

APPENDIX F
Traffic Impact Analysis

Traffic Impact Study for
7811 Santa Monica Boulevard — Orange Grove Mixed Use Project
West Hollywood, CA

July 26, 2019

Prepared For:

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TABLE OF CONTENTS

1. INTRODUCTION	1
1.1 PROJECT LOCATION.....	1
1.2 PROJECT DESCRIPTION.....	2
1.3 PROJECT STUDY AREA.....	5
1.4 ANALYSIS METHODOLOGY	5
2. EXISTING CONDITIONS	12
2.1 EXISTING ROADWAY SYSTEM	12
2.2 EXISTING TRANSIT SERVICE.....	12
2.3 EXISTING TRAFFIC VOLUMES	16
2.4 EXISTING INTERSECTION LEVEL OF SERVICE	16
2.5 EXISTING STREET SEGMENT VOLUMES	17
3. PROJECT TRAFFIC	23
3.1 PROJECT TRIP GENERATION	23
3.2 PROJECT TRIP DISTRIBUTION.....	23
3.3 PROJECT TRIP ASSIGNMENT	24
4. EXISTING PLUS PROJECT CONDITIONS	33
4.1 PEAK HOUR INTERSECTION LEVEL OF SERVICE	33
4.2 EXISTING PLUS PROJECT STREET SEGMENT VOLUMES.....	37
5. FUTURE 2021 WITHOUT-PROJECT CONDITIONS	39
5.1 AMBIENT GROWTH.....	39
5.2 RELATED PROJECTS	39
5.3 PEAK HOUR INTERSECTION LEVEL OF SERVICE	50
5.4 FUTURE WITHOUT PROJECT STREET SEGMENT ANALYSIS	51
6. FUTURE 2021 WITH PROJECT CONDITIONS	53
6.1 PEAK HOUR INTERSECTION LEVEL OF SERVICE	53
6.2 FUTURE WITH PROJECT STREET SEGMENT ANALYSIS.....	57
7. PROJECT TRAFFIC IMPACTS	59
7.1 DETERMINATION OF TRAFFIC IMPACTS ON INTERSECTIONS	59
7.2 DETERMINATION OF TRAFFIC IMPACTS ON RESIDENTIAL STREETS.....	60
7.3 PROJECT TRAFFIC IMPACTS – EXISTING PLUS PROJECT.....	60
7.4 PROJECT TRAFFIC IMPACTS – FUTURE 2021 WITH PROJECT	62
7.5 SB-743 APPLICATION.....	64
8. PARKING ASSESSMENT	66
8.1 PARKING CODE REQUIREMENTS.....	66
9. SITE ACCESS	67
9.1 VEHICLE DELAYS AND QUEUING	67
9.2 PEDESTRIAN CIRCULATION	70
10. CONSTRUCTION IMPACT ANALYSIS	71
11. CONGESTION MANAGEMENT PLAN CONFORMANCE	74
12. ANALYSIS SUMMARY AND PROJECT MITIGATION	75
12.1 SUMMARY	75

FIGURES

FIGURE 1 – STUDY AREA	3
FIGURE 2 - PRELIMINARY SITE PLAN	4
FIGURE 3 - EXISTING INTERSECTION GEOMETRY	14
FIGURE 4 - EXISTING TRANSIT LINES	15
FIGURE 5 – EXISTING WEEKDAY AM PEAK HOUR TRAFFIC VOLUMES	19
FIGURE 6 – EXISTING WEEKDAY MIDDAY PEAK HOUR TRAFFIC VOLUMES	20
FIGURE 7 – EXISTING WEEKDAY PM PEAK HOUR TRAFFIC VOLUMES	21
FIGURE 8 – EXISTING STREET SEGMENT DAILY VOLUMES	22
FIGURE 9A – PROJECT TRIP DISTRIBUTION – RESIDENTIAL INBOUND TRIPS	25
FIGURE 9B – PROJECT TRIP DISTRIBUTION – RESIDENTIAL OUTBOUND TRIPS	256
FIGURE 9C – PROJECT TRIP DISTRIBUTION – COMMERCIAL INBOUND TRIPS	257
FIGURE 9D – PROJECT TRIP DISTRIBUTION – COMMERCIAL OUTBOUND TRIPS	258
FIGURE 10 – WEEKDAY AM PEAK HOUR PROJECT ONLY TRAFFIC VOLUMES	29
FIGURE 11 – WEEKDAY MIDDAY PEAK HOUR PROJECT ONLY TRAFFIC VOLUMES	30
FIGURE 12 – WEEKDAY PM PEAK HOUR PROJECT ONLY TRAFFIC VOLUMES	31
FIGURE 13 – PROJECT ONLY STREET SEGMENT TRAFFIC VOLUMES	32
FIGURE 14 – EXISTING PLUS PROJECT WEEKDAY AM PEAK-HOUR TRAFFIC VOLUMES	34
FIGURE 15 – EXISTING PLUS PROJECT WEEKDAY MIDDAY PEAK-HOUR TRAFFIC VOLUMES	35
FIGURE 16 – EXISTING PLUS PROJECT WEEKDAY PM PEAK-HOUR TRAFFIC VOLUMES	36
FIGURE 17 – EXISTING PLUS PROJECT STREET SEGMENT TRAFFIC VOLUMES	38
FIGURE 18 – LOCATION OF RELATED PROJECTS	46
FIGURE 19 – FUTURE 2021 WITHOUT PROJECT WEEKDAY AM PEAK HOUR TRAFFIC VOLUMES	47
FIGURE 20 – FUTURE 2021 WITHOUT PROJECT WEEKDAY MIDDAY PEAK HOUR TRAFFIC VOLUMES	48
FIGURE 21 – FUTURE 2021 WITHOUT PROJECT WEEKDAY PM PEAK HOUR TRAFFIC VOLUMES	49
FIGURE 22 – FUTURE 2021 WITHOUT PROJECT STREET SEGMENT TRAFFIC VOLUMES	52
FIGURE 23 – FUTURE 2021 WITH PROJECT WEEKDAY AM PEAK-HOUR TRAFFIC VOLUMES	54
FIGURE 24 – FUTURE 2021 WITH PROJECT WEEKDAY MIDDAY PEAK-HOUR TRAFFIC VOLUMES	55
FIGURE 25 – FUTURE 2021 WITH PROJECT WEEKDAY PM PEAK-HOUR TRAFFIC VOLUMES	56
FIGURE 26 – FUTURE 2021 WITH PROJECT STREET SEGMENT TRAFFIC VOLUMES	58

TABLES

TABLE 1: LEVEL OF SERVICE DEFINITION (WEST HOLLYWOOD)	8
TABLE 2: LEVEL OF SERVICE DEFINITION (CITY OF LOS ANGELES)	9
TABLE 3: STUDY AREA ROADWAY DESCRIPTIONS	12
TABLE 4: TRANSIT SERVICE	13
TABLE 5: EXISTING LEVEL OF SERVICE SUMMARY	17
TABLE 6: EXISTING DAILY TRAFFIC VOLUMES ON STUDY STREET SEGMENTS	18
TABLE 7: PROJECT TRIP GENERATION ESTIMATES	23
TABLE 8: EXISTING PLUS PROJECT LEVEL OF SERVICE SUMMARY	33
TABLE 9: EXISTING PLUS PROJECT DAILY TRAFFIC VOLUMES ON STUDY STREET SEGMENTS	37
TABLE 10 - AREA/CUMULATIVE PROJECTS TRIP GENERATION	40
TABLE 10 - AREA/CUMULATIVE PROJECTS TRIP GENERATION (CONT.)	41
TABLE 10 - AREA/CUMULATIVE PROJECTS TRIP GENERATION (CONT.)	42
TABLE 10 - AREA/CUMULATIVE PROJECTS TRIP GENERATION (CONT.)	43
TABLE 10 - AREA/CUMULATIVE PROJECTS TRIP GENERATION (CONT.)	44
TABLE 10 - AREA/CUMULATIVE PROJECTS TRIP GENERATION (CONT.)	45
TABLE 11: FUTURE 2021 WITHOUT PROJECT LEVEL OF SERVICE SUMMARY	50
TABLE 12: FUTURE 2021 WITHOUT PROJECT DAILY VOLUMES ON STUDY STREET SEGMENTS	51
TABLE 13: FUTURE 2021 WITH PROJECT LEVEL OF SERVICE SUMMARY	53
TABLE 14: FUTURE 2021 WITH PROJECT DAILY TRAFFIC VOLUMES ON STUDY STREET SEGMENTS	57
TABLE 15: EXISTING PLUS PROJECT PEAK HOUR IMPACT SUMMARY	61
TABLE 16: EXISTING PLUS PROJECT ROADWAY SEGMENT IMPACT SUMMARY	62
TABLE 17: FUTURE 2021 PEAK HOUR PROJECT IMPACT SUMMARY	63
TABLE 18: FUTURE WITH PROJECT ROADWAY SEGMENT IMPACT SUMMARY	64
TABLE 19: PROPOSED PROJECT VEHICLE MILES TRAVELED	65

TABLE 20: REQUIRED PARKING AND SUPPLY SUMMARY	66
TABLE 21: PROJECT-RELATED VEHICLE DELAYS AND QUEUING AT DRIVEWAYS	69
TABLE 22: CONSTRUCTION TRIP GENERATION TOTALS	71
TABLE 23: CONSTRUCTION IMPACTS - EXISTING PLUS PROJECT	72
TABLE 24: CONSTRUCTION IMPACTS - FUTURE WITH PROJECT	73

APPENDICES

APPENDIX A – TRAFFIC STUDY SCOPING DOCUMENT
APPENDIX B – TRAFFIC COUNT DATA
APPENDIX C – ANALYSIS WORKSHEETS FOR EXISTING CONDITIONS
APPENDIX D – ANALYSIS WORKSHEETS FOR EXISTING PLUS PROJECT CONDITIONS
APPENDIX E – ANALYSIS WORKSHEETS FOR FUTURE WITHOUT PROJECT CONDITIONS (YEAR 2021)
APPENDIX F – ANALYSIS WORKSHEETS FOR FUTURE WITH PROJECT CONDITIONS (YEAR 2021)
APPENDIX G – ANALYSIS WORKSHEETS FOR DRIVEWAY DELAY AND QUEUING
APPENDIX H – CONSTRUCTION ANALYSIS WORKSHEETS

I. INTRODUCTION

This report documents the traffic study prepared for the proposed mixed use project located at 7811 Santa Monica Boulevard (hereafter referred to as the Project) in the City of West Hollywood. KOA was retained to study the potential traffic impacts associated with the proposed Project.

The following sections examine the impacts of the Project on traffic operations at select study area intersections during typical weekday morning, midday, and evening peak-hour periods.

The scope and methodologies used for this traffic study were developed in consultation with the City of West Hollywood staff. The project study area, as defined through consultation with City staff, encompasses eight intersections and two residential street segments. Key tasks undertaken for this traffic analysis include:

- Definition of study approach
- Determination of existing traffic conditions
- Trip generation forecasts of the planned Project land use
- Assignment of Project-generated trips to the study area roadway system
- Evaluation of the impact of Project traffic at the study locations

I.1 PROJECT LOCATION

The Project site is located at 7811 Santa Monica Boulevard, between Orange Grove Avenue and Ogden Drive within the City of West Hollywood. Figure 1 illustrates the study area and the site location in relation to the surrounding street system. Three driveways will provide access to the site: one full-movement driveway on Orange Grove Avenue (with restricted outbound right-turns), one full-movement, residential-only driveway on Ogden Drive (with restricted outbound left-turns), and ingress-only driveway on Santa Monica Boulevard. Northbound/Outbound movements will be restricted at both Orange Grove and Ogden driveways – vehicles exiting the site will be required to travel southbound.

The Orange Grove Avenue driveway would be located approximately 250 feet north from the intersection of Santa Monica Boulevard and Orange Grove Avenue. The driveway would be located on the western side of the Project site. The roadway will continue to provide one traffic lane in each direction with on-street parking on both sides.

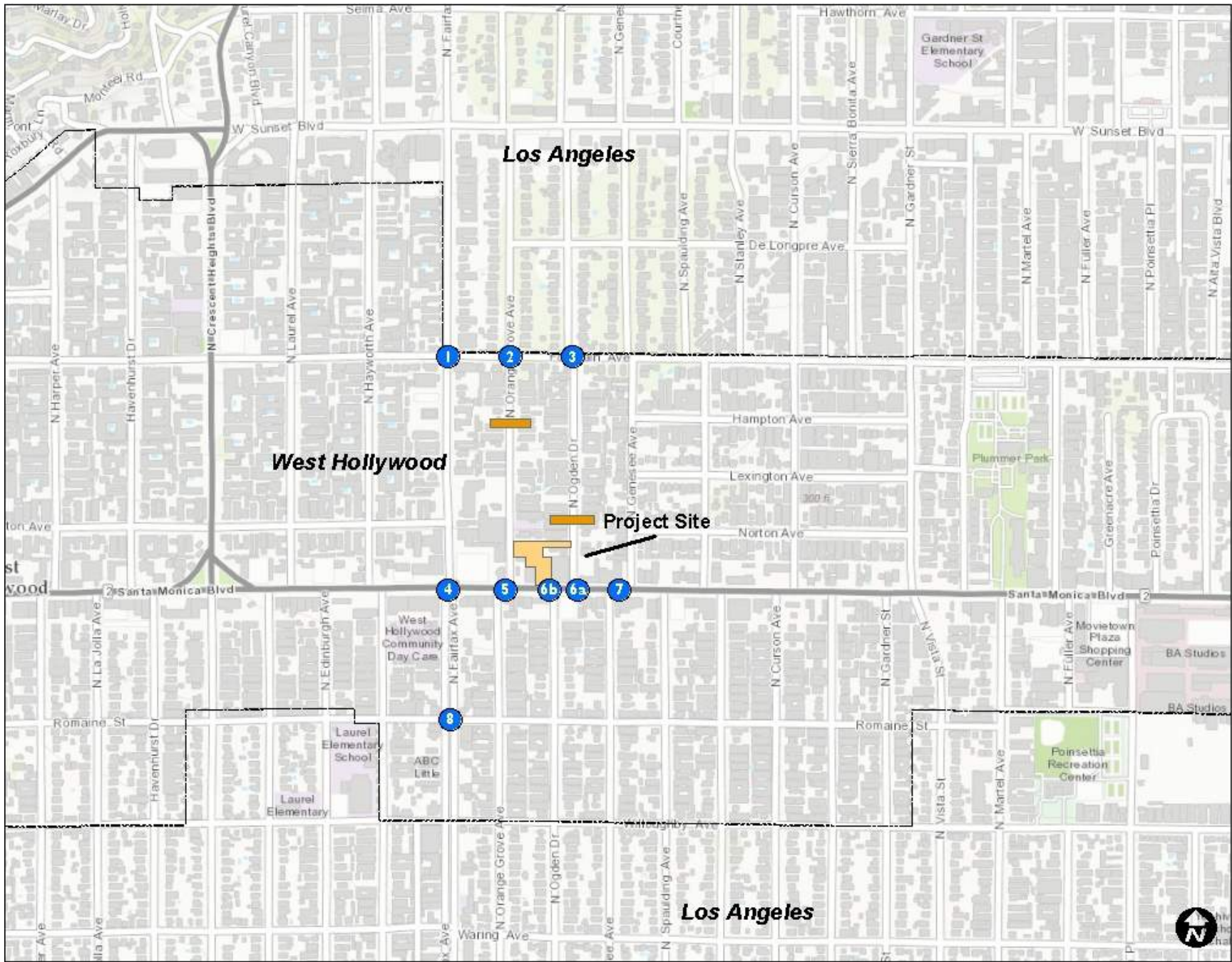
The Ogden Drive driveway would be located approximately 330 feet north from the intersection of Santa Monica Boulevard and Ogden Drive. The driveway would be located on the eastern side of the Project. The roadway will continue to provide one lane of traffic in each direction with on-street parking on both sides.

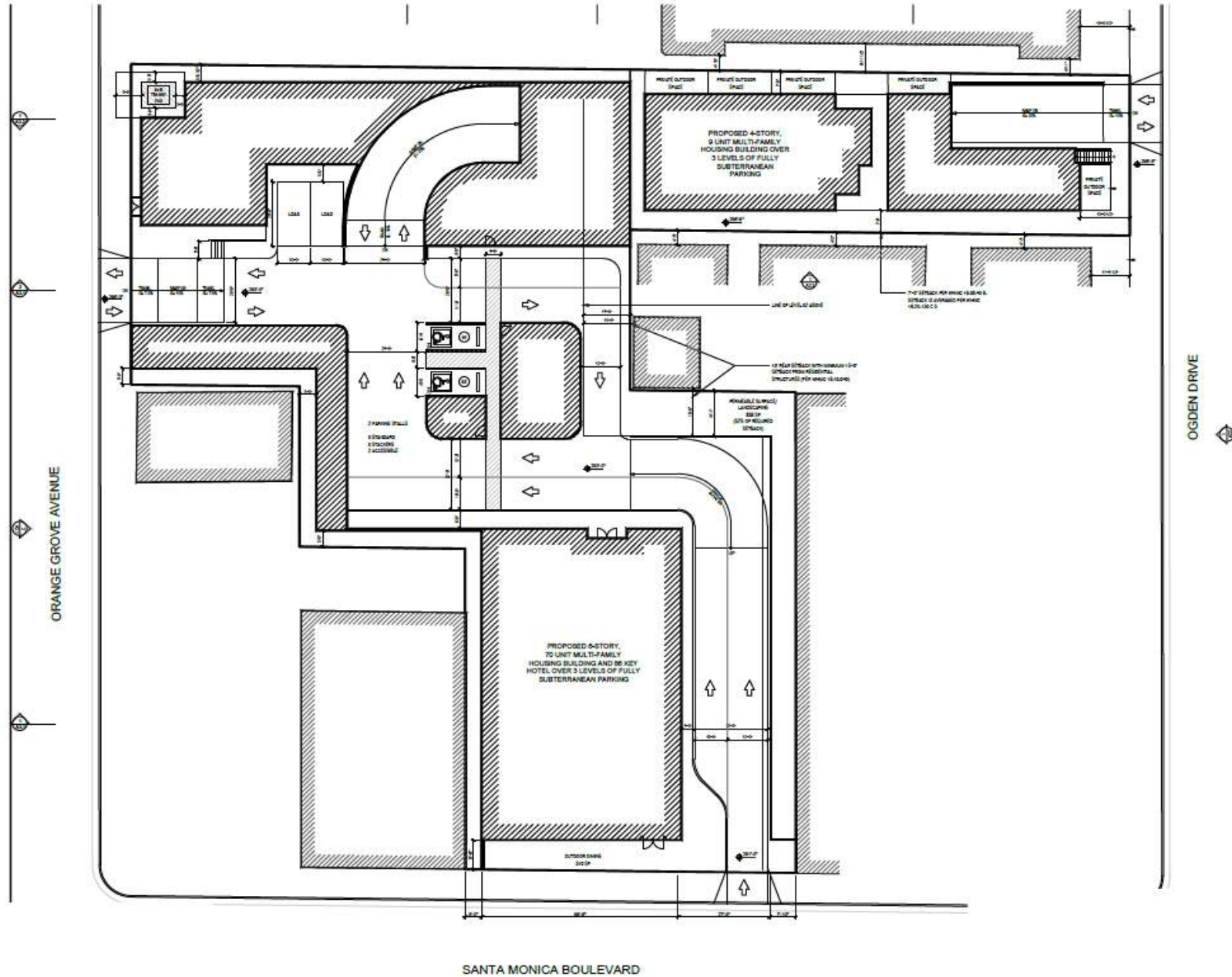
The Santa Monica Boulevard, ingress-only driveway would be located in the approximate center of the site, equidistant from both Orange Grove Avenue and Ogden Drive. The driveway would be located on the southern side of the Project site and no new striped left-turn pocket is proposed on Santa Monica Boulevard Drive for vehicles entering the Project site; the travel lanes would remain in their pre-Project configuration. The roadway will continue to provide two lanes of traffic in each direction with on-street parking on both sides.

Figure 2 shows the preliminary site plan.

1.2 PROJECT DESCRIPTION

The proposed project would involve the construction and operation of a 214,400 square-foot mixed-use building on a 0.92-acre site located within the City of West Hollywood. The project would consist of a 86-room hotel, 3,756 square feet of restaurant space, 1,381 square feet of art gallery space, and 70 apartment units.





I.3 PROJECT STUDY AREA

Based on consultation with City staff, eight intersections were defined to be analyzed for this traffic analysis. They are:

1. Fairfax Avenue & Fountain Avenue [Signalized] ¹
2. Orange Grove Avenue & Fountain Avenue [Stop Controlled] ¹
3. Ogden Drive & Fountain Avenue [Stop Controlled] ¹
4. Fairfax Avenue & Santa Monica Boulevard [Signalized]
5. Orange Grove Avenue & Santa Monica Boulevard [Stop Controlled]
6. Ogden Drive & Santa Monica Boulevard [Stop Controlled]
7. Genesee Avenue & Santa Monica Boulevard [Signalized]
8. Fairfax Avenue & Romaine Street [Stop Controlled]

1. Shared Intersection (City of West Hollywood and City of Los Angeles)

As indicated, five of the eight study intersections are stop-sign controlled while the remaining three intersections are signalized. For the purposes of this analysis, intersection #6 (Ogden Drive and Santa Monica Boulevard) was split into two as it functions as two separate intersections. In the analysis, intersection 6a represents the north-leg and intersection 6b represents the south leg.

In addition, two residential street segments were included in this study for analysis:

- A. Orange Grove Avenue, between the Project Site and Fountain Avenue
- B. Ogden Drive, between the Project Site and Fountain Avenue

The locations of the eight study intersections and two street segments are illustrated on Figure I.

I.4 ANALYSIS METHODOLOGY

KOA discussed this project with the City at the start of this study to achieve consensus on all assumptions and the overall methodology. A traffic study scoping document was approved by the City on May 4, 2016. Since then, the project description has changed various times, so the project description in the approved scoping document will differ from the one used in this analysis. The original scoping document is located in Appendix A. The following describes the general methodology and approach for this traffic study.

Consistent with the traffic impact study guidelines of the City of West Hollywood, the traffic analysis for the study locations within the City of West Hollywood was conducted during the following peak periods:

- Weekday morning (7:00am – 10:00am)
- Weekday midday (11:00am – 1:00pm)
- Weekday afternoon/evening (4:00pm – 7:00pm)

Consistent with traffic impact study guidelines of the City of Los Angeles, the traffic analysis for the study locations within the City of Los Angeles was conducted for the following periods:

- Weekday morning
- Weekday afternoon/evening

Level-of-Service Methodology

For analysis of level of service (LOS) at signalized intersections, the City of West Hollywood has designated the Highway Capacity Manual (HCM) methodology as the desired analysis tool. The HCM method takes into account existing signal timing, minimum green times, vehicle volumes, pedestrian and bike movements, user defined saturation flow rates, and storage bay lengths. The resulting intersection delay (seconds) is then utilized for identification of a level of service value for that particular peak hour period. The output for this method is a delay (in seconds) value and a level of service for the intersection as a whole.

The City of Los Angeles has designated the Circular 212 – Critical Movement Analysis (CMA) Planning methodology as the desired analysis tool. The CMA method is a procedure that incorporates the effects of geometry and traffic signal operation and develops a Volume to Capacity ratio (V/C) for each separate movement. The resulting V/C of the critical movements are then utilized for identification of level of service for that particular peak hour period.

At stop-controlled intersections, the Highway Capacity Manual (HCM) methodology has been designated to determine level of service by the City of West Hollywood. For this methodology, conditions are based upon intersection delay, defined as the worst-case approach delay experienced by users of the intersection who must stop or yield to free-flow through traffic. This method uses a “gap acceptance” technique to predict driver delay. This methodology is applicable to unsignalized and partially-controlled intersections on major streets where there is potential for crossing difficulty from the minor approaches due to heavy traffic volumes on the major approaches.

The City of Los Angeles does not require an impact analysis of stop-controlled intersections.

Level of service (LOS) values range from LOS A to LOS F. LOS A indicates excellent operating conditions with little delay to motorists, whereas LOS F represents congested conditions with excessive vehicle delay. LOS E is typically defined as the operating “capacity” of a roadway. Typically, LOS D is the lowest acceptable operating condition.

Table 1 summarizes the LOS definitions for West Hollywood. Table 2 summarizes the LOS definitions for Los Angeles.

SB-743 Status and Application

On September 27, 2013, California Governor Jerry Brown signed Senate Bill (SB) 743 into law, which created a process to change the way that transportation impacts are analyzed under CEQA. SB 743 required that the Governor’s Office of Planning and Research (OPR) amend the CEQA guidelines to provide an alternative to Level of Service (LOS) for evaluating transportation impacts. Measurements of transportation impacts may include “vehicle miles traveled, vehicle miles traveled per capita, automobile trip generation rates, or automobile trips generated.” (Public Resources Code Section, 21099(b)(1)).

Under the guideline changes, LOS will no longer be considered as a basis for determining significant impacts in many parts of California. Furthermore, parking impacts will also not be considered significant impacts under CEQA for select development projects within infill areas nearby frequent transit service.

As of February 2016, OPR has incorporated comments received by stakeholders on their first draft of the updated guidelines. The second set of guidelines was released on January 20, 2016 which recommends that transportation impacts under CEQA will be evaluated using Vehicle Miles Traveled

(VMT). Local jurisdictions will still be allowed to assess impacts using methodologies in addition to VMT. Once the guidelines are officially adopted, jurisdictions will have a two-year opt-in period to incorporate VMT thresholds into their CEQA-related transportation impact review for projects.

In December 2018, the California Natural Resources Agency certified and adopted the CEQA Guidelines update package, implementing SB 743 (California Code of Regulations, Title 14, Section 15064.3). Under CEQA Guidelines Section 15064.3, “vehicle miles traveled” is considered the most appropriate measure of transportation impacts. Under the guideline changes, LOS will no longer be considered as a basis for determining significant impacts in many part of California. Furthermore, parking impacts will also not be considered significant impacts under CEQA for select development projects within infill areas nearby frequent transit service. Beginning on July 1, 2020, these provisions will be applied statewide, although agencies can elect to apply the VMT metric immediately.

The City of West Hollywood is in the process of developing new traffic study guidelines in accordance with CEQA Guidelines Section 15064.3. As such, this analysis is based on their current traffic study guidelines, which use LOS and delay as a measure for significant transportation impacts under CEQA.

Table I: Level of Service Definition (West Hollywood)

LOS	Interpretation	Signalized Intersection (HCM) Delay (sec.)	Stop-Controlled Intersection (HCM) Delay (sec.)
A	Free-flow operations. Vehicles are completely unimpeded in their ability to maneuver within the traffic stream. Control delay at the boundary intersections is minimal. The travel speed exceeds 85% of the base free-flow speed.	≤ 10	0 - 10
B	Reasonably unimpeded operation. The ability to maneuver within the traffic stream is only slightly restricted and control delay at the boundary intersections is not significant. The travel speed is between 67% and 85% of the base free-flow speed.	> 10 - 20	> 10 - 15
C	Stable operation. The ability to maneuver and change lanes at midsegment locations may be more restricted than at LOS B. Longer queues at the boundary intersections may contribute to lower travel speeds. The travel speed is between 50% and 67% of the base free-flow speed.	> 20 - 35	> 15 - 25
D	Less stable condition in which small increases in flow may cause substantial increases in delay and decreases in travel speed. This operation may be due to adverse signal progression, high volume, or inappropriate signal timing at the boundary intersections. The travel speed is between 40% and 50% of the base free-flow speed.	> 35 - 55	> 25 - 35
E	Unstable operation and significant delay. Such operations may be due to some combination of adverse progression, high volume, and inappropriate signal timing at the boundary intersections. The travel speed is between 30% and 40% of the base free-flow speed.	> 55 - 60	> 35 - 50
F	Flow at extremely low speed. Congestion is likely occurring at the boundary intersections, as indicated by high delay and extensive queuing. The travel speed is 30% or less of the base free-flow speed. Also, LOS F is assigned to the subject direction of travel if the through movement at one or more boundary intersections has a volume-to-capacity ratio greater than 1.0.	> 80	> 50

Source: Highway Capacity Manual, Transportation Research Board of The National Academies, Washington DC, 2010

Table 2: Level of Service Definition (City of Los Angeles)

LOS	Definition	Volume to Capacity Ratio (CMA)/(ICU)
A	LOS A describes primarily free-flow operation. Vehicles are completely unimpeded in their ability to maneuver within the traffic stream. Control delay at the boundary intersections is minimal. The travel speed exceeds 85% of the base free-flow speed.	0.000 - 0.600
B	LOS B describes reasonably unimpeded operation. The ability to maneuver within the traffic stream is only slightly restricted and control delay at the boundary intersections is not significant. The travel speed is between 67% and 85% of the base free-flow speed.	0.601 - 0.700
C	LOS C describes stable operation. The ability to maneuver and change lanes at mid-segment locations may be more restricted than at LOS B. Longer queues at the boundary intersections may contribute to lower travel speeds. The travel speed is between 50% and 67% of the base free-flow speed.	0.701 - 0.800
D	LOS D indicates a less stable condition in which small increases in flow may cause substantial increases in delay and decreases in travel speed. This operation may be due to adverse signal progression, high volume, or inappropriate signal timing at the boundary intersections. The travel speed is between 40% and 50% of the base free-flow speed.	0.801 - 0.900
E	LOS E is characterized by unstable operation and significant delay. Such operations may be due to some combination of adverse progression, high volume, and inappropriate signal timing at the boundary intersections. The travel speed is between 30% and 40% of the base free-flow speed.	0.901 - 1.000
F	LOS F is characterized by flow at extremely low speed. Congestion is likely occurring at the boundary intersections, as indicated by high delay and extensive queuing. The travel speed is 30% or less of the base free-flow speed. Also, LOS F is assigned to the subject direction of travel if the through movement at one or more boundary intersections has a volume-to-capacity ratio greater than 1.0.	Greater than 1.000

Study Scenarios

Weekday morning, midday and afternoon peak hour traffic operations were evaluated at the 8 study intersections and daily traffic assessed at two street segments for each of the following traffic scenarios:

- Existing
- Existing Plus Project
- Future (Year 2021) without Project
- Future (Year 2021) with Proposed Project

Existing Conditions

In order to define existing traffic conditions, new peak period turning movement counts were collected on Wednesday, May 11, 2016 at the study intersections. New 24-hour counts were collected at the study street segments on the same day. The analysis of existing traffic volumes used for this traffic analysis is discussed in Chapter 2 of this report. The peak-hour and Average Daily Traffic (ADT) traffic volume counts are provided in Appendix B.

Fieldwork within the Project study area was undertaken to identify the lane characteristics of major roadways, to identify traffic control and lane configuration at each study intersection, and to identify the location of on-street parking and transit stops.

The existing conditions at each of the study intersections and street segments is further discussed in Chapter 2 of this report.

Project Trip Generation and Distribution

Project trip generation calculations included rates established by *Trip Generation (10th edition)*, published by the Institute of Transportation Engineers (ITE). Former use trip generation credits were also applied.

The methodology utilized for Project trip generation and distribution calculations is discussed in Chapter 3 of this report.

Existing plus Project Conditions

Based on the traffic from the proposed Project, the Existing Plus Project conditions were analyzed. The levels of service for Existing Plus Project conditions for the study area are discussed in Chapter 4 of this report.

Future Without Project Conditions

In order to define regional traffic growth that would affect operations at the study intersections during the project buildout year (2021), an ambient/background traffic growth rate was defined to account for increase in area-wide traffic. An annual growth rate of 1% was utilized to increase existing (year 2016) traffic volumes to establish future (year 2021) base traffic volumes.

In addition to future ambient growth, traffic from area related projects (approved and pending) was also included in the analysis. KOA researched information collected by the City of West Hollywood and City of Los Angeles pertaining to approved projects and projects pending approval within 1.5-miles of the Project site. Daily and peak hour trips that would be generated from each of the related projects were computed. The trip rates are generally based on the Institute of Transportation Engineers (ITE) *Trip Generation, 10th Edition* published in 2017.

The level of service for future without-Project area is discussed in Chapter 5 of this report.

Future With Project Conditions

Based on the inclusion of future ambient growth, traffic from area related projects (approved and pending), and traffic from the proposed Project, future with Project conditions were analyzed. The levels of service for future with Project conditions within the study area is discussed in Chapter 6 of this report.

Level of Service Analysis and Impacts

KOA quantitatively assessed weekday morning, midday, and evening peak-hour traffic impacts at the study intersections. As established by the Cities of West Hollywood and Los Angeles, significant impacts of a proposed project at study intersections are determined based on thresholds of significance for incremental impact and the level of service.

The levels of service for future conditions with Project traffic, and the potential project impacts, are discussed in Chapter 7 of this report.

2. EXISTING CONDITIONS

This chapter documents the existing conditions in the study area. Per CEQA, existing conditions is established at the time the Notice of Preparation is issued. As such, Existing Conditions reflect Year 2016 conditions. The discussion presented here is limited to specific roadways in the project vicinity. Figure 3 depicts the lane configurations and traffic control at the study intersections.

2.1 EXISTING ROADWAY SYSTEM

Major roadways within the study area include:

- Fountain Avenue
- Santa Monica Boulevard
- Romaine Street
- Fairfax Avenue
- Orange Grove Avenue
- Ogden Drive
- Genesee Avenue

Table 3 summarizes the characteristics of the major roadways.

Table 3: Study Area Roadway Descriptions

Roadway	Classification	# Lanes		Median Type	Parking Restrictions		Posted Speed Limit (mph)	General Land Use
		NB/EB	SB/WB		North Side / East Side	South Side / West Side		
North - South Streets								
Fairfax Avenue	Arterial Street	2 / 3	2 / 3	TL / RM	1 hour 8 AM - 6 PM (N. of SMB), 2 Hour 8 AM - 6 PM (S. of SMB)	1 hour 8 AM - 6 PM (N. of SMB), 2 Hour 8 AM - 6 PM (S. of SMB)	35	Commercial / Residential
Orange Grove Avenue	Local Street	1	1	NS	No Limit	No Limit	25	Residential
Ogden Drive	Local Street	1	1	NS	No Limit	No Limit	25	Residential
Genesee Avenue	Local Street	1	1	NS	No Limit	No Limit	25	Residential
East - West Streets								
Fountain Avenue	Collector Street	2	2	ST	No Limit	No Limit	35	Residential
Santa Monica Boulevard	Arterial Street	2	2	TL	2 Hour 8 AM - 12 AM (M-F); 1 Hour AM - 8 PM (Sat)	2 Hour 8 AM - 12 AM (M-F); 1 Hour AM - 8 PM (Sat)	35	Commercial
Romaine Street	Collector Street	1	1	NS	No Limit	No Limit	25	Residential

DY - Double Yellow
 RM - Raised Median
 TL - Center Turn Lane
 ST - Striped
 NSAT - No Stopping Any Time
 NS - No Stopping

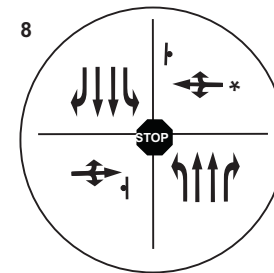
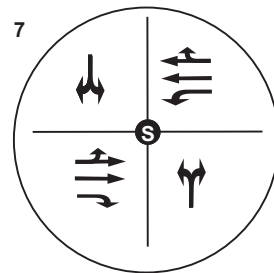
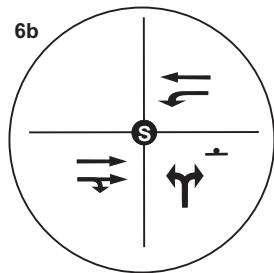
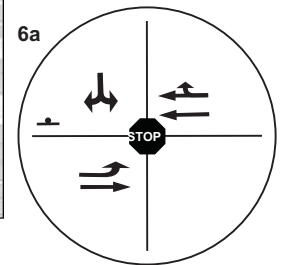
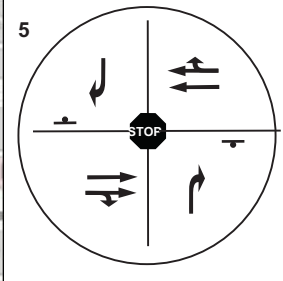
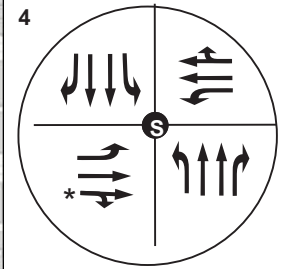
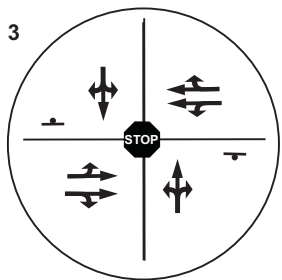
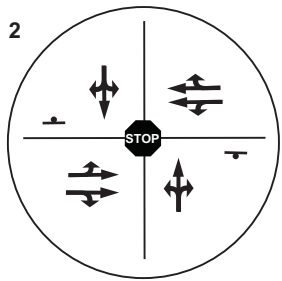
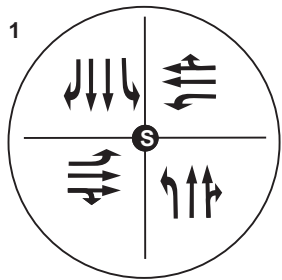
2.2 EXISTING TRANSIT SERVICE

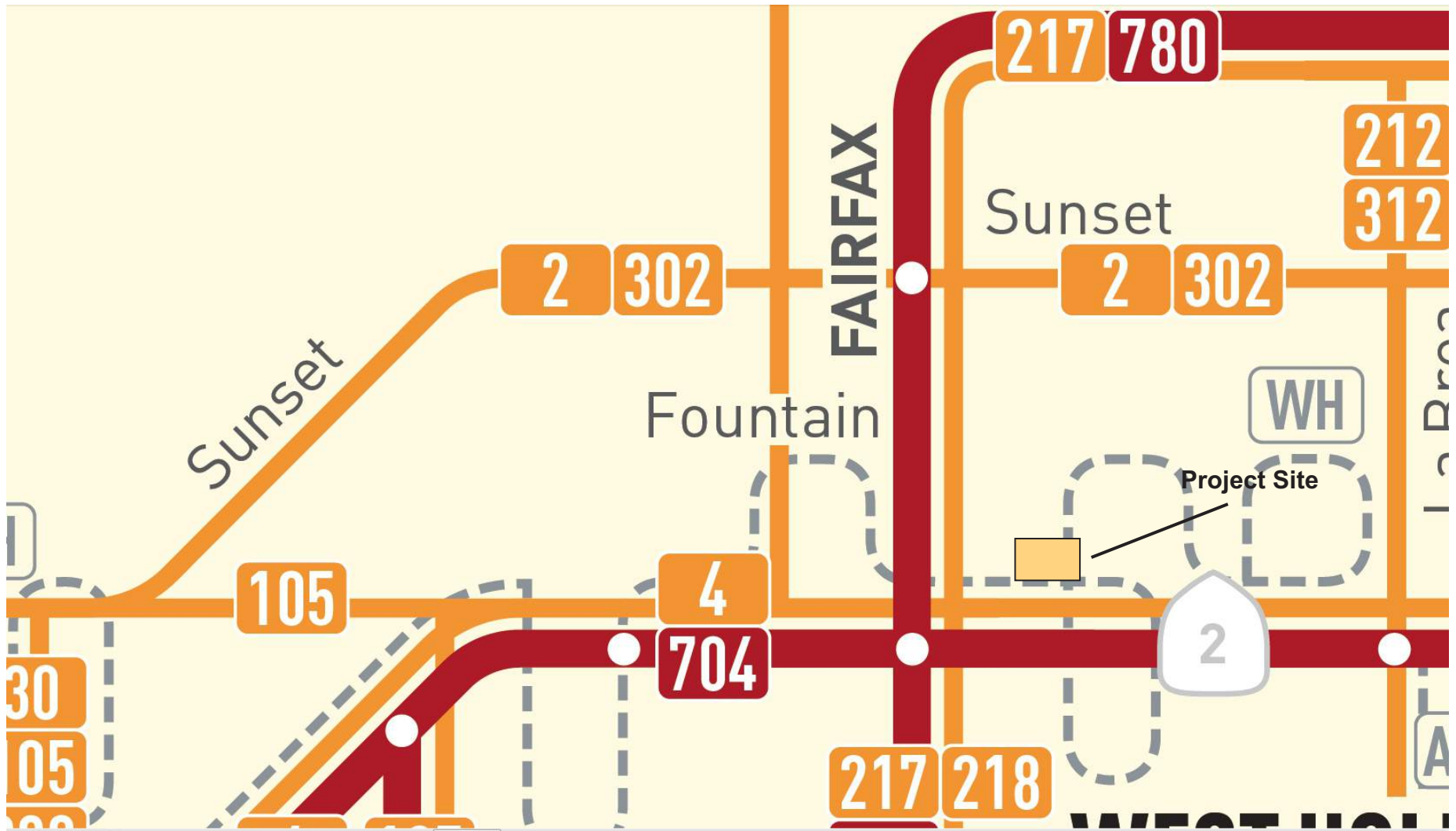
As summarized in Table 4, the Project study area is served by bus transit lines operated by the City of West Hollywood and the Los Angeles County Metropolitan Transportation Authority (Metro).

Figure 4 illustrates the routes of the transit services that serve the Project study area.

Table 4: Transit Service

Agency	Line	From	To	Via	Peak Frequency
Metro	4	Downtown Los Angeles	Santa Monica	Santa Monica Boulevard	9 - 12 Minutes
Metro	217	Fox Hills / Culver City	East Hollywood	La Cienega Boulevard / Fairfax Avenue / Hollywood Boulevard	12 - 20 Minutes
Metro	704	Downtown Los Angeles	Santa Monica	Santa Monica Boulevard	10 - 15 Minutes
Metro	780	Washington / Fairfax	Pasadena	Fairfax Avenue / Hollywood Boulevard	10 - 15 Minutes
West Hollywood	The Pickup	Robertson Boulevard / Santa Monica Boulevard	La Bre Avenue / Santa Monica Boulevard	Santa Monica Boulevard	15 minutes - Friday & Saturday: 8:00pm - 3:00am; Sunday 2:00pm - 10:00pm
West Hollywood	CityLine Blue / Orange	Neighborhood Shuttle		Santa Monica Boulevard / San Vicente Boulevard	30 Minutes





2.3 EXISTING TRAFFIC VOLUMES

KOA compiled new manual intersection turn movement and machine roadway segment counts. These counts were collected on Wednesday, May 11, 2016. The turning movement counts were collected during the morning (7-9 AM), midday (11 AM-1 PM) and evening (4-7 PM) periods. The machine counts were collected for 24 hours on the same day.

Traffic count summaries are provided in Appendix B of this report.

2.4 EXISTING INTERSECTION LEVEL OF SERVICE

Based on the traffic count data conducted at the study area intersections, a volume-to-capacity (V/C) ratio or average vehicle delay and corresponding level of service (LOS) was determined for all of the study area intersections under weekday morning, midday and evening peak hours. The V/C or delay and LOS was determined per the jurisdiction intersection methodology.

The analysis of the study intersection under the jurisdiction of LADOT included an overall volume-to-capacity reduction of 0.1 to reflect the ATSAC and ATCS enhancements.

Table 5 provides the volume/capacity ratios or delay and LOS values for existing conditions.

Table 5: Existing Level of Service Summary

Study Intersections		AM Peak Hour		Mid-Day Peak Hour		PM Peak Hour	
		V/C or Delay	LOS	V/C or Delay	LOS	V/C or Delay	LOS
City of West Hollywood							
1	Fairfax Avenue & Fountain Avenue (A)	28.8	C	28.0	C	61.5	E
2	Orange Grove Avenue & Fountain Avenue (A)*	18.7	C	1.8	A	9.6	A
3	Ogden Drive and Fountain Avenue (A)*	8.7	A	2.2	A	130.4	F
4	Fairfax Avenue & Santa Monica Boulevard	49.8	D	36.9	D	59.6	E
5	Orange Grove Avenue & Santa Monica Boulevard*	1.0	A	0.5	A	0.7	A
6(a)	Ogden Drive and Santa Monica Boulevard (North Leg)*	1.4	A	1.2	A	3.7	A
6(b)	Ogden Drive and Santa Monica Boulevard (South Leg)*	1.5	A	0.7	A	1.9	A
7	Genesee Avenue & Santa Monica Boulevard	8.9	A	7.2	A	9.5	A
8	Fairfax Avenue & Romaine Street*	35.3	E	2.9	A	46.2	E
City of Los Angeles							
1	Fairfax Avenue & Fountain Avenue (A)	0.644	B	-	-	0.840	D

LOS = Level of Service, V/C = Volume-to-Capacity Ratio.

* Unsignalized Intersection

(A) Shared Intersection

The results in Table 5 indicate that 4 of the 8 study intersections operate at good levels of service (LOS D or better) under existing conditions. The following intersections operate at poor LOS values of E or F during at least one of the peak hours:

- Fairfax Avenue & Fountain Avenue (PM peak hour)
- Ogden Drive and Fountain Avenue (PM peak hour)
- Fairfax Avenue & Santa Monica Boulevard (PM peak hour)
- Fairfax Avenue & Romaine Street (AM and PM peak hour)

The existing AM, midday, and PM peak-hour turn movement volumes at the study intersections are provided in Figures 5, 6, and 7, respectively. Existing level of service worksheets are provided in Appendix C.

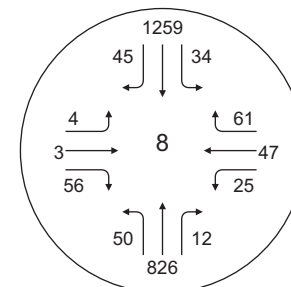
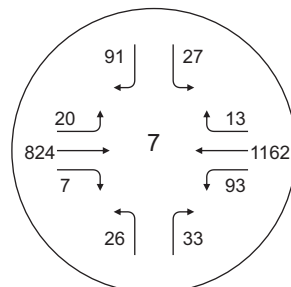
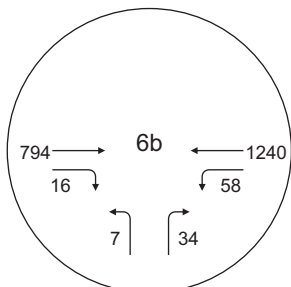
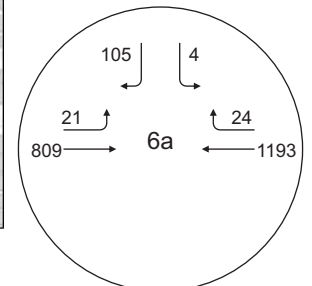
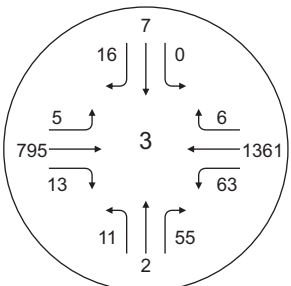
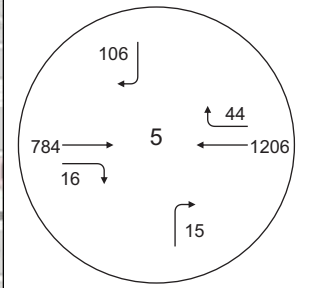
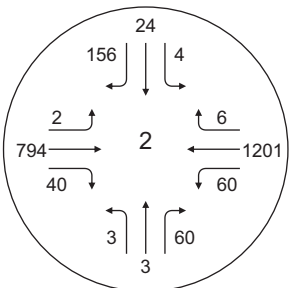
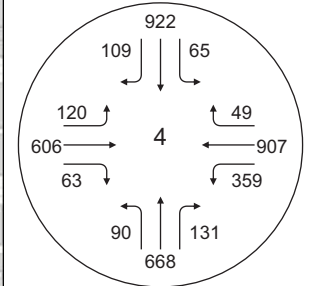
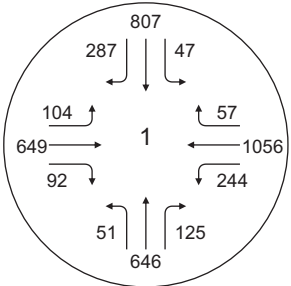
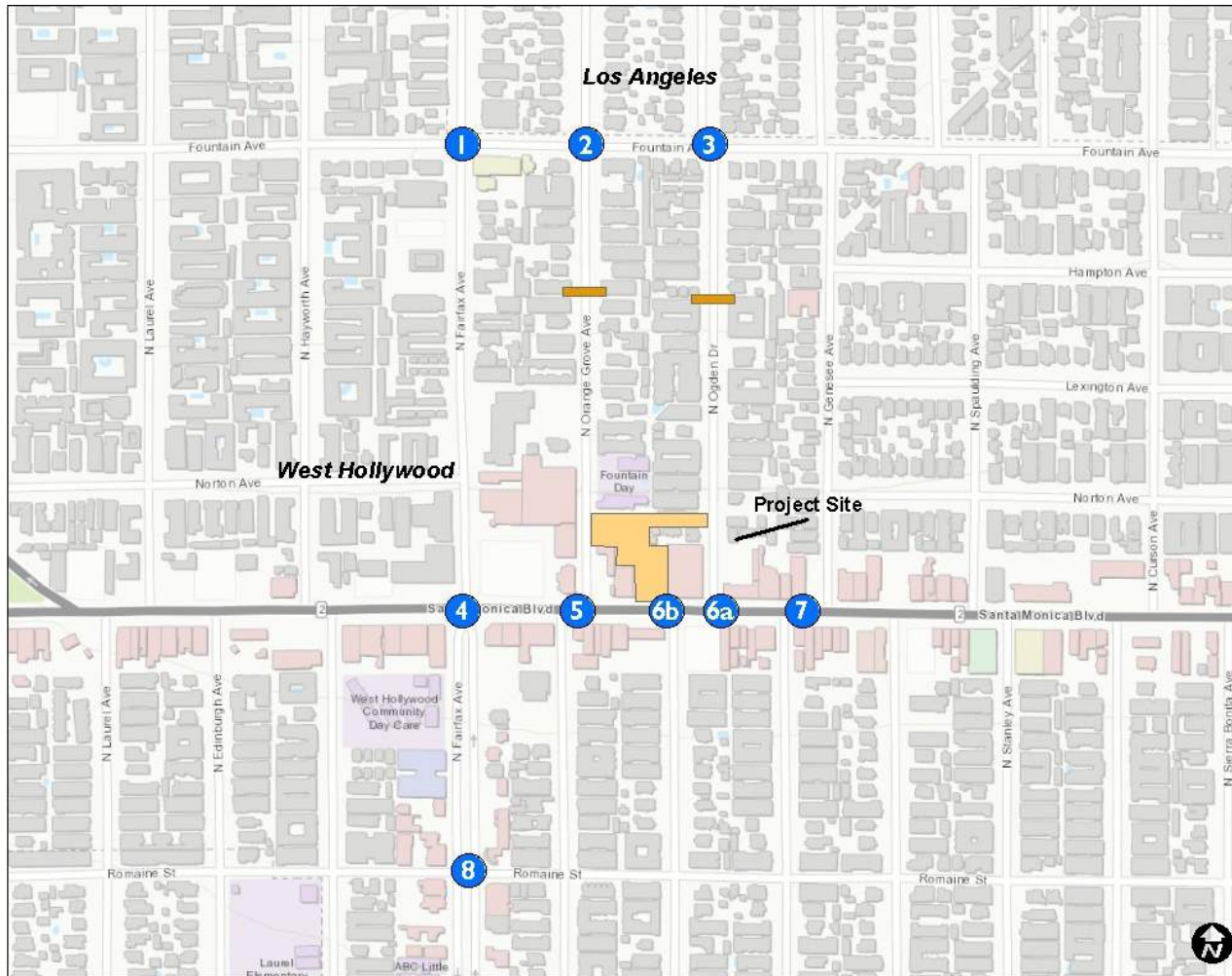
2.5 EXISTING STREET SEGMENT VOLUMES

Table 6 summarizes the two street segments where 24-hour automatic (machine) traffic counts were conducted. These streets were chosen for specific review as they primarily serve the residential areas surrounding the Project site.

Figure 8 illustrates the locations of the study street segments and existing weekday daily traffic volumes on these facilities.

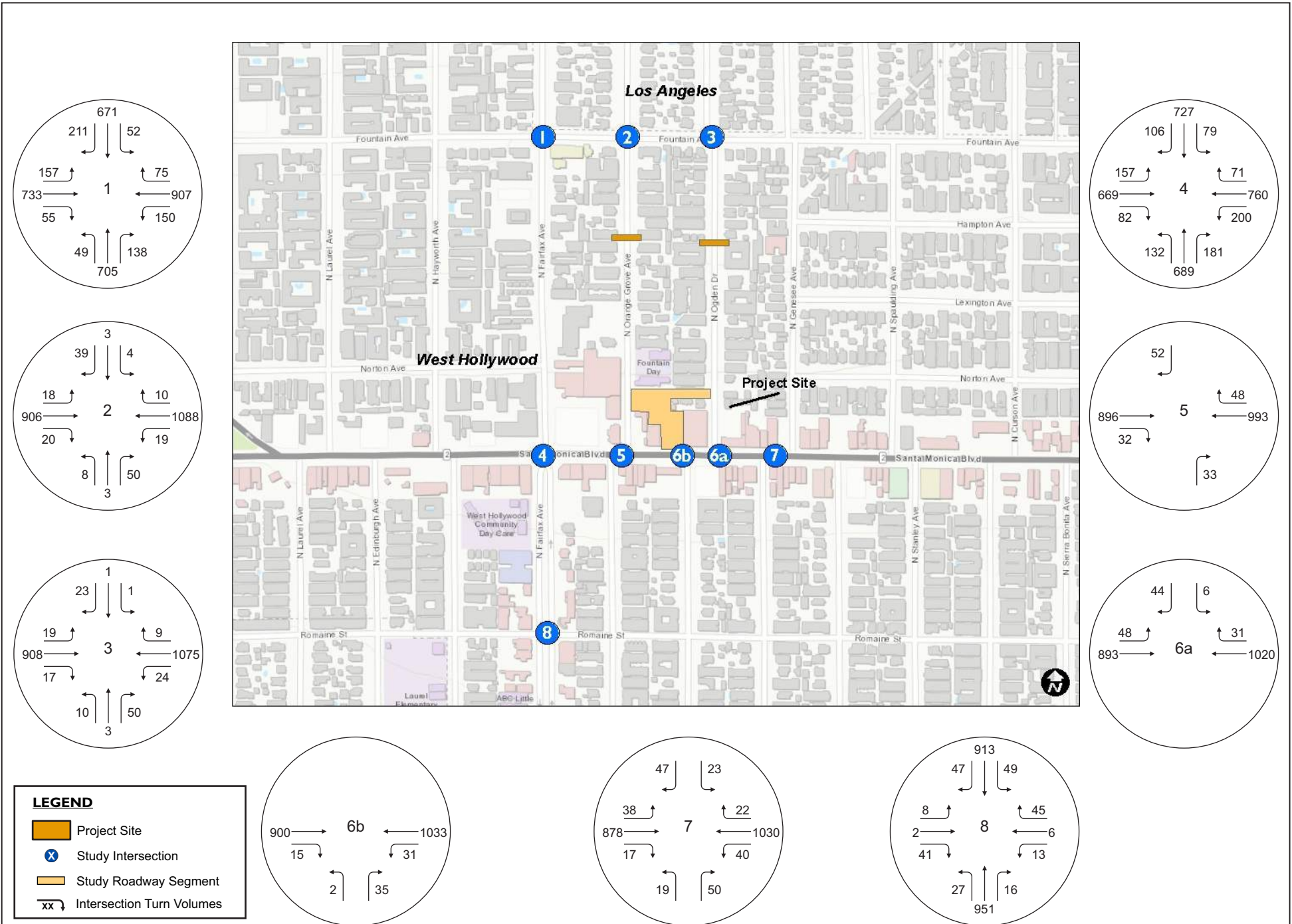
Table 6: Existing Daily Traffic Volumes on Study Street Segments

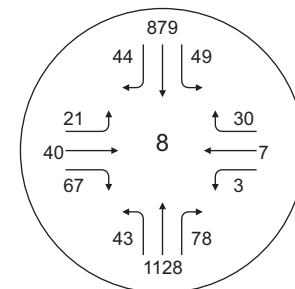
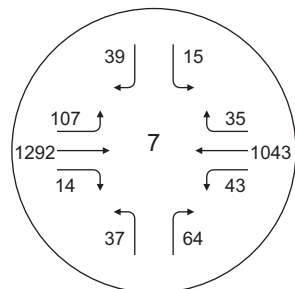
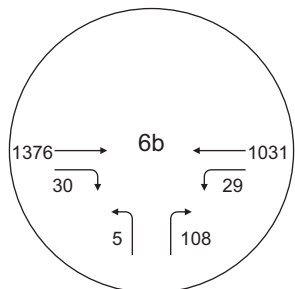
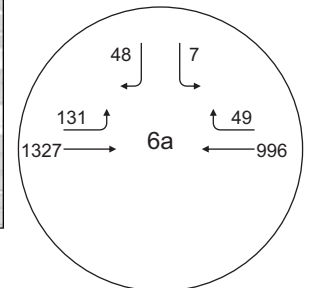
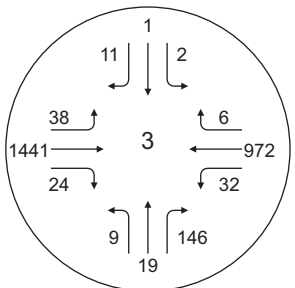
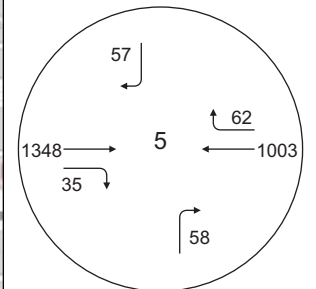
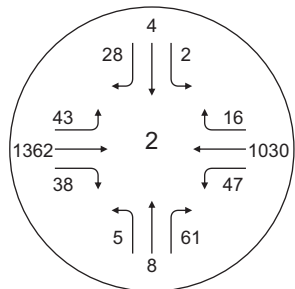
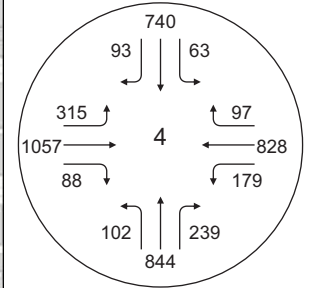
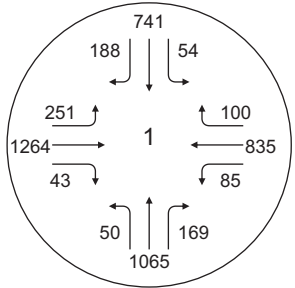
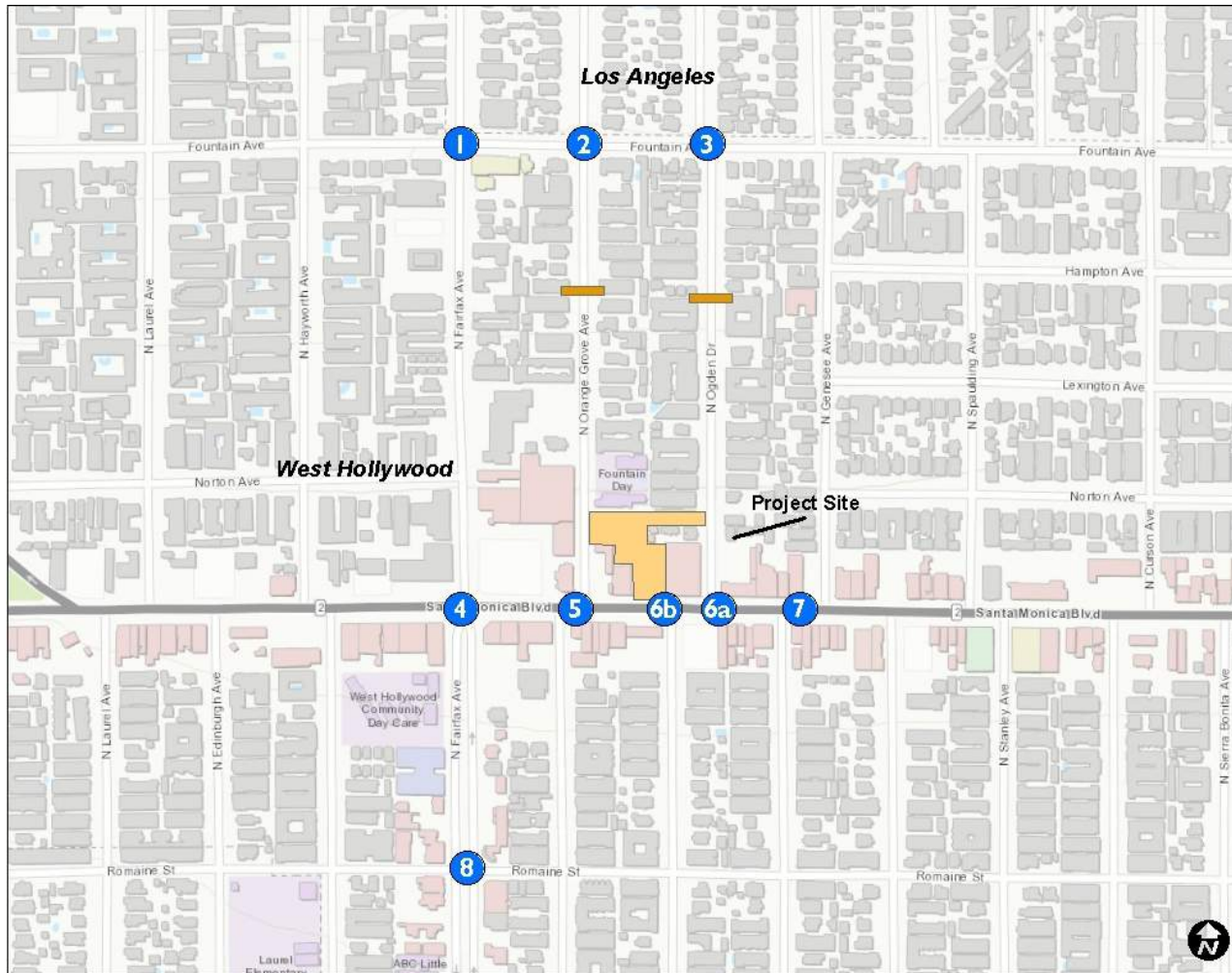
Segment			No. of Lanes	Existing Daily Traffic Volumes
1	Orange Grove Avenue	Between Fountain Avenue and Santa Monica Boulevard	2	2,022
2	Ogden Drive	Between Fountain Avenue and Santa Monica Boulevard	2	1,976



LEGEND

- Project Site
- Study Intersection
- Study Roadway Segment
- Intersection Turn Volumes





LEGEND

- Project Site
- Study Intersection
- Study Roadway Segment
- Intersection Turn Volumes



3. PROJECT TRAFFIC

This section defines the estimated traffic generated by the proposed Project in a three-step process including trip generation, trip distribution, and trip assignment.

3.1 PROJECT TRIP GENERATION

Traffic volumes that are expected to be generated by the Project during the weekday a.m., midday, and p.m. peak hours and daily periods were estimated based on trip rates defined in the Institute of Transportation Engineers *Trip Generation (10th Edition)*. San Diego Association of Governments (SANDAG) *Traffic Generators* rates were also used where applicable. Vehicle trips generated by existing uses that are currently active were applied to the gross trip generation estimates as trip credits. The trip rates and the traffic generation forecast for the proposed project are provided in Table 7.

Table 7: Project Trip Generation Estimates

Land Use	ITE Code	Intensity	Units	Daily Total	AM Peak			Midday Peak			PM Peak		
					Total	In	Out	Total	In	Out	Total	In	Out
Trip Generation Rates													
Quality Restaurant ¹	931	-	-	83.84	0.73	80%	20%	4.47	80%	20%	7.80	67%	33%
Museum	580	-	-	6.60	0.28	86%	14%	0.66	71%	29%	0.18	16%	84%
Hotel	310	-	-	8.36	0.47	59%	41%	0.61	58%	42%	0.60	51%	49%
Multifamily (Mid-Rise)	221	-	-	5.44	0.36	26%	74%	0.32	27%	73%	0.44	61%	39%
Gym	492	-	-	28.82	1.31	51%	49%	1.40	46%	54%	3.45	57%	43%
Proposed Project Trip Generation Estimates													
Quality Restaurant	931	3.756	k.s.f	315	3	2	1	17	14	3	29	19	10
Art Gallery	580	1.381	k.s.f	9	1	1	0	1	1	0	1	0	1
Hotel	310	86	rooms	719	40	24	16	52	30	22	52	27	25
Multifamily (Mid-Rise)	221	70	units	381	25	7	18	22	6	16	31	19	12
Proposed Project Subtotal				1,424	69	34	35	92	51	41	113	65	48
Internal Capture													
Restaurant (25%)				-79	-1	-1	0	-5	-4	-1	-8	-5	-3
External Project Trips				1,345	68	33	35	87	47	40	105	60	45
Former Use Trip Credit													
Gym	492	10,000	k.s.f	-288	-13	-7	-6	-14	-6	-8	-35	-20	-15
Multifamily (Mid-Rise)	221	7	units	-38	-3	-1	-2	-2	-1	-1	-3	-2	-1
Former Use Trip Credit				-326	-16	-8	-8	-16	-7	-9	-38	-22	-16
Total				1,019	52	25	27	71	40	31	67	38	29

Trip generation rates based on ITE *Trip Generation Manual, 10th Edition, Institute of Transportation Engineers, 2017, unless otherwise noted. Midday Peak rates from Peak Hour of Generator.*

1. Quality Restaurant AM In/Out ratio from AM Peak Hour of Generator.

The Project is estimated to gross 1,424 weekday daily trips, including 69 weekday AM peak-hour trips, 92 weekday midday peak-hour trips, and 113 weekday PM peak-hour trips. Taking into consideration existing uses that would be removed and internal trip capture credits, the Project is estimated to generate a net total of 1,019 weekday daily trips including 52 weekday AM peak-hour trips, 71 weekday midday peak-hour trips and 67 weekday PM peak-hour trips.

3.2 PROJECT TRIP DISTRIBUTION

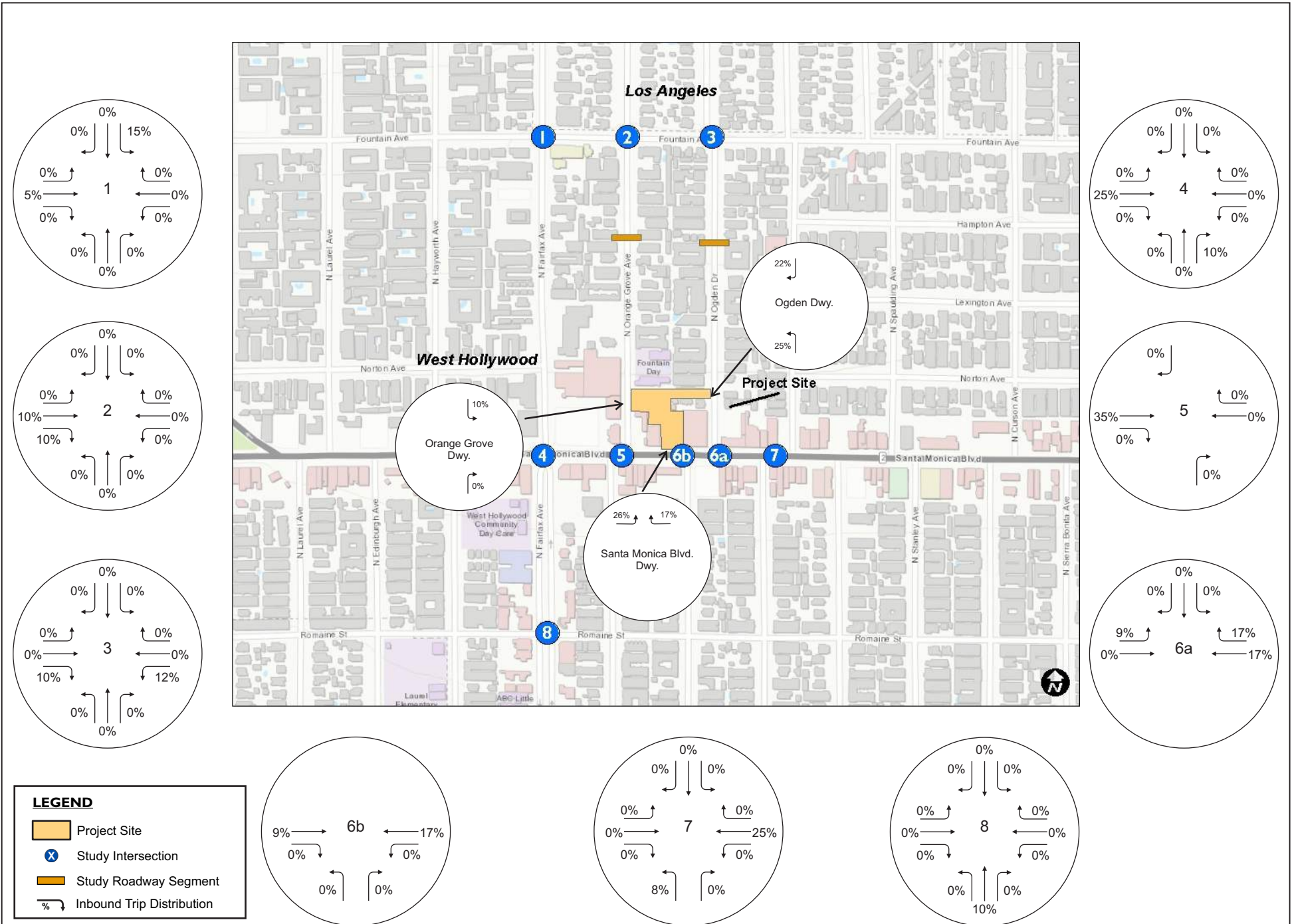
Trip distribution is the process of assigning the trips by direction to and from a project site. Trip distribution is dependent upon the land use characteristics of the project and the general locations of land uses to which project trips would originate or terminate. Project trip distribution was based on the general geographic distribution of population and employment from which the project trips would originate or terminate as well as development trends in the area, local and sub-regional traffic routes, and regional traffic flows.

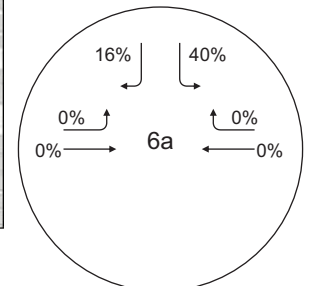
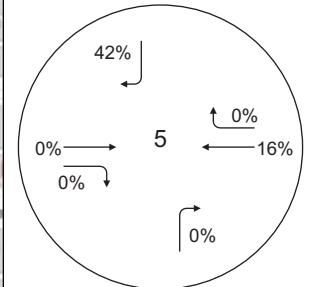
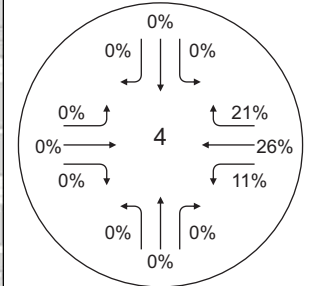
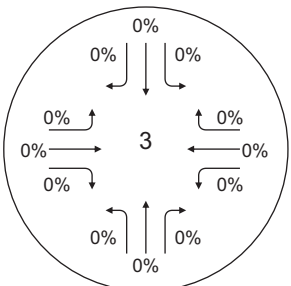
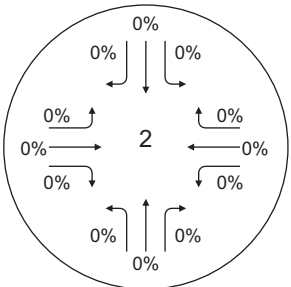
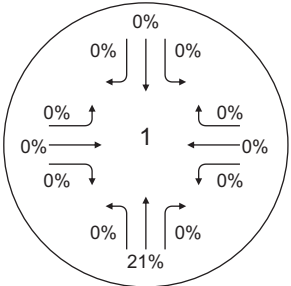
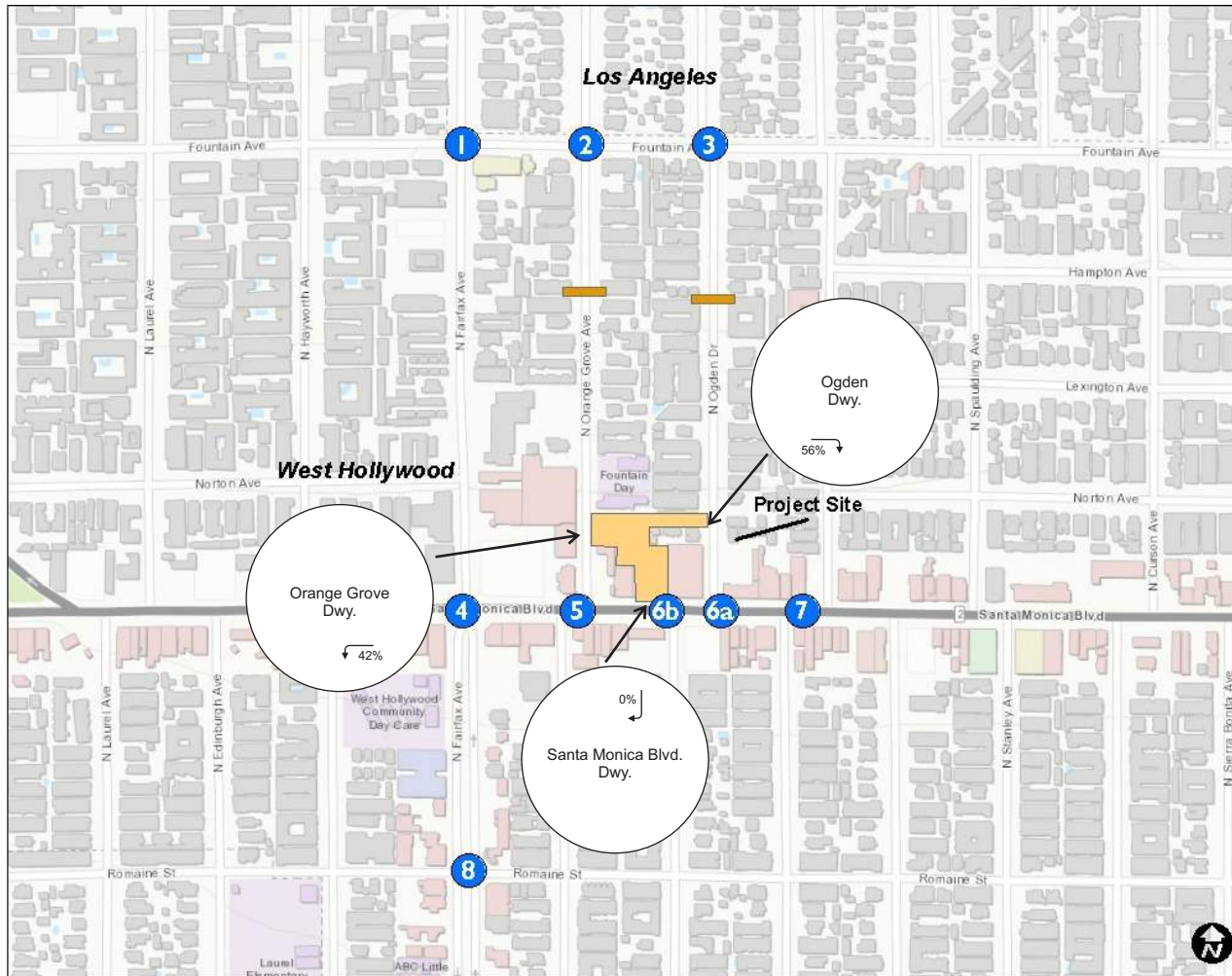
Figures 9A, 9B, 9C, and 9D illustrate the intersection trip distribution percentages by use and in/out direction for the proposed Project during the peak hour study periods.

3.3 PROJECT TRIP ASSIGNMENT

The final product is the trip assignment process, which takes a full accounting of project trips by direction and turning movement at the study intersections.

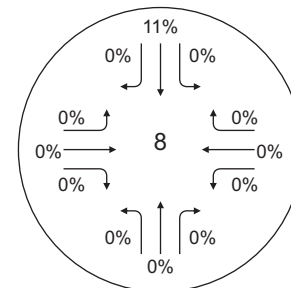
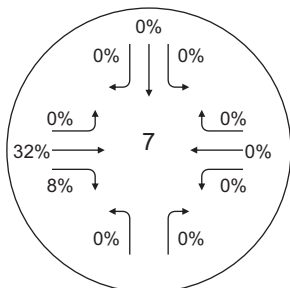
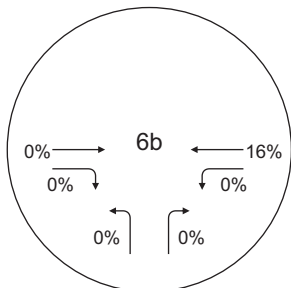
Figures 10, 11, and 12 illustrate the project trip assignment to the study intersections for the weekday AM, midday and PM peak hours, respectively. Figure 13 provides the project trip assignment on the study street segments.

