N-Out Driveway 2

Movement	WB	NB
Directions Served	LR	TR
Maximum Queue (ft)	6	56
Average Queue (ft)	1	4
95th Queue (ft)	8	26
Link Distance (ft)	55	77
Upstream Blk Time (%)		0
Queuing Penalty (veh)		0
Storage Bay Dist (ft)		
Storage Blk Time (%)		
Queuing Penalty (veh)		

Zone Summary

Zone wide Queuing Penalty: 4

Intersection: 2: Coast Highway & Costa Pacifica Way

Movement	EB	NB	NB	SB	SB
Directions Served	LR	L	T	T	R
Maximum Queue (ft)	153	41	76	108	9
Average Queue (ft)	93	25	54	10	0
95th Queue (ft)	187	43	83	55	6
Link Distance (ft)	146		55	76	76
Upstream Blk Time (%)	39	0	37	2	
Queuing Penalty (veh)	27	0	253	8	
Storage Bay Dist (ft)		1			
Storage Blk Time (%)		7	31		
Queuing Penalty (veh)		35	50		

Intersection: 11: Project Driveway 1 & Costa Pacifica Way

Movement	EB	WB	NB
Directions Served	TR	LT	LR
Maximum Queue (ft)	27	6	182
Average Queue (ft)	4	0	71
95th Queue (ft)	21	4	178
Link Distance (ft)	676	146	169
Upstream Blk Time (%)			25
Queuing Penalty (veh)			0
Storage Bay Dist (ft)			
Storage Blk Time (%)			
Queuing Penalty (veh)			

Intersection: 12: Coast Highway & Project Driveway 2

Movement	EB	NB	NB	B43	B43	B44	B44	SB	B41
Directions Served	LR	L	T	T		T	T	T	T
Maximum Queue (ft)	29	30	141	289	277	178	105	104	95
Average Queue (ft)	1	3	82	169	136	97	49	14	11
95th Queue (ft)	11	16	170	375	347	222	112	72	74
Link Distance (ft)	431		73	191	191	55	55	71	77
Upstream Blk Time (%)			52	55	31	45	23	4	3
Queuing Penalty (veh)			374	200	110	161	83	18	28
Storage Bay Dist (ft)		1							
Storage Blk Time (%)		1	29						
Queuing Penalty (veh)		5	1						

Intersection: 13: Coast Highway & Rodeway Inn Driveway/In-N-Out Driveway 1

Movement	EB	WB	B29	B24	NB	NB	SB	SB
Directions Served	LTR	LTR	T	T	L	TR	L	TR
Maximum Queue (ft)	80	117	103	6	30	103	23	209
Average Queue (ft)	19	51	17	0	4	63	2	16
95th Queue (ft)	66	113	97	5	19	126	12	138
Link Distance (ft)	221	52	190	55		76		1412
Upstream Blk Time (%)		32	3			36		
Queuing Penalty (veh)		21	2			188		
Storage Bay Dist (ft)					1		50	
Storage Blk Time (%)					0	39		2
Queuing Penalty (veh)					3	3		0

Intersection: 14: Coast Highway & In-N-Out Driveway 2

Movement	WB	NB	B41	SB	SB
Directions Served	LR	TR	T	L	T
Maximum Queue (ft)	39	149	146	29	79
Average Queue (ft)	11	101	98	3	9
95th Queue (ft)	36	173	197	16	50
Link Distance (ft)	55	77	71		55
Upstream Blk Time (%)	2	61	52		2
Queuing Penalty (veh)	0	437	370		21
Storage Bay Dist (ft)				1	
Storage Blk Time (%)				0	0
Queuing Penalty (veh)				3	0

Zone Summary

Zone wide Queuing Penalty: 2401

APPENDIX C

Cumulative Project and Future Year Data

2.0 PROJECT DESCRIPTION

2.1 Project Location

The proposed project is located at 1103 N. Coast Hwy in the City of Oceanside. ***Figure 2-1*** shows the general vicinity of the project and ***Figure 2-2*** shows a more detailed project area map.

2.2 Project Description

The Rodeway Inn currently occupies the existing site and includes 80 hotel rooms. The project proposes the construction of 37 additional hotel rooms to total 117 hotel rooms. Access to the hotel would be maintained via the two existing driveways on N. Coast Highway and is explained in detail in *Section 10.0*.

The site plan is shown on ***Figure 2-3.***

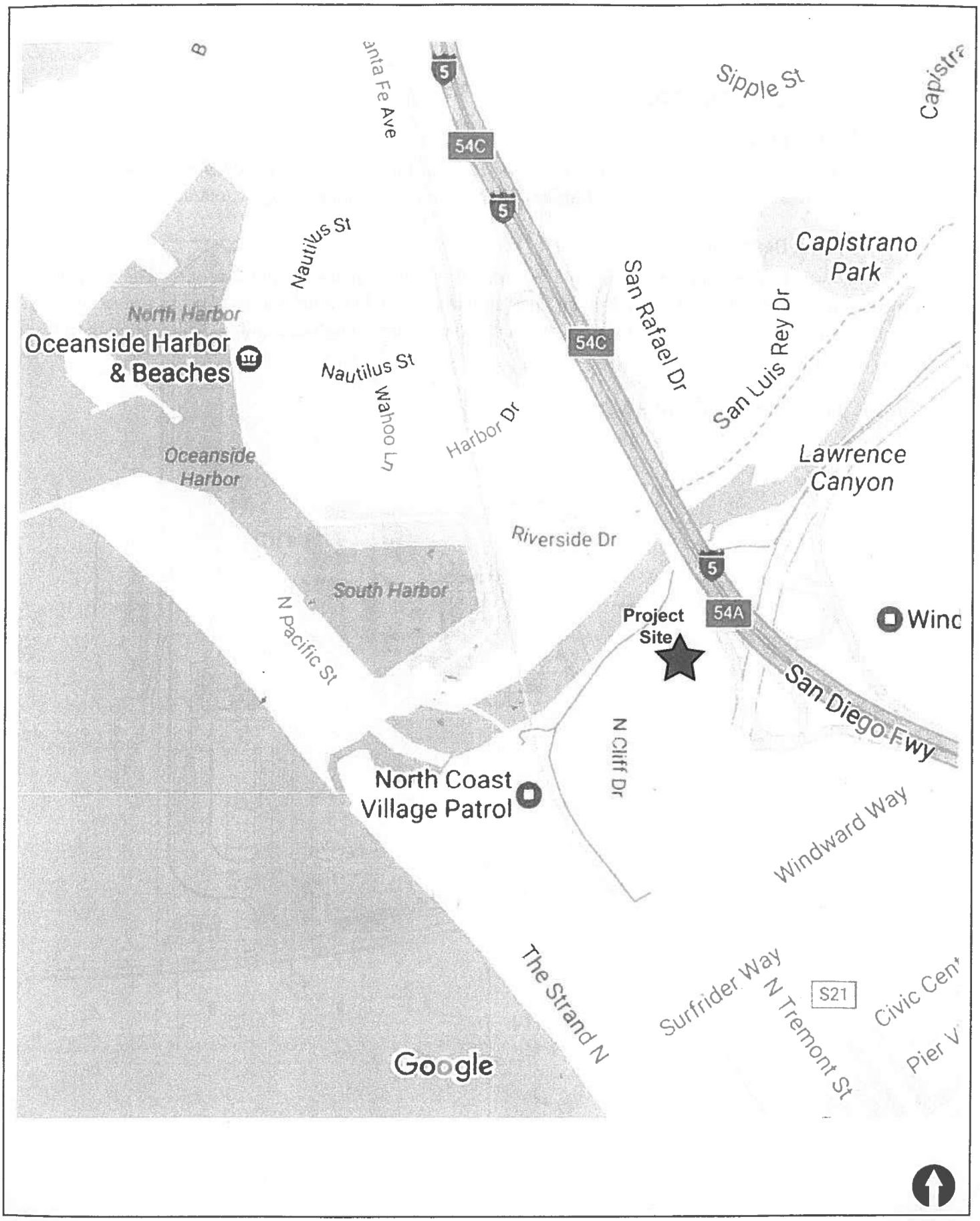

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Figure 2-2

Project Area Map

MARRIOTT RESIDENCE INN

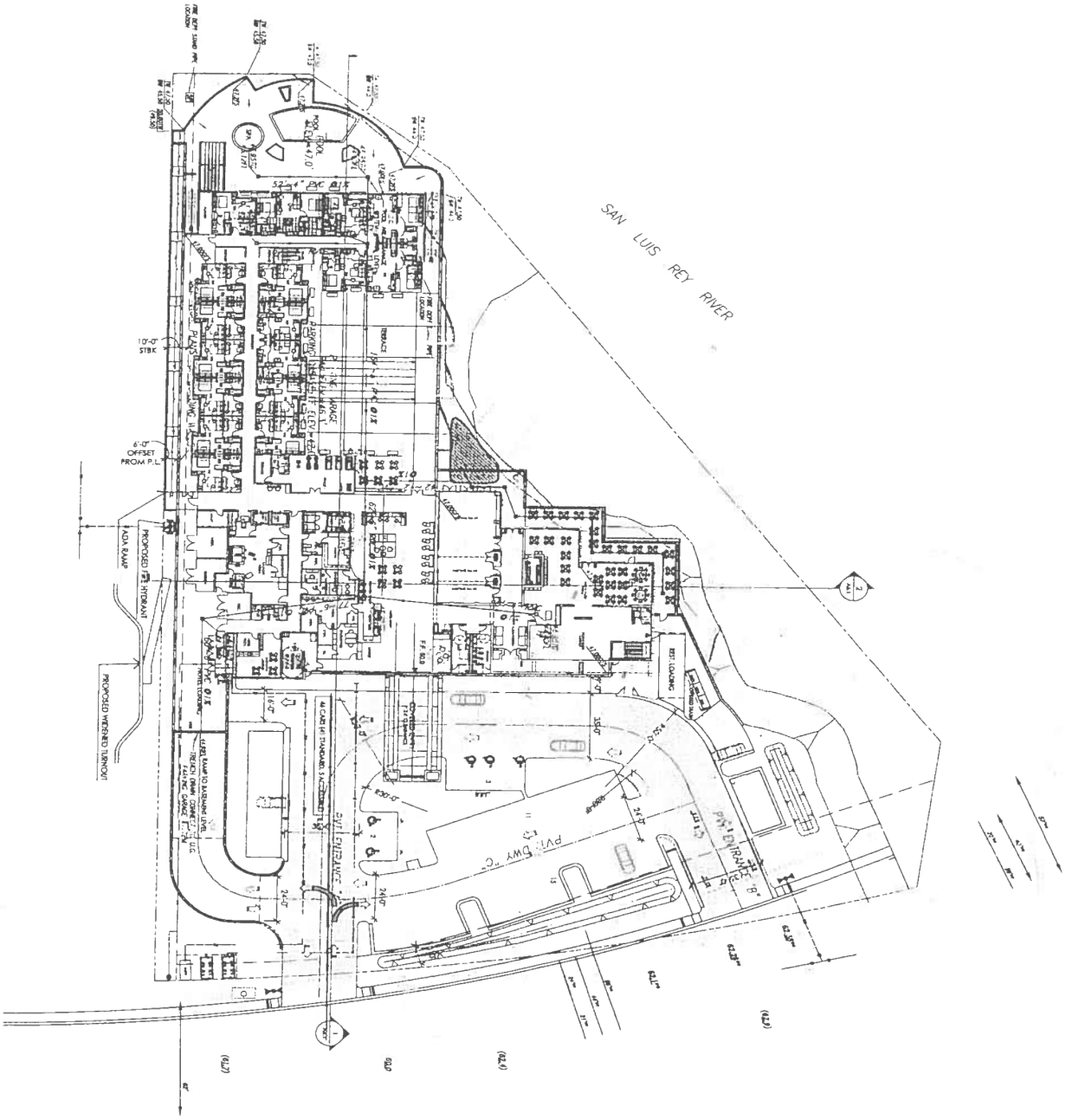

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Figure 2-3

Site Plan

MARRIOTT RESIDENCE INN

8.0 TRIP GENERATION/DISTRIBUTION/ASSIGNMENT

The amount of traffic that is to be generated by the proposed project is based on rates published in the *SANDAG Brief Guide to Vehicular Traffic Generation Rates for the San Diego Region (April 2002).*

8.1 Trip Generation

Table 8–1 tabulates the total project traffic generation. The total project is calculated to generate approximately a total of 400 ADT with 14 inbound / 10 outbound trips during the AM peak hour and 13 inbound / 32 outbound trips during the PM peak hour.

TABLE 8–1
PROJECT TRIP GENERATION

Land Use	Size	Daily Trip Ends (ADTs)		AM Peak Hour				PM Peak Hour			
		Rate[a]	Volume	% of ADT	In:Out Split	Volume In	Volume Out	% of ADT	In:Out Split	Volume In	Volume Out
Hotel	37 Rooms	10 / Room	370	6%	60:40	13	9	8%	60:40	18	12

Footnotes:

a. Rate is based on *SANDAG's (Not So) Brief Guide of Vehicular Traffic Generation Rates for the San Diego Region, April 2002*

8.2 Trip Distribution/Assignment

LLG coordinated with City staff on the project distribution. The project-generated traffic was distributed to the street system based on the existing roadway network and travel patterns, the project's proximity to SR76, a working knowledge of the local transportation system, and a review of the proposed land uses.

Figure 8–1 depicts the regional project traffic distribution percentages. ***Figure 8–2*** depicts the project traffic assignment based on this distribution. ***Figure 8–3*** shows the AM/PM peak hours and ADT traffic volumes for the "Existing + Project" scenario. ***Figure 8–4*** shows the AM/PM peak hours and ADT traffic volumes for the "Existing + Project + Cumulative Projects" scenario.

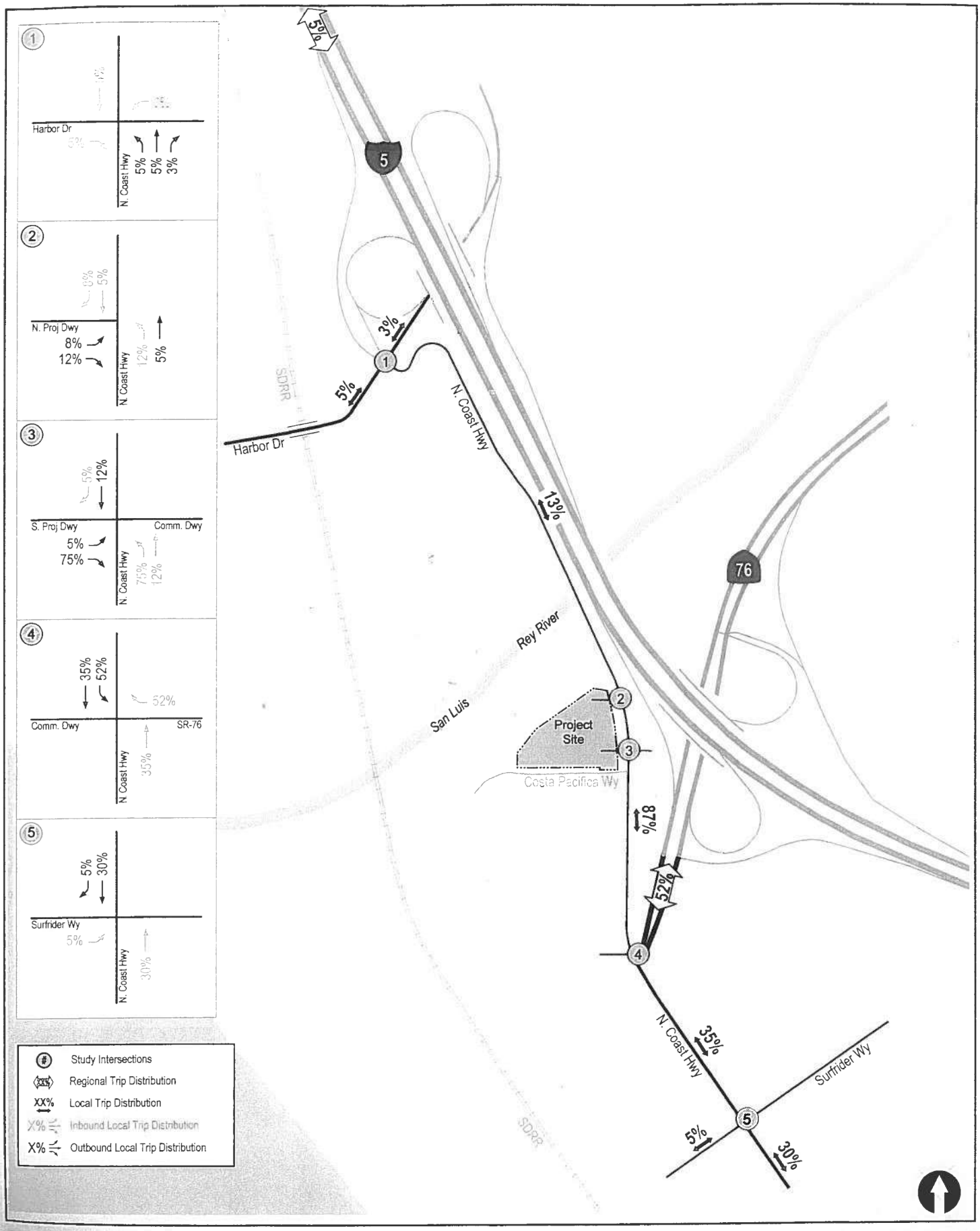

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Figure 8-1

Project Traffic Distribution

MARRIOTT RESIDENCE INN

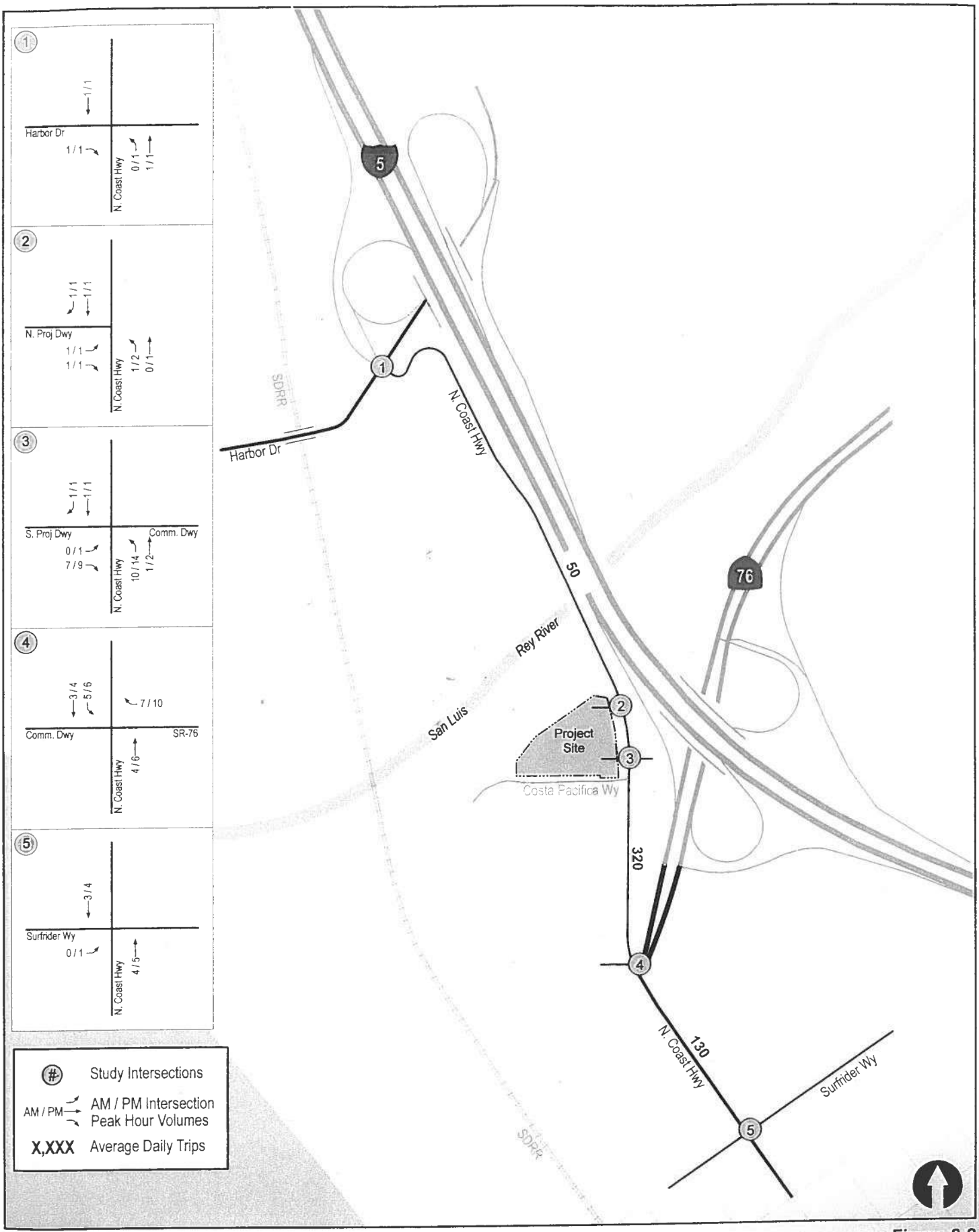

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Figure 8-2

Project Traffic Volumes

MARRIOTT RESIDENCE INN

7.0 CUMULATIVE PROJECTS

There are other planned projects in the areas adjacent to the project site that will add traffic to the roadways surround the project site. LLG coordinated with the City staff to compile a list of relevant cumulative projects for consideration in the analysis. The followings is a brief description of these cumulative projects.