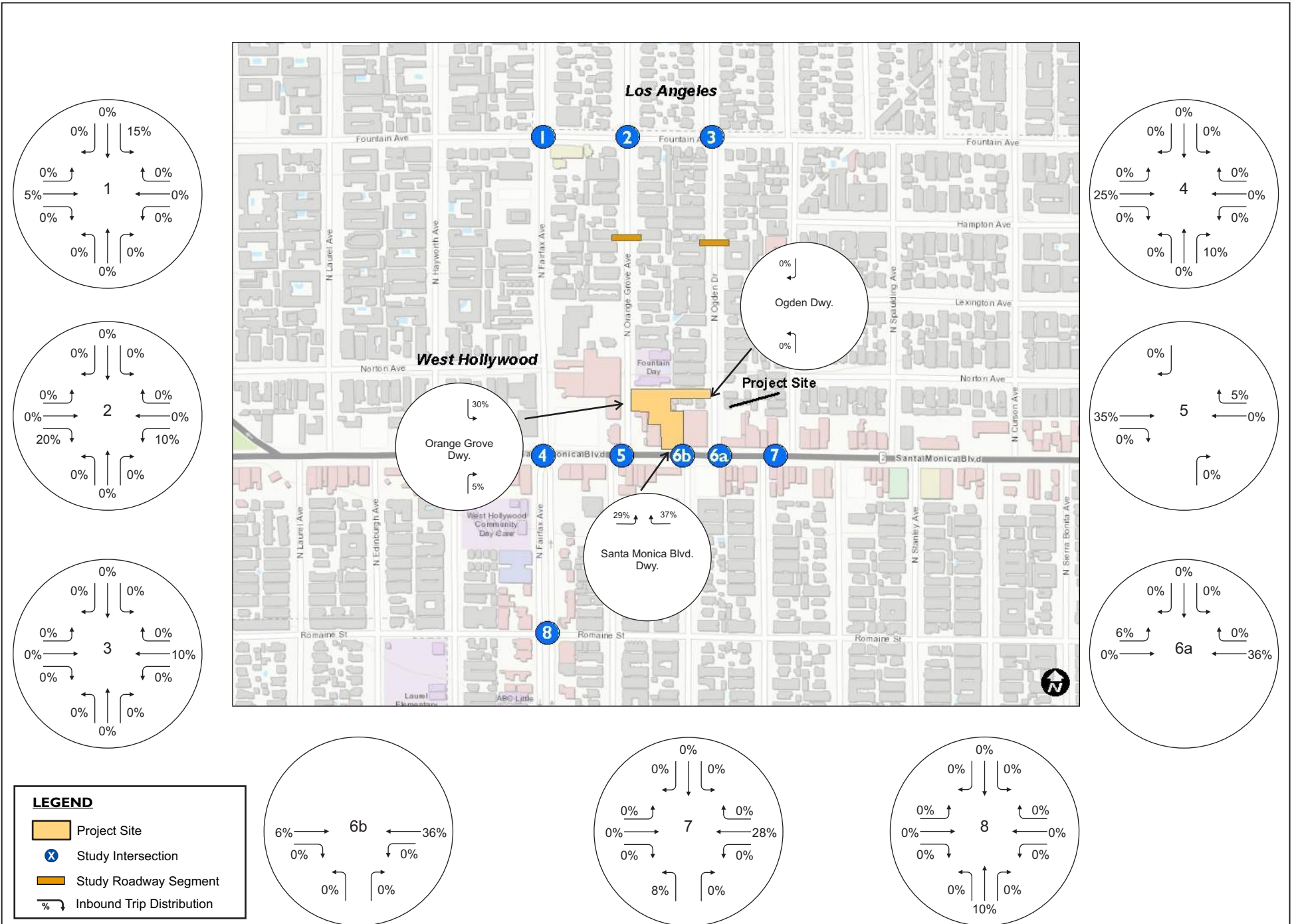


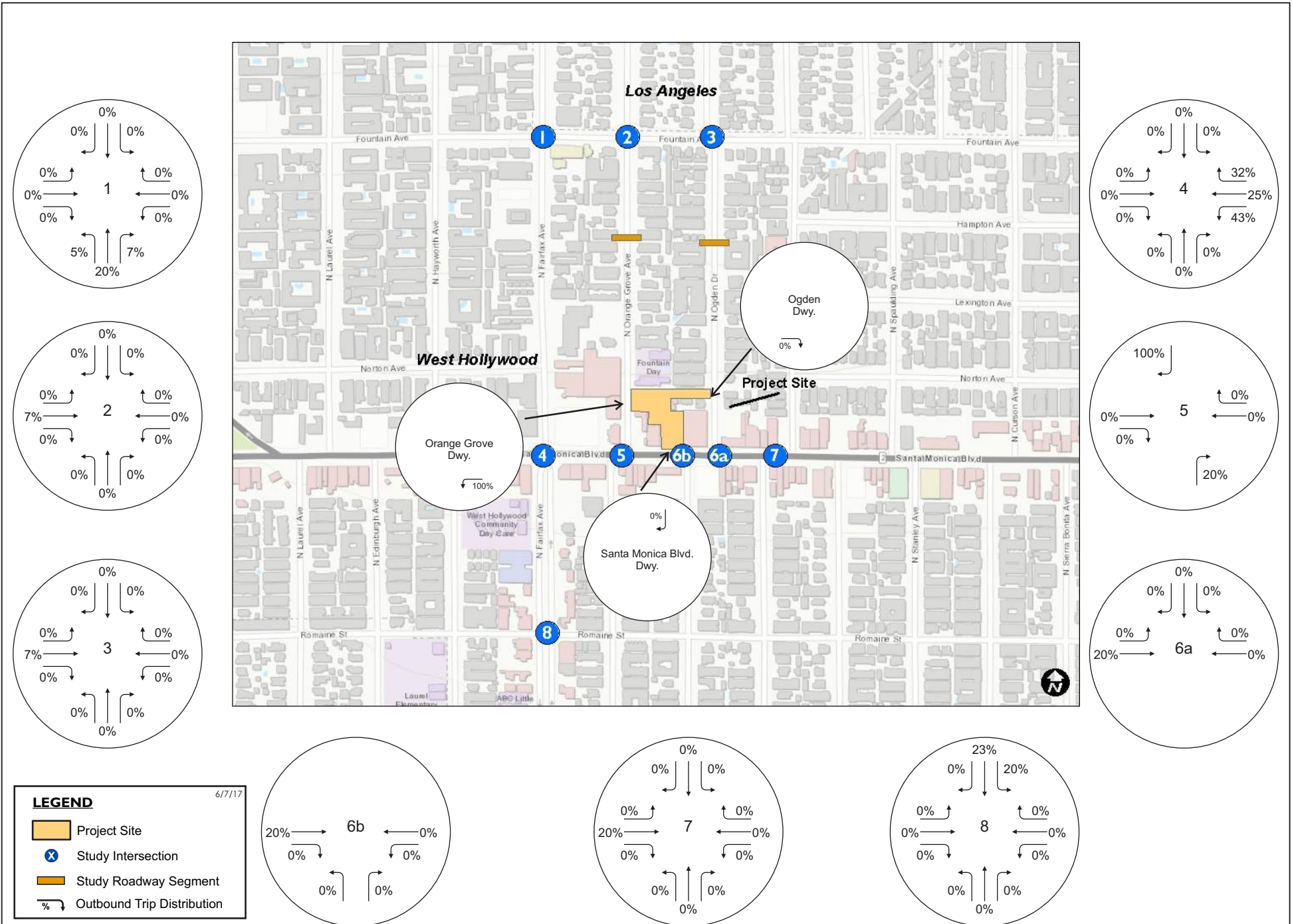


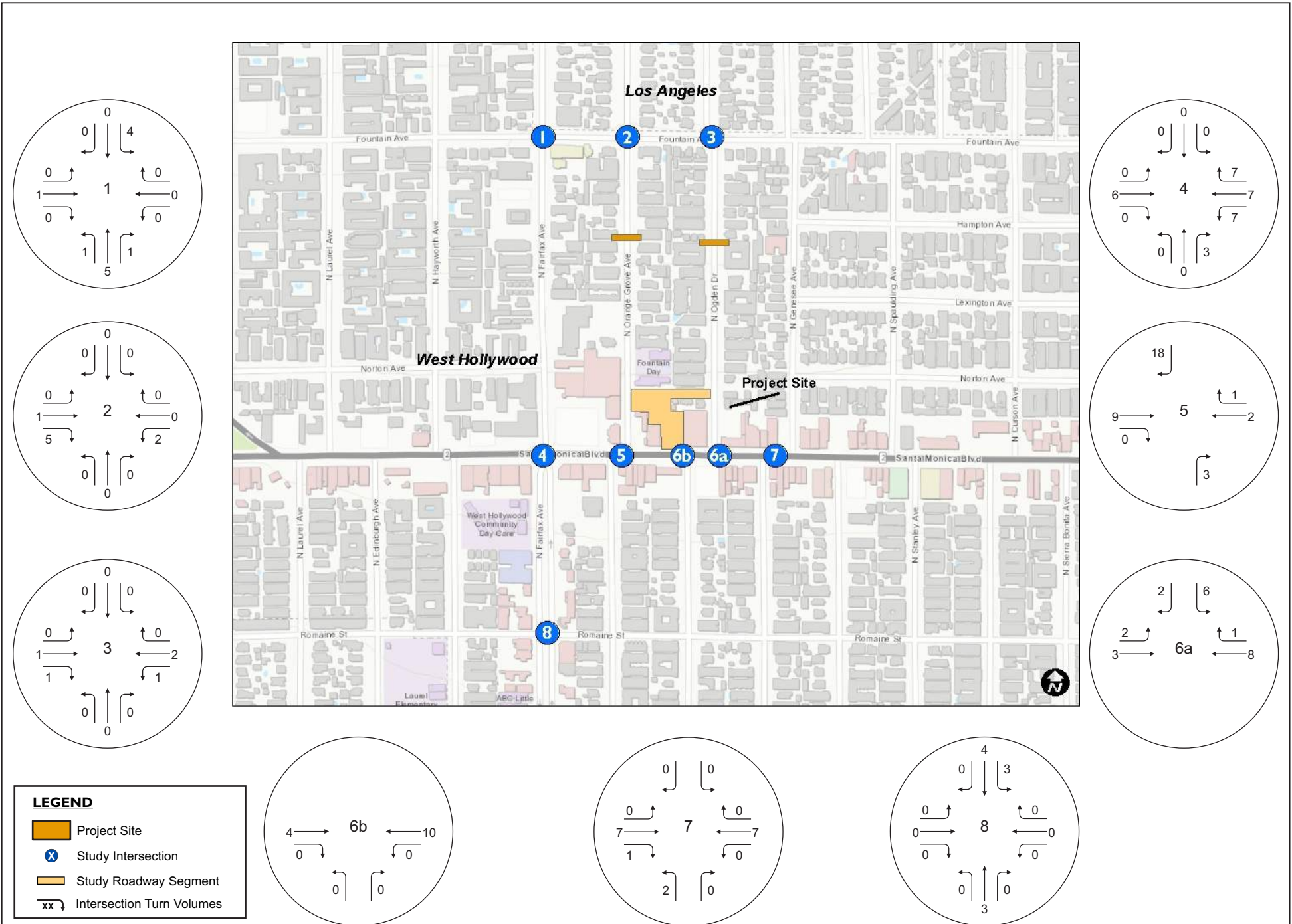
LEGEND

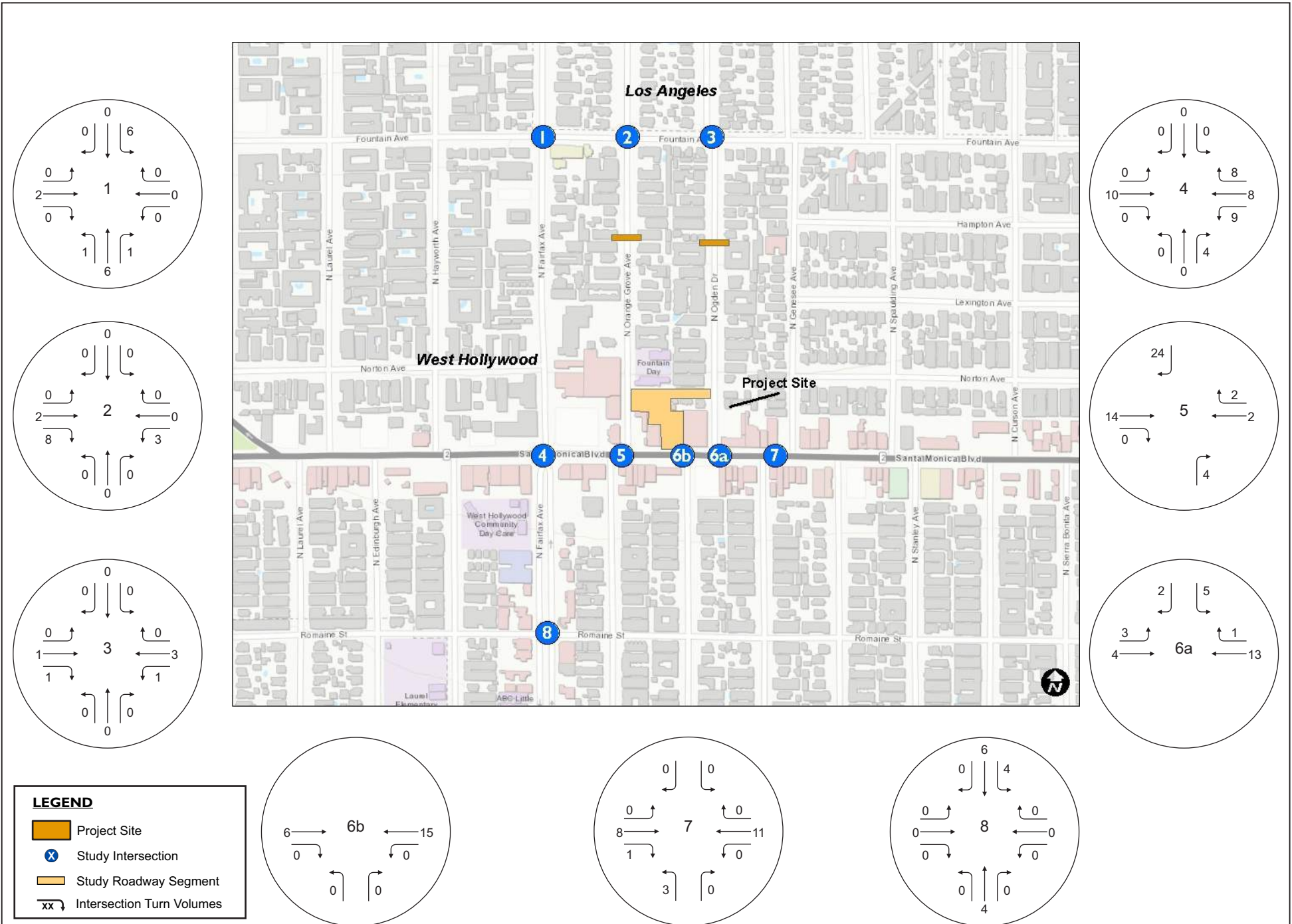
- Project Site
- Study Intersection
- Study Roadway Segment
- Outbound Trip Distribution

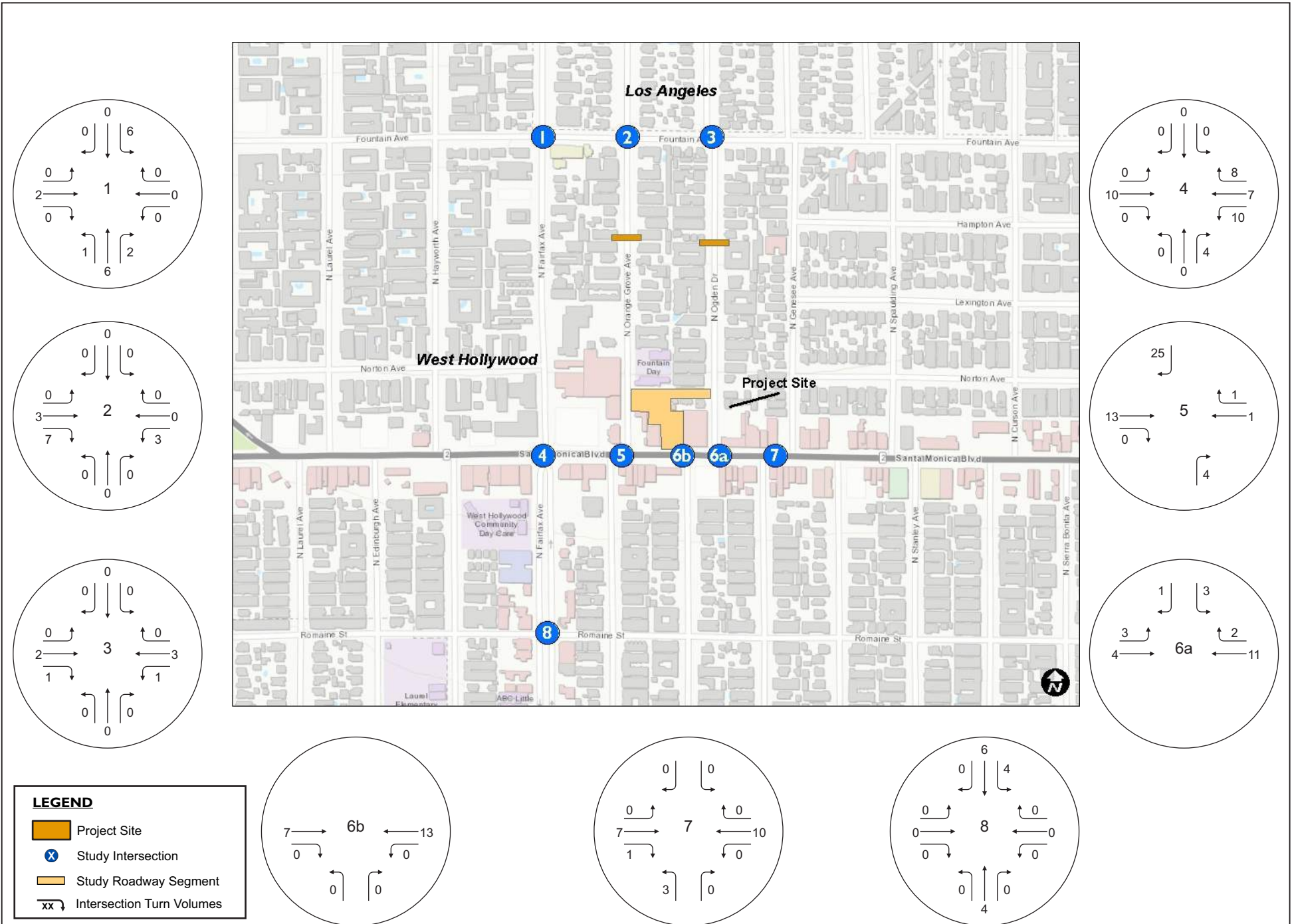

















LEGEND

-  Project Site
-  Study Intersection
-  Study Roadway Segment

4. EXISTING PLUS PROJECT CONDITIONS

This section documents existing traffic conditions at the study intersections and street segments with the addition of Project-generated traffic. Traffic volumes for these conditions were derived by adding Project trips to the existing traffic volumes.

4.1 PEAK HOUR INTERSECTION LEVEL OF SERVICE

Table 8 summarizes the level of service values for this scenario at the study intersections.

Table 8: Existing Plus Project Level of Service Summary

Study Intersections		AM Peak Hour		Mid-Day Peak Hour		PM Peak Hour	
		V/C or Delay	LOS	V/C or Delay	LOS	V/C or Delay	LOS
City of West Hollywood							
1	Fairfax Avenue & Fountain Avenue (A)	29.0	C	28.3	C	62.8	E
2	Orange Grove Avenue & Fountain Avenue (A)*	19.3	C	1.8	A	10.3	B
3	Ogden Drive and Fountain Avenue (A)*	9.2	A	2.2	A	130.4	F
4	Fairfax Avenue & Santa Monica Boulevard	50.8	D	37.2	D	62.4	E
5	Orange Grove Avenue & Santa Monica Boulevard*	1.2	A	0.7	A	0.9	A
6(a)	Ogden Drive and Santa Monica Boulevard (North Leg)*	1.9	A	1.6	A	3.8	A
6(b)	Ogden Drive and Santa Monica Boulevard (South Leg)*	1.5	A	0.7	A	1.9	A
7	Genesee Avenue & Santa Monica Boulevard	9.0	A	7.3	A	9.6	A
8	Fairfax Avenue & Romaine Street*	36.9	E	3.0	A	49.8	E
City of Los Angeles							
1	Fairfax Avenue & Fountain Avenue (A)	0.645	B	-	-	0.847	D

LOS = Level of Service, V/C = Volume-to-Capacity Ratio.

* Unsignalized Intersection

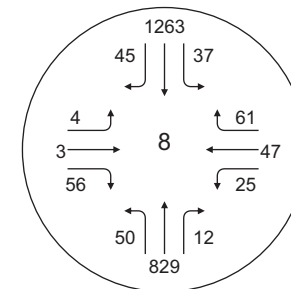
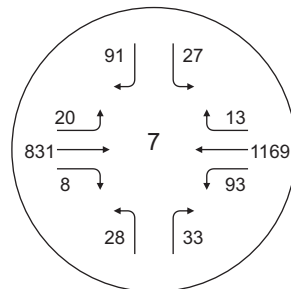
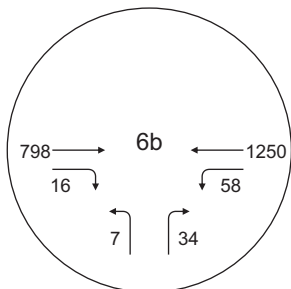
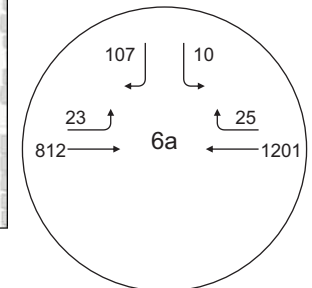
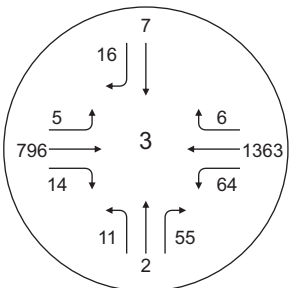
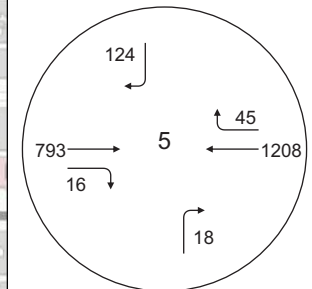
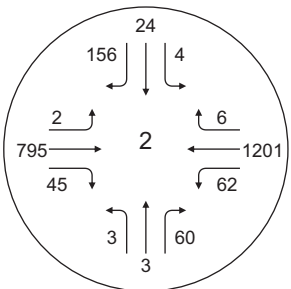
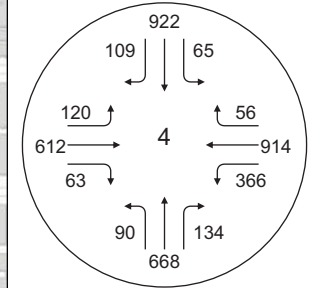
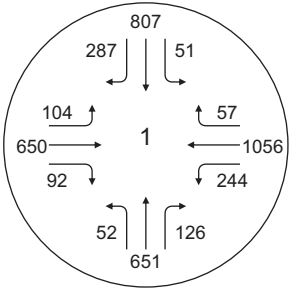
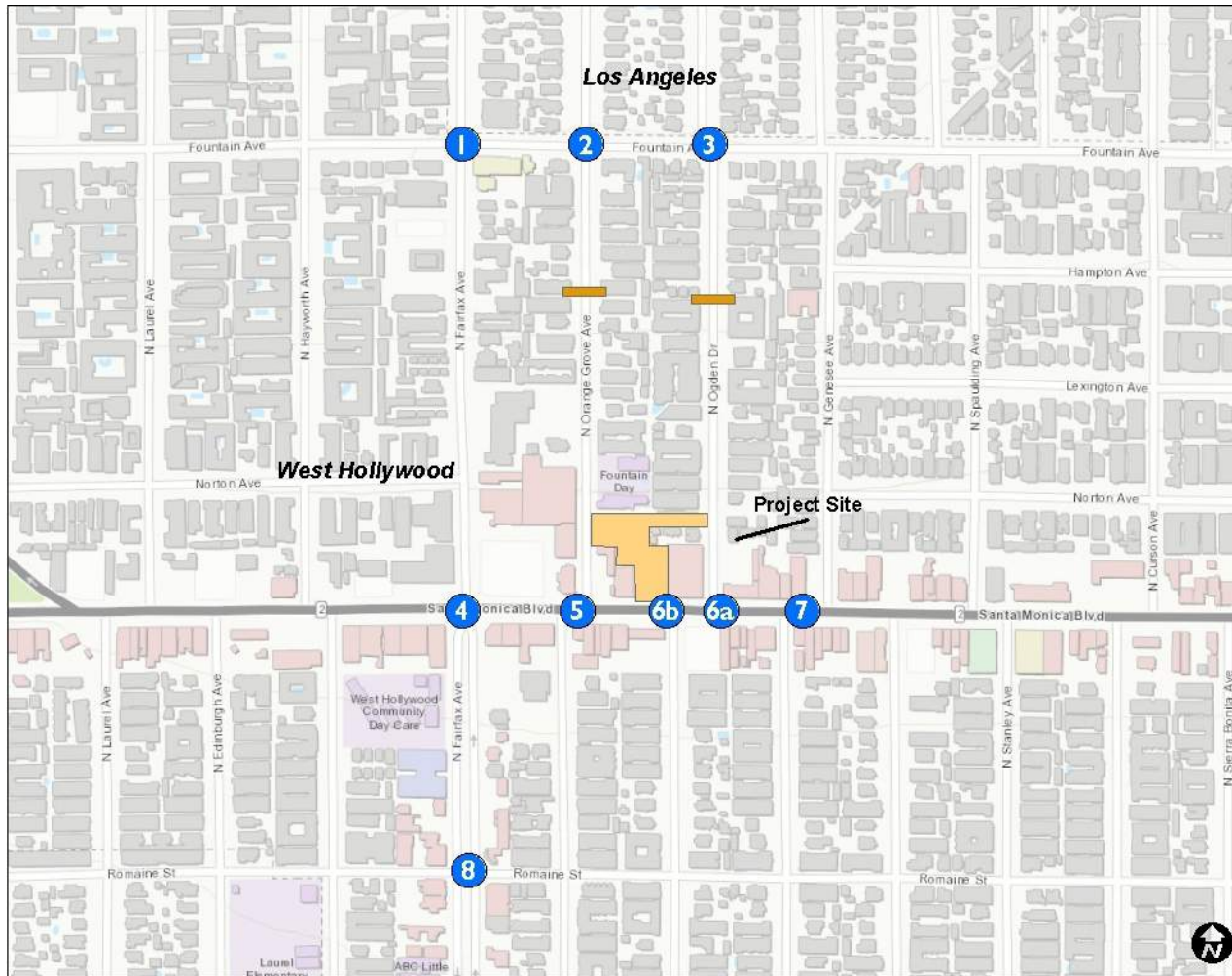
(A) Shared Intersection

Under Existing Plus Project conditions, four study intersections would continue operating under LOS E or F conditions.

- Fairfax Avenue & Fountain Avenue (PM peak hour)
- Ogden Drive and Fountain Avenue (PM peak hour)
- Fairfax Avenue & Santa Monica Boulevard (PM peak hour)
- Fairfax Avenue & Romaine Street (AM and PM peak hour)

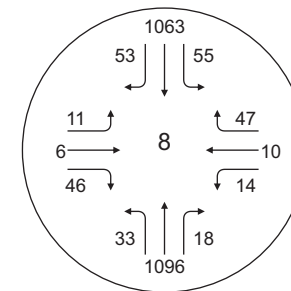
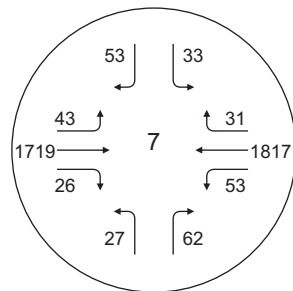
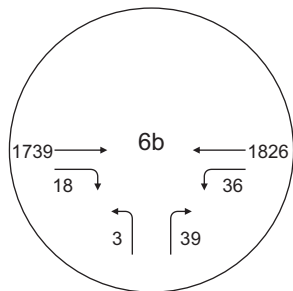
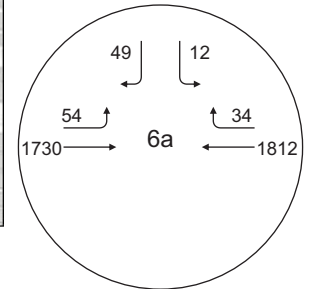
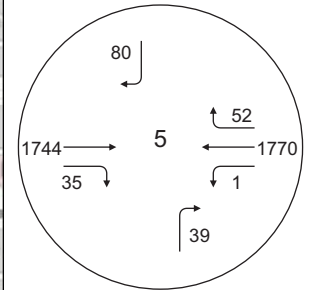
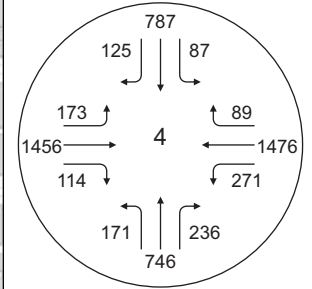
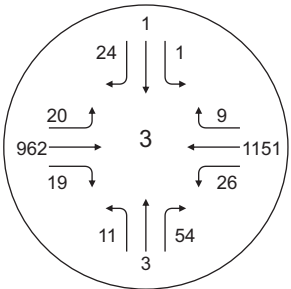
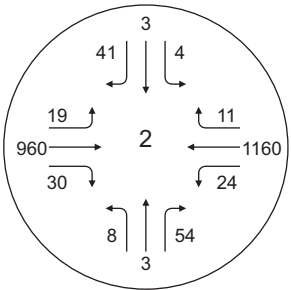
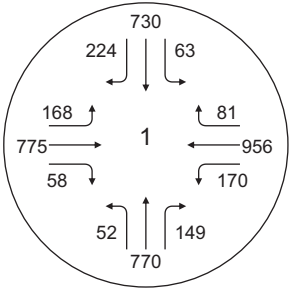
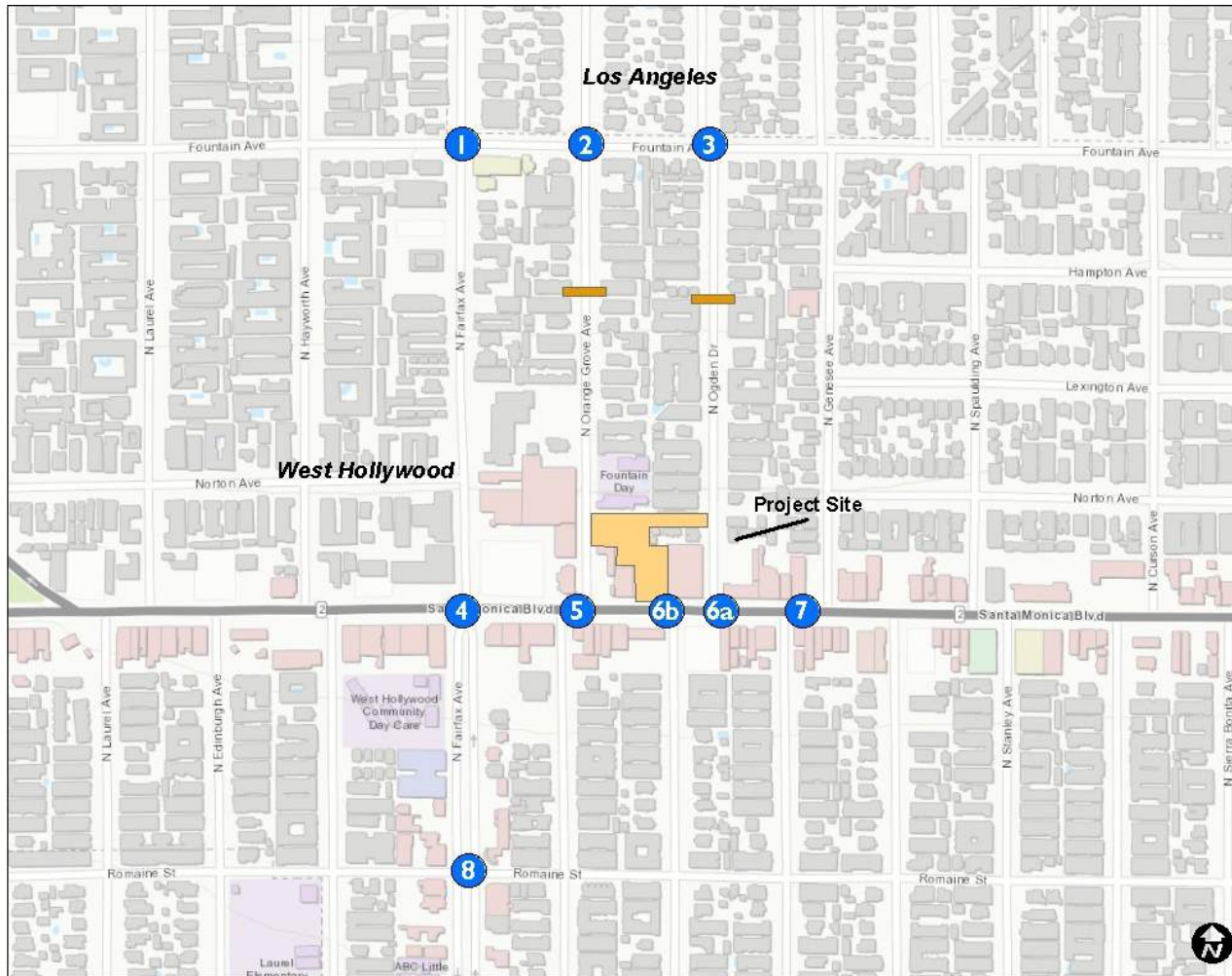
The remaining four intersections would continue to operate at LOS D or better. The traffic analysis worksheets for this scenario are included in Appendix D of this report.

Figures 14, 15, and 16 illustrate the Existing Plus Project traffic volumes for the weekday AM, midday, and PM peak hour intersection traffic volumes, respectively.



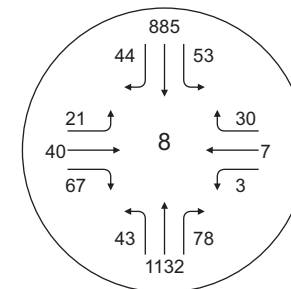
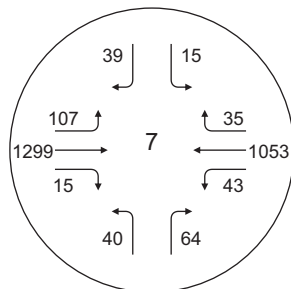
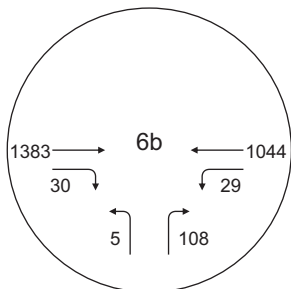
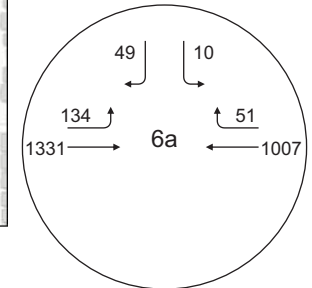
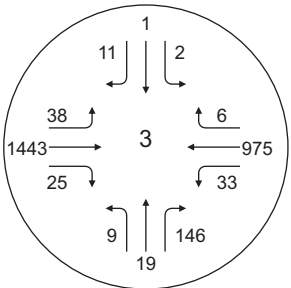
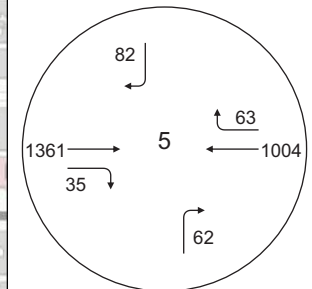
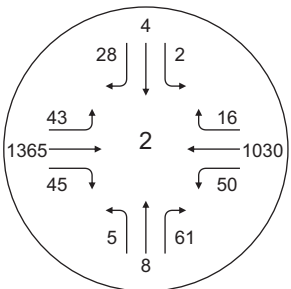
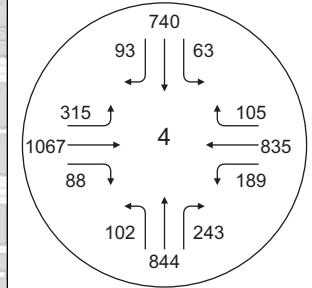
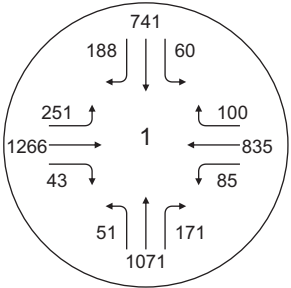
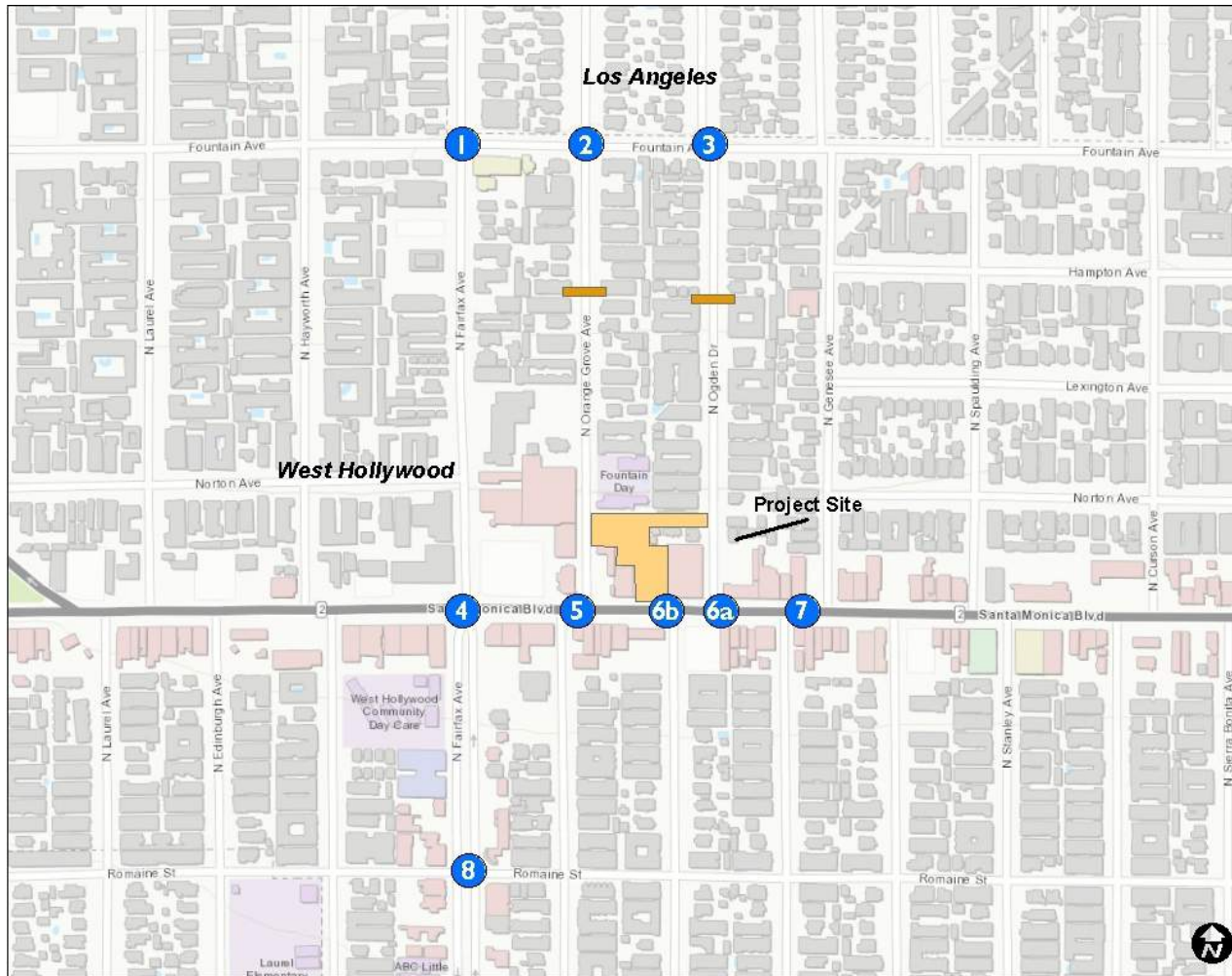
LEGEND

- Project Site
- Study Intersection
- Study Roadway Segment
- Intersection Turn Volumes



LEGEND

- Project Site
- Study Intersection
- Study Roadway Segment
- Intersection Turn Volumes



LEGEND

- Project Site
- Study Intersection
- Study Roadway Segment
- Intersection Turn Volumes

4.2 EXISTING PLUS PROJECT STREET SEGMENT VOLUMES

In addition to intersection level of service analysis, the impacts of the project on the surrounding neighborhood streets were analyzed. Project traffic assigned to the surrounding residential street segments were added to existing conditions.

Table 9 summarizes the Existing Plus Project conditions on the two study street segments.

Table 9: Existing Plus Project Daily Traffic Volumes on Study Street Segments

Segment			Existing Daily Traffic Volumes	Project Only	Existing w/ Project Daily Traffic Volumes
1	Orange Grove Avenue	Between Fountain Avenue and Santa Monica Boulevard	2,022	157	2,179
2	Ogden Drive	Between Fountain Avenue and Santa Monica Boulevard	1,976	14	1,990

Figure 17 provides the ADT volumes on the study street segments for this scenario.

Determinations of significant traffic impacts created by the Project are discussed in Chapter 7 of this report.



5. FUTURE 2021 WITHOUT-PROJECT CONDITIONS

This section provides an analysis of future traffic conditions in the study area with ambient growth and related area projects added but without the proposed Project. The year 2021 was selected for analysis based on the anticipated completion date of the Project. The without-Project scenario provides the basis upon which Project impacts are measured against.

5.1 AMBIENT GROWTH

For the analysis of background traffic during the Project opening year, an annual traffic growth rate of 1% was utilized to account for increase in area-wide traffic. This annual growth rate was confirmed with City of West Hollywood staff.

To apply this ambient growth rate to existing (year 2016) volumes, a growth factor of 1.05 was utilized. This factor provides a compounded 1% annual increase over the three-year period between existing conditions and future (year 2021) conditions.

5.2 RELATED PROJECTS

Based on data provided by West Hollywood and the surrounding cities, a list of area/related projects was compiled. These projects were considered to potentially contribute measurable traffic volumes to the study area during the future analysis period. The total number of related projects included within this traffic analysis was 132 projects (95 projects – City of West Hollywood and 37 projects – City of Los Angeles). These projects are all located within an approximate 1.5-mile radius from the Project site.

The related projects trip generation estimates were developed using trip generation rates from the Institute of Transportation Engineers (ITE) *Trip Generation, 10th Edition* published in 2017, or defined by the project traffic studies.

Figure 18 illustrates the locations of the related projects and Table 10 provides the related project trip generation calculations. Zones were used to conglomerate the projects into trip generation points within the analyzed network.

Figures 19, 20, and 21 illustrate the future 2021 without-Project traffic volumes for each study scenario.

Table 10 - Area/Cumulative Projects Trip Generation

Map ID	Location	Land Use	ITE Code	Intensity	Units	Daily Total	AM Peak Hour			Mid-Day Peak Hour ¹			PM Peak Hour		
							Total	In	Out	Total	In	Out	Total	In	Out
City of West Hollywood															
1	1048 North Curson Avenue	Multifamily Housing (Mid-Rise)	221	5	d.u. ²	27	2	1	1	2	1	1	2	1	1
		Mid-Rise Residential with 1st-Floor Co	231	6	d.u.	21	2	1	1	3	2	1	2	1	1
2	900 Fairfax Avenue	Shopping Center	820	0.93	k.s.f. ^{2,3}	35	1	1	0	4	2	2	4	2	2
		High Turnover Sit-Down Restaurant	932	2.32	k.s.f.	260	23	13	10	40	21	19	23	14	9
		Total				316	26	15	11	47	25	22	29	17	12
3	511 Flores Street	Multifamily Housing (Low-Rise)	220	10	d.u.	73	5	1	4	7	4	3	6	4	2
4	1216 Flores Street	Multifamily Housing (Mid-Rise)	221	14	d.u.	76	5	1	4	6	4	2	6	4	2
5	1264 Harper Avenue	Multifamily Housing (Mid-Rise)	221	14	d.u.	76	5	1	4	6	4	2	6	4	2
6	1041 Formosa Avenue	General Office Building	710	100	k.s.f. ⁴	974	116	100	16	116	100	16	115	18	97
7	1123 Formosa Avenue	Multifamily Housing (Low-Rise)	220	5	d.u.	37	2	0	2	3	2	1	3	2	1
8	947 Genesee Avenue	Multifamily Housing (Low-Rise)	220	10	d.u.	73	5	1	4	7	4	3	6	4	2
9	1003 Hancock Avenue	Multifamily Housing (Low-Rise)	220	3	d.u.	22	1	0	1	2	1	1	2	1	1
10	8583 Melrose Avenue	Shopping Center	820	9.545	k.s.f.	360	9	6	3	36	17	19	36	17	19
11	8650 Melrose Avenue	Shopping Center	820	14.571	k.s.f.	550	14	9	5	56	27	29	56	27	29
		Multifamily Housing (Low-Rise)	220	7	d.u.	51	3	1	2	5	3	2	4	3	1
	Total				601	17	10	7	61	30	31	60	30	30	
12	829 Larrabee Street	Multifamily Housing (Mid-Rise)	221	13	d.u.	71	5	1	4	5	3	2	6	4	2
13	7914 Norton Avenue	Multifamily Housing (Low-Rise)	220	8	d.u.	59	4	1	3	5	3	2	4	3	1
14	8550 Santa Monica Boulevard ⁵	Supermarket	850	25	k.s.f.	-	-	-	-	-	-	-	-	-	-
		General Office Building	710	11.998	k.s.f.	-	-	-	-	-	-	-	-	-	-
		High Turnover Sit-Down Restaurant	932	1.319	k.s.f.	-	-	-	-	-	-	-	-	-	-
		Health/Fitness Club	492	4	k.s.f.	-	-	-	-	-	-	-	-	-	-
	Total				1,834	71	44	27	146	77	69	167	85	82	
15	1001 Ogden Drive	Multifamily Housing (Low-Rise)	220	5	d.u.	37	2	0	2	3	2	1	3	2	1
16	1153 Ogden Drive	Multifamily Housing (Low-Rise)	220	6	d.u.	44	3	1	2	4	2	2	3	2	1
17	1150 Orange Grove	Multifamily Housing (Low-Rise)	220	7	d.u.	51	3	1	2	5	3	2	4	3	1
18	507 Orlando Avenue	Multifamily Housing (Low-Rise)	220	9	d.u.	66	4	1	3	6	4	2	5	3	2
19	923 Palm Avenue ⁶	Senior Housing - Attached	252	49	d.u.	181	10	4	7	15	8	7	13	7	6
20	1016 Martel Avenue	Multifamily Housing (Mid-Rise)	221	11	d.u.	60	4	1	3	5	3	2	5	3	2
21	8497 Sunset Boulevard ⁷	Quality Restaurant	931	9.775	k.s.f.	-	-	-	-	81	49	32	-	-	-
		General Office Building	710	11.52	k.s.f.	-	-	-	-	13	11	2	-	-	-
	Total				800	10	17	-7	94	60	34	71	40	31	
22	7965-7985 Santa Monica Boule	Shopping Center	820	1.345	k.s.f.	-	-	-	-	-	-	-	-	-	
		High Turnover Sit-Down Restaurant	932	14.252	k.s.f.	-	-	-	-	-	-	-	-	-	
		General Office Building	710	54.645	k.s.f.	-	-	-	-	-	-	-	-	-	
		Drinking Place	925	2.746	k.s.f.	-	-	-	-	-	-	-	-	-	
	Total				586	-23	7	-30	28	63	-35	105	40	65	
23	8430 Sunset Boulevard ⁹	Multifamily Housing (High-Rise)	222	125	d.u.	-	-	-	-	-	-	-	-	-	
		Shopping Center	820	35	k.s.f.	-	-	-	-	-	-	-	-	-	
	Total				2,430	122	67	55	176	99	77	216	131	85	
24	1253 Sweetzer Avenue	Multifamily Housing (Low-Rise)	220	8	d.u.	59	4	1	3	5	3	2	4	3	1
25	1040 N La Brea Avenue	Multifamily Housing (Low-Rise)	220	8	d.u.	59	4	1	3	5	3	2	4	3	1
		High Turnover Sit-Down Restaurant	932	5.24	k.s.f.	588	52	29	23	91	47	44	51	32	19
		Hotel	310	91	r.m	761	43	25	18	56	32	24	55	28	27
		Total				1,408	99	55	44	152	82	70	110	63	47
26	600 N La Cienega Boulevard	Multifamily Housing (Low-Rise)	220	5	d.u.	37	2	0	2	3	2	1	3	2	1
		Shopping Center	820	5.355	k.s.f.	202	5	3	2	20	10	10	20	10	10
		High Turnover Sit-Down Restaurant	932	7.094	k.s.f.	796	71	39	32	124	64	60	69	43	26
		Museum	580	15.727	k.s.f.	-	4	3	1	6	2	4	3	0	3
	Total				1,035	82	45	37	153	78	75	95	55	40	
27	624 N La Cienega Boulevard	Multifamily Housing (Low-Rise)	220	6	d.u.	44	3	1	2	4	2	2	3	2	1
		Shopping Center	820	54.209	k.s.f.	2,046	51	32	19	207	99	108	207	99	108
	Total				2,090	54	33	21	211	101	110	210	101	109	
28	1136 N La Cienega Boulevard	Multifamily Housing (Mid-Rise)	221	23	d.u.	125	8	2	6	9	5	4	10	6	4
29	7401 Santa Monica Boulevard	Shopping Center	820	0.92	k.s.f.	35	1	1	0	4	2	2	4	2	2
30	7617 Santa Monica Boulevard	Multifamily Housing (High-Rise)	222	71	d.u.	316	22	5	17	28	17	11	26	16	10
		Shopping Center	820	4.821	k.s.f.	182	5	3	2	18	9	9	18	9	9
		High Turnover Sit-Down Restaurant	932	4.419	k.s.f.	496	44	24	20	77	40	37	43	27	16
		Total				994	71	32	39	123	66	57	87	52	35

Table 10 - Area/Cumulative Projects Trip Generation (cont.)

Map ID	Location	Land Use	ITE Code	Intensity	Units	Daily Total	AM Peak Hour			Mid-Day Peak Hour ¹			PM Peak Hour		
							Total	In	Out	Total	In	Out	Total	In	Out
City of West Hollywood															
31	8445 Santa Monica Boulevard	Multifamily Housing (High-Rise)	222	79	d.u.	352	24	6	18	31	19	12	28	17	11
		Shopping Center	820	5.102	k.s.f.	193	5	3	2	19	9	10	19	9	10
		High Turnover Sit-Down Restaurant	932	9.441	k.s.f.	1,059	94	52	42	164	85	79	92	57	35
		Hotel	310	88	r.m	736	41	24	17	54	31	23	53	27	26
		Drinking Place	925	3.078	k.s.f.					48	33	15	35	23	12
		Total					2,340	164	85	79	316	177	139	227	133
32	8555 Santa Monica Boulevard ¹⁰	Multifamily Housing (Low-Rise)	220	97	d.u.	-	-	-	-	-	-	-	-	-	
		Multifamily Housing (Mid-Rise)	221	12	d.u.	-	-	-	-	-	-	-	-	-	-
		Shopping Center	826	15.68	k.s.f.	-	-	-	-	-	-	-	-	-	-
		High Turnover Sit-Down Restaurant	932	282	k.s.f.	-	-	-	-	-	-	-	-	-	-
		General Office Building	710	6.08	k.s.f.	-	-	-	-	-	-	-	-	-	-
		Hair Salon	918	3.72	k.s.f.	-	-	-	-	-	-	-	-	-	-
Total					809	51	11	40	89	30	59	66	42	24	
33	1236 N Fairfax Avenue	Multifamily Housing (Low-Rise)	220	7	d.u.	51	3	1	2	5	3	2	4	3	1
34	1250 N Fairfax Avenue	Multifamily Housing (High-Rise)	222	53	d.u.	236	16	4	12	21	13	8	19	12	7
35	1301 N Fairfax Avenue	Multifamily Housing (Low-Rise)	220	10	d.u.	73	5	1	4	7	4	3	6	4	2
36	8465 Melrose Avenue	Shopping Center	820	4.122	k.s.f.	156	4	2	2	16	8	8	16	8	8
37	1027 N Gardner Street	Multifamily Housing (Low-Rise)	220	5	d.u.	37	2	0	2	3	2	1	3	2	1
38	1150 N Clark Street	Multifamily Housing (Low-Rise)	220	7	d.u.	51	3	1	2	5	3	2	4	3	1
39	1011 N Crescent Heights Boul	Multifamily Housing (Mid-Rise)	221	12	d.u.	65	4	1	3	5	3	2	5	3	2
40	1317 N Crescent Heights Boul	Multifamily Housing (High-Rise)	222	75	d.u.	334	23	6	17	29	18	11	27	16	11
41	1139 N Detroit Street	Multifamily Housing (Low-Rise)	220	5	d.u.	37	2	0	2	3	2	1	3	2	1
42	1141 N Detroit Street	Multifamily Housing (Low-Rise)	220	5	d.u.	37	2	0	2	3	2	1	3	2	1
43	1138 N Detroit Street	Multifamily Housing (Low-Rise)	220	10	d.u.	73	5	1	4	7	4	3	6	4	2
44	1201 N Detroit Street	Multifamily Housing (Low-Rise)	220	10	d.u.	73	5	1	4	7	4	3	6	4	2
45	1221 N Detroit Street	Multifamily Housing (Low-Rise)	220	10	d.u.	73	5	1	4	7	4	3	6	4	2
46	1251 N Detroit Street	Multifamily Housing (Low-Rise)	220	5	d.u.	37	2	0	2	3	2	1	3	2	1
47	1006 N Edinburg Avenue	Multifamily Housing (Low-Rise)	220	10	d.u.	73	5	1	4	7	4	3	6	4	2
48	528 N Flores Street	Multifamily Housing (Low-Rise)	220	4	d.u.	29	2	0	2	3	2	1	2	1	1
49	1159 N Formosa Avenue	Multifamily Housing (Low-Rise)	220	5	d.u.	37	2	0	2	3	2	1	3	2	1
50	1227 N Formosa Avenue	Multifamily Housing (Low-Rise)	220	5	d.u.	37	2	0	2	3	2	1	3	2	1
51	800 Fountain Avenue	Multifamily Housing (Mid-Rise)	221	30	d.u.	163	11	3	8	12	7	5	13	8	5
52	8210 Foutain Avenue	Multifamily Housing (Low-Rise)	220	9	d.u.	66	4	1	3	6	4	2	5	3	2
53	1250 N Fuller Avenue	Multifamily Housing (Low-Rise)	220	3	d.u.	22	1	0	1	2	1	1	2	1	1
54	938 N Genessee Avenue	Multifamily Housing (Low-Rise)	220	5	d.u.	37	2	0	2	3	2	1	3	2	1
55	1005 N Genessee Avenue	Multifamily Housing (Low-Rise)	220	5	d.u.	37	2	0	2	3	2	1	3	2	1
56	1046 N Genessee Avenue	Multifamily Housing (Low-Rise)	220	5	d.u.	37	2	0	2	3	2	1	3	2	1
57	1006 Hancock Avenue	Multifamily Housing (Low-Rise)	220	6	d.u.	44	3	1	2	4	2	2	3	2	1
58	1223 N Hayworth Avenue	Multifamily Housing (Mid-Rise)	221	12	d.u.	65	4	1	3	5	3	2	5	3	2
59	621 Huntley Drive	Multifamily Housing (Low-Rise)	220	3	d.u.	22	1	0	1	2	1	1	2	1	1
60	634 Huntley Drive	Multifamily Housing (Low-Rise)	220	3	d.u.	22	1	0	1	2	1	1	2	1	1
61	649 Huntley Drive	Multifamily Housing (Low-Rise)	220	3	d.u.	22	1	0	1	2	1	1	2	1	1
62	812 Huntley Drive	Multifamily Housing (Low-Rise)	220	5	d.u.	37	2	0	2	3	2	1	3	2	1
63	933 Huntley Drive	Multifamily Housing (Low-Rise)	220	5	d.u.	37	2	0	2	3	2	1	3	2	1
64	621 N Kings Road	Multifamily Housing (Low-Rise)	220	4	d.u.	29	2	0	2	3	2	1	2	1	1
65	1220 Larrabee Street	Multifamily Housing (Mid-Rise)	221	22	d.u.	120	8	2	6	9	5	4	10	6	4
66	1041 N Martel Avenue	Multifamily Housing (Mid-Rise)	221	25	d.u.	136	9	2	7	10	6	4	11	7	4
67	1052 N Martel Avenue	Multifamily Housing (Low-Rise)	220	5	d.u.	37	2	0	2	3	2	1	3	2	1
68	8008 Norton Avenue	Multifamily Housing (Low-Rise)	220	8	d.u.	59	4	1	3	5	3	2	4	3	1
69	8017 Norton Avenue	Multifamily Housing (High-Rise)	222	34	d.u.	151	11	3	8	13	8	5	12	7	5
70	8116 Norton Avenue	Multifamily Housing (Low-Rise)	220	8	d.u.	59	4	1	3	5	3	2	4	3	1
71	901 N Ogden Drive	Multifamily Housing (Low-Rise)	220	4	d.u.	29	2	0	2	3	2	1	2	1	1
72	950 N Ogden Drive	Multifamily Housing (Low-Rise)	220	10	d.u.	73	5	1	4	7	4	3	6	4	2
73	1008 N Ogden Drive	Multifamily Housing (Low-Rise)	220	7	d.u.	51	3	1	2	5	3	2	4	3	1
74	1019 N Orange Grove Avenue	Multifamily Housing (Low-Rise)	220	9	d.u.	66	4	1	3	6	4	2	5	3	2

Table 10 - Area/Cumulative Projects Trip Generation (cont.)

Map ID	Location	Land Use	ITE Code	Intensity	Units	Daily Total	AM Peak Hour			Mid-Day Peak Hour ¹			PM Peak Hour		
							Total	In	Out	Total	In	Out	Total	In	Out
City of West Hollywood															
75	7905 Romaine Street	Multifamily Housing (High-Rise)	222	35	d.u.	156	11	3	8	14	9	5	13	8	5
		Shopping Center	820	0.9	k.s.f.	34	1	1	0	3	1	2	3	1	2
		General Office Building	710	0.9	k.s.f.	9	1	1	0	1	1	0	1	0	1
		Total				199	13	5	8	18	11	7	17	9	8
76	948 N San Vicente Boulevard	Multifamily Housing (Mid-Rise)	221	18	d.u.	98	6	2	4	7	4	3	8	5	3
77	972 N San Vicente Boulevard	Day Care Center	565	72	Students	294	56	30	26	58	27	31	57	27	30
78	8760 Shoreham Drive	Multifamily Housing (Mid-Rise)	221	11	d.u.	60	4	1	3	5	3	2	5	3	2
79	1011 N Sierra Bonita Avenue	Multifamily Housing (Low-Rise)	220	5	d.u.	37	2	0	2	3	2	1	3	2	1
80	1017 N Sierra Bonita Avenue	Multifamily Housing (Low-Rise)	220	5	d.u.	37	2	0	2	3	2	1	3	2	1
81	1030 N Sierra Bonita Avenue	Multifamily Housing (Low-Rise)	220	5	d.u.	37	2	0	2	3	2	1	3	2	1
82	939 N Spaulding Avenue	Multifamily Housing (Mid-Rise)	221	22	d.u.	120	8	2	6	9	5	4	10	6	4
83	1013 N Spaulding Avenue	Multifamily Housing (Low-Rise)	220	5	d.u.	37	2	0	2	3	2	1	3	2	1
84	1041 N Spaulding Avenue	Multifamily Housing (Mid-Rise)	221	14	d.u.	76	5	1	4	6	4	2	6	4	2
85	1236 N Spaulding Avenue	Multifamily Housing (Low-Rise)	220	3	d.u.	22	1	0	1	2	1	1	2	1	1
86	943 N Stanley Avenue	Multifamily Housing (Low-Rise)	220	5	d.u.	37	2	0	2	3	2	1	3	2	1
87	545 N Sweetzer Avenue	Multifamily Housing (Low-Rise)	220	9	d.u.	66	4	1	3	6	4	2	5	3	2
88	1257 N Sweetzer Avenue	Multifamily Housing (Mid-Rise)	221	12	d.u.	65	4	1	3	5	3	2	5	3	2
89	1280 N Sweetzer Avenue	Multifamily Housing (Low-Rise)	220	9	d.u.	66	4	1	3	6	4	2	5	3	2
90	1035 N Vista Street	Multifamily Housing (Low-Rise)	220	4	d.u.	29	2	0	2	3	2	1	2	1	1
91	852 West Knoll Drive	Multifamily Housing (Low-Rise)	220	6	d.u.	44	3	1	2	4	2	2	3	2	1
92	8553 West Knoll Drive	Multifamily Housing (Low-Rise)	220	5	d.u.	37	2	0	2	3	2	1	3	2	1
93	8557 West Knoll Drive	Multifamily Housing (Low-Rise)	220	6	d.u.	44	3	1	2	4	2	2	3	2	1
94	629 Westbourne Drive	Multifamily Housing (Low-Rise)	220	3	d.u.	22	1	0	1	2	1	1	2	1	1
95	916 Westbourne Drive	Multifamily Housing (Low-Rise)	220	8	d.u.	59	4	1	3	5	3	2	4	3	1
City of West Hollywood Subtotal						22,165	1,254	631	624	2,261	1,305	956	2,075	1,115	960
City of Los Angeles¹¹															
96	1502 N Gardner Street	Supermarket	850	32.435	k.s.f. ²	1,522	49	30	19	300	153	147	142	74	68
97	1118 N McCadden Place	Senior Housing - Attached	252	100	d.u.	-	-	-	-	31	16	15	-	-	-
		Senior Housing - Attached	252	92	d.u.	-	-	-	-	29	15	14	-	-	-
		General Office Building	710	17.040	k.s.f.	-	-	-	-	20	17	3	-	-	-
		Shopping Center	820	29.650	k.s.f.	-	-	-	-	113	54	59	-	-	-
Total					1,346	80	49	31	193	102	91	109	53	56	
98	7000 Melrose Avenue	Multifamily Housing (Mid-Rise)	221	40	d.u.	-	-	-	-	16	10	6	-	-	-
		Shopping Center	820	7.565	k.s.f.	-	-	-	-	29	14	15	-	-	-
Total					334	21	4	17	45	24	21	32	20	12	
99	320 N Fairfax Avenue	General Office Building	710	28.341	k.s.f.	276	37	28	9	33	28	5	25	4	21
100	6901 Santa Monica Boulevard	Multifamily Housing (High-Rise)	222	231	d.u.	-	-	-	-	90	56	34	-	-	-
		High Turnover Sit-Down Restaurant	932	5	k.s.f.	-	-	-	-	87	45	42	-	-	-
		Shopping Center	820	10	k.s.f.	-	-	-	-	38	18	20	-	-	-
Total					1,010	78	0	78	215	119	96	105	86	19	
101	7107 W Hollywood Boulevard	Multifamily Housing (High-Rise)	222	410	d.u.	-	-	-	-	160	99	61	-	-	-
		Shopping Center	820	5	k.s.f.	-	-	-	-	19	9	10	-	-	-
		High Turnover Sit-Down Restaurant	932	5	k.s.f.	-	-	-	-	87	45	42	-	-	-
Total					2,637	206	49	157	266	153	113	253	167	86	
102	1233 N Highland Avenue	Multifamily Housing (Mid-Rise)	221	72	d.u.	-	-	-	-	30	18	12	-	-	-
		Shopping Center	820	17.830	k.s.f.	-	-	-	-	68	33	35	-	-	-
Total					714	38	11	27	98	51	47	66	38	28	
103	904 N La Brea Avenue	Multifamily Housing (High-Rise)	222	169	d.u.	-	-	-	-	66	41	25	-	-	-
		Shopping Center	820	40	k.s.f.	-	-	-	-	152	73	79	-	-	-
Total					2,072	93	25	68	218	114	104	186	83	103	
104	925 N La Brea Avenue	Shopping Center	820	15.265	k.s.f.	-	-	-	-	58	28	30	-	-	-
		General Office Building	710	46.527	k.s.f.	-	-	-	-	54	46	8	-	-	-
Total					735	69	58	11	112	74	38	85	24	61	
105	8150 W Sunset Boulevard	Multifamily Housing (High-Rise)	222	249	d.u.	-	-	-	-	97	60	37	-	-	-
		Shopping Center	820	110	k.s.f.	-	-	-	-	419	201	218	-	-	-
Total					1,077	-82	-92	10	516	261	255	216	158	58	

Table 10 - Area/Cumulative Projects Trip Generation (cont.)

Map ID	Location	Land Use	ITE Code	Intensity	Units	Daily Total	AM Peak Hour			Mid-Day Peak Hour ¹			PM Peak Hour		
							Total	In	Out	Total	In	Out	Total	In	Out
106	7120 W Sunset Boulevard	Multifamily Housing (Mid-Rise)	221	44	d.u.	-	-	-	-	18	11	7	-	-	-
		Shopping Center	820	2.9	k.s.f.	-	-	-	-	11	5	6	-	-	-
		Total				397	14	0	14	29	16	13	29	25	4
107	927 Highland Avenue	Elementary School	520	100	Students	155	3	4	-1	34	15	19	40	23	17
108	859 Highland Avenue	Coffee/Donut Shop with Drive-Thru	937	0.806	k.s.f.	330	41	21	20	79	39	40	18	9	9
109	6677 W Santa Monica Boulevard	Multifamily Housing (High-Rise)	222	695	d.u.	-	-	-	-	271	168	103	-	-	-
		High Turnover Sit-Down Restaurant	932	4	k.s.f.	-	-	-	-	70	36	34	-	-	-
		Coffee/Donut Shop without Drive-Thru	936	5.5	k.s.f. ⁶	-	-	-	-	440	224	216	-	-	-
		Shopping Center	820	15.4	k.s.f.	-	-	-	-	59	28	31	-	-	-
		Total				1,420	289	123	166	840	456	384	261	153	108
110	1411 N Highland Avenue	Multifamily Housing (High-Rise)	222	76	d.u.	-	-	-	-	30	19	11	-	-	-
		Shopping Center	820	2.5	k.s.f.	-	-	-	-	10	5	5	-	-	-
		Total				823	66	23	43	40	24	16	71	45	26
111	316 N La Cienega Boulevard	Multifamily Housing (Mid-Rise)	221	45	d.u.	-	-	-	-	18	11	7	-	-	-
		Shopping Center	820	3.8	k.s.f.	-	-	-	-	14	7	7	-	-	-
		Coffee/Donut Shop without Drive-Thru	936	0.800	k.s.f. ⁶	-	-	-	-	64	33	31	-	-	-
		Total				602	94	41	53	96	51	45	53	31	22
112	375 N La Cienega Boulevard	Multifamily Housing (High-Rise)	222	125	d.u.	-	-	-	-	49	30	19	-	-	-
		Shopping Center	820	17.4	k.s.f.	-	-	-	-	66	32	34	-	-	-
		Total				168	55	8	47	115	62	53	45	34	11
113	915 N La Brea Avenue	Multifamily Housing (High-Rise)	222	179	d.u.	-	-	-	-	70	43	27	-	-	-
		Supermarket	850	33.5	k.s.f.	-	-	-	-	310	158	152	-	-	-
		Total				2,615	91	5	86	380	201	179	248	158	90
114	7901 W Beverly Boulevard	Multifamily Housing (High-Rise)	222	71	d.u.	-	-	-	-	28	17	11	-	-	-
		Shopping Center	820	11.454	k.s.f.	-	-	-	-	44	21	23	-	-	-
		Total				493	36	7	29	72	38	34	46	30	16
115	7002 W Clinton Street	Day Care Center	565	120	Students	-	-	-	-	97	46	51	-	-	-
		Elementary School	520	60	Students	-	-	-	-	20	9	11	-	-	-
		Total				155	38	20	18	117	55	62	23	11	12
116	936 N La Brea Avenue	General Office Building	710	33.19	k.s.f.	-	-	-	-	39	34	5	-	-	-
		Shopping Center	820	19.923	k.s.f.	-	-	-	-	76	36	40	-	-	-
		Total				911	29	24	5	115	70	45	51	14	37
117	8418 Sunset Boulevard	Multifamily Housing (High-Rise)	222	138	d.u.	-	-	-	-	54	33	21	-	-	-
		Shopping Center	820	75	k.s.f.	-	-	-	-	286	137	149	-	-	-
		Total				0	121	46	75	340	170	170	296	162	134
118	6701 W Sunset Boulevard	Multifamily Housing (High-Rise)	222	950	d.u.	-	-	-	-	371	230	141	-	-	-
		Hotel	310	308	Rm	-	-	-	-	188	109	79	-	-	-
		Shopping Center	820	120	k.s.f.	-	-	-	-	457	219	238	-	-	-
		Quality Restaurant	931	35	k.s.f.	-	-	-	-	290	177	113	-	-	-
		High Turnover Sit-Down Restaurant	932	35	k.s.f.	-	-	-	-	609	317	292	-	-	-
		Total				14,833	879	381	498	1,915	1,052	863	1,281	733	548
119	7219 W Sunset Boulevard	Hotel	310	93	Rm	-	-	-	-	57	33	24	-	-	-
		Shopping Center	820	2.8	k.s.f.	-	-	-	-	11	5	6	-	-	-
		Total				761	45	27	18	68	38	30	56	27	29
120	7500 W Sunset Boulevard	Multifamily Housing (High-Rise)	222	219	d.u.	-	-	-	-	85	53	32	-	-	-
		Shopping Center	820	20	k.s.f.	-	-	-	-	76	36	40	-	-	-
		High Turnover Sit-Down Restaurant	932	10	k.s.f.	-	-	-	-	174	90	84	-	-	-
		Total				2,049	188	63	125	335	179	156	178	117	61
121	7300 W Hollywood Boulevard	Synagogue	561	-	-	294	80	48	32	-	-	-	29	9	20
122	7900 W Hollywood Boulevard	Multifamily Housing (Mid-Rise)	221	50	d.u.	251	19	3	16	21	13	8	22	14	8
123	8052 W Beverly Boulevard	Multifamily Housing (High-Rise)	222	102	d.u.	-	-	-	-	40	25	15	-	-	-
		General Office Building	710	15	k.s.f.	-	-	-	-	17	15	2	-	-	-
		Shopping Center	820	1	k.s.f.	-	-	-	-	4	2	2	-	-	-
		Synagogue	561	5	k.s.f.	-	-	-	-	15	9	6	-	-	-
		Total				725	45	19	26	76	51	25	70	21	49
124	8000 W Beverly Boulevard	Multifamily Housing (Mid-Rise)	221	48	d.u.	-	-	-	-	20	12	8	-	-	-
		Shopping Center	820	7.4	k.s.f.	-	-	-	-	28	13	15	-	-	-
		Total				774	57	21	36	48	25	23	59	42	17

Table 10 - Area/Cumulative Projects Trip Generation (cont.)

Map ID	Location	Land Use	ITE Code	Intensity	Units	Daily Total	AM Peak Hour			Mid-Day Peak Hour ¹			PM Peak Hour		
							Total	In	Out	Total	In	Out	Total	In	Out
106	7120 W Sunset Boulevard	Multifamily Housing (Mid-Rise)	221	44	d.u.	-	-	-	-	18	11	7	-	-	-
		Shopping Center	820	2.9	k.s.f.	-	-	-	-	11	5	6	-	-	-
		Total				397	14	0	14	29	16	13	29	25	4
107	927 Highland Avenue	Elementary School	520	100	Students	155	3	4	-1	34	15	19	40	23	17
108	859 Highland Avenue	Coffee/Donut Shop with Drive-Thru	937	0.806	k.s.f.	330	41	21	20	79	39	40	18	9	9
109	6677 W Santa Monica Boulevard	Multifamily Housing (High-Rise)	222	695	d.u.	-	-	-	-	271	168	103	-	-	-
		High Turnover Sit-Down Restaurant	932	4	k.s.f.	-	-	-	-	70	36	34	-	-	-
		Coffee/Donut Shop without Drive-Thru	936	5.5	k.s.f. ⁶	-	-	-	-	440	224	216	-	-	-
		Shopping Center	820	15.4	k.s.f.	-	-	-	-	59	28	31	-	-	-
		Total				1,420	289	123	166	840	456	384	261	153	108
110	1411 N Highland Avenue	Multifamily Housing (High-Rise)	222	76	d.u.	-	-	-	-	30	19	11	-	-	-
		Shopping Center	820	2.5	k.s.f.	-	-	-	-	10	5	5	-	-	-
		Total				823	66	23	43	40	24	16	71	45	26
111	316 N La Cienega Boulevard	Multifamily Housing (Mid-Rise)	221	45	d.u.	-	-	-	-	18	11	7	-	-	-
		Shopping Center	820	3.8	k.s.f.	-	-	-	-	14	7	7	-	-	-
		Coffee/Donut Shop without Drive-Thru	936	0.800	k.s.f. ⁶	-	-	-	-	64	33	31	-	-	-
		Total				602	94	41	53	96	51	45	53	31	22
112	375 N La Cienega Boulevard	Multifamily Housing (High-Rise)	222	125	d.u.	-	-	-	-	49	30	19	-	-	-
		Shopping Center	820	17.4	k.s.f.	-	-	-	-	66	32	34	-	-	-
		Total				168	55	8	47	115	62	53	45	34	11
113	915 N La Brea Avenue	Multifamily Housing (High-Rise)	222	179	d.u.	-	-	-	-	70	43	27	-	-	-
		Supermarket	850	33.5	k.s.f.	-	-	-	-	310	158	152	-	-	-
		Total				2,615	91	5	86	380	201	179	248	158	90
114	7901 W Beverly Boulevard	Multifamily Housing (High-Rise)	222	71	d.u.	-	-	-	-	28	17	11	-	-	-
		Shopping Center	820	11.454	k.s.f.	-	-	-	-	44	21	23	-	-	-
		Total				493	36	7	29	72	38	34	46	30	16
115	7002 W Clinton Street	Day Care Center	565	120	Students	-	-	-	-	97	46	51	-	-	-
		Elementary School	520	60	Students	-	-	-	-	20	9	11	-	-	-
		Total				155	38	20	18	117	55	62	23	11	12
116	936 N La Brea Avenue	General Office Building	710	33.19	k.s.f.	-	-	-	-	39	34	5	-	-	-
		Shopping Center	820	19.923	k.s.f.	-	-	-	-	76	36	40	-	-	-
		Total				911	29	24	5	115	70	45	51	14	37
117	8418 Sunset Boulevard	Multifamily Housing (High-Rise)	222	138	d.u.	-	-	-	-	54	33	21	-	-	-
		Shopping Center	820	75	k.s.f.	-	-	-	-	286	137	149	-	-	-
		Total				0	121	46	75	340	170	170	296	162	134
118	6701 W Sunset Boulevard	Multifamily Housing (High-Rise)	222	950	d.u.	-	-	-	-	371	230	141	-	-	-
		Hotel	310	308	Rm	-	-	-	-	188	109	79	-	-	-
		Shopping Center	820	120	k.s.f.	-	-	-	-	457	219	238	-	-	-
125	8001 W Beverly Boulevard	High Turnover Sit-Down Restaurant	932	22.6	k.s.f.	-	-	-	-	393	204	189	-	-	-
		General Office Building	710	11.358	Total	-	-	-	-	13	11	2	-	-	-
		Total				3,248	260	142	118	406	215	191	263	157	106
126	431 N La Cienega Boulevard	Multifamily Housing (Low-Rise)	220	72	d.u.	-409	1	-9	10	48	28	20	-34	-12	-22
127	1610 N Highland Avenue	Multifamily Housing (High-Rise)	222	248	d.u.	-	-	-	-	97	60	37	-	-	-
		Shopping Center	820	12.785	k.s.f.	-	-	-	-	49	24	25	-	-	-
		Total				1,805	112	22	90	146	84	62	150	96	54
128	1403 N Gardner Street	Assisted Living	254	44	Beds	56	6	3	3	15	7	8	7	4	3
129	750 Edinburg Avenue	Single Family Residential	210	8	d.u.	23	2	1	1	8	5	3	3	2	1
130	8000 W 3rd Street	Multifamily Housing (Mid-Rise)	221	45	d.u.	-	-	-	-	18	11	7	-	-	-
		Affordable Housing (Family)	-	5	d.u.	-	-	-	-	2	1	1	-	-	-
		Shopping Center	820	6.252	k.s.f.	-	-	-	-	24	12	12	-	-	-
Total				428	26	9	17	44	24	20	36	23	13		
131	7007 W Romaine Street	General Office Building	710	28.486	k.s.f.	-	-	-	-	33	28	5	-	-	-
		High Turnover Sit-Down Restaurant	932	4.694	k.s.f.	-	-	-	-	82	43	39	-	-	-
		Total				598	60	42	18	115	71	44	60	24	36
132	6753 W Selma Avenue	Multifamily Housing (Mid-Rise)	221	51	d.u.	-	-	-	-	21	13	8	-	-	-
		Shopping Center	820	0.438	k.s.f.	-	-	-	-	2	1	1	-	-	-
		Total				286	18	5	13	23	14	9	24	14	10
City of Los Angeles Total Subtotal						45,514	3,264	1,261	2,003	7,521	4,082	3,439	4,604	2,673	1,931
Grand Total						67,679	4,518	1,892	2,627	9,782	5,387	4,395	6,679	3,788	2,891

Table 10 - Area/Cumulative Projects Trip Generation (cont.)

Trip generation rates based on ITE Trip Generation Manual, 10th Edition, Institute of Transportation Engineers, 2017, unless otherwise noted. Slight discrepancy in AM Peak Hour total is due to rounding.

¹ Mid-Day rates calculated using "PM Peak Hour Generator" estimates. ITE Trip Generation Manual, 10th Edition, Institute of Transportation Engineers, 2012, unless otherwise noted.

² d.u. = dwelling units, k.s.f. = 1,000 square feet of floor area

³ Mid-Day rates for this land use are calculated using "PM Adjacent Street" estimates. ITE Trip Generation Manual, 10th Edition, Institute of Transportation Engineers, 2017

⁴ Mid-Day rates for this land use are calculated using "AM Adjacent Street" estimates. ITE Trip Generation Manual, 10th Edition, Institute of Transportation Engineers, 2017

⁵ Trip generation estimates from traffic study for "8550 Santa Monica Boulevard," City of West Hollywood

⁶ Mid-Day rates for this land use are calculated using "AM Peak Hour Generator" estimates. ITE Trip Generation Manual, 10th Edition, Institute of Transportation Engineers, 2017

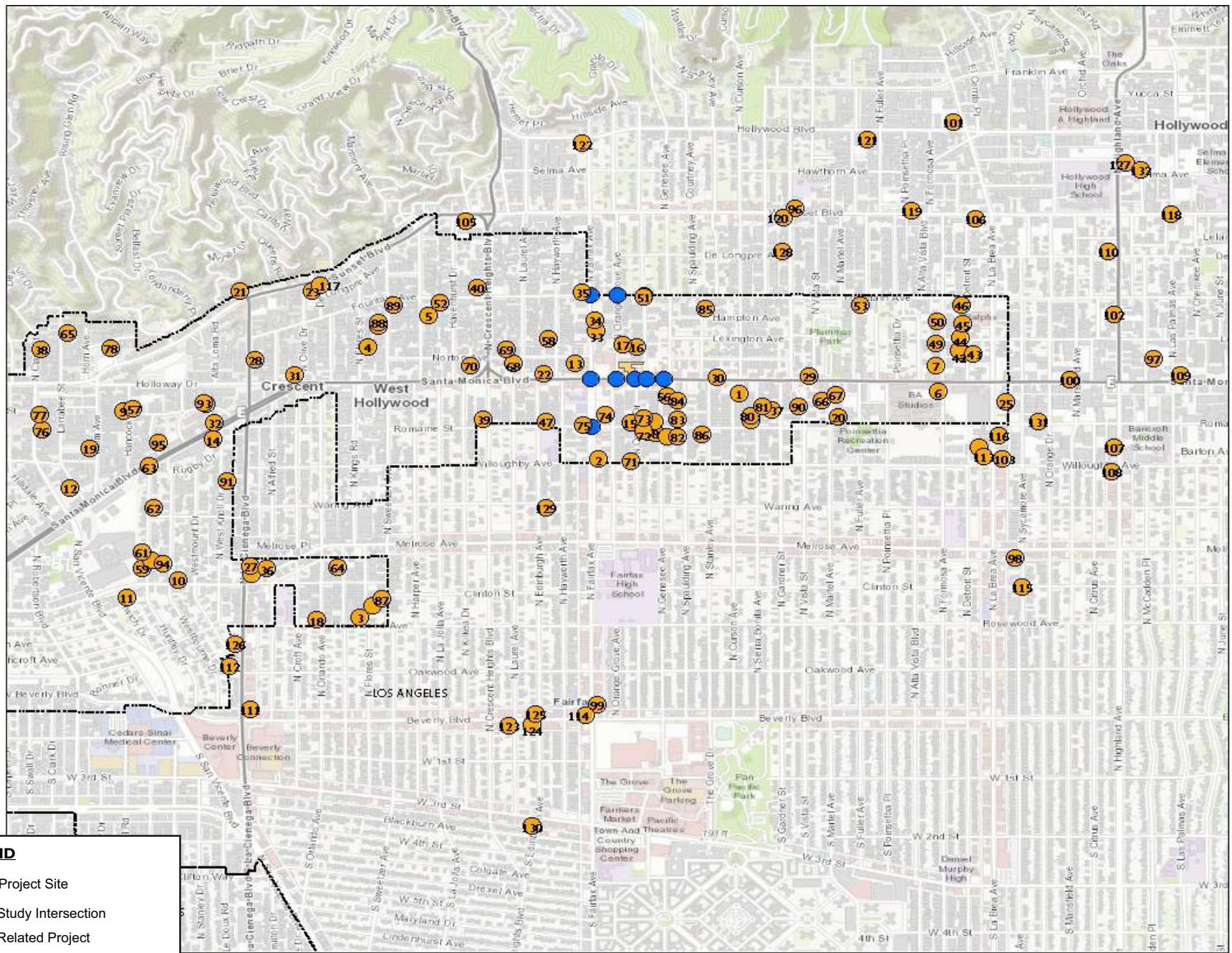
⁷ Trip generation AM/PM Peak "Total" from traffic study for "8497 Sunset Boulevard," City of West Hollywood

⁸ Trip generation estimates from traffic study for "7965-7985 Santa Monica Boulevard," City of West Hollywood

⁹ Trip generation estimates from traffic study for "8430 Sunset Boulevard," City of West Hollywood

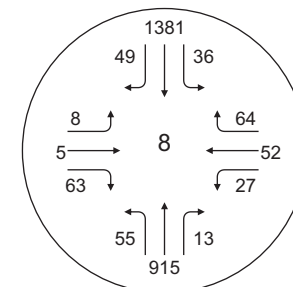
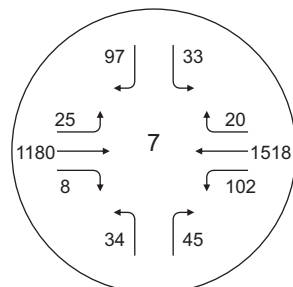
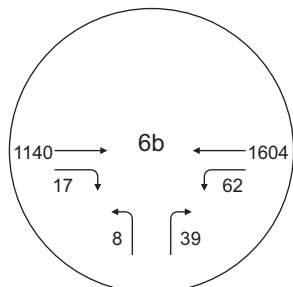
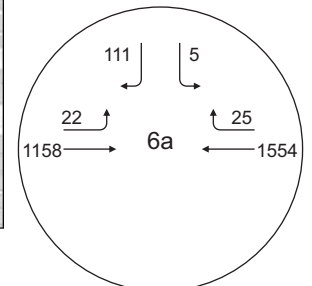
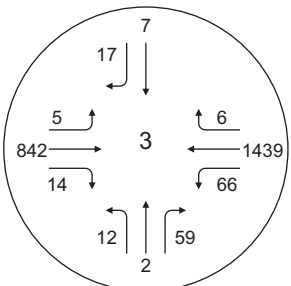
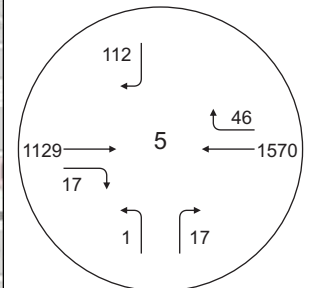
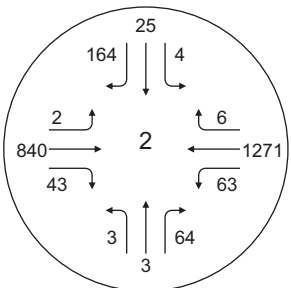
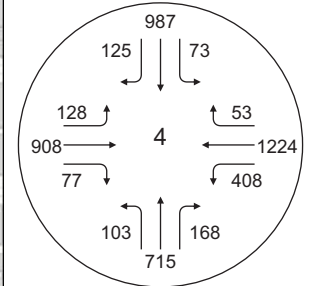
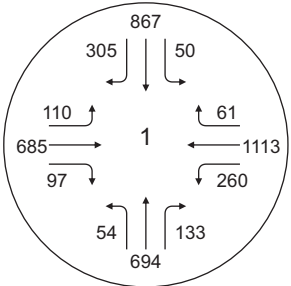
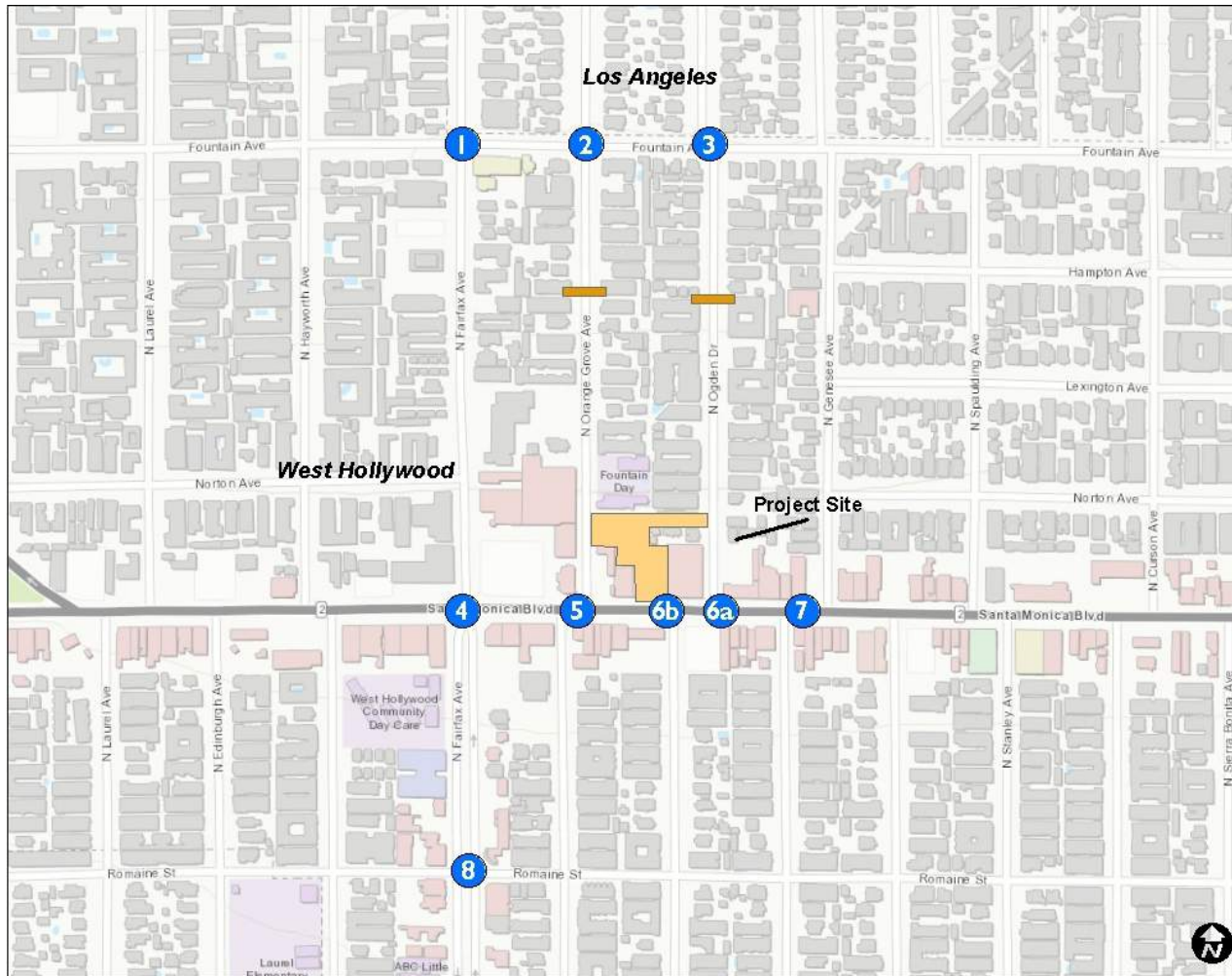
¹⁰ Trip generation estimates from traffic study for "8555 Santa Monica Boulevard," City of West Hollywood

¹¹ Trip Generation AM/PM Peak "Total" Rates Source: Los Angeles Department of Transportation (LADOT) Case Logging and Tracking System (CLATS), 11/9/2018. Mid-day peak period trips calculated using ITE Trip Generation Manual, 10th Edition.



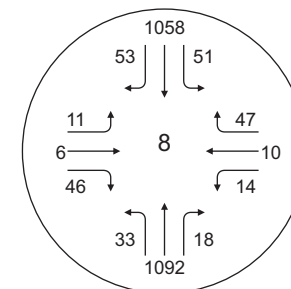
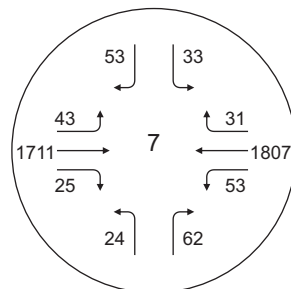
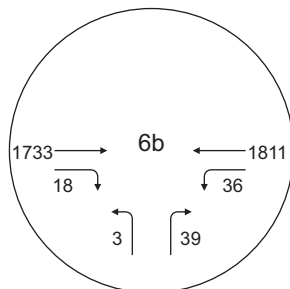
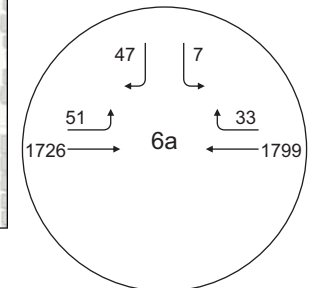
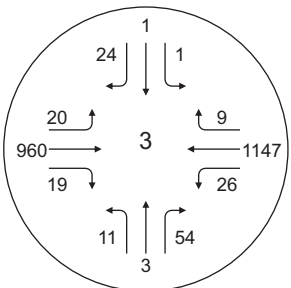
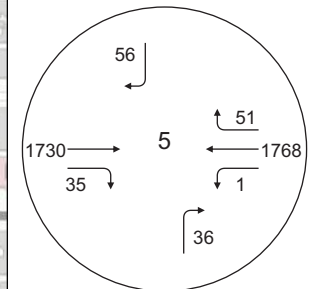
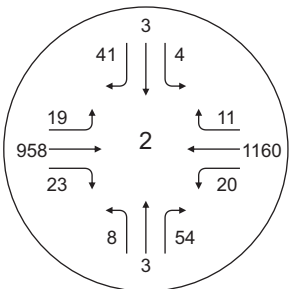
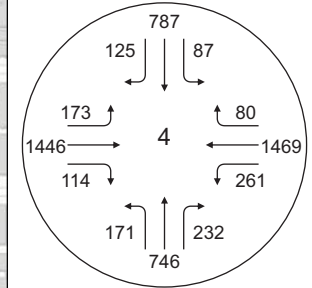
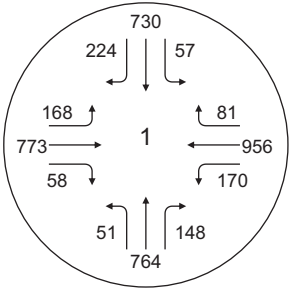
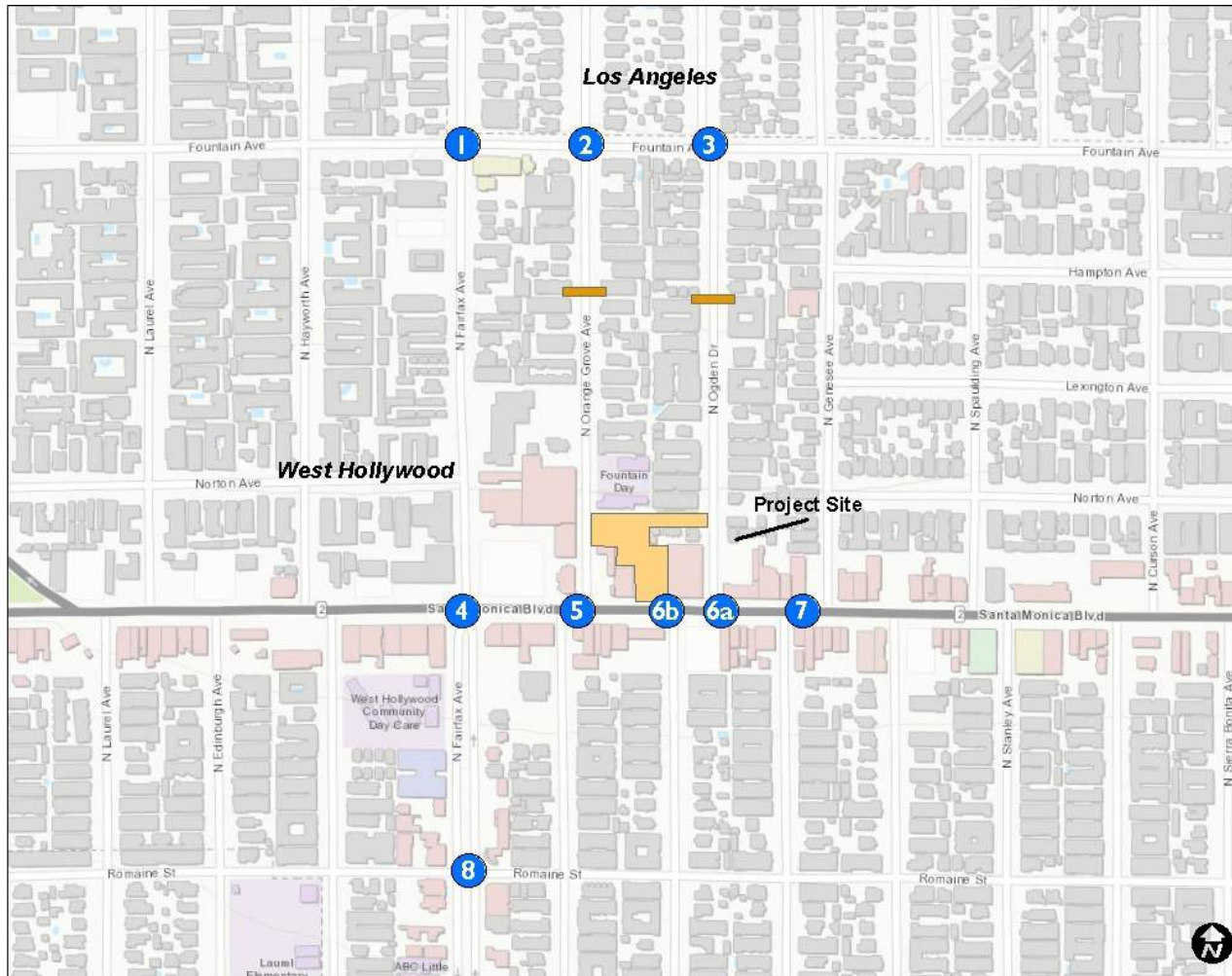
LEGEND

- Project Site
- X Study Intersection
- X Related Project
- Study Roadway Segment



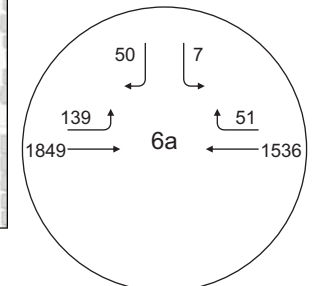
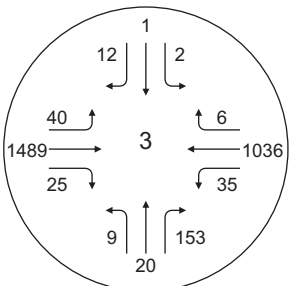
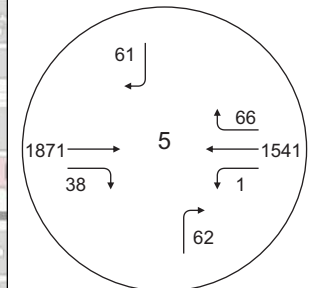
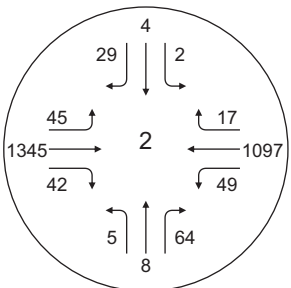
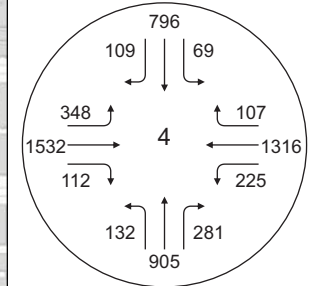
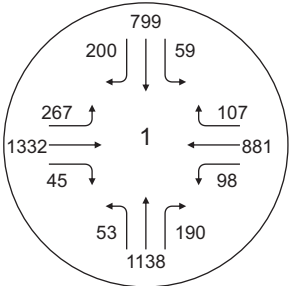
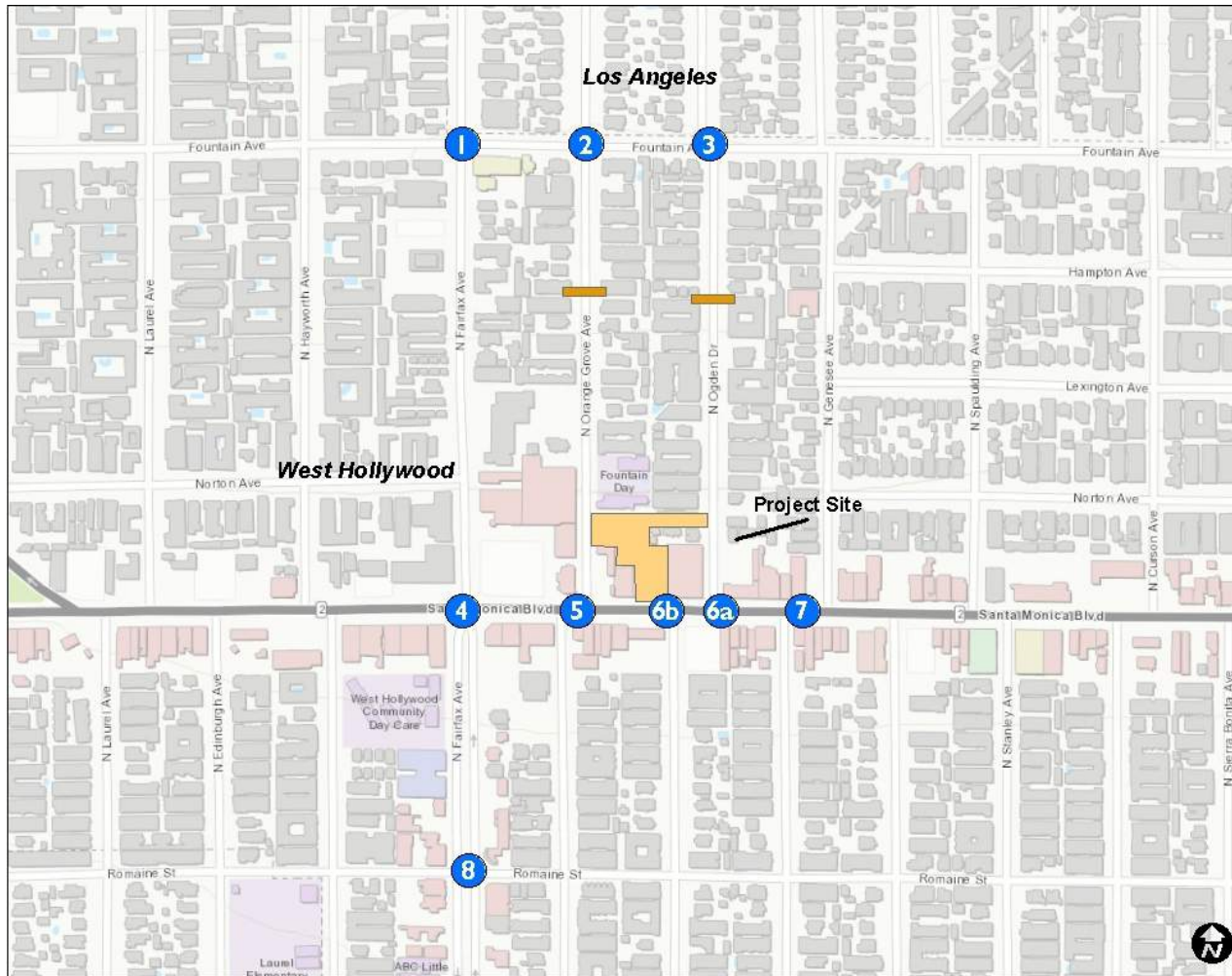
LEGEND

- Project Site
- Study Intersection
- Study Roadway Segment
- Intersection Turn Volumes



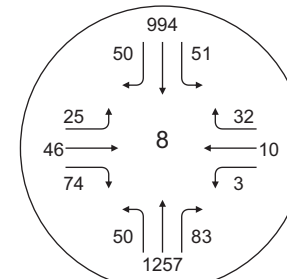
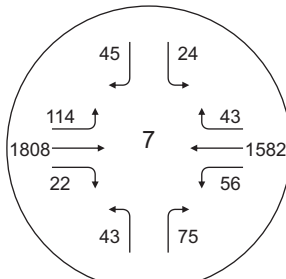
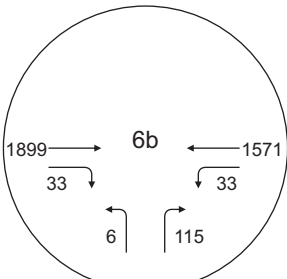
LEGEND

- Project Site
- Study Intersection
- Study Roadway Segment
- Intersection Turn Volumes



LEGEND

- Project Site
- Study Intersection
- Study Roadway Segment
- Intersection Turn Volumes



5.3 PEAK HOUR INTERSECTION LEVEL OF SERVICE

To analyze future without-Project conditions, intersection turn volumes with ambient growth and related projects traffic were included.

Table II summarizes the level of service of the study area intersections under this scenario.

Table II: Future 2021 Without Project Level of Service Summary

Study Intersections		AM Peak Hour		Mid-Day Peak Hour		PM Peak Hour	
		V/C or Delay	LOS	V/C or Delay	LOS	V/C or Delay	LOS
City of West Hollywood							
1	Fairfax Avenue & Fountain Avenue (A)	32.0	C	31.8	C	75.6	E
2	Orange Grove Avenue & Fountain Avenue (A)*	51.3	F	3.0	A	46.3	E
3	Ogden Drive and Fountain Avenue (A)*	9.3	A	2.9	A	415.1	F
4	Fairfax Avenue & Santa Monica Boulevard	92.8	F	147.2	F	167.7	F
5	Orange Grove Avenue & Santa Monica Boulevard*	1.1	A	0.6	A	0.8	A
6(a)	Ogden Drive and Santa Monica Boulevard (North Leg)*	2.8	A	3.6	A	3.5	A
6(b)	Ogden Drive and Santa Monica Boulevard (South Leg)*	3.6	A	0.8	A	5.5	A
7	Genesee Avenue & Santa Monica Boulevard	11.3	B	20.7	C	21.9	C
8	Fairfax Avenue & Romaine Street*	68.1	F	11.0	B	128.5	F
City of Los Angeles							
1	Fairfax Avenue & Fountain Avenue (A)	0.690	B	-	-	0.907	E

LOS = Level of Service, V/C = Volume-to-Capacity Ratio.

* Unsignalized Intersection

(A) Shared Intersection

Under 2021 without Project conditions, the following intersections are projected to operate at LOS E or worse during one or more peak hour periods:

- Fairfax Avenue & Fountain Avenue (PM peak hour)
- Orange Grove Avenue & Fountain Avenue (AM and PM peak hour)
- Ogden Drive & Fountain Avenue (PM peak hour)
- Fairfax Avenue & Santa Monica Boulevard (AM, midday, and PM peak hours)
- Fairfax Avenue & Romaine Street (AM and PM peak hours)

The remaining four intersections would operate at LOS D or better. Note that under the Synchro software package, the delay and Level of Service values changed to a lower, less intense value under future conditions. For the purposes of this analysis, these were left separate in order to assess project impacts for existing and future conditions respectively. The traffic analysis worksheets for this scenario are provided in Appendix E of this report.

5.4 FUTURE WITHOUT PROJECT STREET SEGMENT ANALYSIS

Future without-Project traffic conditions were estimated based on the existing 24-hour traffic counts conducted on each study street segment, using an ambient growth of 1% per year to account for the increase in area-wide traffic within the three-year period. Related project trip assignments were also included as some related projects are located near the study segments. The ambient growth applied would adequately estimate the future traffic increase along the street segments due to “cut-through” traffic.

Table 12 summarizes the projected future street segment traffic volumes on the two study street segments.




Table 12: Future 2021 Without Project Daily Volumes on Study Street Segments

Segment			Existing Daily Traffic Volumes	Ambient Growth	Area Projects	Future Pre-Project Daily Traffic Volumes
1	Orange Grove Avenue	Between Fountain Avenue and Santa Monica Boulevard	2,022	1.051	21	2,146
2	Ogden Drive	Between Fountain Avenue and Santa Monica Boulevard	1,976	1.051	21	2,098

Figure 22 illustrates the daily estimated volumes of the study street segments under future conditions without the proposed project.



LEGEND

-  Project Site
-  Study Intersection
-  Study Roadway Segment

6. FUTURE 2021 WITH PROJECT CONDITIONS

This section documents future traffic conditions at the study intersections and street segments with the addition of Project-generated traffic. Traffic volumes for these conditions were derived by adding Project trips to the future without-Project volumes.

6.1 PEAK HOUR INTERSECTION LEVEL OF SERVICE

Table 13 summarizes the level of service values at the study intersections for this scenario.

Table 13: Future 2021 With Project Level of Service Summary

Study Intersections		AM Peak Hour		Mid-Day Peak Hour		PM Peak Hour	
		V/C or Delay	LOS	V/C or Delay	LOS	V/C or Delay	LOS
City of West Hollywood							
1	Fairfax Avenue & Fountain Avenue (A)	32.2	C	32.4	C	77.0	E
2	Orange Grove Avenue & Fountain Avenue (A)*	54.9	F	3.2	A	46.5	E
3	Ogden Drive and Fountain Avenue (A)*	12.3	B	2.9	A	415.1	F
4	Fairfax Avenue & Santa Monica Boulevard	95.4	F	150.9	F	173.2	F
5	Orange Grove Avenue & Santa Monica Boulevard*	1.4	A	0.8	A	1.0	A
6(a)	Ogden Drive and Santa Monica Boulevard (North Leg)*	5.8	A	8.2	A	6.6	A
6(b)	Ogden Drive and Santa Monica Boulevard (South Leg)*	3.7	A	0.8	A	5.6	A
7	Genesee Avenue & Santa Monica Boulevard	11.4	B	21.5	C	22.5	C
8	Fairfax Avenue & Romaine Street*	72.8	F	11.9	B	133.4	F
City of Los Angeles							
1	Fairfax Avenue & Fountain Avenue (A)	0.691	B	-	-	0.914	E

LOS = Level of Service, V/C = Volume-to-Capacity Ratio.

* Unsignalized Intersection

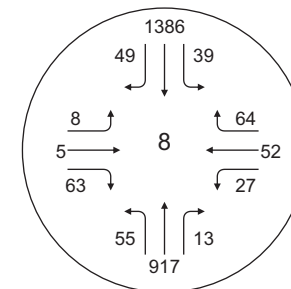
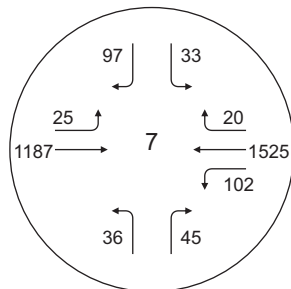
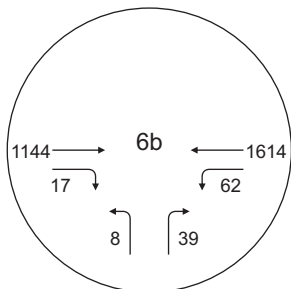
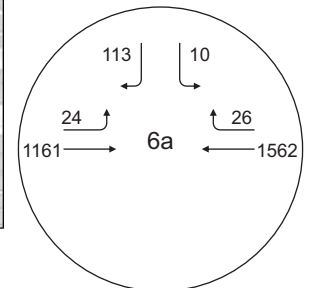
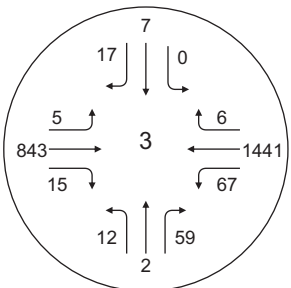
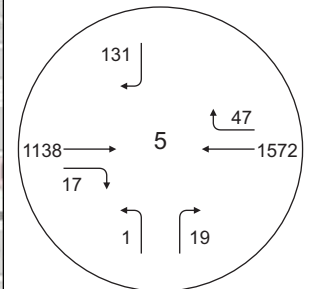
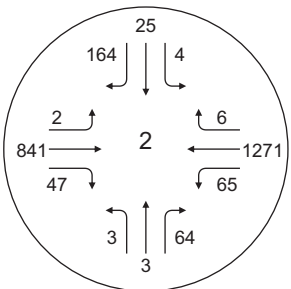
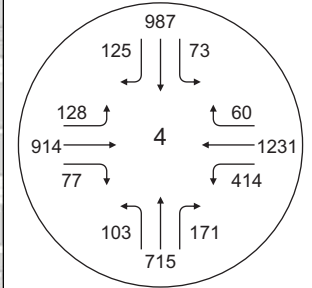
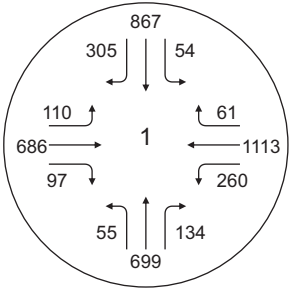
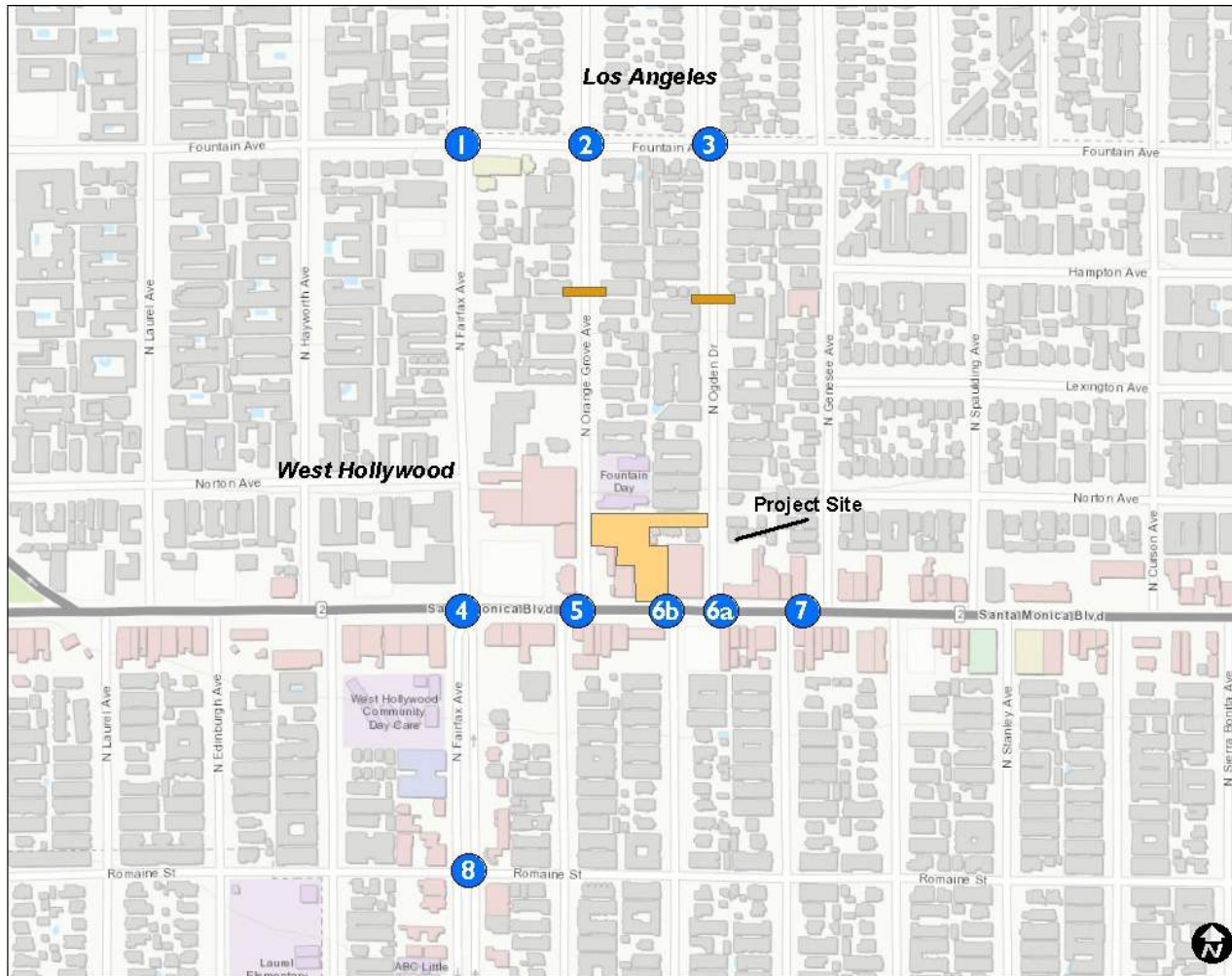
(A) Shared Intersection

Under future conditions with the addition of Project generated traffic, the following intersections are expected to operate at LOS E or F:

- Fairfax Avenue & Fountain Avenue (PM peak hour)
- Orange Grove Avenue & Fountain Avenue (AM and PM peak hours)
- Ogden Drive & Fountain Avenue (PM peak hour)
- Fairfax Avenue & Santa Monica Boulevard (AM, midday, and PM peak hours)
- Fairfax Avenue & Romaine Street (AM and PM peak hours)

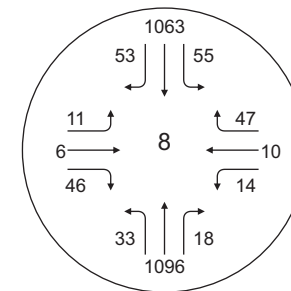
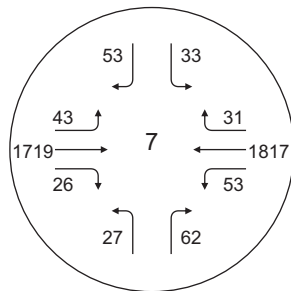
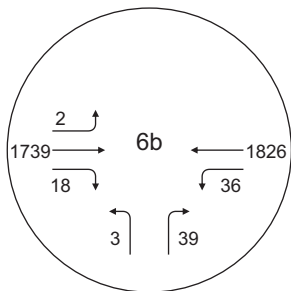
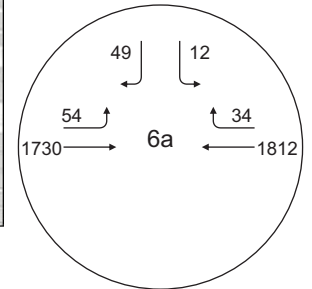
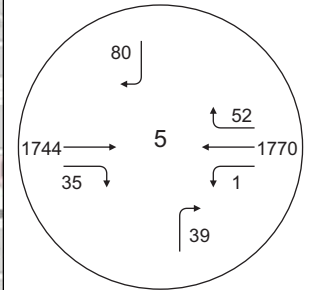
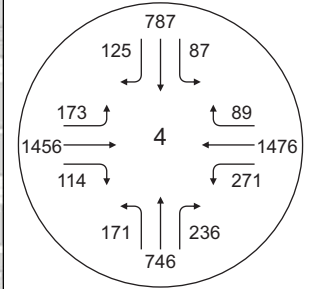
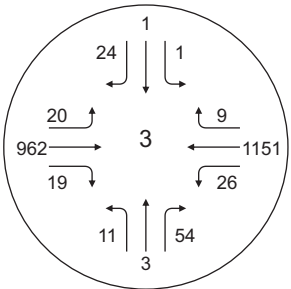
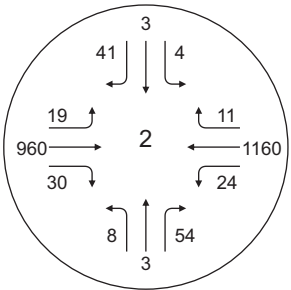
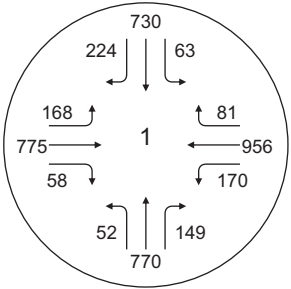
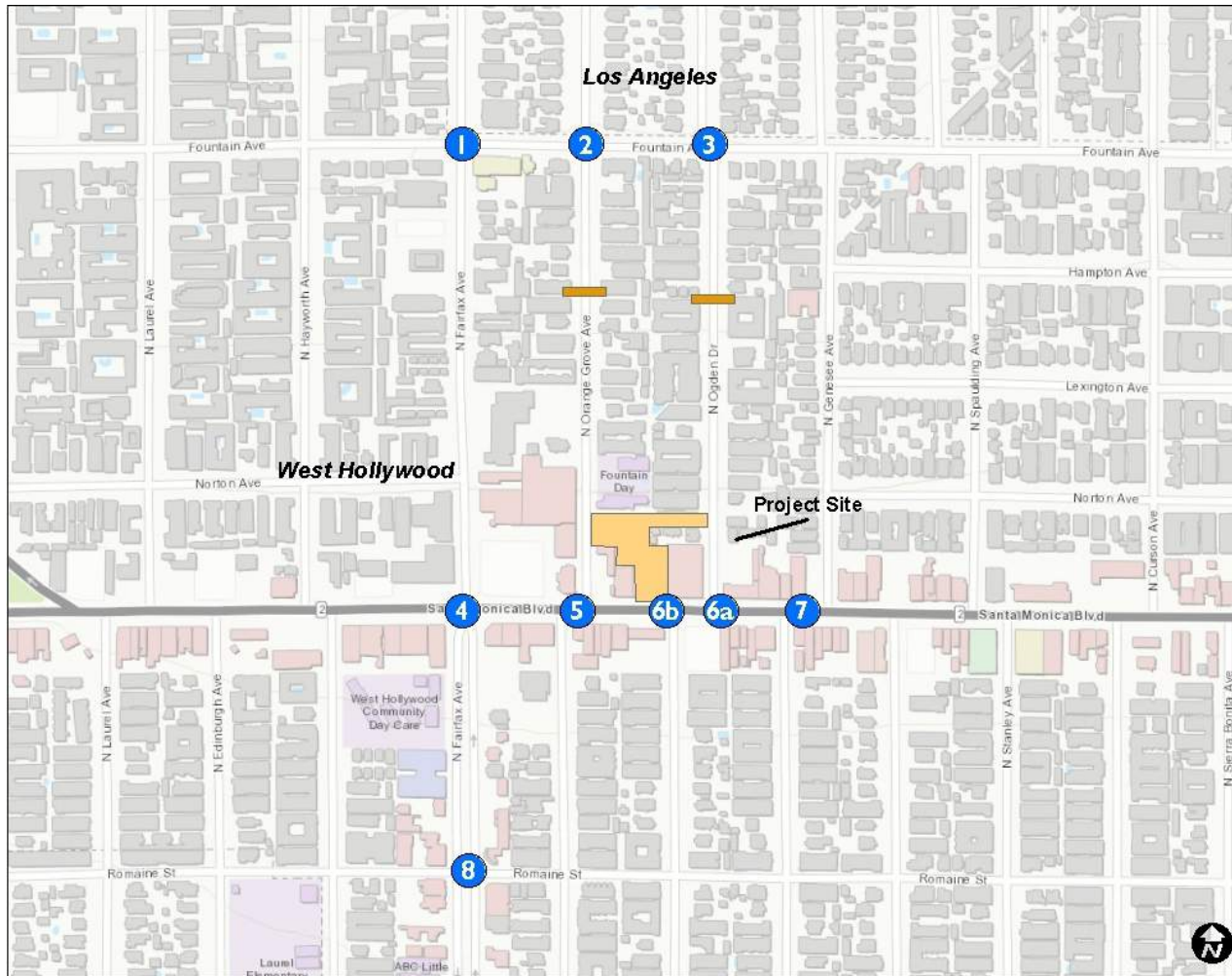
The remaining four intersections would continue to operate at LOS D or better. The traffic analysis worksheets for this scenario are included in Appendix F of this report.

Figures 23, 24, and 25 illustrate the 2021 with Project traffic volumes for the weekday AM, weekday







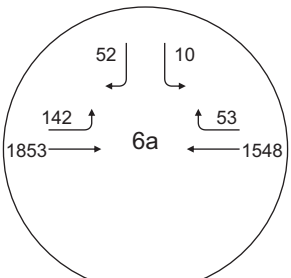
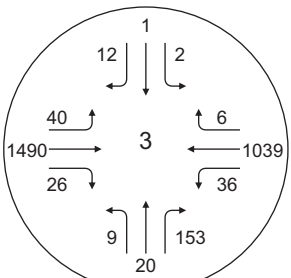
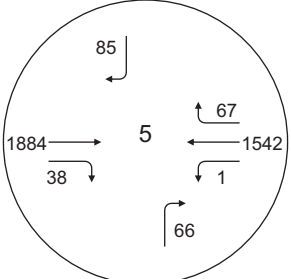
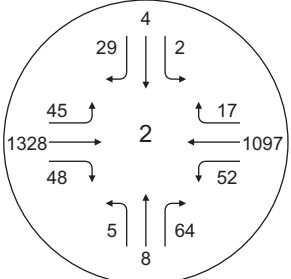
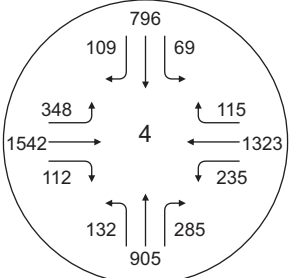
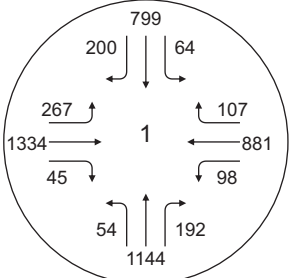
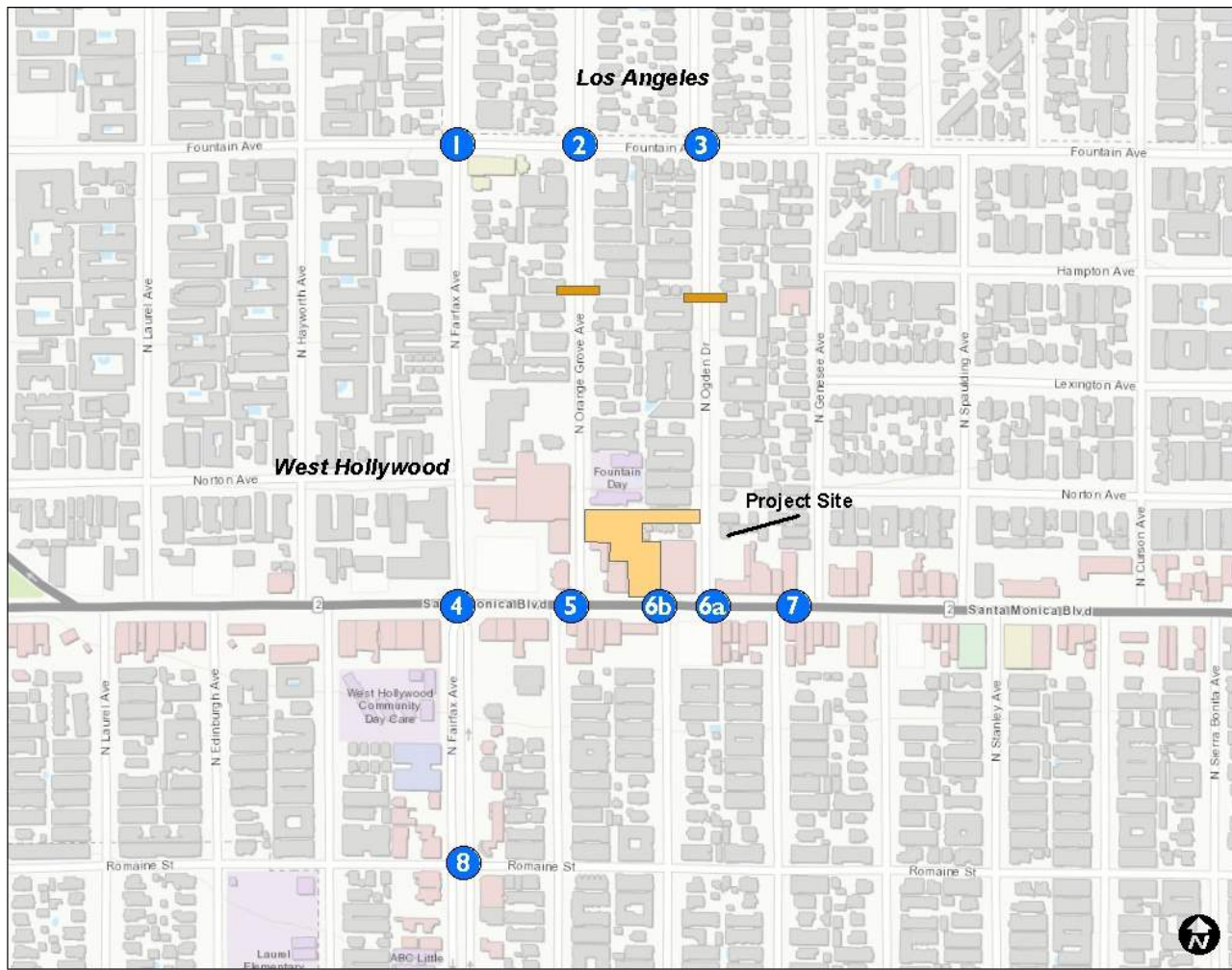
LEGEND

- Project Site
- Study Intersection
- Study Roadway Segment
- Intersection Turn Volumes



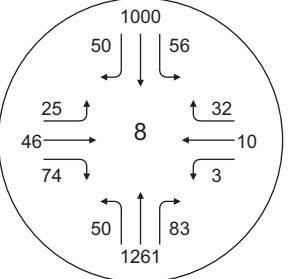
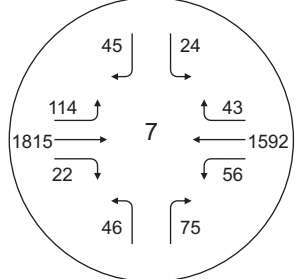
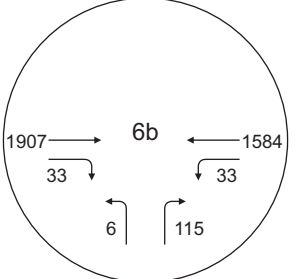
LEGEND

-  Project Site
-  Study Intersection
-  Study Roadway Segment
-  Intersection Turn Volumes



LEGEND

- Project Site
- Study Intersection
- Study Roadway Segment
- Intersection Turn Volumes



6.2 FUTURE WITH PROJECT STREET SEGMENT ANALYSIS

In addition to intersection level of service analysis, the impacts of the project on the surrounding neighborhood streets were analyzed. Project traffic assigned on the surrounding residential street segments were added to the future base conditions.

Table 14 summarizes the future with project conditions on the two study street segments.

Table 14: Future 2021 With Project Daily Traffic Volumes on Study Street Segments

Segment			Existing Daily Traffic Volumes	Future w/o Project Daily Traffic Volumes	Project Only	Future w/ Project Daily Traffic Volumes
1	Orange Grove Avenue	Between Fountain Avenue and Santa Monica Boulevard	2,022	2,146	157	2,303
2	Ogden Drive	Between Fountain Avenue and Santa Monica Boulevard	1,976	2,098	14	2,112

Figure 26 illustrates the ADT volumes along the study street segments under future conditions with the addition of the proposed Project.

Determinations of significant traffic impacts created by the Project are discussed in the next report section.



7. PROJECT TRAFFIC IMPACTS

7.1 DETERMINATION OF TRAFFIC IMPACTS ON INTERSECTIONS

Traffic impacts are identified if the proposed development will result in a significant change in traffic conditions at a study intersection or on a street segment. A significant impact is typically identified if project-related traffic will cause service levels to deteriorate beyond a threshold limit specified by the overseeing agency. Impacts can also be significant if an intersection is already operating below the poorest acceptable level of service and project traffic will cause a further decline below a certain threshold.

City of West Hollywood Significant Impact Criteria

The City of West Hollywood has established specific thresholds for project related increases in the delay of signalized study intersections, made up by two commercial corridors. The following increases in peak hour delay are considered significant impacts:

Level of Service	Final Delay (sec.)	Project Related Delay increase
D	35 – 55 seconds	12 seconds or greater
E and F	55 seconds or more	8 seconds or greater

Note: Final delay is the delay at an intersection, considering impacts from the project, ambient and related project growth, and without proposed traffic impact mitigations.

For all other signalized intersections and four-way stop-controlled intersections within the City of West Hollywood, significant impacts (delay increase) were evaluated as follows:

Level of Service	Final Delay (sec.)	Project Related Delay increase
D	25 – 35 seconds	8 seconds or greater
E and F	35 seconds or more	5 seconds or greater

For unsignalized intersections (one/two-way stops) within the City of West Hollywood, significant impacts (delay increase) were evaluated as follows:

Level of Service	Final Delay (sec.)	Project Related Delay increase
D, E, or F	25 or more	5 seconds or greater

City of Los Angeles Significant Impact Criteria

The following increases in peak hour V/C ratios are considered significant impacts based on City of Los Angeles Department of Transportation guidelines:

Level of Service	Final V/C*	Project Related V/C increase
C	< 0.700 – 0.800	Equal to or greater than 0.040
D	< 0.800– 0.900	Equal to or greater than 0.020
E and F	0.901 or more	Equal to or greater than 0.010

* Final V/C is the V/C ratio at an intersection, considering impacts from the project, ambient and related project growth, and without proposed traffic impact mitigations.

7.2 DETERMINATION OF TRAFFIC IMPACTS ON RESIDENTIAL STREETS

The City of West Hollywood has established specific thresholds for determining the significance of traffic impact on neighborhood streets.

The City uses a combination of the Cities of Los Angeles and Beverly Hills standards. The methodology and thresholds are as follows:

- ADT is less than 2,000 and the Project will increase the ADT by 12%
- ADT is 2,001 or greater but less than 3,000 and the Project will increase the ADT by 10%
- ADT is 3,001 or greater but less than 6,749 and the Project will increase the ADT by 8%
- ADT is 6,750 or greater and the Project will increase the ADT by 6.25%

7.3 PROJECT TRAFFIC IMPACTS – EXISTING PLUS PROJECT

Table 15 provides a comparison of Existing and Existing Plus Project conditions under the weekday AM, midday, and PM peak hours, respectively. Traffic impacts created by the Project are calculated by comparing Existing conditions to Existing Plus Project conditions. The overall traffic impacts created by the proposed Project, and determinations of significant impact, are provided in the two right-most columns of the table.

Table 15: Existing Plus Project Peak Hour Impact Summary

Study Intersections	Peak Hour	Existing Conditions		Existing with Project		Significance Threshold	Change in V/C or Delay	Sig Impact?	
		V/C or Delay	LOS	V/C or Delay	LOS				
City of West Hollywood									
1	Fairfax Avenue & Fountain Avenue (A)	AM	28.8	C	29.0	C	-	0.2	No
		Noon	28.0	C	28.3	C	-	0.3	No
		PM	61.5	E	62.8	E	5.0	1.3	No
2	Orange Grove Avenue & Fountain Avenue (A)*	AM	18.7	C	19.3	C	-	0.6	No
		Noon	1.8	A	1.8	A	-	0.0	No
		PM	9.6	A	10.3	B	-	0.7	No
3	Ogden Drive and Fountain Avenue (A)*	AM	8.7	A	9.2	A	-	0.5	No
		Noon	2.2	A	2.2	A	-	0.0	No
		PM	130.4	F	130.4	F	5.0	0.0	No
4	Fairfax Avenue & Santa Monica Boulevard	AM	49.8	D	50.8	D	12.0	1.0	No
		Noon	36.9	D	37.2	D	12.0	0.3	No
		PM	59.6	E	62.4	E	8.0	2.8	No
5	Orange Grove Avenue & Santa Monica Boulevard*	AM	1.0	A	1.2	A	-	0.2	No
		Noon	0.5	A	0.7	A	-	0.2	No
		PM	0.7	A	0.9	A	-	0.2	No
6	Ogden Drive and Santa Monica Boulevard (North Leg)*	AM	1.4	A	1.9	A	-	0.5	No
		Noon	1.2	A	1.6	A	-	0.4	No
		PM	3.7	A	3.8	A	-	0.1	No
6	Ogden Drive and Santa Monica Boulevard (South Leg)*	AM	1.5	A	1.5	A	-	0.0	No
		Noon	0.7	A	0.7	A	-	0.0	No
		PM	1.9	A	1.9	A	-	0.0	No
7	Genesee Avenue & Santa Monica Boulevard	AM	8.9	A	9.0	A	-	0.1	No
		Noon	7.2	A	7.3	A	-	0.1	No
		PM	9.5	A	9.6	A	-	0.1	No
8	Fairfax Avenue & Romaine Street*	AM	35.3	E	36.9	E	5.0	1.6	No
		Noon	2.9	A	3.0	A	-	0.1	No
		PM	46.2	E	49.8	E	5.0	3.6	No
City of Los Angeles									
1	Fairfax Avenue & Fountain Avenue (A)	AM	0.644	B	0.645	B	-	0.001	No
		PM	0.840	D	0.847	D	0.020	0.007	No

LOS = Level of Service, V/C = Volume-to-Capacity Ratio.

* Unsignalized Intersections

(A) Shared Intersection

As indicated in Table 15, based on the traffic forecasts, the level of service analysis, and significant impact thresholds set forth by the respective cities, the Project will not create a significant traffic impact at any of the study intersections, thus mitigation measures are not recommended.

Project Traffic Impacts – Residential Streets

Table 16 provides a comparison of the Existing and Existing plus Project daily traffic for the study roadway segments. Traffic impacts created by the Project are calculated by comparing the increase in percentage of project traffic against the existing traffic volumes. The overall traffic impacts created by the proposed Project, and determinations of significant impact, are provided in the right two columns of the table.

Table 16: Existing Plus Project Roadway Segment Impact Summary

Segment		Existing Daily Traffic Volumes	Project Only	Existing w/ Project Daily Traffic Volumes	Significance Threshold	Increase (%)	Significant Impact?
1	Orange Grove Avenue Between Fountain Avenue and Santa Monica Boulevard	2,022	157	2,179	10%	7.8%	No
2	Ogden Drive Between Fountain Avenue and Santa Monica Boulevard	1,976	14	1,990	12%	0.7%	No

As indicated in Table 16, the Project is not expected to create a significant traffic impact at any residential roadway segment; no mitigation measures are required.

7.4 PROJECT TRAFFIC IMPACTS – FUTURE 2021 WITH PROJECT

Table 17 provides a comparison of future without-Project conditions and future with-Project conditions under the weekday AM, midday, and PM peak hours. Traffic impacts created by the Project are calculated by comparing “Future 2021 Without-Project” conditions to “Future 2021 With-Project” conditions. The overall traffic impacts created by the proposed Project, and determinations of significant impact, are provided in the two right-most columns of the table.

Table 17: Future 2021 Peak Hour Project Impact Summary

Study Intersections	Peak Hour	Future (2021) No Project		Future (2021) With Project		Significance Threshold	Change in V/C or Delay	Sig Impact?	
		V/C or Delay	LOS	V/C or Delay	LOS				
City of West Hollywood									
1	Fairfax Avenue & Fountain Avenue (A)	AM	32.0	C	32.2	C	-	0.2	No
		Noon	31.8	C	32.4	C	-	0.6	No
		PM	75.6	E	77.0	E	5.0	1.4	No
2	Orange Grove Avenue & Fountain Avenue (A)*	AM	51.3	F	54.9	F	5.0	3.6	No
		Noon	3.0	A	3.2	A	-	0.2	No
		PM**	46.3	E	46.5	E	5.0	0.2	No
3	Ogden Drive and Fountain Avenue (A)*	AM	9.3	A	12.3	B	-	3.0	No
		Noon	2.9	A	2.9	A	-	0.0	No
		PM**	415.1	F	415.1	F	5.0	0.0	No
4	Fairfax Avenue & Santa Monica Boulevard	AM	92.8	F	95.4	F	8.0	2.6	No
		Noon	147.2	F	150.9	F	8.0	3.7	No
		PM	167.7	F	173.2	F	8.0	5.5	No
5	Orange Grove Avenue & Santa Monica Boulevard*	AM	1.1	A	1.4	A	-	0.3	No
		Noon	0.6	A	0.8	A	-	0.2	No
		PM	0.8	A	1.0	A	-	0.2	No
6(a)	Ogden Drive and Santa Monica Boulevard (North Leg)*	AM	2.8	A	5.8	A	-	3.0	No
		Noon	3.6	A	8.2	A	-	4.6	No
		PM	3.5	A	6.6	A	-	3.1	No
6(b)	Ogden Drive and Santa Monica Boulevard (South Leg)*	AM	3.6	A	3.7	A	-	0.1	No
		Noon	0.8	A	0.8	A	-	0.0	No
		PM	5.5	A	5.6	A	-	0.1	No
7	Genesee Avenue & Santa Monica Boulevard	AM	11.3	B	11.4	B	-	0.1	No
		Noon	20.7	C	21.5	C	-	0.8	No
		PM	21.9	C	22.5	C	-	0.6	No
8	Fairfax Avenue & Romaine Street*	AM	68.1	F	72.8	F	5.0	4.7	No
		Noon	11.0	B	11.9	B	-	0.9	No
		PM	128.5	F	133.4	F	5.0	4.9	No
City of Los Angeles									
1	Fairfax Avenue & Fountain Avenue (A)	AM	0.690	B	0.691	B	-	0.001	No
		PM	0.907	E	0.914	E	0.010	0.007	No

LOS = Level of Service, V/C = Volume-to-Capacity Ratio.

* Unsignalized Intersections

** Due to methodology limitations under Future PM peak hour conditions, east-west volumes were adjusted in order to yield delays and corresponding levels-of-service results.

(A) Shared Intersection

As indicated in Table 17, based on the traffic forecasts, the level of service analysis, and significant impact thresholds set forth by the respective cities, the Project will not create a significant traffic impact at any of the study intersections, thus mitigation measures are not recommended.

Project Traffic Impacts – Residential Streets

Table 18 provides a comparison of the future without-project and future with-Project daily traffic for the study roadway segments. Traffic impacts created by the Project are calculated by comparing the increase in percentage of project traffic against the future base traffic volumes with the threshold mentioned above. The overall traffic impacts created by the proposed Project, and determinations of significant impact, are provided in the right two columns of the table.

Table 18: Future with Project Roadway Segment Impact Summary

	Segment	Existing Daily Traffic Volumes	Future w/o Project Daily Traffic Volumes	Project Only	Future w/ Project Daily Traffic Volumes	Significance Threshold	Increase (%)	Significant Impact?
1	Orange Grove Avenue Between Fountain Avenue and Santa Monica Boulevard	2,022	2,146	157	2,303	10%	7.3%	No
2	Ogden Drive Between Fountain Avenue and Santa Monica Boulevard	1,976	2,098	14	2,112	10%	0.7%	No

As indicated in Table 18, the Project is not expected to create a significant traffic impact at any residential roadway segment; no mitigation measures are required.

7.5 SB-743 APPLICATION

As mentioned earlier in this report, SB 743 has not been formally adopted by the State of California at the time of this analysis. However, it is anticipated that the California Office of Planning and Research (OPR) will adopt Vehicle Miles Traveled (VMT) as their method of assessing a development Project's significant impact thresholds under CEQA.

For informational purposes, VMT was calculated for this Project using the methodology adopted by the California Emission Estimator Model (CalEEMod). CalEEMod was released by California Air Pollution Control Officers Association (CAPCOA) in 2011 and was most recently updated in 2013. The model is one of the VMT calculating tools recommended by the Office of Planning and Research in their *Updating Transportation Impact Analysis in the CEQA Guidelines* publication.

The CalEEMod method utilized the ITE trip generation rates with average trip length by trip type from the 1999 Caltrans Statewide Travel Survey. For this project, the ITE 9th edition trip generation rates and the average trip length in Los Angeles County were applied. There is currently no immediately available and more accurate average trip length source by trip type for the Project's specific location in the more recent household survey or the regional models in Southern California. Therefore, the 1999 survey average trip length was still applied for the Project.

For details of the CalEEMod VMT estimation method, please refer to Appendix A - Calculation Details for CalEEMod, of the CalEEMod v.2013.2 documentation.

Table 19 below shows that the Project's anticipated annual VMT would be 3,266,577, which translates to VMT of 8,950 per day.

Table 19: Proposed Project Vehicle Miles Traveled

Trip Generation

Land Use Type	Units	Intensity	Daily Trip Generation Rates			Trip Generation				
			Weekday Trip Rates	Saturday Trip Rates	Sunday Trip Rates	Avg Weekday	Avg Saturday	Avg Sunday	Weekly Trips	Annual Trips
Apartments*	Dwelling Unit	63	5.44	4.91	4.09	343	309	258	2,281	118,591
Art Gallery	1,000 sqft	1.381	6.60	6.60	6.60	9	9	9	64	3,318
Hotel	Room	86	8.36	8.19	5.95	719	704	512	4,811	250,164
Quality Restaurant	1,000 sqft	3.756	83.84	90.04	71.97	315	338	270	2,183	113,517

Trip Rates Source based on ITE Trip Generation Manual, 10th Edition, Institute of Transportation Engineers, 2012.

*Apartments DU intensity is the difference between the 70 units proposed and the existing seven (7) that will be removed.

Trip Length

Land Use Type	Res H-W Trip Length	Res H-S Trip Length	Res H-O Trip Length	Non Res C-C Trip Length	Non Res C-W Trip Length	Non Res C-NW Trip Length	Primar Trip (%)	Divert Trip (%)	Pass-by Trip (%)	Res H-W Trip (%)	Res H-S Trip (%)	Res H-O Trip (%)	Non Res C-C Trip (%)	Non Res C-W Trip (%)	Non Res C-NW Trip (%)
Apartments Mid Rise	14.7	5.9	8.7	0	0	0	86	11	3	40.2	19.2	40.6	0	0	0
Art Gallery	0	0	0	8.4	16.6	6.9	45	29	26	0	0	0	67.4	13.6	19
Hotel	0	0	0	8.4	16.6	6.9	58	38	4	0	0	0	61.6	19.4	19
Quality Restaurant	0	0	0	8.4	16.6	6.9	38	18	44	0	0	0	69	12	19

Note: Trip Length source: 1999 Caltrans Statewide Travel Survey, Los Angeles County

VMT by Land Use

Land Use Type	Trip Length Factor	Avg Primary Trip Length	Avg Overall Trip Length	Annual Trip Length
Apartments Mid Rise	0.89	10.57	9.42	1,116,714
Art Gallery	0.55	9.23	5.06	16,797
Hotel	0.68	9.71	6.59	1,648,638
Quality Restaurant	0.47	9.10	4.27	484,427

Total Annual VMT	3,266,577
Total Daily VMT	8,950

8. PARKING ASSESSMENT

This section documents the parking impacts associated with the proposed Project. The parking analysis was based on the City of West Hollywood Municipal Code parking standards.

8.1 PARKING CODE REQUIREMENTS

Based on the City's Municipal Parking Code parking requirements, the proposed Project would require 130 spaces, as shown in Table 20. The proposed parking supply of 175 spaces would result in a supply surplus of 45 spaces.

Table 20: Required Parking and Supply Summary

DESCRIPTION	SIZE	CITY CODE PARKING RATE	Spaces Required	Possible Reduction Factor	Spaces Required
Parking Per ZCCWH 19.28.040 and Table 3-6					
Restaurant	3,756 SF	3.5 spaces per 1000 SF	13	50%	7
Art Gallery	1,381 SF	0.5 spaces per 1000 SF	1	100%	1
Hotel Rooms	86 rooms	0.5 space per room	43	100%	43
Residential Units (Studio)	38	1.0 space per unit	38	-	38
Residential Units (1-BR)	23	1.0 spaces per unit	23	-	23
Residential Units (2-BR)	9	2.0 spaces per unit	18	-	18
Total			137		130
TOTAL PARKING REQUIREMENT			137		130
SUPPLY			175		175
SURPLUS			38		45

SF = square feet

ZCCWH - Zoning Code of the City of West Hollywood

Project size numbers taken from architectural plans dated January 31, 2019.

The proposed Project is also required to provide 16 bicycle parking spaces and five (4) electric vehicle parking spaces. The applicant will provide all 16 bicycle parking spaces and five (4) electric vehicle parking spaces.

Furthermore, the Project is required to provide two (2) loading spaces, which it will provide to satisfy the City's parking code.

9. SITE ACCESS

This section summarizes the vehicle access, queuing, and pedestrian analysis for the proposed Project. The Project would provide two full-movement driveways, one on Orange Grove Avenue (with restricted outbound right-turns), and another, residential-only driveway on Ogden Drive (with restricted outbound left-turns). A third, ingress-only driveway will be provided along Santa Monica Boulevard. Northbound/Outbound movements will be restricted at both Orange Grove and Ogden driveways – vehicles exiting the site will be required to travel southbound.

9.1 VEHICLE DELAYS AND QUEUING

The Orange Grove Avenue driveway would be located approximately 250 feet north from the intersection of Santa Monica Boulevard and Orange Grove Avenue. The driveway would be located on the western side of the Project site. The roadway will continue to provide one traffic lane in each direction with on-street parking on both sides.

The Ogden Drive driveway would be located approximately 330 feet north from the intersection of Santa Monica Boulevard and Ogden Drive. The driveway would be located on the eastern side of the Project. The roadway will continue to provide one lane of traffic in each direction with on-street parking on both sides.

The Santa Monica Boulevard, ingress-only driveway would be located in the approximate center of the site, equidistant from both Orange Grove Avenue and Ogden Drive. The driveway would be located on the southern side of the Project site and no new striped left-turn pocket is proposed on Santa Monica Boulevard Drive for vehicles entering the Project site; the travel lanes would remain in their pre-Project configuration. The roadway will continue to provide two lanes of traffic in each direction with on-street parking on both sides.

Vehicle Delay and Queuing

Vehicle queuing analysis was conducted to measure both on-site and off-site queuing issues and traffic delays at the driveways. Based on the methodology used in the traffic analysis, vehicle delay and queuing were measured under project conditions. Table 21 shows the anticipated vehicle delay and 90th percentile queuing at the project driveways for entering and exiting vehicles during the peak periods.

Vehicle Delay

As Table 21 shows, the expected vehicle delays under the existing + Project conditions for movements entering / exiting the Project would be 7 to 12 seconds (LOS A and B) for all the time periods. Thus, the driveways are expected to operate well and with minimal delays.

Under Future with Project conditions, the vehicle delay for each movement would be the same for the Orange Grove and Ogden driveways. However, left-turning vehicles at the Santa Monica Boulevard driveway would experience an increase in delay of 3 to 7 seconds from existing + Project conditions. The increase in delay is mainly due to the additional traffic on Santa Monica Boulevard due to ambient growth and from area projects. However, even with the increase, the Level of Service for the Santa Monica Boulevard left-turn movement will be LOS C at the worst, an acceptable value.

Vehicle Queuing

On-street and driveway vehicle queuing was also analyzed. As Table 21 also shows, the vehicle queues due to project trips at all approaches are expected to be less than one vehicle during the peak hours. The project-related queues are not expected to cause any severe vehicle back-ups on either street or project driveways. As such, no major queuing issues are anticipated due to project traffic.

Appendix G shows the driveway delay and queuing worksheets.

Table 21: Project-Related Vehicle Delays and Queuing at Driveways

AM Peak Hour					
Driveway	Left Turn Movement	Delay (sec.) / LOS		Queuing (Vehicles)	
		Existing + Project	Future With Project	Existing + Project	Future With Project
Orange Grove Avenue	Outbound (WB) LT	9.8 / A	9.9 / A	< 1	< 1
	Inbound (SB) LT	7.4 / A	7.4 / A	0	0
Ogden Drive	Inbound (NB) LT	7.5 / A	7.5 / A	0	0
Santa Monica Boulevard	Inbound (EB) LT	12.4 / B	15.5 / C	0	< 1
Midday Peak Hour					
Driveway		Delay (sec.)		Queuing (Vehicles)	
		Existing + Project	Future With Project	Existing + Project	Future With Project
Orange Grove Avenue	Outbound (WB) LT	9.4 / A	9.5 / A	< 1	< 1
	Inbound (SB) LT	7.4 / A	7.4 / A	0	0
Ogden Drive	Inbound (NB) LT	7.3 / A	7.3 / A	0	0
Santa Monica Boulevard	Inbound (EB) LT	11.1 / B	18.2 / C	< 1	< 1
PM Peak Hour					
Driveway		Delay (sec.)		Queuing (Vehicles)	
		Existing + Project	Future With Project	Existing + Project	Future With Project
Orange Grove Avenue	Outbound (WB) LT	9.8 / A	9.8 / A	< 1	< 1
	Inbound (SB) LT	7.4 / A	7.4 / A	0	0
Ogden Drive	Inbound (NB) LT	7.3 / A	7.4 / A	0	0
Santa Monica Boulevard	Inbound (EB) LT	11.2 / B	15.6 / C	< 1	< 1

Note: Delay and Vehicle Queue values are for each movement, not for the intersection as a whole. Proposed Project will restrict northbound-outbound movements from both Ogden Drive and Orange Grove Driveways.

9.2 PEDESTRIAN CIRCULATION

The nearby unsignalized intersections of Santa Monica Boulevard & Orange Grove Avenue and Santa Monica Boulevard & Ogden Drive both have striped crosswalks that provide for safe pedestrian movements across the intersections. The signalized intersection of Santa Monica Boulevard & Fairfax Avenue also provides crosswalks and pedestrian-phasing that allows for safe pedestrian movements. The Project will also not be adding any additional curb-cuts or driveways along Santa Monica Boulevard.

Overall, the existing sidewalk network, traffic signals at major intersections, and the pedestrian-oriented nature of the project provide a safe local pedestrian travel network.

10. CONSTRUCTION IMPACT ANALYSIS

This report section analyzes the potential traffic impacts that could be created by Project construction trips – generated by both haul/delivery trucks and construction employee vehicle trips – during the peak period of construction.

Impacts were analyzed using both existing and future baseline conditions. The project applicant has estimated the peak period of construction to be within the year 2018, thus it was used as the future baseline year.

Construction Period Trip Generation Assumptions

The following assumptions were applied to the Project construction-period trip generation analysis. This information was provided by the City and Project applicant:

- Construction workers would total 40 persons
- Passenger vehicles traveling to and from the site on a daily basis would be 40
- 48 trucks per day are anticipated during peak construction

Table 22 provides the trip generation calculations that served as input to the impact analysis within this report section. Truck trips were multiplied by a Passenger Car Equivalent (PCE) factor of 2.5, consistent with truck studies in the region.

Existing baseline traffic volumes were based on the existing conditions analysis in Section 2 of this report, and future baseline traffic volumes were based on the future buildout analysis in Section 6 of this report.

Table 22: Construction Trip Generation Totals

TRIP GENERATION	AVERAGE DAILY TRIPS			AM PEAK HOUR						MIDDAY PEAK HOUR						PM PEAK HOUR					
				Truck Trips*		Employee Trips		Total Trips		Truck Trips*		Employee Trips		Total Trips		Truck Trips*		Employee Trips		Total Trips	
	Trucks*	Employee	Total	In	Out	In	Out	In	Out	In	Out	In	Out	In	Out	In	Out	In	Out	In	Out
Field Personnel	0	80	80	0	0	30	0	30	0	0	0	0	0	0	0	0	0	0	30	0	30
Construction Truck	240	0	240	15	15	0	0	15	15	15	15	0	0	15	15	15	15	0	0	15	15
TOTAL TRIPS	240	80	320	15	15	30	0	45	15	15	15	15	0	15	15	15	15	0	30	15	45

* Truck trips include a Passenger Car Equivalency (PCE) factor of 2.5.

Field Personnel - 40 total workers, assumed 75% of the construction work crew would travel to and from the site during AM and PM peak hours.

Trucks - Approximately 48 daily and six peak hour construction truck trips in the construction period. Both multiplied by PCE factor of 2.5. Assuming 8-hour workday.

During the peak of Project construction activities, employee and truck trips would total 320 trips on a daily basis, with 60 of those trips occurring during both the a.m. peak hour and the p.m. peak hour, and 30 occurring during the mid-day peak hour.

Truck trips were distributed to the US-101 and I-10 freeways along major arterial roadways connecting to the project site. Employee trips were distributed mainly to the north (towards US-101), south, and east.

Significant impacts of the construction period were determined according to the criteria outlined in Section 7.1 of this report. The final significance of determination is provided in the right-most columns of the tables within this report section.

The analysis of construction impacts with existing baseline conditions is provided in Table 23. The analysis of construction impacts with future baseline (year 2020) conditions is provided in Table 24.

The level of service worksheets for the construction period analysis are provided in Appendix I of this report.

Table 23: Construction Impacts - Existing Plus Project

Study Intersections	Peak Hour	Existing Conditions		Existing with Construction		Significance Threshold	Change in V/C or Delay	Sig Impact?
		V/C or Delay	LOS	V/C or Delay	LOS			
City of West Hollywood								
1 Fairfax Avenue & Fountain Avenue (A)	AM	28.8	C	29.0	C	-	0.2	No
	Noon	28.0	C	28.0	C	-	0.0	No
	PM	61.5	E	61.5	E	5.0	0.0	No
2 Orange Grove Avenue & Fountain Avenue (A)*	AM	18.7	C	19.0	C	-	0.3	No
	Noon	1.8	A	1.8	A	-	0.0	No
	PM	9.6	A	9.6	A	-	0.0	No
3 Ogden Drive and Fountain Avenue (A)*	AM	8.7	A	9.1	A	-	0.4	No
	Noon	2.2	A	2.2	A	-	0.0	No
	PM	130.4	F	133.9	F	5.0	3.5	No
4 Ogden Drive and Fountain Avenue (A)*	AM	49.8	E	50.3	F	8.0	0.5	No
	Noon	36.9	E	36.9	E	8.0	0.0	No
	PM	59.6	F	60.9	F	8.0	1.3	No
5 Fairfax Avenue & Santa Monica Boulevard	AM	1.0	A	1.0	A	-	0.0	No
	Noon	0.5	A	0.5	A	-	0.0	No
	PM	0.7	A	0.8	A	-	0.1	No
6(a) Orange Grove Avenue & Santa Monica Boulevard*	AM	1.4	A	1.5	A	-	0.1	No
	Noon	1.2	A	1.2	A	-	0.0	No
	PM	3.7	A	3.7	A	-	0.0	No
6(b) Ogden Drive and Santa Monica Boulevard (North Leg)*	AM	1.5	A	1.5	A	-	0.0	No
	Noon	0.7	A	0.7	A	-	0.0	No
	PM	1.9	A	1.9	A	-	0.0	No
7 Genesee Avenue & Santa Monica Boulevard	AM	8.9	A	8.9	A	-	0.0	No
	Noon	7.2	A	7.2	A	-	0.0	No
	PM	9.5	A	9.7	A	-	0.2	No
8 Fairfax Avenue & Romaine Street*	AM	35.3	E	35.3	E	5.0	0.0	No
	Noon	2.9	A	2.9	A	-	0.0	No
	PM	46.2	E	48.6	E	5.0	2.4	No
City of Los Angeles								
1 Fairfax Avenue & Fountain Avenue (A)	AM	0.644	B	0.644	B	-	0.000	No
	PM	0.840	D	0.841	D	0.020	0.001	No

LOS = Level of Service, V/C = Volume-to-Capacity Ratio

* Unsignalized Intersections

(A) Shared Intersection

Table 24: Construction Impacts - Future With Project

Study Intersections	Peak Hour	Future (2020) No Project		Future (2020) With Project Construction		Significance Threshold	Change in V/C or Delay	Sig Impact?
		V/C or Delay	LOS	V/C or Delay	LOS			
		City of West Hollywood						
1 Fairfax Avenue & Fountain Avenue (A)	AM	31.5	C	31.5	C	-	0.0	No
	Noon	31.3	C	31.3	C	-	0.0	No
	PM	73.5	E	73.5	E	5.0	0.0	No
2 Orange Grove Avenue & Fountain Avenue (A)*	AM	47.1	E	47.1	E	5.0	0.0	No
	Noon	3.0	A	3.0	A	-	0.0	No
	PM**	47.7	E	47.7	E	-	0.0	No
3 Ogden Drive and Fountain Avenue (A)*	AM	6.8	A	7.8	A	-	1.0	No
	Noon	2.6	A	2.6	A	-	0.0	No
	PM**	411.6	F	411.6	F	-	0.0	No
4 Fairfax Avenue & Santa Monica Boulevard	AM	90.5	F	91.5	F	8.0	1.0	No
	Noon	144.6	F	145.4	F	8.0	0.8	No
	PM	164.8	F	167.3	F	8.0	2.5	No
5 Orange Grove Avenue & Santa Monica Boulevard*	AM	1.1	A	1.1	A	-	0.0	No
	Noon	0.6	A	0.6	A	-	0.0	No
	PM	0.8	A	0.8	A	-	0.0	No
6(a) Ogden Drive and Santa Monica Boulevard (North Leg)*	AM	2.8	A	3.0	A	-	0.2	No
	Noon	3.1	A	3.6	A	-	0.5	No
	PM	3.5	A	11.3	B	-	7.8	No
6(b) Ogden Drive and Santa Monica Boulevard (South Leg)*	AM	3.6	A	3.6	A	-	0.0	No
	Noon	0.8	A	0.8	A	-	0.0	No
	PM	5.4	A	5.4	A	-	0.0	No
7 Genesee Avenue & Santa Monica Boulevard	AM	11.8	B	12.0	B	-	0.2	No
	Noon	22.2	C	22.6	C	-	0.4	No
	PM	20.4	C	20.4	C	-	0.0	No
8 Fairfax Avenue & Romaine Street*	AM	68.8	F	68.8	F	5.0	0.0	No
	Noon	10.3	B	10.3	B	-	0.0	No
	PM	119.5	F	119.5	F	5.0	0.0	No
City of Los Angeles								
1 Fairfax Avenue & Fountain Avenue (A)	AM	0.682	B	0.682	B	-	0.000	No
	PM	0.897	D	0.897	D	0.020	0.000	No

LOS = Level of Service, V/C = Volume-to-Capacity Ratio

* Unsignalized Intersections

** Due to methodology limitations under Future PM peak hour conditions, east-west volumes were adjusted in order to yield delays and corresponding levels-of-service results.

(A) Shared Intersection

As indicated in Table 23 and Table 24, based on the traffic forecasts, the level of service analysis, and significant impact thresholds set forth by the respective cities, the Project will not create a significant traffic impact at any of the study intersections, under either scenario.

No construction-related traffic is expected to enter residential roadway segments.

II. CONGESTION MANAGEMENT PLAN CONFORMANCE

This section demonstrates the ways in which this traffic study was prepared to be in conformance with the procedures mandated by the County of Los Angeles Congestion Management Program.

The Congestion Management Program (CMP) was created statewide because of Proposition III and was implemented locally by the Los Angeles County Metropolitan Transportation Authority (Metro). The CMP for Los Angeles County requires that the traffic impact of individual development projects of potentially regional significance be analyzed. A specific system of arterial roadways plus all freeways comprises the CMP system. Per CMP Transportation Impact Analysis (TIA) Guidelines, a traffic impact analysis is conducted where:

- At CMP arterial monitoring intersections, including freeway on-ramps or off-ramps, where the proposed project will add 50 or more vehicle trips during either AM or PM weekday peak hours.
- At CMP mainline freeway-monitoring locations, where the project will add 150 or more trips, in either direction, during the either the AM or PM weekday peak hours.

The nearest CMP arterial monitoring intersections to the project site is:

- CMP ID #161 Santa Monica Boulevard and La Cienega Boulevard.

The nearest CMP arterial monitoring intersections are located approximately within one mile from the project site. Based on the project trip generation and the distance of this location from the project site, it is not expected that 50 or more new trips per hour would be added at CMP location #161, therefore no further analysis is needed.

The nearest CMP mainline freeway-monitoring locations to the project site are:

- CMP ID #1011 I-10, east of Overland Avenue
- CMP ID# 1012 I-10 east of La Brea Avenue

Based on the Project trip distribution and traffic assignment, the proposed Project is expected to add less than 150 new trips per hour to the freeway segments near the Project site. Therefore, no further analysis of CMP freeway monitoring stations is required.

Due to the nature of the proposed Project (i.e.: hotel serving mostly tourists and leisure users), the demand on the transit system is expected to be largely negligible. Furthermore, the analysis did not take any trip credits for transit use, in order to prepare a conservative traffic impact analysis on the nearby intersections and roadways. Given these factors, no CMP transit impact analysis was conducted.

12. ANALYSIS SUMMARY AND PROJECT MITIGATION

12.1 SUMMARY

The following summarizes the traffic study results and conclusions:

- Based on the scoping document submitted to the City, the Project study area includes 8 study intersections and two roadway segments. Significant traffic impacts of the proposed Project were analyzed within the weekday a.m., midday, and p.m. peak periods for the intersections and on a daily basis for the roadways.
- Under existing conditions, all of the study intersections are currently operating at LOS D or better, except for four intersections, which are operating at LOS E or F during at least one of the a.m., midday, or p.m. peak hours.
- The project would consist of a 86-room hotel, 3,756 square feet of restaurant space, 1,381 square feet of art gallery space, and 70 apartment units. The Project is anticipated to be completed in 2021.
- The Project would generate 1,019 daily trips, of which 52 (25 in, 27 out) would occur during the a.m. peak hour, 71 (40 in, 31 out) would occur during the midday peak hour, and 67 (38 in, 29 out) would occur during the p.m. peak hour. These totals include credits from internal capture and for the former use at the site.
- Under the Existing plus-Project traffic analysis, all of the study intersections would continue operating at LOS D or better, except for four that will operate at LOS E or F during at least one of the a.m., midday, or p.m. peak hours.
- The Future 2021 without Project traffic analysis included ambient growth through 2019 and the addition of traffic from 132 proposed area/cumulative projects within the cities of West Hollywood and Los Angeles.
- Under the Future 2021 without Project conditions, all of the study intersections will continue operating at LOS D or better, except for four intersections, which would operate at LOS E or F during at least one of the a.m., midday, or p.m. peak hours.
- Under the Future 2021 With Project conditions, all of the study intersections will continue operating at LOS D or better, except for four intersections, which would operate at LOS E or F during at least one of the a.m., midday, or p.m. peak hours.
- The proposed Project will not create significant impacts at any study intersections under either existing plus-Project conditions or Future With Project conditions. No intersection mitigation measures are recommended.
- The proposed Project will also not create significant impacts at any study roadway segments under either existing plus-Project conditions or Future With Project conditions. No intersection mitigation measures are recommended.

- The proposed Project is required to provide 130 parking spaces per City of West Hollywood parking requirements. The Project will provide 175 parking spaces, along with two (2) loading spaces, and 16 bicycle parking spaces. There will be a surplus of 45 vehicle parking spaces.
- Project construction would involve 80 daily construction worker employees and 48-trucks per day (6 truck trips per hour) during the peak period of construction.
- Assuming 75% of construction employees would arrive and depart during the a.m. and p.m. peak hours, respectively, and adding a 2.5 passenger car equivalency (PCE) factor to the truck trips, construction trips were analyzed. Under the existing plus construction and future with construction scenarios, Project construction would not create any significant impacts at any of the study intersections. No construction traffic is expected to enter residential roadway segments.
- No major queuing issues, severe delays, or back-ups were anticipated at all three Project driveways and City streets. Project pedestrian improvements along with the existing pedestrian infrastructure will continue to provide a safe local pedestrian travel network

APPENDIX A
Traffic Study Scoping Document

TRAFFIC STUDY SCOPING DOCUMENT
Traffic Study – Santa Monica Boulevard/Orange Grove Avenue Mixed Use
 May 4, 2016

This scoping document acknowledges the City of West Hollywood of requirements of traffic impact analysis for the following project:

Project Address: 781 I Santa Monica Boulevard, West Hollywood, CA 90046

Project Description: The proposed project would involve the construction of a six-story mixed-use building on an approximately 0.9 acre parcel within the City of West Hollywood. The project would consist of 88 apartment units, of which 18 would be affordable units, a 78-room hotel and art gallery, and 5,054 square feet of restaurant space. The hotel use includes ancillary fitness areas and a screening room. A total of 266 parking spaces would be provided.

Geographic Distribution: Determined based on roadway network within the proposed study area. The project study area and study intersections and roadways are provided in Attachment A.

Primary distribution:

North: 15%	South: 20%
East: 30%	West: 35%

Trip Generation Rate(s) (Source): ITE Trip Generation (9th edition).
 A trip generation summary is provided below. A former gym and apartment trip credit is included in the trip generation table.

TABLE I – Trip Generation

Land Use	ITE Code	Intensity	Units	Daily Total	AM Peak			Midday Peak			PM Peak		
					Total	In	Out	Total	In	Out	Total	In	Out
Trip Generation Rates													
Quality Restaurant ¹	931	-	-	89.95	0.81	82%	18%	5.57	82%	18%	7.49	67%	33%
Specialty Retail ²	826	-	-	44.32	1.33	60%	40%	5.02	56%	44%	2.71	44%	56%
Hotel	310	-	-	8.17	0.53	59%	41%	0.61	58%	42%	0.60	51%	49%
Apartments	220	-	-	6.65	0.51	20%	80%	0.55	29%	71%	0.62	65%	35%
Gym	492	-	-	32.93	1.41	50%	50%	1.43	47%	53%	3.53	57%	43%
Proposed Project Trip Generation Estimates													
Quality Restaurant	931	5,054	k.s.f	455	4	3	1	28	23	5	38	25	13
Art Gallery	826	1,381	k.s.f	61	2	1	1	7	4	3	4	2	2
Hotel	310	78	rooms	637	41	24	17	48	28	20	47	24	23
Apartments	220	88	units	585	45	9	36	48	14	34	55	36	19
Proposed Project Subtotal				1,738	92	37	55	131	69	62	144	87	57
Former Use Trip Credit													
Gym	492	10,000	k.s.f	-329	-14	-7	-7	-15	-7	-8	-36	-20	-16
Apartments	220	7	units	-47	-4	-1	-3	-3	-1	-2	-4	-2	-2
Former Use Trip Credit				-376	-18	-8	-10	-18	-8	-10	-40	-22	-18
Total				1,362	74	29	45	113	61	52	104	65	39

Trip generation rates based on ITE Trip Generation Manual, 9th Edition, Institute of Transportation Engineers, 2012, unless otherwise noted. Midday Peak rates from Peak Hour of Generator.

1. Quality Restaurant AM In/Out ratio from AM Peak Hour of Generator.

2. AM Peak Hour retail rates from San Diego Traffic Generators (2002).

TRAFFIC STUDY SCOPING DOCUMENT
Traffic Study – Santa Monica Boulevard/Orange Grove Avenue Mixed Use
May 4, 2016

Proposed Land Use: The mixed-use project will contain 88 residential units, a 78-room hotel and art gallery, and 5,054 square feet of restaurant space. The hotel use includes ancillary fitness areas and a screening room.

The site plan is included in Attachment B.

Project Build-out Year: 2019 **Ambient Growth Rate:** 1% per year (per City of West Hollywood)

Area/Cumulative Projects: A list of pending projects from the City of West Hollywood and the City of Los Angeles will be compiled. Any associated trip generation will be included in the future pre-project and post-project analyses.

Study Intersection Locations

Below is a list of the study intersections. All are located within the City of West Hollywood, unless otherwise noted. AM, midday, and PM peak period volumes will be collected and analyzed. The locations are also illustrated in Attachment A.

- | | |
|--|--|
| 1. Fairfax Avenue & Fountain Avenue | 5. Orange Grove Avenue & Santa Monica Boulevard* |
| 2. Orange Grove Avenue & Fountain Avenue* | 6. Ogden Drive & Santa Monica Boulevard* |
| 3. Ogden Drive & Fountain Avenue* | 7. Genesee Avenue & Santa Monica Boulevard |
| 4. Fairfax Avenue & Santa Monica Boulevard | 8. Fairfax Avenue & Romaine Street* |

**Unsignalized Intersection*

Analysis of study intersections will be based on the City of West Hollywood traffic study guidelines.

Study Residential Roadway Segment Locations

Below is a list of the study roadway segments. These are also illustrated in Attachment A. One day of machine counts would be conducted at the following two locations:

- A. Orange Grove Avenue, south of Fountain Avenue
- B. Ogden Drive, south of Fountain Avenue

Analysis of residential roadways will be based on the City of West Hollywood traffic study guidelines.

TRAFFIC STUDY SCOPING DOCUMENT
Traffic Study – Santa Monica Boulevard/Orange Grove Avenue Mixed Use
May 4, 2016

Other Elements

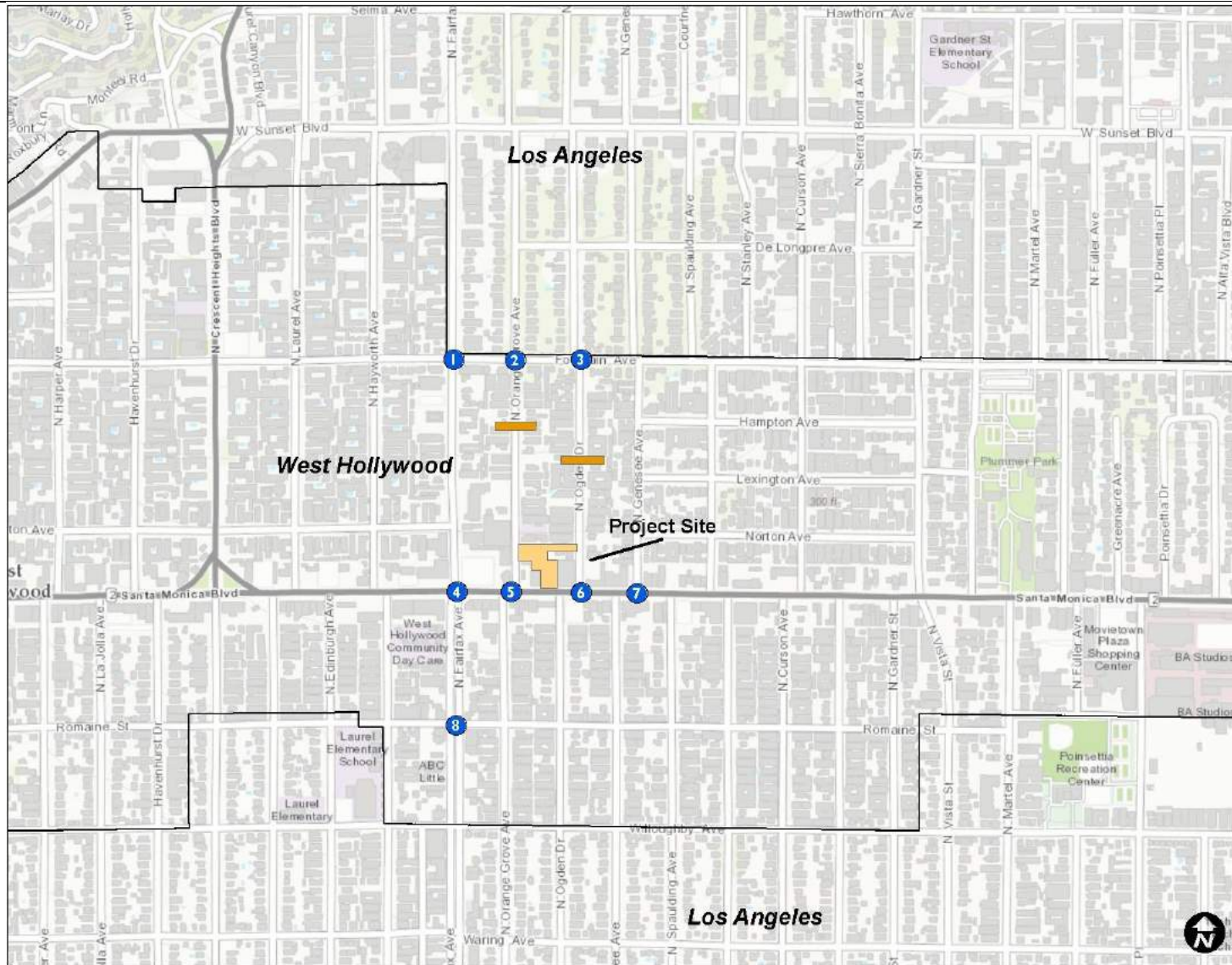
- AM, Midday, and PM peak period turning movement counts have been conducted at the existing Brick CrossFit driveway along Santa Monica Boulevard and at the two public parking lot driveways along Orange Grove Avenue. The counts will be used to verify the number of left turns into and out of the Brick CrossFit driveway and to analyze the traffic and parking shift due to the loss of the parking lot.
- Vehicle and bicycle parking supply will be documented versus City- and City and County Transportation Demand Management requirements.
- KOA will also analyze all elements of site driveway and parking area circulation, including inbound turn queuing issues, outbound queuing issues, queuing calculations, pedestrian/vehicle conflicts, turning radii, delivery access, and other related elements.
- KOA will also analyze construction period traffic and any associated impacts.
- KOA will provide discussion on SB743 and its effects on the traffic impact analysis for this project. The discussion will address SB743's overarching goals and objectives, its status, and timeframe of adoption. Vehicle Miles Traveled (VMT) will be calculated for the project for informational purposes. No conclusions will be made based on VMT.
- If necessary, KOA will develop mitigation measures focusing on off-site physical improvements, traffic control, and site trip reduction measures that will, as a package, reduce any identified significant traffic impacts to a level of insignificance. If deemed necessary, KOA will provide recommendations toward a Transportation Demand Management (TDM) plan for the site to reduce vehicle trips.