7.1 Description of Projects

Oceanside Beach Resort is a mixed-use project located on four city blocks bounded by Sea Gaze Drive, Pier View Way, Myers Street and The Strand. The project proposes to develop about 381 hotel rooms. This project is calculated to generate 4,832 ADT with 317 trips in the AM peak hour (166 inbound and 151 outbound) and 387 trips in the PM peak hour (239 inbound and 148 outbound).

Blocks 5, 18, 19, & 20 is a four-block, mixed-use development in the City of Oceanside. It is part of the City's downtown *Nine-Block Pier Master Plan* (approved in 2000). The project is located east of Myers Street, and bound by Civic Center Drive to the north, Sea Gaze Drive to the south, and Cleveland Street to the east. Each of the four blocks would contain a mixture of commercial, residential, public open space, and parking areas. The total project is calculated to generate approximately 2,741 ADT with 41 inbound / 107 outbound trips during the AM peak hour and 169 inbound / 95 outbound trips during the PM peak hour.

Lot 23 proposes to convert an existing surface public parking lot in downtown Oceanside into a mixed-use development with approximately 9,400 square feet (SF) of commercial space or retail, 525 SF of office, and 52 condominium units. The project is calculated to generate approximately 803 ADT with 15 inbound / 32 outbound trips during the AM peak hour and 46 inbound / 30 outbound trips during the PM peak hour.

Coast Highway Starbucks is located at 624 North Coast Highway (the southeast corner of the intersection of North Coast Highway and Windward Way) in the City of Oceanside. The project proposes to remove the existing drive-through Wienerschnitzel restaurant and replace it with an 1,800 square-foot drive-through coffee shop and 1,800 square foot strip of commercial uses. The proposed project will take access via driveways on Windward, North Coast Highway, and the alleyway that bounds the northeast end of the property. The project is calculated to generate approximately 1,441 ADT with 56 inbound /56 outbound trips during the AM peak hour and 27 inbound /25 outbound trips during the PM peak hour.

Seacliff Terrace is located on the southern side of Costa Pacifica Way, just west of N. Coast Highway. The project proposes to be a mixed-use development consisting of 52 condominiums and 1,056 square feet of retail space. The project is proposed to be constructed as a four store structure over a two level subterranean parking garage which will provide a total of 122 parking spaces. The project is calculated to generate approximately 458 ADT with 8 inbound / 26 outbound trips during the AM peak hour and 31inbound / 15 outbound during the PM peak hour.

7.2 Summary of Cumulative Projects Trips

Table 7–1 is a trip generation summary of each cumulative project.

Figure 7–1 depicts the total AM/PM peak hour intersection and ADT volumes for the cumulative projects. ***Figure 7–2*** depicts the AM/PM peak hour and ADT volumes for the Existing + Cumulative projects scenario. ***Appendix E*** contains more specific cumulative project information.

TABLE 7–1
CUMULATIVE PROJECTS TRIP GENERATION SUMMARY

Cummulative Prject	Land Use	ADT	AM Peak Hour			PM Peak Hour		
			In	Out	Total	In	Out	Total
1 Oceanside Beach Resort	Mixed Use	4,832	166	151	317	239	148	387
2. Blocks 5	Mixed Use	2,741	41	107	148	169	95	264
3. Block 20	Mixed Use							
4. Block 18	Mixed Use							
5. Block 19	Mixed Use							
6. Lot 23	Mixed Use	803	15	32	47	46	30	76
7. Coast Highway Starbucks	Coffee Shop	1,441	56	56	112	27	25	52
8. Seacliff Terrace	Mixed Use	458	8	26	34	31	15	46
Total Cumulative Projects		*10,275*	*286*	*372*	*658*	*512*	*313*	*825*

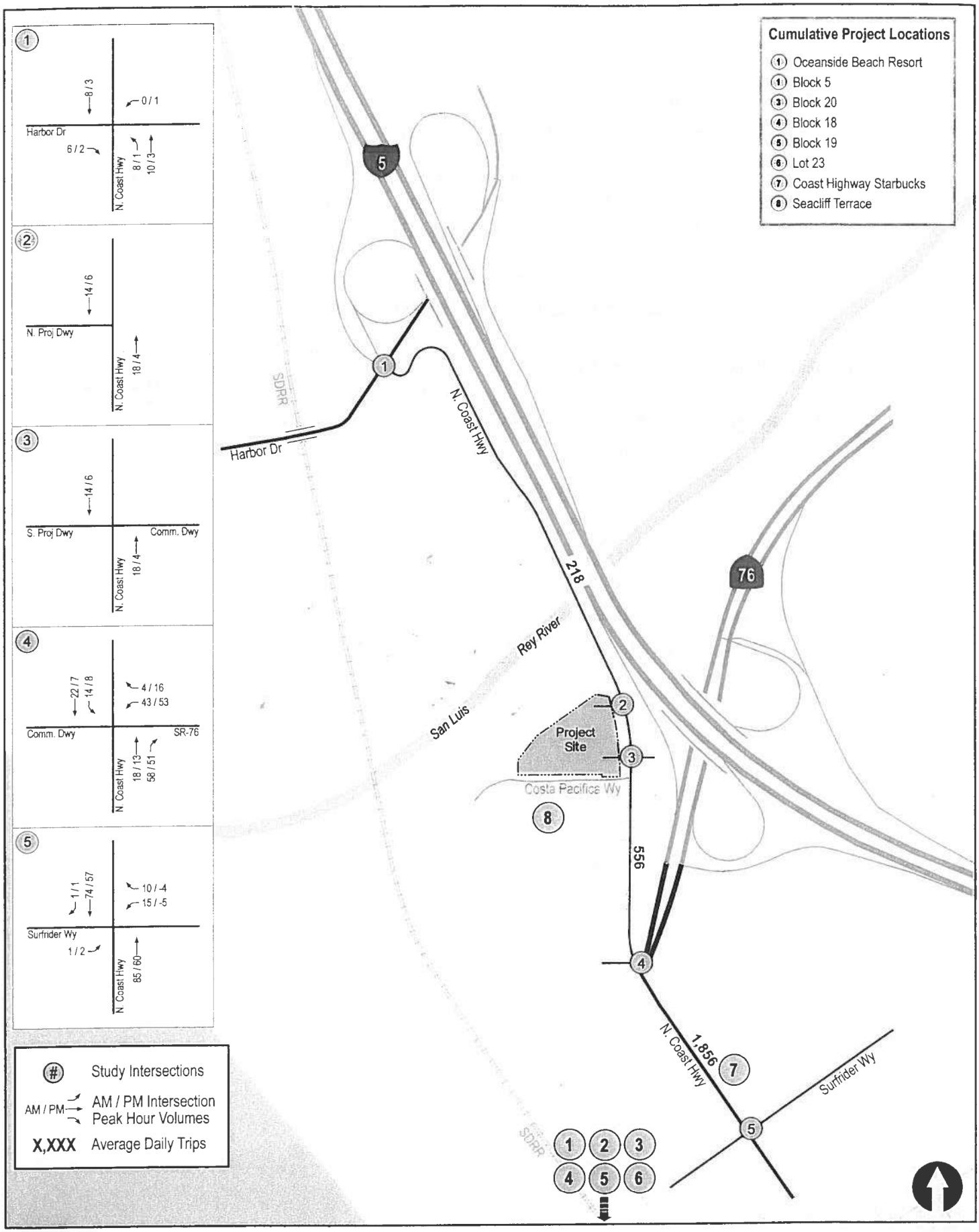

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Figure 7-1

Cumulative Projects Traffic Volumes

MARRIOTT RESIDENCE INN

Figure 6
Project Trip Assignment

5.0 EXISTING + CUMULATIVE CONDITIONS

Prior to evaluating the potential impacts of traffic generated by the proposed Project on the surrounding street system, it was necessary to first develop estimates of near-term traffic conditions in the area without the Project. Near-term traffic conditions without the proposed Project reflect traffic increases due to regional growth and development traffic increases generated by other specific developments near the Project site, as well as traffic shifts caused by roadway improvements in the study area. The forecasted near-term baseline or Existing plus Cumulative projects traffic volumes were then used to identify cumulative impacts on the roadway system.

5.1 CUMULATIVE PROJECTS

Under Existing plus Cumulative Projects Conditions, near-term traffic forecasts without the proposed Project were developed by adding traffic from approved or reasonably foreseeable projects in the vicinity of the Project site to the existing traffic volumes. This scenario determines the operating conditions anticipated when the Project opens. This is the cumulative baseline against which near-term project impacts are assessed.

The City of Oceanside provided a list of four cumulative projects and the respective traffic impact analysis (TIA) reports for each of these cumulative projects. The following four projects are expected to be completed within the next 5 years:

1. Oceanside Beach Resort
2. CityMark Mixed Use Development (Blocks 5, 20, 18, and 19)
3. Seacliff Terraces
4. 1010 Oceanside (Belvedere Hotel & Residence)

Table 12 provides details of the above entitled or pending projects used to determine near-term cumulative traffic conditions while **Figure 8** shows the location of these projects.

5.1.1 TRIP GENERATION, DISTRIBUTION, AND ASSIGNMENT

The peak hour trip generation, distribution, and assignment for each of the cumulative projects were obtained directly from their respective TIAs. At the time the Oceanside Beach Resort traffic analysis was conducted the one-way couplet configuration on Mission Avenue and Seagaze Drive between Coast Highway and Clementine Street was not accounted for in their trip distribution and assignment. Thus,

LOT 23

TABLE 12 - CUMULATIVE PROJECTS TRIP GENERATION

#	Project Name	Description	Daily Trips	AM Peak Hour Trips			PM Peak Hour Trips		
				In	Out	Total	In	Out	Total
1	Oceanside Beach Resort[1]	The project will have up to 48 hotel units and up to 72 timeshare units, along with a restaurant and shops on the north block, while the southern block will have up to 293 rooms.	4,832	166	151	317	239	148	387
2a	CityMark Mixed Use - Block 5[2]	Block 5 will include 43 condominium units and approximately 1,576 SF of commercial space.							
2b	CityMark Mixed Use - Block 20[2]	Block 20 will include 39 condominium units and approximately 17,742 SF of specialty retail/strip commercial space.							
2c	CityMark Mixed Use - Block 18[2]	Block 18 will include 48 condominium units, approximately 3,850 SF of quality restaurant space, and 6,597 SF of specialty retail/strip mall commercial space.	2,741	41	107	148	169	95	264
2d	CityMark Mixed Use –Block 19[2]	Block 19 will include 101 condominium units and approximately 14,199 SF of specialty retail/strip mall commercial space.							
3	Seacliff Terraces[3]	The project will include 52 residential condominiums and 1,056 SF of retail space.	458	8	26	34	31	15	46
✓ 4	1010 Oceanside (Belvedere Hotel & Residence)[4]	The project will include a 124-room hotel, 90 live/work lofts, and 8,357 mixed retail/office.	2,110	79	59	138	97	82	179
		TOTAL RELATED PROJECT VEHICLE TRIPS[3]	**10,141**	**294**	**343**	**637**	**536**	**340**	**876**

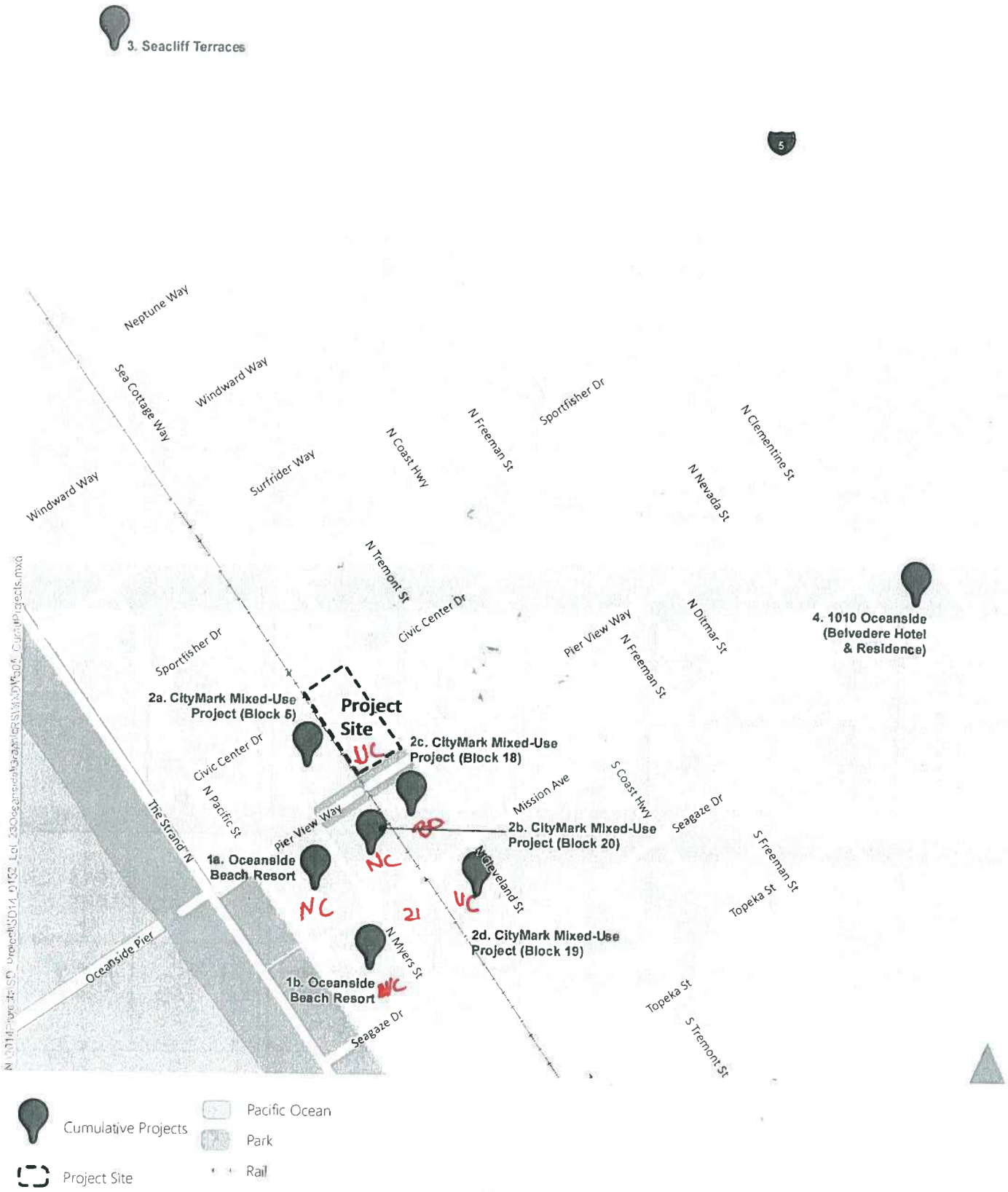
Notes:

[1]Net trip generation, distribution, and assignment estimates were directly taken from the *Traffic Impact Analysis – Oceanside Beach Resort* (Linscott, Law, & Greenspan Engineers, 2007).

[2]Net trip generation, distribution, and assignment estimates were directly taken from the *Mitigation Study for the CityMark Downtown Oceanside Development (CityMark DOD) Project* (Kimley-Horn and Associates, Inc., 2012). This source provides the updated CityMark DOD traffic analysis that reflects changes in the project's development program and the reconfiguration of Mission Avenue and Seagaze Drive since the completion of the *Traffic Impact Analysis – CityMark Downtown OceansideDevelopment* (Linscott, Law, & Greenspan Engineers, 2007). Additionally, since the updated CityMark DOD traffic analysis, Block 21 of the project has been completed and is now occupied. Thus, the trips associated with Block 21 were excluded from Mixed Use/Parking Lot 23's cumulative project analysis.

[3]Trip generation, distribution, and assignment estimates were directly taken from the *Traffic Impact Analysis – Seacliff Terrace* (Linscott, Law, & Greenspan Engineers, 2013).

[4]Trip generation, distribution, and assignment estimates were directly taken from the *Traffic Impact Study for The Belvedere Hotel & Residence, Oceanside* (K2 Traffic Engineering, Inc., 2013). The Belvedere Hotel & Residence project has been renamed to 1010 Oceanside.