Contact Information

	Consultant:	Client:
Name	KOA Corporation	Ms. Nicole Cobleigh
Address	1100 Corporate Center Dr., Suite 201 Monterey Park, CA 91754-7642	Project Manager DUDEK 38 North Marengo Avenue Pasadena, CA 91101
Telephone:	Carlos Velasquez (323) 260-4703	Nicole Cobleigh (626) 204-9821

TRAFFIC STUDY SCOPING DOCUMENT
Traffic Study – Santa Monica Boulevard/Orange Grove Avenue Mixed Use
May 4, 2016

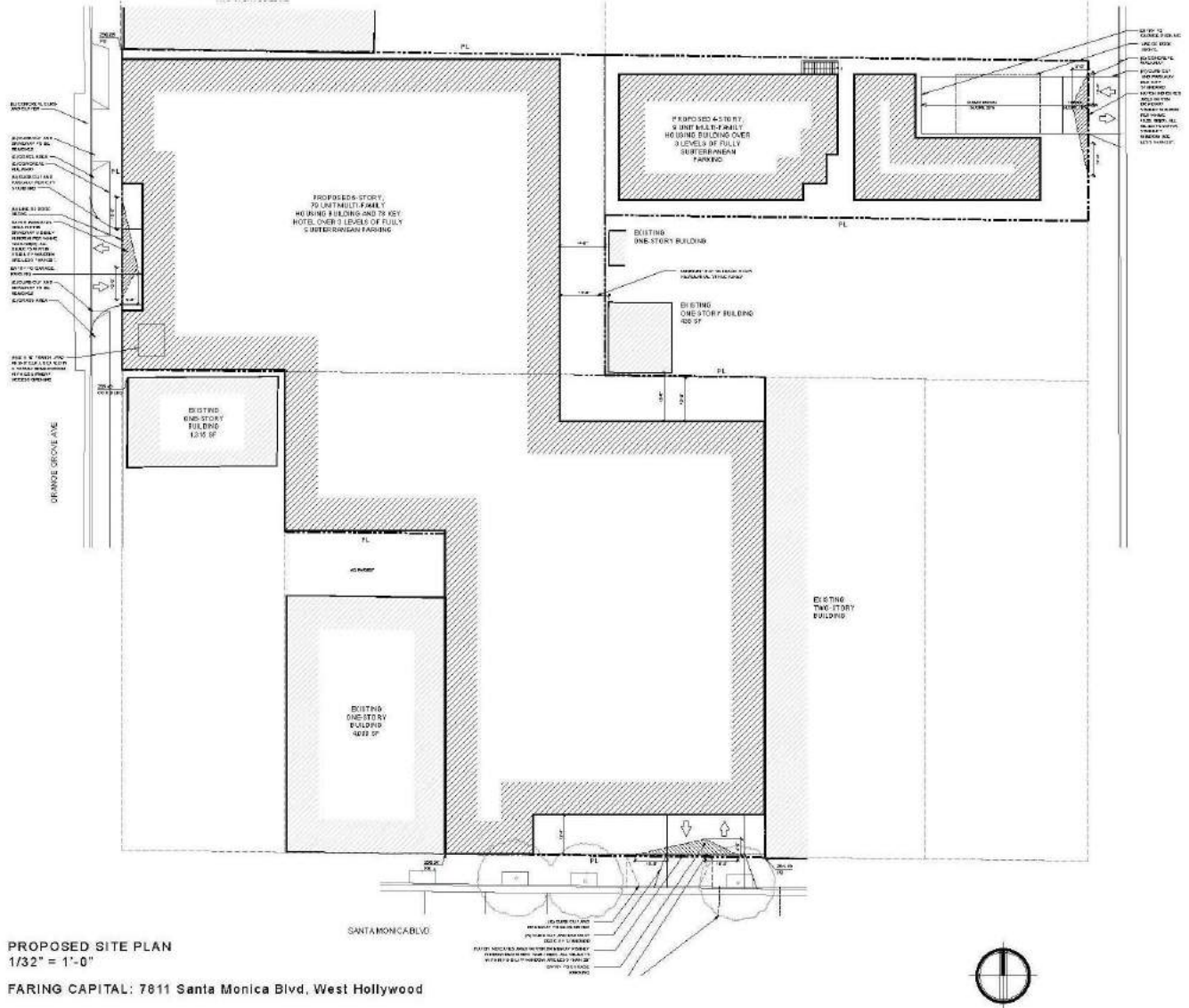
ATTACHMENT A
PROJECT STUDY AREA



TRAFFIC STUDY SCOPING DOCUMENT
Traffic Study – Santa Monica Boulevard/Orange Grove Avenue Mixed Use
May 4, 2016

ATTACHMENT B
PROJECT SITE PLAN

SANTA MONICA / ORANGE GROVE - CITY OF WEST HOLLYWOOD



Source: R&A Architects, 2016

APPENDIX B
Traffic Counts

VOLUME

Orange Grove Ave S/O Fountain Ave

Day: Wednesday
Date: 5/11/2016

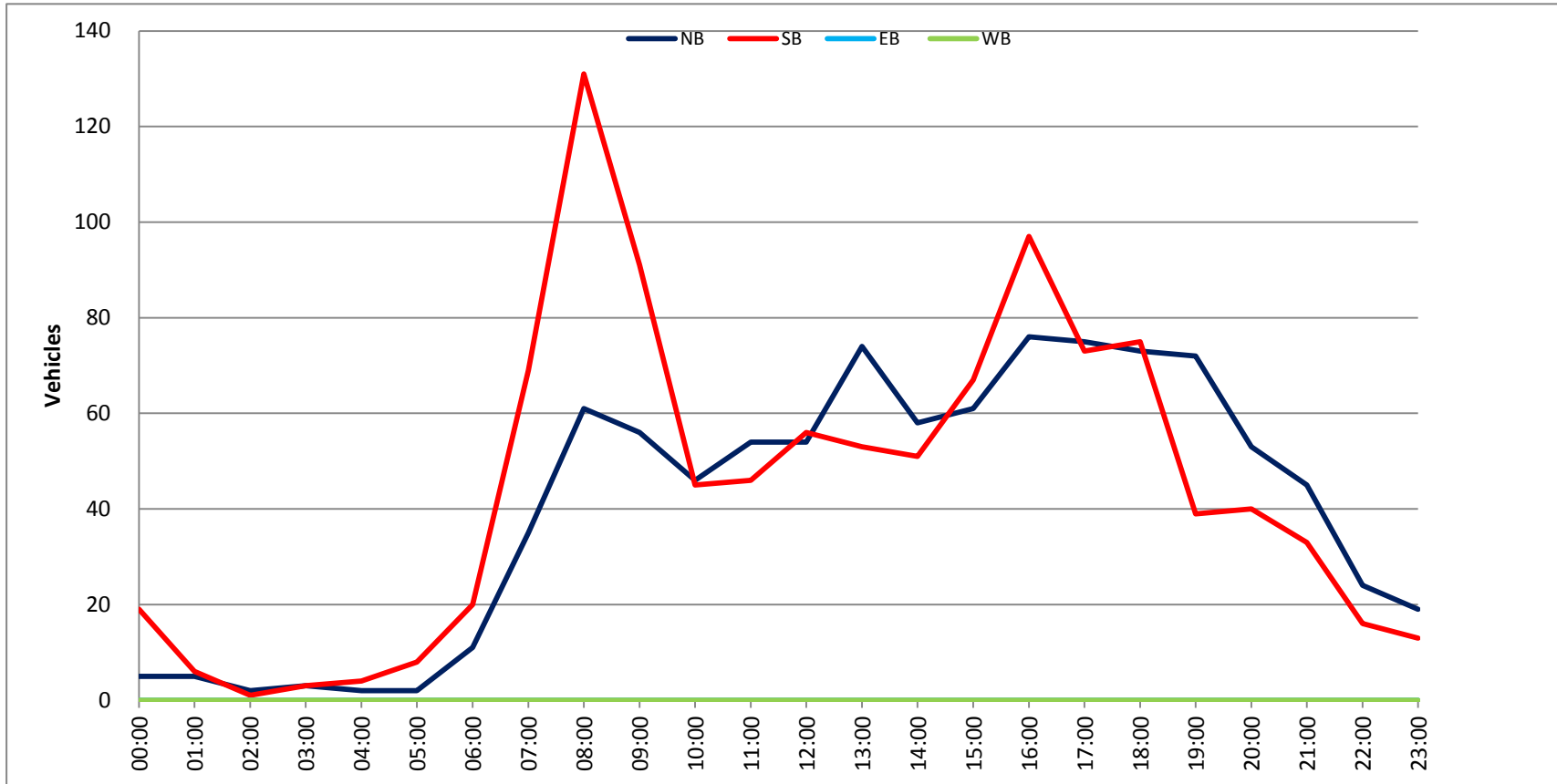
City: West Hollywood
Project #: CA16_5294_001

DAILY TOTALS	NB	SB	EB	WB	Total
	966	1,056	0	0	2,022

AM Period	NB	SB	EB	WB	TOTAL	PM Period	NB	SB	EB	WB	TOTAL
00:00	1	5			6	12:00	12	9			21
00:15	2	3			5	12:15	17	15			32
00:30	2	2			4	12:30	16	14			30
00:45	0	5	9	19	9	12:45	9	54	18	56	27
01:00	1	1			2	13:00	18	13			31
01:15	2	3			5	13:15	27	9			36
01:30	0	1			1	13:30	12	18			30
01:45	2	5	1	6	3	13:45	17	74	13	53	30
02:00	1	1			2	14:00	14	12			26
02:15	0	0			0	14:15	13	12			25
02:30	1	0			1	14:30	16	17			33
02:45	0	2	0	1	0	14:45	15	58	10	51	25
03:00	3	0			3	15:00	14	17			31
03:15	0	0			0	15:15	18	14			32
03:30	0	1			1	15:30	16	14			30
03:45	0	3	2	3	2	15:45	13	61	22	67	35
04:00	0	0			0	16:00	21	27			48
04:15	0	1			1	16:15	17	24			41
04:30	1	1			2	16:30	18	22			40
04:45	1	2	2	4	3	16:45	20	76	24	97	44
05:00	0	3			3	17:00	22	21			43
05:15	0	2			2	17:15	15	19			34
05:30	0	1			1	17:30	20	17			37
05:45	2	2	2	8	4	17:45	18	75	16	73	34
06:00	3	2			5	18:00	16	19			35
06:15	0	3			3	18:15	20	21			41
06:30	6	5			11	18:30	18	20			38
06:45	2	11	10	20	12	18:45	19	73	15	75	34
07:00	8	7			15	19:00	17	12			29
07:15	7	8			15	19:15	17	8			25
07:30	11	23			34	19:30	19	11			30
07:45	9	35	31	69	40	19:45	19	72	8	39	27
08:00	10	37			47	20:00	15	10			25
08:15	12	30			42	20:15	18	9			27
08:30	19	32			51	20:30	10	6			16
08:45	20	61	32	131	52	20:45	10	53	15	40	25
09:00	16	17			33	21:00	15	11			26
09:15	15	22			37	21:15	13	9			22
09:30	11	27			38	21:30	7	9			16
09:45	14	56	25	91	39	21:45	10	45	4	33	14
10:00	10	14			24	22:00	3	6			9
10:15	14	11			25	22:15	6	2			8
10:30	9	9			18	22:30	5	1			6
10:45	13	46	11	45	24	22:45	10	24	7	16	17
11:00	14	10			24	23:00	4	3			7
11:15	15	12			27	23:15	5	5			10
11:30	11	8			19	23:30	8	3			11
11:45	14	54	16	46	30	23:45	2	19	2	13	4
TOTALS	282	443			725	TOTALS	684	613			1297
SPLIT %	38.9%	61.1%			35.9%	SPLIT %	52.7%	47.3%			64.1%

DAILY TOTALS	NB	SB	EB	WB	Total
	966	1,056	0	0	2,022

AM Peak Hour	08:30	08:00	08:00	PM Peak Hour	16:15	16:00	16:00				
AM Pk Volume	70	131	192	PM Pk Volume	77	97	173				
Pk Hr Factor	0.875	0.885	0.923	Pk Hr Factor	0.875	0.898	0.901				
7 - 9 Volume	96	200	0	0	4 - 6 Volume	151	170	0	0	321	
7 - 9 Peak Hour	08:00	08:00	08:00	4 - 6 Peak Hour	16:15	16:00	16:00				
7 - 9 Pk Volume	61	131	0	0	4 - 6 Pk Volume	77	97	0	0	173	
Pk Hr Factor	0.763	0.885	0.000	0.000	0.923	Pk Hr Factor	0.875	0.898	0.000	0.000	0.901



VOLUME

Ogden Dr S/O Fountain Ave

Day: Wednesday

Date: 5/11/2016

City: West Hollywood

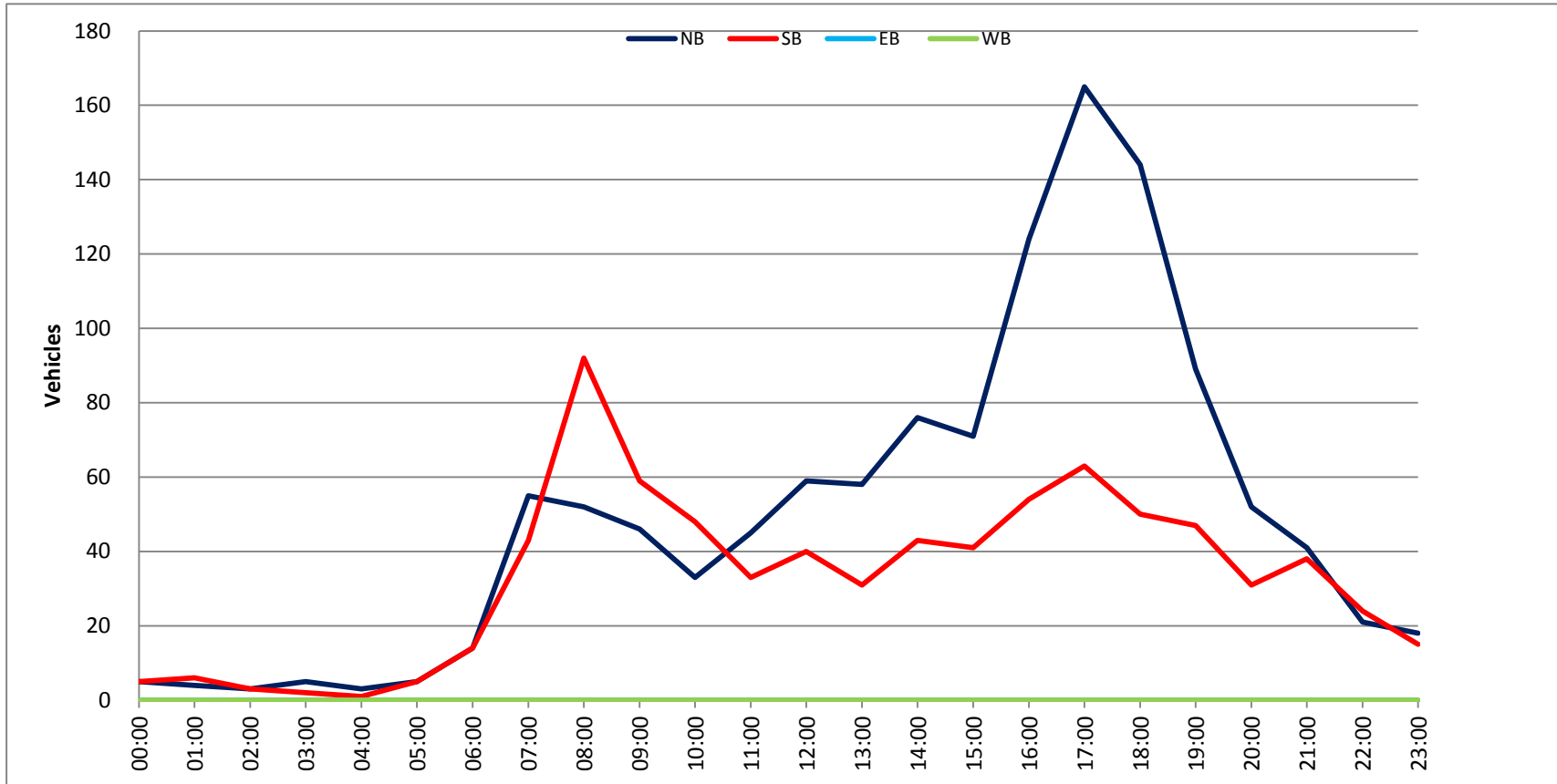
Project #: CA16_5294_002

DAILY TOTALS					NB	SB	EB	WB	Total
					1,188	788	0	0	1,976

AM Period	NB	SB	EB	WB	TOTAL	PM Period	NB	SB	EB	WB	TOTAL
00:00	2	0			2	12:00	20	6			26
00:15	1	1			2	12:15	12	12			24
00:30	1	1			2	12:30	12	13			25
00:45	1	5	3	5	4	12:45	15	59	9	40	24
01:00	0	1			1	13:00	17	11			28
01:15	2	4			6	13:15	12	6			18
01:30	1	0			1	13:30	17	6			23
01:45	1	4	1	6	2	13:45	12	58	8	31	20
02:00	0	2			2	14:00	18	10			28
02:15	1	0			1	14:15	15	7			22
02:30	2	1			3	14:30	25	12			37
02:45	0	3	0	3	0	14:45	18	76	14	43	32
03:00	2	0			2	15:00	19	7			26
03:15	2	1			3	15:15	19	9			28
03:30	1	1			2	15:30	19	13			32
03:45	0	5	0	2	0	15:45	14	71	12	41	26
04:00	0	0			0	16:00	23	13			36
04:15	0	1			1	16:15	34	16			50
04:30	1	0			1	16:30	36	11			47
04:45	2	3	0	1	2	16:45	31	124	14	54	45
05:00	1	0			1	17:00	37	21			58
05:15	1	2			3	17:15	43	12			55
05:30	2	0			2	17:30	48	8			56
05:45	1	5	3	5	4	17:45	37	165	22	63	59
06:00	1	4			5	18:00	40	8			48
06:15	6	3			9	18:15	28	14			42
06:30	1	5			6	18:30	44	20			64
06:45	6	14	2	14	8	18:45	32	144	8	50	40
07:00	7	5			12	19:00	26	14			40
07:15	10	6			16	19:15	21	16			37
07:30	14	13			27	19:30	18	8			26
07:45	24	55	19	43	43	19:45	24	89	9	47	33
08:00	10	17			27	20:00	15	12			27
08:15	11	28			39	20:15	17	5			22
08:30	14	26			40	20:30	10	10			20
08:45	17	52	21	92	38	20:45	10	52	4	31	14
09:00	11	16			27	21:00	9	8			17
09:15	15	12			27	21:15	15	14			29
09:30	10	13			23	21:30	9	8			17
09:45	10	46	18	59	28	21:45	8	41	8	38	16
10:00	12	20			32	22:00	4	7			11
10:15	5	7			12	22:15	6	7			13
10:30	12	10			22	22:30	3	3			6
10:45	4	33	11	48	15	22:45	8	21	7	24	15
11:00	13	6			19	23:00	5	3			8
11:15	11	10			21	23:15	5	3			8
11:30	9	8			17	23:30	5	2			7
11:45	12	45	9	33	21	23:45	3	18	7	15	10
TOTALS	270	311			581	TOTALS	918	477			1395
SPLIT %	46.5%	53.5%			29.4%	SPLIT %	65.8%	34.2%			70.6%

DAILY TOTALS					NB	SB	EB	WB	Total
					1,188	788	0	0	1,976

AM Peak Hour	07:30	08:00		07:45	PM Peak Hour	17:15	17:45		17:00		
AM Pk Volume	59	92		149	PM Pk Volume	168	64		228		
Pk Hr Factor	0.615	0.821		0.866	Pk Hr Factor	0.875	0.727		0.966		
7 - 9 Volume	107	135	0	0	242	4 - 6 Volume	289	117	0	0	406
7 - 9 Peak Hour	07:30	08:00		07:45	4 - 6 Peak Hour	17:00	17:00				17:00
7 - 9 Pk Volume	59	92	0	0	149	4 - 6 Pk Volume	165	63	0	0	228
Pk Hr Factor	0.615	0.821	0.000	0.000	0.866	Pk Hr Factor	0.859	0.716	0.000	0.000	0.966



Intersection Turning Movement

Prepared by:

National Data & Surveying Services

Project ID: 16-5293-001

Day: Wednesday

City: West Hollywood

Date: 5/11/2016

NS/EW Streets:	AM												TOTAL
	Fairfax Ave			Fairfax Ave			Fountain Ave			Fountain Ave			
	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			
LANES:	NL 1	NT 2	NR 0	SL 1	ST 3	SR 0	EL 1	ET 2	ER 0	WL 1	WT 2	WR 0	TOTAL
7:00 AM	4	75	11	8	170	94	12	81	10	43	286	11	805
7:15 AM	4	125	15	4	208	87	22	78	10	53	336	11	953
7:30 AM	4	130	20	5	233	61	17	107	14	84	323	8	1006
7:45 AM	6	135	24	13	221	63	20	137	17	73	311	12	1032
8:00 AM	11	165	26	13	197	84	26	152	21	49	269	9	1022
8:15 AM	13	160	32	8	197	79	33	168	40	69	240	7	1046
8:30 AM	11	158	37	15	178	61	20	159	15	64	274	26	1018
8:45 AM	16	163	30	11	235	63	25	170	16	62	273	15	1079
TOTAL VOLUMES :	69	1111	195	77	1639	592	175	1052	143	497	2312	99	7961
APPROACH %'s :	5.02%	80.80%	14.18%	3.34%	71.01%	25.65%	12.77%	76.79%	10.44%	17.09%	79.50%	3.40%	
PEAK HR START TIME :	800 AM												TOTAL
PEAK HR VOL :	51	646	125	47	807	287	104	649	92	244	1056	57	4165
PEAK HR FACTOR :	0.983			0.923			0.877			0.932			0.965

UTURNS			
NB	SB	EB	WB
0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0
1	0	0	0
NB	SB	EB	WB
1	0	0	0

CONTROL : Signalized

Intersection Turning Movement

Prepared by:

National Data & Surveying Services

Project ID: 16-5293-001

Day: Wednesday

City: West Hollywood

Date: 5/11/2016

NOON

NS/EW Streets:	Fairfax Ave		Fairfax Ave			Fountain Ave			Fountain Ave			TOTAL	
	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			
LANES:	NL 1	NT 2	NR 0	SL 1	ST 3	SR 0	EL 1	ET 2	ER 0	WL 1	WT 2	WR 0	
11:00 AM	13	135	30	21	155	50	38	154	8	35	216	13	868
11:15 AM	18	179	33	13	166	46	50	140	14	48	213	25	945
11:30 AM	15	159	45	23	185	50	40	184	12	43	213	23	992
11:45 AM	18	153	28	16	188	56	37	185	19	30	201	14	945
12:00 PM	11	167	37	15	176	54	40	183	10	34	230	17	974
12:15 PM	11	164	40	19	172	55	42	192	15	34	219	17	980
12:30 PM	16	170	39	8	149	57	35	192	13	35	236	21	971
12:45 PM	11	204	22	10	174	45	40	166	17	47	222	20	978
TOTAL VOLUMES :	113	1331	274	125	1365	413	322	1396	108	306	1750	150	7653
APPROACH %'s :	6.58%	77.47%	15.95%	6.57%	71.73%	21.70%	17.63%	76.45%	5.91%	13.87%	79.33%	6.80%	
PEAK HR START TIME :	1200 PM												TOTAL
PEAK HR VOL :	49	705	138	52	671	211	157	733	55	150	907	75	3903
PEAK HR FACTOR :	0.941			0.949			0.949			0.969			0.996

UTURNS			
NB	SB	EB	WB
0	0	0	0
0	1	0	0
0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0
0	1	0	0

CONTROL : Signalized

ITM Peak Hour Summary

Prepared by:



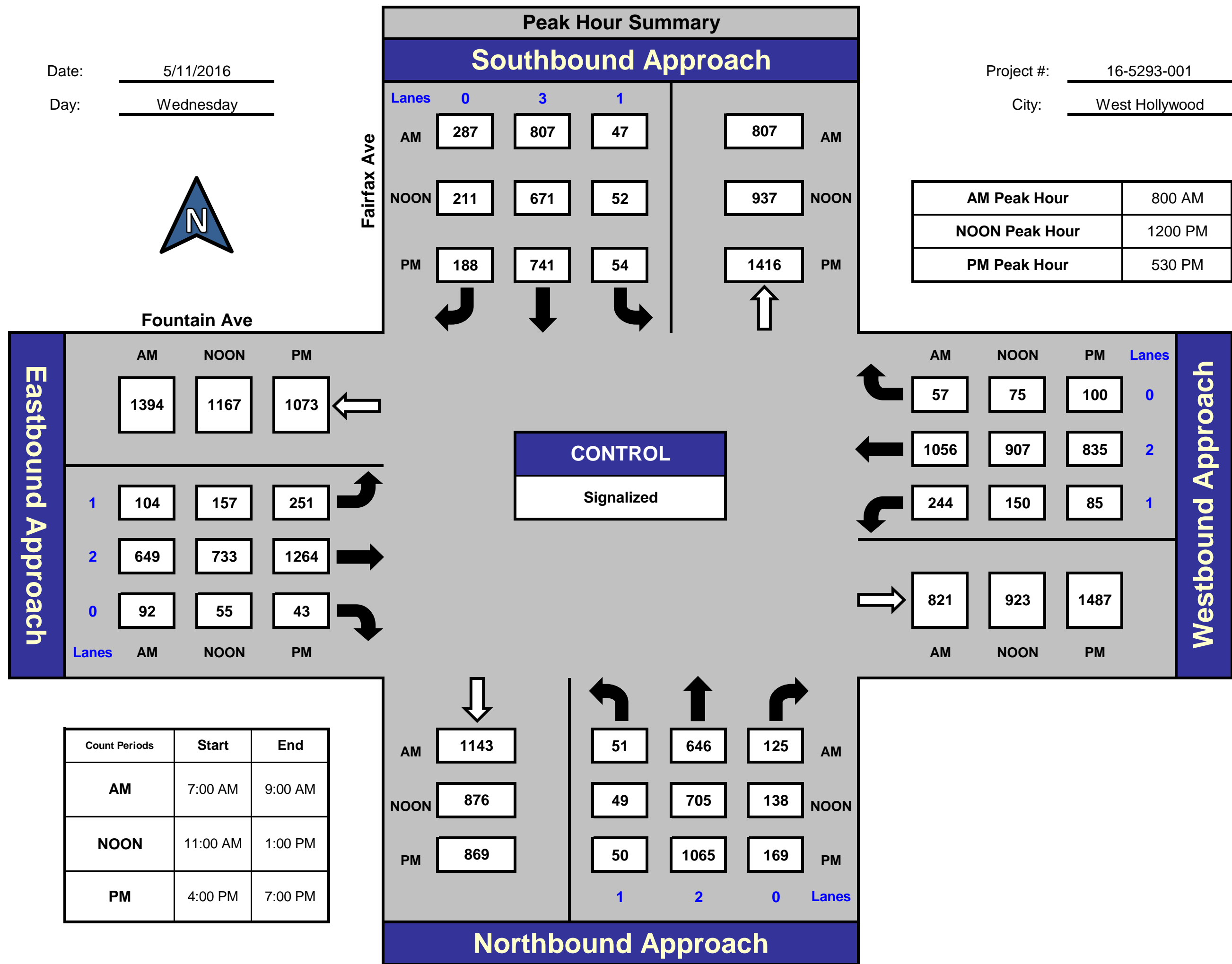
Fairfax Ave and Fountain Ave, West Hollywood

Date: 5/11/2016

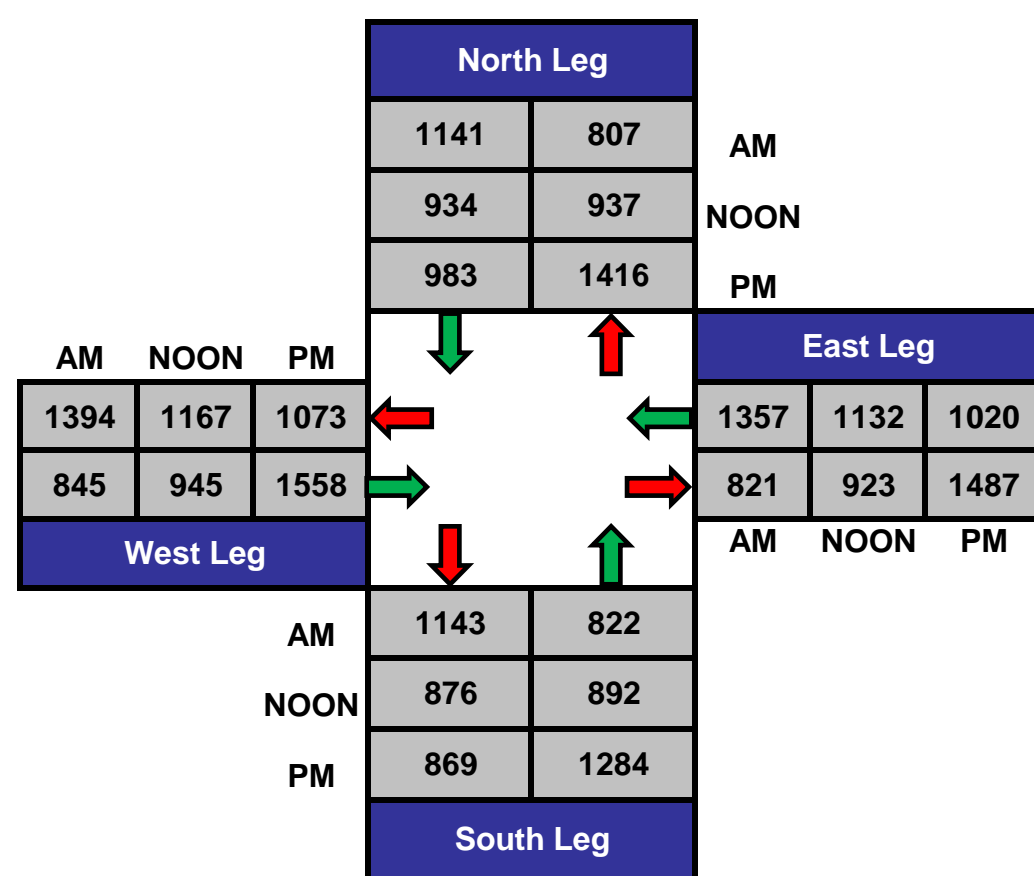
Day: Wednesday

Project #: 16-5293-001

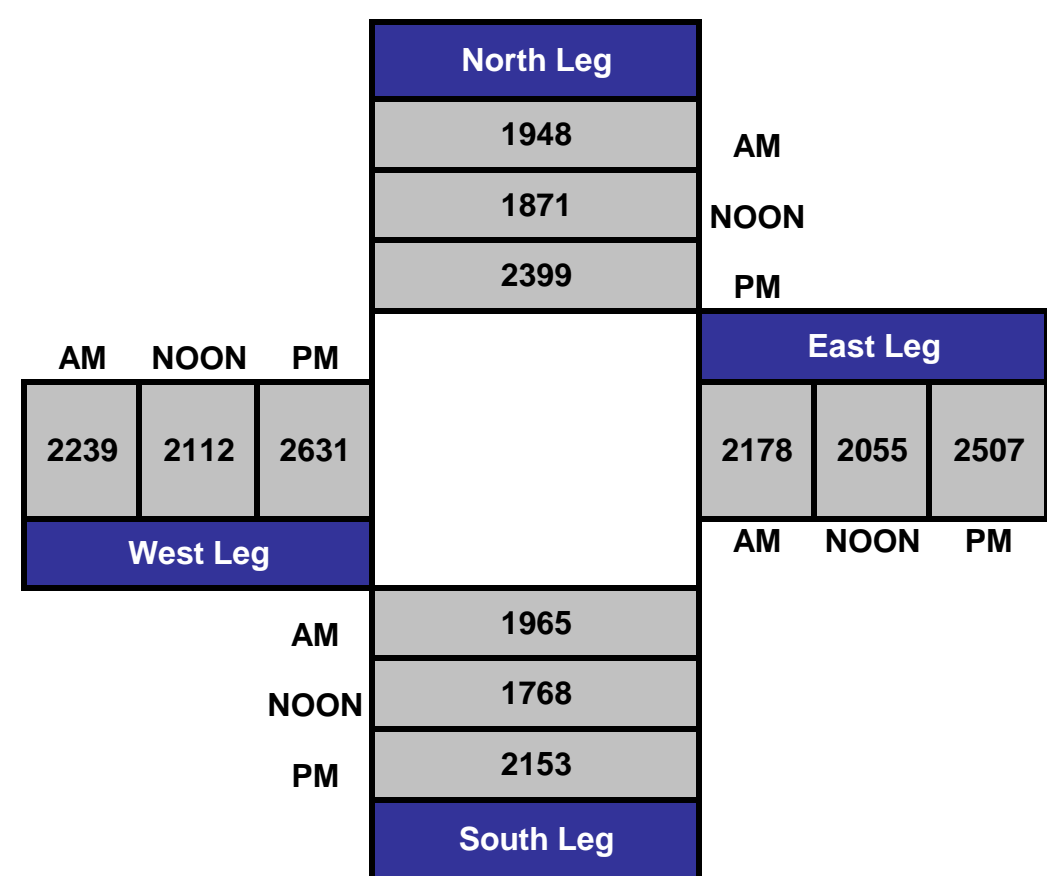
City: West Hollywood



Total Ins & Outs



Total Volume Per Leg



Intersection Turning Movement

Prepared by:

National Data & Surveying Services

Project ID: 16-5293-002

Day: Wednesday

City: West Hollywood

Date: 5/11/2016

AM													
NS/EW Streets:	Orange Grove Ave			Orange Grove Ave			Fountain Ave			Fountain Ave			
	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			
LANES:	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
	0	1	0	0	1	0	0	2	0	0	2	0	
7:00 AM	2	0	4	0	1	13	0	85	0	4	365	2	476
7:15 AM	1	0	4	0	3	14	0	117	3	11	404	0	557
7:30 AM	0	0	9	0	6	23	2	131	3	21	376	1	572
7:45 AM	0	1	9	1	4	32	1	150	3	15	334	2	552
8:00 AM	0	0	8	0	9	38	0	205	3	16	287	2	568
8:15 AM	0	1	12	1	4	44	1	181	12	16	283	0	555
8:30 AM	1	1	20	0	6	43	1	214	9	12	296	3	606
8:45 AM	2	1	20	3	5	31	0	194	16	16	335	1	624
TOTAL VOLUMES :	6	4	86	5	38	238	5	1277	49	111	2680	11	4510
APPROACH %'s :	6.25%	4.17%	89.58%	1.78%	13.52%	84.70%	0.38%	95.94%	3.68%	3.96%	95.65%	0.39%	
PEAK HR START TIME :	800 AM												TOTAL
PEAK HR VOL :	3	3	60	4	24	156	2	794	40	60	1201	6	2353
PEAK HR FACTOR :	0.717			0.939			0.933			0.900			0.943

UTURNS			
NB	SB	EB	WB

NB	SB	EB	WB
0	0	0	0

CONTROL : 2-Way Stop(NB/SB)

Intersection Turning Movement

Prepared by:

National Data & Surveying Services

Project ID: 16-5293-002

Day: Wednesday

City: West Hollywood

Date: 5/11/2016

NS/EW Streets:	PM												TOTAL
	Orange Grove Ave			Orange Grove Ave			Fountain Ave			Fountain Ave			
	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			
LANES:	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
	0	1	0	0	1	0	0	2	0	0	2	0	
4:00 PM	0	0	18	0	2	7	5	322	7	6	223	1	591
4:15 PM	2	1	9	3	1	13	9	323	18	11	207	4	601
4:30 PM	0	0	15	0	0	3	10	329	17	9	253	4	640
4:45 PM	1	0	18	0	0	16	6	373	14	15	195	2	640
5:00 PM	2	1	23	2	1	10	8	351	8	9	250	5	670
5:15 PM	0	2	15	0	1	8	8	342	6	6	251	0	639
5:30 PM	2	2	21	1	0	8	14	335	10	5	214	3	615
5:45 PM	3	0	18	1	0	10	5	374	4	7	244	3	669
6:00 PM	0	1	13	1	2	6	13	365	11	12	225	4	653
6:15 PM	2	2	13	0	0	6	11	325	8	16	252	6	641
6:30 PM	0	0	19	0	0	8	11	326	5	10	291	3	673
6:45 PM	3	5	16	1	2	8	8	346	14	9	262	3	677
TOTAL VOLUMES :	15	14	198	9	9	103	108	4111	122	115	2867	38	7709
APPROACH %'s :	6.61%	6.17%	87.22%	7.44%	7.44%	85.12%	2.49%	94.70%	2.81%	3.81%	94.93%	1.26%	
PEAK HR START TIME :	600 PM												TOTAL
PEAK HR VOL :	5	8	61	2	4	28	43	1362	38	47	1030	16	2644
PEAK HR FACTOR :	0.771			0.773			0.927			0.899			0.976

UTURNS			
NB	SB	EB	WB
0	0	0	0

NB	SB	EB	WB
0	0	0	0

CONTROL : 2-Way Stop(NB/SB)

Intersection Turning Movement

Prepared by:

National Data & Surveying Services

Project ID: 16-5293-002

Day: Wednesday

City: West Hollywood

Date: 5/11/2016

NOON

NS/EW Streets:	Orange Grove Ave			Orange Grove Ave			Fountain Ave			Fountain Ave			TOTAL
	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			
LANES:	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	
	0	1	0	0	1	0	0	2	0	0	2	0	
11:00 AM	4	0	9	1	0	13	4	204	5	5	252	1	498
11:15 AM	4	2	3	0	1	12	6	180	7	4	257	4	480
11:30 AM	3	2	11	2	0	15	6	230	3	9	246	2	529
11:45 AM	2	1	10	0	0	12	7	202	4	6	253	1	498
12:00 PM	4	0	11	1	3	10	6	209	6	7	275	2	534
12:15 PM	1	2	8	1	0	11	3	262	4	6	262	2	562
12:30 PM	1	0	20	1	0	11	2	220	4	5	274	2	540
12:45 PM	2	1	11	1	0	7	7	215	6	1	277	4	532
TOTAL VOLUMES :	21	8	83	7	4	91	41	1722	39	43	2096	18	4173
APPROACH %'s :	18.75%	7.14%	74.11%	6.86%	3.92%	89.22%	2.28%	95.56%	2.16%	1.99%	97.17%	0.83%	
PEAK HR START TIME :	1200 PM												TOTAL
PEAK HR VOL :	8	3	50	4	3	39	18	906	20	19	1088	10	2168
PEAK HR FACTOR :	0.726			0.821			0.877			0.983			0.964

UTURNS			
NB	SB	EB	WB

NB	SB	EB	WB
0	0	0	0

CONTROL : 2-Way Stop(NB/SB)

ITM Peak Hour Summary

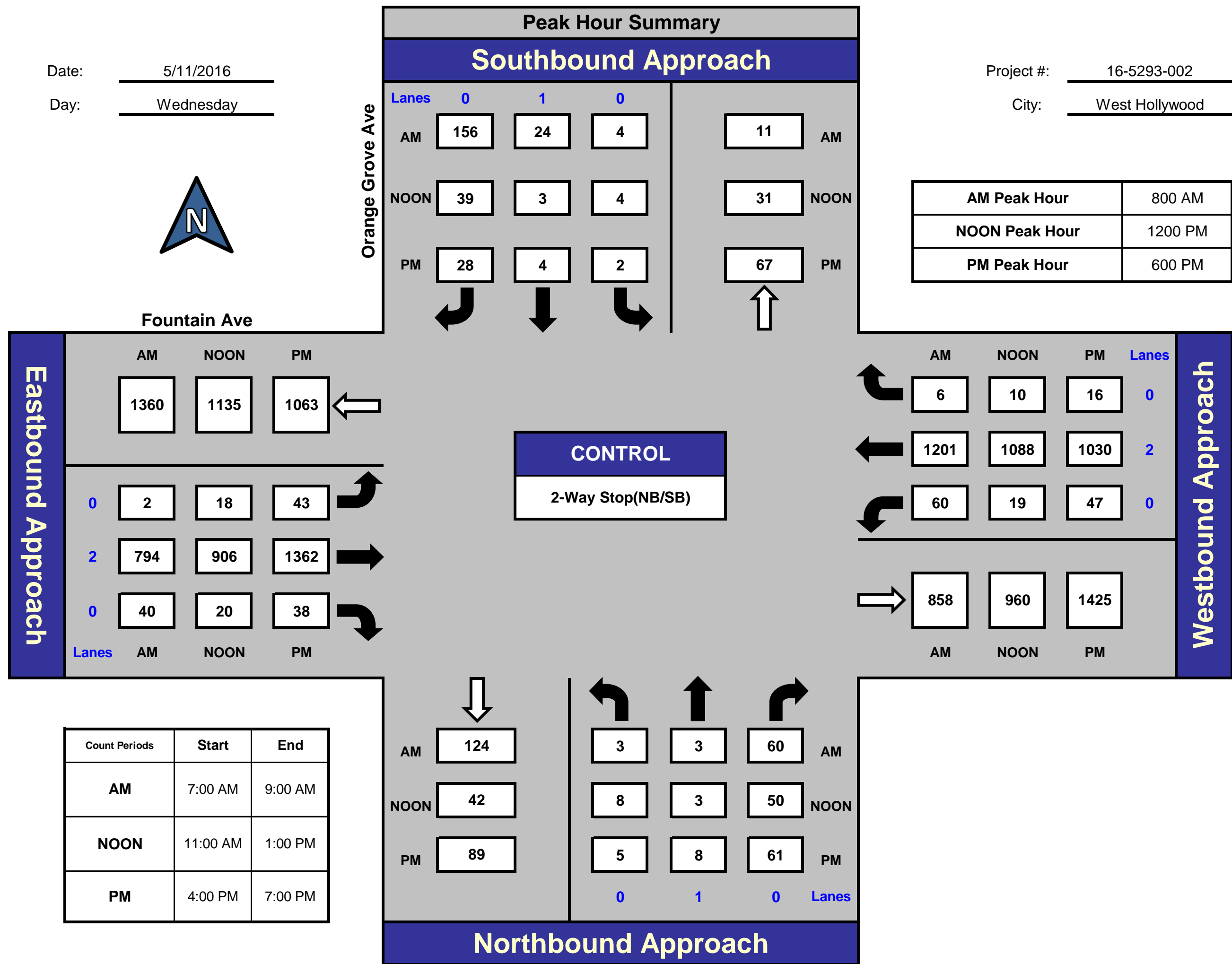
Prepared by:



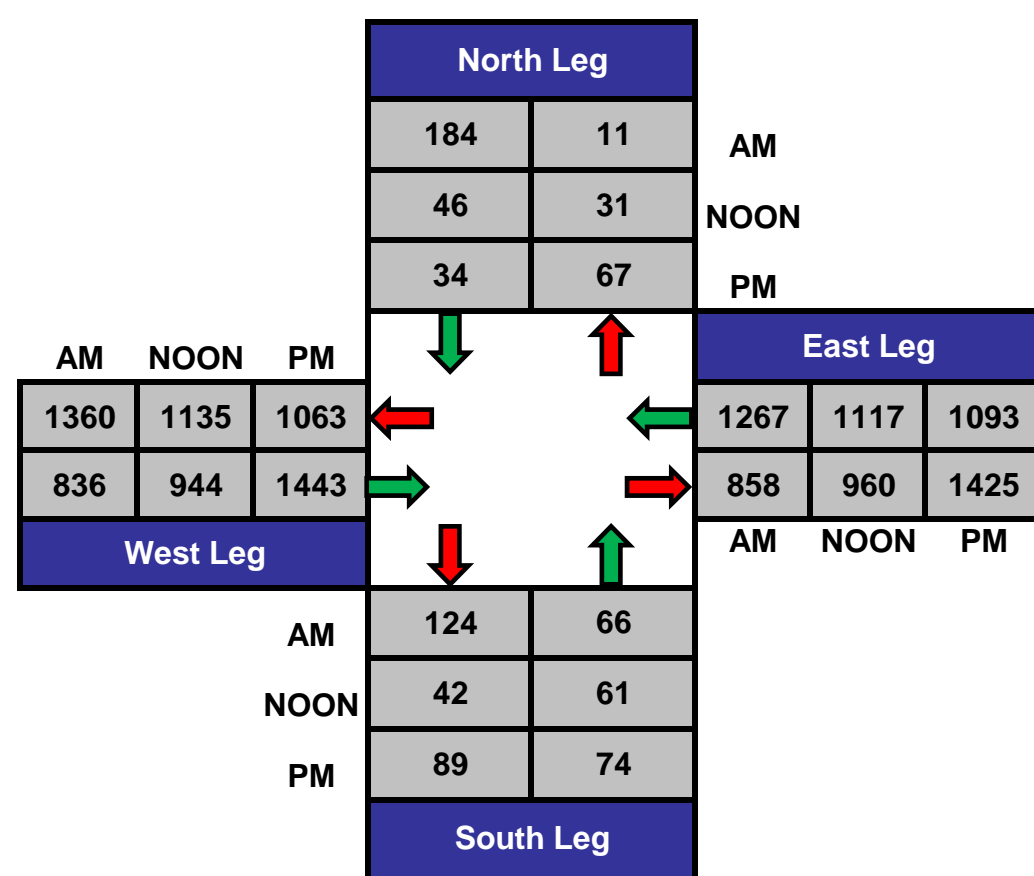
Orange Grove Ave and Fountain Ave, West Hollywood

Date: 5/11/2016
Day: Wednesday

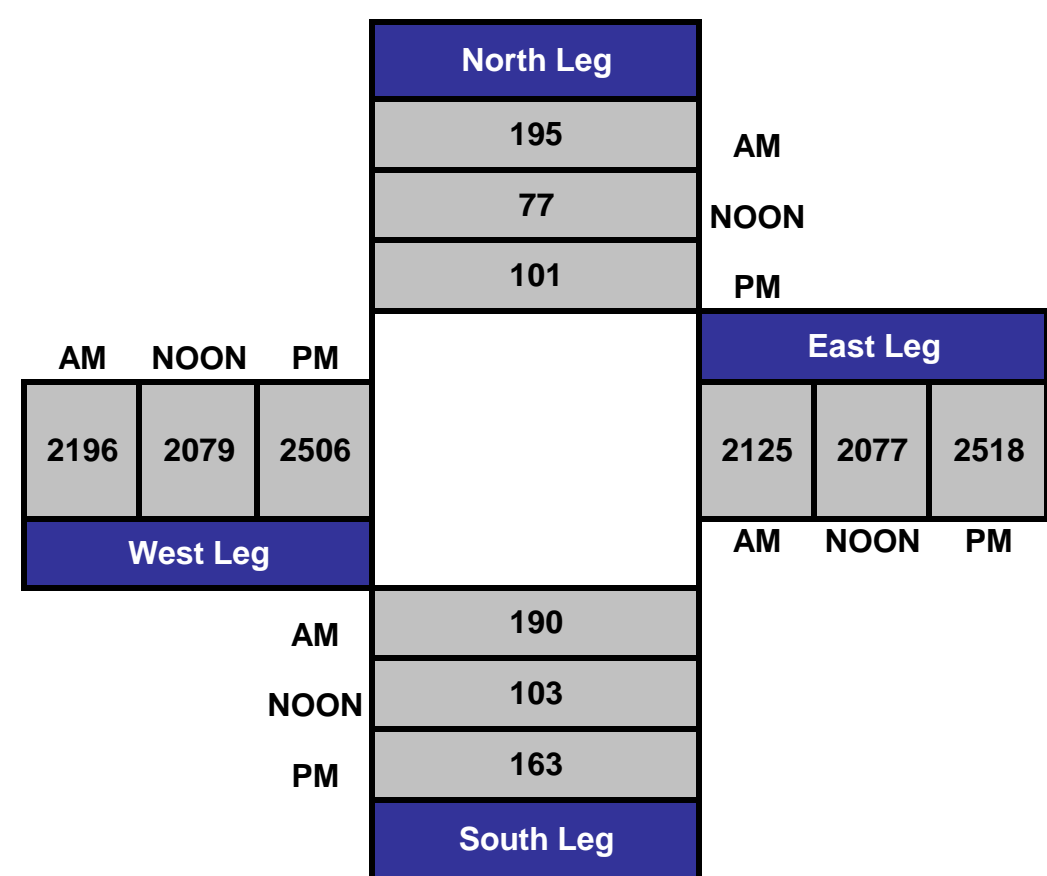
Project #: 16-5293-002
City: West Hollywood



Total Ins & Outs



Total Volume Per Leg



Intersection Turning Movement

Prepared by:

National Data & Surveying Services

Project ID: 16-5293-003

Day: Wednesday

City: West Hollywood

Date: 5/11/2016

AM													
NS/EW Streets:	Ogden Dr			Ogden Dr			Fountain Ave			Fountain Ave			
	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			
LANES:	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
	0	1	0	0	1	0	0	2	0	0	2	0	
7:00 AM	1	0	5	0	0	8	1	100	0	4	303	2	424
7:15 AM	0	0	11	0	0	12	1	91	2	4	395	2	518
7:30 AM	0	0	5	0	1	2	4	126	3	15	388	1	545
7:45 AM	9	2	20	0	1	8	0	177	4	13	377	1	612
8:00 AM	0	0	11	0	1	3	2	198	5	8	371	2	601
8:15 AM	0	0	12	0	1	2	1	215	1	24	276	0	532
8:30 AM	2	0	12	0	4	3	2	205	3	18	337	3	589
8:45 AM	3	0	15	0	2	1	1	219	5	16	324	2	588
TOTAL VOLUMES :	15	2	91	0	10	39	12	1331	23	102	2771	13	4409
APPROACH %'s :	13.89%	1.85%	84.26%	0.00%	20.41%	79.59%	0.88%	97.44%	1.68%	3.53%	96.02%	0.45%	
PEAK HR START TIME :	745 AM												TOTAL
PEAK HR VOL :	11	2	55	0	7	16	5	795	13	63	1361	6	2334
PEAK HR FACTOR :	0.548			0.639			0.937			0.914			0.953

UTURNS			
NB	SB	EB	WB
0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0
0	0	1	0
0	0	0	0
0	0	1	0

CONTROL : 2-Way Stop(NB/SB)

Intersection Turning Movement

Prepared by:

National Data & Surveying Services

Project ID: 16-5293-003

Day: Wednesday

City: West Hollywood

Date: 5/11/2016

PM

NS/EW Streets:	Ogden Dr			Ogden Dr			Fountain Ave			Fountain Ave			TOTAL
	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			
LANES:	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	
	0	1	0	0	1	0	0	2	0	0	2	0	
4:00 PM	3	1	17	0	1	1	7	334	4	6	241	2	617
4:15 PM	7	4	20	0	2	8	8	325	6	9	241	1	631
4:30 PM	6	4	29	1	2	5	5	352	9	5	248	1	667
4:45 PM	2	8	29	0	2	4	11	334	2	7	222	1	622
5:00 PM	2	3	27	0	0	2	16	365	11	6	222	1	655
5:15 PM	3	13	30	0	0	2	10	341	6	4	229	4	642
5:30 PM	2	1	44	1	0	5	12	343	1	11	236	0	656
5:45 PM	3	3	32	1	1	2	10	371	8	11	262	0	704
6:00 PM	1	2	40	0	0	2	6	386	9	6	245	2	699
6:15 PM	4	3	24	1	0	5	11	296	7	6	250	2	609
6:30 PM	3	3	33	1	0	1	8	345	5	12	270	0	681
6:45 PM	0	1	29	0	0	7	3	376	4	5	273	2	700
TOTAL VOLUMES :	36	46	354	5	8	44	107	4168	72	88	2939	16	7883
APPROACH %'s :	8.26%	10.55%	81.19%	8.77%	14.04%	77.19%	2.46%	95.88%	1.66%	2.89%	96.58%	0.53%	
PEAK HR START TIME :	515 PM												TOTAL
PEAK HR VOL :	9	19	146	2	1	11	38	1441	24	32	972	6	2701
PEAK HR FACTOR :	0.926			0.583			0.937			0.925			0.959

UTURNS			
NB	SB	EB	WB
0	0	0	0
0	0	1	0
0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0
0	0	1	0
0	0	1	0
0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0
TOTAL	TOTAL	TOTAL	TOTAL
0	0	4	0

CONTROL : 2-Way Stop(NB/SB)

ITM Peak Hour Summary

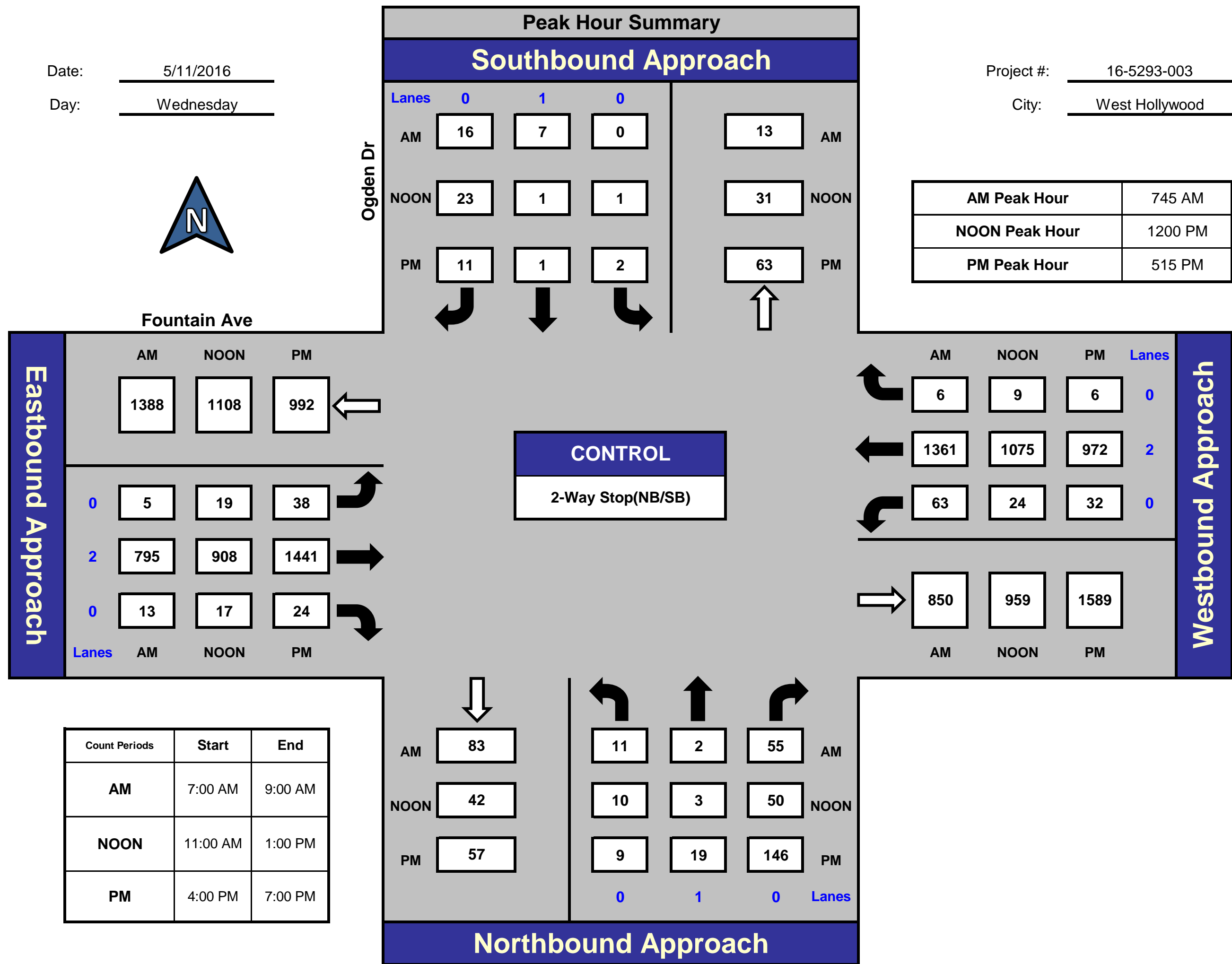
Prepared by:



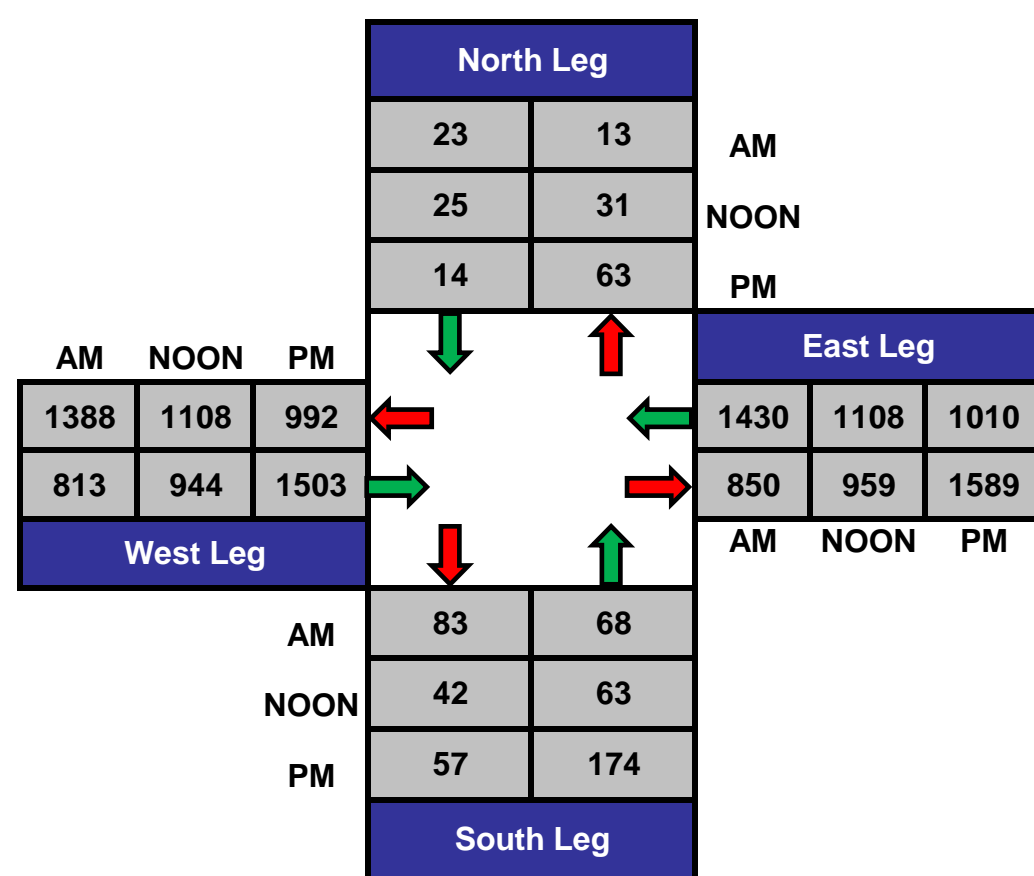
Ogden Dr and Fountain Ave, West Hollywood

Date: 5/11/2016
Day: Wednesday

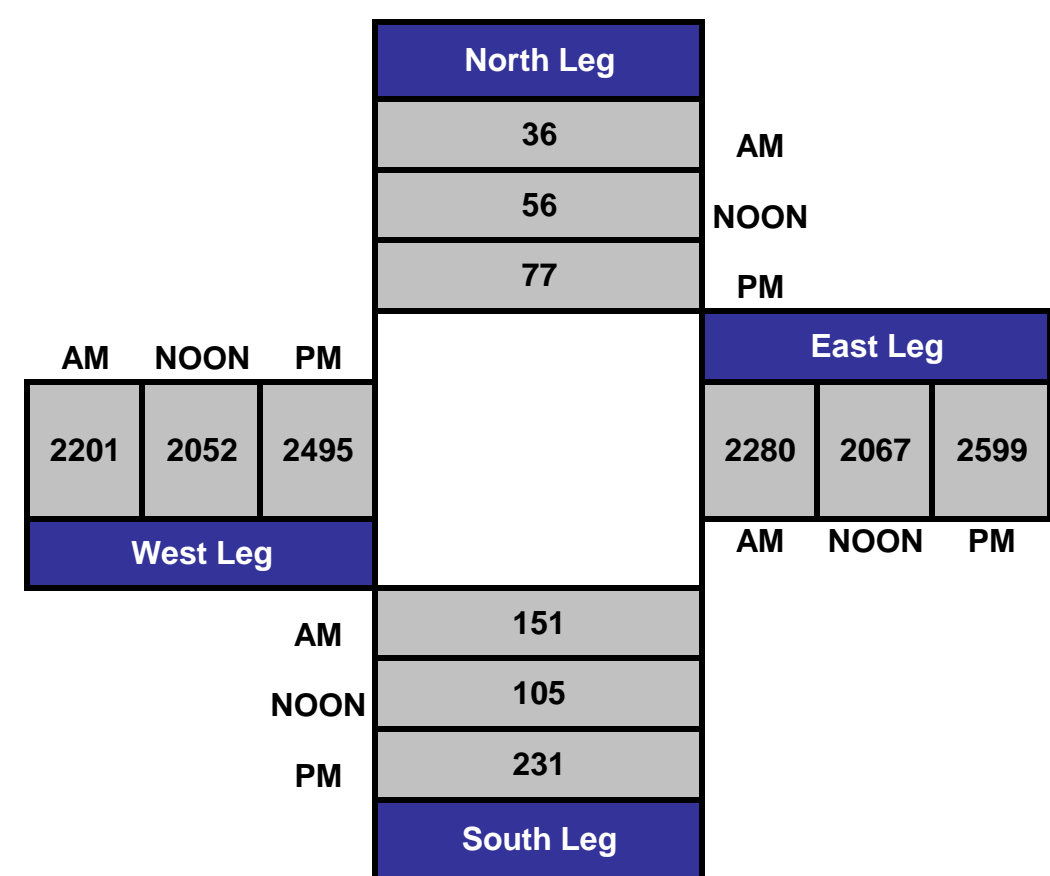
Project #: 16-5293-003
City: West Hollywood



Total Ins & Outs



Total Volume Per Leg



Intersection Turning Movement

Prepared by:

National Data & Surveying Services

Project ID: 16-5293-004

Day: Wednesday

City: West Hollywood

Date: 5/11/2016

AM													
NS/EW Streets:	Fairfax Ave			Fairfax Ave			Santa Monica Blvd			Santa Monica Blvd			
	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			
LANES:	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
	1	2	1	1	2	0	1	2	0	1	2	0	
7:00 AM	18	73	9	12	169	39	16	105	13	38	280	7	779
7:15 AM	13	109	13	10	211	35	28	102	6	53	271	11	862
7:30 AM	19	123	15	6	236	50	14	110	20	42	286	3	924
7:45 AM	18	139	21	18	234	37	28	136	21	57	231	10	950
8:00 AM	23	177	28	12	224	33	28	143	15	76	264	13	1036
8:15 AM	23	186	25	23	225	28	32	138	10	93	191	11	985
8:30 AM	16	157	36	16	221	30	30	152	16	96	237	13	1020
8:45 AM	28	148	42	14	252	18	30	173	22	94	215	12	1048
TOTAL VOLUMES :	158	1112	189	111	1772	270	206	1059	123	549	1975	80	7604
APPROACH %'s :	10.83%	76.22%	12.95%	5.16%	82.30%	12.54%	14.84%	76.30%	8.86%	21.08%	75.84%	3.07%	
PEAK HR START TIME :	800 AM												TOTAL
PEAK HR VOL :	90	668	131	65	922	109	120	606	63	359	907	49	4089
PEAK HR FACTOR :	0.950			0.965			0.877			0.931			0.975

UTURNS			
NB	SB	EB	WB
2	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0
1	0	0	0
0	0	0	0
1	0	0	0
4	0	0	0

CONTROL : Signalized

Intersection Turning Movement

Prepared by:

National Data & Surveying Services

Project ID: 16-5293-004

Day: Wednesday

City: West Hollywood

Date: 5/11/2016

NS/EW Streets:	PM												TOTAL
	Fairfax Ave			Fairfax Ave			Santa Monica Blvd			Santa Monica Blvd			
	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			
LANES:	NL 1	NT 2	NR 1	SL 1	ST 2	SR 0	EL 1	ET 2	ER 0	WL 1	WT 2	WR 0	TOTAL
4:00 PM	30	204	44	28	166	18	63	235	21	46	163	14	1032
4:15 PM	16	212	51	22	195	24	66	257	21	37	192	28	1121
4:30 PM	25	195	45	21	180	29	80	251	24	44	189	19	1102
4:45 PM	25	209	41	15	159	21	56	269	16	42	190	21	1064
5:00 PM	22	216	60	14	186	27	68	267	17	28	199	27	1131
5:15 PM	13	209	57	29	177	23	79	256	25	48	186	22	1124
5:30 PM	22	208	60	18	198	24	89	277	18	44	188	26	1172
5:45 PM	23	215	54	22	182	19	93	238	16	41	197	21	1121
6:00 PM	31	213	61	9	157	30	86	302	19	41	202	22	1173
6:15 PM	27	206	56	16	183	17	77	264	17	37	220	24	1144
6:30 PM	22	209	64	16	203	16	82	248	27	53	205	29	1174
6:45 PM	22	216	58	22	197	30	70	243	25	48	201	22	1154
TOTAL VOLUMES :	278	2512	651	232	2183	278	909	3107	246	509	2332	275	13512
APPROACH %'s :	8.08%	73.00%	18.92%	8.61%	81.06%	10.32%	21.33%	72.90%	5.77%	16.34%	74.84%	8.83%	
PEAK HR START TIME :	600 PM												TOTAL
PEAK HR VOL :	102	844	239	63	740	93	315	1057	88	179	828	97	4645
PEAK HR FACTOR :	0.971			0.900			0.897			0.962			0.989

UTURNS			
NB	SB	EB	WB
0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0
1	0	0	0
1	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0
1	0	0	0
NB	SB	EB	WB
3	0	0	0

CONTROL : Signalized

Intersection Turning Movement

Prepared by:

National Data & Surveying Services

Project ID: 16-5293-004

Day: Wednesday

City: West Hollywood

Date: 5/11/2016

NOON

NS/EW Streets:	Fairfax Ave		Fairfax Ave			Santa Monica Blvd			Santa Monica Blvd			TOTAL	
	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			
LANES:	NL 1	NT 2	NR 1	SL 1	ST 2	SR 0	EL 1	ET 2	ER 0	WL 1	WT 2	WR 0	
11:00 AM	30	133	35	24	186	18	39	163	20	33	164	18	863
11:15 AM	25	165	45	13	172	22	38	172	26	49	161	22	910
11:30 AM	29	161	42	16	209	25	36	158	9	51	225	19	980
11:45 AM	35	159	27	24	188	21	34	162	22	49	172	10	903
12:00 PM	29	176	38	20	195	28	39	157	16	58	193	15	964
12:15 PM	35	162	34	17	185	27	38	164	27	53	178	16	936
12:30 PM	33	163	55	19	171	25	39	170	18	46	179	21	939
12:45 PM	35	188	54	23	176	26	41	178	21	43	210	19	1014
TOTAL VOLUMES :	NL 251	NT 1307	NR 330	SL 156	ST 1482	SR 192	EL 304	ET 1324	ER 159	WL 382	WT 1482	WR 140	TOTAL 7509
APPROACH %'s :	13.29%	69.23%	17.48%	8.52%	80.98%	10.49%	17.01%	74.09%	8.90%	19.06%	73.95%	6.99%	
PEAK HR START TIME :	1200 PM												TOTAL
PEAK HR VOL :	132	689	181	79	727	106	157	669	82	200	760	71	3853
PEAK HR FACTOR :	0.904		0.938			0.946			0.948			0.950	

UTURNS			
NB	SB	EB	WB
0	0	0	0
0	0	0	0
1	0	0	0
0	0	0	0
3	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0
4	0	0	0

CONTROL : Signalized

ITM Peak Hour Summary

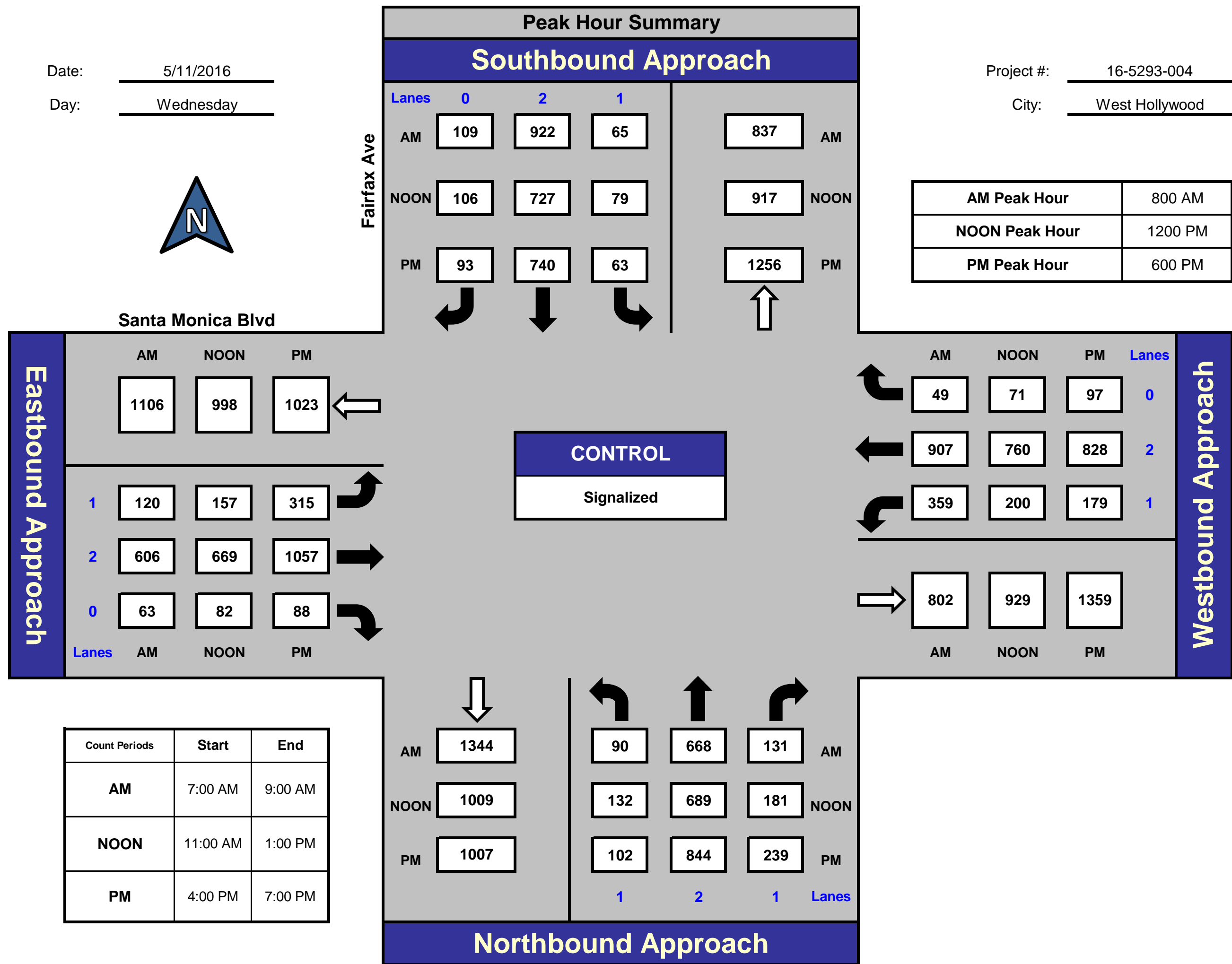
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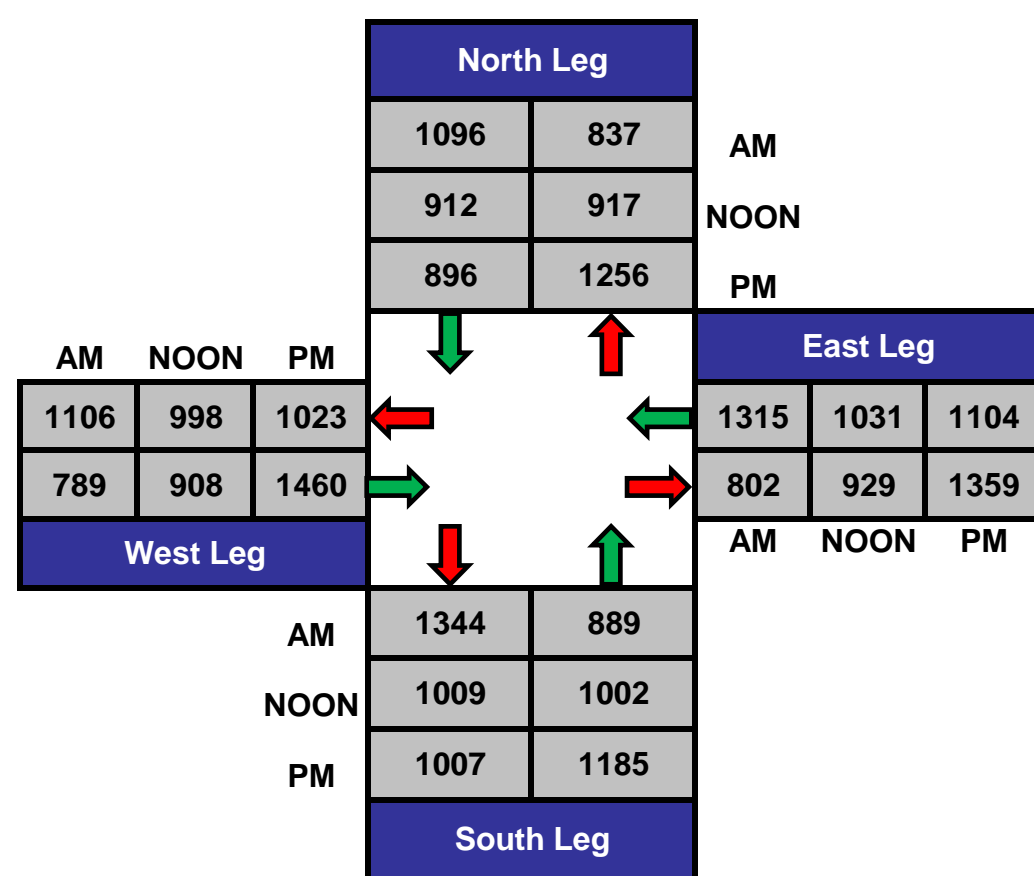
Fairfax Ave and Santa Monica Blvd, West Hollywood

Date: 5/11/2016
Day: Wednesday

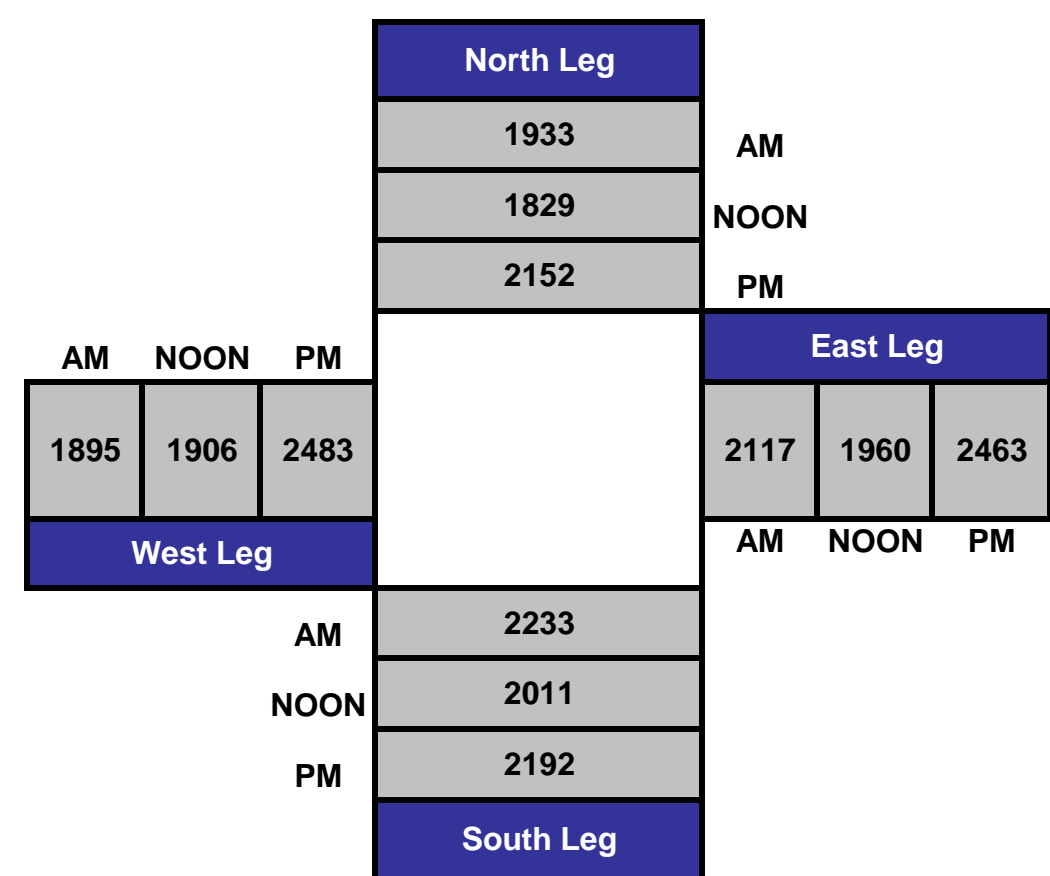
Project #: 16-5293-004
City: West Hollywood



Total Ins & Outs



Total Volume Per Leg



Intersection Turning Movement

Prepared by:

National Data & Surveying Services

Project ID: 16-5293-005

Day: Wednesday

City: West Hollywood

Date: 5/11/2016

		AM																
NS/EW Streets:		Orange Grove Ave			Orange Grove Ave			Santa Monica Blvd			Santa Monica Blvd							
		NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			UTURNS				
LANES:		NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL	NB	SB	EB	WB
		0	1	0	0	1	0	0	2	0	0	2	0					
7:00 AM		0	0	2	0	0	3	0	128	1	0	320	4	458				
7:15 AM		0	0	5	0	0	6	0	122	1	0	316	2	452				
7:30 AM		0	0	3	0	0	16	0	130	0	0	330	6	485				
7:45 AM		0	0	8	0	0	19	0	171	4	0	289	9	500				
8:00 AM		0	0	4	0	0	30	0	178	3	0	304	9	528				
8:15 AM		0	0	5	0	0	23	0	188	5	0	280	6	507				
8:30 AM		0	0	4	0	0	21	0	193	4	0	325	10	557				
8:45 AM		0	0	2	0	0	32	0	225	4	0	297	19	579				
TOTAL VOLUMES :		0	0	33	0	0	150	0	1335	22	0	2461	65	4066	0	0	0	0
APPROACH %'s :		0.00%	0.00%	100.00%	0.00%	0.00%	100.00%	0.00%	98.38%	1.62%	0.00%	97.43%	2.57%					
PEAK HR START TIME :		800 AM												TOTAL				
PEAK HR VOL :		0	0	15	0	0	106	0	784	16	0	1206	44	2171				
PEAK HR FACTOR :		0.750			0.828			0.873			0.933			0.937				

CONTROL : 2-Way Stop(NB/SB)

Intersection Turning Movement

Prepared by:

National Data & Surveying Services

Project ID: 16-5293-005

Day: Wednesday

City: West Hollywood

Date: 5/11/2016

		PM																
NS/EW Streets:		Orange Grove Ave			Orange Grove Ave			Santa Monica Blvd			Santa Monica Blvd							
		NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			UTURNS				
LANES:		NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL	NB	SB	EB	WB
		0	1	0	0	1	0	0	2	0	0	2	0					
4:00 PM		0	0	14	0	0	16	0	302	7	0	213	16	568				
4:15 PM		0	0	13	0	0	24	0	311	6	0	239	7	600				
4:30 PM		0	0	15	0	0	16	0	320	9	0	233	10	603				
4:45 PM		0	0	13	0	0	20	0	325	6	0	230	16	610				
5:00 PM		0	0	16	0	0	19	0	329	3	0	241	14	622				
5:15 PM		0	0	20	0	0	13	0	333	10	0	250	14	640				
5:30 PM		0	0	14	0	0	12	0	345	8	0	254	18	651				
5:45 PM		0	0	17	0	0	14	0	302	11	0	245	16	605				
6:00 PM		0	0	7	0	0	18	0	368	6	0	254	14	667				
6:15 PM		0	0	4	0	0	7	0	324	6	0	281	9	631				
6:30 PM		0	0	13	0	0	16	0	313	6	0	265	9	622				
6:45 PM		0	0	12	0	0	12	0	309	8	0	254	12	607				
TOTAL VOLUMES :		0	0	158	0	0	187	0	3881	86	0	2959	155	7426	0	0	0	0
APPROACH %'s :		0.00%	0.00%	100.00%	0.00%	0.00%	100.00%	0.00%	97.83%	2.17%	0.00%	95.02%	4.98%					
PEAK HR START TIME :		515 PM												TOTAL				
PEAK HR VOL :		0	0	58	0	0	57	0	1348	35	0	1003	62	2563				
PEAK HR FACTOR :		0.725			0.792			0.924			0.979			0.961				

CONTROL : 2-Way Stop(NB/SB)

Intersection Turning Movement

Prepared by:

National Data & Surveying Services

Project ID: 16-5293-005

Day: Wednesday

City: West Hollywood

Date: 5/11/2016

NOON

NS/EW Streets:	Orange Grove Ave			Orange Grove Ave			Santa Monica Blvd			Santa Monica Blvd			TOTAL
	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			
LANES:	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	
	0	1	0	0	1	0	0	2	0	0	2	0	
11:00 AM	0	0	4	0	0	14	0	216	9	0	210	8	461
11:15 AM	0	0	3	0	0	16	0	221	4	0	224	7	475
11:30 AM	0	0	9	0	0	15	0	209	7	0	273	9	522
11:45 AM	0	0	9	0	0	7	0	202	12	0	230	6	466
12:00 PM	0	0	13	0	0	13	0	208	7	0	251	12	504
12:15 PM	0	0	5	0	0	17	0	208	8	0	235	10	483
12:30 PM	0	0	9	0	0	12	0	234	9	0	239	18	521
12:45 PM	0	0	6	0	0	10	0	246	8	0	268	8	546
TOTAL VOLUMES :	0	0	58	0	0	104	0	1744	64	0	1930	78	3978
APPROACH %'s :	0.00%	0.00%	100.00%	0.00%	0.00%	100.00%	0.00%	96.46%	3.54%	0.00%	96.12%	3.88%	
PEAK HR START TIME :	1200 PM												TOTAL
PEAK HR VOL :	0	0	33	0	0	52	0	896	32	0	993	48	2054
PEAK HR FACTOR :	0.635			0.765			0.913			0.943			0.940

UTURNS			
NB	SB	EB	WB

NB	SB	EB	WB
0	0	0	0

CONTROL : 2-Way Stop(NB/SB)

ITM Peak Hour Summary

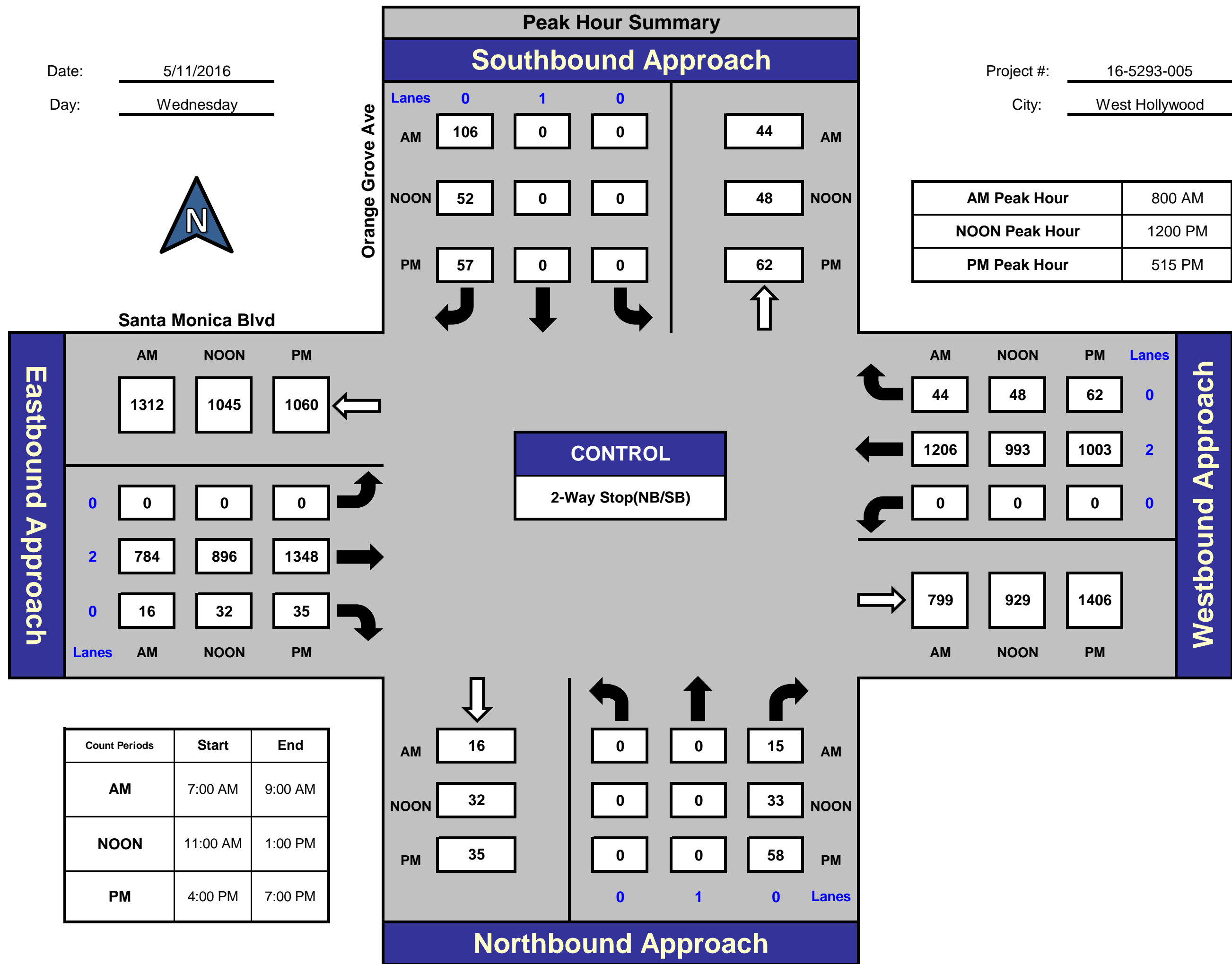
Prepared by:



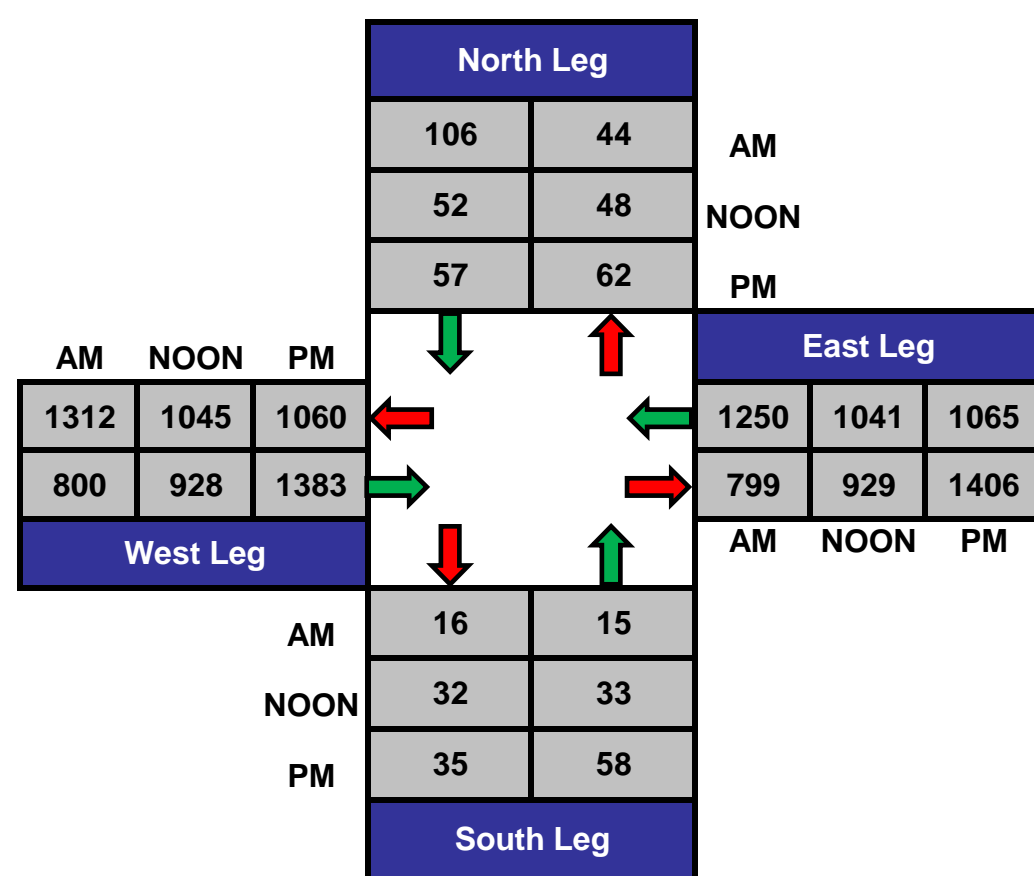
Orange Grove Ave and Santa Monica Blvd, West Hollywood

Date: 5/11/2016
Day: Wednesday

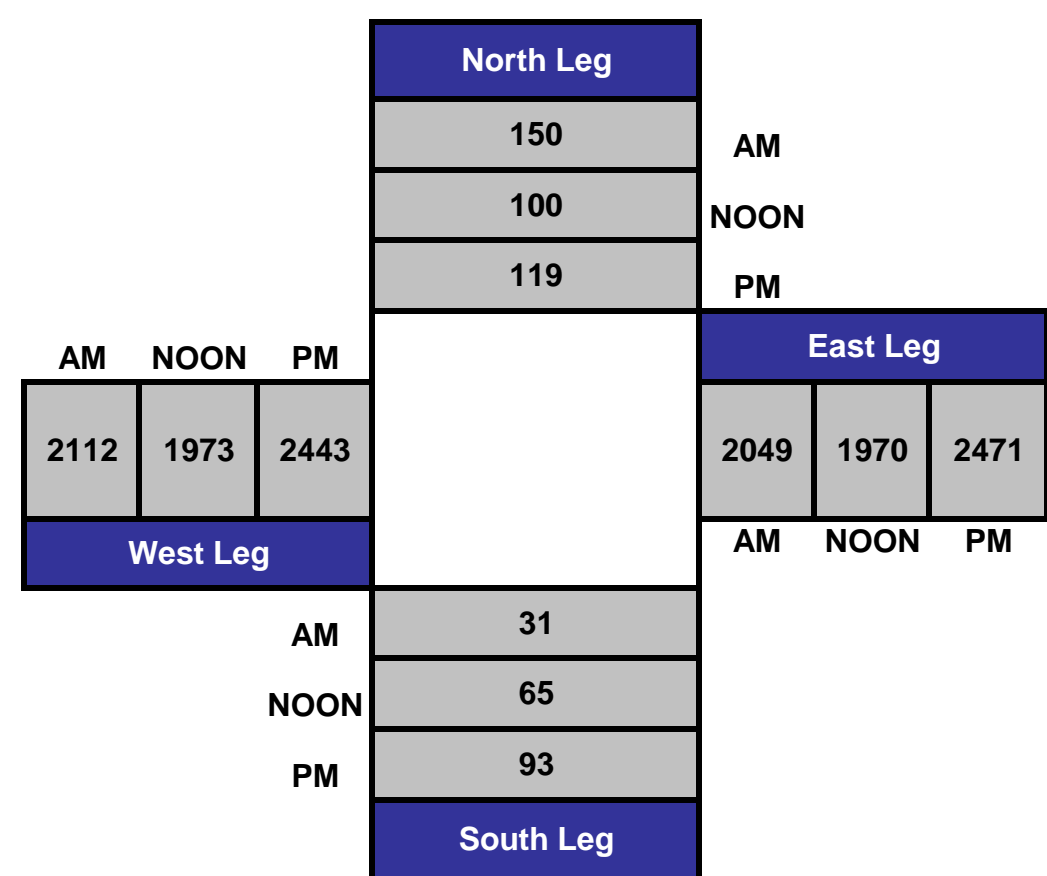
Project #: 16-5293-005
City: West Hollywood



Total Ins & Outs



Total Volume Per Leg



Intersection Turning Movement

Prepared by:

National Data & Surveying Services

Project ID: 16-5293-006

Day: Wednesday

City: West Hollywood

Date: 5/11/2016

AM													
NS/EW Streets:	Ogden Dr (South Leg)			Ogden Dr (South Leg)			Santa Monica Blvd			Santa Monica Blvd			
	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			
LANES:	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
	0	1	0	0	0	0	0	2	0	0	2	0	
7:00 AM	1	0	7	0	0	0	0	127	1	2	326	0	464
7:15 AM	0	0	4	0	0	0	0	126	0	7	331	0	468
7:30 AM	1	0	2	0	0	0	0	127	1	4	322	0	457
7:45 AM	2	0	9	0	0	0	0	173	10	9	308	0	511
8:00 AM	1	0	13	0	0	0	0	173	8	9	309	0	513
8:15 AM	1	0	7	0	0	0	0	196	1	19	303	0	527
8:30 AM	3	0	10	0	0	0	0	192	4	18	319	0	546
8:45 AM	2	0	4	0	0	0	1	233	3	12	309	0	564
TOTAL VOLUMES :	11	0	56	0	0	0	1	1347	28	80	2527	0	4050
APPROACH %'s :	16.42%	0.00%	83.58%	#DIV/0!	#DIV/0!	#DIV/0!	0.07%	97.89%	2.03%	3.07%	96.93%	0.00%	
PEAK HR START TIME :	800 AM												TOTAL
PEAK HR VOL :	7	0	34	0	0	0	1	794	16	58	1240	0	2150
PEAK HR FACTOR :	0.732			0.000			0.855			0.963			0.953

UTURNS			
NB	SB	EB	WB
0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0
0	0	1	0
0	0	1	0

CONTROL : 1-Way Stop(NB)

Intersection Turning Movement

Prepared by:

National Data & Surveying Services

Project ID: 16-5293-006

Day: Wednesday

City: West Hollywood

Date: 5/11/2016

NOON

NS/EW Streets:	Ogden Dr (South Leg)		Ogden Dr (South Leg)			Santa Monica Blvd			Santa Monica Blvd			TOTAL	
	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			
LANES:	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	
	0	1	0	0	0	0	0	2	0	0	2	0	
11:00 AM	0	0	4	0	0	0	0	217	3	6	207	0	437
11:15 AM	5	0	4	0	0	0	1	221	2	12	234	0	479
11:30 AM	1	0	10	0	0	0	0	222	0	7	265	0	505
11:45 AM	1	0	8	0	0	0	0	210	4	10	244	0	477
12:00 PM	1	0	12	0	0	1	0	212	5	5	254	0	490
12:15 PM	1	0	7	0	0	0	1	213	3	9	260	0	494
12:30 PM	0	0	7	0	0	0	0	230	5	8	255	0	505
12:45 PM	0	0	9	0	0	0	1	245	2	9	264	0	530
TOTAL VOLUMES :	9	0	61	0	0	1	3	1770	24	66	1983	0	3917
APPROACH %'s :	12.86%	0.00%	87.14%	0.00%	0.00%	100.00%	0.17%	98.50%	1.34%	3.22%	96.78%	0.00%	
PEAK HR START TIME :	1200 PM												TOTAL
PEAK HR VOL :	2	0	35	0	0	1	2	900	15	31	1033	0	2019
PEAK HR FACTOR :	0.712			0.250			0.924			0.974			0.952

UTURNS			
NB	SB	EB	WB
0	0	0	0
0	0	1	1
0	0	0	0
0	0	0	1
0	0	0	0
0	0	1	0
0	0	0	0
0	0	1	0
0	0	3	2

CONTROL : 1-Way Stop(NB)

ITM Peak Hour Summary

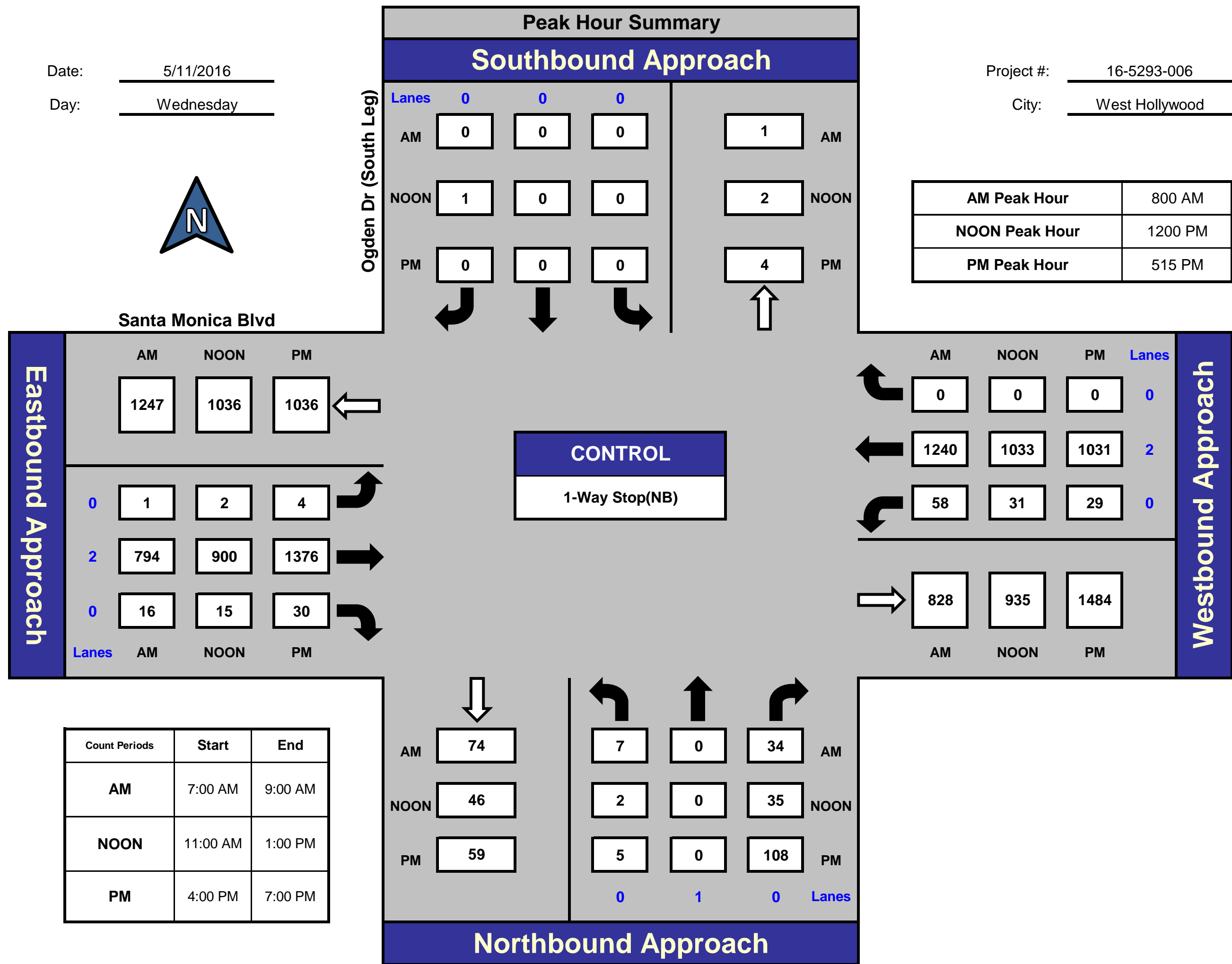
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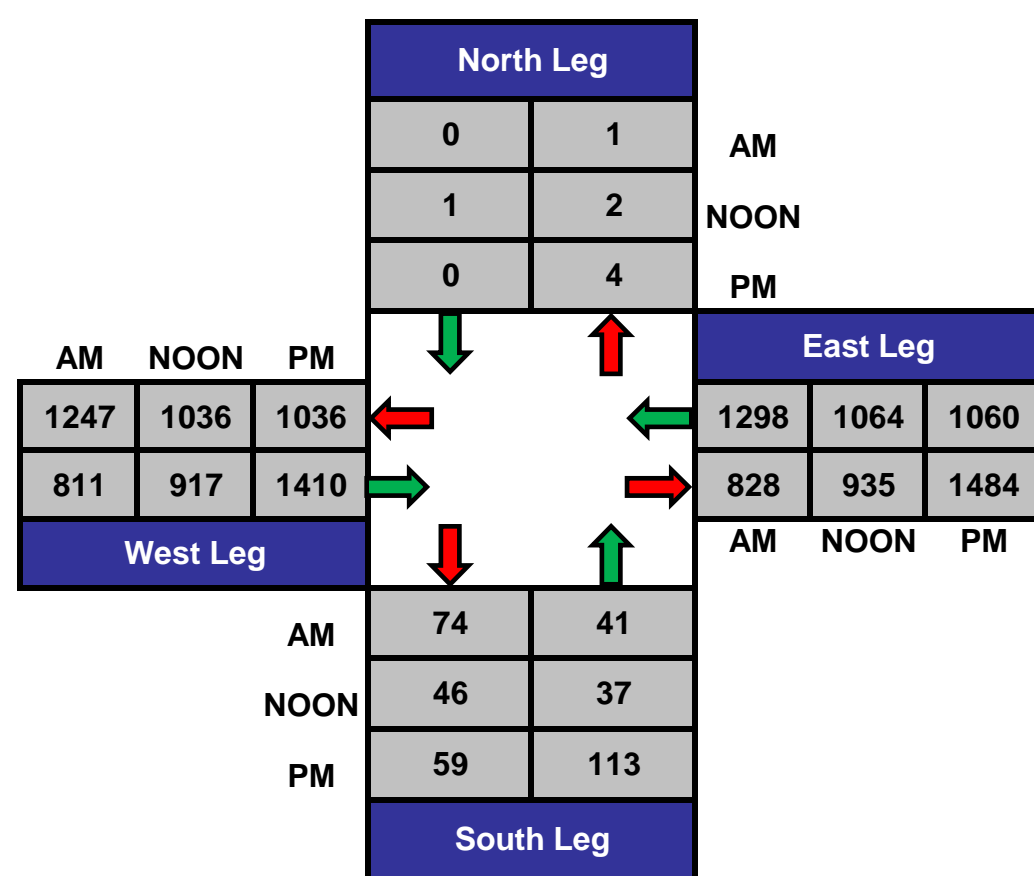
Ogden Dr (South Leg) and Santa Monica Blvd, West Hollywood

Date: 5/11/2016
Day: Wednesday

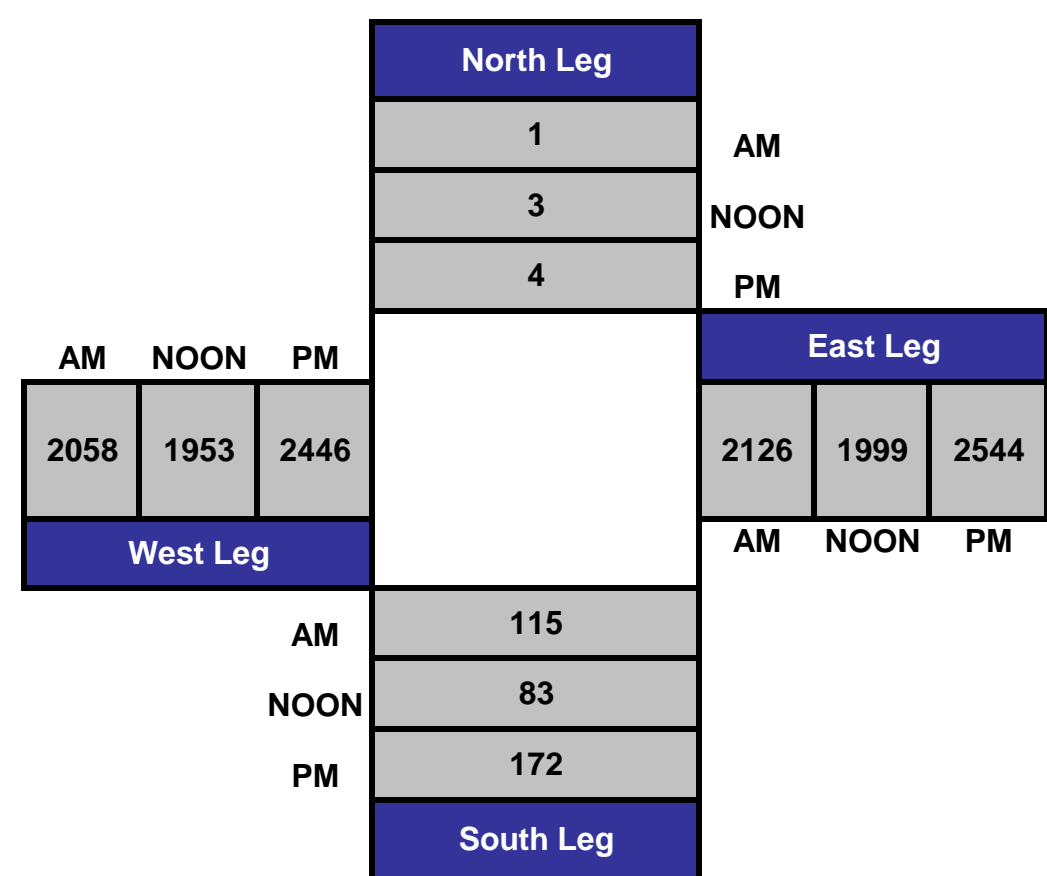
Project #: 16-5293-006
City: West Hollywood



Total Ins & Outs



Total Volume Per Leg



Intersection Turning Movement

Prepared by:

National Data & Surveying Services

Project ID: 16-5293-106

Day: Wednesday

City: West Hollywood

Date: 5/11/2016

AM													
NS/EW Streets:	Ogden Dr (North Leg)			Ogden Dr (North Leg)			Santa Monica Blvd			Santa Monica Blvd			
	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			
LANES:	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
	0	0	0	0	1	0	0	2	0	0	2	0	
7:00 AM	0	0	0	0	0	7	3	125	0	0	313	1	449
7:15 AM	0	0	0	1	0	9	1	129	0	0	328	1	469
7:30 AM	0	0	0	3	0	20	1	128	0	0	306	5	463
7:45 AM	0	0	0	1	0	26	8	173	0	0	291	8	507
8:00 AM	0	0	0	1	0	22	4	182	0	0	296	5	510
8:15 AM	0	0	0	2	0	30	5	191	0	0	298	1	527
8:30 AM	0	0	0	1	0	33	7	199	0	0	306	12	558
8:45 AM	0	0	0	0	0	20	5	237	0	0	293	6	561
TOTAL VOLUMES :	0	0	0	9	0	167	34	1364	0	0	2431	39	4044
APPROACH %'s :	#DIV/0!	#DIV/0!	#DIV/0!	5.11%	0.00%	94.89%	2.43%	97.57%	0.00%	0.00%	98.42%	1.58%	
PEAK HR START TIME :	800 AM												TOTAL
PEAK HR VOL :	0	0	0	4	0	105	21	809	0	0	1193	24	2156
PEAK HR FACTOR :	0.000			0.801			0.857			0.957			0.961

UTURNS			
NB	SB	EB	WB
0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0
0	0	1	0
0	0	1	0

CONTROL : 1-Way Stop(SB)

Intersection Turning Movement

Prepared by:

National Data & Surveying Services

Project ID: 16-5293-106

Day: Wednesday

City: West Hollywood

Date: 5/11/2016

NS/EW Streets:	PM												TOTAL
	Ogden Dr (North Leg)			Ogden Dr (North Leg)			Santa Monica Blvd			Santa Monica Blvd			
	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			
LANES:	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
	0	0	0	0	1	0	0	2	0	0	2	0	
4:00 PM	0	0	0	4	0	11	14	306	0	0	226	8	569
4:15 PM	0	0	0	2	0	14	17	317	0	0	261	13	624
4:30 PM	0	0	0	3	0	10	30	334	0	0	249	5	631
4:45 PM	0	0	0	0	0	12	27	332	0	0	227	11	609
5:00 PM	0	0	0	1	0	22	27	314	0	0	238	14	616
5:15 PM	0	0	0	2	0	20	31	352	0	0	235	13	653
5:30 PM	0	0	0	0	0	14	39	334	0	0	250	12	649
5:45 PM	0	0	0	2	0	11	34	295	0	0	262	10	614
6:00 PM	0	0	0	3	0	3	27	346	0	0	249	14	642
6:15 PM	0	0	0	0	0	13	23	310	0	0	277	11	634
6:30 PM	0	0	0	2	0	22	30	309	0	0	256	18	637
6:45 PM	0	0	0	0	0	9	32	296	0	0	259	13	609
TOTAL VOLUMES :	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
APPROACH %'s :	0	0	0	19	0	161	331	3845	0	0	2989	142	7487
	#DIV/0!	#DIV/0!	#DIV/0!	10.56%	0.00%	89.44%	7.93%	92.07%	0.00%	0.00%	95.46%	4.54%	
PEAK HR START TIME :	515 PM												TOTAL
PEAK HR VOL :	0	0	0	7	0	48	131	1327	0	0	996	49	2558
PEAK HR FACTOR :	0.000			0.625			0.952			0.960			0.979

UTURNS			
NB	SB	EB	WB
0	0	1	0
0	0	0	0
0	0	0	0
0	0	2	0
0	0	0	0
0	0	2	0
0	0	4	0
0	0	2	0
0	0	1	0
0	0	0	0
0	0	0	0
0	0	0	0
NB	SB	EB	WB
0	0	12	0

CONTROL : 1-Way Stop(SB)

Intersection Turning Movement

Prepared by:

National Data & Surveying Services

Project ID: 16-5293-106

Day: Wednesday

City: West Hollywood

Date: 5/11/2016

NOON

NS/EW Streets:	Ogden Dr (North Leg)		Ogden Dr (North Leg)			Santa Monica Blvd			Santa Monica Blvd			TOTAL	
	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			
LANES:	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	
	0	0	0	0	1	0	0	2	0	0	2	0	
11:00 AM	0	0	0	5	0	4	8	204	0	0	216	8	445
11:15 AM	0	0	0	1	0	9	6	225	0	0	238	7	486
11:30 AM	0	0	0	2	0	18	15	218	0	0	253	5	511
11:45 AM	0	0	0	3	0	13	4	209	0	0	233	13	475
12:00 PM	0	0	0	4	0	8	16	218	0	0	241	7	494
12:15 PM	0	0	0	2	0	10	8	204	0	0	265	9	498
12:30 PM	0	0	0	0	0	13	9	228	0	0	254	5	509
12:45 PM	0	0	0	0	0	13	15	243	0	0	260	10	541
TOTAL VOLUMES :	0	0	0	17	0	88	81	1749	0	0	1960	64	3959
APPROACH %'s :	#DIV/0!	#DIV/0!	#DIV/0!	16.19%	0.00%	83.81%	4.43%	95.57%	0.00%	0.00%	96.84%	3.16%	
PEAK HR START TIME :	1200 PM												TOTAL
PEAK HR VOL :	0	0	0	6	0	44	48	893	0	0	1020	31	2042
PEAK HR FACTOR :	0.000			0.962			0.912			0.959			0.944

UTURNS			
NB	SB	EB	WB
0	0	1	0
0	0	0	0
0	0	2	0
0	0	0	0
0	0	1	0
0	0	2	0
0	0	0	0
0	0	1	0
0	0	7	0

CONTROL : 1-Way Stop(SB)

ITM Peak Hour Summary

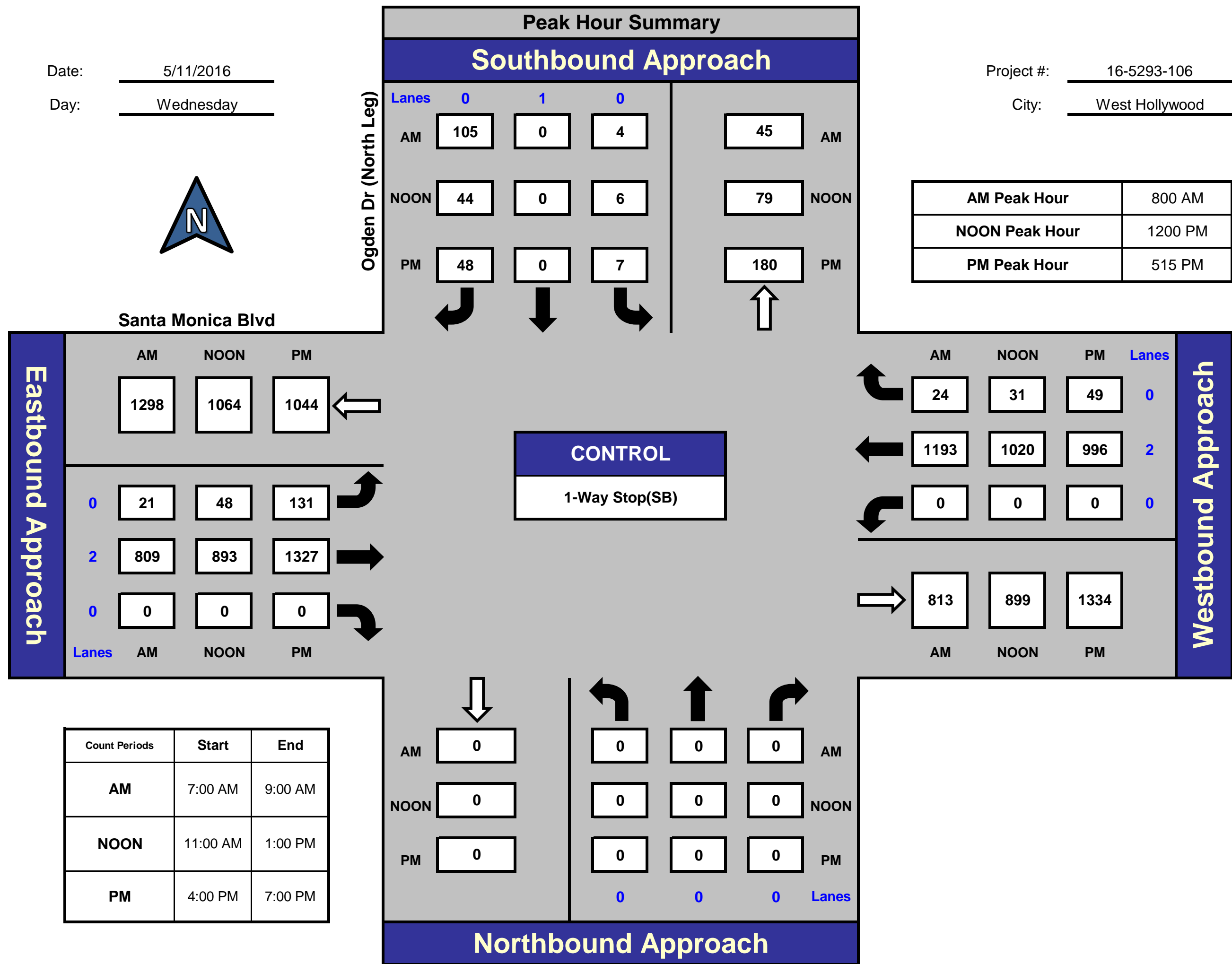
Prepared by:



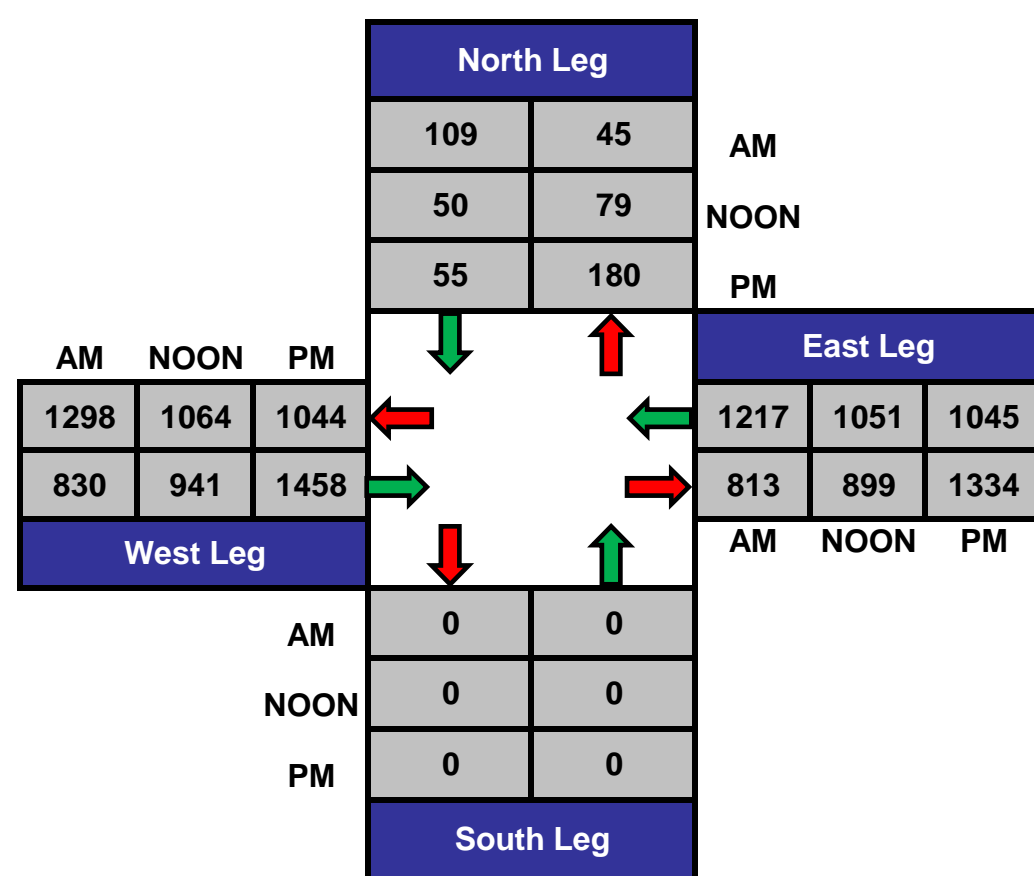
Ogden Dr (North Leg) and Santa Monica Blvd, West Hollywood

Date: 5/11/2016
Day: Wednesday

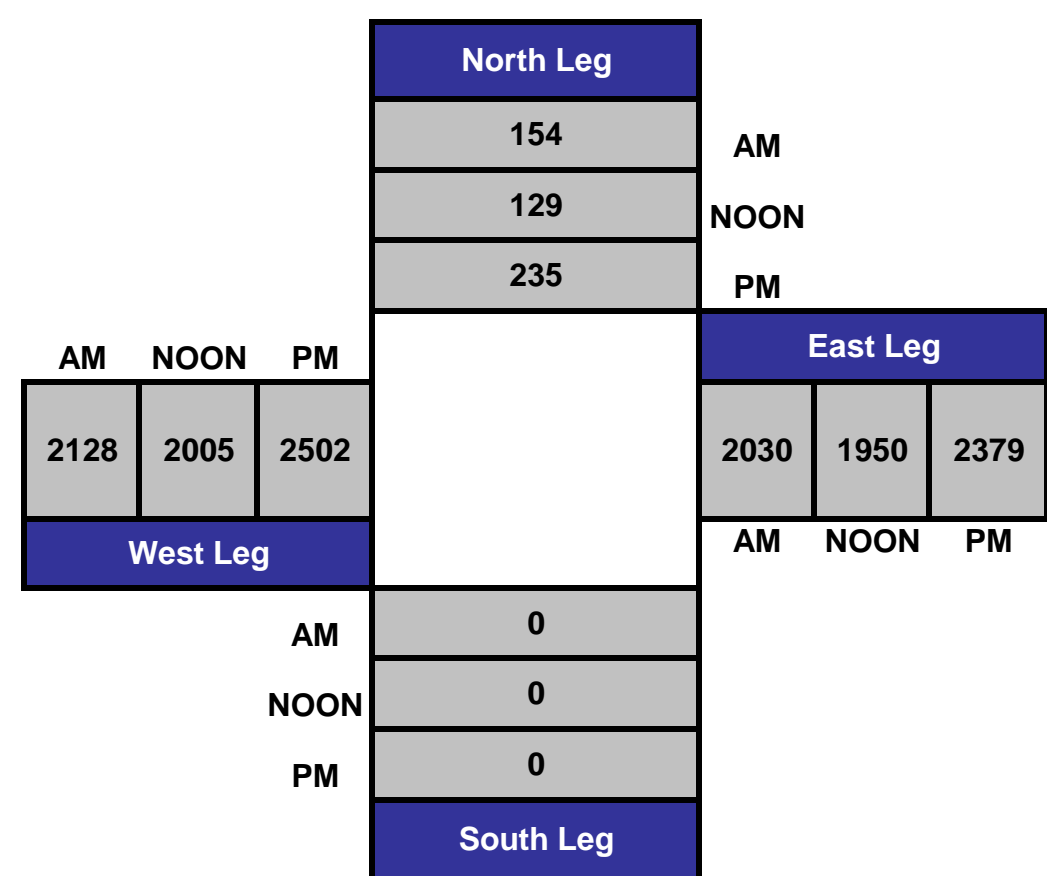
Project #: 16-5293-106
City: West Hollywood



Total Ins & Outs



Total Volume Per Leg



Intersection Turning Movement

Prepared by:

National Data & Surveying Services

Project ID: 16-5293-007

Day: Wednesday

City: West Hollywood

Date: 5/11/2016

AM													
NS/EW Streets:	Genesee Ave (South Leg)			Genesee Ave (South Leg)			Santa Monica Blvd			Santa Monica Blvd			
	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			
LANES:	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
	0	1	0	0	0	0	0	2	0	1	2	0	
7:00 AM	3	0	2	0	0	0	0	118	3	7	324	0	457
7:15 AM	3	0	3	0	0	0	0	132	1	9	330	0	478
7:30 AM	6	0	5	0	0	0	0	133	2	19	320	0	485
7:45 AM	4	0	13	0	0	0	0	151	6	12	282	0	468
8:00 AM	8	0	9	0	0	0	0	206	4	18	286	0	531
8:15 AM	1	0	9	0	0	0	0	189	1	23	287	0	510
8:30 AM	13	0	13	0	0	0	0	200	1	21	313	0	561
8:45 AM	4	0	2	0	0	0	0	216	1	31	274	0	528
TOTAL VOLUMES :	42	0	56	0	0	0	0	1345	19	140	2416	0	4018
APPROACH %'s :	42.86%	0.00%	57.14%	#DIV/0!	#DIV/0!	#DIV/0!	0.00%	98.61%	1.39%	5.48%	94.52%	0.00%	
PEAK HR START TIME :	800 AM												TOTAL
PEAK HR VOL :	26	0	33	0	0	0	0	811	7	93	1160	0	2130
PEAK HR FACTOR :	0.567			0.000			0.942			0.938			0.949

UTURNS			
NB	SB	EB	WB

NB	SB	EB	WB
0	0	0	0

CONTROL : Signalized

Intersection Turning Movement

Prepared by:

National Data & Surveying Services

Project ID: 16-5293-007

Day: Wednesday

City: West Hollywood

Date: 5/11/2016

PM

NS/EW Streets:	Genesee Ave (South Leg)		Genesee Ave (South Leg)			Santa Monica Blvd			Santa Monica Blvd			TOTAL	
	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			
LANES:	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	
	0	1	0	0	0	0	0	2	0	1	2	0	
4:00 PM	6	0	18	0	0	0	0	294	6	14	244	0	582
4:15 PM	10	0	17	0	0	0	0	300	12	17	245	0	601
4:30 PM	14	0	12	0	0	0	0	335	4	10	224	0	599
4:45 PM	12	0	12	0	0	0	0	320	6	9	233	0	592
5:00 PM	9	0	18	0	0	0	0	311	4	15	250	0	607
5:15 PM	7	0	21	0	0	0	0	346	3	6	245	0	628
5:30 PM	11	0	22	0	0	0	0	343	3	15	256	0	650
5:45 PM	5	0	12	0	0	0	0	286	4	13	261	0	581
6:00 PM	14	0	18	0	0	0	0	348	4	8	241	0	633
6:15 PM	7	0	12	0	0	0	0	315	3	7	285	0	629
6:30 PM	4	0	9	0	0	0	0	310	7	7	288	0	625
6:45 PM	11	0	17	0	0	0	0	301	1	12	252	0	594
TOTAL VOLUMES :	110	0	188	0	0	0	0	3809	57	133	3024	0	7321
APPROACH %'s :	36.91%	0.00%	63.09%	#DIV/0!	#DIV/0!	#DIV/0!	0.00%	98.53%	1.47%	4.21%	95.79%	0.00%	
PEAK HR START TIME :	530 PM												TOTAL
PEAK HR VOL :	37	0	64	0	0	0	0	1292	14	43	1043	0	2493
PEAK HR FACTOR :	0.765			0.000			0.928			0.930			0.959

UTURNS			
NB	SB	EB	WB

NB	SB	EB	WB
0	0	0	0

CONTROL : Signalized

Intersection Turning Movement

Prepared by:

National Data & Surveying Services

Project ID: 16-5293-007

Day: Wednesday

City: West Hollywood

Date: 5/11/2016

NOON

NS/EW Streets:	Genesee Ave (South Leg)			Genesee Ave (South Leg)			Santa Monica Blvd			Santa Monica Blvd			TOTAL
	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			
LANES:	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	
	0	1	0	0	0	0	0	2	0	1	2	0	
11:00 AM	4	0	9	0	0	0	0	216	6	4	216	0	455
11:15 AM	3	0	8	0	0	0	0	224	1	10	236	0	482
11:30 AM	5	0	16	0	0	0	0	217	5	11	261	0	515
11:45 AM	2	0	9	0	0	0	0	203	7	8	242	0	471
12:00 PM	3	0	17	0	0	0	0	207	5	10	241	0	483
12:15 PM	4	0	10	0	0	0	0	196	3	11	276	0	500
12:30 PM	6	0	15	0	0	0	0	224	4	9	253	0	511
12:45 PM	6	0	8	0	0	0	0	239	5	10	260	0	528
TOTAL VOLUMES :	33	0	92	0	0	0	0	1726	36	73	1985	0	3945
APPROACH %'s :	26.40%	0.00%	73.60%	#DIV/0!	#DIV/0!	#DIV/0!	0.00%	97.96%	2.04%	3.55%	96.45%	0.00%	
PEAK HR START TIME :	1200 PM												TOTAL
PEAK HR VOL :	19	0	50	0	0	0	0	866	17	40	1030	0	2022
PEAK HR FACTOR :	0.821			0.000			0.905			0.932			0.957

UTURNS			
NB	SB	EB	WB

NB	SB	EB	WB
0	0	0	0

CONTROL : Signalized

ITM Peak Hour Summary

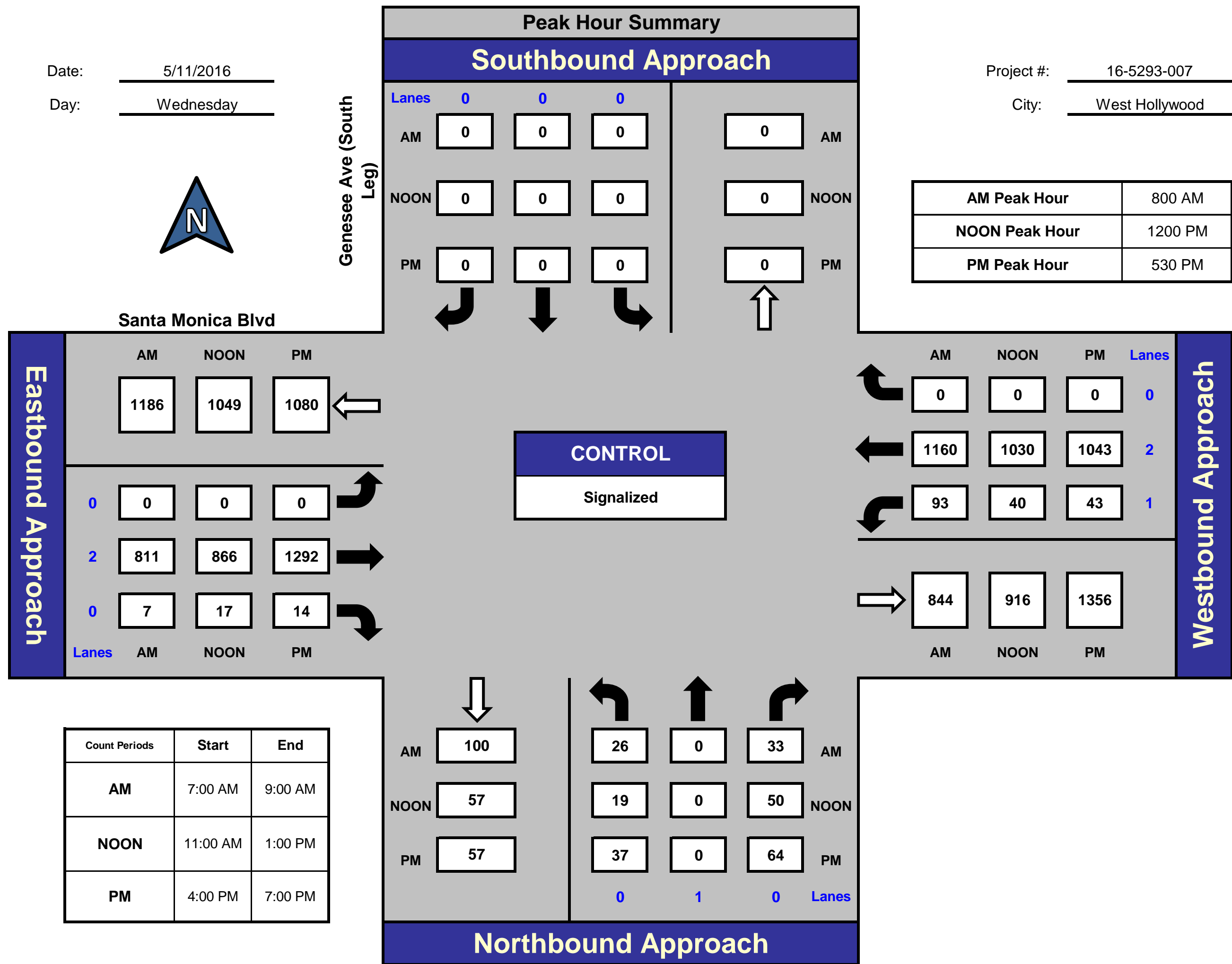
Prepared by:



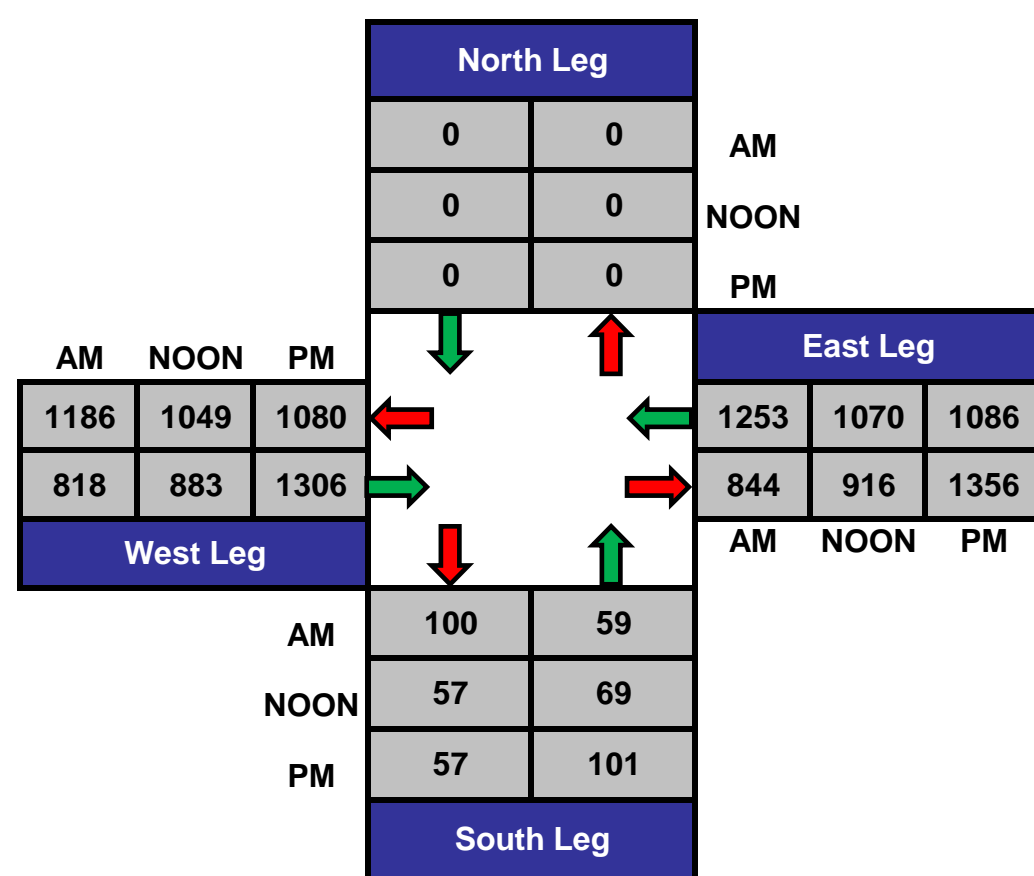
Genesee Ave (South Leg) and Santa Monica Blvd , West Hollywood

Date: 5/11/2016
Day: Wednesday

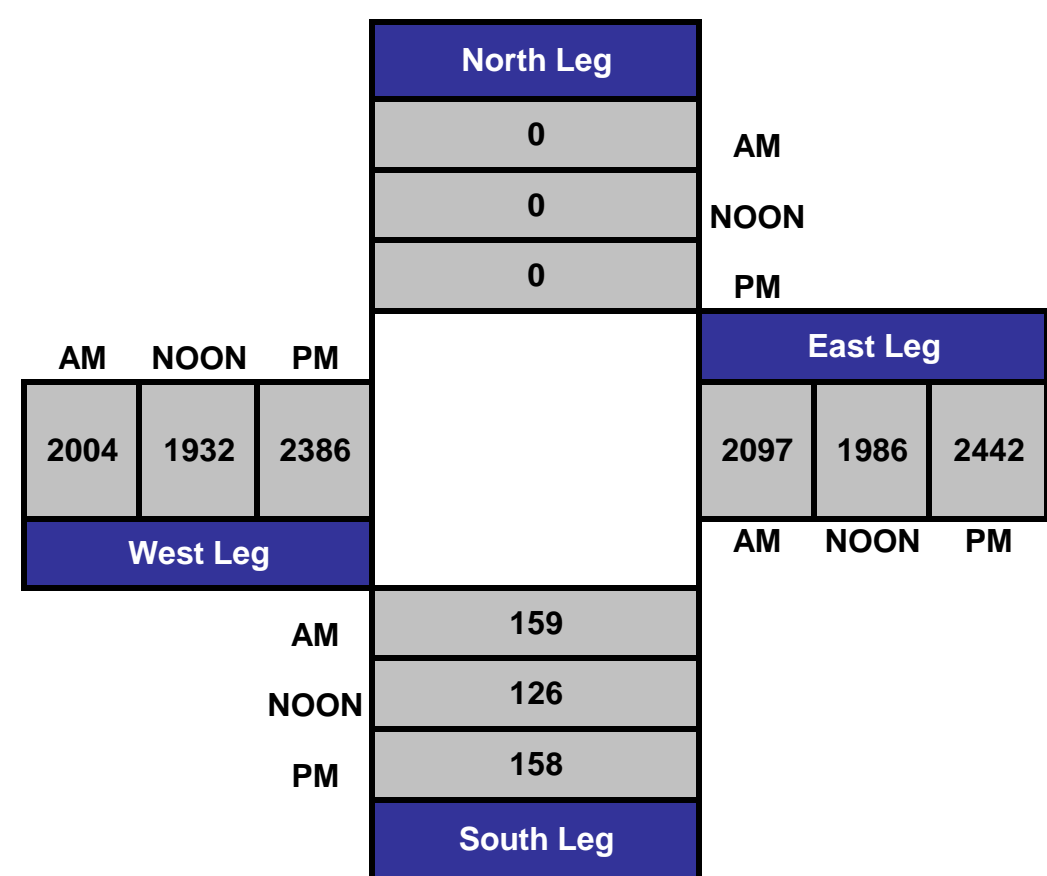
Project #: 16-5293-007
City: West Hollywood



Total Ins & Outs



Total Volume Per Leg



Intersection Turning Movement

Prepared by:

National Data & Surveying Services

Project ID: 16-5293-107

Day: Wednesday

City: West Hollywood

Date: 5/11/2016

AM													
NS/EW Streets:	Genesee Ave (North Leg)			Genesee Ave (North Leg)			Santa Monica Blvd			Santa Monica Blvd			
	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			
LANES:	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
	0	0	0	0	1	0	1	2	0	0	2	0	
7:00 AM	0	0	0	1	0	8	1	119	0	0	323	1	453
7:15 AM	0	0	0	2	0	6	3	132	0	0	333	2	478
7:30 AM	0	0	0	2	0	17	4	134	0	0	322	1	480
7:45 AM	0	0	0	9	0	6	9	152	0	0	288	1	465
8:00 AM	0	0	0	6	0	18	6	209	0	0	286	0	525
8:15 AM	0	0	0	5	0	33	6	192	0	0	277	5	518
8:30 AM	0	0	0	12	0	23	4	209	0	0	311	5	564
8:45 AM	0	0	0	4	0	17	4	214	0	0	288	3	530
TOTAL VOLUMES :	0	0	0	41	0	128	37	1361	0	0	2428	18	4013
APPROACH %'s :	#DIV/0!	#DIV/0!	#DIV/0!	24.26%	0.00%	75.74%	2.65%	97.35%	0.00%	0.00%	99.26%	0.74%	
PEAK HR START TIME :	800 AM												TOTAL
PEAK HR VOL :	0	0	0	27	0	91	20	824	0	0	1162	13	2137
PEAK HR FACTOR :	0.000			0.776			0.968			0.930			0.947

UTURNS			
NB	SB	EB	WB

NB	SB	EB	WB
0	0	0	0

CONTROL : Signalized

Intersection Turning Movement

Prepared by:

National Data & Surveying Services

Project ID: 16-5293-107

Day: Wednesday

City: West Hollywood

Date: 5/11/2016

PM

NS/EW Streets:	Genesee Ave (North Leg)			Genesee Ave (North Leg)			Santa Monica Blvd			Santa Monica Blvd			TOTAL
	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			
LANES:	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	
	0	0	0	0	1	0	1	2	0	0	2	0	
4:00 PM	0	0	0	5	0	13	21	291	0	0	245	9	584
4:15 PM	0	0	0	3	0	18	23	294	0	0	244	6	588
4:30 PM	0	0	0	9	0	8	20	327	0	0	226	2	592
4:45 PM	0	0	0	5	0	12	15	317	0	0	230	6	585
5:00 PM	0	0	0	2	0	13	24	305	0	0	252	24	620
5:15 PM	0	0	0	6	0	8	25	342	0	0	243	10	634
5:30 PM	0	0	0	3	0	9	21	344	0	0	262	11	650
5:45 PM	0	0	0	3	0	10	28	270	0	0	264	6	581
6:00 PM	0	0	0	3	0	12	33	333	0	0	237	8	626
6:15 PM	0	0	0	5	0	10	21	306	0	0	282	8	632
6:30 PM	0	0	0	4	0	12	25	294	0	0	283	7	625
6:45 PM	0	0	0	5	0	9	17	301	0	0	255	10	597

UTURNS			
NB	SB	EB	WB

	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
TOTAL VOLUMES :	0	0	0	53	0	134	273	3724	0	0	3023	107	7314
APPROACH %'s :	#DIV/0!	#DIV/0!	#DIV/0!	28.34%	0.00%	71.66%	6.83%	93.17%	0.00%	0.00%	96.58%	3.42%	

NB	SB	EB	WB
0	0	0	0

PEAK HR START TIME :	515 PM												TOTAL
PEAK HR VOL :	0	0	0	15	0	39	107	1289	0	0	1006	35	2491
PEAK HR FACTOR :	0.000			0.900			0.951			0.953			0.958

CONTROL : Signalized

Intersection Turning Movement

Prepared by:

National Data & Surveying Services

Project ID: 16-5293-107

Day: Wednesday

City: West Hollywood

Date: 5/11/2016

NOON

NS/EW Streets:	Genesee Ave (North Leg)			Genesee Ave (North Leg)			Santa Monica Blvd			Santa Monica Blvd			TOTAL
	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			
LANES:	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	
	0	0	0	0	1	0	1	2	0	0	2	0	
11:00 AM	0	0	0	7	0	10	8	217	0	0	210	6	458
11:15 AM	0	0	0	5	0	16	7	225	0	0	230	15	498
11:30 AM	0	0	0	6	0	7	7	226	0	0	265	10	521
11:45 AM	0	0	0	5	0	8	9	203	0	0	242	4	471
12:00 PM	0	0	0	12	0	13	12	212	0	0	238	3	490
12:15 PM	0	0	0	2	0	15	5	201	0	0	272	8	503
12:30 PM	0	0	0	5	0	5	13	226	0	0	257	5	511
12:45 PM	0	0	0	4	0	14	8	239	0	0	256	6	527
TOTAL VOLUMES :	0	0	0	46	0	88	69	1749	0	0	1970	57	3979
APPROACH %'s :	#DIV/0!	#DIV/0!	#DIV/0!	34.33%	0.00%	65.67%	3.80%	96.20%	0.00%	0.00%	97.19%	2.81%	
PEAK HR START TIME :	1200 PM												TOTAL
PEAK HR VOL :	0	0	0	23	0	47	38	878	0	0	1023	22	2031
PEAK HR FACTOR :	0.000			0.700			0.927			0.933			0.963

UTURNS			
NB	SB	EB	WB

NB	SB	EB	WB
0	0	0	0

CONTROL : Signalized

ITM Peak Hour Summary

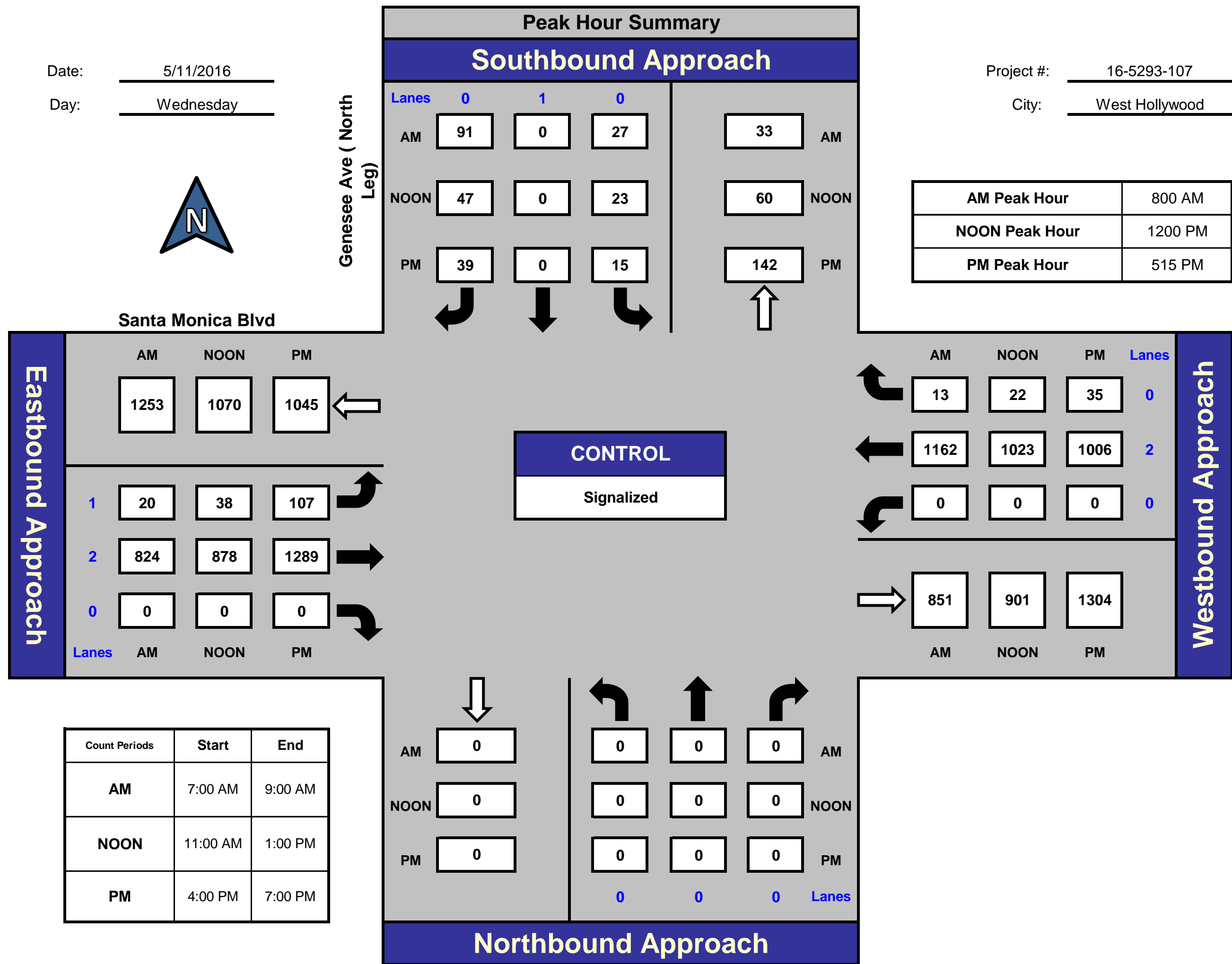
Prepared by:



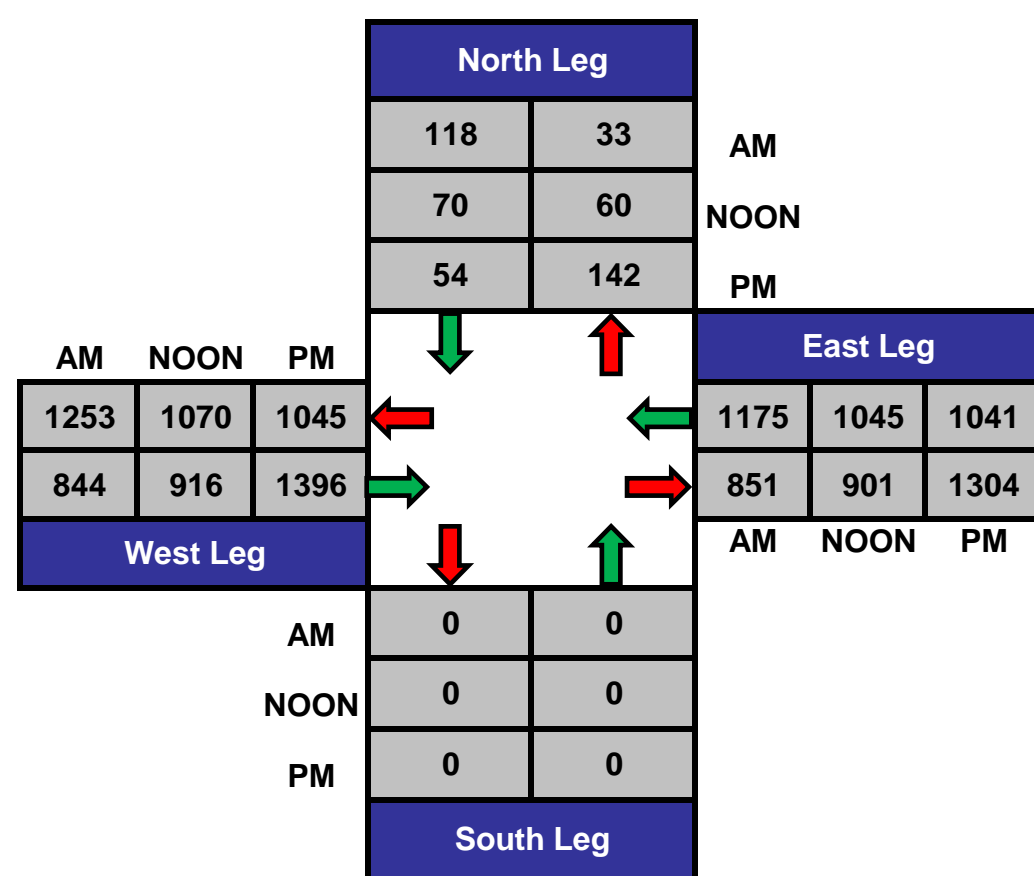
Genesee Ave (North Leg) and Santa Monica Blvd , West Hollywood

Date: 5/11/2016
Day: Wednesday

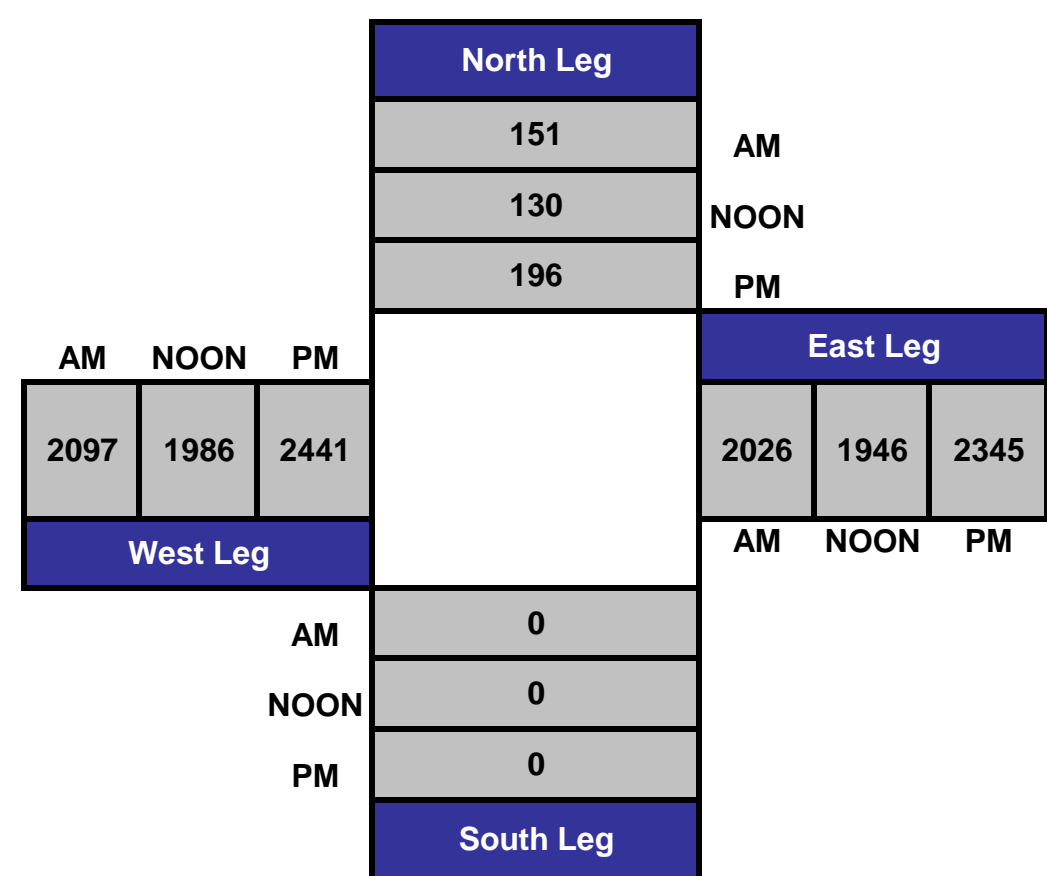
Project #: 16-5293-107
City: West Hollywood



Total Ins & Outs



Total Volume Per Leg



Intersection Turning Movement

Prepared by:

National Data & Surveying Services

Project ID: 16-5293-008

Day: Wednesday

City: West Hollywood

Date: 5/11/2016

AM													
NS/EW Streets:	Fairfax Ave			Fairfax Ave			Romaine St			Romaine St			
	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			
LANES:	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
	1	3	0	1	3	0	0	1	0	0	1	0	
7:00 AM	5	92	4	3	221	4	0	0	8	2	0	3	342
7:15 AM	6	141	4	4	248	6	0	0	11	3	1	4	428
7:30 AM	10	152	1	6	282	10	0	0	9	8	3	12	493
7:45 AM	22	170	5	9	276	18	1	1	14	3	7	14	540
8:00 AM	17	212	1	6	304	14	0	0	15	7	8	14	598
8:15 AM	17	215	4	16	300	17	3	0	16	6	8	16	618
8:30 AM	9	206	5	6	319	6	0	1	10	9	14	12	597
8:45 AM	7	193	2	6	336	8	1	2	15	3	17	19	609
TOTAL VOLUMES :	93	1381	26	56	2286	83	5	4	98	41	58	94	4225
APPROACH %'s :	6.20%	92.07%	1.73%	2.31%	94.27%	3.42%	4.67%	3.74%	91.59%	21.24%	30.05%	48.70%	
PEAK HR START TIME :	800 AM												TOTAL
PEAK HR VOL :	50	826	12	34	1259	45	4	3	56	25	47	61	2422
PEAK HR FACTOR :	0.941			0.956			0.829			0.853			0.980

UTURNS			
NB	SB	EB	WB
2	1	0	0
1	1	0	0
2	3	0	0
1	0	0	0
4	3	0	0
6	6	0	0
3	3	0	0
4	2	0	0
NB	SB	EB	WB
23	19	0	0

CONTROL : 2-Way Stop(EB/WB)

Intersection Turning Movement

Prepared by:

National Data & Surveying Services

Project ID: 16-5293-008

Day: Wednesday

City: West Hollywood

Date: 5/11/2016

		PM															
NS/EW Streets:	Fairfax Ave			Fairfax Ave			Romaine St			Romaine St							
		NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			UTURNS			
LANES:	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL	NB	SB	EB	WB
		1	3	0	1	3	0	0	1	0	0	1	0				
4:00 PM	12	284	6	13	208	4	2	1	11	4	1	6	552	6	4	0	0
4:15 PM	10	268	10	15	218	12	2	6	11	1	0	6	559	4	6	0	0
4:30 PM	13	248	14	16	240	7	0	2	8	2	2	4	556	7	4	0	0
4:45 PM	8	238	10	9	195	8	3	5	13	2	5	8	504	2	3	0	0
5:00 PM	7	319	16	13	208	15	7	8	17	2	2	7	621	3	7	0	0
5:15 PM	7	281	22	11	227	8	7	8	27	1	1	9	609	1	2	0	0
5:30 PM	18	265	21	14	218	14	3	15	10	0	2	4	584	5	2	0	0
5:45 PM	11	263	19	11	226	7	4	9	13	0	2	10	575	3	3	0	0
6:00 PM	11	285	23	5	215	13	0	8	14	2	5	7	588	3	2	0	0
6:15 PM	7	306	14	8	213	11	1	9	7	1	1	9	587	4	4	0	0
6:30 PM	6	257	14	13	250	14	2	7	12	4	2	14	595	0	2	0	0
6:45 PM	13	289	10	8	244	20	3	1	12	1	3	8	612	2	3	0	0
TOTAL VOLUMES :	123	3303	179	136	2662	133	34	79	155	20	26	92	6942	40	42	0	0
APPROACH %'s :	3.41%	91.62%	4.97%	4.64%	90.82%	4.54%	12.69%	29.48%	57.84%	14.49%	18.84%	66.67%					
PEAK HR START TIME :	500 PM												TOTAL				
PEAK HR VOL :	43	1128	78	49	879	44	21	40	67	3	7	30	2389				
PEAK HR FACTOR :	0.913			0.988			0.762			0.833			0.962				

CONTROL : 2-Way Stop(EB/WB)

Intersection Turning Movement

Prepared by:

National Data & Surveying Services

Project ID: 16-5293-008

Day: Wednesday

City: West Hollywood

Date: 5/11/2016

NOON

NS/EW Streets:	Fairfax Ave		Fairfax Ave			Romaine St			Romaine St			TOTAL	
	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			
LANES:	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	
	1	3	0	1	3	0	0	1	0	0	1	0	
11:00 AM	10	199	6	19	215	14	0	2	7	4	3	10	489
11:15 AM	8	208	3	8	231	13	2	0	3	4	0	3	483
11:30 AM	9	235	10	12	243	14	1	2	14	5	0	7	552
11:45 AM	5	200	5	12	237	12	1	2	7	5	0	12	498
12:00 PM	5	226	5	6	249	15	1	1	17	2	4	11	542
12:15 PM	5	223	6	18	232	7	1	0	7	3	2	5	509
12:30 PM	6	240	2	8	210	17	2	1	9	5	0	17	517
12:45 PM	11	262	3	17	222	8	4	0	8	3	0	12	550
TOTAL VOLUMES :	59	1793	40	100	1839	100	12	8	72	31	9	77	4140
APPROACH %'s :	3.12%	94.77%	2.11%	4.90%	90.19%	4.90%	13.04%	8.70%	78.26%	26.50%	7.69%	65.81%	
PEAK HR START TIME :	1200 PM												TOTAL
PEAK HR VOL :	27	951	16	49	913	47	8	2	41	13	6	45	2118
PEAK HR FACTOR :	0.900			0.934			0.671			0.727			0.963

UTURNS			
NB	SB	EB	WB
4	7	0	0
0	2	0	0
1	7	0	0
2	4	0	0
0	2	0	0
1	11	0	0
1	2	0	0
4	5	0	0
NB	SB	EB	WB
13	40	0	0

CONTROL : 2-Way Stop(EB/WB)

ITM Peak Hour Summary

Prepared by:



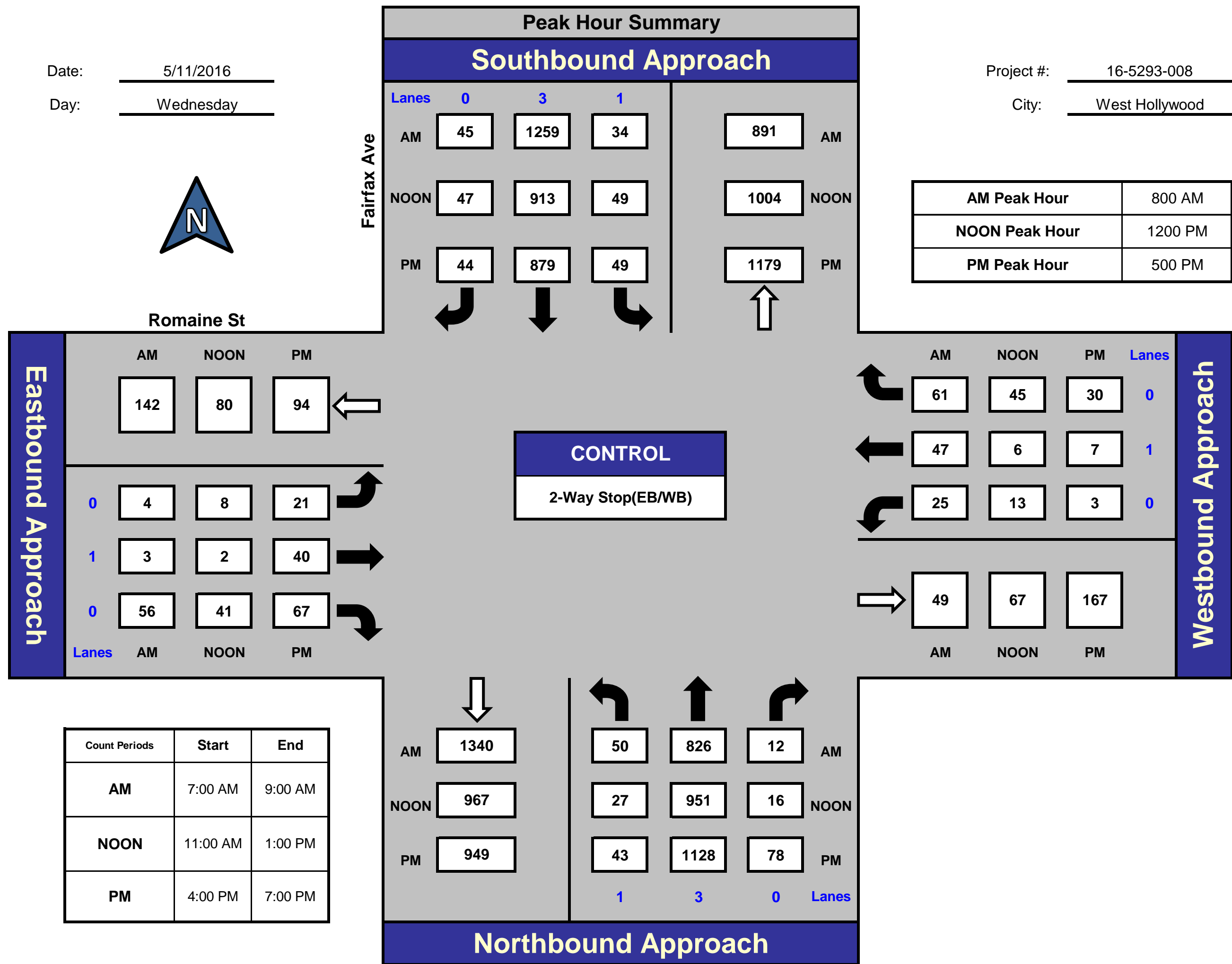
Fairfax Ave and Romaine St, West Hollywood

Date: 5/11/2016

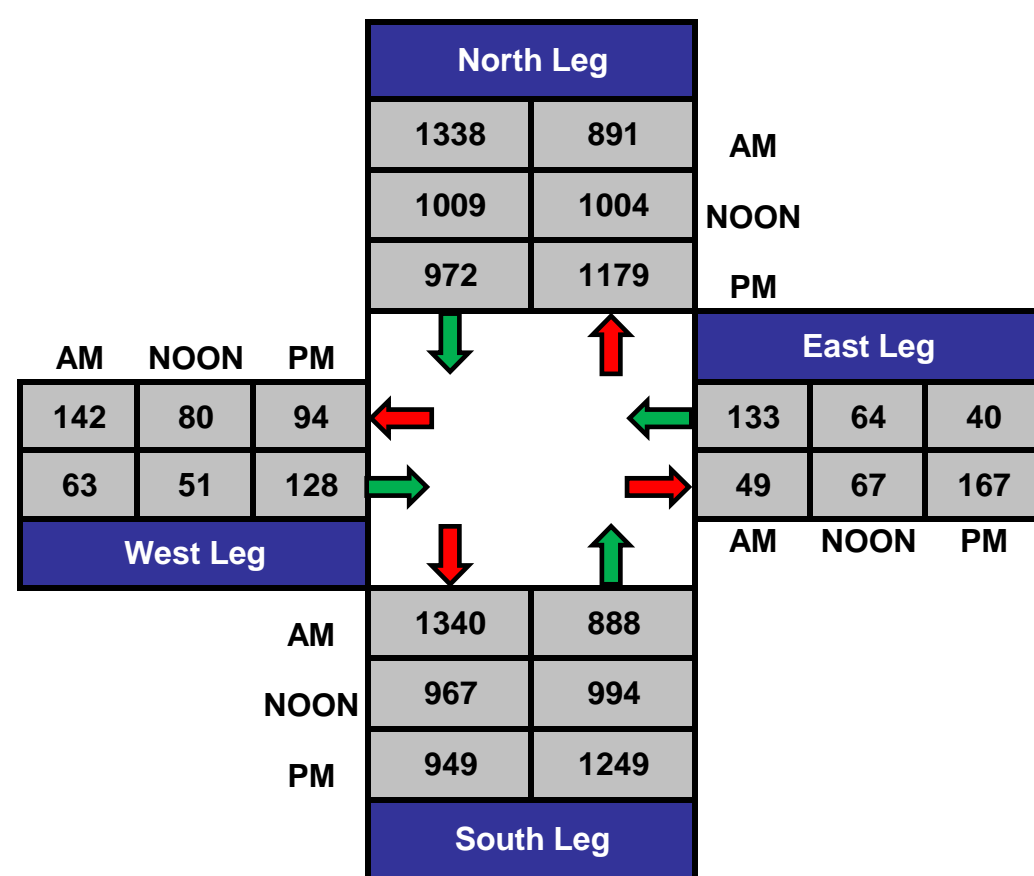
Day: Wednesday

Project #: 16-5293-008

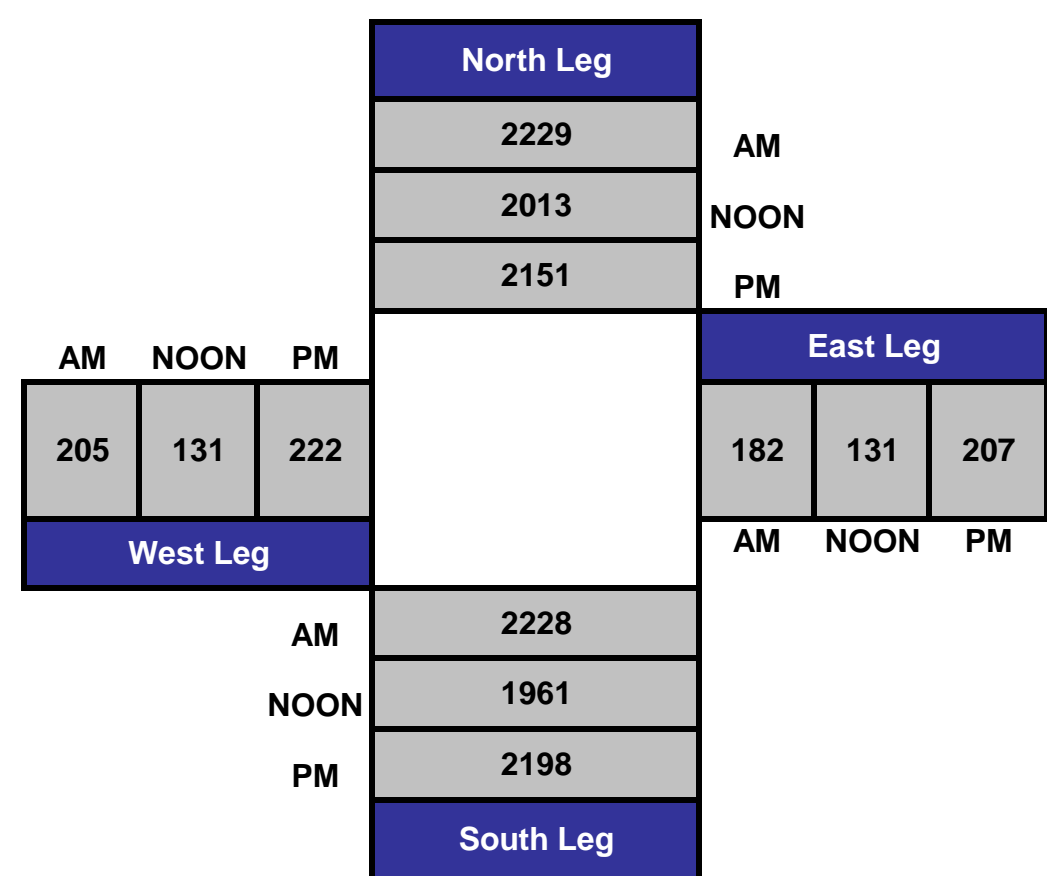
City: West Hollywood



Total Ins & Outs



Total Volume Per Leg



APPENDIX C
Intersection Level of Service Worksheets
Existing Conditions

West Hollywood - Orange Grove Mixed Use - Traffic Impact Study

1: Fairfax Ave & Fountain Ave/Fountain Ave

12/13/2018

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	104	649	92	244	1056	57	51	646	125	47	807	287
Future Volume (veh/h)	104	649	92	244	1056	57	51	646	125	47	807	287
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q, 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	1588	1588	1620	1588	1588	1620	1588	1588	1620	1588	1588	1588
Adj Flow Rate, veh/h	109	683	97	257	1112	60	54	680	132	49	849	302
Adj No. of Lanes	1	2	0	1	2	0	1	2	0	1	2	1
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Opposing Right Turn Influence	Yes			Yes			Yes			Yes		
Cap, veh/h	231	1585	225	380	1739	94	112	883	171	139	1057	443
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
Prop Arrive On Green	0.60	0.60	0.58	0.60	0.60	0.58	0.35	0.35	0.35	0.35	0.35	0.33
Ln Grp Delay, s/veh	33.4	12.7	12.9	32.0	16.5	16.5	64.1	41.8	41.9	53.9	38.8	40.2
Ln Grp LOS	C	B	B	C	B	B	E	D	D	D	D	D
Approach Vol, veh/h		889			1429			866			1200	
Approach Delay, s/veh		15.3			19.3			43.3			39.8	
Approach LOS		B			B			D			D	
Timer:		1	2	3	4	5	6	7	8			
Assigned Phs			2		4		6		8			
Case No			6.0		6.0		5.0		6.0			
Phs Duration (G+Y+Rc), s			41.4		68.6		41.4		68.6			
Change Period (Y+Rc), s			* 5.3		* 5.3		* 5.3		* 5.3			
Max Green (Gmax), s			* 36		* 64		* 36		* 64			
Max Allow Headway (MAH), s			7.2		7.4		7.2		7.4			
Max Q Clear (g_c+I1), s			40.5		50.8		36.2		53.1			
Green Ext Time (g_e), s			0.0		12.4		0.0		10.2			
Prob of Phs Call (p_c)			1.00		1.00		1.00		1.00			
Prob of Max Out (p_x)			0.00		0.98		0.00		0.99			
Left-Turn Movement Data												
Assigned Mvmt			5		7		1		3			
Mvmt Sat Flow, veh/h			486		477		669		690			
Through Movement Data												
Assigned Mvmt			2		4		6		8			
Mvmt Sat Flow, veh/h			2522		2654		3018		2912			
Right-Turn Movement Data												
Assigned Mvmt			12		14		16		18			
Mvmt Sat Flow, veh/h			489		377		1350		157			
Left Lane Group Data												
Assigned Mvmt		0	5	0	7	0	1	0	3			
Lane Assignment												

AM PEAK HOUR
EXISTING CONDITIONS

West Hollywood - Orange Grove Mixed Use - Traffic Impact Study

1: Fairfax Ave & Fountain Ave/Fountain Ave

12/13/2018

Lanes in Grp	0	1	0	1	0	1	0	1
Grp Vol (v), veh/h	0	54	0	109	0	49	0	257
Grp Sat Flow (s), veh/h/ln	0	486	0	477	0	669	0	690
Q Serve Time (g_s), s	0.0	10.5	0.0	21.3	0.0	7.7	0.0	35.5
Cycle Q Clear Time (g_c), s	0.0	38.5	0.0	48.8	0.0	34.2	0.0	51.1
Perm LT Sat Flow (s_l), veh/h/ln	0	486	0	477	0	669	0	690
Shared LT Sat Flow (s_sh), veh/h/ln	0	0	0	0	0	0	0	0
Perm LT Eff Green (g_p), s	0.0	38.5	0.0	65.7	0.0	38.5	0.0	65.7
Perm LT Serve Time (g_u), s	0.0	10.5	0.0	38.2	0.0	12.1	0.0	50.2
Perm LT Q Serve Time (g_ps), s	0.0	10.5	0.0	21.3	0.0	7.7	0.0	35.5
Time to First Blk (g_f), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Serve Time pre Blk (g_fs), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prop LT Inside Lane (P_L)	0.00	1.00	0.00	1.00	0.00	1.00	0.00	1.00
Lane Grp Cap (c), veh/h	0	112	0	231	0	139	0	380
V/C Ratio (X)	0.00	0.48	0.00	0.47	0.00	0.35	0.00	0.68
Avail Cap (c_a), veh/h	0	112	0	233	0	139	0	383
Upstream Filter (I)	0.00	0.97	0.00	1.00	0.00	1.00	0.00	1.00
Uniform Delay (d1), s/veh	0.0	50.5	0.0	30.4	0.0	47.0	0.0	26.0
Incr Delay (d2), s/veh	0.0	13.7	0.0	3.0	0.0	6.9	0.0	6.0
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	64.1	0.0	33.4	0.0	53.9	0.0	32.0
1st-Term Q (Q1), veh/ln	0.0	1.6	0.0	2.8	0.0	1.4	0.0	6.7
2nd-Term Q (Q2), veh/ln	0.0	0.4	0.0	0.2	0.0	0.3	0.0	0.6
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	1.00	0.00	1.00	0.00	1.00	0.00	1.00
%ile Back of Q (50%), veh/ln	0.0	2.1	0.0	3.0	0.0	1.7	0.0	7.3
%ile Storage Ratio (RQ%)	0.00	0.57	0.00	1.89	0.00	0.21	0.00	2.03
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Middle Lane Group Data

Assigned Mvmt	0	2	0	4	0	6	0	8
Lane Assignment		T		T		T		T
Lanes in Grp	0	1	0	1	0	2	0	1
Grp Vol (v), veh/h	0	407	0	388	0	849	0	576
Grp Sat Flow (s), veh/h/ln	0	1509	0	1509	0	1509	0	1509
Q Serve Time (g_s), s	0.0	26.4	0.0	15.3	0.0	28.0	0.0	27.4
Cycle Q Clear Time (g_c), s	0.0	26.4	0.0	15.3	0.0	28.0	0.0	27.4
Lane Grp Cap (c), veh/h	0	528	0	901	0	1057	0	901
V/C Ratio (X)	0.00	0.77	0.00	0.43	0.00	0.80	0.00	0.64
Avail Cap (c_a), veh/h	0	528	0	907	0	1057	0	907
Upstream Filter (I)	0.00	0.97	0.00	1.00	0.00	1.00	0.00	1.00
Uniform Delay (d1), s/veh	0.0	31.8	0.0	12.0	0.0	32.3	0.0	14.4
Incr Delay (d2), s/veh	0.0	10.0	0.0	0.7	0.0	6.5	0.0	2.1
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	41.8	0.0	12.7	0.0	38.8	0.0	16.5
1st-Term Q (Q1), veh/ln	0.0	11.0	0.0	6.4	0.0	11.7	0.0	11.4

AM PEAK HOUR
EXISTING CONDITIONS

West Hollywood - Orange Grove Mixed Use - Traffic Impact Study
 1: Fairfax Ave & Fountain Ave/Fountain Ave

12/13/2018

2nd-Term Q (Q2), veh/ln	0.0	1.5	0.0	0.2	0.0	1.0	0.0	0.5
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	1.00	0.00	1.00	0.00	1.00	0.00	1.00
%ile Back of Q (50%), veh/ln	0.0	12.4	0.0	6.5	0.0	12.6	0.0	11.9
%ile Storage Ratio (RQ%)	0.00	0.35	0.00	0.47	0.00	0.26	0.00	1.09
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Right Lane Group Data

Assigned Mvmt	0	12	0	14	0	16	0	18
Lane Assignment		T+R		T+R		R		T+R
Lanes in Grp	0	1	0	1	0	1	0	1
Grp Vol (v), veh/h	0	405	0	392	0	302	0	596
Grp Sat Flow (s), veh/h/ln	0	1502	0	1522	0	1350	0	1561
Q Serve Time (g_s), s	0.0	26.4	0.0	15.5	0.0	21.3	0.0	27.5
Cycle Q Clear Time (g_c), s	0.0	26.4	0.0	15.5	0.0	21.3	0.0	27.5
Prot RT Sat Flow (s_R), veh/h/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prot RT Eff Green (g_R), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prop RT Outside Lane (P_R)	0.00	0.33	0.00	0.25	0.00	1.00	0.00	0.10
Lane Grp Cap (c), veh/h	0	526	0	909	0	443	0	932
V/C Ratio (X)	0.00	0.77	0.00	0.43	0.00	0.68	0.00	0.64
Avail Cap (c_a), veh/h	0	526	0	914	0	443	0	938
Upstream Filter (I)	0.00	0.97	0.00	1.00	0.00	1.00	0.00	1.00
Uniform Delay (d1), s/veh	0.0	31.8	0.0	12.2	0.0	32.0	0.0	14.5
Incr Delay (d2), s/veh	0.0	10.1	0.0	0.7	0.0	8.2	0.0	2.0
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	41.9	0.0	12.9	0.0	40.2	0.0	16.5
1st-Term Q (Q1), veh/ln	0.0	10.9	0.0	6.5	0.0	7.9	0.0	11.8
2nd-Term Q (Q2), veh/ln	0.0	1.5	0.0	0.2	0.0	1.0	0.0	0.5
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	1.00	0.00	1.00	0.00	1.00	0.00	1.00
%ile Back of Q (50%), veh/ln	0.0	12.4	0.0	6.6	0.0	8.9	0.0	12.3
%ile Storage Ratio (RQ%)	0.00	0.34	0.00	0.48	0.00	0.19	0.00	1.13
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Intersection Summary

HCM 2010 Ctrl Delay	28.8
HCM 2010 LOS	C

Notes

* HCM 2010 computational engine requires equal clearance times for the phases crossing the barrier.