NC = NOT CONSTRUCTED

UC = UNDER CONSTRUCTION

BO = BUILT & OCCUPIED

Figure 8

Cumulative Projects

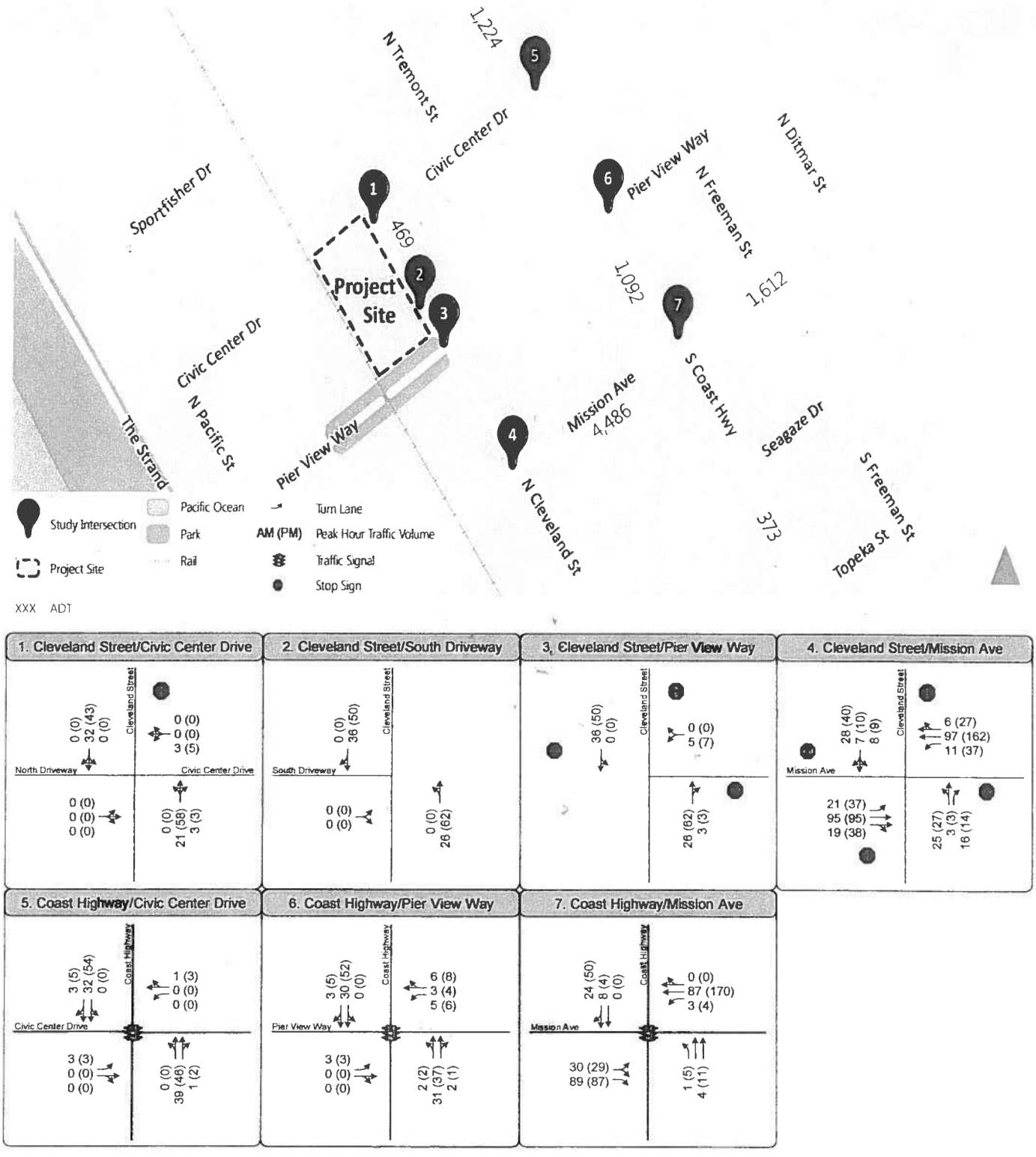


Figure 9

Cumulative Projects Trip Assignment

DRAFT

Traffic Impact Analysis for the Coast Highway Corridor Study

Prepared for City of Oceanside
by IBI Group

May 2, 2017

5 Future 2035 Conditions

This section provides a review of the future (2035) roadway system in the study area, the traffic volumes for the study intersections and key road segments, and presents the level of service analyses for the future (2035) conditions scenario.

As discussed in Section 2, the proposed project would transform Coast Highway into a complete street that accommodates all modes of travel in a safe and efficient manner. The key elements of the proposed project include a continuous Class II striped bicycle lane from Harbor Drive to the South City Limit, additional mid-block crosswalks, roundabouts in place of traffic signals, and other enhancements to landscaping and/or the roadway.

This section covers the following scenarios:

- Future Baseline (No Project) Conditions – Year 2035 analysis without project including:
  - Four-lane roadway throughout the Coast Highway corridor
  - General Plan land uses consistent with SANDAG's 2035 growth forecast
- Future Conditions with Project – Year 2035 analysis with project including:
  - Two-lane roadway throughout the Coast Highway corridor with roundabouts
  - Modified Vision Plan land uses
- Future Conditions with Project Alternative 1 – Year 2035 analysis with project including:
  - Two-lane roadway with roundabouts from Harbor Blvd to Oceanside Blvd and four-lane roadway with traffic signals south of Oceanside Blvd
  - Modified Vision Plan land uses
- Future Conditions with Project Alternative 2 – Year 2035 analysis with project including:
  - Two-lane roadway with roundabouts from Harbor Blvd to Oceanside Blvd and four-lane roadway with traffic signals south of Morse St
  - Modified Vision Plan land uses

5.1 Year 2035 Future Baseline (No Project) – General Plan

This section examines traffic conditions without the Coast Highway Corridor Project and includes 4 lanes throughout the corridor. The analysis was conducted for future (2035) conditions.

5.1.1 Road Segment Volumes

Road segment volumes have been included in Appendix A for use in noise modeling purposes. Future road segment volumes are extracted from SANDAG's regional model. In addition to a review of daily ADT volumes, peak hour roadway volumes are also provided for reference in Appendix A. Peak hour roadway volumes can provide a more appropriate depiction of traffic conditions compared with daily roadway capacity.

5.1.2 Intersection Level of Service

The intersection operations analysis for the future condition without project was performed consistent with the methodology outlined in Section 3. Of the 47 intersections analyzed in the study area, three intersections are projected to operate at a LOS of E or F. Table 5-1 presents the results for the future conditions traffic analysis without the proposed project. Figure 5-1 contains the traffic volumes used for the future condition analysis.

Table 5-1: LOS Analysis – Future Conditions without Project

	INTERSECTION	TRAFFIC CONTROL	AM PEAK HOUR		PM PEAK HOUR	
			Delay (s)	LOS	Delay (s)	LOS
1	Coast Highway - I-5 Ramps / Harbor Drive	Signalized	30.4	C	**65.3**	**E**
2	Coast Highway - SR-76 Ramps	Signalized	13.3	B	27.7	C
3	Surfrider Way - Pacific Street	AWSC	9.7	A	14.5	B
4	Coast Highway - Surfrider Way	Signalized	12.8	B	15.6	B
5	Coast Highway - Civic Center Drive	Signalized	26.8	C	14.6	B
6	Coast Highway - Pier View Way	Signalized	13.6	B	12.5	B
7	Pier View Way - Horne Street	AWSC	9.2	A	15.6	C
8	Mission Avenue - Pacific Street	AWSC	9.2	A	17.3	C
9	Mission Avenue - Cleveland Street	Signalized	30.4	C	18.5	B
10	Coast Highway - Mission Avenue	Signalized	10.6	B	14.0	B
11	Mission Avenue - Horne Street	Signalized	7.1	A	12.1	B
12	Seagaze Street - Tremont Street	SSSC	10.1	B	22.2	C
13	Coast Highway - Seagaze Street	Signalized	18.7	B	23.9	C
14	Seagaze Street - Freeman Street	SSSC	10.0	B	14.4	B
15	Seagaze Street - Ditmar Street	AWSC	8.5	A	33.3	D
16	Seagaze Street - Clementine Street	SSSC	8.1	A	14.1	B
17	Coast Highway - Missouri Avenue	SSSC	13.1	B	33.7	D
18	Coast Highway - Washington Avenue	SSSC	12.4	B	31.9	D
19	Wisconsin Avenue - Pacific Street	AWSC	9.7	A	28.7	D
20	Wisconsin Avenue - Tremont Street	SSSC	11.5	B	18.4	C
21	Coast Highway - Wisconsin Avenue	Signalized	10.6	B	19.3	B
22	Wisconsin Avenue - Freeman Street	SSSC	9.0	A	9.5	A
23	Wisconsin Avenue - Ditmar Street (North)	SSSC	9.6	A	9.8	A
24	Wisconsin Avenue - Ditmar Street (South)	AWSC	7.5	A	7.8	A
25	Oceanside Boulevard - Pacific Street	AWSC	8.4	A	9.8	A
26	Oceanside Boulevard - Tremont Street	SSSC	12.4	B	24.6	C
27	Coast Highway - Oceanside Boulevard	Signalized	16.4	B	**58.5**	**E**
28	Oceanside Boulevard - Ditmar Street	Signalized	19.1	B	8.1	A
29	Coast Highway - Morse Street	Signalized	16.4	B	15.5	B
30	Morse Street - Freeman Street	SSSC	9.8	A	13.1	B
31	Morse Street - Ditmar Street	SSSC	9.1	A	10.0	B
32	Cassidy Street - Pacific Street	AWSC	8.1	A	11.1	B
33	Cassidy Street - Broadway Street	SSSC	11.5	B	23.8	C
34	Cassidy Street - Tremont Street	SSSC	10.1	B	13.1	B
35	Coast Highway - Cassidy Street	Signalized	15.5	B	19.6	B
36	Cassidy Street - Freeman Street	SSSC	11.7	B	21.2	C
37	Cassidy Street - Ditmar Street	AWSC	8.7	A	11.6	B
38	Cassidy Street - Stewart Street	AWSC	11.0	B	24.5	C
39	Vista Way - Broadway Street	SSSC	7.8	A	8.2	A
40	Coast Highway - Vista Way	Signalized	25.0	C	45.1	D
41	Vista Way - Freeman Street	SSSC	13.5	B	20.0	C
42	Vista Way - Ditmar Street	SSSC	14.8	B	25.0	D

INTERSECTION		TRAFFIC CONTROL	AM PEAK HOUR		PM PEAK HOUR	
			Delay (s)	LOS	Delay (s)	LOS
43	Vista Way - Stewart Street	SSSC	13.2	B	20.2	C
44	Coast Highway - Eaton Street	SSSC	14.4	B	16.2	C
45	Coast Highway - Michigan Avenue	Signalized	7.5	A	6.6	A
46	Coast Highway - West Street	SSSC	11.4	B	18.0	C
47	Coast Highway - Kelly Street	SSSC	10.2	B	13.9	B

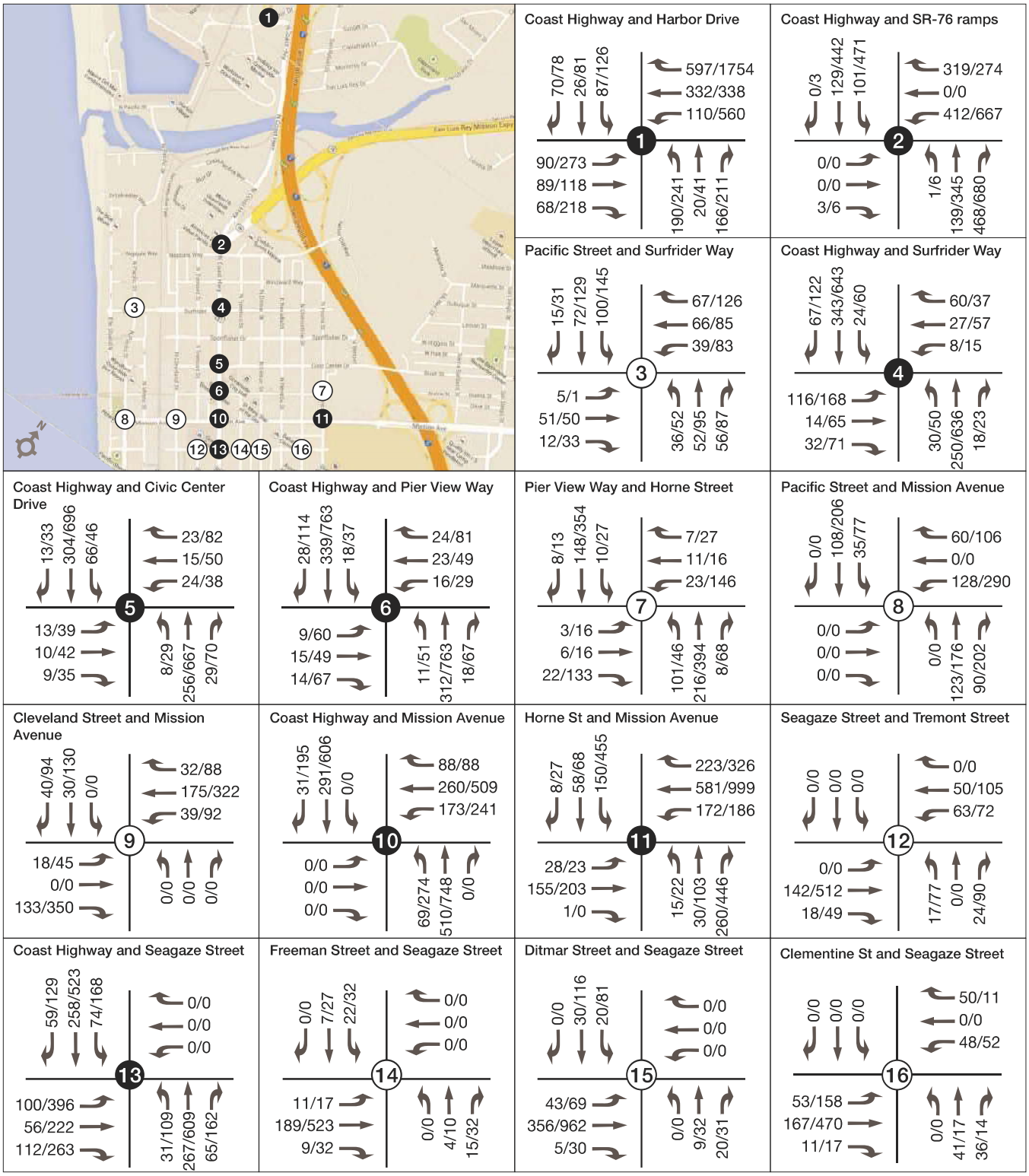
Notes:
A. Delay is expressed as an average seconds of delay per vehicle
B. LOS – Level of Service
C. AWSC – All-way stop control intersection
D. SSSC – Side-street stop control intersection
E. The minimum acceptable LOS is "D"
F. Existing volumes not available for Int 46 and Int 47; assumed 1-2-1 turning movement split for analysis of future scenarios

Three intersections were identified to operate below the minimum acceptable LOS D during the PM peak hour in the future baseline condition. The following intersections each would operate worse than LOS D for the PM period.

- Coast Highway and Harbor Drive / I-5 Ramps (#1)
- Coast Highway and Oceanside Boulevard (#27)

All other intersections would operate at LOS D or better during both peak hours.

Figure 5-1a Future (No Project) Peak Hour Volumes - AM & PM



Legend

● Signalized Intersections ○ Unsignalized Intersections ##/## AM/PM Turning Movement Volume

Figure 5-1b Future (No Project) Peak Hour Volumes - AM & PM

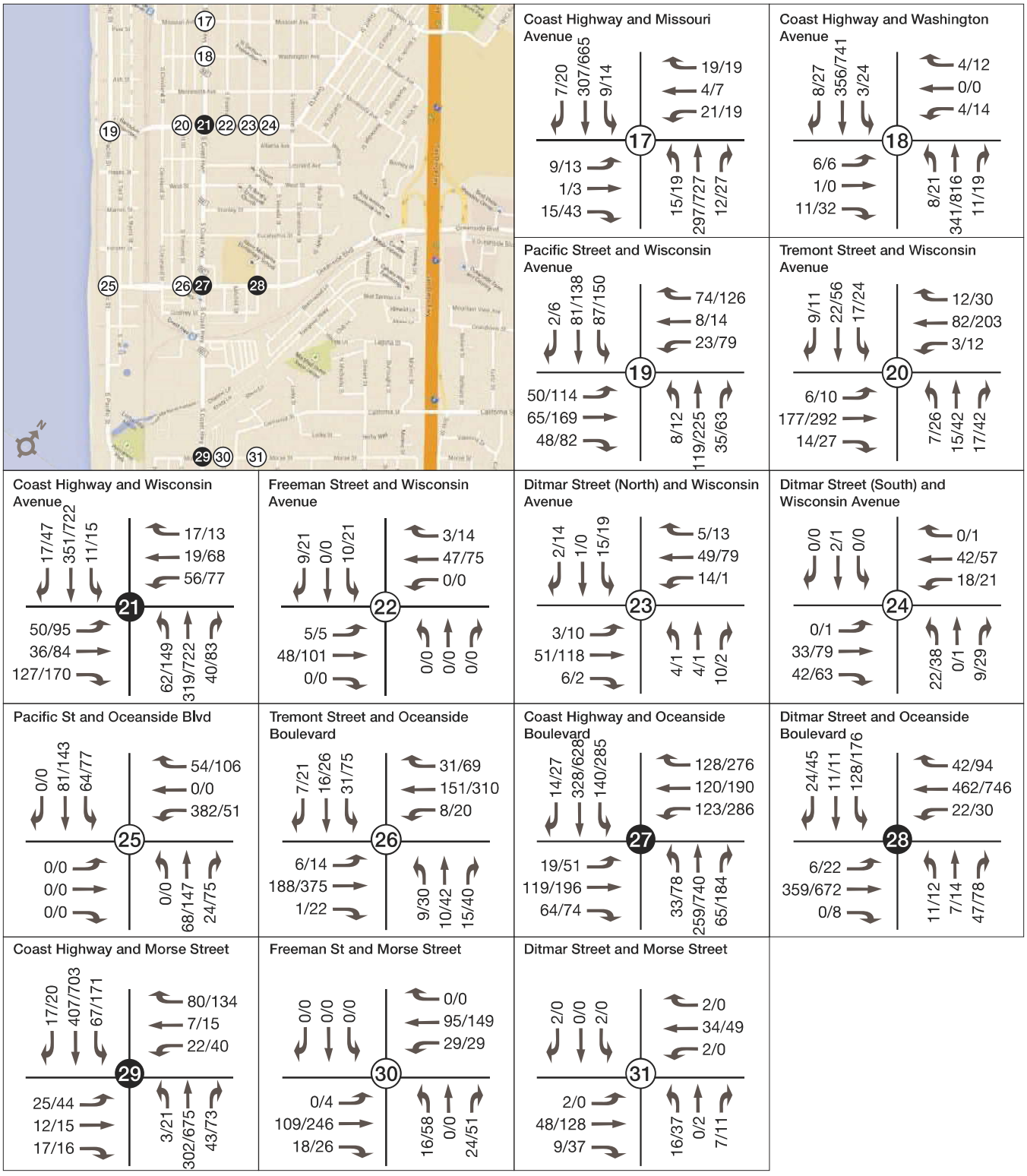
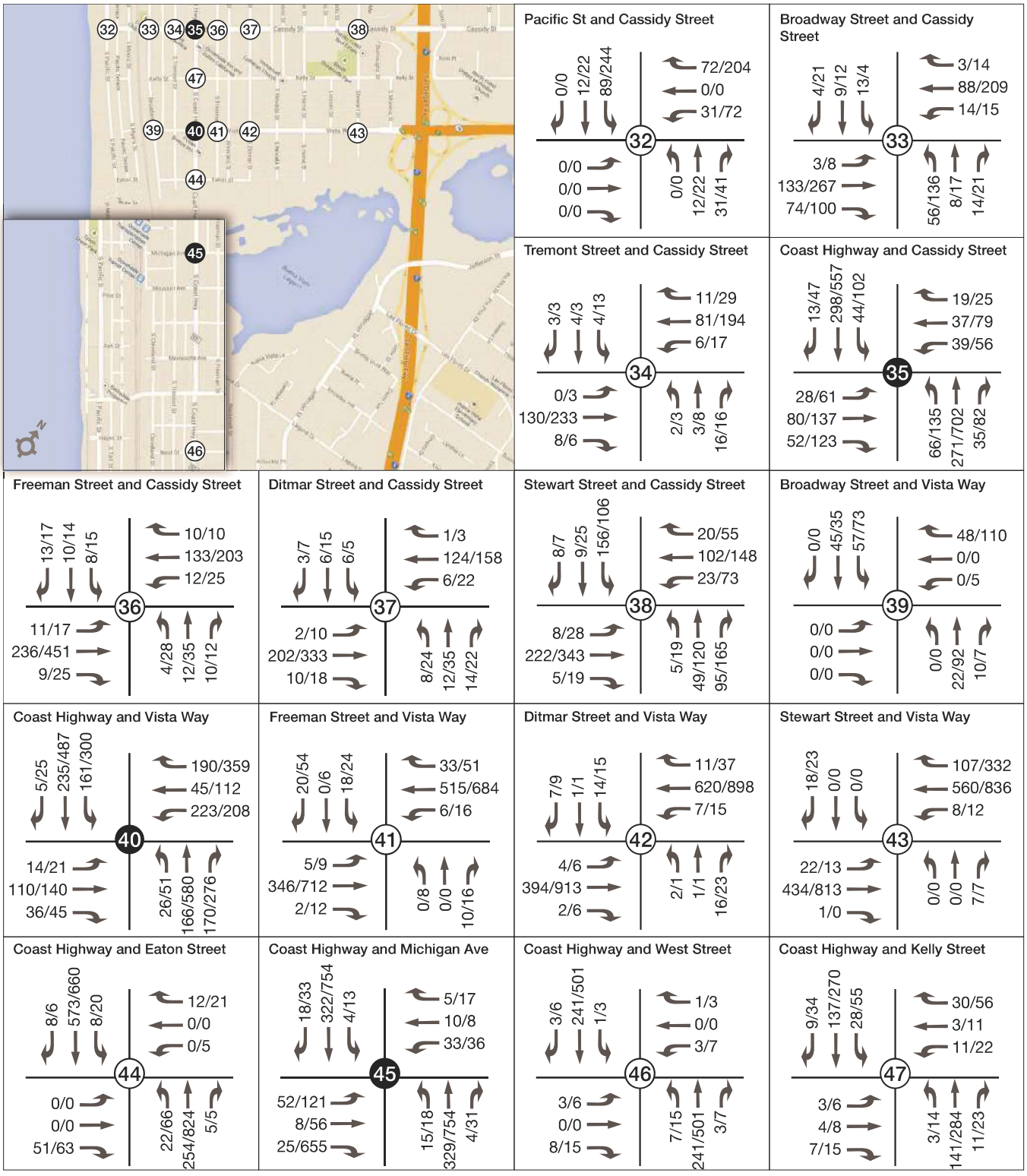


Figure 5-1c Future (No Project) Peak Hour Volumes - AM & PM



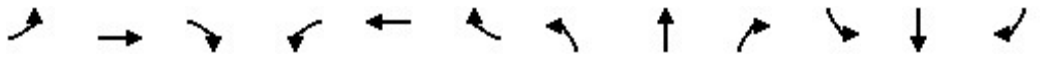
FUTURE WITHOUT PROJECT

Street Segment	From	To	Lanes	Classification	LOS E Capacity	Average Daily Traffic (ADT)			Peak Hour		
						Future (2035)	V/C	LOS	Future (2035)	V/C	LOS
Coast Hwy	Harbor Dr	SR-76 Ramps	2TWLT	Collector	15,000	17,600	1.173	F	1,580	0.617	B
	SR-76 Ramps	Civic Center Dr	4U	Secondary Collector	25,000	20,400	0.816	D	1,830	0.357	A
	Civic Center Dr	Seagaze Dr	4U	Secondary Collector	25,000	17,500	0.700	C	1,570	0.307	A
	Seagaze Dr	Wisconsin Ave	4U	Secondary Collector	25,000	18,000	0.720	D	1,620	0.316	A
	Wisconsin Ave	Oceanside Blvd	4U	Secondary Collector	25,000	22,700	0.908	E	2,040	0.398	A
	Oceanside Blvd	Morse St	4TWLT	Secondary Collector	30,000	21,500	0.717	D	1,940	0.379	A
	Morse St	Cassidy St	4U	Secondary Collector	25,000	17,500	0.700	C	1,570	0.307	A
	Cassidy St	Vista Way	4U	Secondary Collector	25,000	15,600	0.624	C	1,410	0.275	A
	Vista Way	Southern City Limits	3TWLT	Secondary Collector	22,500	17,200	0.764	D	1,540	0.401	A
Pacific St	Surfrider Way	Seagaze Dr	2U	Collector	10,000	11,700	1.170	F	1,050	0.410	A
	Seagaze Dr	Wisconsin Ave	2U	Collector	10,000	9,700	0.970	E	880	0.344	A
	Wisconsin Ave	Oceanside Blvd	2U	Collector	10,000	5,400	0.540	B	490	0.191	A
	Oceanside Blvd	Cassidy St	2U	Collector	10,000	5,400	0.540	B	490	0.191	A
Surfrider Way	Pacific St	Coast Hwy	2D	Collector	10,000	7,300	0.730	C	660	0.258	A
Mission Ave	Pacific St	Coast Hwy	4U	Secondary Collector	25,000	10,700	0.428	B	960	0.188	A
	Coast Hwy	Clementine St	4U	Secondary Collector	25,000	11,600	0.464	B	1,040	0.203	A
Seagaze St	Coast Hwy	Clementine St	2U	Collector	10,000	7,300	0.730	C	660	0.258	A
Cleveland St	Civic Center Dr	Mission Ave	2U	Collector	10,000	3,500	0.350	A	310	0.121	A
Tremont St	Michigan Ave	Wisconsin Ave	2U	Local	2,200	1,800	0.818	A	160	0.063	A
	Wisconsin Ave	Oceanside Blvd	2U	Local	2,200	1,500	0.682	A	130	0.051	A
	Cassidy St	Vista Way	2U	Local	2,200	300	0.136	A	30	0.012	A
Freeman St	Michigan Ave	Wisconsin Ave	2U	Local	2,200	400	0.182	A	40	0.016	A
	Morse St	Cassidy St	2U	Local	2,200	2,200	1.000	C	200	0.078	A
Ditmar St	Michigan Ave	Wisconsin Ave	2U	Local	2,200	900	0.409	A	80	0.031	A
	Wisconsin Ave	Oceanside Blvd	2U	Collector	10,000	4,300	0.430	B	390	0.152	A
	Morse St	Cassidy St	2U	Local	2,200	1,200	0.545	A	110	0.043	A
Wisconsin Ave	Cleveland	Coast Hwy	2U	Collector	10,000	6,900	0.690	C	620	0.242	A
	Coast Hwy	Ditmar St	2U	Collector	10,000	2,000	0.200	A	180	0.070	A
Oceanside Blvd	Cleveland	Coast Hwy	2U	Collector	10,000	6,900	0.690	C	620	0.242	A
	Coast Hwy	Ditmar St	4U	Secondary Collector	25,000	17,300	0.692	C	1,550	0.303	A
Broadway St	Cassidy St	Vista Way	2U	Collector	10,000	3,400	0.340	A	310	0.121	A
Morse St	Coast Hwy	Ditmar St	2U	Collector	10,000	5,100	0.510	B	460	0.180	A
Cassidy St	Broadway St	Coast Hwy	2U	Collector	10,000	2,500	0.250	A	230	0.090	A
	Coast Hwy	Ditmar St	2U	Collector	10,000	7,600	0.760	D	690	0.270	A
Vista Way	Broadway St	Coast Hwy	2U	Collector	10,000	3,100	0.310	A	280	0.109	A
	Coast Hwy	Ditmar St	3TWLT	Collector	22,500	18,400	0.818	D	1,650	0.430	A

Notes:
A. #D - Total number of lanes in both directions divided by a raised median
B. #U - Total number of undivided lanes in both directions
C. #TWLT - Total number of lanes in both directions with a center continous two-way left turn lane
D. LOS E capacity is based on criteria estaglished in the City of Oceanside Circulation Element and/or County of San Diego Public Road Standards
E. Peak hour volumes uses HCM 2000 methodology; 9% peak hour factor and 20% volume reduction per lane was assumed (due to posted 25mph signs)
F. ADT - Average Daily Traffic Volumes
G. LOS - Level of Service

APPENDIX D

Alternative LOS Analysis at Coast Highway – I-5 SB ramps/Harbor Drive



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	273	118	218	603	338	1754	241	41	211	126	92	78
Future Volume (veh/h)	273	118	218	603	338	1754	241	41	211	126	92	78
Number	5	2	12	1	6	16	3	8	18	7	4	14
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1863	1863	1863	1863	1900	1863	1863	1900	1863	1863
Adj Flow Rate, veh/h	297	128	237	655	367	1907	262	45	229	137	100	85
Adj No. of Lanes	1	1	1	1	1	2	0	1	1	0	1	1
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	312	522	444	473	692	1629	223	38	232	150	109	227
Arrive On Green	0.18	0.28	0.28	0.27	0.37	0.37	0.15	0.15	0.15	0.14	0.14	0.14
Sat Flow, veh/h	1774	1863	1583	1774	1863	3167	1525	262	1583	1047	764	1583
Grp Volume(v), veh/h	297	128	237	655	367	1907	307	0	229	237	0	85
Grp Sat Flow(s),veh/h/ln	1774	1863	1583	1774	1863	1583	1787	0	1583	1810	0	1583
Q Serve(g_s), s	24.8	7.9	18.9	39.9	23.1	55.5	21.9	0.0	21.6	19.3	0.0	7.3
Cycle Q Clear(g_c), s	24.8	7.9	18.9	39.9	23.1	55.5	21.9	0.0	21.6	19.3	0.0	7.3
Prop In Lane	1.00		1.00	1.00		1.00	0.85		1.00	0.58		1.00
Lane Grp Cap(c), veh/h	312	522	444	473	692	1629	262	0	232	259	0	227
V/C Ratio(X)	0.95	0.25	0.53	1.38	0.53	1.17	1.17	0.00	0.99	0.91	0.00	0.38
Avail Cap(c_a), veh/h	312	522	444	473	692	1629	262	0	232	265	0	232
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	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	61.0	41.6	45.5	54.8	36.8	31.1	63.8	0.0	63.7	63.2	0.0	58.0
Incr Delay (d2), s/veh	38.1	0.2	1.2	185.3	0.8	83.8	110.7	0.0	55.3	33.3	0.0	1.0
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	15.4	4.1	8.4	43.8	12.0	52.4	18.8	0.0	13.0	12.1	0.0	3.3
LnGrp Delay(d),s/veh	99.1	41.8	46.8	240.1	37.6	114.9	174.5	0.0	119.0	96.4	0.0	59.0
LnGrp LOS	F	D	D	F	D	F	F		F	F		E
Approach Vol, veh/h		662			2929			536			322	
Approach Delay, s/veh		69.3			133.2			150.8			86.5	
Approach LOS		E			F			F			F	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4	5	6		8
Phs Duration (G+Y+Rc), s	46.0	48.0		27.5	32.4	61.6		28.0
Change Period (Y+Rc), s	6.1	6.1		6.1	6.1	6.1		6.1
Max Green Setting (Gmax), s	39.9	41.9		21.9	26.3	55.5		21.9
Max Q Clear Time (g_c+I1), s	41.9	20.9		21.3	26.8	57.5		23.9
Green Ext Time (p_c), s	0.0	1.4		0.1	0.0	0.0		0.0

Intersection Summary	
HCM 2010 Ctrl Delay	122.4
HCM 2010 LOS	F

Notes

User approved volume balancing among the lanes for turning movement.

APPENDIX E

Freeway Mainline Segment Analysis Worksheets

HCS7 Basic Freeway Report

Project Information

Analyst	Amanda Meroux	Date	10/2/2019
Agency	Dudek	Analysis Year	2019
Jurisdiction	Caltrans	Time Period Analyzed	Existing AM
Project Description	I-5: Mission Avenue to Oceanside Boulevard NB	Unit	United States Customary

Geometric Data

Number of Lanes, ln	4	Terrain Type	Level
Segment Length (L), ft	-	Percent Grade, %	-
Measured or Base Free-Flow Speed	Measured	Grade Length, mi	-
Base Free-Flow Speed (BFFS), mi/h	69.9	Total Ramp Density (TRD), ramps/mi	-
Lane Width, ft	-	Free-Flow Speed (FFS), mi/h	69.9
Right-Side Lateral Clearance, ft	-		

Adjustment Factors

Driver Population	Mostly Familiar	Final Speed Adjustment Factor (SAF)	0.975
Weather Type	Non-Severe Weather	Final Capacity Adjustment Factor (CAF)	0.968
Incident Type	No Incident	Demand Adjustment Factor (DAF)	1.000

Demand and Capacity

Demand Volume veh/h	5422	Heavy Vehicle Adjustment Factor (f_{HV})	0.983
Peak Hour Factor	0.94	Flow Rate (V_p), pc/h/ln	1467
Total Trucks, %	1.70	Capacity (c), pc/h/ln	2382
Single-Unit Trucks (SUT), %	-	Adjusted Capacity (c_{adj}), pc/h/ln	2306
Tractor-Trailers (TT), %	-	Volume-to-Capacity Ratio (v/c)	0.64
Passenger Car Equivalent (E_T)	2.000		

Speed and Density

Lane Width Adjustment (f_{LW})	-	Average Speed (S), mi/h	67.2
Right-Side Lateral Clearance Adj. (f_{RLC})	-	Density (D), pc/mi/ln	21.8
Total Ramp Density Adjustment	-	Level of Service (LOS)	C
Adjusted Free-Flow Speed (FFS_{adj}), mi/h	68.2		

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HCS7 Basic Freeway Report

Project Information

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Project Description	I-5: Mission Avenue to Oceanside Boulevard SB	Unit	United States Customary

Geometric Data

Number of Lanes, ln	4	Terrain Type	Level
Segment Length (L), ft	-	Percent Grade, %	-
Measured or Base Free-Flow Speed	Measured	Grade Length, mi	-
Base Free-Flow Speed (BFFS), mi/h	69.5	Total Ramp Density (TRD), ramps/mi	-
Lane Width, ft	-	Free-Flow Speed (FFS), mi/h	69.5
Right-Side Lateral Clearance, ft	-		

Adjustment Factors

Driver Population	Mostly Familiar	Final Speed Adjustment Factor (SAF)	0.975
Weather Type	Non-Severe Weather	Final Capacity Adjustment Factor (CAF)	0.968
Incident Type	No Incident	Demand Adjustment Factor (DAF)	1.000

Demand and Capacity

Demand Volume veh/h	5344	Heavy Vehicle Adjustment Factor (f_{HV})	0.986
Peak Hour Factor	0.94	Flow Rate (V_p), pc/h/ln	1442
Total Trucks, %	1.39	Capacity (c), pc/h/ln	2378
Single-Unit Trucks (SUT), %	-	Adjusted Capacity (c_{adj}), pc/h/ln	2302
Tractor-Trailers (TT), %	-	Volume-to-Capacity Ratio (v/c)	0.63
Passenger Car Equivalent (E_T)	2.000		

Speed and Density

Lane Width Adjustment (f_{LW})	-	Average Speed (S), mi/h	67.0
Right-Side Lateral Clearance Adj. (f_{RLC})	-	Density (D), pc/mi/ln	21.5
Total Ramp Density Adjustment	-	Level of Service (LOS)	C
Adjusted Free-Flow Speed (FFS_{adj}), mi/h	67.8		

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Project Description	I-5: Mission Avenue to Oceanside Boulevard NB	Unit	United States Customary

Geometric Data

Number of Lanes, ln	4	Terrain Type	Level
Segment Length (L), ft	-	Percent Grade, %	-
Measured or Base Free-Flow Speed	Measured	Grade Length, mi	-
Base Free-Flow Speed (BFFS), mi/h	68.5	Total Ramp Density (TRD), ramps/mi	-
Lane Width, ft	-	Free-Flow Speed (FFS), mi/h	68.5
Right-Side Lateral Clearance, ft	-		

Adjustment Factors

Driver Population	Mostly Familiar	Final Speed Adjustment Factor (SAF)	0.975
Weather Type	Non-Severe Weather	Final Capacity Adjustment Factor (CAF)	0.968
Incident Type	No Incident	Demand Adjustment Factor (DAF)	1.000

Demand and Capacity

Demand Volume veh/h	5516	Heavy Vehicle Adjustment Factor (f_{HV})	0.985
Peak Hour Factor	0.94	Flow Rate (V_p), pc/h/ln	1489
Total Trucks, %	1.53	Capacity (c), pc/h/ln	2368
Single-Unit Trucks (SUT), %	-	Adjusted Capacity (c_{adj}), pc/h/ln	2292
Tractor-Trailers (TT), %	-	Volume-to-Capacity Ratio (v/c)	0.65
Passenger Car Equivalent (E_T)	2.000		

Speed and Density

Lane Width Adjustment (f_{LW})	-	Average Speed (S), mi/h	65.9
Right-Side Lateral Clearance Adj. (f_{RLC})	-	Density (D), pc/mi/ln	22.6
Total Ramp Density Adjustment	-	Level of Service (LOS)	C
Adjusted Free-Flow Speed (FFS_{adj}), mi/h	66.8		

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Geometric Data

Number of Lanes, ln	4	Terrain Type	Level
Segment Length (L), ft	-	Percent Grade, %	-
Measured or Base Free-Flow Speed	Measured	Grade Length, mi	-
Base Free-Flow Speed (BFFS), mi/h	68.0	Total Ramp Density (TRD), ramps/mi	-
Lane Width, ft	-	Free-Flow Speed (FFS), mi/h	68.0
Right-Side Lateral Clearance, ft	-		

Adjustment Factors

Driver Population	Mostly Familiar	Final Speed Adjustment Factor (SAF)	0.975
Weather Type	Non-Severe Weather	Final Capacity Adjustment Factor (CAF)	0.968
Incident Type	No Incident	Demand Adjustment Factor (DAF)	1.000

Demand and Capacity

Demand Volume veh/h	6104	Heavy Vehicle Adjustment Factor (f_{HV})	0.988
Peak Hour Factor	0.94	Flow Rate (V_p), pc/h/ln	1643
Total Trucks, %	1.21	Capacity (c), pc/h/ln	2363
Single-Unit Trucks (SUT), %	-	Adjusted Capacity (c_{adj}), pc/h/ln	2287
Tractor-Trailers (TT), %	-	Volume-to-Capacity Ratio (v/c)	0.72
Passenger Car Equivalent (E_T)	2.000		

Speed and Density

Lane Width Adjustment (f_{LW})	-	Average Speed (S), mi/h	64.2
Right-Side Lateral Clearance Adj. (f_{RLC})	-	Density (D), pc/mi/ln	25.6
Total Ramp Density Adjustment	-	Level of Service (LOS)	C
Adjusted Free-Flow Speed (FFS_{adj}), mi/h	66.3		

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HCS7 Basic Freeway Report

Project Information

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Jurisdiction	Caltrans	Time Period Analyzed	Existing AM
Project Description	I-5: SR-76 to Mission Avenue NB	Unit	United States Customary

Geometric Data

Number of Lanes, ln	4	Terrain Type	Level
Segment Length (L), ft	-	Percent Grade, %	-
Measured or Base Free-Flow Speed	Measured	Grade Length, mi	-
Base Free-Flow Speed (BFFS), mi/h	70.2	Total Ramp Density (TRD), ramps/mi	-
Lane Width, ft	-	Free-Flow Speed (FFS), mi/h	70.2
Right-Side Lateral Clearance, ft	-		

Adjustment Factors

Driver Population	Mostly Familiar	Final Speed Adjustment Factor (SAF)	0.975
Weather Type	Non-Severe Weather	Final Capacity Adjustment Factor (CAF)	0.968
Incident Type	No Incident	Demand Adjustment Factor (DAF)	1.000

Demand and Capacity

Demand Volume veh/h	5009	Heavy Vehicle Adjustment Factor (f_{HV})	0.960
Peak Hour Factor	0.94	Flow Rate (V_p), pc/h/ln	1388
Total Trucks, %	4.22	Capacity (c), pc/h/ln	2384
Single-Unit Trucks (SUT), %	-	Adjusted Capacity (c_{adj}), pc/h/ln	2308
Tractor-Trailers (TT), %	-	Volume-to-Capacity Ratio (v/c)	0.60
Passenger Car Equivalent (E_T)	2.000		