AM PEAK HOUR
 EXISTING CONDITIONS

West Hollywood - Orange Grove Mixed Use - Traffic Impact Study
 2: Orange Grove Ave & Fountain Ave

02/21/2019



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↔			↔			↔			↔	
Traffic Volume (veh/h)	2	794	40	60	1201	6	3	3	60	4	24	156
Future Volume (Veh/h)	2	794	40	60	1201	6	3	3	60	4	24	156
Sign Control		Free			Free			Stop			Stop	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.95	0.92	0.92	0.92	0.92	0.95	0.92	0.95	0.92	0.95	0.95	0.95
Hourly flow rate (vph)	2	863	43	65	1305	6	3	3	65	4	25	164
Pedestrians												
Lane Width (ft)												
Walking Speed (ft/s)												
Percent Blockage												
Right turn flare (veh)												
Median type		None			None							
Median storage (veh)												
Upstream signal (ft)		377			1010							
pX, platoon unblocked				0.88			0.88	0.88	0.88	0.88	0.88	
vC, conflicting volume	1311			906			1848	2330	453	1940	2348	656
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	1311			618			1689	2237	103	1794	2258	656
tC, single (s)	4.1			4.1			7.5	6.5	6.9	7.5	6.5	6.9
tC, 2 stage (s)												
tF (s)	2.2			2.2			3.5	4.0	3.3	3.5	4.0	3.3
p0 queue free %	100			92			74	91	92	89	24	60
cM capacity (veh/h)	524			842			11	34	819	36	33	408
Direction, Lane #	EB 1	EB 2	WB 1	WB 2	NB 1	SB 1						
Volume Total	434	474	718	658	71	193						
Volume Left	2	0	65	0	3	4						
Volume Right	0	43	0	6	65	164						
cSH	524	1700	842	1700	164	151						
Volume to Capacity	0.00	0.28	0.08	0.39	0.43	1.28						
Queue Length 95th (ft)	0	0	6	0	49	288						
Control Delay (s)	0.1	0.0	2.0	0.0	42.7	223.0						
Lane LOS	A		A		E	F						
Approach Delay (s)	0.1		1.0		42.7	223.0						
Approach LOS					E	F						
Intersection Summary												
Average Delay			18.7									
Intersection Capacity Utilization			93.1%		ICU Level of Service				F			
Analysis Period (min)			15									

AM PEAK HOUR
 EXISTING CONDITIONS

West Hollywood - Orange Grove Mixed Use - Traffic Impact Study
 3: Ogden Ave & Fountain Ave

12/13/2018

Intersection												
Int Delay, s/veh	8.7											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↔			↔			↔			↔	
Traffic Vol, veh/h	5	795	13	63	1361	6	11	2	55	0	7	16
Future Vol, veh/h	5	795	13	63	1361	6	11	2	55	0	7	16
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	95	92	92	92	92	95	92	95	92	95	95	95
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	5	864	14	68	1479	6	12	2	60	0	7	17

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	1485	0	0	878	0	0	1760	2502	439	2061	2506	743
Stage 1	-	-	-	-	-	-	881	881	-	1618	1618	-
Stage 2	-	-	-	-	-	-	879	1621	-	443	888	-
Critical Hdwy	4.14	-	-	4.14	-	-	7.54	6.54	6.94	7.54	6.54	6.94
Critical Hdwy Stg 1	-	-	-	-	-	-	6.54	5.54	-	6.54	5.54	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.54	5.54	-	6.54	5.54	-
Follow-up Hdwy	2.22	-	-	2.22	-	-	3.52	4.02	3.32	3.52	4.02	3.32
Pot Cap-1 Maneuver	449	-	-	765	-	-	54	28	566	32	28	358
Stage 1	-	-	-	-	-	-	308	363	-	108	161	-
Stage 2	-	-	-	-	-	-	309	160	-	564	360	-
Platoon blocked, %	-	-	-	-	-	-	-	-	-	-	-	-
Mov Cap-1 Maneuver	449	-	-	765	-	-	18	13	566	15	13	358
Mov Cap-2 Maneuver	-	-	-	-	-	-	18	13	-	15	13	-
Stage 1	-	-	-	-	-	-	301	355	-	106	79	-
Stage 2	-	-	-	-	-	-	131	78	-	490	352	-
























Approach	EB			WB			NB			SB		
HCM Control Delay, s	0.2			2.7			175.1			193.8		
HCM LOS							F			F		

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	79	449	-	-	765	-	-	39
HCM Lane V/C Ratio	0.935	0.012	-	-	0.09	-	-	0.621
HCM Control Delay (s)	175.1	13.1	0.1	-	10.2	2.4	-	193.8
HCM Lane LOS	F	B	A	-	B	A	-	F
HCM 95th %tile Q(veh)	5	0	-	-	0.3	-	-	2.2

AM PEAK HOUR
 EXISTING CONDITIONS

West Hollywood - Orange Grove Mixed Use - Traffic Impact Study
 4: Fairfax Ave & Santa Monica Blvd/Santa Monica Boulevard

12/13/2018

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	120	606	63	359	907	49	90	668	131	65	922	109
Future Volume (veh/h)	120	606	63	359	907	49	90	668	131	65	922	109
Number	5	2	12	1	6	16	3	8	18	7	4	14
Initial Q, 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	1588	1588	1588	1588	1588	1620	1588	1588	1588	1588	1588	1588
Adj Flow Rate, veh/h	126	638	66	378	955	52	95	703	138	68	971	115
Adj No. of Lanes	1	2	1	1	2	0	1	2	1	1	2	1
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Opposing Right Turn Influence	Yes			Yes			Yes			Yes		
Cap, veh/h	204	994	439	364	1186	65	131	1005	450	175	945	417
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
Prop Arrive On Green	0.06	0.33	0.32	0.13	0.41	0.40	0.05	0.33	0.33	0.03	0.31	0.31
Ln Grp Delay, s/veh	34.1	36.0	28.3	87.2	40.8	40.5	48.5	35.5	28.9	34.4	74.2	30.3
Ln Grp LOS	C	D	C	F	D	D	D	D	C	C	F	C
Approach Vol, veh/h		830			1385			936			1154	
Approach Delay, s/veh		35.1			53.4			35.8			67.5	
Approach LOS		D			D			D			E	
Timer:		1	2	3	4	5	6	7	8			
Assigned Phs		1	2	3	4	5	6	7	8			
Case No		1.1	3.0	1.1	3.0	1.1	4.0	1.1	3.0			
Phs Duration (G+Y+Rc), s		21.0	42.5	10.7	40.8	12.0	51.5	8.4	43.1			
Change Period (Y+Rc), s		* 4	5.1	* 4	* 5.3	* 4	5.1	* 4	* 5.3			
Max Green (Gmax), s		* 17	37.1	* 7	* 36	* 8	46.1	* 8	* 35			
Max Allow Headway (MAH), s		3.8	5.2	3.8	5.1	3.8	5.2	3.8	5.1			
Max Q Clear (g_c+I1), s		17.5	22.7	7.1	38.0	8.5	35.3	4.9	25.3			
Green Ext Time (g_e), s		0.0	9.3	0.0	0.0	0.0	7.5	0.0	7.1			
Prob of Phs Call (p_c)		1.00	1.00	0.95	1.00	0.98	1.00	0.89	1.00			
Prob of Max Out (p_x)		1.00	0.67	1.00	1.00	1.00	0.78	1.00	0.86			
Left-Turn Movement Data												
Assigned Mvmt		1		3		5		7				
Mvmt Sat Flow, veh/h		1513		1513		1513		1513				
Through Movement Data												
Assigned Mvmt			2		4		6		8			
Mvmt Sat Flow, veh/h			3018		3018		2911		3018			
Right-Turn Movement Data												
Assigned Mvmt			12		14		16		18			
Mvmt Sat Flow, veh/h			1350		1350		158		1350			
Left Lane Group Data												
Assigned Mvmt		1	0	3	0	5	0	7	0			
Lane Assignment		(Pr/Pm)		(Pr/Pm)		(Pr/Pm)		(Pr/Pm)				

AM PEAK HOUR
 EXISTING CONDITIONS

West Hollywood - Orange Grove Mixed Use - Traffic Impact Study
 4: Fairfax Ave & Santa Monica Blvd/Santa Monica Boulevard

12/13/2018

Lanes in Grp	1	0	1	0	1	0	1	0
Grp Vol (v), veh/h	378	0	95	0	126	0	68	0
Grp Sat Flow (s), veh/h/ln	1513	0	1513	0	1513	0	1513	0
Q Serve Time (g_s), s	15.5	0.0	5.1	0.0	6.5	0.0	2.9	0.0
Cycle Q Clear Time (g_c), s	15.5	0.0	5.1	0.0	6.5	0.0	2.9	0.0
Perm LT Sat Flow (s_l), veh/h/ln	740	0	517	0	557	0	651	0
Shared LT Sat Flow (s_sh), veh/h/ln	0	0	0	0	0	0	0	0
Perm LT Eff Green (g_p), s	37.9	0.0	34.0	0.0	35.9	0.0	34.0	0.0
Perm LT Serve Time (g_u), s	15.2	0.0	0.0	0.0	11.6	0.0	13.0	0.0
Perm LT Q Serve Time (g_ps), s	15.2	0.0	0.0	0.0	7.4	0.0	4.3	0.0
Time to First Blk (g_f), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Serve Time pre Blk (g_fs), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prop LT Inside Lane (P_L)	1.00	0.00	1.00	0.00	1.00	0.00	1.00	0.00
Lane Grp Cap (c), veh/h	364	0	131	0	204	0	175	0
V/C Ratio (X)	1.04	0.00	0.72	0.00	0.62	0.00	0.39	0.00
Avail Cap (c_a), veh/h	364	0	135	0	204	0	222	0
Upstream Filter (I)	1.00	0.00	1.00	0.00	1.00	0.00	0.87	0.00
Uniform Delay (d1), s/veh	29.9	0.0	31.7	0.0	28.6	0.0	33.2	0.0
Incr Delay (d2), s/veh	57.3	0.0	16.8	0.0	5.5	0.0	1.2	0.0
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	87.2	0.0	48.5	0.0	34.1	0.0	34.4	0.0
1st-Term Q (Q1), veh/ln	7.7	0.0	2.1	0.0	1.1	0.0	0.8	0.0
2nd-Term Q (Q2), veh/ln	5.8	0.0	0.6	0.0	0.3	0.0	0.1	0.0
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	1.00	0.00	1.00	0.00	1.00	0.00	1.00	0.00
%ile Back of Q (50%), veh/ln	13.5	0.0	2.7	0.0	1.4	0.0	0.8	0.0
%ile Storage Ratio (RQ%)	1.83	0.00	0.55	0.00	0.22	0.00	0.20	0.00
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	3.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Middle Lane Group Data								
Assigned Mvmt	0	2	0	4	0	6	0	8
Lane Assignment		T		T		T		T
Lanes in Grp	0	2	0	2	0	1	0	2
Grp Vol (v), veh/h	0	638	0	971	0	495	0	703
Grp Sat Flow (s), veh/h/ln	0	1509	0	1509	0	1509	0	1509
Q Serve Time (g_s), s	0.0	20.7	0.0	36.0	0.0	33.3	0.0	23.3
Cycle Q Clear Time (g_c), s	0.0	20.7	0.0	36.0	0.0	33.3	0.0	23.3
Lane Grp Cap (c), veh/h	0	994	0	945	0	615	0	1005
V/C Ratio (X)	0.00	0.64	0.00	1.03	0.00	0.81	0.00	0.70
Avail Cap (c_a), veh/h	0	994	0	945	0	615	0	1005
Upstream Filter (I)	0.00	1.00	0.00	0.87	0.00	1.00	0.00	1.00
Uniform Delay (d1), s/veh	0.0	32.8	0.0	39.5	0.0	30.0	0.0	33.3
Incr Delay (d2), s/veh	0.0	3.2	0.0	34.7	0.0	10.8	0.0	2.2
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	36.0	0.0	74.2	0.0	40.8	0.0	35.5
1st-Term Q (Q1), veh/ln	0.0	8.6	0.0	15.0	0.0	13.9	0.0	9.7

AM PEAK HOUR
 EXISTING CONDITIONS

West Hollywood - Orange Grove Mixed Use - Traffic Impact Study
 4: Fairfax Ave & Santa Monica Blvd/Santa Monica Boulevard

12/13/2018

2nd-Term Q (Q2), veh/ln	0.0	0.4	0.0	4.6	0.0	1.8	0.0	0.3
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	1.00	0.00	1.00	0.00	1.00	0.00	1.00
%ile Back of Q (50%), veh/ln	0.0	9.0	0.0	19.5	0.0	15.7	0.0	10.0
%ile Storage Ratio (RQ%)	0.00	0.58	0.00	1.59	0.00	1.47	0.00	0.38
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	6.6	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.3	0.0	0.0	0.0	0.0

Right Lane Group Data

Assigned Mvmt	0	12	0	14	0	16	0	18
Lane Assignment		R		R		T+R		R
Lanes in Grp	0	1	0	1	0	1	0	1
Grp Vol (v), veh/h	0	66	0	115	0	512	0	138
Grp Sat Flow (s), veh/h/ln	0	1350	0	1350	0	1560	0	1350
Q Serve Time (g_s), s	0.0	4.0	0.0	7.4	0.0	33.3	0.0	8.7
Cycle Q Clear Time (g_c), s	0.0	4.0	0.0	7.4	0.0	33.3	0.0	8.7
Prot RT Sat Flow (s_R), veh/h/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prot RT Eff Green (g_R), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prop RT Outside Lane (P_R)	0.00	1.00	0.00	1.00	0.00	0.10	0.00	1.00
Lane Grp Cap (c), veh/h	0	439	0	417	0	636	0	450
V/C Ratio (X)	0.00	0.15	0.00	0.28	0.00	0.81	0.00	0.31
Avail Cap (c_a), veh/h	0	439	0	417	0	636	0	450
Upstream Filter (I)	0.00	1.00	0.00	0.87	0.00	1.00	0.00	1.00
Uniform Delay (d1), s/veh	0.0	27.6	0.0	30.0	0.0	30.1	0.0	28.5
Incr Delay (d2), s/veh	0.0	0.7	0.0	0.3	0.0	10.5	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
Control Delay (d), s/veh	0.0	28.3	0.0	30.3	0.0	40.5	0.0	28.9
1st-Term Q (Q1), veh/ln	0.0	1.5	0.0	2.8	0.0	14.4	0.0	3.2
2nd-Term Q (Q2), veh/ln	0.0	0.1	0.0	0.0	0.0	1.8	0.0	0.0
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	1.00	0.00	1.00	0.00	1.00	0.00	1.00
%ile Back of Q (50%), veh/ln	0.0	1.6	0.0	2.8	0.0	16.2	0.0	3.3
%ile Storage Ratio (RQ%)	0.00	0.10	0.00	0.23	0.00	1.51	0.00	0.79
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Intersection Summary

HCM 2010 Ctrl Delay	49.8
HCM 2010 LOS	D

Notes

* HCM 2010 computational engine requires equal clearance times for the phases crossing the barrier.

AM PEAK HOUR
 EXISTING CONDITIONS

West Hollywood - Orange Grove Mixed Use - Traffic Impact Study
 5: Santa Monica Boulevard & Orange Grove Ave

12/13/2018

Intersection

Int Delay, s/veh 1

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↑↓			↑↓				↑			↑
Traffic Vol, veh/h	0	784	16	0	1206	44	0	0	15	0	0	106
Future Vol, veh/h	0	784	16	0	1206	44	0	0	15	0	0	106
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	0	-	-	0
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	95	95	92	92	95	95	95	92	95	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	852	17	0	1311	48	0	0	16	0	0	115

Major/Minor	Major1	Major2	Minor1	Minor2								
Conflicting Flow All	-	0	0	-	-	0	-	-	435	-	-	680
Stage 1	-	-	-	-	-	-	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-	-	-	-	-	-	-
Critical Hdwy	-	-	-	-	-	-	-	-	6.94	-	-	6.94
Critical Hdwy Stg 1	-	-	-	-	-	-	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-	-	-	-	-	-	-
Follow-up Hdwy	-	-	-	-	-	-	-	-	3.32	-	-	3.32
Pot Cap-1 Maneuver	0	-	-	0	-	-	0	0	569	0	0	393
Stage 1	0	-	-	0	-	-	0	0	-	0	0	-
Stage 2	0	-	-	0	-	-	0	0	-	0	0	-
Platoon blocked, %	-	-	-	-	-	-	-	-	-	-	-	-
Mov Cap-1 Maneuver	-	-	-	-	-	-	-	-	569	-	-	393
Mov Cap-2 Maneuver	-	-	-	-	-	-	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0	0	11.5	17.9
HCM LOS			B	C

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBT	WBR	SBLn1
Capacity (veh/h)	569	-	-	-	-	393
HCM Lane V/C Ratio	0.028	-	-	-	-	0.293
HCM Control Delay (s)	11.5	-	-	-	-	17.9
HCM Lane LOS	B	-	-	-	-	C
HCM 95th %tile Q(veh)	0.1	-	-	-	-	1.2

AM PEAK HOUR
 EXISTING CONDITIONS

West Hollywood - Orange Grove Mixed Use - Traffic Impact Study
 6: Ogden Ave

12/13/2018

Intersection						
Int Delay, s/veh	1.4					
Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		↑↑	↑↑		↑	
Traffic Vol, veh/h	21	809	1193	24	4	105
Future Vol, veh/h	21	809	1193	24	4	105
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	23	879	1297	26	4	114

Major/Minor	Major1	Major2	Minor2		
Conflicting Flow All	1323	0	-	0	1796 662
Stage 1	-	-	-	-	1310 -
Stage 2	-	-	-	-	486 -
Critical Hdwy	4.14	-	-	-	6.84 6.94
Critical Hdwy Stg 1	-	-	-	-	5.84 -
Critical Hdwy Stg 2	-	-	-	-	5.84 -
Follow-up Hdwy	2.22	-	-	-	3.52 3.32
Pot Cap-1 Maneuver	518	-	-	-	72 404
Stage 1	-	-	-	-	217 -
Stage 2	-	-	-	-	584 -
Platoon blocked, %		-	-	-	
Mov Cap-1 Maneuver	518	-	-	-	66 404
Mov Cap-2 Maneuver	-	-	-	-	66 -
Stage 1	-	-	-	-	198 -
Stage 2	-	-	-	-	584 -

Approach	EB	WB	SB
HCM Control Delay, s	0.8	0	21.1
HCM LOS			C

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	518	-	-	-	340
HCM Lane V/C Ratio	0.044	-	-	-	0.348
HCM Control Delay (s)	12.3	0.5	-	-	21.1
HCM Lane LOS	B	A	-	-	C
HCM 95th %tile Q(veh)	0.1	-	-	-	1.5

AM PEAK HOUR
 EXISTING CONDITIONS

Intersection						
Int Delay, s/veh	1.5					
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↑↑			↑↑	↑	
Traffic Vol, veh/h	794	16	58	1240	7	34
Future Vol, veh/h	794	16	58	1240	7	34
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	95	95	95	95	95	95
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	836	17	61	1305	7	36

Major/Minor	Major1	Major2	Minor1		
Conflicting Flow All	0	0	853	0	1620
Stage 1	-	-	-	-	845
Stage 2	-	-	-	-	775
Critical Hdwy	-	-	4.14	-	6.84
Critical Hdwy Stg 1	-	-	-	-	5.84
Critical Hdwy Stg 2	-	-	-	-	5.84
Follow-up Hdwy	-	-	2.22	-	3.52
Pot Cap-1 Maneuver	-	-	782	-	94
Stage 1	-	-	-	-	382
Stage 2	-	-	-	-	415
Platoon blocked, %	-	-	-	-	-
Mov Cap-1 Maneuver	-	-	782	-	67
Mov Cap-2 Maneuver	-	-	-	-	67
Stage 1	-	-	-	-	382
Stage 2	-	-	-	-	297

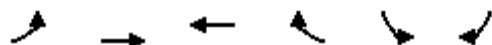
Approach	EB	WB	NB
HCM Control Delay, s	0	1.7	22.3
HCM LOS			C

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	251	-	-	782	-
HCM Lane V/C Ratio	0.172	-	-	0.078	-
HCM Control Delay (s)	22.3	-	-	10	1.3
HCM Lane LOS	C	-	-	A	A
HCM 95th %tile Q(veh)	0.6	-	-	0.3	-

AM PEAK HOUR
EXISTING CONDITIONS

West Hollywood - Orange Grove Mixed Use - Traffic Impact Study
 7: Santa Monica Blvd & Genesse Ave

12/13/2018



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (vph)	20	824	1162	13	27	91
Future Volume (vph)	20	824	1162	13	27	91
Ideal Flow (vphpl)	1620	1620	1620	1620	1620	1620
Total Lost time (s)	4.5	5.6	5.6		4.6	
Lane Util. Factor	1.00	0.95	0.95		1.00	
Frt	1.00	1.00	1.00		0.90	
Flt Protected	0.95	1.00	1.00		0.99	
Satd. Flow (prot)	1509	3018	3013		1406	
Flt Permitted	0.18	1.00	1.00		0.99	
Satd. Flow (perm)	294	3018	3013		1406	
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	22	896	1263	14	29	99
RTOR Reduction (vph)	0	0	1	0	84	0
Lane Group Flow (vph)	22	896	1276	0	44	0
Turn Type	pm+pt	NA	NA		Prot	
Protected Phases	5	2	6		4	
Permitted Phases	2					
Actuated Green, G (s)	71.7	68.7	72.8		15.6	
Effective Green, g (s)	70.7	68.2	72.3		16.1	
Actuated g/C Ratio	0.67	0.65	0.68		0.15	
Clearance Time (s)	4.0	5.1	5.1		5.1	
Vehicle Extension (s)	1.0	3.0	3.0		3.0	
Lane Grp Cap (vph)	225	1949	2062		214	
v/s Ratio Prot	c0.00	0.30	c0.42		c0.03	
v/s Ratio Perm	0.06					
v/c Ratio	0.10	0.46	0.62		0.21	
Uniform Delay, d1	6.4	9.4	9.1		39.2	
Progression Factor	0.25	0.17	1.00		1.00	
Incremental Delay, d2	0.1	0.7	1.4		0.5	
Delay (s)	1.6	2.3	10.5		39.6	
Level of Service	A	A	B		D	
Approach Delay (s)		2.3	10.5		39.6	
Approach LOS		A	B		D	

Intersection Summary

HCM 2000 Control Delay	8.9	HCM 2000 Level of Service	A
HCM 2000 Volume to Capacity ratio	0.53		
Actuated Cycle Length (s)	105.6	Sum of lost time (s)	14.7
Intersection Capacity Utilization	59.2%	ICU Level of Service	B
Analysis Period (min)	15		

c Critical Lane Group

AM PEAK HOUR
 EXISTING CONDITIONS

West Hollywood - Orange Grove Mixed Use - Traffic Impact Study
 8: Romaine St & Fairfax Ave

12/13/2018

Intersection												
Int Delay, s/veh	35.3											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↔			↔	↔	↔	↕	↕	↕	↕	↕
Traffic Vol, veh/h	4	3	56	25	47	61	50	826	12	34	1259	45
Future Vol, veh/h	4	3	56	25	47	61	50	826	12	34	1259	45
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	0	90	-	0	102	-	0
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	4	3	61	27	51	66	54	898	13	37	1368	49

Major/Minor	Minor2		Minor1		Major1		Major2					
Conflicting Flow All	2025	2461	684	1766	2497	449	1417	0	0	911	0	0
Stage 1	1442	1442	-	1006	1006	-	-	-	-	-	-	-
Stage 2	583	1019	-	760	1491	-	-	-	-	-	-	-
Critical Hdwy	7.54	6.54	6.94	7.54	6.54	6.94	4.14	-	-	4.14	-	-
Critical Hdwy Stg 1	6.54	5.54	-	6.54	5.54	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.54	5.54	-	6.54	5.54	-	-	-	-	-	-	-
Follow-up Hdwy	3.52	4.02	3.32	3.52	4.02	3.32	2.22	-	-	2.22	-	-
Pot Cap-1 Maneuver	34	30	391	53	~ 29	557	477	-	-	743	-	-
Stage 1	139	196	-	258	317	-	-	-	-	-	-	-
Stage 2	465	313	-	364	185	-	-	-	-	-	-	-
Platoon blocked, %								-	-	-	-	-
Mov Cap-1 Maneuver	-	25	391	36	~ 24	557	477	-	-	743	-	-
Mov Cap-2 Maneuver	-	25	-	36	~ 24	-	-	-	-	-	-	-
Stage 1	123	186	-	229	281	-	-	-	-	-	-	-
Stage 2	297	278	-	287	176	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s		\$ 635	0.8	0.3
HCM LOS	-	F		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1WBLn1WBLn2	SBL	SBT	SBR
Capacity (veh/h)	477	-	-	-	27	557	743
HCM Lane V/C Ratio	0.114	-	-	-	2.899	0.119	0.05
HCM Control Delay (s)	13.5	-	-	\$ 1162.5	12.3	10.1	-
HCM Lane LOS	B	-	-	-	F	B	B
HCM 95th %tile Q(veh)	0.4	-	-	-	9.5	0.4	0.2






















Notes
 -: Volume exceeds capacity \$: Delay exceeds 300s +: Computation Not Defined *: All major volume in platoon

AM PEAK HOUR
 EXISTING CONDITIONS

West Hollywood - Orange Grove Mixed Use - Traffic Impact Study

1: Fairfax Ave & Fountain Ave

12/13/2018

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	157	733	55	150	907	75	49	705	138	52	671	211
Future Volume (veh/h)	157	733	55	150	907	75	49	705	138	52	671	211
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q, 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	1588	1588	1620	1588	1588	1620	1588	1588	1620	1588	1588	1588
Adj Flow Rate, veh/h	165	772	58	158	955	79	52	742	145	55	706	222
Adj No. of Lanes	1	2	0	1	2	0	1	2	0	1	2	1
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Opposing Right Turn Influence	Yes			Yes			Yes			Yes		
Cap, veh/h	277	1698	128	359	1684	139	157	883	172	115	1058	444
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
Prop Arrive On Green	0.60	0.60	0.57	0.60	0.60	0.57	0.35	0.35	0.35	0.35	0.35	0.33
Ln Grp Delay, s/veh	34.5	13.0	13.1	24.0	14.8	15.0	48.7	47.3	47.4	64.7	33.6	33.7
Ln Grp LOS	C	B	B	C	B	B	D	D	D	E	C	C
Approach Vol, veh/h		995			1192			939			983	
Approach Delay, s/veh		16.6			16.1			47.4			35.4	
Approach LOS		B			B			D			D	
Timer:		1	2	3	4	5	6	7	8			
Assigned Phs			2		4		6		8			
Case No			6.0		6.0		5.0		6.0			
Phs Duration (G+Y+Rc), s			41.5		68.5		41.5		68.5			
Change Period (Y+Rc), s			* 5.3		* 5.3		* 5.3		* 5.3			
Max Green (Gmax), s			* 36		* 64		* 36		* 64			
Max Allow Headway (MAH), s			7.2		7.4		7.2		7.4			
Max Q Clear (g_c+I1), s			32.7		54.1		40.6		37.9			
Green Ext Time (g_e), s			2.9		9.1		0.0		23.3			
Prob of Phs Call (p_c)			1.00		1.00		1.00		1.00			
Prob of Max Out (p_x)			0.00		0.99		0.00		0.91			
Left-Turn Movement Data												
Assigned Mvmt			5		7		1		3			
Mvmt Sat Flow, veh/h			600		543		624		658			
Through Movement Data												
Assigned Mvmt			2		4		6		8			
Mvmt Sat Flow, veh/h			2518		2846		3018		2822			
Right-Turn Movement Data												
Assigned Mvmt			12		14		16		18			
Mvmt Sat Flow, veh/h			492		214		1350		233			
Left Lane Group Data												
Assigned Mvmt		0	5	0	7	0	1	0	3			
Lane Assignment												

MIDDAY PEAK HOUR
EXISTING CONDITIONS

West Hollywood - Orange Grove Mixed Use - Traffic Impact Study

1: Fairfax Ave & Fountain Ave

12/13/2018

Lanes in Grp	0	1	0	1	0	1	0	1
Grp Vol (v), veh/h	0	52	0	165	0	55	0	158
Grp Sat Flow (s), veh/h/ln	0	600	0	543	0	624	0	658
Q Serve Time (g_s), s	0.0	8.8	0.0	29.3	0.0	8.7	0.0	19.3
Cycle Q Clear Time (g_c), s	0.0	30.7	0.0	52.1	0.0	38.6	0.0	35.9
Perm LT Sat Flow (s_l), veh/h/ln	0	600	0	543	0	624	0	658
Shared LT Sat Flow (s_sh), veh/h/ln	0	0	0	0	0	0	0	0
Perm LT Eff Green (g_p), s	0.0	38.6	0.0	65.6	0.0	38.6	0.0	65.6
Perm LT Serve Time (g_u), s	0.0	16.7	0.0	42.8	0.0	8.7	0.0	49.0
Perm LT Q Serve Time (g_ps), s	0.0	8.8	0.0	29.3	0.0	8.7	0.0	19.3
Time to First Blk (g_f), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Serve Time pre Blk (g_fs), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prop LT Inside Lane (P_L)	0.00	1.00	0.00	1.00	0.00	1.00	0.00	1.00
Lane Grp Cap (c), veh/h	0	157	0	277	0	115	0	359
V/C Ratio (X)	0.00	0.33	0.00	0.60	0.00	0.48	0.00	0.44
Avail Cap (c_a), veh/h	0	157	0	279	0	115	0	362
Upstream Filter (I)	0.00	0.97	0.00	1.00	0.00	1.00	0.00	1.00
Uniform Delay (d1), s/veh	0.0	43.3	0.0	29.4	0.0	51.1	0.0	22.2
Incr Delay (d2), s/veh	0.0	5.4	0.0	5.1	0.0	13.6	0.0	1.7
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	48.7	0.0	34.5	0.0	64.7	0.0	24.0
1st-Term Q (Q1), veh/ln	0.0	1.5	0.0	4.4	0.0	1.7	0.0	3.5
2nd-Term Q (Q2), veh/ln	0.0	0.2	0.0	0.4	0.0	0.4	0.0	0.2
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	1.00	0.00	1.00	0.00	1.00	0.00	1.00
%ile Back of Q (50%), veh/ln	0.0	1.7	0.0	4.8	0.0	2.1	0.0	3.6
%ile Storage Ratio (RQ%)	0.00	0.47	0.00	3.04	0.00	0.26	0.00	1.00
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Middle Lane Group Data

Assigned Mvmt	0	2	0	4	0	6	0	8
Lane Assignment		T		T		T		T
Lanes in Grp	0	1	0	1	0	2	0	1
Grp Vol (v), veh/h	0	444	0	409	0	706	0	511
Grp Sat Flow (s), veh/h/ln	0	1509	0	1509	0	1509	0	1509
Q Serve Time (g_s), s	0.0	29.8	0.0	16.5	0.0	21.8	0.0	22.7
Cycle Q Clear Time (g_c), s	0.0	29.8	0.0	16.5	0.0	21.8	0.0	22.7
Lane Grp Cap (c), veh/h	0	529	0	900	0	1058	0	900
V/C Ratio (X)	0.00	0.84	0.00	0.45	0.00	0.67	0.00	0.57
Avail Cap (c_a), veh/h	0	529	0	907	0	1058	0	907
Upstream Filter (I)	0.00	0.97	0.00	1.00	0.00	1.00	0.00	1.00
Uniform Delay (d1), s/veh	0.0	32.9	0.0	12.3	0.0	30.3	0.0	13.5
Incr Delay (d2), s/veh	0.0	14.4	0.0	0.7	0.0	3.3	0.0	1.3
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	47.3	0.0	13.0	0.0	33.6	0.0	14.8
1st-Term Q (Q1), veh/ln	0.0	12.3	0.0	6.8	0.0	9.1	0.0	9.4

MIDDAY PEAK HOUR
EXISTING CONDITIONS

West Hollywood - Orange Grove Mixed Use - Traffic Impact Study
 1: Fairfax Ave & Fountain Ave

12/13/2018

2nd-Term Q (Q2), veh/ln	0.0	2.1	0.0	0.2	0.0	0.5	0.0	0.3
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	1.00	0.00	1.00	0.00	1.00	0.00	1.00
%ile Back of Q (50%), veh/ln	0.0	14.5	0.0	7.0	0.0	9.6	0.0	9.7
%ile Storage Ratio (RQ%)	0.00	0.40	0.00	0.50	0.00	0.20	0.00	0.89
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Right Lane Group Data

Assigned Mvmt	0	12	0	14	0	16	0	18
Lane Assignment		T+R		T+R		R		T+R
Lanes in Grp	0	1	0	1	0	1	0	1
Grp Vol (v), veh/h	0	443	0	421	0	222	0	523
Grp Sat Flow (s), veh/h/ln	0	1501	0	1551	0	1350	0	1547
Q Serve Time (g_s), s	0.0	29.9	0.0	16.6	0.0	14.5	0.0	22.8
Cycle Q Clear Time (g_c), s	0.0	29.9	0.0	16.6	0.0	14.5	0.0	22.8
Prot RT Sat Flow (s_R), veh/h/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prot RT Eff Green (g_R), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prop RT Outside Lane (P_R)	0.00	0.33	0.00	0.14	0.00	1.00	0.00	0.15
Lane Grp Cap (c), veh/h	0	526	0	925	0	444	0	923
V/C Ratio (X)	0.00	0.84	0.00	0.45	0.00	0.50	0.00	0.57
Avail Cap (c_a), veh/h	0	526	0	932	0	444	0	930
Upstream Filter (I)	0.00	0.97	0.00	1.00	0.00	1.00	0.00	1.00
Uniform Delay (d1), s/veh	0.0	32.9	0.0	12.4	0.0	29.7	0.0	13.7
Incr Delay (d2), s/veh	0.0	14.5	0.0	0.7	0.0	4.0	0.0	1.3
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	47.4	0.0	13.1	0.0	33.7	0.0	15.0
1st-Term Q (Q1), veh/ln	0.0	12.3	0.0	7.0	0.0	5.4	0.0	9.6
2nd-Term Q (Q2), veh/ln	0.0	2.1	0.0	0.2	0.0	0.5	0.0	0.3
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	1.00	0.00	1.00	0.00	1.00	0.00	1.00
%ile Back of Q (50%), veh/ln	0.0	14.4	0.0	7.2	0.0	5.9	0.0	10.0
%ile Storage Ratio (RQ%)	0.00	0.40	0.00	0.52	0.00	0.12	0.00	0.91
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Intersection Summary

HCM 2010 Ctrl Delay	28.0
HCM 2010 LOS	C

Notes

* HCM 2010 computational engine requires equal clearance times for the phases crossing the barrier.

MIDDAY PEAK HOUR
 EXISTING CONDITIONS

West Hollywood - Orange Grove Mixed Use - Traffic Impact Study

2: Orange Grove Ave

02/21/2019



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕↕			↕↕			↕			↕	
Traffic Volume (veh/h)	18	906	20	19	1088	10	8	3	50	4	3	39
Future Volume (Veh/h)	18	906	20	19	1088	10	8	3	50	4	3	39
Sign Control		Free			Free			Stop			Stop	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.95	0.92	0.92	0.92	0.92	0.95	0.92	0.95	0.92	0.95	0.95	0.95
Hourly flow rate (vph)	19	985	22	21	1183	11	9	3	54	4	3	41
Pedestrians												
Lane Width (ft)												
Walking Speed (ft/s)												
Percent Blockage												
Right turn flare (veh)												
Median type		None			None							
Median storage (veh)												
Upstream signal (ft)		377			1010							
pX, platoon unblocked				0.85			0.85	0.85	0.85	0.85	0.85	
vC, conflicting volume	1194			1007			1710	2270	504	1816	2276	597
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	1194			652			1480	2140	59	1606	2146	597
tC, single (s)	4.1			4.1			7.5	6.5	6.9	7.5	6.5	6.9
tC, 2 stage (s)												
tF (s)	2.2			2.2			3.5	4.0	3.3	3.5	4.0	3.3
p0 queue free %	97			97			85	92	94	92	92	91
cM capacity (veh/h)	580			790			60	39	844	50	38	446

Direction, Lane #	EB 1	EB 2	WB 1	WB 2	NB 1	SB 1
Volume Total	512	514	612	602	66	48
Volume Left	19	0	21	0	9	4
Volume Right	0	22	0	11	54	41
cSH	580	1700	790	1700	227	192
Volume to Capacity	0.03	0.30	0.03	0.35	0.29	0.25
Queue Length 95th (ft)	3	0	2	0	29	24
Control Delay (s)	0.9	0.0	0.7	0.0	27.2	29.9
Lane LOS	A		A		D	D
Approach Delay (s)	0.5		0.4		27.2	29.9
Approach LOS					D	D

Intersection Summary

Average Delay		1.8				
Intersection Capacity Utilization		64.6%		ICU Level of Service		C
Analysis Period (min)		15				

MIDDAY PEAK HOUR
EXISTING CONDITIONS

West Hollywood - Orange Grove Mixed Use - Traffic Impact Study
 3: Ogden Ave

12/13/2018

Intersection

Int Delay, s/veh 2.2

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↔			↔			↔			↔	
Traffic Vol, veh/h	19	908	17	24	1075	9	10	3	50	1	1	23
Future Vol, veh/h	19	908	17	24	1075	9	10	3	50	1	1	23
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	95	92	92	92	92	95	92	95	92	95	95	95
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	20	987	18	26	1168	9	11	3	54	1	1	24

Major/Minor	Major1	Major2	Minor1	Minor2
Conflicting Flow All	1177	0	0	1005
Stage 1	-	-	-	-
Stage 2	-	-	-	-
Critical Hdwy	4.14	-	-	4.14
Critical Hdwy Stg 1	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-
Follow-up Hdwy	2.22	-	-	2.22
Pot Cap-1 Maneuver	589	-	-	685
Stage 1	-	-	-	-
Stage 2	-	-	-	-
Platoon blocked, %	-	-	-	-
Mov Cap-1 Maneuver	589	-	-	685
Mov Cap-2 Maneuver	-	-	-	-
Stage 1	-	-	-	-
Stage 2	-	-	-	-
























Approach	EB	WB	NB	SB
HCM Control Delay, s	0.6	0.8	42.5	22.3
HCM LOS			E	C

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	162	589	-	-	685	-	-	234
HCM Lane V/C Ratio	0.422	0.034	-	-	0.038	-	-	0.112
HCM Control Delay (s)	42.5	11.3	0.4	-	10.5	0.6	-	22.3
HCM Lane LOS	E	B	A	-	B	A	-	C
HCM 95th %tile Q(veh)	1.9	0.1	-	-	0.1	-	-	0.4

MIDDAY PEAK HOUR
 EXISTING CONDITIONS

West Hollywood - Orange Grove Mixed Use - Traffic Impact Study
 4: Fairfax Ave & Santa Monica Blvd

12/13/2018

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	157	669	82	200	760	71	132	689	181	79	727	106
Future Volume (veh/h)	157	669	82	200	760	71	132	689	181	79	727	106
Number	5	2	12	1	6	16	3	8	18	7	4	14
Initial Q, 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	1588	1588	1588	1588	1588	1620	1588	1588	1588	1588	1588	1588
Adj Flow Rate, veh/h	165	704	86	211	800	75	139	725	191	83	765	112
Adj No. of Lanes	1	2	1	1	2	0	1	2	1	1	2	1
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Opposing Right Turn Influence	Yes			Yes			Yes			Yes		
Cap, veh/h	254	1161	513	324	1170	110	162	925	414	165	901	397
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
Prop Arrive On Green	0.06	0.38	0.38	0.09	0.42	0.42	0.05	0.31	0.31	0.04	0.30	0.29
Ln Grp Delay, s/veh	33.9	30.8	24.3	24.7	33.1	33.0	72.7	40.8	33.0	33.1	44.2	31.6
Ln Grp LOS	C	C	C	C	C	C	E	D	C	C	D	C
Approach Vol, veh/h		955			1086			1055			960	
Approach Delay, s/veh		30.7			31.4			43.6			41.7	
Approach LOS		C			C			D			D	
Timer:		1	2	3	4	5	6	7	8			
Assigned Phs		1	2	3	4	5	6	7	8			
Case No		1.1	3.0	1.1	3.0	1.1	4.0	1.1	3.0			
Phs Duration (G+Y+Rc), s		16.0	48.8	11.0	39.1	12.0	52.9	10.1	40.1			
Change Period (Y+Rc), s		* 4	5.1	* 4	* 5.3	* 4	5.1	* 4	* 5.3			
Max Green (Gmax), s		* 17	37.1	* 7	* 36	* 8	46.1	* 8	* 35			
Max Allow Headway (MAH), s		3.8	5.2	3.8	5.1	3.8	5.2	3.8	5.1			
Max Q Clear (g_c+I1), s		11.8	23.5	7.5	29.4	8.5	28.9	6.5	27.2			
Green Ext Time (g_e), s		0.3	8.7	0.0	4.5	0.0	10.2	0.0	5.5			
Prob of Phs Call (p_c)		1.00	1.00	0.99	1.00	0.99	1.00	0.93	1.00			
Prob of Max Out (p_x)		0.35	0.67	1.00	0.95	1.00	0.56	1.00	0.90			
Left-Turn Movement Data												
Assigned Mvmt		1		3		5		7				
Mvmt Sat Flow, veh/h		1513		1513		1513		1513				
Through Movement Data												
Assigned Mvmt			2		4		6		8			
Mvmt Sat Flow, veh/h			3018		3018		2789		3018			
Right-Turn Movement Data												
Assigned Mvmt			12		14		16		18			
Mvmt Sat Flow, veh/h			1350		1350		261		1350			
Left Lane Group Data												
Assigned Mvmt		1	0	3	0	5	0	7	0			
Lane Assignment		(Pr/Pm)		(Pr/Pm)		(Pr/Pm)		(Pr/Pm)				

MIDDAY PEAK HOUR
 EXISTING CONDITIONS

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 4: Fairfax Ave & Santa Monica Blvd

12/13/2018

Lanes in Grp	1	0	1	0	1	0	1	0
Grp Vol (v), veh/h	211	0	139	0	165	0	83	0
Grp Sat Flow (s), veh/h/ln	1513	0	1513	0	1513	0	1513	0
Q Serve Time (g_s), s	9.8	0.0	5.5	0.0	6.5	0.0	4.5	0.0
Cycle Q Clear Time (g_c), s	9.8	0.0	5.5	0.0	6.5	0.0	4.5	0.0
Perm LT Sat Flow (s_l), veh/h/ln	683	0	630	0	631	0	607	0
Shared LT Sat Flow (s_sh), veh/h/ln	0	0	0	0	0	0	0	0
Perm LT Eff Green (g_p), s	44.2	0.0	32.3	0.0	42.2	0.0	32.3	0.0
Perm LT Serve Time (g_u), s	20.7	0.0	5.0	0.0	19.4	0.0	8.0	0.0
Perm LT Q Serve Time (g_ps), s	10.5	0.0	5.0	0.0	12.8	0.0	3.8	0.0
Time to First Blk (g_f), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Serve Time pre Blk (g_fs), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prop LT Inside Lane (P_L)	1.00	0.00	1.00	0.00	1.00	0.00	1.00	0.00
Lane Grp Cap (c), veh/h	324	0	162	0	254	0	165	0
V/C Ratio (X)	0.65	0.00	0.86	0.00	0.65	0.00	0.50	0.00
Avail Cap (c_a), veh/h	389	0	162	0	254	0	191	0
Upstream Filter (I)	1.00	0.00	1.00	0.00	1.00	0.00	0.87	0.00
Uniform Delay (d1), s/veh	21.8	0.0	38.7	0.0	28.2	0.0	31.0	0.0
Incr Delay (d2), s/veh	2.9	0.0	33.9	0.0	5.7	0.0	2.1	0.0
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	24.7	0.0	72.7	0.0	33.9	0.0	33.1	0.0
1st-Term Q (Q1), veh/ln	4.0	0.0	2.1	0.0	2.2	0.0	1.9	0.0
2nd-Term Q (Q2), veh/ln	0.3	0.0	1.5	0.0	0.4	0.0	0.1	0.0
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	1.00	0.00	1.00	0.00	1.00	0.00	1.00	0.00
%ile Back of Q (50%), veh/ln	4.3	0.0	3.6	0.0	2.6	0.0	2.0	0.0
%ile Storage Ratio (RQ%)	0.58	0.00	0.75	0.00	0.40	0.00	0.46	0.00
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Middle Lane Group Data								
Assigned Mvmt	0	2	0	4	0	6	0	8
Lane Assignment		T		T		T		T
Lanes in Grp	0	2	0	2	0	1	0	2
Grp Vol (v), veh/h	0	704	0	765	0	433	0	725
Grp Sat Flow (s), veh/h/ln	0	1509	0	1509	0	1509	0	1509
Q Serve Time (g_s), s	0.0	21.5	0.0	27.4	0.0	26.8	0.0	25.2
Cycle Q Clear Time (g_c), s	0.0	21.5	0.0	27.4	0.0	26.8	0.0	25.2
Lane Grp Cap (c), veh/h	0	1161	0	901	0	633	0	925
V/C Ratio (X)	0.00	0.61	0.00	0.85	0.00	0.68	0.00	0.78
Avail Cap (c_a), veh/h	0	1161	0	945	0	633	0	925
Upstream Filter (I)	0.00	1.00	0.00	0.87	0.00	1.00	0.00	1.00
Uniform Delay (d1), s/veh	0.0	28.4	0.0	37.9	0.0	27.2	0.0	36.4
Incr Delay (d2), s/veh	0.0	2.4	0.0	6.3	0.0	5.9	0.0	4.5
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	30.8	0.0	44.2	0.0	33.1	0.0	40.8
1st-Term Q (Q1), veh/ln	0.0	9.0	0.0	11.4	0.0	11.2	0.0	10.5

MIDDAY PEAK HOUR
 EXISTING CONDITIONS

West Hollywood - Orange Grove Mixed Use - Traffic Impact Study
 4: Fairfax Ave & Santa Monica Blvd

12/13/2018

2nd-Term Q (Q2), veh/ln	0.0	0.4	0.0	0.8	0.0	1.0	0.0	0.6
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	1.00	0.00	1.00	0.00	1.00	0.00	1.00
%ile Back of Q (50%), veh/ln	0.0	9.4	0.0	12.2	0.0	12.2	0.0	11.0
%ile Storage Ratio (RQ%)	0.00	0.60	0.00	0.99	0.00	1.14	0.00	0.42
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Right Lane Group Data

Assigned Mvmt	0	12	0	14	0	16	0	18
Lane Assignment		R		R		T+R		R
Lanes in Grp	0	1	0	1	0	1	0	1
Grp Vol (v), veh/h	0	86	0	112	0	442	0	191
Grp Sat Flow (s), veh/h/ln	0	1350	0	1350	0	1542	0	1350
Q Serve Time (g_s), s	0.0	4.8	0.0	7.3	0.0	26.9	0.0	13.1
Cycle Q Clear Time (g_c), s	0.0	4.8	0.0	7.3	0.0	26.9	0.0	13.1
Prot RT Sat Flow (s_R), veh/h/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prot RT Eff Green (g_R), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prop RT Outside Lane (P_R)	0.00	1.00	0.00	1.00	0.00	0.17	0.00	1.00
Lane Grp Cap (c), veh/h	0	513	0	397	0	647	0	414
V/C Ratio (X)	0.00	0.17	0.00	0.28	0.00	0.68	0.00	0.46
Avail Cap (c_a), veh/h	0	513	0	417	0	647	0	414
Upstream Filter (I)	0.00	1.00	0.00	0.87	0.00	1.00	0.00	1.00
Uniform Delay (d1), s/veh	0.0	23.6	0.0	31.2	0.0	27.2	0.0	32.2
Incr Delay (d2), s/veh	0.0	0.7	0.0	0.3	0.0	5.8	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
Control Delay (d), s/veh	0.0	24.3	0.0	31.6	0.0	33.0	0.0	33.0
1st-Term Q (Q1), veh/ln	0.0	1.8	0.0	2.7	0.0	11.4	0.0	4.9
2nd-Term Q (Q2), veh/ln	0.0	0.1	0.0	0.0	0.0	1.0	0.0	0.1
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	1.00	0.00	1.00	0.00	1.00	0.00	1.00
%ile Back of Q (50%), veh/ln	0.0	1.9	0.0	2.8	0.0	12.5	0.0	5.0
%ile Storage Ratio (RQ%)	0.00	0.12	0.00	0.23	0.00	1.16	0.00	1.19
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Intersection Summary

HCM 2010 Ctrl Delay	36.9
HCM 2010 LOS	D

Notes

* HCM 2010 computational engine requires equal clearance times for the phases crossing the barrier.

MIDDAY PEAK HOUR
 EXISTING CONDITIONS

West Hollywood - Orange Grove Mixed Use - Traffic Impact Study
 5: Orange Grove Ave

12/13/2018

Intersection												
Int Delay, s/veh	0.5											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↑↓			↑↓				↑			↑
Traffic Vol, veh/h	0	896	32	0	993	48	0	0	33	0	0	52
Future Vol, veh/h	0	896	32	0	993	48	0	0	33	0	0	52
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	0	-	-	0
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	95	95	92	92	95	95	95	92	95	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	974	34	0	1079	52	0	0	35	0	0	57

Major/Minor	Major1		Major2		Minor1		Minor2					
Conflicting Flow All	-	0	0	-	-	0	-	-	504	-	-	566
Stage 1	-	-	-	-	-	-	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-	-	-	-	-	-	-
Critical Hdwy	-	-	-	-	-	-	-	-	6.94	-	-	6.94
Critical Hdwy Stg 1	-	-	-	-	-	-	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-	-	-	-	-	-	-
Follow-up Hdwy	-	-	-	-	-	-	-	-	3.32	-	-	3.32
Pot Cap-1 Maneuver	0	-	-	0	-	-	0	0	513	0	0	467
Stage 1	0	-	-	0	-	-	0	0	-	0	0	-
Stage 2	0	-	-	0	-	-	0	0	-	0	0	-
Platoon blocked, %	-	-	-	-	-	-	-	-	-	-	-	-
Mov Cap-1 Maneuver	-	-	-	-	-	-	-	-	513	-	-	467
Mov Cap-2 Maneuver	-	-	-	-	-	-	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0	0	12.5	13.8
HCM LOS			B	B

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBT	WBR	SBLn1
Capacity (veh/h)	513	-	-	-	-	467
HCM Lane V/C Ratio	0.068	-	-	-	-	0.121
HCM Control Delay (s)	12.5	-	-	-	-	13.8
HCM Lane LOS	B	-	-	-	-	B
HCM 95th %tile Q(veh)	0.2	-	-	-	-	0.4

MIDDAY PEAK HOUR
 EXISTING CONDITIONS

West Hollywood - Orange Grove Mixed Use - Traffic Impact Study
6: Ogden Ave

12/13/2018

Intersection						
Int Delay, s/veh	1.2					
Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		↑↑	↑↑		↑	
Traffic Vol, veh/h	48	893	1020	31	6	44
Future Vol, veh/h	48	893	1020	31	6	44
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	52	971	1109	34	7	48

Major/Minor	Major1	Major2	Minor2		
Conflicting Flow All	1143	0	-	0	1716 572
Stage 1	-	-	-	-	1126 -
Stage 2	-	-	-	-	590 -
Critical Hdwy	4.14	-	-	-	6.84 6.94
Critical Hdwy Stg 1	-	-	-	-	5.84 -
Critical Hdwy Stg 2	-	-	-	-	5.84 -
Follow-up Hdwy	2.22	-	-	-	3.52 3.32
Pot Cap-1 Maneuver	607	-	-	-	81 463
Stage 1	-	-	-	-	272 -
Stage 2	-	-	-	-	517 -
Platoon blocked, %		-	-	-	
Mov Cap-1 Maneuver	607	-	-	-	66 463
Mov Cap-2 Maneuver	-	-	-	-	66 -
Stage 1	-	-	-	-	221 -
Stage 2	-	-	-	-	517 -

Approach	EB	WB	SB
HCM Control Delay, s	1.5	0	21.7
HCM LOS			C

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	607	-	-	-	269
HCM Lane V/C Ratio	0.086	-	-	-	0.202
HCM Control Delay (s)	11.5	1	-	-	21.7
HCM Lane LOS	B	A	-	-	C
HCM 95th %tile Q(veh)	0.3	-	-	-	0.7

MIDDAY PEAK HOUR
EXISTING CONDITIONS

West Hollywood - Orange Grove Mixed Use - Traffic Impact Study

106:

12/13/2018

Intersection						
Int Delay, s/veh	0.7					
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↑↑			↑↑	↑	
Traffic Vol, veh/h	900	15	31	1033	2	35
Future Vol, veh/h	900	15	31	1033	2	35
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	95	95	95	95	95	95
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	947	16	33	1087	2	37

Major/Minor	Major1	Major2	Minor1		
Conflicting Flow All	0	0	963	0	1565 482
Stage 1	-	-	-	-	955 -
Stage 2	-	-	-	-	610 -
Critical Hdwy	-	-	4.14	-	6.84 6.94
Critical Hdwy Stg 1	-	-	-	-	5.84 -
Critical Hdwy Stg 2	-	-	-	-	5.84 -
Follow-up Hdwy	-	-	2.22	-	3.52 3.32
Pot Cap-1 Maneuver	-	-	711	-	102 530
Stage 1	-	-	-	-	334 -
Stage 2	-	-	-	-	505 -
Platoon blocked, %	-	-	-	-	-
Mov Cap-1 Maneuver	-	-	711	-	90 530
Mov Cap-2 Maneuver	-	-	-	-	90 -
Stage 1	-	-	-	-	334 -
Stage 2	-	-	-	-	446 -

Approach	EB	WB	NB
HCM Control Delay, s	0	0.9	14.5
HCM LOS			B

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	419	-	-	711	-
HCM Lane V/C Ratio	0.093	-	-	0.046	-
HCM Control Delay (s)	14.5	-	-	10.3	0.6
HCM Lane LOS	B	-	-	B	A
HCM 95th %tile Q(veh)	0.3	-	-	0.1	-

MIDDAY PEAK HOUR
EXISTING CONDITIONS

West Hollywood - Orange Grove Mixed Use - Traffic Impact Study
 7: Santa Monica Blvd & Genesse Ave

12/13/2018



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (vph)	38	878	1023	22	23	47
Future Volume (vph)	38	878	1023	22	23	47
Ideal Flow (vphpl)	1620	1620	1620	1620	1620	1620
Total Lost time (s)	4.5	5.6	5.6		4.6	
Lane Util. Factor	1.00	0.95	0.95		1.00	
Frt	1.00	1.00	1.00		0.91	
Flt Protected	0.95	1.00	1.00		0.98	
Satd. Flow (prot)	1509	3018	3008		1421	
Flt Permitted	0.21	1.00	1.00		0.98	
Satd. Flow (perm)	337	3018	3008		1421	
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	41	954	1112	24	25	51
RTOR Reduction (vph)	0	0	1	0	43	0
Lane Group Flow (vph)	41	954	1135	0	33	0
Turn Type	pm+pt	NA	NA		Prot	
Protected Phases	5	2	6		4	
Permitted Phases	2					
Actuated Green, G (s)	75.8	72.8	72.8		15.6	
Effective Green, g (s)	74.8	72.3	72.3		16.1	
Actuated g/C Ratio	0.71	0.68	0.68		0.15	
Clearance Time (s)	4.0	5.1	5.1		5.1	
Vehicle Extension (s)	1.0	3.0	3.0		3.0	
Lane Grp Cap (vph)	266	2066	2059		216	
v/s Ratio Prot	c0.00	0.32	c0.38		c0.02	
v/s Ratio Perm	0.11					
v/c Ratio	0.15	0.46	0.55		0.15	
Uniform Delay, d1	5.3	7.7	8.4		38.8	
Progression Factor	0.27	0.20	1.00		1.00	
Incremental Delay, d2	0.1	0.7	1.1		0.3	
Delay (s)	1.5	2.2	9.5		39.2	
Level of Service	A	A	A		D	
Approach Delay (s)		2.2	9.5		39.2	
Approach LOS		A	A		D	

Intersection Summary

HCM 2000 Control Delay	7.2	HCM 2000 Level of Service	A
HCM 2000 Volume to Capacity ratio	0.47		
Actuated Cycle Length (s)	105.6	Sum of lost time (s)	14.7
Intersection Capacity Utilization	58.0%	ICU Level of Service	B
Analysis Period (min)	15		

c Critical Lane Group

MIDDAY PEAK HOUR
 EXISTING CONDITIONS

West Hollywood - Orange Grove Mixed Use - Traffic Impact Study
 8: Romaine St & Fairfax Ave

12/13/2018

Intersection

Int Delay, s/veh 2.9

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↔			↔	↔	↔	↕	↕	↕	↕	↕
Traffic Vol, veh/h	8	2	41	13	6	45	27	951	16	49	913	47
Future Vol, veh/h	8	2	41	13	6	45	27	951	16	49	913	47
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	0	90	-	0	102	-	0
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	9	2	45	14	7	49	29	1034	17	53	992	51

Major/Minor	Minor2		Minor1		Major1		Major2					
Conflicting Flow All	1677	2207	496	1695	2241	517	1043	0	0	1051	0	0
Stage 1	1098	1098	-	1092	1092	-	-	-	-	-	-	-
Stage 2	579	1109	-	603	1149	-	-	-	-	-	-	-
Critical Hdwy	7.54	6.54	6.94	7.54	6.54	6.94	4.14	-	-	4.14	-	-
Critical Hdwy Stg 1	6.54	5.54	-	6.54	5.54	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.54	5.54	-	6.54	5.54	-	-	-	-	-	-	-
Follow-up Hdwy	3.52	4.02	3.32	3.52	4.02	3.32	2.22	-	-	2.22	-	-
Pot Cap-1 Maneuver	62	44	519	60	42	503	663	-	-	658	-	-
Stage 1	227	287	-	229	289	-	-	-	-	-	-	-
Stage 2	468	283	-	453	271	-	-	-	-	-	-	-
Platoon blocked, %								-	-	-	-	-
Mov Cap-1 Maneuver	44	39	519	48	37	503	663	-	-	658	-	-
Mov Cap-2 Maneuver	44	39	-	48	37	-	-	-	-	-	-	-
Stage 1	217	264	-	219	276	-	-	-	-	-	-	-
Stage 2	394	271	-	378	249	-	-	-	-	-	-	-

Approach	EB		WB		NB		SB	
HCM Control Delay, s	38.1		52.1		0.3		0.5	
HCM LOS	E		F					






















Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	WBLn2	SBL	SBT	SBR
Capacity (veh/h)	663	-	-	163	44	503	658	-	-
HCM Lane V/C Ratio	0.044	-	-	0.34	0.469	0.097	0.081	-	-
HCM Control Delay (s)	10.7	-	-	38.1	145	12.9	11	-	-
HCM Lane LOS	B	-	-	E	F	B	B	-	-
HCM 95th %tile Q(veh)	0.1	-	-	1.4	1.7	0.3	0.3	-	-

MIDDAY PEAK HOUR
 EXISTING CONDITIONS

West Hollywood - Orange Grove Mixed Use - Traffic Impact Study

1: Fairfax Ave & Fountain Ave

12/13/2018

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	251	1264	43	85	835	100	50	1065	169	54	741	188
Future Volume (veh/h)	251	1264	43	85	835	100	50	1065	169	54	741	188
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q, 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	1588	1588	1620	1588	1588	1620	1588	1588	1620	1588	1588	1588
Adj Flow Rate, veh/h	264	1331	45	89	879	105	53	1121	178	57	780	198
Adj No. of Lanes	1	2	0	1	2	0	1	2	0	1	2	1
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Opposing Right Turn Influence	Yes			Yes			Yes			Yes		
Cap, veh/h	298	1790	60	174	1632	195	133	904	143	65	1045	438
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
Prop Arrive On Green	0.60	0.60	0.58	0.60	0.60	0.58	0.35	0.35	0.35	0.35	0.35	0.32
Ln Grp Delay, s/veh	62.0	19.8	19.8	41.9	14.1	14.2	55.4	157.8	160.4	133.7	36.5	32.7
Ln Grp LOS	E	B	B	D	B	B	E	F	F	F	D	C
Approach Vol, veh/h		1640			1073			1352			1035	
Approach Delay, s/veh		26.6			16.5			155.0			41.2	
Approach LOS		C			B			F			D	
Timer:		1	2	3	4	5	6	7	8			
Assigned Phs			2		4		6		8			
Case No			6.0		6.0		5.0		6.0			
Phs Duration (G+Y+Rc), s			41.0		69.0		41.0		69.0			
Change Period (Y+Rc), s			* 5.3		* 5.3		* 5.3		* 5.3			
Max Green (Gmax), s			* 36		* 64		* 36		* 64			
Max Allow Headway (MAH), s			7.3		7.5		7.3		7.5			
Max Q Clear (g_c+I1), s			40.1		68.1		40.1		60.9			
Green Ext Time (g_e), s			0.0		0.0		0.0		2.8			
Prob of Phs Call (p_c)			1.00		1.00		1.00		1.00			
Prob of Max Out (p_x)			0.00		1.00		0.00		1.00			
Left-Turn Movement Data												
Assigned Mvmt			5		7		1		3			
Mvmt Sat Flow, veh/h			573		570		423		393			
Through Movement Data												
Assigned Mvmt			2		4		6		8			
Mvmt Sat Flow, veh/h			2611		2979		3018		2715			
Right-Turn Movement Data												
Assigned Mvmt			12		14		16		18			
Mvmt Sat Flow, veh/h			413		101		1350		324			
Left Lane Group Data												
Assigned Mvmt		0	5	0	7	0	1	0	3			
Lane Assignment												

PM PEAK HOUR
EXISTING CONDITIONS

West Hollywood - Orange Grove Mixed Use - Traffic Impact Study

1: Fairfax Ave & Fountain Ave

12/13/2018

Lanes in Grp	0	1	0	1	0	1	0	1
Grp Vol (v), veh/h	0	53	0	264	0	57	0	89
Grp Sat Flow (s), veh/h/ln	0	573	0	570	0	423	0	393
Q Serve Time (g_s), s	0.0	9.9	0.0	44.9	0.0	0.0	0.0	23.3
Cycle Q Clear Time (g_c), s	0.0	34.9	0.0	66.1	0.0	38.1	0.0	58.9
Perm LT Sat Flow (s_l), veh/h/ln	0	573	0	570	0	423	0	393
Shared LT Sat Flow (s_sh), veh/h/ln	0	0	0	0	0	0	0	0
Perm LT Eff Green (g_p), s	0.0	38.1	0.0	66.1	0.0	38.1	0.0	66.1
Perm LT Serve Time (g_u), s	0.0	13.0	0.0	44.9	0.0	0.0	0.0	30.5
Perm LT Q Serve Time (g_ps), s	0.0	9.9	0.0	44.9	0.0	0.0	0.0	23.3
Time to First Blk (g_f), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Serve Time pre Blk (g_fs), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prop LT Inside Lane (P_L)	0.00	1.00	0.00	1.00	0.00	1.00	0.00	1.00
Lane Grp Cap (c), veh/h	0	133	0	298	0	65	0	174
V/C Ratio (X)	0.00	0.40	0.00	0.89	0.00	0.87	0.00	0.51
Avail Cap (c_a), veh/h	0	133	0	298	0	65	0	174
Upstream Filter (I)	0.00	0.97	0.00	1.00	0.00	1.00	0.00	1.00
Uniform Delay (d1), s/veh	0.0	47.1	0.0	35.2	0.0	55.0	0.0	37.1
Incr Delay (d2), s/veh	0.0	8.3	0.0	26.8	0.0	78.7	0.0	4.8
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	55.4	0.0	62.0	0.0	133.7	0.0	41.9
1st-Term Q (Q1), veh/ln	0.0	1.6	0.0	8.0	0.0	1.7	0.0	2.5
2nd-Term Q (Q2), veh/ln	0.0	0.3	0.0	2.2	0.0	1.4	0.0	0.2
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	1.00	0.00	1.00	0.00	1.00	0.00	1.00
%ile Back of Q (50%), veh/ln	0.0	1.9	0.0	10.2	0.0	3.2	0.0	2.8
%ile Storage Ratio (RQ%)	0.00	0.52	0.00	6.49	0.00	0.40	0.00	0.76
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Middle Lane Group Data

Assigned Mvmt	0	2	0	4	0	6	0	8
Lane Assignment		T		T		T		T
Lanes in Grp	0	1	0	1	0	2	0	1
Grp Vol (v), veh/h	0	646	0	674	0	780	0	488
Grp Sat Flow (s), veh/h/ln	0	1509	0	1509	0	1509	0	1509
Q Serve Time (g_s), s	0.0	38.1	0.0	35.4	0.0	25.1	0.0	21.0
Cycle Q Clear Time (g_c), s	0.0	38.1	0.0	35.4	0.0	25.1	0.0	21.0
Lane Grp Cap (c), veh/h	0	523	0	907	0	1045	0	907
V/C Ratio (X)	0.00	1.24	0.00	0.74	0.00	0.75	0.00	0.54
Avail Cap (c_a), veh/h	0	523	0	907	0	1045	0	907
Upstream Filter (I)	0.00	0.97	0.00	1.00	0.00	1.00	0.00	1.00
Uniform Delay (d1), s/veh	0.0	35.9	0.0	15.8	0.0	31.7	0.0	13.0
Incr Delay (d2), s/veh	0.0	121.8	0.0	4.0	0.0	4.9	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
Control Delay (d), s/veh	0.0	157.8	0.0	19.8	0.0	36.5	0.0	14.1
1st-Term Q (Q1), veh/ln	0.0	15.8	0.0	14.6	0.0	10.4	0.0	8.7

PM PEAK HOUR
EXISTING CONDITIONS

West Hollywood - Orange Grove Mixed Use - Traffic Impact Study

1: Fairfax Ave & Fountain Ave

12/13/2018

2nd-Term Q (Q2), veh/ln	0.0	17.7	0.0	1.0	0.0	0.7	0.0	0.3
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	1.00	0.00	1.00	0.00	1.00	0.00	1.00
%ile Back of Q (50%), veh/ln	0.0	33.5	0.0	15.6	0.0	11.1	0.0	9.0
%ile Storage Ratio (RQ%)	0.00	0.93	0.00	1.12	0.00	0.23	0.00	0.82
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	31.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.3	0.0	0.0	0.0	0.0	0.0	0.0

Right Lane Group Data

Assigned Mvmt	0	12	0	14	0	16	0	18
Lane Assignment		T+R		T+R		R		T+R
Lanes in Grp	0	1	0	1	0	1	0	1
Grp Vol (v), veh/h	0	653	0	702	0	198	0	496
Grp Sat Flow (s), veh/h/ln	0	1515	0	1570	0	1350	0	1531
Q Serve Time (g_s), s	0.0	38.1	0.0	35.6	0.0	12.8	0.0	21.2
Cycle Q Clear Time (g_c), s	0.0	38.1	0.0	35.6	0.0	12.8	0.0	21.2
Prot RT Sat Flow (s_R), veh/h/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prot RT Eff Green (g_R), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prop RT Outside Lane (P_R)	0.00	0.27	0.00	0.06	0.00	1.00	0.00	0.21
Lane Grp Cap (c), veh/h	0	525	0	944	0	438	0	920
V/C Ratio (X)	0.00	1.24	0.00	0.74	0.00	0.45	0.00	0.54
Avail Cap (c_a), veh/h	0	525	0	944	0	438	0	920
Upstream Filter (I)	0.00	0.97	0.00	1.00	0.00	1.00	0.00	1.00
Uniform Delay (d1), s/veh	0.0	36.0	0.0	15.9	0.0	29.4	0.0	13.1
Incr Delay (d2), s/veh	0.0	124.4	0.0	3.8	0.0	3.3	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
Control Delay (d), s/veh	0.0	160.4	0.0	19.8	0.0	32.7	0.0	14.2
1st-Term Q (Q1), veh/ln	0.0	15.9	0.0	15.2	0.0	4.7	0.0	8.9
2nd-Term Q (Q2), veh/ln	0.0	18.1	0.0	1.0	0.0	0.4	0.0	0.3
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	1.00	0.00	1.00	0.00	1.00	0.00	1.00
%ile Back of Q (50%), veh/ln	0.0	34.0	0.0	16.2	0.0	5.1	0.0	9.1
%ile Storage Ratio (RQ%)	0.00	0.95	0.00	1.17	0.00	0.11	0.00	0.84
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	31.9	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.3	0.0	0.0	0.0	0.0	0.0	0.0

Intersection Summary

HCM 2010 Ctrl Delay	61.5
HCM 2010 LOS	E

Notes

* HCM 2010 computational engine requires equal clearance times for the phases crossing the barrier.