Speed and Density

Lane Width Adjustment (f_{LW})	-	Average Speed (S), mi/h	67.8
Right-Side Lateral Clearance Adj. (f_{RLC})	-	Density (D), pc/mi/ln	20.5
Total Ramp Density Adjustment	-	Level of Service (LOS)	C
Adjusted Free-Flow Speed (FFS_{adj}), mi/h	68.4		

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Jurisdiction	Caltrans	Time Period Analyzed	Existing AM
Project Description	I-5: SR-76 to Mission Avenue SB	Unit	United States Customary

Geometric Data

Number of Lanes, ln	4	Terrain Type	Level
Segment Length (L), ft	-	Percent Grade, %	-
Measured or Base Free-Flow Speed	Measured	Grade Length, mi	-
Base Free-Flow Speed (BFFS), mi/h	66.6	Total Ramp Density (TRD), ramps/mi	-
Lane Width, ft	-	Free-Flow Speed (FFS), mi/h	66.6
Right-Side Lateral Clearance, ft	-		

Adjustment Factors

Driver Population	Mostly Familiar	Final Speed Adjustment Factor (SAF)	0.975
Weather Type	Non-Severe Weather	Final Capacity Adjustment Factor (CAF)	0.968
Incident Type	No Incident	Demand Adjustment Factor (DAF)	1.000

Demand and Capacity

Demand Volume veh/h	4248	Heavy Vehicle Adjustment Factor (f_{HV})	0.937
Peak Hour Factor	0.94	Flow Rate (V_p), pc/h/ln	1206
Total Trucks, %	6.77	Capacity (c), pc/h/ln	2349
Single-Unit Trucks (SUT), %	-	Adjusted Capacity (c_{adj}), pc/h/ln	2274
Tractor-Trailers (TT), %	-	Volume-to-Capacity Ratio (v/c)	0.53
Passenger Car Equivalent (E_T)	2.000		

Speed and Density

Lane Width Adjustment (f_{LW})	-	Average Speed (S), mi/h	64.9
Right-Side Lateral Clearance Adj. (f_{RLC})	-	Density (D), pc/mi/ln	18.6
Total Ramp Density Adjustment	-	Level of Service (LOS)	C
Adjusted Free-Flow Speed (FFS_{adj}), mi/h	64.9		

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HCS7 Basic Freeway Report

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Project Description	I-5: SR-76 to Mission Avenue NB	Unit	United States Customary

Geometric Data

Number of Lanes, ln	4	Terrain Type	Level
Segment Length (L), ft	-	Percent Grade, %	-
Measured or Base Free-Flow Speed	Measured	Grade Length, mi	-
Base Free-Flow Speed (BFFS), mi/h	67.8	Total Ramp Density (TRD), ramps/mi	-
Lane Width, ft	-	Free-Flow Speed (FFS), mi/h	67.8
Right-Side Lateral Clearance, ft	-		

Adjustment Factors

Driver Population	Mostly Familiar	Final Speed Adjustment Factor (SAF)	0.975
Weather Type	Non-Severe Weather	Final Capacity Adjustment Factor (CAF)	0.968
Incident Type	No Incident	Demand Adjustment Factor (DAF)	1.000

Demand and Capacity

Demand Volume veh/h	4516	Heavy Vehicle Adjustment Factor (f_{HV})	0.966
Peak Hour Factor	0.94	Flow Rate (V_p), pc/h/ln	1243
Total Trucks, %	3.47	Capacity (c), pc/h/ln	2361
Single-Unit Trucks (SUT), %	-	Adjusted Capacity (c_{adj}), pc/h/ln	2285
Tractor-Trailers (TT), %	-	Volume-to-Capacity Ratio (v/c)	0.54
Passenger Car Equivalent (E_T)	2.000		

Speed and Density

Lane Width Adjustment (f_{LW})	-	Average Speed (S), mi/h	66.1
Right-Side Lateral Clearance Adj. (f_{RLC})	-	Density (D), pc/mi/ln	18.8
Total Ramp Density Adjustment	-	Level of Service (LOS)	C
Adjusted Free-Flow Speed (FFS_{adj}), mi/h	66.1		

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HCS7 Basic Freeway Report

Project Information

Analyst	Amanda Meroux	Date	10/2/2019
Agency	Dudek	Analysis Year	2019
Jurisdiction	Caltrans	Time Period Analyzed	Existing PM
Project Description	I-5: SR-76 to Mission Avenue SB	Unit	United States Customary

Geometric Data

Number of Lanes, ln	4	Terrain Type	Level
Segment Length (L), ft	-	Percent Grade, %	-
Measured or Base Free-Flow Speed	Measured	Grade Length, mi	-
Base Free-Flow Speed (BFFS), mi/h	68.6	Total Ramp Density (TRD), ramps/mi	-
Lane Width, ft	-	Free-Flow Speed (FFS), mi/h	68.6
Right-Side Lateral Clearance, ft	-		

Adjustment Factors

Driver Population	Mostly Familiar	Final Speed Adjustment Factor (SAF)	0.975
Weather Type	Non-Severe Weather	Final Capacity Adjustment Factor (CAF)	0.968
Incident Type	No Incident	Demand Adjustment Factor (DAF)	1.000

Demand and Capacity

Demand Volume veh/h	5514	Heavy Vehicle Adjustment Factor (f_{HV})	0.949
Peak Hour Factor	0.94	Flow Rate (V_p), pc/h/ln	1545
Total Trucks, %	5.32	Capacity (c), pc/h/ln	2369
Single-Unit Trucks (SUT), %	-	Adjusted Capacity (c_{adj}), pc/h/ln	2293
Tractor-Trailers (TT), %	-	Volume-to-Capacity Ratio (v/c)	0.67
Passenger Car Equivalent (E_T)	2.000		

Speed and Density

Lane Width Adjustment (f_{LW})	-	Average Speed (S), mi/h	65.6
Right-Side Lateral Clearance Adj. (f_{RLC})	-	Density (D), pc/mi/ln	23.6
Total Ramp Density Adjustment	-	Level of Service (LOS)	C
Adjusted Free-Flow Speed (FFS_{adj}), mi/h	66.9		

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HCS7 Basic Freeway Report

Project Information

Analyst	Amanda Meroux	Date	10/2/2019
Agency	Dudek	Analysis Year	2019
Jurisdiction	Caltrans	Time Period Analyzed	Existing plus Project AM
Project Description	I-5: Mission Avenue to Oceanside Boulevard NB	Unit	United States Customary

Geometric Data

Number of Lanes, ln	4	Terrain Type	Level
Segment Length (L), ft	-	Percent Grade, %	-
Measured or Base Free-Flow Speed	Measured	Grade Length, mi	-
Base Free-Flow Speed (BFFS), mi/h	69.9	Total Ramp Density (TRD), ramps/mi	-
Lane Width, ft	-	Free-Flow Speed (FFS), mi/h	69.9
Right-Side Lateral Clearance, ft	-		

Adjustment Factors

Driver Population	Mostly Familiar	Final Speed Adjustment Factor (SAF)	0.975
Weather Type	Non-Severe Weather	Final Capacity Adjustment Factor (CAF)	0.968
Incident Type	No Incident	Demand Adjustment Factor (DAF)	1.000

Demand and Capacity

Demand Volume veh/h	5446	Heavy Vehicle Adjustment Factor (f_{HV})	0.983
Peak Hour Factor	0.94	Flow Rate (V_p), pc/h/ln	1474
Total Trucks, %	1.70	Capacity (c), pc/h/ln	2382
Single-Unit Trucks (SUT), %	-	Adjusted Capacity (c_{adj}), pc/h/ln	2306
Tractor-Trailers (TT), %	-	Volume-to-Capacity Ratio (v/c)	0.64
Passenger Car Equivalent (E_T)	2.000		

Speed and Density

Lane Width Adjustment (f_{LW})	-	Average Speed (S), mi/h	67.1
Right-Side Lateral Clearance Adj. (f_{RLC})	-	Density (D), pc/mi/ln	22.0
Total Ramp Density Adjustment	-	Level of Service (LOS)	C
Adjusted Free-Flow Speed (FFS_{adj}), mi/h	68.2		

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Project Information

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Project Description	I-5: Mission Avenue to Oceanside Boulevard SB	Unit	United States Customary

Geometric Data

Number of Lanes, ln	4	Terrain Type	Level
Segment Length (L), ft	-	Percent Grade, %	-
Measured or Base Free-Flow Speed	Measured	Grade Length, mi	-
Base Free-Flow Speed (BFFS), mi/h	69.5	Total Ramp Density (TRD), ramps/mi	-
Lane Width, ft	-	Free-Flow Speed (FFS), mi/h	69.5
Right-Side Lateral Clearance, ft	-		

Adjustment Factors

Driver Population	Mostly Familiar	Final Speed Adjustment Factor (SAF)	0.975
Weather Type	Non-Severe Weather	Final Capacity Adjustment Factor (CAF)	0.968
Incident Type	No Incident	Demand Adjustment Factor (DAF)	1.000

Demand and Capacity

Demand Volume veh/h	5400	Heavy Vehicle Adjustment Factor (f_{HV})	0.986
Peak Hour Factor	0.94	Flow Rate (V_p), pc/h/ln	1456
Total Trucks, %	1.39	Capacity (c), pc/h/ln	2378
Single-Unit Trucks (SUT), %	-	Adjusted Capacity (c_{adj}), pc/h/ln	2302
Tractor-Trailers (TT), %	-	Volume-to-Capacity Ratio (v/c)	0.63
Passenger Car Equivalent (E_T)	2.000		

Speed and Density

Lane Width Adjustment (f_{LW})	-	Average Speed (S), mi/h	66.9
Right-Side Lateral Clearance Adj. (f_{RLC})	-	Density (D), pc/mi/ln	21.8
Total Ramp Density Adjustment	-	Level of Service (LOS)	C
Adjusted Free-Flow Speed (FFS_{adj}), mi/h	67.8		

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Project Information

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Project Description	I-5: Mission Avenue to Oceanside Boulevard NB	Unit	United States Customary

Geometric Data

Number of Lanes, ln	4	Terrain Type	Level
Segment Length (L), ft	-	Percent Grade, %	-
Measured or Base Free-Flow Speed	Measured	Grade Length, mi	-
Base Free-Flow Speed (BFFS), mi/h	68.5	Total Ramp Density (TRD), ramps/mi	-
Lane Width, ft	-	Free-Flow Speed (FFS), mi/h	68.5
Right-Side Lateral Clearance, ft	-		

Adjustment Factors

Driver Population	Mostly Familiar	Final Speed Adjustment Factor (SAF)	0.975
Weather Type	Non-Severe Weather	Final Capacity Adjustment Factor (CAF)	0.968
Incident Type	No Incident	Demand Adjustment Factor (DAF)	1.000

Demand and Capacity

Demand Volume veh/h	5571	Heavy Vehicle Adjustment Factor (f_{HV})	0.985
Peak Hour Factor	0.94	Flow Rate (V_p), pc/h/ln	1504
Total Trucks, %	1.53	Capacity (c), pc/h/ln	2368
Single-Unit Trucks (SUT), %	-	Adjusted Capacity (c_{adj}), pc/h/ln	2292
Tractor-Trailers (TT), %	-	Volume-to-Capacity Ratio (v/c)	0.66
Passenger Car Equivalent (E_T)	2.000		

Speed and Density

Lane Width Adjustment (f_{LW})	-	Average Speed (S), mi/h	65.8
Right-Side Lateral Clearance Adj. (f_{RLC})	-	Density (D), pc/mi/ln	22.9
Total Ramp Density Adjustment	-	Level of Service (LOS)	C
Adjusted Free-Flow Speed (FFS_{adj}), mi/h	66.8		

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Project Information

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Project Description	I-5: Mission Avenue to Oceanside Boulevard SB	Unit	United States Customary

Geometric Data

Number of Lanes, ln	4	Terrain Type	Level
Segment Length (L), ft	-	Percent Grade, %	-
Measured or Base Free-Flow Speed	Measured	Grade Length, mi	-
Base Free-Flow Speed (BFFS), mi/h	68.0	Total Ramp Density (TRD), ramps/mi	-
Lane Width, ft	-	Free-Flow Speed (FFS), mi/h	68.0
Right-Side Lateral Clearance, ft	-		

Adjustment Factors

Driver Population	Mostly Familiar	Final Speed Adjustment Factor (SAF)	0.975
Weather Type	Non-Severe Weather	Final Capacity Adjustment Factor (CAF)	0.968
Incident Type	No Incident	Demand Adjustment Factor (DAF)	1.000

Demand and Capacity

Demand Volume veh/h	6130	Heavy Vehicle Adjustment Factor (f_{HV})	0.988
Peak Hour Factor	0.94	Flow Rate (V_p), pc/h/ln	1650
Total Trucks, %	1.21	Capacity (c), pc/h/ln	2363
Single-Unit Trucks (SUT), %	-	Adjusted Capacity (c_{adj}), pc/h/ln	2287
Tractor-Trailers (TT), %	-	Volume-to-Capacity Ratio (v/c)	0.72
Passenger Car Equivalent (E_T)	2.000		

Speed and Density

Lane Width Adjustment (f_{LW})	-	Average Speed (S), mi/h	64.1
Right-Side Lateral Clearance Adj. (f_{RLC})	-	Density (D), pc/mi/ln	25.7
Total Ramp Density Adjustment	-	Level of Service (LOS)	C
Adjusted Free-Flow Speed (FFS_{adj}), mi/h	66.3		

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Project Description	I-5: SR-76 to Mission Avenue NB	Unit	United States Customary

Geometric Data

Number of Lanes, ln	4	Terrain Type	Level
Segment Length (L), ft	-	Percent Grade, %	-
Measured or Base Free-Flow Speed	Measured	Grade Length, mi	-
Base Free-Flow Speed (BFFS), mi/h	70.2	Total Ramp Density (TRD), ramps/mi	-
Lane Width, ft	-	Free-Flow Speed (FFS), mi/h	70.2
Right-Side Lateral Clearance, ft	-		

Adjustment Factors

Driver Population	Mostly Familiar	Final Speed Adjustment Factor (SAF)	0.975
Weather Type	Non-Severe Weather	Final Capacity Adjustment Factor (CAF)	0.968
Incident Type	No Incident	Demand Adjustment Factor (DAF)	1.000

Demand and Capacity

Demand Volume veh/h	5033	Heavy Vehicle Adjustment Factor (f_{HV})	0.960
Peak Hour Factor	0.94	Flow Rate (V_p), pc/h/ln	1394
Total Trucks, %	4.22	Capacity (c), pc/h/ln	2384
Single-Unit Trucks (SUT), %	-	Adjusted Capacity (c_{adj}), pc/h/ln	2308
Tractor-Trailers (TT), %	-	Volume-to-Capacity Ratio (v/c)	0.60
Passenger Car Equivalent (E_T)	2.000		

Speed and Density

Lane Width Adjustment (f_{LW})	-	Average Speed (S), mi/h	67.8
Right-Side Lateral Clearance Adj. (f_{RLC})	-	Density (D), pc/mi/ln	20.6
Total Ramp Density Adjustment	-	Level of Service (LOS)	C
Adjusted Free-Flow Speed (FFS_{adj}), mi/h	68.4		

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Project Information

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Project Description	I-5: SR-76 to Mission Avenue SB	Unit	United States Customary

Geometric Data

Number of Lanes, ln	4	Terrain Type	Level
Segment Length (L), ft	-	Percent Grade, %	-
Measured or Base Free-Flow Speed	Measured	Grade Length, mi	-
Base Free-Flow Speed (BFFS), mi/h	66.6	Total Ramp Density (TRD), ramps/mi	-
Lane Width, ft	-	Free-Flow Speed (FFS), mi/h	66.6
Right-Side Lateral Clearance, ft	-		

Adjustment Factors

Driver Population	Mostly Familiar	Final Speed Adjustment Factor (SAF)	0.975
Weather Type	Non-Severe Weather	Final Capacity Adjustment Factor (CAF)	0.968
Incident Type	No Incident	Demand Adjustment Factor (DAF)	1.000

Demand and Capacity

Demand Volume veh/h	4304	Heavy Vehicle Adjustment Factor (f_{HV})	0.937
Peak Hour Factor	0.94	Flow Rate (V_p), pc/h/ln	1222
Total Trucks, %	6.77	Capacity (c), pc/h/ln	2349
Single-Unit Trucks (SUT), %	-	Adjusted Capacity (c_{adj}), pc/h/ln	2274
Tractor-Trailers (TT), %	-	Volume-to-Capacity Ratio (v/c)	0.54
Passenger Car Equivalent (E_T)	2.000		

Speed and Density

Lane Width Adjustment (f_{LW})	-	Average Speed (S), mi/h	64.9
Right-Side Lateral Clearance Adj. (f_{RLC})	-	Density (D), pc/mi/ln	18.8
Total Ramp Density Adjustment	-	Level of Service (LOS)	C
Adjusted Free-Flow Speed (FFS_{adj}), mi/h	64.9		

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Project Description	I-5: SR-76 to Mission Avenue NB	Unit	United States Customary

Geometric Data

Number of Lanes, ln	4	Terrain Type	Level
Segment Length (L), ft	-	Percent Grade, %	-
Measured or Base Free-Flow Speed	Measured	Grade Length, mi	-
Base Free-Flow Speed (BFFS), mi/h	67.8	Total Ramp Density (TRD), ramps/mi	-
Lane Width, ft	-	Free-Flow Speed (FFS), mi/h	67.8
Right-Side Lateral Clearance, ft	-		

Adjustment Factors

Driver Population	Mostly Familiar	Final Speed Adjustment Factor (SAF)	0.975
Weather Type	Non-Severe Weather	Final Capacity Adjustment Factor (CAF)	0.968
Incident Type	No Incident	Demand Adjustment Factor (DAF)	1.000

Demand and Capacity

Demand Volume veh/h	4571	Heavy Vehicle Adjustment Factor (f_{HV})	0.966
Peak Hour Factor	0.94	Flow Rate (V_p), pc/h/ln	1258
Total Trucks, %	3.47	Capacity (c), pc/h/ln	2361
Single-Unit Trucks (SUT), %	-	Adjusted Capacity (c_{adj}), pc/h/ln	2285
Tractor-Trailers (TT), %	-	Volume-to-Capacity Ratio (v/c)	0.55
Passenger Car Equivalent (E_T)	2.000		

Speed and Density

Lane Width Adjustment (f_{LW})	-	Average Speed (S), mi/h	66.1
Right-Side Lateral Clearance Adj. (f_{RLC})	-	Density (D), pc/mi/ln	19.0
Total Ramp Density Adjustment	-	Level of Service (LOS)	C
Adjusted Free-Flow Speed (FFS_{adj}), mi/h	66.1		

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Project Description	I-5: SR-76 to Mission Avenue SB	Unit	United States Customary

Geometric Data

Number of Lanes, ln	4	Terrain Type	Level
Segment Length (L), ft	-	Percent Grade, %	-
Measured or Base Free-Flow Speed	Measured	Grade Length, mi	-
Base Free-Flow Speed (BFFS), mi/h	68.6	Total Ramp Density (TRD), ramps/mi	-
Lane Width, ft	-	Free-Flow Speed (FFS), mi/h	68.6
Right-Side Lateral Clearance, ft	-		

Adjustment Factors

Driver Population	Mostly Familiar	Final Speed Adjustment Factor (SAF)	0.975
Weather Type	Non-Severe Weather	Final Capacity Adjustment Factor (CAF)	0.968
Incident Type	No Incident	Demand Adjustment Factor (DAF)	1.000