PM PEAK HOUR
EXISTING CONDITIONS

West Hollywood - Orange Grove Mixed Use - Traffic Impact Study

2: Orange Grove Ave & Fountain Ave

02/21/2019



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↔↔			↔↔			↔			↔	
Traffic Volume (veh/h)	43	1362	38	47	1030	16	5	8	61	2	4	28
Future Volume (Veh/h)	43	1362	38	47	1030	16	5	8	61	2	4	28
Sign Control		Free			Free			Stop			Stop	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.95	0.92	0.92	0.92	0.92	0.95	0.92	0.95	0.92	0.95	0.95	0.95
Hourly flow rate (vph)	45	1480	41	51	1120	17	5	8	66	2	4	29
Pedestrians												
Lane Width (ft)												
Walking Speed (ft/s)												
Percent Blockage												
Right turn flare (veh)												
Median type		None			None							
Median storage (veh)												
Upstream signal (ft)		377			1010							
pX, platoon unblocked				0.67			0.67	0.67	0.67	0.67	0.67	
vC, conflicting volume	1137			1521			2284	2830	760	2130	2842	568
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	1137			793			1931	2746	0	1702	2763	568
tC, single (s)	4.1			4.1			7.5	6.5	6.9	7.5	6.5	6.9
tC, 2 stage (s)												
tF (s)	2.2			2.2			3.5	4.0	3.3	3.5	4.0	3.3
p0 queue free %	93			91			68	28	91	85	63	94
cM capacity (veh/h)	610			552			16	11	727	13	11	466

Direction, Lane #	EB 1	EB 2	WB 1	WB 2	NB 1	SB 1
Volume Total	785	781	611	577	79	35
Volume Left	45	0	51	0	5	2
Volume Right	0	41	0	17	66	29
cSH	610	1700	552	1700	70	60
Volume to Capacity	0.07	0.46	0.09	0.34	1.13	0.58
Queue Length 95th (ft)	6	0	8	0	151	60
Control Delay (s)	2.1	0.0	2.6	0.0	250.4	128.0
Lane LOS	A		A		F	F
Approach Delay (s)	1.0		1.3		250.4	128.0
Approach LOS					F	F

Intersection Summary

Average Delay	9.6
Intersection Capacity Utilization	95.8%
ICU Level of Service	F
Analysis Period (min)	15

PM PEAK HOUR
EXISTING CONDITIONS

West Hollywood - Orange Grove Mixed Use - Traffic Impact Study
 3: Ogden Ave (North Leg) & Fountain Ave

12/13/2018

Intersection

Int Delay, s/veh 130.4

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↔			↔			↔			↔	
Traffic Vol, veh/h	38	1441	24	32	972	6	9	19	146	2	1	11
Future Vol, veh/h	38	1441	24	32	972	6	9	19	146	2	1	11
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	95	92	92	92	92	95	92	95	92	95	95	95
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	40	1566	26	35	1057	6	10	20	159	2	1	12

Major/Minor	Major1	Major2	Minor1	Minor2
Conflicting Flow All	1063	0	0	1592
Stage 1	-	-	-	-
Stage 2	-	-	-	-
Critical Hdwy	4.14	-	-	4.14
Critical Hdwy Stg 1	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-
Follow-up Hdwy	2.22	-	-	2.22
Pot Cap-1 Maneuver	651	-	-	408
Stage 1	-	-	-	-
Stage 2	-	-	-	-
Platoon blocked, %	-	-	-	-
Mov Cap-1 Maneuver	651	-	-	408
Mov Cap-2 Maneuver	-	-	-	-
Stage 1	-	-	-	-
Stage 2	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	3	1.8	\$ 1993.4	
HCM LOS			F	-

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	38	651	-	-	408	-	-	-
HCM Lane V/C Ratio	4.96	0.061	-	-	0.085	-	-	-
HCM Control Delay (s)	\$ 1993.4	10.9	2.8	-	14.6	1.4	-	-
HCM Lane LOS	F	B	A	-	B	A	-	-
HCM 95th %tile Q(veh)	22	0.2	-	-	0.3	-	-	-
























Notes

~: Volume exceeds capacity \$: Delay exceeds 300s +: Computation Not Defined *: All major volume in platoon

PM PEAK HOUR
 EXISTING CONDITIONS

West Hollywood - Orange Grove Mixed Use - Traffic Impact Study
 4: Fairfax Ave & Santa Monica Blvd

12/13/2018

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	315	1057	88	179	828	97	102	844	239	63	740	93
Future Volume (veh/h)	315	1057	88	179	828	97	102	844	239	63	740	93
Number	5	2	12	1	6	16	3	8	18	7	4	14
Initial Q, 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	1588	1588	1588	1588	1588	1620	1588	1588	1588	1588	1588	1588
Adj Flow Rate, veh/h	332	1113	93	188	872	102	107	888	252	66	779	98
Adj No. of Lanes	1	2	1	1	2	0	1	2	1	1	2	1
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Opposing Right Turn Influence	Yes			Yes			Yes			Yes		
Cap, veh/h	228	1208	535	202	1160	136	153	950	425	106	881	388
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
Prop Arrive On Green	0.06	0.40	0.40	0.08	0.43	0.42	0.05	0.31	0.31	0.03	0.29	0.29
Ln Grp Delay, s/veh	266.0	45.5	23.2	56.4	35.8	35.7	47.3	54.1	35.4	43.5	47.3	31.8
Ln Grp LOS	F	D	C	E	D	D	D	D	D	D	D	C
Approach Vol, veh/h		1538			1162			1247			943	
Approach Delay, s/veh		91.8			39.1			49.8			45.4	
Approach LOS		F			D			D			D	
Timer:		1	2	3	4	5	6	7	8			
Assigned Phs		1	2	3	4	5	6	7	8			
Case No		1.1	3.0	1.1	3.0	1.1	4.0	1.1	3.0			
Phs Duration (G+Y+Rc), s		15.0	50.7	11.0	38.4	12.0	53.6	8.4	41.0			
Change Period (Y+Rc), s		* 4	5.1	* 4	* 5.3	* 4	5.1	* 4	* 5.3			
Max Green (Gmax), s		* 17	37.1	* 7	* 36	* 8	46.1	* 8	* 35			
Max Allow Headway (MAH), s		3.8	5.2	3.8	5.1	3.8	5.2	3.8	5.1			
Max Q Clear (g_c+I1), s		10.7	42.3	7.5	30.3	8.5	33.1	4.9	34.9			
Green Ext Time (g_e), s		0.3	0.0	0.0	2.8	0.0	10.3	0.0	0.0			
Prob of Phs Call (p_c)		1.00	1.00	0.97	1.00	1.00	1.00	0.88	1.00			
Prob of Max Out (p_x)		0.14	1.00	1.00	1.00	1.00	0.84	1.00	1.00			
Left-Turn Movement Data												
Assigned Mvmt		1		3		5		7				
Mvmt Sat Flow, veh/h		1513		1513		1513		1513				
Through Movement Data												
Assigned Mvmt			2		4		6		8			
Mvmt Sat Flow, veh/h			3018		3018		2722		3018			
Right-Turn Movement Data												
Assigned Mvmt			12		14		16		18			
Mvmt Sat Flow, veh/h			1350		1350		318		1350			
Left Lane Group Data												
Assigned Mvmt		1	0	3	0	5	0	7	0			
Lane Assignment		(Pr/Pm)		(Pr/Pm)		(Pr/Pm)		(Pr/Pm)				

PM PEAK HOUR
 EXISTING CONDITIONS

West Hollywood - Orange Grove Mixed Use - Traffic Impact Study
 4: Fairfax Ave & Santa Monica Blvd

12/13/2018

Lanes in Grp	1	0	1	0	1	0	1	0
Grp Vol (v), veh/h	188	0	107	0	332	0	66	0
Grp Sat Flow (s), veh/h/ln	1513	0	1513	0	1513	0	1513	0
Q Serve Time (g_s), s	8.7	0.0	5.5	0.0	6.5	0.0	2.9	0.0
Cycle Q Clear Time (g_c), s	8.7	0.0	5.5	0.0	6.5	0.0	2.9	0.0
Perm LT Sat Flow (s_l), veh/h/ln	462	0	630	0	575	0	491	0
Shared LT Sat Flow (s_sh), veh/h/ln	0	0	0	0	0	0	0	0
Perm LT Eff Green (g_p), s	44.1	0.0	31.6	0.0	44.1	0.0	31.6	0.0
Perm LT Serve Time (g_u), s	3.8	0.0	3.3	0.0	15.9	0.0	1.3	0.0
Perm LT Q Serve Time (g_ps), s	3.8	0.0	3.3	0.0	15.9	0.0	1.3	0.0
Time to First Blk (g_f), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Serve Time pre Blk (g_fs), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prop LT Inside Lane (P_L)	1.00	0.00	1.00	0.00	1.00	0.00	1.00	0.00
Lane Grp Cap (c), veh/h	202	0	153	0	228	0	106	0
V/C Ratio (X)	0.93	0.00	0.70	0.00	1.46	0.00	0.62	0.00
Avail Cap (c_a), veh/h	282	0	153	0	228	0	154	0
Upstream Filter (I)	1.00	0.00	1.00	0.00	1.00	0.00	0.87	0.00
Uniform Delay (d1), s/veh	27.1	0.0	34.0	0.0	37.0	0.0	38.4	0.0
Incr Delay (d2), s/veh	29.3	0.0	13.3	0.0	229.1	0.0	5.1	0.0
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	56.4	0.0	47.3	0.0	266.0	0.0	43.5	0.0
1st-Term Q (Q1), veh/ln	3.6	0.0	1.1	0.0	4.5	0.0	0.9	0.0
2nd-Term Q (Q2), veh/ln	1.6	0.0	0.6	0.0	14.5	0.0	0.2	0.0
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	1.00	0.00	1.00	0.00	1.00	0.00	1.00	0.00
%ile Back of Q (50%), veh/ln	5.3	0.0	1.7	0.0	19.0	0.0	1.0	0.0
%ile Storage Ratio (RQ%)	0.71	0.00	0.34	0.00	2.93	0.00	0.24	0.00
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	26.1	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.4	0.0	0.0	0.0
Middle Lane Group Data								
Assigned Mvmt	0	2	0	4	0	6	0	8
Lane Assignment		T		T		T		T
Lanes in Grp	0	2	0	2	0	1	0	2
Grp Vol (v), veh/h	0	1113	0	779	0	483	0	888
Grp Sat Flow (s), veh/h/ln	0	1509	0	1509	0	1509	0	1509
Q Serve Time (g_s), s	0.0	40.3	0.0	28.3	0.0	31.1	0.0	32.9
Cycle Q Clear Time (g_c), s	0.0	40.3	0.0	28.3	0.0	31.1	0.0	32.9
Lane Grp Cap (c), veh/h	0	1208	0	881	0	643	0	950
V/C Ratio (X)	0.00	0.92	0.00	0.88	0.00	0.75	0.00	0.93
Avail Cap (c_a), veh/h	0	1208	0	945	0	643	0	950
Upstream Filter (I)	0.00	1.00	0.00	0.87	0.00	1.00	0.00	1.00
Uniform Delay (d1), s/veh	0.0	32.7	0.0	38.8	0.0	27.9	0.0	38.3
Incr Delay (d2), s/veh	0.0	12.8	0.0	8.5	0.0	7.9	0.0	15.9
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	45.5	0.0	47.3	0.0	35.8	0.0	54.1
1st-Term Q (Q1), veh/ln	0.0	16.7	0.0	11.8	0.0	12.9	0.0	13.7

PM PEAK HOUR
 EXISTING CONDITIONS

West Hollywood - Orange Grove Mixed Use - Traffic Impact Study
 4: Fairfax Ave & Santa Monica Blvd

12/13/2018

2nd-Term Q (Q2), veh/ln	0.0	2.1	0.0	1.0	0.0	1.4	0.0	2.1
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	1.00	0.00	1.00	0.00	1.00	0.00	1.00
%ile Back of Q (50%), veh/ln	0.0	18.8	0.0	12.8	0.0	14.3	0.0	15.8
%ile Storage Ratio (RQ%)	0.00	1.21	0.00	1.04	0.00	1.34	0.00	0.59
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Right Lane Group Data

Assigned Mvmt	0	12	0	14	0	16	0	18
Lane Assignment		R		R		T+R		R
Lanes in Grp	0	1	0	1	0	1	0	1
Grp Vol (v), veh/h	0	93	0	98	0	491	0	252
Grp Sat Flow (s), veh/h/ln	0	1350	0	1350	0	1532	0	1350
Q Serve Time (g_s), s	0.0	5.1	0.0	6.4	0.0	31.1	0.0	18.1
Cycle Q Clear Time (g_c), s	0.0	5.1	0.0	6.4	0.0	31.1	0.0	18.1
Prot RT Sat Flow (s_R), veh/h/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prot RT Eff Green (g_R), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prop RT Outside Lane (P_R)	0.00	1.00	0.00	1.00	0.00	0.21	0.00	1.00
Lane Grp Cap (c), veh/h	0	535	0	388	0	653	0	425
V/C Ratio (X)	0.00	0.17	0.00	0.25	0.00	0.75	0.00	0.59
Avail Cap (c_a), veh/h	0	535	0	417	0	653	0	425
Upstream Filter (I)	0.00	1.00	0.00	0.87	0.00	1.00	0.00	1.00
Uniform Delay (d1), s/veh	0.0	22.5	0.0	31.5	0.0	27.9	0.0	33.2
Incr Delay (d2), s/veh	0.0	0.7	0.0	0.3	0.0	7.8	0.0	2.2
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	23.2	0.0	31.8	0.0	35.7	0.0	35.4
1st-Term Q (Q1), veh/ln	0.0	1.9	0.0	2.4	0.0	13.1	0.0	6.7
2nd-Term Q (Q2), veh/ln	0.0	0.1	0.0	0.0	0.0	1.4	0.0	0.3
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	1.00	0.00	1.00	0.00	1.00	0.00	1.00
%ile Back of Q (50%), veh/ln	0.0	2.0	0.0	2.4	0.0	14.5	0.0	7.0
%ile Storage Ratio (RQ%)	0.00	0.13	0.00	0.20	0.00	1.35	0.00	1.67
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Intersection Summary

HCM 2010 Ctrl Delay	59.6
HCM 2010 LOS	E

Notes

* HCM 2010 computational engine requires equal clearance times for the phases crossing the barrier.

PM PEAK HOUR
 EXISTING CONDITIONS

West Hollywood - Orange Grove Mixed Use - Traffic Impact Study
 5: Santa Monica Blvd. & Orange Grove Ave

02/21/2019

Intersection

Int Delay, s/veh 0.7

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↑↓			↑↓				↑			↑
Traffic Vol, veh/h	0	1348	35	0	1003	62	0	0	58	0	0	57
Future Vol, veh/h	0	1348	35	0	1003	62	0	0	58	0	0	57
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	0	-	-	0
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	95	95	92	92	95	95	95	92	95	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	1465	37	0	1090	67	0	0	61	0	0	62

Major/Minor

	Major1	Major2	Minor1	Minor2
Conflicting Flow All	-	0	0	-
Stage 1	-	-	-	-
Stage 2	-	-	-	-
Critical Hdwy	-	-	-	-
Critical Hdwy Stg 1	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-
Follow-up Hdwy	-	-	-	-
Pot Cap-1 Maneuver	0	-	-	0
Stage 1	0	-	-	0
Stage 2	0	-	-	0
Platoon blocked, %	-	-	-	-
Mov Cap-1 Maneuver	-	-	-	-
Mov Cap-2 Maneuver	-	-	-	-
Stage 1	-	-	-	-
Stage 2	-	-	-	-

Approach

	EB	WB	NB	SB
HCM Control Delay, s	0	0	17.3	14.1
HCM LOS			C	B

Minor Lane/Major Mvmt

	NBLn1	EBT	EBR	WBT	WBR	SBLn1
Capacity (veh/h)	353	-	-	-	-	458
HCM Lane V/C Ratio	0.173	-	-	-	-	0.135
HCM Control Delay (s)	17.3	-	-	-	-	14.1
HCM Lane LOS	C	-	-	-	-	B
HCM 95th %tile Q(veh)	0.6	-	-	-	-	0.5

PM PEAK HOUR
 EXISTING CONDITIONS

West Hollywood - Orange Grove Mixed Use - Traffic Impact Study
 6: Santa Monica Blvd. & Ogden Ave (North Leg)

12/13/2018

Intersection

Int Delay, s/veh 3.7

Movement EBL EBT WBT WBR SBL SBR

Lane Configurations		↑↑	↑↑		↑	
Traffic Vol, veh/h	131	1327	996	49	7	48
Future Vol, veh/h	131	1327	996	49	7	48
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	142	1442	1083	53	8	52

Major/Minor Major1 Major2 Minor2

Conflicting Flow All	1136	0	-	0	2115	568
Stage 1	-	-	-	-	1110	-
Stage 2	-	-	-	-	1005	-
Critical Hdwy	4.14	-	-	-	6.84	6.94
Critical Hdwy Stg 1	-	-	-	-	5.84	-
Critical Hdwy Stg 2	-	-	-	-	5.84	-
Follow-up Hdwy	2.22	-	-	-	3.52	3.32
Pot Cap-1 Maneuver	611	-	-	-	44	466
Stage 1	-	-	-	-	277	-
Stage 2	-	-	-	-	315	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	611	-	-	-	0	466
Mov Cap-2 Maneuver	-	-	-	-	0	-
Stage 1	-	-	-	-	0	-
Stage 2	-	-	-	-	315	-

Approach EB WB SB

HCM Control Delay, s	6	0	13.9
HCM LOS			B

Minor Lane/Major Mvmt EBL EBT WBT WBR SBLn1

Capacity (veh/h)	611	-	-	-	466
HCM Lane V/C Ratio	0.233	-	-	-	0.128
HCM Control Delay (s)	12.7	5.3	-	-	13.9
HCM Lane LOS	B	A	-	-	B
HCM 95th %tile Q(veh)	0.9	-	-	-	0.4

PM PEAK HOUR
 EXISTING CONDITIONS

West Hollywood - Orange Grove Mixed Use - Traffic Impact Study
 106: Ogden Ave (South Leg) & Santa Monica Blvd.

12/13/2018

Intersection						
Int Delay, s/veh	1.9					
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↑↑			↑↑	↑	
Traffic Vol, veh/h	1376	30	29	1031	5	108
Future Vol, veh/h	1376	30	29	1031	5	108
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	95	95	95	95	95	95
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	1448	32	31	1085	5	114

Major/Minor	Major1	Major2	Minor1		
Conflicting Flow All	0	0	1480	0	2069 740
Stage 1	-	-	-	-	1464 -
Stage 2	-	-	-	-	605 -
Critical Hdwy	-	-	4.14	-	6.84 6.94
Critical Hdwy Stg 1	-	-	-	-	5.84 -
Critical Hdwy Stg 2	-	-	-	-	5.84 -
Follow-up Hdwy	-	-	2.22	-	3.52 3.32
Pot Cap-1 Maneuver	-	-	451	-	47 359
Stage 1	-	-	-	-	179 -
Stage 2	-	-	-	-	508 -
Platoon blocked, %	-	-	-	-	-
Mov Cap-1 Maneuver	-	-	451	-	39 359
Mov Cap-2 Maneuver	-	-	-	-	39 -
Stage 1	-	-	-	-	179 -
Stage 2	-	-	-	-	420 -

Approach	EB	WB	NB
HCM Control Delay, s	0	1.4	29.5
HCM LOS			D

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	263	-	-	451	-
HCM Lane V/C Ratio	0.452	-	-	0.068	-
HCM Control Delay (s)	29.5	-	-	13.6	1.1
HCM Lane LOS	D	-	-	B	A
HCM 95th %tile Q(veh)	2.2	-	-	0.2	-

PM PEAK HOUR
 EXISTING CONDITIONS

West Hollywood - Orange Grove Mixed Use - Traffic Impact Study
 107: Genesee Ave & Santa Monica Blvd

12/13/2018



Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↑↑		↘	↑↑	↘	
Traffic Volume (vph)	1292	14	43	1043	37	64
Future Volume (vph)	1292	14	43	1043	37	64
Ideal Flow (vphpl)	1620	1620	1620	1620	1620	1620
Total Lost time (s)	5.6		4.5	5.6	3.5	
Lane Util. Factor	0.95		1.00	0.95	1.00	
Frt	1.00		1.00	1.00	0.91	
Flt Protected	1.00		0.95	1.00	0.98	
Satd. Flow (prot)	3013		1509	3018	1426	
Flt Permitted	1.00		0.14	1.00	0.98	
Satd. Flow (perm)	3013		222	3018	1426	
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	1404	15	47	1134	40	70
RTOR Reduction (vph)	1	0	0	0	59	0
Lane Group Flow (vph)	1418	0	47	1134	51	0
Turn Type	NA		pm+pt	NA	Prot	
Protected Phases	2		1	6	8	
Permitted Phases			6			
Actuated Green, G (s)	71.3		74.5	70.0	16.7	
Effective Green, g (s)	70.8		73.5	69.5	17.2	
Actuated g/C Ratio	0.67		0.70	0.66	0.16	
Clearance Time (s)	5.1		4.0	5.1	4.0	
Vehicle Extension (s)	3.0		3.0	3.0	3.0	
Lane Grp Cap (vph)	2020		203	1986	232	
v/s Ratio Prot	c0.47		c0.01	0.38	c0.04	
v/s Ratio Perm			0.15			
v/c Ratio	0.70		0.23	0.57	0.22	
Uniform Delay, d1	10.8		6.8	9.9	38.4	
Progression Factor	1.00		0.26	0.17	1.00	
Incremental Delay, d2	2.1		0.5	1.0	0.5	
Delay (s)	12.9		2.3	2.7	38.9	
Level of Service	B		A	A	D	
Approach Delay (s)	12.9			2.7	38.9	
Approach LOS	B			A	D	

Intersection Summary

HCM 2000 Control Delay	9.5	HCM 2000 Level of Service	A
HCM 2000 Volume to Capacity ratio	0.60		
Actuated Cycle Length (s)	105.6	Sum of lost time (s)	15.2
Intersection Capacity Utilization	57.4%	ICU Level of Service	B
Analysis Period (min)	15		

c Critical Lane Group

PM PEAK HOUR
 EXISTING CONDITIONS

West Hollywood - Orange Grove Mixed Use - Traffic Impact Study
 44: Romaine St & Fairfax Ave

12/13/2018

Intersection												
Int Delay, s/veh	46.2											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕↔			↕	↕	↕	↕↕	↕	↕	↕↕	↕
Traffic Vol, veh/h	21	40	67	3	7	30	43	1128	78	49	879	44
Future Vol, veh/h	21	40	67	3	7	30	43	1128	78	49	879	44
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	0	90	-	0	102	-	0
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	23	43	73	3	8	33	47	1226	85	53	955	48

Major/Minor	Minor2		Minor1		Major1		Major2					
Conflicting Flow All	1772	2466	478	1925	2429	613	1003	0	0	1311	0	0
Stage 1	1061	1061	-	1320	1320	-	-	-	-	-	-	-
Stage 2	711	1405	-	605	1109	-	-	-	-	-	-	-
Critical Hdwy	7.54	6.54	6.94	7.54	6.54	6.94	4.14	-	-	4.14	-	-
Critical Hdwy Stg 1	6.54	5.54	-	6.54	5.54	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.54	5.54	-	6.54	5.54	-	-	-	-	-	-	-
Follow-up Hdwy	3.52	4.02	3.32	3.52	4.02	3.32	2.22	-	-	2.22	-	-
Pot Cap-1 Maneuver	53	~ 30	534	40	32	435	686	-	-	524	-	-
Stage 1	239	299	-	166	225	-	-	-	-	-	-	-
Stage 2	390	204	-	451	283	-	-	-	-	-	-	-
Platoon blocked, %								-	-	-	-	-
Mov Cap-1 Maneuver	34	~ 25	534	-	27	435	686	-	-	524	-	-
Mov Cap-2 Maneuver	34	~ 25	-	-	27	-	-	-	-	-	-	-
Stage 1	223	269	-	155	209	-	-	-	-	-	-	-
Stage 2	324	190	-	294	254	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s/\$	853.9		0.4	0.6
HCM LOS	F	-		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	WBLn2	SBL	SBT	SBR
Capacity (veh/h)	686	-	-	55	-	435	524	-	-
HCM Lane V/C Ratio	0.068	-	-	2.53	-	0.075	0.102	-	-
HCM Control Delay (s)	10.6	-	-	\$ 853.9	-	13.9	12.6	-	-
HCM Lane LOS	B	-	-	F	-	B	B	-	-
HCM 95th %tile Q(veh)	0.2	-	-	14.2	-	0.2	0.3	-	-


























Notes
 -: Volume exceeds capacity \$: Delay exceeds 300s +: Computation Not Defined *: All major volume in platoon

PM PEAK HOUR
 EXISTING CONDITIONS

APPENDIX D
Intersection Level of Service Worksheets
Existing plus-Project

HCM 2010 Signalized Intersection Summary

1: Fairfax Ave & Fountain Ave/Fountain Ave

















												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		 			 			 			 	
Traffic Volume (veh/h)	104	650	92	244	1056	57	52	651	126	51	807	287
Future Volume (veh/h)	104	650	92	244	1056	57	52	651	126	51	807	287
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	1588	1588	1620	1588	1588	1620	1588	1588	1620	1588	1588	1588
Adj Flow Rate, veh/h	109	684	97	257	1112	60	55	685	133	54	849	302
Adj No. of Lanes	1	2	0	1	2	0	1	2	0	1	2	1
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	237	1606	228	387	1762	95	107	863	167	130	1033	433
Arrive On Green	0.61	0.61	0.58	0.61	0.61	0.58	0.34	0.34	0.34	0.34	0.34	0.32
Sat Flow, veh/h	477	2655	376	689	2912	157	486	2522	489	666	3018	1350
Grp Volume(v), veh/h	109	389	392	257	576	596	55	410	408	54	849	302
Grp Sat Flow(s),veh/h/ln	477	1509	1522	689	1509	1561	486	1509	1502	666	1509	1350
Q Serve(g_s), s	20.9	15.1	15.3	34.9	26.8	26.9	9.3	27.0	27.0	8.8	28.3	21.5
Cycle Q Clear(g_c), s	47.8	15.1	15.3	50.2	26.8	26.9	37.6	27.0	27.0	35.8	28.3	21.5
Prop In Lane	1.00		0.25	1.00		0.10	1.00		0.33	1.00		1.00
Lane Grp Cap(c), veh/h	237	913	921	387	913	944	107	516	514	130	1033	433
V/C Ratio(X)	0.46	0.43	0.43	0.66	0.63	0.63	0.52	0.79	0.79	0.42	0.82	0.70
Avail Cap(c_a), veh/h	240	920	928	390	920	952	107	516	514	130	1033	433
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	0.97	0.97	0.97	1.00	1.00	1.00
Uniform Delay (d), s/veh	29.2	11.6	11.8	25.0	13.9	14.0	51.5	32.7	32.7	48.8	33.1	32.7
Incr Delay (d2), s/veh	2.8	0.6	0.6	5.5	1.9	1.9	16.2	11.5	11.6	9.5	7.4	9.0
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	2.9	6.4	6.5	7.2	11.5	11.9	2.1	12.9	12.9	2.0	12.8	9.1
LnGrp Delay(d),s/veh	32.0	12.2	12.4	30.5	15.8	15.9	67.7	44.2	44.3	58.4	40.5	41.7
LnGrp LOS	C	B	B	C	B	B	E	D	D	E	D	D
Approach Vol, veh/h		890			1429			873			1205	
Approach Delay, s/veh		14.7			18.5			45.7			41.6	
Approach LOS		B			B			D			D	
Timer	1	2	3	4	5	6	7	8				
Assigned Phs		2		4		6		8				
Phs Duration (G+Y+Rc), s		40.5		69.5		40.5		69.5				
Change Period (Y+Rc), s		* 5.3		* 5.3		* 5.3		* 5.3				
Max Green Setting (Gmax), s		* 35		* 65		* 35		* 65				
Max Q Clear Time (g_c+I1), s		39.6		49.8		37.8		52.2				
Green Ext Time (p_c), s		0.0		14.2		0.0		12.0				
Intersection Summary												
HCM 2010 Ctrl Delay				29.5								
HCM 2010 LOS				C								
Notes												

HCM 2010 Signalized Intersection Summary
1: Fairfax Ave & Fountain Ave/Fountain Ave

* HCM 2010 computational engine requires equal clearance times for the phases crossing the barrier.

HCM Unsignalized Intersection Capacity Analysis

2: Orange Grove Ave & Foutain Ave

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	2	795	45	62	1201	6	3	3	60	4	24	156
Future Volume (Veh/h)	2	795	45	62	1201	6	3	3	60	4	24	156
Sign Control		Free			Free			Stop			Stop	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.95	0.92	0.92	0.92	0.92	0.95	0.92	0.95	0.92	0.95	0.95	0.95
Hourly flow rate (vph)	2	864	49	67	1305	6	3	3	65	4	25	164
Pedestrians												
Lane Width (ft)												
Walking Speed (ft/s)												
Percent Blockage												
Right turn flare (veh)												
Median type		None			None							
Median storage (veh)												
Upstream signal (ft)		377			1010							
pX, platoon unblocked				0.88			0.88	0.88	0.88	0.88	0.88	
vC, conflicting volume	1311			913			1856	2338	456	1944	2359	656
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	1311			630			1700	2248	112	1801	2272	656
tC, single (s)	4.1			4.1			7.5	6.5	6.9	7.5	6.5	6.9
tC, 2 stage (s)												
tF (s)	2.2			2.2			3.5	4.0	3.3	3.5	4.0	3.3
p0 queue free %	100			92			72	91	92	89	22	60
cM capacity (veh/h)	524			835			11	33	810	35	32	408
Direction, Lane #	EB 1	EB 2	WB 1	WB 2	NB 1	SB 1						
Volume Total	434	481	720	658	71	193						
Volume Left	2	0	67	0	3	4						
Volume Right	0	49	0	6	65	164						
cSH	524	1700	835	1700	157	149						
Volume to Capacity	0.00	0.28	0.08	0.39	0.45	1.29						
Queue Length 95th (ft)	0	0	7	0	52	292						
Control Delay (s)	0.1	0.0	2.0	0.0	45.7	231.0						
Lane LOS	A		A		E	F						
Approach Delay (s)	0.1		1.1		45.7	231.0						
Approach LOS					E	F						
Intersection Summary												
Average Delay			19.3									
Intersection Capacity Utilization			93.4%		ICU Level of Service				F			
Analysis Period (min)			15									

HCM 2010 TWSC
3: Ogden Ave
























Intersection												
Int Delay, s/veh	9.2											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↔↔			↔↔			↔			↔	
Traffic Vol, veh/h	5	796	14	64	1363	6	11	2	55	0	7	16
Future Vol, veh/h	5	796	14	64	1363	6	11	2	55	0	7	16
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	95	92	92	92	92	95	92	95	92	95	95	95
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	5	865	15	70	1482	6	12	2	60	0	7	17

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	1488	0	0	880	0	0	1768	2511	440	2069	2515	744
Stage 1	-	-	-	-	-	-	883	883	-	1625	1625	-
Stage 2	-	-	-	-	-	-	885	1628	-	444	890	-
Critical Hdwy	4.14	-	-	4.14	-	-	7.54	6.54	6.94	7.54	6.54	6.94
Critical Hdwy Stg 1	-	-	-	-	-	-	6.54	5.54	-	6.54	5.54	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.54	5.54	-	6.54	5.54	-
Follow-up Hdwy	2.22	-	-	2.22	-	-	3.52	4.02	3.32	3.52	4.02	3.32
Pot Cap-1 Maneuver	448	-	-	764	-	-	53	28	565	31	28	357
Stage 1	-	-	-	-	-	-	307	362	-	107	159	-
Stage 2	-	-	-	-	-	-	306	159	-	563	359	-
Platoon blocked, %	-	-	-	-	-	-	-	-	-	-	-	-
Mov Cap-1 Maneuver	448	-	-	764	-	-	17	13	565	14	13	357
Mov Cap-2 Maneuver	-	-	-	-	-	-	17	13	-	14	13	-
Stage 1	-	-	-	-	-	-	300	354	-	105	75	-
Stage 2	-	-	-	-	-	-	124	75	-	489	351	-

Approach	EB			WB			NB			SB		
HCM Control Delay, s	0.2			2.8			190			193.8		
HCM LOS							F			F		

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	76	448	-	-	764	-	-	39
HCM Lane V/C Ratio	0.972	0.012	-	-	0.091	-	-	0.621
HCM Control Delay (s)	190	13.1	0.1	-	10.2	2.5	-	193.8
HCM Lane LOS	F	B	A	-	B	A	-	F
HCM 95th %tile Q(veh)	5.1	0	-	-	0.3	-	-	2.2

HCM 2010 Signalized Intersection Summary
 4: Fairfax Ave & Santa Monica Blvd/Santa Monica Boulevard

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	120	612	63	366	914	56	90	668	134	65	922	109
Future Volume (veh/h)	120	612	63	366	914	56	90	668	134	65	922	109
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	1588	1588	1588	1588	1588	1620	1588	1588	1588	1588	1588	1588
Adj Flow Rate, veh/h	126	644	66	385	962	59	95	703	141	68	971	115
Adj No. of Lanes	1	2	1	1	2	0	1	2	1	1	2	1
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	200	994	439	362	1177	72	131	1005	450	175	945	417
Arrive On Green	0.06	0.33	0.32	0.13	0.41	0.40	0.05	0.33	0.33	0.03	0.31	0.31
Sat Flow, veh/h	1513	3018	1350	1513	2889	177	1513	3018	1350	1513	3018	1350
Grp Volume(v), veh/h	126	644	66	385	502	519	95	703	141	68	971	115
Grp Sat Flow(s),veh/h/ln	1513	1509	1350	1513	1509	1557	1513	1509	1350	1513	1509	1350
Q Serve(g_s), s	6.5	20.9	4.0	15.5	34.0	34.0	5.1	23.3	8.9	2.9	36.0	7.4
Cycle Q Clear(g_c), s	6.5	20.9	4.0	15.5	34.0	34.0	5.1	23.3	8.9	2.9	36.0	7.4
Prop In Lane	1.00		1.00	1.00		0.11	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	200	994	439	362	615	634	131	1005	450	175	945	417
V/C Ratio(X)	0.63	0.65	0.15	1.06	0.82	0.82	0.72	0.70	0.31	0.39	1.03	0.28
Avail Cap(c_a), veh/h	200	994	439	362	615	634	135	1005	450	222	945	417
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	1.00	1.00	0.87	0.87	0.87
Uniform Delay (d), s/veh	28.9	32.9	27.6	29.8	30.3	30.3	31.7	33.3	28.6	33.2	39.5	30.0
Incr Delay (d2), s/veh	6.2	3.3	0.7	65.0	11.5	11.2	16.8	2.2	0.4	1.2	34.7	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	1.5	9.1	1.6	11.5	16.1	16.5	2.7	10.0	3.4	0.8	19.5	2.8
LnGrp Delay(d),s/veh	35.1	36.2	28.3	94.9	41.7	41.5	48.5	35.5	29.0	34.4	74.2	30.3
LnGrp LOS	D	D	C	F	D	D	D	D	C	C	F	C
Approach Vol, veh/h		836			1406			939			1154	
Approach Delay, s/veh		35.4			56.2			35.8			67.5	
Approach LOS		D			E			D			E	
Timer	1	2	3	4	5	6	7	8				
Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	21.0	42.5	10.7	40.8	12.0	51.5	8.4	43.1				
Change Period (Y+Rc), s	* 4	5.1	* 4	* 5.3	* 4	5.1	* 4	* 5.3				
Max Green Setting (Gmax), s	* 17	37.1	* 7	* 36	* 8	46.1	* 8	* 35				
Max Q Clear Time (g_c+I1), s	17.5	22.9	7.1	38.0	8.5	36.0	4.9	25.3				
Green Ext Time (p_c), s	0.0	9.3	0.0	0.0	0.0	7.1	0.0	7.1				
Intersection Summary												
HCM 2010 Ctrl Delay			50.8									
HCM 2010 LOS			D									
Notes												

HCM 2010 Signalized Intersection Summary
4: Fairfax Ave & Santa Monica Blvd/Santa Monica Boulevard

* HCM 2010 computational engine requires equal clearance times for the phases crossing the barrier.

HCM 2010 TWSC
 5: Santa Monica Boulevard & Orange Grove Ave

Intersection												
Int Delay, s/veh	1.2											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↑↑			↑↑				↑			↑
Traffic Vol, veh/h	0	793	16	0	1208	45	0	0	18	0	0	124
Future Vol, veh/h	0	793	16	0	1208	45	0	0	18	0	0	124
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	0	-	-	0
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	95	95	92	92	95	95	95	92	95	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	862	17	0	1313	49	0	0	19	0	0	135

Major/Minor	Major1		Major2		Minor1		Minor2					
Conflicting Flow All	-	0	0	-	-	0	-	-	440	-	-	681
Stage 1	-	-	-	-	-	-	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-	-	-	-	-	-	-
Critical Hdwy	-	-	-	-	-	-	-	-	6.94	-	-	6.94
Critical Hdwy Stg 1	-	-	-	-	-	-	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-	-	-	-	-	-	-
Follow-up Hdwy	-	-	-	-	-	-	-	-	3.32	-	-	3.32
Pot Cap-1 Maneuver	0	-	-	0	-	-	0	0	565	0	0	393
Stage 1	0	-	-	0	-	-	0	0	-	0	0	-
Stage 2	0	-	-	0	-	-	0	0	-	0	0	-
Platoon blocked, %	-	-	-	-	-	-	-	-	-	-	-	-
Mov Cap-1 Maneuver	-	-	-	-	-	-	-	-	565	-	-	393
Mov Cap-2 Maneuver	-	-	-	-	-	-	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0	0	11.6	18.9
HCM LOS			B	C

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBT	WBR	SBLn1
Capacity (veh/h)	565	-	-	-	-	393
HCM Lane V/C Ratio	0.034	-	-	-	-	0.343
HCM Control Delay (s)	11.6	-	-	-	-	18.9
HCM Lane LOS	B	-	-	-	-	C
HCM 95th %tile Q(veh)	0.1	-	-	-	-	1.5

HCM 2010 TWSC
6: Ogden Ave

Intersection						
Int Delay, s/veh	1.9					
Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		↑↑	↑↑		↑	
Traffic Vol, veh/h	23	812	1201	25	10	107
Future Vol, veh/h	23	812	1201	25	10	107
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	25	883	1305	27	11	116

Major/Minor	Major1	Major2	Minor2
Conflicting Flow All	1332	0	0
Stage 1	-	-	-
Stage 2	-	-	-
Critical Hdwy	4.14	-	-
Critical Hdwy Stg 1	-	-	-
Critical Hdwy Stg 2	-	-	-
Follow-up Hdwy	2.22	-	-
Pot Cap-1 Maneuver	514	-	-
Stage 1	-	-	-
Stage 2	-	-	-
Platoon blocked, %	-	-	-
Mov Cap-1 Maneuver	514	-	-
Mov Cap-2 Maneuver	-	-	-
Stage 1	-	-	-
Stage 2	-	-	-

Approach	EB	WB	SB
HCM Control Delay, s	0.9	0	28.9
HCM LOS			D

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	514	-	-	-	275
HCM Lane V/C Ratio	0.049	-	-	-	0.462
HCM Control Delay (s)	12.4	0.6	-	-	28.9
HCM Lane LOS	B	A	-	-	D
HCM 95th %tile Q(veh)	0.2	-	-	-	2.3

HCM 2010 TWSC

106:

Intersection

Int Delay, s/veh 1.5

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↑↑			↑↑	↑	↑
Traffic Vol, veh/h	798	16	58	1250	7	34
Future Vol, veh/h	798	16	58	1250	7	34
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	95	95	95	95	95	95
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	840	17	61	1316	7	36

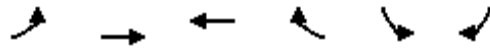
Major/Minor	Major1	Major2	Minor1	Minor2	Minor3
Conflicting Flow All	0	0	857	0	1629
Stage 1	-	-	-	-	849
Stage 2	-	-	-	-	780
Critical Hdwy	-	-	4.14	-	6.84
Critical Hdwy Stg 1	-	-	-	-	5.84
Critical Hdwy Stg 2	-	-	-	-	5.84
Follow-up Hdwy	-	-	2.22	-	3.52
Pot Cap-1 Maneuver	-	-	779	-	93
Stage 1	-	-	-	-	380
Stage 2	-	-	-	-	412
Platoon blocked, %	-	-	-	-	-
Mov Cap-1 Maneuver	-	-	779	-	66
Mov Cap-2 Maneuver	-	-	-	-	66
Stage 1	-	-	-	-	380
Stage 2	-	-	-	-	292

Approach	EB	WB	NB
HCM Control Delay, s	0	1.7	22.6
HCM LOS			C

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	248	-	-	779	-
HCM Lane V/C Ratio	0.174	-	-	0.078	-
HCM Control Delay (s)	22.6	-	-	10	1.3
HCM Lane LOS	C	-	-	B	A
HCM 95th %tile Q(veh)	0.6	-	-	0.3	-

HCM Signalized Intersection Capacity Analysis

7: Santa Monica Blvd & Genesse Ave



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations	↖	↑↑	↑↑		↘	
Traffic Volume (vph)	20	831	1169	13	27	91
Future Volume (vph)	20	831	1169	13	27	91
Ideal Flow (vphpl)	1620	1620	1620	1620	1620	1620
Total Lost time (s)	4.5	5.6	5.6		4.6	
Lane Util. Factor	1.00	0.95	0.95		1.00	
Frt	1.00	1.00	1.00		0.90	
Flt Protected	0.95	1.00	1.00		0.99	
Satd. Flow (prot)	1509	3018	3013		1406	
Flt Permitted	0.18	1.00	1.00		0.99	
Satd. Flow (perm)	290	3018	3013		1406	
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	22	903	1271	14	29	99
RTOR Reduction (vph)	0	0	1	0	84	0
Lane Group Flow (vph)	22	903	1284	0	44	0
Turn Type	pm+pt	NA	NA		Prot	
Protected Phases	5	2	6		4	
Permitted Phases	2					
Actuated Green, G (s)	71.7	68.7	72.8		15.6	
Effective Green, g (s)	70.7	68.2	72.3		16.1	
Actuated g/C Ratio	0.67	0.65	0.68		0.15	
Clearance Time (s)	4.0	5.1	5.1		5.1	
Vehicle Extension (s)	1.0	3.0	3.0		3.0	
Lane Grp Cap (vph)	223	1949	2062		214	
v/s Ratio Prot	c0.00	0.30	c0.43		c0.03	
v/s Ratio Perm	0.06					
v/c Ratio	0.10	0.46	0.62		0.21	
Uniform Delay, d1	6.4	9.5	9.2		39.2	
Progression Factor	0.25	0.17	1.00		1.00	
Incremental Delay, d2	0.1	0.7	1.4		0.5	
Delay (s)	1.6	2.4	10.6		39.6	
Level of Service	A	A	B		D	
Approach Delay (s)		2.3	10.6		39.6	
Approach LOS		A	B		D	

Intersection Summary

HCM 2000 Control Delay	8.9	HCM 2000 Level of Service	A
HCM 2000 Volume to Capacity ratio	0.53		
Actuated Cycle Length (s)	105.6	Sum of lost time (s)	14.7
Intersection Capacity Utilization	59.4%	ICU Level of Service	B
Analysis Period (min)	15		

c Critical Lane Group

HCM 2010 TWSC
 8: Romaine St & Fairfax Ave

Intersection												
Int Delay, s/veh	36.9											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↔			↔	↔	↔	↕	↕	↕	↕	↕
Traffic Vol, veh/h	4	3	56	25	47	61	50	829	12	37	1263	45
Future Vol, veh/h	4	3	56	25	47	61	50	829	12	37	1263	45
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	0	90	-	0	102	-	0
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	4	3	61	27	51	66	54	901	13	40	1373	49

Major/Minor	Minor2		Minor1		Major1		Major2					
Conflicting Flow All	2037	2475	687	1777	2511	451	1422	0	0	914	0	0
Stage 1	1453	1453	-	1009	1009	-	-	-	-	-	-	-
Stage 2	584	1022	-	768	1502	-	-	-	-	-	-	-
Critical Hdwy	7.54	6.54	6.94	7.54	6.54	6.94	4.14	-	-	4.14	-	-
Critical Hdwy Stg 1	6.54	5.54	-	6.54	5.54	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.54	5.54	-	6.54	5.54	-	-	-	-	-	-	-
Follow-up Hdwy	3.52	4.02	3.32	3.52	4.02	3.32	2.22	-	-	2.22	-	-
Pot Cap-1 Maneuver	33	29	389	52	~ 28	556	475	-	-	742	-	-
Stage 1	137	194	-	257	316	-	-	-	-	-	-	-
Stage 2	465	312	-	360	183	-	-	-	-	-	-	-
Platoon blocked, %								-	-	-	-	-
Mov Cap-1 Maneuver	-	24	389	35	~ 23	556	475	-	-	742	-	-
Mov Cap-2 Maneuver	-	24	-	35	~ 23	-	-	-	-	-	-	-
Stage 1	121	184	-	228	280	-	-	-	-	-	-	-
Stage 2	297	276	-	282	173	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s		\$ 667.2	0.8	0.3
HCM LOS	-	F		






















Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	WBLn2	SBL	SBT	SBR
Capacity (veh/h)	475	-	-	-	26	556	742	-	-
HCM Lane V/C Ratio	0.114	-	-	-	3.01	0.119	0.054	-	-
HCM Control Delay (s)	13.6	-	-	\$ 1221.9	12.4	10.1	-	-	-
HCM Lane LOS	B	-	-	-	F	B	B	-	-
HCM 95th %tile Q(veh)	0.4	-	-	-	9.6	0.4	0.2	-	-

Notes
 -: Volume exceeds capacity \$: Delay exceeds 300s +: Computation Not Defined *: All major volume in platoon

West Hollywood - Orange Grove Mixed Use - Traffic Impact Study

1: Fairfax Ave & Fountain Ave

06/06/2019

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	157	735	55	150	907	75	50	711	139	58	671	211
Future Volume (veh/h)	157	735	55	150	907	75	50	711	139	58	671	211
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	1588	1588	1620	1588	1588	1620	1588	1588	1620	1588	1588	1588
Adj Flow Rate, veh/h	165	774	58	158	955	79	53	748	146	61	706	222
Adj No. of Lanes	1	2	0	1	2	0	1	2	0	1	2	1
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	277	1698	127	358	1684	139	157	883	172	113	1058	444
Arrive On Green	0.60	0.60	0.57	0.60	0.60	0.57	0.35	0.35	0.35	0.35	0.35	0.33
Sat Flow, veh/h	543	2846	213	657	2822	233	600	2519	492	620	3018	1350
Grp Volume(v), veh/h	165	410	422	158	511	523	53	448	446	61	706	222
Grp Sat Flow(s),veh/h/ln	543	1509	1551	657	1509	1547	600	1509	1501	620	1509	1350
Q Serve(g_s), s	29.3	16.6	16.7	19.3	22.7	22.8	9.0	30.2	30.2	8.4	21.8	14.5
Cycle Q Clear(g_c), s	52.1	16.6	16.7	36.0	22.7	22.8	30.8	30.2	30.2	38.6	21.8	14.5
Prop In Lane	1.00		0.14	1.00		0.15	1.00		0.33	1.00		1.00
Lane Grp Cap(c), veh/h	277	900	925	358	900	923	157	529	526	113	1058	444
V/C Ratio(X)	0.60	0.46	0.46	0.44	0.57	0.57	0.34	0.85	0.85	0.54	0.67	0.50
Avail Cap(c_a), veh/h	279	907	932	361	907	930	157	529	526	113	1058	444
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(l)	1.00	1.00	1.00	1.00	1.00	1.00	0.97	0.97	0.97	1.00	1.00	1.00
Uniform Delay (d), s/veh	29.4	12.3	12.4	22.3	13.5	13.7	43.4	33.0	33.0	51.8	30.3	29.7
Incr Delay (d2), s/veh	5.1	0.7	0.7	1.7	1.3	1.3	5.6	15.0	15.1	17.4	3.3	4.0
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	4.8	7.0	7.2	3.7	9.7	10.0	1.7	14.8	14.7	2.4	9.6	5.9
LnGrp Delay(d),s/veh	34.5	13.0	13.1	24.0	14.8	15.0	48.9	48.0	48.1	69.2	33.6	33.7
LnGrp LOS	C	B	B	C	B	B	D	D	D	E	C	C
Approach Vol, veh/h		997			1192			947			989	
Approach Delay, s/veh		16.6			16.1			48.1			35.8	
Approach LOS		B			B			D			D	
Timer	1	2	3	4	5	6	7	8				
Assigned Phs		2		4		6		8				
Phs Duration (G+Y+Rc), s		41.5		68.5		41.5		68.5				
Change Period (Y+Rc), s		* 5.3		* 5.3		* 5.3		* 5.3				
Max Green Setting (Gmax), s		* 36		* 64		* 36		* 64				
Max Q Clear Time (g_c+I1), s		32.8		54.1		40.6		38.0				
Green Ext Time (p_c), s		2.7		9.1		0.0		23.2				
Intersection Summary												
HCM 2010 Ctrl Delay				28.3								
HCM 2010 LOS				C								
Notes												

MIDDAY PEAK HOUR
Existing + Project

* HCM 2010 computational engine requires equal clearance times for the phases crossing the barrier.

West Hollywood - Orange Grove Mixed Use - Traffic Impact Study

2: Orange Grove Ave

06/06/2019



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↔↔			↔↔			↔			↔	
Traffic Volume (veh/h)	18	908	28	22	1088	10	8	3	50	4	3	39
Future Volume (Veh/h)	18	908	28	22	1088	10	8	3	50	4	3	39
Sign Control		Free			Free			Stop			Stop	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.95	0.92	0.92	0.92	0.92	0.95	0.92	0.95	0.92	0.95	0.95	0.95
Hourly flow rate (vph)	19	987	30	24	1183	11	9	3	54	4	3	41
Pedestrians												
Lane Width (ft)												
Walking Speed (ft/s)												
Percent Blockage												
Right turn flare (veh)												
Median type		None			None							
Median storage (veh)												
Upstream signal (ft)		377			1010							
pX, platoon unblocked				0.85			0.85	0.85	0.85	0.85	0.85	
vC, conflicting volume	1194			1017			1722	2282	508	1824	2292	597
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	1194			662			1493	2154	63	1613	2165	597
tC, single (s)	4.1			4.1			7.5	6.5	6.9	7.5	6.5	6.9
tC, 2 stage (s)												
tF (s)	2.2			2.2			3.5	4.0	3.3	3.5	4.0	3.3
p0 queue free %	97			97			85	92	94	92	92	91
cM capacity (veh/h)	580			782			59	38	839	49	37	446

Direction, Lane #	EB 1	EB 2	WB 1	WB 2	NB 1	SB 1
Volume Total	512	524	616	602	66	48
Volume Left	19	0	24	0	9	4
Volume Right	0	30	0	11	54	41
cSH	580	1700	782	1700	222	189
Volume to Capacity	0.03	0.31	0.03	0.35	0.30	0.25
Queue Length 95th (ft)	3	0	2	0	30	24
Control Delay (s)	0.9	0.0	0.8	0.0	28.0	30.4
Lane LOS	A		A		D	D
Approach Delay (s)	0.5		0.4		28.0	30.4
Approach LOS					D	D

Intersection Summary

Average Delay	1.8
Intersection Capacity Utilization	67.2%
ICU Level of Service	C
Analysis Period (min)	15

MIDDAY PEAK HOUR
Existing + Project

West Hollywood - Orange Grove Mixed Use - Traffic Impact Study
 3: Ogden Ave

06/06/2019

Intersection												
Int Delay, s/veh	2.2											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↔			↔			↔			↔	
Traffic Vol, veh/h	19	909	18	25	1078	9	10	3	50	1	1	23
Future Vol, veh/h	19	909	18	25	1078	9	10	3	50	1	1	23
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	95	92	92	92	92	95	92	95	92	95	95	95
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	20	988	20	27	1172	9	11	3	54	1	1	24

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	1181	0	0	1008	0	0	1679	2273	504	1767	2279	591
Stage 1	-	-	-	-	-	-	1038	1038	-	1231	1231	-
Stage 2	-	-	-	-	-	-	641	1235	-	536	1048	-
Critical Hdwy	4.14	-	-	4.14	-	-	7.54	6.54	6.94	7.54	6.54	6.94
Critical Hdwy Stg 1	-	-	-	-	-	-	6.54	5.54	-	6.54	5.54	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.54	5.54	-	6.54	5.54	-
Follow-up Hdwy	2.22	-	-	2.22	-	-	3.52	4.02	3.32	3.52	4.02	3.32
Pot Cap-1 Maneuver	587	-	-	683	-	-	62	40	513	53	39	450
Stage 1	-	-	-	-	-	-	247	306	-	188	248	-
Stage 2	-	-	-	-	-	-	430	247	-	496	303	-
Platoon blocked, %	-	-	-	-	-	-	-	-	-	-	-	-
Mov Cap-1 Maneuver	587	-	-	683	-	-	49	33	513	38	32	450
Mov Cap-2 Maneuver	-	-	-	-	-	-	49	33	-	38	32	-
Stage 1	-	-	-	-	-	-	228	282	-	173	219	-
Stage 2	-	-	-	-	-	-	358	219	-	404	279	-

Approach	EB			WB			NB			SB		
HCM Control Delay, s	0.6			0.8			42.9			22.7		
HCM LOS							E			C		

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	161	587	-	-	683	-	-	230
HCM Lane V/C Ratio	0.425	0.034	-	-	0.04	-	-	0.114
HCM Control Delay (s)	42.9	11.3	0.4	-	10.5	0.6	-	22.7
HCM Lane LOS	E	B	A	-	B	A	-	C
HCM 95th %tile Q(veh)	1.9	0.1	-	-	0.1	-	-	0.4

MIDDAY PEAK HOUR
 Existing +Project

West Hollywood - Orange Grove Mixed Use - Traffic Impact Study
 4: Fairfax Ave & Santa Monica Blvd

06/06/2019

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	157	679	82	209	768	79	132	689	185	79	727	106
Future Volume (veh/h)	157	679	82	209	768	79	132	689	185	79	727	106
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	1588	1588	1588	1588	1588	1620	1588	1588	1588	1588	1588	1588
Adj Flow Rate, veh/h	165	715	86	220	808	83	139	725	195	83	765	112
Adj No. of Lanes	1	2	1	1	2	0	1	2	1	1	2	1
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	249	1148	508	323	1159	119	162	925	414	165	901	397
Arrive On Green	0.06	0.38	0.38	0.10	0.42	0.42	0.05	0.31	0.31	0.04	0.30	0.29
Sat Flow, veh/h	1513	3018	1350	1513	2763	284	1513	3018	1350	1513	3018	1350
Grp Volume(v), veh/h	165	715	86	220	441	450	139	725	195	83	765	112
Grp Sat Flow(s),veh/h/ln	1513	1509	1350	1513	1509	1538	1513	1509	1350	1513	1509	1350
Q Serve(g_s), s	6.5	22.1	4.9	10.3	27.6	27.6	5.5	25.2	13.5	4.5	27.4	7.3
Cycle Q Clear(g_c), s	6.5	22.1	4.9	10.3	27.6	27.6	5.5	25.2	13.5	4.5	27.4	7.3
Prop In Lane	1.00		1.00	1.00		0.18	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	249	1148	508	323	633	645	162	925	414	165	901	397
V/C Ratio(X)	0.66	0.62	0.17	0.68	0.70	0.70	0.86	0.78	0.47	0.50	0.85	0.28
Avail Cap(c_a), veh/h	249	1148	508	382	633	645	162	925	414	190	945	417
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	1.00	1.00	0.87	0.87	0.87
Uniform Delay (d), s/veh	28.8	28.9	23.9	22.2	27.4	27.4	38.7	36.4	32.3	31.0	37.9	31.2
Incr Delay (d2), s/veh	6.4	2.6	0.7	3.9	6.3	6.1	33.9	4.4	0.8	2.1	6.3	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	2.7	9.6	1.9	4.6	12.5	12.9	3.6	11.0	5.1	2.0	12.2	2.8
LnGrp Delay(d),s/veh	35.3	31.5	24.6	26.1	33.6	33.6	72.6	40.8	33.1	33.1	44.2	31.6
LnGrp LOS	D	C	C	C	C	C	E	D	C	C	D	C
Approach Vol, veh/h		966			1111			1059			960	
Approach Delay, s/veh		31.5			32.1			43.6			41.7	
Approach LOS		C			C			D			D	
Timer	1	2	3	4	5	6	7	8				
Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	16.5	48.3	11.0	39.2	12.0	52.8	10.1	40.1				
Change Period (Y+Rc), s	* 4	5.1	* 4	* 5.3	* 4	5.1	* 4	* 5.3				
Max Green Setting (Gmax), s	* 17	37.1	* 7	* 36	* 8	46.1	* 8	* 35				
Max Q Clear Time (g_c+I1), s	12.3	24.1	7.5	29.4	8.5	29.6	6.5	27.2				
Green Ext Time (p_c), s	0.3	8.5	0.0	4.5	0.0	10.1	0.0	5.5				
Intersection Summary												
HCM 2010 Ctrl Delay			37.2									
HCM 2010 LOS			D									
Notes												

MIDDAY PEAK HOUR
 Existing + Project

* HCM 2010 computational engine requires equal clearance times for the phases crossing the barrier.

West Hollywood - Orange Grove Mixed Use - Traffic Impact Study
5: Orange Grove Ave

06/06/2019

Intersection												
Int Delay, s/veh	0.7											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↑↓			↑↓				↑			↑
Traffic Vol, veh/h	0	910	32	0	995	50	0	0	37	0	0	76
Future Vol, veh/h	0	910	32	0	995	50	0	0	37	0	0	76
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	0	-	-	0
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	95	95	92	92	95	95	95	92	95	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	989	34	0	1082	54	0	0	39	0	0	83

Major/Minor	Major1		Major2		Minor1		Minor2					
Conflicting Flow All	-	0	0	-	-	0	-	-	512	-	-	568
Stage 1	-	-	-	-	-	-	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-	-	-	-	-	-	-
Critical Hdwy	-	-	-	-	-	-	-	-	6.94	-	-	6.94
Critical Hdwy Stg 1	-	-	-	-	-	-	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-	-	-	-	-	-	-
Follow-up Hdwy	-	-	-	-	-	-	-	-	3.32	-	-	3.32
Pot Cap-1 Maneuver	0	-	-	0	-	-	0	0	507	0	0	466
Stage 1	0	-	-	0	-	-	0	0	-	0	0	-
Stage 2	0	-	-	0	-	-	0	0	-	0	0	-
Platoon blocked, %	-	-	-	-	-	-	-	-	-	-	-	-
Mov Cap-1 Maneuver	-	-	-	-	-	-	-	-	507	-	-	466
Mov Cap-2 Maneuver	-	-	-	-	-	-	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0	0	12.7	14.4
HCM LOS			B	B

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBT	WBR	SBLn1
Capacity (veh/h)	507	-	-	-	-	466
HCM Lane V/C Ratio	0.077	-	-	-	-	0.177
HCM Control Delay (s)	12.7	-	-	-	-	14.4
HCM Lane LOS	B	-	-	-	-	B
HCM 95th %tile Q(veh)	0.2	-	-	-	-	0.6

MIDDAY PEAK HOUR
Existing + Project

West Hollywood - Orange Grove Mixed Use - Traffic Impact Study
6: Ogden Ave

06/06/2019

Intersection						
Int Delay, s/veh	1.6					
Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		↑↑	↑↑		↑↑	
Traffic Vol, veh/h	51	897	1033	32	11	46
Future Vol, veh/h	51	897	1033	32	11	46
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	55	975	1123	35	12	50

Major/Minor	Major1	Major2	Minor2
Conflicting Flow All	1158	0	0
Stage 1	-	-	-
Stage 2	-	-	-
Critical Hdwy	4.14	-	-
Critical Hdwy Stg 1	-	-	-
Critical Hdwy Stg 2	-	-	-
Follow-up Hdwy	2.22	-	-
Pot Cap-1 Maneuver	599	-	-
Stage 1	-	-	-
Stage 2	-	-	-
Platoon blocked, %	-	-	-
Mov Cap-1 Maneuver	599	-	-
Mov Cap-2 Maneuver	-	-	-
Stage 1	-	-	-
Stage 2	-	-	-

Approach	EB	WB	SB
HCM Control Delay, s	1.6	0	30
HCM LOS			D

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	599	-	-	-	205
HCM Lane V/C Ratio	0.093	-	-	-	0.302
HCM Control Delay (s)	11.6	1	-	-	30
HCM Lane LOS	B	A	-	-	D
HCM 95th %tile Q(veh)	0.3	-	-	-	1.2

MIDDAY PEAK HOUR
Existing + Project

Intersection

Int Delay, s/veh 0.7

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↑↑			↑↑	↑	
Traffic Vol, veh/h	906	15	31	1048	2	35
Future Vol, veh/h	906	15	31	1048	2	35
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	95	95	95	95	95	95
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	954	16	33	1103	2	37

Major/Minor

	Major1	Major2	Minor1		
Conflicting Flow All	0	0	970	0	1580 485
Stage 1	-	-	-	-	962 -
Stage 2	-	-	-	-	618 -
Critical Hdwy	-	-	4.14	-	6.84 6.94
Critical Hdwy Stg 1	-	-	-	-	5.84 -
Critical Hdwy Stg 2	-	-	-	-	5.84 -
Follow-up Hdwy	-	-	2.22	-	3.52 3.32
Pot Cap-1 Maneuver	-	-	706	-	100 528
Stage 1	-	-	-	-	331 -
Stage 2	-	-	-	-	500 -
Platoon blocked, %	-	-	-	-	-
Mov Cap-1 Maneuver	-	-	706	-	88 528
Mov Cap-2 Maneuver	-	-	-	-	88 -
Stage 1	-	-	-	-	331 -
Stage 2	-	-	-	-	440 -

Approach

	EB	WB	NB
HCM Control Delay, s	0	0.9	14.5
HCM LOS			B

Minor Lane/Major Mvmt

	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	416	-	-	706	-
HCM Lane V/C Ratio	0.094	-	-	0.046	-
HCM Control Delay (s)	14.5	-	-	10.3	0.6
HCM Lane LOS	B	-	-	B	A
HCM 95th %tile Q(veh)	0.3	-	-	0.1	-

West Hollywood - Orange Grove Mixed Use - Traffic Impact Study
 7: Santa Monica Blvd & Genesse Ave

06/06/2019



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (vph)	38	886	1034	22	23	47
Future Volume (vph)	38	886	1034	22	23	47
Ideal Flow (vphpl)	1620	1620	1620	1620	1620	1620
Total Lost time (s)	4.5	5.6	5.6		4.6	
Lane Util. Factor	1.00	0.95	0.95		1.00	
Frt	1.00	1.00	1.00		0.91	
Flt Protected	0.95	1.00	1.00		0.98	
Satd. Flow (prot)	1509	3018	3008		1421	
Flt Permitted	0.21	1.00	1.00		0.98	
Satd. Flow (perm)	332	3018	3008		1421	
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	41	963	1124	24	25	51
RTOR Reduction (vph)	0	0	1	0	43	0
Lane Group Flow (vph)	41	963	1147	0	33	0
Turn Type	pm+pt	NA	NA		Prot	
Protected Phases	5	2	6		4	
Permitted Phases	2					
Actuated Green, G (s)	75.8	72.8	72.8		15.6	
Effective Green, g (s)	74.8	72.3	72.3		16.1	
Actuated g/C Ratio	0.71	0.68	0.68		0.15	
Clearance Time (s)	4.0	5.1	5.1		5.1	
Vehicle Extension (s)	1.0	3.0	3.0		3.0	
Lane Grp Cap (vph)	263	2066	2059		216	
v/s Ratio Prot	c0.00	0.32	c0.38		c0.02	
v/s Ratio Perm	0.11					
v/c Ratio	0.16	0.47	0.56		0.15	
Uniform Delay, d1	5.3	7.7	8.5		38.8	
Progression Factor	0.28	0.20	1.00		1.00	
Incremental Delay, d2	0.1	0.7	1.1		0.3	
Delay (s)	1.5	2.2	9.6		39.2	
Level of Service	A	A	A		D	
Approach Delay (s)		2.2	9.6		39.2	
Approach LOS		A	A		D	

Intersection Summary

HCM 2000 Control Delay	7.3	HCM 2000 Level of Service	A
HCM 2000 Volume to Capacity ratio	0.47		
Actuated Cycle Length (s)	105.6	Sum of lost time (s)	14.7
Intersection Capacity Utilization	58.0%	ICU Level of Service	B
Analysis Period (min)	15		

c Critical Lane Group

MIDDAY PEAK HOUR
 Existing + Project

West Hollywood - Orange Grove Mixed Use - Traffic Impact Study
 8: Romaine St & Fairfax Ave

06/06/2019

Intersection

Int Delay, s/veh 3

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↔			↔	↗	↖	↗	↖	↖	↗	↗
Traffic Vol, veh/h	8	2	41	13	6	45	27	955	16	53	919	47
Future Vol, veh/h	8	2	41	13	6	45	27	955	16	53	919	47
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	0	90	-	0	102	-	0
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	9	2	45	14	7	49	29	1038	17	58	999	51

Major/Minor	Minor2		Minor1		Major1		Major2					
Conflicting Flow All	1696	2228	500	1713	2262	519	1050	0	0	1055	0	0
Stage 1	1115	1115	-	1096	1096	-	-	-	-	-	-	-
Stage 2	581	1113	-	617	1166	-	-	-	-	-	-	-
Critical Hdwy	7.54	6.54	6.94	7.54	6.54	6.94	4.14	-	-	4.14	-	-
Critical Hdwy Stg 1	6.54	5.54	-	6.54	5.54	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.54	5.54	-	6.54	5.54	-	-	-	-	-	-	-
Follow-up Hdwy	3.52	4.02	3.32	3.52	4.02	3.32	2.22	-	-	2.22	-	-
Pot Cap-1 Maneuver	60	42	516	58	40	502	659	-	-	656	-	-
Stage 1	222	282	-	228	287	-	-	-	-	-	-	-
Stage 2	467	282	-	444	266	-	-	-	-	-	-	-
Platoon blocked, %								-	-	-	-	-
Mov Cap-1 Maneuver	42	37	516	46	35	502	659	-	-	656	-	-
Mov Cap-2 Maneuver	42	37	-	46	35	-	-	-	-	-	-	-
Stage 1	212	257	-	218	274	-	-	-	-	-	-	-
Stage 2	393	270	-	367	243	-	-	-	-	-	-	-

Approach	EB		WB		NB		SB	
HCM Control Delay, s	39.9		55.2		0.3		0.6	
HCM LOS	E		F					

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	WBLn2	SBL	SBT	SBR
Capacity (veh/h)	659	-	-	157	42	502	656	-	-
HCM Lane V/C Ratio	0.045	-	-	0.353	0.492	0.097	0.088	-	-
HCM Control Delay (s)	10.7	-	-	39.9	155.4	12.9	11	-	-
HCM Lane LOS	B	-	-	E	F	B	B	-	-
HCM 95th %tile Q(veh)	0.1	-	-	1.5	1.8	0.3	0.3	-	-

MIDDAY PEAK HOUR
 Existing + Project

West Hollywood - Orange Grove Mixed Use - Traffic Impact Study

1: Fairfax Ave & Fountain Ave

06/06/2019

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	251	1266	43	85	835	100	51	1071	171	60	741	188
Future Volume (veh/h)	251	1266	43	85	835	100	51	1071	171	60	741	188
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	1588	1588	1620	1588	1588	1620	1588	1588	1620	1588	1588	1588
Adj Flow Rate, veh/h	264	1333	45	89	879	105	54	1127	180	63	780	198
Adj No. of Lanes	1	2	0	1	2	0	1	2	0	1	2	1
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	298	1790	60	174	1632	195	133	903	144	65	1045	438
Arrive On Green	0.60	0.60	0.58	0.60	0.60	0.58	0.35	0.35	0.35	0.35	0.35	0.32
Sat Flow, veh/h	570	2979	100	392	2715	324	573	2608	415	419	3018	1350
Grp Volume(v), veh/h	264	675	703	89	488	496	54	650	657	63	780	198
Grp Sat Flow(s),veh/h/ln	570	1509	1571	392	1509	1531	573	1509	1515	419	1509	1350
Q Serve(g_s), s	44.9	35.5	35.7	23.4	21.0	21.2	10.1	38.1	38.1	0.0	25.1	12.8
Cycle Q Clear(g_c), s	66.1	35.5	35.7	59.1	21.0	21.2	35.2	38.1	38.1	38.1	25.1	12.8
Prop In Lane	1.00		0.06	1.00		0.21	1.00		0.27	1.00		1.00
Lane Grp Cap(c), veh/h	298	907	944	174	907	920	133	523	525	65	1045	438
V/C Ratio(X)	0.89	0.74	0.75	0.51	0.54	0.54	0.40	1.24	1.25	0.96	0.75	0.45
Avail Cap(c_a), veh/h	298	907	944	174	907	920	133	523	525	65	1045	438
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	0.97	0.97	0.97	1.00	1.00	1.00
Uniform Delay (d), s/veh	35.2	15.8	15.9	37.2	13.0	13.1	47.2	35.9	36.0	55.0	31.7	29.4
Incr Delay (d2), s/veh	26.8	4.0	3.9	4.8	1.1	1.1	8.6	125.0	127.7	101.0	4.9	3.3
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	10.2	15.6	16.3	2.8	9.0	9.1	1.9	34.0	34.5	3.7	11.1	5.1
LnGrp Delay(d),s/veh	62.0	19.8	19.8	42.1	14.1	14.2	55.8	160.9	163.7	156.0	36.5	32.7
LnGrp LOS	E	B	B	D	B	B	E	F	F	F	D	C
Approach Vol, veh/h		1642			1073			1361			1041	
Approach Delay, s/veh		26.6			16.5			158.1			43.1	
Approach LOS		C			B			F			D	
Timer	1	2	3	4	5	6	7	8				
Assigned Phs		2		4		6		8				
Phs Duration (G+Y+Rc), s		41.0		69.0		41.0		69.0				
Change Period (Y+Rc), s		* 5.3		* 5.3		* 5.3		* 5.3				
Max Green Setting (Gmax), s		* 36		* 64		* 36		* 64				
Max Q Clear Time (g_c+I1), s		40.1		68.1		40.1		61.1				
Green Ext Time (p_c), s		0.0		0.0		0.0		2.6				
Intersection Summary												
HCM 2010 Ctrl Delay				62.8								
HCM 2010 LOS				E								
Notes												

PM PEAK HOUR
Existing + Project

* HCM 2010 computational engine requires equal clearance times for the phases crossing the barrier.

West Hollywood - Orange Grove Mixed Use - Traffic Impact Study

2: Orange Grove Ave

06/06/2019



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕↕			↕↕			↕			↕	
Traffic Volume (veh/h)	43	1365	45	50	1030	16	5	8	61	2	4	28
Future Volume (Veh/h)	43	1365	45	50	1030	16	5	8	61	2	4	28
Sign Control		Free			Free			Stop			Stop	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.95	0.92	0.92	0.92	0.92	0.95	0.92	0.95	0.92	0.95	0.95	0.95
Hourly flow rate (vph)	45	1484	49	54	1120	17	5	8	66	2	4	29
Pedestrians												
Lane Width (ft)												
Walking Speed (ft/s)												
Percent Blockage												
Right turn flare (veh)												
Median type		None			None							
Median storage (veh)												
Upstream signal (ft)		377			1010							
pX, platoon unblocked				0.67			0.67	0.67	0.67	0.67	0.67	
vC, conflicting volume	1137			1533			2298	2844	766	2138	2860	568
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	1137			808			1950	2766	0	1713	2790	568
tC, single (s)	4.1			4.1			7.5	6.5	6.9	7.5	6.5	6.9
tC, 2 stage (s)												
tF (s)	2.2			2.2			3.5	4.0	3.3	3.5	4.0	3.3
p0 queue free %	93			90			66	25	91	84	61	94
cM capacity (veh/h)	610			544			15	11	726	12	10	466
Direction, Lane #	EB 1	EB 2	WB 1	WB 2	NB 1	SB 1						
Volume Total	787	791	614	577	79	35						
Volume Left	45	0	54	0	5	2						
Volume Right	0	49	0	17	66	29						
cSH	610	1700	544	1700	67	57						
Volume to Capacity	0.07	0.47	0.10	0.34	1.18	0.62						
Queue Length 95th (ft)	6	0	8	0	156	63						
Control Delay (s)	2.1	0.0	2.8	0.0	273.1	140.5						
Lane LOS	A		A		F	F						
Approach Delay (s)	1.0		1.4		273.1	140.5						
Approach LOS					F	F						
Intersection Summary												
Average Delay			10.3									
Intersection Capacity Utilization			96.2%		ICU Level of Service				F			
Analysis Period (min)			15									

PM PEAK HOUR
Existing +Project

West Hollywood - Orange Grove Mixed Use - Traffic Impact Study
 3: Ogden Ave

06/06/2019

Intersection

Int Delay, s/veh 130.1

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↔			↔			↔			↔	
Traffic Vol, veh/h	38	1443	25	33	975	6	9	19	146	2	1	11
Future Vol, veh/h	38	1443	25	33	975	6	9	19	146	2	1	11
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	95	92	92	92	92	95	92	95	92	95	95	95
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	40	1568	27	36	1060	6	10	20	159	2	1	12

Major/Minor	Major1	Major2	Minor1	Minor2
Conflicting Flow All	1066	0	0	1595
Stage 1	-	-	-	-
Stage 2	-	-	-	-
Critical Hdwy	4.14	-	-	4.14
Critical Hdwy Stg 1	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-
Follow-up Hdwy	2.22	-	-	2.22
Pot Cap-1 Maneuver	649	-	-	407
Stage 1	-	-	-	-
Stage 2	-	-	-	-
Platoon blocked, %	-	-	-	-
Mov Cap-1 Maneuver	649	-	-	407
Mov Cap-2 Maneuver	-	-	-	-
Stage 1	-	-	-	-
Stage 2	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	3	1.9	\$ 1993.4	
HCM LOS			F	-

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	38	649	-	-	407	-	-	-
HCM Lane V/C Ratio	4.96	0.062	-	-	0.088	-	-	-
HCM Control Delay (s)	\$ 1993.4	10.9	2.9	-	14.7	1.5	-	-
HCM Lane LOS	F	B	A	-	B	A	-	-
HCM 95th %tile Q(veh)	22	0.2	-	-	0.3	-	-	-

Notes

-: Volume exceeds capacity \$: Delay exceeds 300s +: Computation Not Defined *: All major volume in platoon

PM PEAK HOUR
 Existing + Project

West Hollywood - Orange Grove Mixed Use - Traffic Impact Study

4: Fairfax Ave & Santa Monica Blvd

06/06/2019

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	315	1067	88	189	835	105	102	844	243	63	740	93
Future Volume (veh/h)	315	1067	88	189	835	105	102	844	243	63	740	93
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	1588	1588	1588	1588	1588	1620	1588	1588	1588	1588	1588	1588
Adj Flow Rate, veh/h	332	1123	93	199	879	111	107	888	256	66	779	98
Adj No. of Lanes	1	2	1	1	2	0	1	2	1	1	2	1
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	222	1179	522	207	1149	145	153	950	425	106	881	388
Arrive On Green	0.06	0.39	0.39	0.09	0.43	0.42	0.05	0.31	0.31	0.03	0.29	0.29
Sat Flow, veh/h	1513	3018	1350	1513	2696	341	1513	3018	1350	1513	3018	1350
Grp Volume(v), veh/h	332	1123	93	199	492	498	107	888	256	66	779	98
Grp Sat Flow(s),veh/h/ln	1513	1509	1350	1513	1509	1528	1513	1509	1350	1513	1509	1350
Q Serve(g_s), s	6.5	41.5	5.2	9.8	31.9	31.9	5.5	32.9	18.4	2.9	28.3	6.4
Cycle Q Clear(g_c), s	6.5	41.5	5.2	9.8	31.9	31.9	5.5	32.9	18.4	2.9	28.3	6.4
Prop In Lane	1.00		1.00	1.00		0.22	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	222	1179	522	207	643	651	153	950	425	106	881	388
V/C Ratio(X)	1.49	0.95	0.18	0.96	0.76	0.76	0.70	0.94	0.60	0.62	0.88	0.25
Avail Cap(c_a), veh/h	222	1179	522	272	643	651	153	950	425	154	945	417
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	1.00	1.00	0.87	0.87	0.87
Uniform Delay (d), s/veh	37.2	34.0	23.2	29.8	28.1	28.1	34.0	38.3	33.3	38.4	38.8	31.5
Incr Delay (d2), s/veh	244.1	17.0	0.7	38.5	8.4	8.3	13.3	15.9	2.4	5.1	8.5	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	15.1	20.1	2.1	8.5	14.8	14.9	1.7	15.8	7.2	1.0	12.8	2.4
LnGrp Delay(d),s/veh	281.3	51.0	24.0	68.3	36.5	36.5	47.3	54.1	35.7	43.5	47.3	31.8
LnGrp LOS	F	D	C	E	D	D	D	D	D	D	D	C
Approach Vol, veh/h		1548			1189			1251			943	
Approach Delay, s/veh		98.7			41.8			49.8			45.4	
Approach LOS		F			D			D			D	
Timer	1	2	3	4	5	6	7	8				
Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	16.1	49.5	11.0	38.4	12.0	53.6	8.4	41.0				
Change Period (Y+Rc), s	* 4	5.1	* 4	* 5.3	* 4	5.1	* 4	* 5.3				
Max Green Setting (Gmax), s	* 17	37.1	* 7	* 36	* 8	46.1	* 8	* 35				
Max Q Clear Time (g_c+I1), s	11.8	43.5	7.5	30.3	8.5	33.9	4.9	34.9				
Green Ext Time (p_c), s	0.2	0.0	0.0	2.8	0.0	9.9	0.0	0.0				
Intersection Summary												
HCM 2010 Ctrl Delay			62.4									
HCM 2010 LOS			E									
Notes												

PM PEAK HOUR
Existing + Project

* HCM 2010 computational engine requires equal clearance times for the phases crossing the barrier.

West Hollywood - Orange Grove Mixed Use - Traffic Impact Study
 5: Orange Grove Ave

06/06/2019

Intersection

Int Delay, s/veh 0.9

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↑↑			↑↑				↑			↑
Traffic Vol, veh/h	0	1361	35	0	1004	63	0	0	62	0	0	82
Future Vol, veh/h	0	1361	35	0	1004	63	0	0	62	0	0	82
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	0	-	-	0
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	95	95	92	92	95	95	95	92	95	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	1479	37	0	1091	68	0	0	65	0	0	89

Major/Minor	Major1	Major2	Minor1	Minor2								
Conflicting Flow All	-	0	0	-	-	0	-	-	758	-	-	580
Stage 1	-	-	-	-	-	-	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-	-	-	-	-	-	-
Critical Hdwy	-	-	-	-	-	-	-	-	6.94	-	-	6.94
Critical Hdwy Stg 1	-	-	-	-	-	-	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-	-	-	-	-	-	-
Follow-up Hdwy	-	-	-	-	-	-	-	-	3.32	-	-	3.32
Pot Cap-1 Maneuver	0	-	-	0	-	-	0	0	350	0	0	458
Stage 1	0	-	-	0	-	-	0	0	-	0	0	-
Stage 2	0	-	-	0	-	-	0	0	-	0	0	-
Platoon blocked, %	-	-	-	-	-	-	-	-	-	-	-	-
Mov Cap-1 Maneuver	-	-	-	-	-	-	-	-	350	-	-	458
Mov Cap-2 Maneuver	-	-	-	-	-	-	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0	0	17.6	14.8
HCM LOS			C	B

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBT	WBR	SBLn1
Capacity (veh/h)	350	-	-	-	-	458
HCM Lane V/C Ratio	0.186	-	-	-	-	0.195
HCM Control Delay (s)	17.6	-	-	-	-	14.8
HCM Lane LOS	C	-	-	-	-	B
HCM 95th %tile Q(veh)	0.7	-	-	-	-	0.7

PM PEAK HOUR
 Existing + Project

West Hollywood - Orange Grove Mixed Use - Traffic Impact Study
 6: Ogden Ave

06/06/2019

Intersection						
Int Delay, s/veh	3.8					
Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		↕↕	↕↔		↕	
Traffic Vol, veh/h	134	1331	1007	51	10	49
Future Vol, veh/h	134	1331	1007	51	10	49
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	146	1447	1095	55	11	53

Major/Minor	Major1	Major2	Minor2		
Conflicting Flow All	1150	0	-	0	2139 575
Stage 1	-	-	-	-	1123 -
Stage 2	-	-	-	-	1016 -
Critical Hdwy	4.14	-	-	-	6.84 6.94
Critical Hdwy Stg 1	-	-	-	-	5.84 -
Critical Hdwy Stg 2	-	-	-	-	5.84 -
Follow-up Hdwy	2.22	-	-	-	3.52 3.32
Pot Cap-1 Maneuver	603	-	-	-	42 461
Stage 1	-	-	-	-	273 -
Stage 2	-	-	-	-	310 -
Platoon blocked, %		-	-	-	
Mov Cap-1 Maneuver	603	-	-	-	0 461
Mov Cap-2 Maneuver	-	-	-	-	0 -
Stage 1	-	-	-	-	0 -
Stage 2	-	-	-	-	310 -

Approach	EB	WB	SB
HCM Control Delay, s	6.1	0	14.1
HCM LOS			B

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	603	-	-	-	461
HCM Lane V/C Ratio	0.242	-	-	-	0.139
HCM Control Delay (s)	12.9	5.4	-	-	14.1
HCM Lane LOS	B	A	-	-	B
HCM 95th %tile Q(veh)	0.9	-	-	-	0.5

PM PEAK HOUR
 Existing + Project

Intersection						
Int Delay, s/veh	1.9					
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↑↑			↑↑	↑	
Traffic Vol, veh/h	1383	30	29	1044	5	108
Future Vol, veh/h	1383	30	29	1044	5	108
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	95	95	95	95	95	95
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	1456	32	31	1099	5	114
Major/Minor	Major1	Major2	Minor1			
Conflicting Flow All	0	0	1488	0	2084	744
Stage 1	-	-	-	-	1472	-
Stage 2	-	-	-	-	612	-
Critical Hdwy	-	-	4.14	-	6.84	6.94
Critical Hdwy Stg 1	-	-	-	-	5.84	-
Critical Hdwy Stg 2	-	-	-	-	5.84	-
Follow-up Hdwy	-	-	2.22	-	3.52	3.32
Pot Cap-1 Maneuver	-	-	448	-	46	357
Stage 1	-	-	-	-	177	-
Stage 2	-	-	-	-	504	-
Platoon blocked, %	-	-	-	-	-	-
Mov Cap-1 Maneuver	-	-	448	-	38	357
Mov Cap-2 Maneuver	-	-	-	-	38	-
Stage 1	-	-	-	-	177	-
Stage 2	-	-	-	-	414	-
Approach	EB	WB	NB			
HCM Control Delay, s	0	1.4	30			
HCM LOS			D			
Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT	
Capacity (veh/h)	260	-	-	448	-	
HCM Lane V/C Ratio	0.457	-	-	0.068	-	
HCM Control Delay (s)	30	-	-	13.6	1.1	
HCM Lane LOS	D	-	-	B	A	
HCM 95th %tile Q(veh)	2.2	-	-	0.2	-	

West Hollywood - Orange Grove Mixed Use - Traffic Impact Study
 107: Genesee Ave & Santa Monica Blvd

06/06/2019



Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↑↑		↙	↑↑	↘	
Traffic Volume (vph)	1299	15	43	1053	40	64
Future Volume (vph)	1299	15	43	1053	40	64
Ideal Flow (vphpl)	1620	1620	1620	1620	1620	1620
Total Lost time (s)	5.6		4.5	5.6	3.5	
Lane Util. Factor	0.95		1.00	0.95	1.00	
Frt	1.00		1.00	1.00	0.92	
Flt Protected	1.00		0.95	1.00	0.98	
Satd. Flow (prot)	3013		1509	3018	1428	
Flt Permitted	1.00		0.14	1.00	0.98	
Satd. Flow (perm)	3013		219	3018	1428	
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	1412	16	47	1145	43	70
RTOR Reduction (vph)	1	0	0	0	57	0
Lane Group Flow (vph)	1427	0	47	1145	56	0
Turn Type	NA		pm+pt	NA	Prot	
Protected Phases	2		1	6	8	
Permitted Phases			6			
Actuated Green, G (s)	71.3		74.5	70.0	16.7	
Effective Green, g (s)	70.8		73.5	69.5	17.2	
Actuated g/C Ratio	0.67		0.70	0.66	0.16	
Clearance Time (s)	5.1		4.0	5.1	4.0	
Vehicle Extension (s)	3.0		3.0	3.0	3.0	
Lane Grp Cap (vph)	2020		201	1986	232	
v/s Ratio Prot	c0.47		c0.01	0.38	c0.04	
v/s Ratio Perm			0.15			
v/c Ratio	0.71		0.23	0.58	0.24	
Uniform Delay, d1	10.9		6.9	9.9	38.5	
Progression Factor	1.00		0.25	0.17	1.00	
Incremental Delay, d2	2.1		0.5	1.0	0.5	
Delay (s)	13.0		2.2	2.7	39.1	
Level of Service	B		A	A	D	
Approach Delay (s)	13.0			2.7	39.1	
Approach LOS	B			A	D	

Intersection Summary

HCM 2000 Control Delay	9.6	HCM 2000 Level of Service	A
HCM 2000 Volume to Capacity ratio	0.61		
Actuated Cycle Length (s)	105.6	Sum of lost time (s)	15.2
Intersection Capacity Utilization	57.9%	ICU Level of Service	B
Analysis Period (min)	15		

c Critical Lane Group

West Hollywood - Orange Grove Mixed Use - Traffic Impact Study
 8: Romaine St & Fairfax Ave

06/06/2019

Intersection

Int Delay, s/veh	49.8											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕↔			↕↔	↕↔	↕↔	↕↔	↕↔	↕↔	↕↔	↕↔
Traffic Vol, veh/h	21	40	67	3	7	30	43	1132	78	53	885	44
Future Vol, veh/h	21	40	67	3	7	30	43	1132	78	53	885	44
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	0	90	-	0	102	-	0
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	23	43	73	3	8	33	47	1230	85	58	962	48

Major/Minor	Minor2		Minor1		Major1		Major2					
Conflicting Flow All	1791	2487	481	1943	2450	615	1010	0	0	1315	0	0
Stage 1	1078	1078	-	1324	1324	-	-	-	-	-	-	-
Stage 2	713	1409	-	619	1126	-	-	-	-	-	-	-
Critical Hdwy	7.54	6.54	6.94	7.54	6.54	6.94	4.14	-	-	4.14	-	-
Critical Hdwy Stg 1	6.54	5.54	-	6.54	5.54	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.54	5.54	-	6.54	5.54	-	-	-	-	-	-	-
Follow-up Hdwy	3.52	4.02	3.32	3.52	4.02	3.32	2.22	-	-	2.22	-	-
Pot Cap-1 Maneuver	51	~ 29	531	39	31	434	682	-	-	522	-	-
Stage 1	233	293	-	165	224	-	-	-	-	-	-	-
Stage 2	389	203	-	443	278	-	-	-	-	-	-	-
Platoon blocked, %								-	-	-	-	-
Mov Cap-1 Maneuver	32	~ 24	531	-	26	434	682	-	-	522	-	-
Mov Cap-2 Maneuver	32	~ 24	-	-	26	-	-	-	-	-	-	-
Stage 1	217	260	-	154	209	-	-	-	-	-	-	-
Stage 2	323	189	-	283	247	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s\$ 926.1			0.4	0.7
HCM LOS	F	-		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1WBLn1WBLn2	SBL	SBT	SBR
Capacity (veh/h)	682	-	-	52	434	522	-
HCM Lane V/C Ratio	0.069	-	-	2.676	0.075	0.11	-
HCM Control Delay (s)	10.7	-	-	\$ 926.1	14	12.8	-
HCM Lane LOS	B	-	-	F	B	B	-
HCM 95th %tile Q(veh)	0.2	-	-	14.5	0.2	0.4	-

Notes
 -: Volume exceeds capacity \$: Delay exceeds 300s +: Computation Not Defined *: All major volume in platoon

PM PEAK HOUR
 Existing + Project

APPENDIX E
Intersection Level of Service Worksheets
Future Without Project

West Hollywood - Orange Grove Mixed Use - Traffic Impact Study

1: Fairfax Ave & Fountain Ave/Fountain Ave

02/21/2019

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	110	685	97	260	1113	61	54	694	133	50	867	305
Future Volume (veh/h)	110	685	97	260	1113	61	54	694	133	50	867	305
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	1588	1588	1620	1588	1588	1620	1588	1588	1620	1588	1588	1588
Adj Flow Rate, veh/h	116	721	102	274	1172	64	57	731	140	53	913	321
Adj No. of Lanes	1	2	0	1	2	0	1	2	0	1	2	1
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	214	1595	225	364	1748	95	94	876	168	117	1046	439
Arrive On Green	0.60	0.60	0.58	0.60	0.60	0.58	0.35	0.35	0.35	0.35	0.35	0.32
Sat Flow, veh/h	449	2655	375	663	2910	159	450	2528	484	633	3018	1350
Grp Volume(v), veh/h	116	410	413	274	607	629	57	436	435	53	913	321
Grp Sat Flow(s),veh/h/ln	449	1509	1522	663	1509	1560	450	1509	1503	633	1509	1350
Q Serve(g_s), s	25.7	16.4	16.6	42.7	29.6	29.7	7.0	29.2	29.3	8.9	31.2	23.2
Cycle Q Clear(g_c), s	55.4	16.4	16.6	59.2	29.6	29.7	38.1	29.2	29.3	38.1	31.2	23.2
Prop In Lane	1.00		0.25	1.00		0.10	1.00		0.32	1.00		1.00
Lane Grp Cap(c), veh/h	214	906	914	364	906	937	94	523	521	117	1046	439
V/C Ratio(X)	0.54	0.45	0.45	0.75	0.67	0.67	0.61	0.83	0.83	0.45	0.87	0.73
Avail Cap(c_a), veh/h	214	907	915	364	907	938	94	523	521	117	1046	439
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	0.97	0.97	0.97	1.00	1.00	1.00
Uniform Delay (d), s/veh	33.3	12.0	12.2	28.4	14.7	14.8	53.3	33.0	33.0	50.7	33.7	32.9
Incr Delay (d2), s/veh	4.8	0.7	0.7	10.0	2.5	2.4	25.1	14.1	14.1	12.3	10.0	10.3
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	3.5	7.0	7.1	8.8	12.8	13.4	2.4	14.2	14.1	2.0	14.4	9.9
LnGrp Delay(d),s/veh	38.1	12.8	13.0	38.4	17.2	17.2	78.3	47.1	47.2	63.0	43.7	43.2
LnGrp LOS	D	B	B	D	B	B	E	D	D	E	D	D
Approach Vol, veh/h		939			1510			928			1287	
Approach Delay, s/veh		16.0			21.1			49.0			44.4	
Approach LOS		B			C			D			D	
Timer	1	2	3	4	5	6	7	8				
Assigned Phs		2		4		6		8				
Phs Duration (G+Y+Rc), s		41.0		69.0		41.0		69.0				
Change Period (Y+Rc), s		* 5.3		* 5.3		* 5.3		* 5.3				
Max Green Setting (Gmax), s		* 36		* 64		* 36		* 64				
Max Q Clear Time (g_c+I1), s		40.1		57.4		40.1		61.2				
Green Ext Time (p_c), s		0.0		6.1		0.0		2.5				
Intersection Summary												
HCM 2010 Ctrl Delay				32.0								
HCM 2010 LOS				C								
Notes												

AM PEAK HOUR
Future Without Project

* HCM 2010 computational engine requires equal clearance times for the phases crossing the barrier.