Demand and Capacity

Demand Volume veh/h	5540	Heavy Vehicle Adjustment Factor (f_{HV})	0.949
Peak Hour Factor	0.94	Flow Rate (V_p), pc/h/ln	1552
Total Trucks, %	5.32	Capacity (c), pc/h/ln	2369
Single-Unit Trucks (SUT), %	-	Adjusted Capacity (c_{adj}), pc/h/ln	2293
Tractor-Trailers (TT), %	-	Volume-to-Capacity Ratio (v/c)	0.68
Passenger Car Equivalent (E_T)	2.000		

Speed and Density

Lane Width Adjustment (f_{LW})	-	Average Speed (S), mi/h	65.5
Right-Side Lateral Clearance Adj. (f_{RLC})	-	Density (D), pc/mi/ln	23.7
Total Ramp Density Adjustment	-	Level of Service (LOS)	C
Adjusted Free-Flow Speed (FFS_{adj}), mi/h	66.9		

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Project Information

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Jurisdiction	Caltrans	Time Period Analyzed	Existing plus Cumulative Projects Baseline AM
Project Description	I-5: Mission Avenue to Oceanside Boulevard NB	Unit	United States Customary

Geometric Data

Number of Lanes, ln	4	Terrain Type	Level
Segment Length (L), ft	-	Percent Grade, %	-
Measured or Base Free-Flow Speed	Measured	Grade Length, mi	-
Base Free-Flow Speed (BFFS), mi/h	69.9	Total Ramp Density (TRD), ramps/mi	-
Lane Width, ft	-	Free-Flow Speed (FFS), mi/h	69.9
Right-Side Lateral Clearance, ft	-		

Adjustment Factors

Driver Population	Mostly Familiar	Final Speed Adjustment Factor (SAF)	0.975
Weather Type	Non-Severe Weather	Final Capacity Adjustment Factor (CAF)	0.968
Incident Type	No Incident	Demand Adjustment Factor (DAF)	1.000

Demand and Capacity

Demand Volume veh/h	5494	Heavy Vehicle Adjustment Factor (f_{HV})	0.983
Peak Hour Factor	0.94	Flow Rate (V_p), pc/h/ln	1486
Total Trucks, %	1.70	Capacity (c), pc/h/ln	2382
Single-Unit Trucks (SUT), %	-	Adjusted Capacity (c_{adj}), pc/h/ln	2306
Tractor-Trailers (TT), %	-	Volume-to-Capacity Ratio (v/c)	0.64
Passenger Car Equivalent (E_T)	2.000		

Speed and Density

Lane Width Adjustment (f_{LW})	-	Average Speed (S), mi/h	67.0
Right-Side Lateral Clearance Adj. (f_{RLC})	-	Density (D), pc/mi/ln	22.2
Total Ramp Density Adjustment	-	Level of Service (LOS)	C
Adjusted Free-Flow Speed (FFS_{adj}), mi/h	68.2		

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Project Description	I-5: Mission Avenue to Oceanside Boulevard SB	Unit	United States Customary

Geometric Data

Number of Lanes, ln	4	Terrain Type	Level
Segment Length (L), ft	-	Percent Grade, %	-
Measured or Base Free-Flow Speed	Measured	Grade Length, mi	-
Base Free-Flow Speed (BFFS), mi/h	69.5	Total Ramp Density (TRD), ramps/mi	-
Lane Width, ft	-	Free-Flow Speed (FFS), mi/h	69.5
Right-Side Lateral Clearance, ft	-		

Adjustment Factors

Driver Population	Mostly Familiar	Final Speed Adjustment Factor (SAF)	0.975
Weather Type	Non-Severe Weather	Final Capacity Adjustment Factor (CAF)	0.968
Incident Type	No Incident	Demand Adjustment Factor (DAF)	1.000

Demand and Capacity

Demand Volume veh/h	5424	Heavy Vehicle Adjustment Factor (f_{HV})	0.986
Peak Hour Factor	0.94	Flow Rate (V_p), pc/h/ln	1463
Total Trucks, %	1.39	Capacity (c), pc/h/ln	2378
Single-Unit Trucks (SUT), %	-	Adjusted Capacity (c_{adj}), pc/h/ln	2302
Tractor-Trailers (TT), %	-	Volume-to-Capacity Ratio (v/c)	0.64
Passenger Car Equivalent (E_T)	2.000		

Speed and Density

Lane Width Adjustment (f_{LW})	-	Average Speed (S), mi/h	66.9
Right-Side Lateral Clearance Adj. (f_{RLC})	-	Density (D), pc/mi/ln	21.9
Total Ramp Density Adjustment	-	Level of Service (LOS)	C
Adjusted Free-Flow Speed (FFS_{adj}), mi/h	67.8		

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Project Description	I-5: Mission Avenue to Oceanside Boulevard NB	Unit	United States Customary

Geometric Data

Number of Lanes, ln	4	Terrain Type	Level
Segment Length (L), ft	-	Percent Grade, %	-
Measured or Base Free-Flow Speed	Measured	Grade Length, mi	-
Base Free-Flow Speed (BFFS), mi/h	68.5	Total Ramp Density (TRD), ramps/mi	-
Lane Width, ft	-	Free-Flow Speed (FFS), mi/h	68.5
Right-Side Lateral Clearance, ft	-		

Adjustment Factors

Driver Population	Mostly Familiar	Final Speed Adjustment Factor (SAF)	0.975
Weather Type	Non-Severe Weather	Final Capacity Adjustment Factor (CAF)	0.968
Incident Type	No Incident	Demand Adjustment Factor (DAF)	1.000

Demand and Capacity

Demand Volume veh/h	5586	Heavy Vehicle Adjustment Factor (f_{HV})	0.985
Peak Hour Factor	0.94	Flow Rate (V_p), pc/h/ln	1508
Total Trucks, %	1.53	Capacity (c), pc/h/ln	2368
Single-Unit Trucks (SUT), %	-	Adjusted Capacity (c_{adj}), pc/h/ln	2292
Tractor-Trailers (TT), %	-	Volume-to-Capacity Ratio (v/c)	0.66
Passenger Car Equivalent (E_T)	2.000		

Speed and Density

Lane Width Adjustment (f_{LW})	-	Average Speed (S), mi/h	65.8
Right-Side Lateral Clearance Adj. (f_{RLC})	-	Density (D), pc/mi/ln	22.9
Total Ramp Density Adjustment	-	Level of Service (LOS)	C
Adjusted Free-Flow Speed (FFS_{adj}), mi/h	66.8		

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Geometric Data

Number of Lanes, ln	4	Terrain Type	Level
Segment Length (L), ft	-	Percent Grade, %	-
Measured or Base Free-Flow Speed	Measured	Grade Length, mi	-
Base Free-Flow Speed (BFFS), mi/h	68.0	Total Ramp Density (TRD), ramps/mi	-
Lane Width, ft	-	Free-Flow Speed (FFS), mi/h	68.0
Right-Side Lateral Clearance, ft	-		

Adjustment Factors

Driver Population	Mostly Familiar	Final Speed Adjustment Factor (SAF)	0.975
Weather Type	Non-Severe Weather	Final Capacity Adjustment Factor (CAF)	0.968
Incident Type	No Incident	Demand Adjustment Factor (DAF)	1.000

Demand and Capacity

Demand Volume veh/h	6185	Heavy Vehicle Adjustment Factor (f_{HV})	0.988
Peak Hour Factor	0.94	Flow Rate (V_p), pc/h/ln	1665
Total Trucks, %	1.21	Capacity (c), pc/h/ln	2363
Single-Unit Trucks (SUT), %	-	Adjusted Capacity (c_{adj}), pc/h/ln	2287
Tractor-Trailers (TT), %	-	Volume-to-Capacity Ratio (v/c)	0.73
Passenger Car Equivalent (E_T)	2.000		

Speed and Density

Lane Width Adjustment (f_{LW})	-	Average Speed (S), mi/h	63.9
Right-Side Lateral Clearance Adj. (f_{RLC})	-	Density (D), pc/mi/ln	26.1
Total Ramp Density Adjustment	-	Level of Service (LOS)	D
Adjusted Free-Flow Speed (FFS_{adj}), mi/h	66.3		

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Project Description	I-5: SR-76 to Mission Avenue NB	Unit	United States Customary

Geometric Data

Number of Lanes, ln	4	Terrain Type	Level
Segment Length (L), ft	-	Percent Grade, %	-
Measured or Base Free-Flow Speed	Measured	Grade Length, mi	-
Base Free-Flow Speed (BFFS), mi/h	70.2	Total Ramp Density (TRD), ramps/mi	-
Lane Width, ft	-	Free-Flow Speed (FFS), mi/h	70.2
Right-Side Lateral Clearance, ft	-		

Adjustment Factors

Driver Population	Mostly Familiar	Final Speed Adjustment Factor (SAF)	0.975
Weather Type	Non-Severe Weather	Final Capacity Adjustment Factor (CAF)	0.968
Incident Type	No Incident	Demand Adjustment Factor (DAF)	1.000

Demand and Capacity

Demand Volume veh/h	5076	Heavy Vehicle Adjustment Factor (f_{HV})	0.960
Peak Hour Factor	0.94	Flow Rate (V_p), pc/h/ln	1406
Total Trucks, %	4.22	Capacity (c), pc/h/ln	2384
Single-Unit Trucks (SUT), %	-	Adjusted Capacity (c_{adj}), pc/h/ln	2308
Tractor-Trailers (TT), %	-	Volume-to-Capacity Ratio (v/c)	0.61
Passenger Car Equivalent (E_T)	2.000		

Speed and Density

Lane Width Adjustment (f_{LW})	-	Average Speed (S), mi/h	67.7
Right-Side Lateral Clearance Adj. (f_{RLC})	-	Density (D), pc/mi/ln	20.8
Total Ramp Density Adjustment	-	Level of Service (LOS)	C
Adjusted Free-Flow Speed (FFS_{adj}), mi/h	68.4		

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Project Description	I-5: SR-76 to Mission Avenue SB	Unit	United States Customary

Geometric Data

Number of Lanes, ln	4	Terrain Type	Level
Segment Length (L), ft	-	Percent Grade, %	-
Measured or Base Free-Flow Speed	Measured	Grade Length, mi	-
Base Free-Flow Speed (BFFS), mi/h	66.6	Total Ramp Density (TRD), ramps/mi	-
Lane Width, ft	-	Free-Flow Speed (FFS), mi/h	66.6
Right-Side Lateral Clearance, ft	-		

Adjustment Factors

Driver Population	Mostly Familiar	Final Speed Adjustment Factor (SAF)	0.975
Weather Type	Non-Severe Weather	Final Capacity Adjustment Factor (CAF)	0.968
Incident Type	No Incident	Demand Adjustment Factor (DAF)	1.000

Demand and Capacity

Demand Volume veh/h	4314	Heavy Vehicle Adjustment Factor (f_{HV})	0.937
Peak Hour Factor	0.94	Flow Rate (V_p), pc/h/ln	1224
Total Trucks, %	6.77	Capacity (c), pc/h/ln	2349
Single-Unit Trucks (SUT), %	-	Adjusted Capacity (c_{adj}), pc/h/ln	2274
Tractor-Trailers (TT), %	-	Volume-to-Capacity Ratio (v/c)	0.54
Passenger Car Equivalent (E_T)	2.000		

Speed and Density

Lane Width Adjustment (f_{LW})	-	Average Speed (S), mi/h	64.9
Right-Side Lateral Clearance Adj. (f_{RLC})	-	Density (D), pc/mi/ln	18.9
Total Ramp Density Adjustment	-	Level of Service (LOS)	C
Adjusted Free-Flow Speed (FFS_{adj}), mi/h	64.9		

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HCS7 Basic Freeway Report

Project Information

Analyst	Amanda Meroux	Date	10/2/2019
Agency	Dudek	Analysis Year	2019
Jurisdiction	Caltrans	Time Period Analyzed	Existing plus Cumulative Projects Baseline PM
Project Description	I-5: SR-76 to Mission Avenue NB	Unit	United States Customary

Geometric Data

Number of Lanes, ln	4	Terrain Type	Level
Segment Length (L), ft	-	Percent Grade, %	-
Measured or Base Free-Flow Speed	Measured	Grade Length, mi	-
Base Free-Flow Speed (BFFS), mi/h	67.8	Total Ramp Density (TRD), ramps/mi	-
Lane Width, ft	-	Free-Flow Speed (FFS), mi/h	67.8
Right-Side Lateral Clearance, ft	-		

Adjustment Factors

Driver Population	Mostly Familiar	Final Speed Adjustment Factor (SAF)	0.975
Weather Type	Non-Severe Weather	Final Capacity Adjustment Factor (CAF)	0.968
Incident Type	No Incident	Demand Adjustment Factor (DAF)	1.000

Demand and Capacity

Demand Volume veh/h	4574	Heavy Vehicle Adjustment Factor (f_{HV})	0.966
Peak Hour Factor	0.94	Flow Rate (V_p), pc/h/ln	1259
Total Trucks, %	3.47	Capacity (c), pc/h/ln	2361
Single-Unit Trucks (SUT), %	-	Adjusted Capacity (c_{adj}), pc/h/ln	2285
Tractor-Trailers (TT), %	-	Volume-to-Capacity Ratio (v/c)	0.55
Passenger Car Equivalent (E_T)	2.000		

Speed and Density

Lane Width Adjustment (f_{LW})	-	Average Speed (S), mi/h	66.1
Right-Side Lateral Clearance Adj. (f_{RLC})	-	Density (D), pc/mi/ln	19.0
Total Ramp Density Adjustment	-	Level of Service (LOS)	C
Adjusted Free-Flow Speed (FFS_{adj}), mi/h	66.1		

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Project Information

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Agency	Dudek	Analysis Year	2019
Jurisdiction	Caltrans	Time Period Analyzed	Existing plus Cumulative Projects Baseline PM
Project Description	I-5: SR-76 to Mission Avenue SB	Unit	United States Customary

Geometric Data

Number of Lanes, ln	4	Terrain Type	Level
Segment Length (L), ft	-	Percent Grade, %	-
Measured or Base Free-Flow Speed	Measured	Grade Length, mi	-
Base Free-Flow Speed (BFFS), mi/h	68.6	Total Ramp Density (TRD), ramps/mi	-
Lane Width, ft	-	Free-Flow Speed (FFS), mi/h	68.6
Right-Side Lateral Clearance, ft	-		

Adjustment Factors

Driver Population	Mostly Familiar	Final Speed Adjustment Factor (SAF)	0.975
Weather Type	Non-Severe Weather	Final Capacity Adjustment Factor (CAF)	0.968
Incident Type	No Incident	Demand Adjustment Factor (DAF)	1.000

Demand and Capacity

Demand Volume veh/h	5587	Heavy Vehicle Adjustment Factor (f_{HV})	0.949
Peak Hour Factor	0.94	Flow Rate (V_p), pc/h/ln	1566
Total Trucks, %	5.32	Capacity (c), pc/h/ln	2369
Single-Unit Trucks (SUT), %	-	Adjusted Capacity (c_{adj}), pc/h/ln	2293
Tractor-Trailers (TT), %	-	Volume-to-Capacity Ratio (v/c)	0.68
Passenger Car Equivalent (E_T)	2.000		

Speed and Density

Lane Width Adjustment (f_{LW})	-	Average Speed (S), mi/h	65.4
Right-Side Lateral Clearance Adj. (f_{RLC})	-	Density (D), pc/mi/ln	23.9
Total Ramp Density Adjustment	-	Level of Service (LOS)	C
Adjusted Free-Flow Speed (FFS_{adj}), mi/h	66.9		

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Project Information

Analyst	Amanda Meroux	Date	10/2/2019
Agency	Dudek	Analysis Year	2019
Jurisdiction	Caltrans	Time Period Analyzed	Existing plus Cumulative Projects plus Project AM
Project Description	I-5: Mission Avenue to Oceanside Boulevard NB	Unit	United States Customary

Geometric Data

Number of Lanes, ln	4	Terrain Type	Level
Segment Length (L), ft	-	Percent Grade, %	-
Measured or Base Free-Flow Speed	Measured	Grade Length, mi	-
Base Free-Flow Speed (BFFS), mi/h	69.9	Total Ramp Density (TRD), ramps/mi	-
Lane Width, ft	-	Free-Flow Speed (FFS), mi/h	69.9
Right-Side Lateral Clearance, ft	-		

Adjustment Factors

Driver Population	Mostly Familiar	Final Speed Adjustment Factor (SAF)	0.975
Weather Type	Non-Severe Weather	Final Capacity Adjustment Factor (CAF)	0.968
Incident Type	No Incident	Demand Adjustment Factor (DAF)	1.000

Demand and Capacity

Demand Volume veh/h	5518	Heavy Vehicle Adjustment Factor (f_{HV})	0.983
Peak Hour Factor	0.94	Flow Rate (V_p), pc/h/ln	1493
Total Trucks, %	1.70	Capacity (c), pc/h/ln	2382
Single-Unit Trucks (SUT), %	-	Adjusted Capacity (c_{adj}), pc/h/ln	2306
Tractor-Trailers (TT), %	-	Volume-to-Capacity Ratio (v/c)	0.65
Passenger Car Equivalent (E_T)	2.000		

Speed and Density

Lane Width Adjustment (f_{LW})	-	Average Speed (S), mi/h	67.0
Right-Side Lateral Clearance Adj. (f_{RLC})	-	Density (D), pc/mi/ln	22.3
Total Ramp Density Adjustment	-	Level of Service (LOS)	C
Adjusted Free-Flow Speed (FFS_{adj}), mi/h	68.2		

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Project Description	I-5: Mission Avenue to Oceanside Boulevard SB	Unit	United States Customary

Geometric Data

Number of Lanes, ln	4	Terrain Type	Level
Segment Length (L), ft	-	Percent Grade, %	-
Measured or Base Free-Flow Speed	Measured	Grade Length, mi	-
Base Free-Flow Speed (BFFS), mi/h	69.5	Total Ramp Density (TRD), ramps/mi	-
Lane Width, ft	-	Free-Flow Speed (FFS), mi/h	69.5
Right-Side Lateral Clearance, ft	-		

Adjustment Factors

Driver Population	Mostly Familiar	Final Speed Adjustment Factor (SAF)	0.975
Weather Type	Non-Severe Weather	Final Capacity Adjustment Factor (CAF)	0.968
Incident Type	No Incident	Demand Adjustment Factor (DAF)	1.000

Demand and Capacity

Demand Volume veh/h	5480	Heavy Vehicle Adjustment Factor (f_{HV})	0.986
Peak Hour Factor	0.94	Flow Rate (V_p), pc/h/ln	1478
Total Trucks, %	1.39	Capacity (c), pc/h/ln	2378
Single-Unit Trucks (SUT), %	-	Adjusted Capacity (c_{adj}), pc/h/ln	2302
Tractor-Trailers (TT), %	-	Volume-to-Capacity Ratio (v/c)	0.64
Passenger Car Equivalent (E_T)	2.000		

Speed and Density

Lane Width Adjustment (f_{LW})	-	Average Speed (S), mi/h	66.8
Right-Side Lateral Clearance Adj. (f_{RLC})	-	Density (D), pc/mi/ln	22.1
Total Ramp Density Adjustment	-	Level of Service (LOS)	C
Adjusted Free-Flow Speed (FFS_{adj}), mi/h	67.8		

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Project Information

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Project Description	I-5: Mission Avenue to Oceanside Boulevard NB	Unit	United States Customary

Geometric Data

Number of Lanes, ln	4	Terrain Type	Level
Segment Length (L), ft	-	Percent Grade, %	-
Measured or Base Free-Flow Speed	Measured	Grade Length, mi	-
Base Free-Flow Speed (BFFS), mi/h	68.5	Total Ramp Density (TRD), ramps/mi	-
Lane Width, ft	-	Free-Flow Speed (FFS), mi/h	68.5
Right-Side Lateral Clearance, ft	-		

Adjustment Factors

Driver Population	Mostly Familiar	Final Speed Adjustment Factor (SAF)	0.975
Weather Type	Non-Severe Weather	Final Capacity Adjustment Factor (CAF)	0.968
Incident Type	No Incident	Demand Adjustment Factor (DAF)	1.000

Demand and Capacity

Demand Volume veh/h	5641	Heavy Vehicle Adjustment Factor (f_{HV})	0.985
Peak Hour Factor	0.94	Flow Rate (V_p), pc/h/ln	1523
Total Trucks, %	1.53	Capacity (c), pc/h/ln	2368
Single-Unit Trucks (SUT), %	-	Adjusted Capacity (c_{adj}), pc/h/ln	2292
Tractor-Trailers (TT), %	-	Volume-to-Capacity Ratio (v/c)	0.66
Passenger Car Equivalent (E_T)	2.000		

Speed and Density

Lane Width Adjustment (f_{LW})	-	Average Speed (S), mi/h	65.7
Right-Side Lateral Clearance Adj. (f_{RLC})	-	Density (D), pc/mi/ln	23.2
Total Ramp Density Adjustment	-	Level of Service (LOS)	C
Adjusted Free-Flow Speed (FFS_{adj}), mi/h	66.8		

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Project Information

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Project Description	I-5: Mission Avenue to Oceanside Boulevard SB	Unit	United States Customary

Geometric Data

Number of Lanes, ln	4	Terrain Type	Level
Segment Length (L), ft	-	Percent Grade, %	-
Measured or Base Free-Flow Speed	Measured	Grade Length, mi	-
Base Free-Flow Speed (BFFS), mi/h	68.0	Total Ramp Density (TRD), ramps/mi	-
Lane Width, ft	-	Free-Flow Speed (FFS), mi/h	68.0
Right-Side Lateral Clearance, ft	-		

Adjustment Factors

Driver Population	Mostly Familiar	Final Speed Adjustment Factor (SAF)	0.975
Weather Type	Non-Severe Weather	Final Capacity Adjustment Factor (CAF)	0.968
Incident Type	No Incident	Demand Adjustment Factor (DAF)	1.000

Demand and Capacity

Demand Volume veh/h	6211	Heavy Vehicle Adjustment Factor (f_{HV})	0.988
Peak Hour Factor	0.94	Flow Rate (V_p), pc/h/ln	1672
Total Trucks, %	1.21	Capacity (c), pc/h/ln	2363
Single-Unit Trucks (SUT), %	-	Adjusted Capacity (c_{adj}), pc/h/ln	2287
Tractor-Trailers (TT), %	-	Volume-to-Capacity Ratio (v/c)	0.73
Passenger Car Equivalent (E_T)	2.000		

Speed and Density

Lane Width Adjustment (f_{LW})	-	Average Speed (S), mi/h	63.8
Right-Side Lateral Clearance Adj. (f_{RLC})	-	Density (D), pc/mi/ln	26.2
Total Ramp Density Adjustment	-	Level of Service (LOS)	D
Adjusted Free-Flow Speed (FFS_{adj}), mi/h	66.3		

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Project Description	I-5: SR-76 to Mission Avenue NB	Unit	United States Customary

Geometric Data

Number of Lanes, ln	4	Terrain Type	Level
Segment Length (L), ft	-	Percent Grade, %	-
Measured or Base Free-Flow Speed	Measured	Grade Length, mi	-
Base Free-Flow Speed (BFFS), mi/h	70.2	Total Ramp Density (TRD), ramps/mi	-
Lane Width, ft	-	Free-Flow Speed (FFS), mi/h	70.2
Right-Side Lateral Clearance, ft	-		

Adjustment Factors

Driver Population	Mostly Familiar	Final Speed Adjustment Factor (SAF)	0.975
Weather Type	Non-Severe Weather	Final Capacity Adjustment Factor (CAF)	0.968
Incident Type	No Incident	Demand Adjustment Factor (DAF)	1.000

Demand and Capacity

Demand Volume veh/h	5100	Heavy Vehicle Adjustment Factor (f_{HV})	0.960
Peak Hour Factor	0.94	Flow Rate (V_p), pc/h/ln	1413
Total Trucks, %	4.22	Capacity (c), pc/h/ln	2384
Single-Unit Trucks (SUT), %	-	Adjusted Capacity (c_{adj}), pc/h/ln	2308
Tractor-Trailers (TT), %	-	Volume-to-Capacity Ratio (v/c)	0.61
Passenger Car Equivalent (E_T)	2.000		

Speed and Density

Lane Width Adjustment (f_{LW})	-	Average Speed (S), mi/h	67.7
Right-Side Lateral Clearance Adj. (f_{RLC})	-	Density (D), pc/mi/ln	20.9
Total Ramp Density Adjustment	-	Level of Service (LOS)	C
Adjusted Free-Flow Speed (FFS_{adj}), mi/h	68.4		

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Project Information

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Project Description	I-5: SR-76 to Mission Avenue SB	Unit	United States Customary

Geometric Data

Number of Lanes, ln	4	Terrain Type	Level
Segment Length (L), ft	-	Percent Grade, %	-
Measured or Base Free-Flow Speed	Measured	Grade Length, mi	-
Base Free-Flow Speed (BFFS), mi/h	66.6	Total Ramp Density (TRD), ramps/mi	-
Lane Width, ft	-	Free-Flow Speed (FFS), mi/h	66.6
Right-Side Lateral Clearance, ft	-		

Adjustment Factors

Driver Population	Mostly Familiar	Final Speed Adjustment Factor (SAF)	0.975
Weather Type	Non-Severe Weather	Final Capacity Adjustment Factor (CAF)	0.968
Incident Type	No Incident	Demand Adjustment Factor (DAF)	1.000

Demand and Capacity

Demand Volume veh/h	4370	Heavy Vehicle Adjustment Factor (f_{HV})	0.937
Peak Hour Factor	0.94	Flow Rate (V_p), pc/h/ln	1240
Total Trucks, %	6.77	Capacity (c), pc/h/ln	2349
Single-Unit Trucks (SUT), %	-	Adjusted Capacity (c_{adj}), pc/h/ln	2274
Tractor-Trailers (TT), %	-	Volume-to-Capacity Ratio (v/c)	0.55
Passenger Car Equivalent (E_T)	2.000		

Speed and Density

Lane Width Adjustment (f_{LW})	-	Average Speed (S), mi/h	64.9
Right-Side Lateral Clearance Adj. (f_{RLC})	-	Density (D), pc/mi/ln	19.1
Total Ramp Density Adjustment	-	Level of Service (LOS)	C
Adjusted Free-Flow Speed (FFS_{adj}), mi/h	64.9		

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Project Information

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Project Description	I-5: SR-76 to Mission Avenue NB	Unit	United States Customary

Geometric Data

Number of Lanes, ln	4	Terrain Type	Level
Segment Length (L), ft	-	Percent Grade, %	-
Measured or Base Free-Flow Speed	Measured	Grade Length, mi	-
Base Free-Flow Speed (BFFS), mi/h	67.8	Total Ramp Density (TRD), ramps/mi	-
Lane Width, ft	-	Free-Flow Speed (FFS), mi/h	67.8
Right-Side Lateral Clearance, ft	-		

Adjustment Factors

Driver Population	Mostly Familiar	Final Speed Adjustment Factor (SAF)	0.975
Weather Type	Non-Severe Weather	Final Capacity Adjustment Factor (CAF)	0.968
Incident Type	No Incident	Demand Adjustment Factor (DAF)	1.000

Demand and Capacity

Demand Volume veh/h	4629	Heavy Vehicle Adjustment Factor (f_{HV})	0.966
Peak Hour Factor	0.94	Flow Rate (V_p), pc/h/ln	1274
Total Trucks, %	3.47	Capacity (c), pc/h/ln	2361
Single-Unit Trucks (SUT), %	-	Adjusted Capacity (c_{adj}), pc/h/ln	2285
Tractor-Trailers (TT), %	-	Volume-to-Capacity Ratio (v/c)	0.56
Passenger Car Equivalent (E_T)	2.000		

Speed and Density

Lane Width Adjustment (f_{LW})	-	Average Speed (S), mi/h	66.1
Right-Side Lateral Clearance Adj. (f_{RLC})	-	Density (D), pc/mi/ln	19.3
Total Ramp Density Adjustment	-	Level of Service (LOS)	C
Adjusted Free-Flow Speed (FFS_{adj}), mi/h	66.1		

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Project Description	I-5: SR-76 to Mission Avenue SB	Unit	United States Customary

Geometric Data

Number of Lanes, ln	4	Terrain Type	Level
Segment Length (L), ft	-	Percent Grade, %	-
Measured or Base Free-Flow Speed	Measured	Grade Length, mi	-
Base Free-Flow Speed (BFFS), mi/h	68.6	Total Ramp Density (TRD), ramps/mi	-
Lane Width, ft	-	Free-Flow Speed (FFS), mi/h	68.6
Right-Side Lateral Clearance, ft	-		

Adjustment Factors

Driver Population	Mostly Familiar	Final Speed Adjustment Factor (SAF)	0.975
Weather Type	Non-Severe Weather	Final Capacity Adjustment Factor (CAF)	0.968
Incident Type	No Incident	Demand Adjustment Factor (DAF)	1.000

Demand and Capacity

Demand Volume veh/h	5613	Heavy Vehicle Adjustment Factor (f_{HV})	0.949
Peak Hour Factor	0.94	Flow Rate (V_p), pc/h/ln	1573
Total Trucks, %	5.32	Capacity (c), pc/h/ln	2369
Single-Unit Trucks (SUT), %	-	Adjusted Capacity (c_{adj}), pc/h/ln	2293
Tractor-Trailers (TT), %	-	Volume-to-Capacity Ratio (v/c)	0.69
Passenger Car Equivalent (E_T)	2.000		

Speed and Density

Lane Width Adjustment (f_{LW})	-	Average Speed (S), mi/h	65.3
Right-Side Lateral Clearance Adj. (f_{RLC})	-	Density (D), pc/mi/ln	24.1
Total Ramp Density Adjustment	-	Level of Service (LOS)	C
Adjusted Free-Flow Speed (FFS_{adj}), mi/h	66.9		

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Project Information

Analyst	Amanda Meroux	Date	10/2/2019
Agency	Dudek	Analysis Year	2019
Jurisdiction	Caltrans	Time Period Analyzed	Buildout Year (2035) Baseline AM
Project Description	I-5: Mission Avenue to Oceanside Boulevard NB	Unit	United States Customary

Geometric Data

Number of Lanes, ln	4	Terrain Type	Level
Segment Length (L), ft	-	Percent Grade, %	-
Measured or Base Free-Flow Speed	Measured	Grade Length, mi	-
Base Free-Flow Speed (BFFS), mi/h	69.9	Total Ramp Density (TRD), ramps/mi	-
Lane Width, ft	-	Free-Flow Speed (FFS), mi/h	69.9
Right-Side Lateral Clearance, ft	-		

Adjustment Factors

Driver Population	Mostly Familiar	Final Speed Adjustment Factor (SAF)	0.975
Weather Type	Non-Severe Weather	Final Capacity Adjustment Factor (CAF)	0.968
Incident Type	No Incident	Demand Adjustment Factor (DAF)	1.000

Demand and Capacity

Demand Volume veh/h	6002	Heavy Vehicle Adjustment Factor (f_{HV})	0.983
Peak Hour Factor	0.94	Flow Rate (V_p), pc/h/ln	1624
Total Trucks, %	1.70	Capacity (c), pc/h/ln	2382
Single-Unit Trucks (SUT), %	-	Adjusted Capacity (c_{adj}), pc/h/ln	2306
Tractor-Trailers (TT), %	-	Volume-to-Capacity Ratio (v/c)	0.70
Passenger Car Equivalent (E_T)	2.000		

Speed and Density

Lane Width Adjustment (f_{LW})	-	Average Speed (S), mi/h	65.6
Right-Side Lateral Clearance Adj. (f_{RLC})	-	Density (D), pc/mi/ln	24.8
Total Ramp Density Adjustment	-	Level of Service (LOS)	C
Adjusted Free-Flow Speed (FFS_{adj}), mi/h	68.2		

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Project Description	I-5: Mission Avenue to Oceanside Boulevard SB	Unit	United States Customary

Geometric Data

Number of Lanes, ln	4	Terrain Type	Level
Segment Length (L), ft	-	Percent Grade, %	-
Measured or Base Free-Flow Speed	Measured	Grade Length, mi	-
Base Free-Flow Speed (BFFS), mi/h	69.5	Total Ramp Density (TRD), ramps/mi	-
Lane Width, ft	-	Free-Flow Speed (FFS), mi/h	69.5
Right-Side Lateral Clearance, ft	-		

Adjustment Factors

Driver Population	Mostly Familiar	Final Speed Adjustment Factor (SAF)	0.975
Weather Type	Non-Severe Weather	Final Capacity Adjustment Factor (CAF)	0.968
Incident Type	No Incident	Demand Adjustment Factor (DAF)	1.000

Demand and Capacity

Demand Volume veh/h	5916	Heavy Vehicle Adjustment Factor (f_{HV})	0.986
Peak Hour Factor	0.94	Flow Rate (V_p), pc/h/ln	1596
Total Trucks, %	1.39	Capacity (c), pc/h/ln	2378
Single-Unit Trucks (SUT), %	-	Adjusted Capacity (c_{adj}), pc/h/ln	2302
Tractor-Trailers (TT), %	-	Volume-to-Capacity Ratio (v/c)	0.69
Passenger Car Equivalent (E_T)	2.000		

Speed and Density

Lane Width Adjustment (f_{LW})	-	Average Speed (S), mi/h	65.7
Right-Side Lateral Clearance Adj. (f_{RLC})	-	Density (D), pc/mi/ln	24.3
Total Ramp Density Adjustment	-	Level of Service (LOS)	C
Adjusted Free-Flow Speed (FFS_{adj}), mi/h	67.8		

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Project Information

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Project Description	I-5: Mission Avenue to Oceanside Boulevard NB	Unit	United States Customary

Geometric Data

Number of Lanes, ln	4	Terrain Type	Level
Segment Length (L), ft	-	Percent Grade, %	-
Measured or Base Free-Flow Speed	Measured	Grade Length, mi	-
Base Free-Flow Speed (BFFS), mi/h	68.5	Total Ramp Density (TRD), ramps/mi	-
Lane Width, ft	-	Free-Flow Speed (FFS), mi/h	68.5
Right-Side Lateral Clearance, ft	-		

Adjustment Factors

Driver Population	Mostly Familiar	Final Speed Adjustment Factor (SAF)	0.975
Weather Type	Non-Severe Weather	Final Capacity Adjustment Factor (CAF)	0.968
Incident Type	No Incident	Demand Adjustment Factor (DAF)	1.000

Demand and Capacity

Demand Volume veh/h	6106	Heavy Vehicle Adjustment Factor (f_{HV})	0.985
Peak Hour Factor	0.94	Flow Rate (V_p), pc/h/ln	1649
Total Trucks, %	1.53	Capacity (c), pc/h/ln	2368
Single-Unit Trucks (SUT), %	-	Adjusted Capacity (c_{adj}), pc/h/ln	2292
Tractor-Trailers (TT), %	-	Volume-to-Capacity Ratio (v/c)	0.72
Passenger Car Equivalent (E_T)	2.000		

Speed and Density

Lane Width Adjustment (f_{LW})	-	Average Speed (S), mi/h	64.4
Right-Side Lateral Clearance Adj. (f_{RLC})	-	Density (D), pc/mi/ln	25.6
Total Ramp Density Adjustment	-	Level of Service (LOS)	C
Adjusted Free-Flow Speed (FFS_{adj}), mi/h	66.8		

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Project Information

Analyst	Amanda Meroux	Date	10/2/2019
Agency	Dudek	Analysis Year	2019
Jurisdiction	Caltrans	Time Period Analyzed	Buildout Year (2035) Baseline PM
Project Description	I-5: Mission Avenue to Oceanside Boulevard SB	Unit	United States Customary

Geometric Data

Number of Lanes, ln	4	Terrain Type	Level
Segment Length (L), ft	-	Percent Grade, %	-
Measured or Base Free-Flow Speed	Measured	Grade Length, mi	-
Base Free-Flow Speed (BFFS), mi/h	68.0	Total Ramp Density (TRD), ramps/mi	-
Lane Width, ft	-	Free-Flow Speed (FFS), mi/h	68.0
Right-Side Lateral Clearance, ft	-		

Adjustment Factors

Driver Population	Mostly Familiar	Final Speed Adjustment Factor (SAF)	0.975
Weather Type	Non-Severe Weather	Final Capacity Adjustment Factor (CAF)	0.968
Incident Type	No Incident	Demand Adjustment Factor (DAF)	1.000

Demand and Capacity

Demand Volume veh/h	6757	Heavy Vehicle Adjustment Factor (f_{HV})	0.988
Peak Hour Factor	0.94	Flow Rate (V_p), pc/h/ln	1819
Total Trucks, %	1.21	Capacity (c), pc/h/ln	2363
Single-Unit Trucks (SUT), %	-	Adjusted Capacity (c_{adj}), pc/h/ln	2287
Tractor-Trailers (TT), %	-	Volume-to-Capacity Ratio (v/c)	0.80
Passenger Car Equivalent (E_T)	2.000		

Speed and Density

Lane Width Adjustment (f_{LW})	-	Average Speed (S), mi/h	61.7
Right-Side Lateral Clearance Adj. (f_{RLC})	-	Density (D), pc/mi/ln	29.5
Total Ramp Density Adjustment	-	Level of Service (LOS)	D
Adjusted Free-Flow Speed (FFS_{adj}), mi/h	66.3		

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HCS7 Basic Freeway Report

Project Information

Analyst	Amanda Meroux	Date	10/2/2019
Agency	Dudek	Analysis Year	2019
Jurisdiction	Caltrans	Time Period Analyzed	Buildout Year (2035) Baseline AM
Project Description	I-5: SR-76 to Mission Avenue NB	Unit	United States Customary

Geometric Data

Number of Lanes, ln	4	Terrain Type	Level
Segment Length (L), ft	-	Percent Grade, %	-
Measured or Base Free-Flow Speed	Measured	Grade Length, mi	-
Base Free-Flow Speed (BFFS), mi/h	70.2	Total Ramp Density (TRD), ramps/mi	-
Lane Width, ft	-	Free-Flow Speed (FFS), mi/h	70.2
Right-Side Lateral Clearance, ft	-		

Adjustment Factors

Driver Population	Mostly Familiar	Final Speed Adjustment Factor (SAF)	0.975
Weather Type	Non-Severe Weather	Final Capacity Adjustment Factor (CAF)	0.968
Incident Type	No Incident	Demand Adjustment Factor (DAF)	1.000

Demand and Capacity

Demand Volume veh/h	5545	Heavy Vehicle Adjustment Factor (f_{HV})	0.960
Peak Hour Factor	0.94	Flow Rate (V_p), pc/h/ln	1536
Total Trucks, %	4.22	Capacity (c), pc/h/ln	2384
Single-Unit Trucks (SUT), %	-	Adjusted Capacity (c_{adj}), pc/h/ln	2308
Tractor-Trailers (TT), %	-	Volume-to-Capacity Ratio (v/c)	0.67
Passenger Car Equivalent (E_T)	2.000		

Speed and Density

Lane Width Adjustment (f_{LW})	-	Average Speed (S), mi/h	66.7
Right-Side Lateral Clearance Adj. (f_{RLC})	-	Density (D), pc/mi/ln	23.0
Total Ramp Density Adjustment	-	Level of Service (LOS)	C
Adjusted Free-Flow Speed (FFS_{adj}), mi/h	68.4		

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Project Information

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Agency	Dudek	Analysis Year	2019
Jurisdiction	Caltrans	Time Period Analyzed	Buildout Year (2035) Baseline AM
Project Description	I-5: SR-76 to Mission Avenue SB	Unit	United States Customary

Geometric Data

Number of Lanes, ln	4	Terrain Type	Level
Segment Length (L), ft	-	Percent Grade, %	-
Measured or Base Free-Flow Speed	Measured	Grade Length, mi	-
Base Free-Flow Speed (BFFS), mi/h	66.6	Total Ramp Density (TRD), ramps/mi	-
Lane Width, ft	-	Free-Flow Speed (FFS), mi/h	66.6
Right-Side Lateral Clearance, ft	-		

Adjustment Factors

Driver Population	Mostly Familiar	Final Speed Adjustment Factor (SAF)	0.975
Weather Type	Non-Severe Weather	Final Capacity Adjustment Factor (CAF)	0.968
Incident Type	No Incident	Demand Adjustment Factor (DAF)	1.000

Demand and Capacity

Demand Volume veh/h	4703	Heavy Vehicle Adjustment Factor (f_{HV})	0.937
Peak Hour Factor	0.94	Flow Rate (V_p), pc/h/ln	1335
Total Trucks, %	6.77	Capacity (c), pc/h/ln	2349
Single-Unit Trucks (SUT), %	-	Adjusted Capacity (c_{adj}), pc/h/ln	2274
Tractor-Trailers (TT), %	-	Volume-to-Capacity Ratio (v/c)	0.59
Passenger Car Equivalent (E_T)	2.000		

Speed and Density

Lane Width Adjustment (f_{LW})	-	Average Speed (S), mi/h	64.9
Right-Side Lateral Clearance Adj. (f_{RLC})	-	Density (D), pc/mi/ln	20.6
Total Ramp Density Adjustment	-	Level of Service (LOS)	C
Adjusted Free-Flow Speed (FFS_{adj}), mi/h	64.9		

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HCS7 Basic Freeway Report

Project Information

Analyst	Amanda Meroux	Date	10/2/2019
Agency	Dudek	Analysis Year	2019
Jurisdiction	Caltrans	Time Period Analyzed	Buildout Year (2035) Baseline PM
Project Description	I-5: SR-76 to Mission Avenue NB	Unit	United States Customary

Geometric Data

Number of Lanes, ln	4	Terrain Type	Level
Segment Length (L), ft	-	Percent Grade, %	-
Measured or Base Free-Flow Speed	Measured	Grade Length, mi	-
Base Free-Flow Speed (BFFS), mi/h	67.8	Total Ramp Density (TRD), ramps/mi	-
Lane Width, ft	-	Free-Flow Speed (FFS), mi/h	67.8
Right-Side Lateral Clearance, ft	-		

Adjustment Factors

Driver Population	Mostly Familiar	Final Speed Adjustment Factor (SAF)	0.975
Weather Type	Non-Severe Weather	Final Capacity Adjustment Factor (CAF)	0.968
Incident Type	No Incident	Demand Adjustment Factor (DAF)	1.000

Demand and Capacity

Demand Volume veh/h	5000	Heavy Vehicle Adjustment Factor (f_{HV})	0.966
Peak Hour Factor	0.94	Flow Rate (V_p), pc/h/ln	1376
Total Trucks, %	3.47	Capacity (c), pc/h/ln	2361
Single-Unit Trucks (SUT), %	-	Adjusted Capacity (c_{adj}), pc/h/ln	2285
Tractor-Trailers (TT), %	-	Volume-to-Capacity Ratio (v/c)	0.60
Passenger Car Equivalent (E_T)	2.000		

Speed and Density

Lane Width Adjustment (f_{LW})	-	Average Speed (S), mi/h	65.9
Right-Side Lateral Clearance Adj. (f_{RLC})	-	Density (D), pc/mi/ln	20.9
Total Ramp Density Adjustment	-	Level of Service (LOS)	C
Adjusted Free-Flow Speed (FFS_{adj}), mi/h	66.1		

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Project Description	I-5: SR-76 to Mission Avenue SB	Unit	United States Customary

Geometric Data

Number of Lanes, ln	4	Terrain Type	Level
Segment Length (L), ft	-	Percent Grade, %	-
Measured or Base Free-Flow Speed	Measured	Grade Length, mi	-
Base Free-Flow Speed (BFFS), mi/h	68.6	Total Ramp Density (TRD), ramps/mi	-
Lane Width, ft	-	Free-Flow Speed (FFS), mi/h	68.6
Right-Side Lateral Clearance, ft	-		

Adjustment Factors

Driver Population	Mostly Familiar	Final Speed Adjustment Factor (SAF)	0.975
Weather Type	Non-Severe Weather	Final Capacity Adjustment Factor (CAF)	0.968
Incident Type	No Incident	Demand Adjustment Factor (DAF)	1.000

Demand and Capacity

Demand Volume veh/h	6104	Heavy Vehicle Adjustment Factor (f_{HV})	0.949
Peak Hour Factor	0.94	Flow Rate (V_p), pc/h/ln	1711
Total Trucks, %	5.32	Capacity (c), pc/h/ln	2369
Single-Unit Trucks (SUT), %	-	Adjusted Capacity (c_{adj}), pc/h/ln	2293
Tractor-Trailers (TT), %	-	Volume-to-Capacity Ratio (v/c)	0.75
Passenger Car Equivalent (E_T)	2.000		

Speed and Density

Lane Width Adjustment (f_{LW})	-	Average Speed (S), mi/h	63.7
Right-Side Lateral Clearance Adj. (f_{RLC})	-	Density (D), pc/mi/ln	26.9
Total Ramp Density Adjustment	-	Level of Service (LOS)	D
Adjusted Free-Flow Speed (FFS_{adj}), mi/h	66.9		

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Project Information

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Project Description	I-5: Mission Avenue to Oceanside Boulevard NB	Unit	United States Customary

Geometric Data

Number of Lanes, ln	4	Terrain Type	Level
Segment Length (L), ft	-	Percent Grade, %	-
Measured or Base Free-Flow Speed	Measured	Grade Length, mi	-
Base Free-Flow Speed (BFFS), mi/h	69.9	Total Ramp Density (TRD), ramps/mi	-
Lane Width, ft	-	Free-Flow Speed (FFS), mi/h	69.9
Right-Side Lateral Clearance, ft	-		

Adjustment Factors

Driver Population	Mostly Familiar	Final Speed Adjustment Factor (SAF)	0.975
Weather Type	Non-Severe Weather	Final Capacity Adjustment Factor (CAF)	0.968
Incident Type	No Incident	Demand Adjustment Factor (DAF)	1.000

Demand and Capacity

Demand Volume veh/h	6026	Heavy Vehicle Adjustment Factor (f_{HV})	0.983
Peak Hour Factor	0.94	Flow Rate (V_p), pc/h/ln	1630
Total Trucks, %	1.70	Capacity (c), pc/h/ln	2382
Single-Unit Trucks (SUT), %	-	Adjusted Capacity (c_{adj}), pc/h/ln	2306
Tractor-Trailers (TT), %	-	Volume-to-Capacity Ratio (v/c)	0.71
Passenger Car Equivalent (E_T)	2.000		

Speed and Density

Lane Width Adjustment (f_{LW})	-	Average Speed (S), mi/h	65.6
Right-Side Lateral Clearance Adj. (f_{RLC})	-	Density (D), pc/mi/ln	24.8
Total Ramp Density Adjustment	-	Level of Service (LOS)	C
Adjusted Free-Flow Speed (FFS_{adj}), mi/h	68.2		

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Project Description	I-5: Mission Avenue to Oceanside Boulevard SB	Unit	United States Customary

Geometric Data

Number of Lanes, ln	4	Terrain Type	Level
Segment Length (L), ft	-	Percent Grade, %	-
Measured or Base Free-Flow Speed	Measured	Grade Length, mi	-
Base Free-Flow Speed (BFFS), mi/h	69.5	Total Ramp Density (TRD), ramps/mi	-
Lane Width, ft	-	Free-Flow Speed (FFS), mi/h	69.5
Right-Side Lateral Clearance, ft	-		

Adjustment Factors

Driver Population	Mostly Familiar	Final Speed Adjustment Factor (SAF)	0.975
Weather Type	Non-Severe Weather	Final Capacity Adjustment Factor (CAF)	0.968
Incident Type	No Incident	Demand Adjustment Factor (DAF)	1.000

Demand and Capacity

Demand Volume veh/h	5972	Heavy Vehicle Adjustment Factor (f_{HV})	0.986
Peak Hour Factor	0.94	Flow Rate (V_p), pc/h/ln	1611
Total Trucks, %	1.39	Capacity (c), pc/h/ln	2378
Single-Unit Trucks (SUT), %	-	Adjusted Capacity (c_{adj}), pc/h/ln	2302
Tractor-Trailers (TT), %	-	Volume-to-Capacity Ratio (v/c)	0.70
Passenger Car Equivalent (E_T)	2.000		

Speed and Density

Lane Width Adjustment (f_{LW})	-	Average Speed (S), mi/h	65.5
Right-Side Lateral Clearance Adj. (f_{RLC})	-	Density (D), pc/mi/ln	24.6
Total Ramp Density Adjustment	-	Level of Service (LOS)	C
Adjusted Free-Flow Speed (FFS_{adj}), mi/h	67.8		

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Project Description	I-5: Mission Avenue to Oceanside Boulevard NB	Unit	United States Customary

Geometric Data

Number of Lanes, ln	4	Terrain Type	Level
Segment Length (L), ft	-	Percent Grade, %	-
Measured or Base Free-Flow Speed	Measured	Grade Length, mi	-
Base Free-Flow Speed (BFFS), mi/h	68.5	Total Ramp Density (TRD), ramps/mi	-
Lane Width, ft	-	Free-Flow Speed (FFS), mi/h	68.5
Right-Side Lateral Clearance, ft	-		

Adjustment Factors

Driver Population	Mostly Familiar	Final Speed Adjustment Factor (SAF)	0.975
Weather Type	Non-Severe Weather	Final Capacity Adjustment Factor (CAF)	0.968
Incident Type	No Incident	Demand Adjustment Factor (DAF)	1.000

Demand and Capacity

Demand Volume veh/h	6161	Heavy Vehicle Adjustment Factor (f_{HV})	0.985
Peak Hour Factor	0.94	Flow Rate (V_p), pc/h/ln	1664
Total Trucks, %	1.53	Capacity (c), pc/h/ln	2368
Single-Unit Trucks (SUT), %	-	Adjusted Capacity (c_{adj}), pc/h/ln	2292
Tractor-Trailers (TT), %	-	Volume-to-Capacity Ratio (v/c)	0.73
Passenger Car Equivalent (E_T)	2.000		

Speed and Density

Lane Width Adjustment (f_{LW})	-	Average Speed (S), mi/h	64.3
Right-Side Lateral Clearance Adj. (f_{RLC})	-	Density (D), pc/mi/ln	25.9
Total Ramp Density Adjustment	-	Level of Service (LOS)	C
Adjusted Free-Flow Speed (FFS_{adj}), mi/h	66.8		

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Project Description	I-5: Mission Avenue to Oceanside Boulevard SB	Unit	United States Customary

Geometric Data

Number of Lanes, ln	4	Terrain Type	Level
Segment Length (L), ft	-	Percent Grade, %	-
Measured or Base Free-Flow Speed	Measured	Grade Length, mi	-
Base Free-Flow Speed (BFFS), mi/h	68.0	Total Ramp Density (TRD), ramps/mi	-
Lane Width, ft	-	Free-Flow Speed (FFS), mi/h	68.0
Right-Side Lateral Clearance, ft	-		

Adjustment Factors

Driver Population	Mostly Familiar	Final Speed Adjustment Factor (SAF)	0.975
Weather Type	Non-Severe Weather	Final Capacity Adjustment Factor (CAF)	0.968
Incident Type	No Incident	Demand Adjustment Factor (DAF)	1.000

Demand and Capacity

Demand Volume veh/h	6783	Heavy Vehicle Adjustment Factor (f_{HV})	0.988
Peak Hour Factor	0.94	Flow Rate (V_p), pc/h/ln	1826
Total Trucks, %	1.21	Capacity (c), pc/h/ln	2363
Single-Unit Trucks (SUT), %	-	Adjusted Capacity (c_{adj}), pc/h/ln	2287
Tractor-Trailers (TT), %	-	Volume-to-Capacity Ratio (v/c)	0.80
Passenger Car Equivalent (E_T)	2.000		

Speed and Density

Lane Width Adjustment (f_{LW})	-	Average Speed (S), mi/h	61.6
Right-Side Lateral Clearance Adj. (f_{RLC})	-	Density (D), pc/mi/ln	29.6
Total Ramp Density Adjustment	-	Level of Service (LOS)	D
Adjusted Free-Flow Speed (FFS_{adj}), mi/h	66.3		

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Project Description	I-5: SR-76 to Mission Avenue NB	Unit	United States Customary

Geometric Data

Number of Lanes, ln	4	Terrain Type	Level
Segment Length (L), ft	-	Percent Grade, %	-
Measured or Base Free-Flow Speed	Measured	Grade Length, mi	-
Base Free-Flow Speed (BFFS), mi/h	70.2	Total Ramp Density (TRD), ramps/mi	-
Lane Width, ft	-	Free-Flow Speed (FFS), mi/h	70.2
Right-Side Lateral Clearance, ft	-		

Adjustment Factors

Driver Population	Mostly Familiar	Final Speed Adjustment Factor (SAF)	0.975
Weather Type	Non-Severe Weather	Final Capacity Adjustment Factor (CAF)	0.968
Incident Type	No Incident	Demand Adjustment Factor (DAF)	1.000

Demand and Capacity

Demand Volume veh/h	5569	Heavy Vehicle Adjustment Factor (f_{HV})	0.960
Peak Hour Factor	0.94	Flow Rate (V_p), pc/h/ln	1543
Total Trucks, %	4.22	Capacity (c), pc/h/ln	2384
Single-Unit Trucks (SUT), %	-	Adjusted Capacity (c_{adj}), pc/h/ln	2308
Tractor-Trailers (TT), %	-	Volume-to-Capacity Ratio (v/c)	0.67
Passenger Car Equivalent (E_T)	2.000		

Speed and Density

Lane Width Adjustment (f_{LW})	-	Average Speed (S), mi/h	66.7
Right-Side Lateral Clearance Adj. (f_{RLC})	-	Density (D), pc/mi/ln	23.1
Total Ramp Density Adjustment	-	Level of Service (LOS)	C
Adjusted Free-Flow Speed (FFS_{adj}), mi/h	68.4		

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Geometric Data

Number of Lanes, ln	4	Terrain Type	Level
Segment Length (L), ft	-	Percent Grade, %	-
Measured or Base Free-Flow Speed	Measured	Grade Length, mi	-
Base Free-Flow Speed (BFFS), mi/h	66.6	Total Ramp Density (TRD), ramps/mi	-
Lane Width, ft	-	Free-Flow Speed (FFS), mi/h	66.6
Right-Side Lateral Clearance, ft	-		

Adjustment Factors

Driver Population	Mostly Familiar	Final Speed Adjustment Factor (SAF)	0.975
Weather Type	Non-Severe Weather	Final Capacity Adjustment Factor (CAF)	0.968
Incident Type	No Incident	Demand Adjustment Factor (DAF)	1.000

Demand and Capacity

Demand Volume veh/h	4759	Heavy Vehicle Adjustment Factor (f_{HV})	0.937
Peak Hour Factor	0.94	Flow Rate (V_p), pc/h/ln	1351
Total Trucks, %	6.77	Capacity (c), pc/h/ln	2349
Single-Unit Trucks (SUT), %	-	Adjusted Capacity (c_{adj}), pc/h/ln	2274
Tractor-Trailers (TT), %	-	Volume-to-Capacity Ratio (v/c)	0.59
Passenger Car Equivalent (E_T)	2.000		

Speed and Density

Lane Width Adjustment (f_{LW})	-	Average Speed (S), mi/h	64.9
Right-Side Lateral Clearance Adj. (f_{RLC})	-	Density (D), pc/mi/ln	20.8
Total Ramp Density Adjustment	-	Level of Service (LOS)	C
Adjusted Free-Flow Speed (FFS_{adj}), mi/h	64.9		

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Geometric Data

Number of Lanes, ln	4	Terrain Type	Level
Segment Length (L), ft	-	Percent Grade, %	-
Measured or Base Free-Flow Speed	Measured	Grade Length, mi	-
Base Free-Flow Speed (BFFS), mi/h	67.8	Total Ramp Density (TRD), ramps/mi	-
Lane Width, ft	-	Free-Flow Speed (FFS), mi/h	67.8
Right-Side Lateral Clearance, ft	-		

Adjustment Factors

Driver Population	Mostly Familiar	Final Speed Adjustment Factor (SAF)	0.975
Weather Type	Non-Severe Weather	Final Capacity Adjustment Factor (CAF)	0.968
Incident Type	No Incident	Demand Adjustment Factor (DAF)	1.000

Demand and Capacity

Demand Volume veh/h	5055	Heavy Vehicle Adjustment Factor (f_{HV})	0.966
Peak Hour Factor	0.94	Flow Rate (V_p), pc/h/ln	1392
Total Trucks, %	3.47	Capacity (c), pc/h/ln	2361
Single-Unit Trucks (SUT), %	-	Adjusted Capacity (c_{adj}), pc/h/ln	2285
Tractor-Trailers (TT), %	-	Volume-to-Capacity Ratio (v/c)	0.61
Passenger Car Equivalent (E_T)	2.000		

Speed and Density

Lane Width Adjustment (f_{LW})	-	Average Speed (S), mi/h	65.9
Right-Side Lateral Clearance Adj. (f_{RLC})	-	Density (D), pc/mi/ln	21.1
Total Ramp Density Adjustment	-	Level of Service (LOS)	C
Adjusted Free-Flow Speed (FFS_{adj}), mi/h	66.1		

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Number of Lanes, ln	4	Terrain Type	Level
Segment Length (L), ft	-	Percent Grade, %	-
Measured or Base Free-Flow Speed	Measured	Grade Length, mi	-
Base Free-Flow Speed (BFFS), mi/h	68.6	Total Ramp Density (TRD), ramps/mi	-
Lane Width, ft	-	Free-Flow Speed (FFS), mi/h	68.6
Right-Side Lateral Clearance, ft	-		

Adjustment Factors

Driver Population	Mostly Familiar	Final Speed Adjustment Factor (SAF)	0.975
Weather Type	Non-Severe Weather	Final Capacity Adjustment Factor (CAF)	0.968
Incident Type	No Incident	Demand Adjustment Factor (DAF)	1.000

Demand and Capacity

Demand Volume veh/h	6130	Heavy Vehicle Adjustment Factor (f_{HV})	0.949
Peak Hour Factor	0.94	Flow Rate (V_p), pc/h/ln	1718
Total Trucks, %	5.32	Capacity (c), pc/h/ln	2369
Single-Unit Trucks (SUT), %	-	Adjusted Capacity (c_{adj}), pc/h/ln	2293
Tractor-Trailers (TT), %	-	Volume-to-Capacity Ratio (v/c)	0.75
Passenger Car Equivalent (E_T)	2.000		

Speed and Density

Lane Width Adjustment (f_{LW})	-	Average Speed (S), mi/h	63.6
Right-Side Lateral Clearance Adj. (f_{RLC})	-	Density (D), pc/mi/ln	27.0
Total Ramp Density Adjustment	-	Level of Service (LOS)	D
Adjusted Free-Flow Speed (FFS_{adj}), mi/h	66.9		

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