West Hollywood - Orange Grove Mixed Use - Traffic Impact Study
 2: Orange Grove Ave & Fountain Ave

02/21/2019

Intersection

Int Delay, s/veh 51.3

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕↕			↕↕			↕			↕	
Traffic Vol, veh/h	2	840	43	63	1271	6	3	3	64	4	25	164
Future Vol, veh/h	2	840	43	63	1271	6	3	3	64	4	25	164
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	95	92	92	92	92	95	92	95	92	95	95	95
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	2	913	47	68	1382	6	3	3	70	4	26	173

Major/Minor	Major1	Major2	Minor1	Minor2
Conflicting Flow All	1388	0	0	960
Stage 1	-	-	-	-
Stage 2	-	-	-	-
Critical Hdwy	4.14	-	-	4.14
Critical Hdwy Stg 1	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-
Follow-up Hdwy	2.22	-	-	2.22
Pot Cap-1 Maneuver	489	-	-	712
Stage 1	-	-	-	-
Stage 2	-	-	-	-
Platoon blocked, %	-	-	-	-
Mov Cap-1 Maneuver	489	-	-	712
Mov Cap-2 Maneuver	-	-	-	-
Stage 1	-	-	-	-
Stage 2	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0.1	2.4		\$ 663.4
HCM LOS			-	F

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	-	489	-	-	712	-	-	91
HCM Lane V/C Ratio	-	0.004	-	-	0.096	-	-	2.233
HCM Control Delay (s)	-	12.4	0.1	-	10.6	2	-	\$ 663.4
HCM Lane LOS	-	B	A	-	B	A	-	F
HCM 95th %tile Q(veh)	-	0	-	-	0.3	-	-	18.2

Notes
 -: Volume exceeds capacity \$: Delay exceeds 300s +: Computation Not Defined *: All major volume in platoon

AM PEAK HOUR
 Future Without Project

West Hollywood - Orange Grove Mixed Use - Traffic Impact Study
 3: Ogden Ave

02/21/2019

Intersection

Int Delay, s/veh 9.3

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↔			↔			↔			↔	
Traffic Vol, veh/h	5	842	14	66	1439	6	12	2	59	0	7	17
Future Vol, veh/h	5	842	14	66	1439	6	12	2	59	0	7	17
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	95	92	92	92	92	95	92	95	92	95	95	95
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	5	915	15	72	1564	6	13	2	64	0	7	18

Major/Minor	Major1	Major2	Minor1	Minor2
Conflicting Flow All	1570	0	0	930
Stage 1	-	-	-	-
Stage 2	-	-	-	-
Critical Hdwy	4.14	-	-	4.14
Critical Hdwy Stg 1	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-
Follow-up Hdwy	2.22	-	-	2.22
Pot Cap-1 Maneuver	416	-	-	731
Stage 1	-	-	-	-
Stage 2	-	-	-	-
Platoon blocked, %	-	-	-	-
Mov Cap-1 Maneuver	416	-	-	731
Mov Cap-2 Maneuver	-	-	-	-
Stage 1	-	-	-	-
Stage 2	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0.3	4		\$ 718
HCM LOS			-	F

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	-	416	-	-	731	-	-	17
HCM Lane V/C Ratio	-	0.013	-	-	0.098	-	-	1.486
HCM Control Delay (s)	-	13.8	0.2	-	10.5	3.7	-	\$ 718
HCM Lane LOS	-	B	A	-	B	A	-	F
HCM 95th %tile Q(veh)	-	0	-	-	0.3	-	-	3.6
























Notes

-: Volume exceeds capacity \$: Delay exceeds 300s +: Computation Not Defined *: All major volume in platoon

AM PEAK HOUR
 Future Without Project

West Hollywood - Orange Grove Mixed Use - Traffic Impact Study
 4: Fairfax Ave & Santa Monica Blvd/Santa Monica Boulevard

02/21/2019

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	128	908	77	408	1224	53	103	715	168	73	987	125
Future Volume (veh/h)	128	908	77	408	1224	53	103	715	168	73	987	125
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	1588	1588	1588	1588	1588	1620	1588	1588	1588	1588	1588	1588
Adj Flow Rate, veh/h	135	956	81	429	1288	56	108	753	177	77	1039	132
Adj No. of Lanes	1	2	1	1	2	0	1	2	1	1	2	1
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	148	987	436	266	1194	52	135	981	439	167	945	417
Arrive On Green	0.06	0.33	0.32	0.13	0.41	0.40	0.05	0.33	0.33	0.04	0.31	0.31
Sat Flow, veh/h	1513	3018	1350	1513	2947	128	1513	3018	1350	1513	3018	1350
Grp Volume(v), veh/h	135	956	81	429	659	685	108	753	177	77	1039	132
Grp Sat Flow(s),veh/h/ln	1513	1509	1350	1513	1509	1566	1513	1509	1350	1513	1509	1350
Q Serve(g_s), s	6.5	35.9	5.0	15.5	46.6	46.6	5.5	25.8	11.7	4.1	36.0	8.6
Cycle Q Clear(g_c), s	6.5	35.9	5.0	15.5	46.6	46.6	5.5	25.8	11.7	4.1	36.0	8.6
Prop In Lane	1.00		1.00	1.00		0.08	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	148	987	436	266	611	634	135	981	439	167	945	417
V/C Ratio(X)	0.91	0.97	0.19	1.61	1.08	1.08	0.80	0.77	0.40	0.46	1.10	0.32
Avail Cap(c_a), veh/h	148	987	436	266	611	634	135	981	439	198	945	417
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	1.00	1.00	0.87	0.87	0.87
Uniform Delay (d), s/veh	32.9	38.1	28.1	33.4	34.2	34.2	32.9	34.9	30.1	30.1	39.5	30.5
Incr Delay (d2), s/veh	48.6	22.1	0.9	291.2	59.1	59.2	28.0	3.7	0.6	1.7	58.9	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	3.6	17.9	2.0	30.0	29.4	30.5	2.2	11.3	4.4	1.8	22.7	3.3
LnGrp Delay(d),s/veh	81.5	60.2	29.0	324.6	93.3	93.4	60.9	38.6	30.7	31.9	98.4	30.8
LnGrp LOS	F	E	C	F	F	F	E	D	C	C	F	C
Approach Vol, veh/h		1172			1773			1038			1248	
Approach Delay, s/veh		60.5			149.3			39.6			87.2	
Approach LOS		E			F			D			F	
Timer	1	2	3	4	5	6	7	8				
Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	21.0	42.2	11.0	40.8	12.0	51.2	9.6	42.2				
Change Period (Y+Rc), s	* 4	5.1	* 4	* 5.3	* 4	5.1	* 4	* 5.3				
Max Green Setting (Gmax), s	* 17	37.1	* 7	* 36	* 8	46.1	* 8	* 35				
Max Q Clear Time (g_c+I1), s	17.5	37.9	7.5	38.0	8.5	48.6	6.1	27.8				
Green Ext Time (p_c), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	5.6				
Intersection Summary												
HCM 2010 Ctrl Delay			92.8									
HCM 2010 LOS			F									
Notes												

AM PEAK HOUR
 Future Without Project

* HCM 2010 computational engine requires equal clearance times for the phases crossing the barrier.

West Hollywood - Orange Grove Mixed Use - Traffic Impact Study
 5: Santa Monica Boulevard & Orange Grove Ave

02/21/2019

Intersection

Int Delay, s/veh 1.1

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↑↓			↑↓				↑			↑
Traffic Vol, veh/h	0	1129	17	0	1570	46	1	0	17	0	0	112
Future Vol, veh/h	0	1129	17	0	1570	46	1	0	17	0	0	112
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	0	-	-	0
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	95	95	92	92	95	95	95	92	95	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	1227	18	0	1707	50	1	0	18	0	0	122

Major/Minor	Major1	Major2	Minor1	Minor2
Conflicting Flow All	- 0	0 -	- 0	2090 -
Stage 1	- -	- -	- -	1236 -
Stage 2	- -	- -	- -	854 -
Critical Hdwy	- -	- -	- -	7.54 -
Critical Hdwy Stg 1	- -	- -	- -	6.54 -
Critical Hdwy Stg 2	- -	- -	- -	6.54 -
Follow-up Hdwy	- -	- -	- -	3.52 -
Pot Cap-1 Maneuver	0 -	- 0	- -	30 0
Stage 1	0 -	- 0	- -	187 0
Stage 2	0 -	- 0	- -	320 0
Platoon blocked, %	- -	- -	- -	- -
Mov Cap-1 Maneuver	- -	- -	- -	17 -
Mov Cap-2 Maneuver	- -	- -	- -	17 -
Stage 1	- -	- -	- -	187 -
Stage 2	- -	- -	- -	186 -

Approach	EB	WB	NB	SB
HCM Control Delay, s	0	0	13.8	26
HCM LOS			B	D

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBT	WBR	SBLn1
Capacity (veh/h)	429	-	-	-	-	291
HCM Lane V/C Ratio	0.042	-	-	-	-	0.418
HCM Control Delay (s)	13.8	-	-	-	-	26
HCM Lane LOS	B	-	-	-	-	D
HCM 95th %tile Q(veh)	0.1	-	-	-	-	2

AM PEAK HOUR
 Future Without Project

West Hollywood - Orange Grove Mixed Use - Traffic Impact Study
6: Ogden Ave

02/21/2019

Intersection						
Int Delay, s/veh	2.8					
Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		↑↑	↑↑		↑	
Traffic Vol, veh/h	22	1158	1554	25	5	111
Future Vol, veh/h	22	1158	1554	25	5	111
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	24	1259	1689	27	5	121

Major/Minor	Major1	Major2	Minor2		
Conflicting Flow All	1716	0	-	0	2381 858
Stage 1	-	-	-	-	1703 -
Stage 2	-	-	-	-	678 -
Critical Hdwy	4.14	-	-	-	6.84 6.94
Critical Hdwy Stg 1	-	-	-	-	5.84 -
Critical Hdwy Stg 2	-	-	-	-	5.84 -
Follow-up Hdwy	2.22	-	-	-	3.52 3.32
Pot Cap-1 Maneuver	365	-	-	-	29 300
Stage 1	-	-	-	-	133 -
Stage 2	-	-	-	-	466 -
Platoon blocked, %		-	-	-	
Mov Cap-1 Maneuver	365	-	-	-	23 300
Mov Cap-2 Maneuver	-	-	-	-	23 -
Stage 1	-	-	-	-	104 -
Stage 2	-	-	-	-	466 -

Approach	EB	WB	SB
HCM Control Delay, s	1.9	0	51
HCM LOS			F

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	365	-	-	-	197
HCM Lane V/C Ratio	0.066	-	-	-	0.64
HCM Control Delay (s)	15.6	1.6	-	-	51
HCM Lane LOS	C	A	-	-	F
HCM 95th %tile Q(veh)	0.2	-	-	-	3.7

AM PEAK HOUR
Future Without Project

Intersection						
Int Delay, s/veh	3.6					
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↑↑			↑↑	↑↑	
Traffic Vol, veh/h	1140	17	62	1604	8	39
Future Vol, veh/h	1140	17	62	1604	8	39
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	95	95	95	95	95	95
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	1200	18	65	1688	8	41
Major/Minor	Major1	Major2	Minor1			
Conflicting Flow All	0	0	1218	0	2183	609
Stage 1	-	-	-	-	1209	-
Stage 2	-	-	-	-	974	-
Critical Hdwy	-	-	4.14	-	6.84	6.94
Critical Hdwy Stg 1	-	-	-	-	5.84	-
Critical Hdwy Stg 2	-	-	-	-	5.84	-
Follow-up Hdwy	-	-	2.22	-	3.52	3.32
Pot Cap-1 Maneuver	-	-	568	-	39	438
Stage 1	-	-	-	-	245	-
Stage 2	-	-	-	-	327	-
Platoon blocked, %	-	-	-	-	-	-
Mov Cap-1 Maneuver	-	-	568	-	0	438
Mov Cap-2 Maneuver	-	-	-	-	0	-
Stage 1	-	-	-	-	245	-
Stage 2	-	-	-	-	0	-
Approach	EB	WB	NB			
HCM Control Delay, s	0	5.8	14.3			
HCM LOS			B			
Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT	
Capacity (veh/h)	438	-	-	568	-	
HCM Lane V/C Ratio	0.113	-	-	0.115	-	
HCM Control Delay (s)	14.3	-	-	12.2	5.6	
HCM Lane LOS	B	-	-	B	A	
HCM 95th %tile Q(veh)	0.4	-	-	0.4	-	

West Hollywood - Orange Grove Mixed Use - Traffic Impact Study
 7: Santa Monica Blvd & Genesse Ave

02/21/2019



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations	↘	↑↑	↑↑		↘	
Traffic Volume (vph)	25	1180	1518	20	33	97
Future Volume (vph)	25	1180	1518	20	33	97
Ideal Flow (vphpl)	1620	1620	1620	1620	1620	1620
Total Lost time (s)	4.5	5.6	5.6		4.6	
Lane Util. Factor	1.00	0.95	0.95		1.00	
Frt	1.00	1.00	1.00		0.90	
Flt Protected	0.95	1.00	1.00		0.99	
Satd. Flow (prot)	1509	3018	3012		1411	
Flt Permitted	0.10	1.00	1.00		0.99	
Satd. Flow (perm)	156	3018	3012		1411	
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	27	1283	1650	22	36	105
RTOR Reduction (vph)	0	0	1	0	89	0
Lane Group Flow (vph)	27	1283	1671	0	52	0
Turn Type	pm+pt	NA	NA		Prot	
Protected Phases	5	2	6		4	
Permitted Phases	2					
Actuated Green, G (s)	71.6	68.6	72.8		15.6	
Effective Green, g (s)	70.6	68.1	72.3		16.1	
Actuated g/C Ratio	0.67	0.64	0.68		0.15	
Clearance Time (s)	4.0	5.1	5.1		5.1	
Vehicle Extension (s)	1.0	3.0	3.0		3.0	
Lane Grp Cap (vph)	136	1946	2062		215	
v/s Ratio Prot	c0.00	0.43	c0.55		c0.04	
v/s Ratio Perm	0.13					
v/c Ratio	0.20	0.66	0.81		0.24	
Uniform Delay, d1	8.5	11.6	11.8		39.4	
Progression Factor	0.23	0.14	1.00		1.00	
Incremental Delay, d2	0.2	1.4	3.6		0.6	
Delay (s)	2.2	2.9	15.4		40.0	
Level of Service	A	A	B		D	
Approach Delay (s)		2.9	15.4		40.0	
Approach LOS		A	B		D	

Intersection Summary

HCM 2000 Control Delay	11.3	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.69		
Actuated Cycle Length (s)	105.6	Sum of lost time (s)	14.7
Intersection Capacity Utilization	71.0%	ICU Level of Service	C
Analysis Period (min)	15		

c Critical Lane Group

West Hollywood - Orange Grove Mixed Use - Traffic Impact Study
 8: Romaine St & Fairfax Ave

02/21/2019

Intersection												
Int Delay, s/veh	68.1											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↔			↔	↔	↔	↕	↕	↕	↕	↕
Traffic Vol, veh/h	8	5	63	27	52	64	55	915	13	36	1381	49
Future Vol, veh/h	8	5	63	27	52	64	55	915	13	36	1381	49
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	0	90	-	0	102	-	0
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	9	5	68	29	57	70	60	995	14	39	1501	53

Major/Minor	Minor2		Minor1		Major1		Major2					
Conflicting Flow All	2225	2708	751	1946	2747	498	1554	0	0	1009	0	0
Stage 1	1579	1579	-	1115	1115	-	-	-	-	-	-	-
Stage 2	646	1129	-	831	1632	-	-	-	-	-	-	-
Critical Hdwy	7.54	6.54	6.94	7.54	6.54	6.94	4.14	-	-	4.14	-	-
Critical Hdwy Stg 1	6.54	5.54	-	6.54	5.54	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.54	5.54	-	6.54	5.54	-	-	-	-	-	-	-
Follow-up Hdwy	3.52	4.02	3.32	3.52	4.02	3.32	2.22	-	-	2.22	-	-
Pot Cap-1 Maneuver	24	21	353	39	~ 20	518	422	-	-	683	-	-
Stage 1	114	168	-	222	282	-	-	-	-	-	-	-
Stage 2	427	277	-	330	158	-	-	-	-	-	-	-
Platoon blocked, %								-	-	-	-	-
Mov Cap-1 Maneuver	-	17	353	~ 20	~ 16	518	422	-	-	683	-	-
Mov Cap-2 Maneuver	-	17	-	~ 20	~ 16	-	-	-	-	-	-	-
Stage 1	98	158	-	190	242	-	-	-	-	-	-	-
Stage 2	243	238	-	242	149	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s		\$ 1262	0.8	0.3
HCM LOS	-	F		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	WBLn2	SBL	SBT	SBR
Capacity (veh/h)	422	-	-	-	17	518	683	-	-
HCM Lane V/C Ratio	0.142	-	-	-	5.051	0.134	0.057	-	-
HCM Control Delay (s)	14.9	-	-	\$ 2273.8	13	10.6	-	-	-
HCM Lane LOS	B	-	-	-	F	B	B	-	-
HCM 95th %tile Q(veh)	0.5	-	-	-	11.4	0.5	0.2	-	-























Notes
 -: Volume exceeds capacity \$: Delay exceeds 300s +: Computation Not Defined *: All major volume in platoon

AM PEAK HOUR
 Future Without Project

West Hollywood - Orange Grove Mixed Use - Traffic Impact Study

1: Fairfax Ave & Fountain Ave

02/21/2019

													
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR	
Lane Configurations													
Traffic Volume (veh/h)	168	773	58	170	956	81	51	764	148	57	730	224	
Future Volume (veh/h)	168	773	58	170	956	81	51	764	148	57	730	224	
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	1588	1588	1620	1588	1588	1620	1588	1588	1620	1588	1588	1588	
Adj Flow Rate, veh/h	177	814	61	179	1006	85	54	804	156	60	768	236	
Adj No. of Lanes	1	2	0	1	2	0	1	2	0	1	2	1	
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2	
Cap, veh/h	260	1710	128	343	1692	143	134	874	170	89	1046	438	
Arrive On Green	0.60	0.60	0.58	0.60	0.60	0.58	0.35	0.35	0.35	0.35	0.35	0.32	
Sat Flow, veh/h	515	2846	213	631	2817	238	559	2521	489	583	3018	1350	
Grp Volume(v), veh/h	177	431	444	179	539	552	54	481	479	60	768	236	
Grp Sat Flow(s),veh/h/ln	515	1509	1551	631	1509	1546	559	1509	1502	583	1509	1350	
Q Serve(g_s), s	35.9	17.6	17.7	24.4	24.4	24.5	10.3	33.6	33.6	4.5	24.5	15.7	
Cycle Q Clear(g_c), s	60.4	17.6	17.7	42.1	24.4	24.5	34.9	33.6	33.6	38.1	24.5	15.7	
Prop In Lane	1.00		0.14	1.00		0.15	1.00		0.33	1.00		1.00	
Lane Grp Cap(c), veh/h	260	906	931	343	906	929	134	523	520	89	1046	438	
V/C Ratio(X)	0.68	0.48	0.48	0.52	0.59	0.59	0.40	0.92	0.92	0.67	0.73	0.54	
Avail Cap(c_a), veh/h	260	907	932	343	907	929	134	523	520	89	1046	438	
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	0.97	0.97	0.97	1.00	1.00	1.00	
Uniform Delay (d), s/veh	32.5	12.3	12.4	24.1	13.6	13.8	46.8	34.5	34.5	54.1	31.5	30.4	
Incr Delay (d2), s/veh	9.0	0.8	0.8	2.6	1.6	1.5	8.4	23.3	23.3	33.8	4.6	4.7	
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	5.7	7.5	7.7	4.5	10.4	10.9	1.9	17.4	17.3	2.7	10.9	6.4	
LnGrp Delay(d),s/veh	41.4	13.1	13.2	26.7	15.2	15.3	55.2	57.7	57.8	87.9	36.1	35.1	
LnGrp LOS	D	B	B	C	B	B	E	E	E	F	D	D	
Approach Vol, veh/h		1052			1270			1014			1064		
Approach Delay, s/veh		17.9			16.9			57.6			38.8		
Approach LOS		B			B			E			D		
Timer	1	2	3	4	5	6	7	8					
Assigned Phs		2		4		6		8					
Phs Duration (G+Y+Rc), s		41.0		69.0		41.0		69.0					
Change Period (Y+Rc), s		* 5.3		* 5.3		* 5.3		* 5.3					
Max Green Setting (Gmax), s		* 36		* 64		* 36		* 64					
Max Q Clear Time (g_c+I1), s		36.9		62.4		40.1		44.1					
Green Ext Time (p_c), s		0.0		1.3		0.0		18.4					
Intersection Summary													
HCM 2010 Ctrl Delay				31.8									
HCM 2010 LOS				C									
Notes													

MIDDAY PEAK HOUR
Future Without Project

* HCM 2010 computational engine requires equal clearance times for the phases crossing the barrier.

West Hollywood - Orange Grove Mixed Use - Traffic Impact Study
 2: Orange Grove Ave

02/21/2019

Intersection

Int Delay, s/veh 3

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↔			↔			↔			↔	
Traffic Vol, veh/h	19	958	23	20	1160	11	8	3	54	4	3	41
Future Vol, veh/h	19	958	23	20	1160	11	8	3	54	4	3	41
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	95	92	92	92	92	95	92	95	92	95	95	95
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	20	1041	25	22	1261	12	9	3	59	4	3	43

Major/Minor	Major1	Major2	Minor1	Minor2
Conflicting Flow All	1273	0	0	1066
Stage 1	-	-	-	-
Stage 2	-	-	-	-
Critical Hdwy	4.14	-	-	4.14
Critical Hdwy Stg 1	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-
Follow-up Hdwy	2.22	-	-	2.22
Pot Cap-1 Maneuver	541	-	-	649
Stage 1	-	-	-	-
Stage 2	-	-	-	-
Platoon blocked, %	-	-	-	-
Mov Cap-1 Maneuver	541	-	-	649
Mov Cap-2 Maneuver	-	-	-	-
Stage 1	-	-	-	-
Stage 2	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0.7	0.8	49.7	45
HCM LOS			E	E

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	148	541	-	-	649	-	-	139
HCM Lane V/C Ratio	0.477	0.037	-	-	0.033	-	-	0.363
HCM Control Delay (s)	49.7	11.9	0.5	-	10.7	0.6	-	45
HCM Lane LOS	E	B	A	-	B	A	-	E
HCM 95th %tile Q(veh)	2.2	0.1	-	-	0.1	-	-	1.5

MIDDAY PEAK HOUR
 Future Without Project

West Hollywood - Orange Grove Mixed Use - Traffic Impact Study
 3: Ogden Ave

02/21/2019

Intersection

Int Delay, s/veh 2.9

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↔			↔			↔			↔	
Traffic Vol, veh/h	20	960	19	26	1147	9	11	3	54	1	1	24
Future Vol, veh/h	20	960	19	26	1147	9	11	3	54	1	1	24
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	95	92	92	92	92	95	92	95	92	95	95	95
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	21	1043	21	28	1247	9	12	3	59	1	1	25

Major/Minor	Major1	Major2	Minor1	Minor2
Conflicting Flow All	1256	0	0	1064
Stage 1	-	-	-	-
Stage 2	-	-	-	-
Critical Hdwy	4.14	-	-	4.14
Critical Hdwy Stg 1	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-
Follow-up Hdwy	2.22	-	-	2.22
Pot Cap-1 Maneuver	550	-	-	651
Stage 1	-	-	-	-
Stage 2	-	-	-	-
Platoon blocked, %	-	-	-	-
Mov Cap-1 Maneuver	550	-	-	651
Mov Cap-2 Maneuver	-	-	-	-
Stage 1	-	-	-	-
Stage 2	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0.7	0.9	59.9	26
HCM LOS			F	D

























Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	135	550	-	-	651	-	-	199
HCM Lane V/C Ratio	0.547	0.038	-	-	0.043	-	-	0.138
HCM Control Delay (s)	59.9	11.8	0.5	-	10.8	0.7	-	26
HCM Lane LOS	F	B	A	-	B	A	-	D
HCM 95th %tile Q(veh)	2.7	0.1	-	-	0.1	-	-	0.5

MIDDAY PEAK HOUR
 Future Without Project

West Hollywood - Orange Grove Mixed Use - Traffic Impact Study

4: Fairfax Ave & Santa Monica Blvd

02/21/2019

													
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR	
Lane Configurations													
Traffic Volume (veh/h)	173	1446	114	261	1469	80	171	746	232	87	787	125	
Future Volume (veh/h)	173	1446	114	261	1469	80	171	746	232	87	787	125	
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	1588	1588	1588	1588	1588	1620	1588	1588	1588	1588	1588	1588	
Adj Flow Rate, veh/h	182	1522	120	275	1546	84	180	785	244	92	828	132	
Adj No. of Lanes	1	2	1	1	2	0	1	2	1	1	2	1	
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2	
Cap, veh/h	148	1011	447	266	1204	65	149	930	416	156	920	406	
Arrive On Green	0.06	0.34	0.33	0.13	0.41	0.41	0.05	0.31	0.31	0.04	0.30	0.30	
Sat Flow, veh/h	1513	3018	1350	1513	2912	158	1513	3018	1350	1513	3018	1350	
Grp Volume(v), veh/h	182	1522	120	275	798	832	180	785	244	92	828	132	
Grp Sat Flow(s),veh/h/ln	1513	1509	1350	1513	1509	1560	1513	1509	1350	1513	1509	1350	
Q Serve(g_s), s	6.5	38.5	7.5	15.5	47.5	47.5	5.5	28.0	17.6	5.0	30.2	8.7	
Cycle Q Clear(g_c), s	6.5	38.5	7.5	15.5	47.5	47.5	5.5	28.0	17.6	5.0	30.2	8.7	
Prop In Lane	1.00		1.00	1.00		0.10	1.00		1.00	1.00		1.00	
Lane Grp Cap(c), veh/h	148	1011	447	266	624	645	149	930	416	156	920	406	
V/C Ratio(X)	1.23	1.51	0.27	1.03	1.28	1.29	1.21	0.84	0.59	0.59	0.90	0.33	
Avail Cap(c_a), veh/h	148	1011	447	266	624	645	149	930	416	174	945	417	
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	1.00	1.00	0.87	0.87	0.87	
Uniform Delay (d), s/veh	34.5	38.2	28.3	33.6	33.7	33.8	40.0	37.2	33.6	31.3	38.3	31.2	
Incr Delay (d2), s/veh	148.3	232.4	1.5	63.7	137.8	141.8	139.4	7.2	2.1	3.7	10.1	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	8.1	48.7	3.0	13.2	43.6	45.8	5.8	12.6	6.8	2.2	13.8	3.3	
LnGrp Delay(d),s/veh	182.8	270.7	29.7	97.3	171.5	175.6	179.4	44.4	35.7	35.0	48.4	31.6	
LnGrp LOS	F	F	C	F	F	F	F	D	D	D	D	C	
Approach Vol, veh/h		1824			1905			1209			1052		
Approach Delay, s/veh		246.1			162.6			62.7			45.1		
Approach LOS		F			F			E			D		
Timer	1	2	3	4	5	6	7	8					
Assigned Phs	1	2	3	4	5	6	7	8					
Phs Duration (G+Y+Rc), s	21.0	43.1	11.0	39.9	12.0	52.1	10.6	40.2					
Change Period (Y+Rc), s	* 4	5.1	* 4	* 5.3	* 4	5.1	* 4	* 5.3					
Max Green Setting (Gmax), s	* 17	37.1	* 7	* 36	* 8	46.1	* 8	* 35					
Max Q Clear Time (g_c+I1), s	17.5	40.5	7.5	32.2	8.5	49.5	7.0	30.0					
Green Ext Time (p_c), s	0.0	0.0	0.0	2.3	0.0	0.0	0.0	3.8					
Intersection Summary													
HCM 2010 Ctrl Delay			147.2										
HCM 2010 LOS			F										
Notes													

MIDDAY PEAK HOUR
Future Without Project

* HCM 2010 computational engine requires equal clearance times for the phases crossing the barrier.

West Hollywood - Orange Grove Mixed Use - Traffic Impact Study
 5: Orange Grove Ave

02/21/2019

Intersection												
Int Delay, s/veh	0.6											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↑↓			↑↓				↑			↑
Traffic Vol, veh/h	0	1730	35	1	1768	51	0	0	36	0	0	56
Future Vol, veh/h	0	1730	35	1	1768	51	0	0	36	0	0	56
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	0	-	-	0
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	95	95	92	92	95	95	95	92	95	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	1880	37	1	1922	55	0	0	38	0	0	61

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	-	0	0	1917	0	0	-	-	959	-	-	989
Stage 1	-	-	-	-	-	-	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-	-	-	-	-	-	-
Critical Hdwy	-	-	-	4.14	-	-	-	-	6.94	-	-	6.94
Critical Hdwy Stg 1	-	-	-	-	-	-	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-	-	-	-	-	-	-
Follow-up Hdwy	-	-	-	2.22	-	-	-	-	3.32	-	-	3.32
Pot Cap-1 Maneuver	0	-	-	305	-	-	0	0	257	0	0	246
Stage 1	0	-	-	-	-	-	0	0	-	0	0	-
Stage 2	0	-	-	-	-	-	0	0	-	0	0	-
Platoon blocked, %	-	-	-	-	-	-	-	-	-	-	-	-
Mov Cap-1 Maneuver	-	-	-	305	-	-	-	-	257	-	-	246
Mov Cap-2 Maneuver	-	-	-	-	-	-	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-	-	-	-	-	-	-

Approach	EB			WB			NB			SB		
HCM Control Delay, s	0			0			21.4			24.4		
HCM LOS							C			C		

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	257	-	-	305	-	-	246
HCM Lane V/C Ratio	0.147	-	-	0.003	-	-	0.247
HCM Control Delay (s)	21.4	-	-	16.8	-	-	24.4
HCM Lane LOS	C	-	-	C	-	-	C
HCM 95th %tile Q(veh)	0.5	-	-	0	-	-	0.9

MIDDAY PEAK HOUR
 Future Without Project

West Hollywood - Orange Grove Mixed Use - Traffic Impact Study
6: Ogden Ave

02/21/2019

Intersection						
Int Delay, s/veh	3.6					
Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		↑↑	↑↑		↑	
Traffic Vol, veh/h	51	1726	1799	33	7	47
Future Vol, veh/h	51	1726	1799	33	7	47
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	55	1876	1955	36	8	51

Major/Minor	Major1	Major2	Minor2		
Conflicting Flow All	1991	0	-	0	3021 996
Stage 1	-	-	-	-	1973 -
Stage 2	-	-	-	-	1048 -
Critical Hdwy	4.14	-	-	-	6.84 6.94
Critical Hdwy Stg 1	-	-	-	-	5.84 -
Critical Hdwy Stg 2	-	-	-	-	5.84 -
Follow-up Hdwy	2.22	-	-	-	3.52 3.32
Pot Cap-1 Maneuver	285	-	-	-	10 243
Stage 1	-	-	-	-	94 -
Stage 2	-	-	-	-	299 -
Platoon blocked, %		-	-	-	
Mov Cap-1 Maneuver	285	-	-	-	10 243
Mov Cap-2 Maneuver	-	-	-	-	10 -
Stage 1	-	-	-	-	94 -
Stage 2	-	-	-	-	299 -

Approach	EB	WB	SB
HCM Control Delay, s	0.6	0	222.7
HCM LOS			F

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	285	-	-	-	60
HCM Lane V/C Ratio	0.195	-	-	-	0.978
HCM Control Delay (s)	20.7	0	-	-	222.7
HCM Lane LOS	C	A	-	-	F
HCM 95th %tile Q(veh)	0.7	-	-	-	4.6

MIDDAY PEAK HOUR
Future Without Project

Intersection						
Int Delay, s/veh	0.8					
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↑↑			↑↑	↑	
Traffic Vol, veh/h	1733	18	36	1811	3	39
Future Vol, veh/h	1733	18	36	1811	3	39
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	95	95	95	95	95	95
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	1824	19	38	1906	3	41

Major/Minor	Major1	Major2	Minor1		
Conflicting Flow All	0	0	1843	0	2863
Stage 1	-	-	-	-	1834
Stage 2	-	-	-	-	1029
Critical Hdwy	-	-	4.14	-	6.84
Critical Hdwy Stg 1	-	-	-	-	5.84
Critical Hdwy Stg 2	-	-	-	-	5.84
Follow-up Hdwy	-	-	2.22	-	3.52
Pot Cap-1 Maneuver	-	-	326	-	13
Stage 1	-	-	-	-	112
Stage 2	-	-	-	-	306
Platoon blocked, %	-	-	-	-	-
Mov Cap-1 Maneuver	-	-	326	-	13
Mov Cap-2 Maneuver	-	-	-	-	13
Stage 1	-	-	-	-	112
Stage 2	-	-	-	-	306

Approach	EB	WB	NB
HCM Control Delay, s	0	0.3	56.7
HCM LOS			F

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	112	-	-	326	-
HCM Lane V/C Ratio	0.395	-	-	0.116	-
HCM Control Delay (s)	56.7	-	-	17.5	0
HCM Lane LOS	F	-	-	C	A
HCM 95th %tile Q(veh)	1.6	-	-	0.4	-

West Hollywood - Orange Grove Mixed Use - Traffic Impact Study
 7: Santa Monica Blvd & Genesse Ave

02/21/2019



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (vph)	43	1711	1806	31	33	53
Future Volume (vph)	43	1711	1806	31	33	53
Ideal Flow (vphpl)	1620	1620	1620	1620	1620	1620
Total Lost time (s)	4.5	5.6	5.6		4.6	
Lane Util. Factor	1.00	0.95	0.95		1.00	
Frt	1.00	1.00	1.00		0.92	
Flt Protected	0.95	1.00	1.00		0.98	
Satd. Flow (prot)	1509	3018	3010		1429	
Flt Permitted	0.06	1.00	1.00		0.98	
Satd. Flow (perm)	90	3018	3010		1429	
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	47	1860	1963	34	36	58
RTOR Reduction (vph)	0	0	1	0	49	0
Lane Group Flow (vph)	47	1860	1996	0	45	0
Turn Type	pm+pt	NA	NA		Prot	
Protected Phases	5	2	6		4	
Permitted Phases	2					
Actuated Green, G (s)	75.6	71.4	71.6		15.6	
Effective Green, g (s)	74.6	70.9	71.1		16.1	
Actuated g/C Ratio	0.71	0.67	0.67		0.15	
Clearance Time (s)	4.0	5.1	5.1		5.1	
Vehicle Extension (s)	1.0	3.0	3.0		3.0	
Lane Grp Cap (vph)	113	2026	2026		217	
v/s Ratio Prot	c0.01	0.62	c0.66		c0.03	
v/s Ratio Perm	0.28					
v/c Ratio	0.42	0.92	0.99		0.21	
Uniform Delay, d1	15.6	14.9	16.7		39.2	
Progression Factor	1.76	0.12	1.00		1.00	
Incremental Delay, d2	0.4	3.9	16.8		0.5	
Delay (s)	27.8	5.7	33.5		39.6	
Level of Service	C	A	C		D	
Approach Delay (s)		6.3	33.5		39.6	
Approach LOS		A	C		D	

Intersection Summary

HCM 2000 Control Delay	20.7	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.82		
Actuated Cycle Length (s)	105.6	Sum of lost time (s)	14.7
Intersection Capacity Utilization	80.7%	ICU Level of Service	D
Analysis Period (min)	15		

c Critical Lane Group

MIDDAY PEAK HOUR
 Future Without Project

West Hollywood - Orange Grove Mixed Use - Traffic Impact Study
 8: Romaine St & Fairfax Ave

02/21/2019

Intersection												
Int Delay, s/veh	11											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↔			↔	↔	↔	↕	↕	↕	↕	↕
Traffic Vol, veh/h	11	6	46	14	10	47	33	1092	18	51	1058	53
Future Vol, veh/h	11	6	46	14	10	47	33	1092	18	51	1058	53
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	0	90	-	0	102	-	0
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	12	7	50	15	11	51	36	1187	20	55	1150	58

Major/Minor	Minor2		Minor1		Major1		Major2					
Conflicting Flow All	1931	2539	575	1948	2577	594	1208	0	0	1207	0	0
Stage 1	1260	1260	-	1259	1259	-	-	-	-	-	-	-
Stage 2	671	1279	-	689	1318	-	-	-	-	-	-	-
Critical Hdwy	7.54	6.54	6.94	7.54	6.54	6.94	4.14	-	-	4.14	-	-
Critical Hdwy Stg 1	6.54	5.54	-	6.54	5.54	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.54	5.54	-	6.54	5.54	-	-	-	-	-	-	-
Follow-up Hdwy	3.52	4.02	3.32	3.52	4.02	3.32	2.22	-	-	2.22	-	-
Pot Cap-1 Maneuver	40	27	461	39	25	448	573	-	-	574	-	-
Stage 1	180	240	-	181	240	-	-	-	-	-	-	-
Stage 2	412	235	-	402	225	-	-	-	-	-	-	-
Platoon blocked, %								-	-	-	-	-
Mov Cap-1 Maneuver	19	23	461	24	21	448	573	-	-	574	-	-
Mov Cap-2 Maneuver	19	23	-	24	21	-	-	-	-	-	-	-
Stage 1	169	217	-	170	225	-	-	-	-	-	-	-
Stage 2	326	220	-	314	203	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	221	170.2	0.3	0.5
HCM LOS	F	F		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	WBLn2	SBL	SBT	SBR
Capacity (veh/h)	573	-	-	67	23	448	574	-	-
HCM Lane V/C Ratio	0.063	-	-	1.022	1.134	0.114	0.097	-	-
HCM Control Delay (s)	11.7	-	-	221	476	14.1	11.9	-	-
HCM Lane LOS	B	-	-	F	F	B	B	-	-
HCM 95th %tile Q(veh)	0.2	-	-	5.2	3.3	0.4	0.3	-	-

MIDDAY PEAK HOUR
 Future Without Project

West Hollywood - Orange Grove Mixed Use - Traffic Impact Study

1: Fairfax Ave & Fountain Ave

02/21/2019

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	267	1332	45	98	881	107	53	1138	190	59	799	200
Future Volume (veh/h)	267	1332	45	98	881	107	53	1138	190	59	799	200
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	1588	1588	1620	1588	1588	1620	1588	1588	1620	1588	1588	1588
Adj Flow Rate, veh/h	281	1402	47	103	927	113	56	1198	200	62	841	211
Adj No. of Lanes	1	2	0	1	2	0	1	2	0	1	2	1
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	277	1791	60	155	1628	198	116	897	149	65	1045	438
Arrive On Green	0.60	0.60	0.58	0.60	0.60	0.58	0.35	0.35	0.35	0.35	0.35	0.32
Sat Flow, veh/h	540	2980	100	366	2709	330	534	2591	430	384	3018	1350
Grp Volume(v), veh/h	281	709	740	103	516	524	56	695	703	62	841	211
Grp Sat Flow(s),veh/h/ln	540	1509	1571	366	1509	1530	534	1509	1512	384	1509	1350
Q Serve(g_s), s	43.1	38.9	39.2	26.9	22.8	23.0	10.3	38.1	38.1	0.0	27.8	13.8
Cycle Q Clear(g_c), s	66.1	38.9	39.2	66.1	22.8	23.0	38.1	38.1	38.1	38.1	27.8	13.8
Prop In Lane	1.00		0.06	1.00		0.22	1.00		0.28	1.00		1.00
Lane Grp Cap(c), veh/h	277	907	944	155	907	919	116	523	524	65	1045	438
V/C Ratio(X)	1.01	0.78	0.78	0.66	0.57	0.57	0.48	1.33	1.34	0.95	0.80	0.48
Avail Cap(c_a), veh/h	277	907	944	155	907	919	116	523	524	65	1045	438
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	0.97	0.97	0.97	1.00	1.00	1.00
Uniform Delay (d), s/veh	38.5	16.5	16.6	43.3	13.3	13.5	50.4	35.9	36.0	55.0	32.6	29.7
Incr Delay (d2), s/veh	57.8	5.1	5.0	13.2	1.4	1.3	13.4	160.8	166.0	97.0	6.6	3.8
Initial Q Delay(d3),s/veh	0.1	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	12.8	17.2	18.2	3.7	9.8	10.0	2.1	39.2	40.0	3.6	12.5	5.6
LnGrp Delay(d),s/veh	96.4	21.6	21.6	56.5	14.7	14.8	63.8	196.8	202.0	152.0	39.2	33.5
LnGrp LOS	F	C	C	E	B	B	E	F	F	F	D	C
Approach Vol, veh/h		1730			1143			1454			1114	
Approach Delay, s/veh		33.8			18.5			194.2			44.4	
Approach LOS		C			B			F			D	
Timer	1	2	3	4	5	6	7	8				
Assigned Phs		2		4		6		8				
Phs Duration (G+Y+Rc), s		41.0		69.0		41.0		69.0				
Change Period (Y+Rc), s		* 5.3		* 5.3		* 5.3		* 5.3				
Max Green Setting (Gmax), s		* 36		* 64		* 36		* 64				
Max Q Clear Time (g_c+I1), s		40.1		68.1		40.1		68.1				
Green Ext Time (p_c), s		0.0		0.0		0.0		0.0				
Intersection Summary												
HCM 2010 Ctrl Delay				75.6								
HCM 2010 LOS				E								
Notes												

PM PEAK HOUR
 Future Without Project - Iteration 5

* HCM 2010 computational engine requires equal clearance times for the phases crossing the barrier.

West Hollywood - Orange Grove Mixed Use - Traffic Impact Study
 2: Orange Grove Ave

06/06/2019

Intersection

Int Delay, s/veh 46.3

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕↕			↕↕			↕↕			↕↕	
Traffic Vol, veh/h	45	1345	42	49	1097	17	5	8	64	2	4	29
Future Vol, veh/h	45	1345	42	49	1097	17	5	8	64	2	4	29
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	95	92	92	92	92	95	92	95	92	95	95	95
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	47	1462	46	53	1192	18	5	8	70	2	4	31

Major/Minor	Major1	Major2	Minor1	Minor2
Conflicting Flow All	1210	0	0	1508
Stage 1	-	-	-	-
Stage 2	-	-	-	-
Critical Hdwy	4.14	-	-	4.14
Critical Hdwy Stg 1	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-
Follow-up Hdwy	2.22	-	-	2.22
Pot Cap-1 Maneuver	572	-	-	440
Stage 1	-	-	-	-
Stage 2	-	-	-	-
Platoon blocked, %	-	-	-	-
Mov Cap-1 Maneuver	572	-	-	440
Mov Cap-2 Maneuver	-	-	-	-
Stage 1	-	-	-	-
Stage 2	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	3.1	2.9	\$ 1530.3	
HCM LOS			F	-

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	23	572	-	-	440	-	-	-
HCM Lane V/C Ratio	3.627	0.083	-	-	0.121	-	-	-
HCM Control Delay (s)	\$ 1530.3	11.9	2.9	-	14.3	2.4	-	-
HCM Lane LOS	F	B	A	-	B	A	-	-
HCM 95th %tile Q(veh)	10.5	0.3	-	-	0.4	-	-	-

Notes
 -: Volume exceeds capacity \$: Delay exceeds 300s +: Computation Not Defined *: All major volume in platoon

West Hollywood - Orange Grove Mixed Use - Traffic Impact Study
 3: Ogden Ave

06/06/2019

Intersection

Int Delay, s/veh 415.1

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕↕			↕↕			↕			↕↕	
Traffic Vol, veh/h	40	1489	25	35	1036	6	9	20	153	2	1	12
Future Vol, veh/h	40	1489	25	35	1036	6	9	20	153	2	1	12
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	95	92	92	92	92	95	92	95	92	95	95	95
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	42	1618	27	38	1126	6	10	21	166	2	1	13

Major/Minor	Major1	Major2	Minor1	Minor2
Conflicting Flow All	1132	0	0	1645
Stage 1	-	-	-	-
Stage 2	-	-	-	-
Critical Hdwy	4.14	-	-	4.14
Critical Hdwy Stg 1	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-
Follow-up Hdwy	2.22	-	-	2.22
Pot Cap-1 Maneuver	613	-	-	389
Stage 1	-	-	-	-
Stage 2	-	-	-	-
Platoon blocked, %	-	-	-	-
Mov Cap-1 Maneuver	613	-	-	389
Mov Cap-2 Maneuver	-	-	-	-
Stage 1	-	-	-	-
Stage 2	-	-	-	-
























Approach	EB	WB	NB	SB
HCM Control Delay, s	4.5	2.3	\$ 6413.7	
HCM LOS			F	-

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	14	613	-	-	389	-	-	-
HCM Lane V/C Ratio	14.081	0.069	-	-	0.098	-	-	-
HCM Control Delay (s)	\$ 6413.7	11.3	4.4	-	15.3	1.9	-	-
HCM Lane LOS	F	B	A	-	C	A	-	-
HCM 95th %tile Q(veh)	25.8	0.2	-	-	0.3	-	-	-

Notes
 -: Volume exceeds capacity \$: Delay exceeds 300s +: Computation Not Defined *: All major volume in platoon

West Hollywood - Orange Grove Mixed Use - Traffic Impact Study
 4: Fairfax Ave & Santa Monica Blvd

02/21/2019

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	348	1532	112	225	1316	107	132	905	281	69	796	109
Future Volume (veh/h)	348	1532	112	225	1316	107	132	905	281	69	796	109
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	1588	1588	1588	1588	1588	1620	1588	1588	1588	1588	1588	1588
Adj Flow Rate, veh/h	366	1613	118	237	1385	113	139	953	296	73	838	115
Adj No. of Lanes	1	2	1	1	2	0	1	2	1	1	2	1
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	148	1072	474	244	1184	96	142	956	427	109	904	399
Arrive On Green	0.06	0.36	0.35	0.12	0.42	0.41	0.05	0.32	0.32	0.03	0.30	0.30
Sat Flow, veh/h	1513	3018	1350	1513	2827	230	1513	3018	1350	1513	3018	1350
Grp Volume(v), veh/h	366	1613	118	237	737	761	139	953	296	73	838	115
Grp Sat Flow(s),veh/h/ln	1513	1509	1350	1513	1509	1548	1513	1509	1350	1513	1509	1350
Q Serve(g_s), s	6.5	40.9	7.1	13.2	48.2	48.2	5.5	36.3	22.1	3.5	31.0	7.5
Cycle Q Clear(g_c), s	6.5	40.9	7.1	13.2	48.2	48.2	5.5	36.3	22.1	3.5	31.0	7.5
Prop In Lane	1.00		1.00	1.00		0.15	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	148	1072	474	244	632	648	142	956	427	109	904	399
V/C Ratio(X)	2.47	1.50	0.25	0.97	1.17	1.17	0.98	1.00	0.69	0.67	0.93	0.29
Avail Cap(c_a), veh/h	148	1072	474	266	632	648	142	956	427	148	945	417
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	1.00	1.00	0.87	0.87	0.87
Uniform Delay (d), s/veh	33.2	37.1	26.5	32.7	33.4	33.5	39.1	39.2	34.4	35.7	39.1	31.2
Incr Delay (d2), s/veh	681.9	231.8	1.3	45.7	91.1	94.2	67.7	28.4	4.7	6.1	13.0	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	30.0	51.5	2.8	10.6	36.0	37.5	4.8	18.9	8.8	1.0	14.6	2.9
LnGrp Delay(d),s/veh	715.1	268.8	27.8	78.3	124.6	127.7	106.9	67.7	39.1	41.8	52.1	31.6
LnGrp LOS	F	F	C	E	F	F	F	E	D	D	D	C
Approach Vol, veh/h		2097			1735			1388			1026	
Approach Delay, s/veh		333.1			119.6			65.5			49.1	
Approach LOS		F			F			E			D	
Timer	1	2	3	4	5	6	7	8				
Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	19.3	45.5	11.0	39.2	12.0	52.8	9.0	41.2				
Change Period (Y+Rc), s	* 4	5.1	* 4	* 5.3	* 4	5.1	* 4	* 5.3				
Max Green Setting (Gmax), s	* 17	37.1	* 7	* 36	* 8	46.1	* 8	* 35				
Max Q Clear Time (g_c+I1), s	15.2	42.9	7.5	33.0	8.5	50.2	5.5	38.3				
Green Ext Time (p_c), s	0.1	0.0	0.0	1.0	0.0	0.0	0.0	0.0				
Intersection Summary												
HCM 2010 Ctrl Delay			167.7									
HCM 2010 LOS			F									
Notes												

PM PEAK HOUR
 Future Without Project - Iteration 5

* HCM 2010 computational engine requires equal clearance times for the phases crossing the barrier.

West Hollywood - Orange Grove Mixed Use - Traffic Impact Study
 5: Orange Grove Ave

02/21/2019

Intersection												
Int Delay, s/veh	0.8											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↑↓			↑↓				↑			↑
Traffic Vol, veh/h	0	1871	38	1	1541	66	0	0	62	0	0	61
Future Vol, veh/h	0	1871	38	1	1541	66	0	0	62	0	0	61
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	0	-	-	0
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	95	95	92	92	95	95	95	92	95	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	2034	40	1	1675	72	0	0	65	0	0	66

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	-	0	0	2074	0	0	-	-	1037	-	-	874
Stage 1	-	-	-	-	-	-	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-	-	-	-	-	-	-
Critical Hdwy	-	-	-	4.14	-	-	-	-	6.94	-	-	6.94
Critical Hdwy Stg 1	-	-	-	-	-	-	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-	-	-	-	-	-	-
Follow-up Hdwy	-	-	-	2.22	-	-	-	-	3.32	-	-	3.32
Pot Cap-1 Maneuver	0	-	-	265	-	-	0	0	228	0	0	293
Stage 1	0	-	-	-	-	-	0	0	-	0	0	-
Stage 2	0	-	-	-	-	-	0	0	-	0	0	-
Platoon blocked, %	-	-	-	-	-	-	-	-	-	-	-	-
Mov Cap-1 Maneuver	-	-	-	265	-	-	-	-	228	-	-	293
Mov Cap-2 Maneuver	-	-	-	-	-	-	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-	-	-	-	-	-	-

Approach	EB			WB			NB			SB		
HCM Control Delay, s	0			0			27			20.8		
HCM LOS							D			C		

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	228	-	-	265	-	-	293
HCM Lane V/C Ratio	0.286	-	-	0.004	-	-	0.226
HCM Control Delay (s)	27	-	-	18.6	-	-	20.8
HCM Lane LOS	D	-	-	C	-	-	C
HCM 95th %tile Q(veh)	1.1	-	-	0	-	-	0.9

West Hollywood - Orange Grove Mixed Use - Traffic Impact Study
6: Ogden Ave

02/21/2019

Intersection						
Int Delay, s/veh	3.5					
Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		↑↑	↑↑		↑	
Traffic Vol, veh/h	139	1849	1536	51	7	50
Future Vol, veh/h	139	1849	1536	51	7	50
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	151	2010	1670	55	8	54

Major/Minor	Major1	Major2	Minor2		
Conflicting Flow All	1725	0	-	0	3005 863
Stage 1	-	-	-	-	1698 -
Stage 2	-	-	-	-	1307 -
Critical Hdwy	4.14	-	-	-	6.84 6.94
Critical Hdwy Stg 1	-	-	-	-	5.84 -
Critical Hdwy Stg 2	-	-	-	-	5.84 -
Follow-up Hdwy	2.22	-	-	-	3.52 3.32
Pot Cap-1 Maneuver	362	-	-	-	11 298
Stage 1	-	-	-	-	133 -
Stage 2	-	-	-	-	217 -
Platoon blocked, %		-	-	-	
Mov Cap-1 Maneuver	362	-	-	-	11 298
Mov Cap-2 Maneuver	-	-	-	-	11 -
Stage 1	-	-	-	-	133 -
Stage 2	-	-	-	-	217 -

Approach	EB	WB	SB
HCM Control Delay, s	1.5	0	171
HCM LOS			F

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	362	-	-	-	71
HCM Lane V/C Ratio	0.417	-	-	-	0.873
HCM Control Delay (s)	21.9	0	-	-	171
HCM Lane LOS	C	A	-	-	F
HCM 95th %tile Q(veh)	2	-	-	-	4.3

Intersection						
Int Delay, s/veh	5.5					
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↑↑			↑↑	↑	
Traffic Vol, veh/h	1899	33	33	1571	6	115
Future Vol, veh/h	1899	33	33	1571	6	115
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	95	95	95	95	95	95
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	1999	35	35	1654	6	121

Major/Minor	Major1	Major2	Minor1	Minor2	Minor3
Conflicting Flow All	0	0	2034	0	2914
Stage 1	-	-	-	-	2017
Stage 2	-	-	-	-	897
Critical Hdwy	-	-	4.14	-	6.84
Critical Hdwy Stg 1	-	-	-	-	5.84
Critical Hdwy Stg 2	-	-	-	-	5.84
Follow-up Hdwy	-	-	2.22	-	3.52
Pot Cap-1 Maneuver	-	-	274	-	12
Stage 1	-	-	-	-	89
Stage 2	-	-	-	-	358
Platoon blocked, %	-	-	-	-	-
Mov Cap-1 Maneuver	-	-	274	-	0
Mov Cap-2 Maneuver	-	-	-	-	0
Stage 1	-	-	-	-	89
Stage 2	-	-	-	-	0

Approach	EB	WB	NB
HCM Control Delay, s	0	9.8	37.1
HCM LOS			E

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	235	-	-	274	-
HCM Lane V/C Ratio	0.542	-	-	0.127	-
HCM Control Delay (s)	37.1	-	-	20	9.6
HCM Lane LOS	E	-	-	C	A
HCM 95th %tile Q(veh)	2.9	-	-	0.4	-

West Hollywood - Orange Grove Mixed Use - Traffic Impact Study
 107: Genesee Ave & Santa Monica Blvd

02/21/2019



Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↑↑		↵	↑↑	↵	
Traffic Volume (vph)	1805	22	56	1582	43	75
Future Volume (vph)	1805	22	56	1582	43	75
Ideal Flow (vphpl)	1620	1620	1620	1620	1620	1620
Total Lost time (s)	5.6		4.5	5.6	3.5	
Lane Util. Factor	0.95		1.00	0.95	1.00	
Frt	1.00		1.00	1.00	0.91	
Flt Protected	1.00		0.95	1.00	0.98	
Satd. Flow (prot)	3012		1509	3018	1426	
Flt Permitted	1.00		0.06	1.00	0.98	
Satd. Flow (perm)	3012		94	3018	1426	
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	1962	24	61	1720	47	82
RTOR Reduction (vph)	1	0	0	0	61	0
Lane Group Flow (vph)	1985	0	61	1720	68	0
Turn Type	NA		pm+pt	NA	Prot	
Protected Phases	2		1	6	8	
Permitted Phases			6			
Actuated Green, G (s)	71.0		72.9	68.1	16.7	
Effective Green, g (s)	70.5		71.9	67.6	17.2	
Actuated g/C Ratio	0.67		0.68	0.64	0.16	
Clearance Time (s)	5.1		4.0	5.1	4.0	
Vehicle Extension (s)	3.0		3.0	3.0	3.0	
Lane Grp Cap (vph)	2010		121	1931	232	
v/s Ratio Prot	c0.66		c0.02	0.57	c0.05	
v/s Ratio Perm			0.32			
v/c Ratio	0.99		0.50	0.89	0.29	
Uniform Delay, d1	17.1		16.0	15.9	38.9	
Progression Factor	1.00		1.68	0.15	1.00	
Incremental Delay, d2	17.4		1.6	3.5	0.7	
Delay (s)	34.5		28.3	5.8	39.6	
Level of Service	C		C	A	D	
Approach Delay (s)	34.5			6.6	39.6	
Approach LOS	C			A	D	

Intersection Summary

HCM 2000 Control Delay	21.9	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.85		
Actuated Cycle Length (s)	105.6	Sum of lost time (s)	15.2
Intersection Capacity Utilization	75.5%	ICU Level of Service	D
Analysis Period (min)	15		

c Critical Lane Group

West Hollywood - Orange Grove Mixed Use - Traffic Impact Study
 8: Romaine St & Fairfax Ave

02/21/2019

Intersection

Int Delay, s/veh 128.5

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↔			↔	↔	↔	↕	↕	↕	↕	↕
Traffic Vol, veh/h	25	46	74	3	10	32	50	1257	83	51	994	50
Future Vol, veh/h	25	46	74	3	10	32	50	1257	83	51	994	50
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	0	90	-	0	102	-	0
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	27	50	80	3	11	35	54	1366	90	55	1080	54

Major/Minor	Minor2		Minor1		Major1		Major2					
Conflicting Flow All	1987	2754	540	2149	2718	683	1134	0	0	1456	0	0
Stage 1	1190	1190	-	1474	1474	-	-	-	-	-	-	-
Stage 2	797	1564	-	675	1244	-	-	-	-	-	-	-
Critical Hdwy	7.54	6.54	6.94	7.54	6.54	6.94	4.14	-	-	4.14	-	-
Critical Hdwy Stg 1	6.54	5.54	-	6.54	5.54	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.54	5.54	-	6.54	5.54	-	-	-	-	-	-	-
Follow-up Hdwy	3.52	4.02	3.32	3.52	4.02	3.32	2.22	-	-	2.22	-	-
Pot Cap-1 Maneuver	36	~ 19	486	27	20	392	612	-	-	461	-	-
Stage 1	199	259	-	133	189	-	-	-	-	-	-	-
Stage 2	346	171	-	410	244	-	-	-	-	-	-	-
Platoon blocked, %								-	-	-	-	-
Mov Cap-1 Maneuver	~ 13	~ 15	486	-	16	392	612	-	-	461	-	-
Mov Cap-2 Maneuver	~ 13	~ 15	-	-	16	-	-	-	-	-	-	-
Stage 1	181	228	-	121	172	-	-	-	-	-	-	-
Stage 2	269	156	-	235	215	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, \$ 2362.7			0.4	0.6
HCM LOS	F	-		






















Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	WBLn2	SBL	SBT	SBR
Capacity (veh/h)	612	-	-	28	-	392	461	-	-
HCM Lane V/C Ratio	0.089	-	-	5.629	-	0.089	0.12	-	-
HCM Control Delay (s)	11.5	-	-	\$ 2362.7	-	15.1	13.9	-	-
HCM Lane LOS	B	-	-	F	-	C	B	-	-
HCM 95th %tile Q(veh)	0.3	-	-	19.3	-	0.3	0.4	-	-

Notes
 -: Volume exceeds capacity \$: Delay exceeds 300s +: Computation Not Defined *: All major volume in platoon

APPENDIX F
Intersection Level of Service Worksheets
Future With Project

HCM 2010 Signalized Intersection Summary

1: Fairfax Ave & Fountain Ave/Fountain Ave

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	110	686	97	260	1113	61	55	699	134	54	867	305
Future Volume (veh/h)	110	686	97	260	1113	61	55	699	134	54	867	305
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	1588	1588	1620	1588	1588	1620	1588	1588	1620	1588	1588	1588
Adj Flow Rate, veh/h	116	722	102	274	1172	64	58	736	141	57	913	321
Adj No. of Lanes	1	2	0	1	2	0	1	2	0	1	2	1
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	214	1595	225	363	1748	95	94	876	168	115	1046	439
Arrive On Green	0.60	0.60	0.58	0.60	0.60	0.58	0.35	0.35	0.35	0.35	0.35	0.32
Sat Flow, veh/h	449	2656	375	662	2910	159	450	2528	484	630	3018	1350
Grp Volume(v), veh/h	116	410	414	274	607	629	58	439	438	57	913	321
Grp Sat Flow(s),veh/h/ln	449	1509	1522	662	1509	1560	450	1509	1503	630	1509	1350
Q Serve(g_s), s	25.7	16.4	16.6	42.7	29.6	29.7	7.0	29.5	29.5	8.6	31.2	23.2
Cycle Q Clear(g_c), s	55.4	16.4	16.6	59.3	29.6	29.7	38.1	29.5	29.5	38.1	31.2	23.2
Prop In Lane	1.00		0.25	1.00		0.10	1.00		0.32	1.00		1.00
Lane Grp Cap(c), veh/h	214	906	914	363	906	937	94	523	521	115	1046	439
V/C Ratio(X)	0.54	0.45	0.45	0.75	0.67	0.67	0.62	0.84	0.84	0.50	0.87	0.73
Avail Cap(c_a), veh/h	214	907	915	363	907	938	94	523	521	115	1046	439
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	0.97	0.97	0.97	1.00	1.00	1.00
Uniform Delay (d), s/veh	33.3	12.0	12.2	28.4	14.7	14.8	53.3	33.1	33.1	51.3	33.7	32.9
Incr Delay (d2), s/veh	4.8	0.7	0.7	10.1	2.5	2.4	26.0	14.5	14.6	14.6	10.0	10.3
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	3.5	7.0	7.1	8.8	12.8	13.4	2.4	14.4	14.4	2.2	14.4	9.9
LnGrp Delay(d),s/veh	38.1	12.8	13.0	38.5	17.2	17.2	79.3	47.6	47.7	65.9	43.7	43.2
LnGrp LOS	D	B	B	D	B	B	E	D	D	E	D	D
Approach Vol, veh/h		940			1510			935			1291	
Approach Delay, s/veh		16.0			21.1			49.6			44.6	
Approach LOS		B			C			D			D	
Timer	1	2	3	4	5	6	7	8				
Assigned Phs		2		4		6		8				
Phs Duration (G+Y+Rc), s		41.0		69.0		41.0		69.0				
Change Period (Y+Rc), s		* 5.3		* 5.3		* 5.3		* 5.3				
Max Green Setting (Gmax), s		* 36		* 64		* 36		* 64				
Max Q Clear Time (g_c+I1), s		40.1		57.4		40.1		61.3				
Green Ext Time (p_c), s		0.0		6.1		0.0		2.3				
Intersection Summary												
HCM 2010 Ctrl Delay				32.2								
HCM 2010 LOS				C								
Notes												

HCM 2010 Signalized Intersection Summary

1: Fairfax Ave & Fountain Ave/Fountain Ave

* HCM 2010 computational engine requires equal clearance times for the phases crossing the barrier.

HCM 2010 TWSC
 2: Orange Grove Ave & Foutain Ave

Intersection

Int Delay, s/veh 54.9

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	2	841	47	65	1271	6	3	3	64	4	25	164
Future Vol, veh/h	2	841	47	65	1271	6	3	3	64	4	25	164
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	95	92	92	92	92	95	92	95	92	95	95	95
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	2	914	51	71	1382	6	3	3	70	4	26	173

Major/Minor	Major1	Major2	Minor1	Minor2
Conflicting Flow All	1388	0	0	965
Stage 1	-	-	-	-
Stage 2	-	-	-	-
Critical Hdwy	4.14	-	-	4.14
Critical Hdwy Stg 1	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-
Follow-up Hdwy	2.22	-	-	2.22
Pot Cap-1 Maneuver	489	-	-	709
Stage 1	-	-	-	-
Stage 2	-	-	-	-
Platoon blocked, %	-	-	-	-
Mov Cap-1 Maneuver	489	-	-	709
Mov Cap-2 Maneuver	-	-	-	-
Stage 1	-	-	-	-
Stage 2	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0.1	2.5		\$ 712.5
HCM LOS			-	F

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	-	489	-	-	709	-	-	87
HCM Lane V/C Ratio	-	0.004	-	-	0.1	-	-	2.335
HCM Control Delay (s)	-	12.4	0.1	-	10.6	2.1	-	\$ 712.5
HCM Lane LOS	-	B	A	-	B	A	-	F
HCM 95th %tile Q(veh)	-	0	-	-	0.3	-	-	18.6

Notes

-: Volume exceeds capacity \$: Delay exceeds 300s +: Computation Not Defined *: All major volume in platoon

HCM 2010 TWSC
3: Ogden Ave

Intersection												
Int Delay, s/veh	12.3											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↔			↔			↔			↔	
Traffic Vol, veh/h	5	843	15	67	1441	6	12	2	59	0	7	17
Future Vol, veh/h	5	843	15	67	1441	6	12	2	59	0	7	17
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	95	92	92	92	92	95	92	95	92	95	95	95
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	5	916	16	73	1566	6	13	2	64	0	7	18
























Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	1572	0	0	932	0	0	1867	2652	466	2184	2657	786
Stage 1	-	-	-	-	-	-	934	934	-	1715	1715	-
Stage 2	-	-	-	-	-	-	933	1718	-	469	942	-
Critical Hdwy	4.14	-	-	4.14	-	-	7.54	6.54	6.94	7.54	6.54	6.94
Critical Hdwy Stg 1	-	-	-	-	-	-	6.54	5.54	-	6.54	5.54	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.54	5.54	-	6.54	5.54	-
Follow-up Hdwy	2.22	-	-	2.22	-	-	3.52	4.02	3.32	3.52	4.02	3.32
Pot Cap-1 Maneuver	415	-	-	730	-	-	45	23	543	26	22	335
Stage 1	-	-	-	-	-	-	286	343	-	94	144	-
Stage 2	-	-	-	-	-	-	286	143	-	544	340	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	415	-	-	730	-	-	-	5	543	6	~ 4	335
Mov Cap-2 Maneuver	-	-	-	-	-	-	-	5	-	6	~ 4	-
Stage 1	-	-	-	-	-	-	279	334	-	92	29	-
Stage 2	-	-	-	-	-	-	41	29	-	465	332	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0.3	4.1		\$ 1030.1
HCM LOS			-	F

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	-	415	-	-	730	-	-	13
HCM Lane V/C Ratio	-	0.013	-	-	0.1	-	-	1.943
HCM Control Delay (s)	-	13.8	0.2	-	10.5	3.8		\$ 1030.1
HCM Lane LOS	-	B	A	-	B	A	-	F
HCM 95th %tile Q(veh)	-	0	-	-	0.3	-	-	3.9

Notes
 -: Volume exceeds capacity \$: Delay exceeds 300s +: Computation Not Defined *: All major volume in platoon

HCM 2010 Signalized Intersection Summary
 4: Fairfax Ave & Santa Monica Blvd/Santa Monica Boulevard

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	128	914	77	414	1231	60	103	715	171	73	987	125
Future Volume (veh/h)	128	914	77	414	1231	60	103	715	171	73	987	125
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	1588	1588	1588	1588	1588	1620	1588	1588	1588	1588	1588	1588
Adj Flow Rate, veh/h	135	962	81	436	1296	63	108	753	180	77	1039	132
Adj No. of Lanes	1	2	1	1	2	0	1	2	1	1	2	1
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	148	987	436	266	1187	58	135	981	439	166	945	417
Arrive On Green	0.06	0.33	0.32	0.13	0.41	0.40	0.05	0.33	0.33	0.04	0.31	0.31
Sat Flow, veh/h	1513	3018	1350	1513	2930	142	1513	3018	1350	1513	3018	1350
Grp Volume(v), veh/h	135	962	81	436	667	692	108	753	180	77	1039	132
Grp Sat Flow(s),veh/h/ln	1513	1509	1350	1513	1509	1563	1513	1509	1350	1513	1509	1350
Q Serve(g_s), s	6.5	36.2	5.0	15.5	46.6	46.6	5.5	25.8	11.9	4.1	36.0	8.6
Cycle Q Clear(g_c), s	6.5	36.2	5.0	15.5	46.6	46.6	5.5	25.8	11.9	4.1	36.0	8.6
Prop In Lane	1.00		1.00	1.00		0.09	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	148	987	436	266	611	633	135	981	439	166	945	417
V/C Ratio(X)	0.91	0.98	0.19	1.64	1.09	1.09	0.80	0.77	0.41	0.46	1.10	0.32
Avail Cap(c_a), veh/h	148	987	436	266	611	633	135	981	439	198	945	417
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	1.00	1.00	0.87	0.87	0.87
Uniform Delay (d), s/veh	32.9	38.2	28.1	33.4	34.2	34.2	32.9	34.9	30.2	30.1	39.5	30.5
Incr Delay (d2), s/veh	48.6	23.2	0.9	302.7	63.4	63.8	28.0	3.7	0.6	1.7	58.9	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	3.6	18.3	2.0	30.8	30.1	31.3	2.2	11.3	4.5	1.8	22.7	3.3
LnGrp Delay(d),s/veh	81.5	61.5	29.0	336.1	97.6	98.0	60.9	38.6	30.8	31.9	98.4	30.8
LnGrp LOS	F	E	C	F	F	F	E	D	C	C	F	C
Approach Vol, veh/h		1178			1795			1041			1248	
Approach Delay, s/veh		61.5			155.7			39.6			87.2	
Approach LOS		E			F			D			F	
Timer	1	2	3	4	5	6	7	8				
Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	21.0	42.2	11.0	40.8	12.0	51.2	9.6	42.2				
Change Period (Y+Rc), s	* 4	5.1	* 4	* 5.3	* 4	5.1	* 4	* 5.3				
Max Green Setting (Gmax), s	* 17	37.1	* 7	* 36	* 8	46.1	* 8	* 35				
Max Q Clear Time (g_c+I1), s	17.5	38.2	7.5	38.0	8.5	48.6	6.1	27.8				
Green Ext Time (p_c), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	5.6				
Intersection Summary												
HCM 2010 Ctrl Delay			95.4									
HCM 2010 LOS			F									
Notes												

HCM 2010 Signalized Intersection Summary
4: Fairfax Ave & Santa Monica Blvd/Santa Monica Boulevard

* HCM 2010 computational engine requires equal clearance times for the phases crossing the barrier.

HCM 2010 TWSC
 5: Santa Monica Boulevard & Orange Grove Ave

Intersection												
Int Delay, s/veh	1.4											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↑↑			↑↑				↑			↑
Traffic Vol, veh/h	0	1138	17	0	1572	47	1	0	19	0	0	131
Future Vol, veh/h	0	1138	17	0	1572	47	1	0	19	0	0	131
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	0	-	-	0
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	95	95	92	92	95	95	95	92	95	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	1237	18	0	1709	51	1	0	20	0	0	142

Major/Minor	Major1		Major2		Minor1		Minor2					
Conflicting Flow All	-	0	0	-	-	0	2101	-	628	-	-	880
Stage 1	-	-	-	-	-	-	1246	-	-	-	-	-
Stage 2	-	-	-	-	-	-	855	-	-	-	-	-
Critical Hdwy	-	-	-	-	-	-	7.54	-	6.94	-	-	6.94
Critical Hdwy Stg 1	-	-	-	-	-	-	6.54	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.54	-	-	-	-	-
Follow-up Hdwy	-	-	-	-	-	-	3.52	-	3.32	-	-	3.32
Pot Cap-1 Maneuver	0	-	-	0	-	-	30	0	426	0	0	290
Stage 1	0	-	-	0	-	-	184	0	-	0	0	-
Stage 2	0	-	-	0	-	-	319	0	-	0	0	-
Platoon blocked, %	-	-	-	-	-	-	-	-	-	-	-	-
Mov Cap-1 Maneuver	-	-	-	-	-	-	15	-	426	-	-	290
Mov Cap-2 Maneuver	-	-	-	-	-	-	15	-	-	-	-	-
Stage 1	-	-	-	-	-	-	184	-	-	-	-	-
Stage 2	-	-	-	-	-	-	162	-	-	-	-	-

Approach	EB		WB		NB		SB	
HCM Control Delay, s	0		0		13.9		28.8	
HCM LOS					B		D	

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBT	WBR	SBLn1
Capacity (veh/h)	426	-	-	-	-	290
HCM Lane V/C Ratio	0.047	-	-	-	-	0.491
HCM Control Delay (s)	13.9	-	-	-	-	28.8
HCM Lane LOS	B	-	-	-	-	D
HCM 95th %tile Q(veh)	0.1	-	-	-	-	2.5

HCM 2010 TWSC
6: Ogden Ave

Intersection						
Int Delay, s/veh	5.8					
Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		↑↑	↑↑		↑	
Traffic Vol, veh/h	24	1161	1562	26	10	113
Future Vol, veh/h	24	1161	1562	26	10	113
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	26	1262	1698	28	11	123

Major/Minor	Major1	Major2	Minor2		
Conflicting Flow All	1726	0	-	0	2395 863
Stage 1	-	-	-	-	1712 -
Stage 2	-	-	-	-	683 -
Critical Hdwy	4.14	-	-	-	6.84 6.94
Critical Hdwy Stg 1	-	-	-	-	5.84 -
Critical Hdwy Stg 2	-	-	-	-	5.84 -
Follow-up Hdwy	2.22	-	-	-	3.52 3.32
Pot Cap-1 Maneuver	362	-	-	-	28 298
Stage 1	-	-	-	-	131 -
Stage 2	-	-	-	-	463 -
Platoon blocked, %		-	-	-	
Mov Cap-1 Maneuver	362	-	-	-	21 298
Mov Cap-2 Maneuver	-	-	-	-	21 -
Stage 1	-	-	-	-	100 -
Stage 2	-	-	-	-	463 -

Approach	EB	WB	SB
HCM Control Delay, s	2.1	0	117.4
HCM LOS			F

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	362	-	-	-	144
HCM Lane V/C Ratio	0.072	-	-	-	0.928
HCM Control Delay (s)	15.7	1.8	-	-	117.4
HCM Lane LOS	C	A	-	-	F
HCM 95th %tile Q(veh)	0.2	-	-	-	6.5

HCM 2010 TWSC

106:

Intersection

Int Delay, s/veh 3.7

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↑↑			↑↑	↑	
Traffic Vol, veh/h	1144	17	62	1614	8	39
Future Vol, veh/h	1144	17	62	1614	8	39
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	95	95	95	95	95	95
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	1204	18	65	1699	8	41

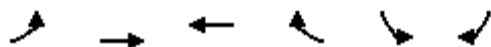
Major/Minor	Major1	Major2	Minor1	Minor2	Minor3
Conflicting Flow All	0	0	1222	0	2193
Stage 1	-	-	-	-	1213
Stage 2	-	-	-	-	980
Critical Hdwy	-	-	4.14	-	6.84
Critical Hdwy Stg 1	-	-	-	-	5.84
Critical Hdwy Stg 2	-	-	-	-	5.84
Follow-up Hdwy	-	-	2.22	-	3.52
Pot Cap-1 Maneuver	-	-	566	-	39
Stage 1	-	-	-	-	244
Stage 2	-	-	-	-	324
Platoon blocked, %	-	-	-	-	-
Mov Cap-1 Maneuver	-	-	566	-	0
Mov Cap-2 Maneuver	-	-	-	-	0
Stage 1	-	-	-	-	244
Stage 2	-	-	-	-	0

Approach	EB	WB	NB
HCM Control Delay, s	0	5.9	14.3
HCM LOS			B

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	437	-	-	566	-
HCM Lane V/C Ratio	0.113	-	-	0.115	-
HCM Control Delay (s)	14.3	-	-	12.2	5.7
HCM Lane LOS	B	-	-	B	A
HCM 95th %tile Q(veh)	0.4	-	-	0.4	-

HCM Signalized Intersection Capacity Analysis

7: Santa Monica Blvd & Genesse Ave



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations	↖	↑↑	↑↑		↗	
Traffic Volume (vph)	25	1187	1525	20	33	97
Future Volume (vph)	25	1187	1525	20	33	97
Ideal Flow (vphpl)	1620	1620	1620	1620	1620	1620
Total Lost time (s)	4.5	5.6	5.6		4.6	
Lane Util. Factor	1.00	0.95	0.95		1.00	
Frt	1.00	1.00	1.00		0.90	
Flt Protected	0.95	1.00	1.00		0.99	
Satd. Flow (prot)	1509	3018	3012		1411	
Flt Permitted	0.10	1.00	1.00		0.99	
Satd. Flow (perm)	154	3018	3012		1411	
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	27	1290	1658	22	36	105
RTOR Reduction (vph)	0	0	1	0	89	0
Lane Group Flow (vph)	27	1290	1679	0	52	0
Turn Type	pm+pt	NA	NA		Prot	
Protected Phases	5	2	6		4	
Permitted Phases	2					
Actuated Green, G (s)	71.6	68.6	72.8		15.6	
Effective Green, g (s)	70.6	68.1	72.3		16.1	
Actuated g/C Ratio	0.67	0.64	0.68		0.15	
Clearance Time (s)	4.0	5.1	5.1		5.1	
Vehicle Extension (s)	1.0	3.0	3.0		3.0	
Lane Grp Cap (vph)	135	1946	2062		215	
v/s Ratio Prot	c0.00	0.43	c0.56		c0.04	
v/s Ratio Perm	0.13					
v/c Ratio	0.20	0.66	0.81		0.24	
Uniform Delay, d1	8.6	11.6	11.9		39.4	
Progression Factor	0.23	0.14	1.00		1.00	
Incremental Delay, d2	0.2	1.4	3.7		0.6	
Delay (s)	2.2	3.0	15.5		40.0	
Level of Service	A	A	B		D	
Approach Delay (s)		2.9	15.5		40.0	
Approach LOS		A	B		D	

Intersection Summary

HCM 2000 Control Delay	11.4	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.70		
Actuated Cycle Length (s)	105.6	Sum of lost time (s)	14.7
Intersection Capacity Utilization	71.2%	ICU Level of Service	C
Analysis Period (min)	15		

c Critical Lane Group

HCM 2010 TWSC
8: Romaine St & Fairfax Ave

Intersection												
Int Delay, s/veh	72.8											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↔			↔	↗	↖	↗	↖	↖	↗	↗
Traffic Vol, veh/h	8	5	63	27	52	64	55	917	13	39	1386	49
Future Vol, veh/h	8	5	63	27	52	64	55	917	13	39	1386	49
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	0	90	-	0	102	-	0
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	9	5	68	29	57	70	60	997	14	42	1507	53

Major/Minor	Minor2		Minor1		Major1		Major2					
Conflicting Flow All	2238	2722	754	1957	2761	499	1560	0	0	1011	0	0
Stage 1	1591	1591	-	1117	1117	-	-	-	-	-	-	-
Stage 2	647	1131	-	840	1644	-	-	-	-	-	-	-
Critical Hdwy	7.54	6.54	6.94	7.54	6.54	6.94	4.14	-	-	4.14	-	-
Critical Hdwy Stg 1	6.54	5.54	-	6.54	5.54	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.54	5.54	-	6.54	5.54	-	-	-	-	-	-	-
Follow-up Hdwy	3.52	4.02	3.32	3.52	4.02	3.32	2.22	-	-	2.22	-	-
Pot Cap-1 Maneuver	23	20	352	38	~ 19	517	420	-	-	681	-	-
Stage 1	112	166	-	221	281	-	-	-	-	-	-	-
Stage 2	426	277	-	326	156	-	-	-	-	-	-	-
Platoon blocked, %								-	-	-	-	-
Mov Cap-1 Maneuver	-	16	352	~ 19	~ 15	517	420	-	-	681	-	-
Mov Cap-2 Maneuver	-	16	-	~ 19	~ 15	-	-	-	-	-	-	-
Stage 1	96	156	-	189	241	-	-	-	-	-	-	-
Stage 2	242	237	-	238	146	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s		\$ 1354.3	0.8	0.3
HCM LOS	-	F		






















Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	WBLn2	SBL	SBT	SBR
Capacity (veh/h)	420	-	-	-	16	517	681	-	-
HCM Lane V/C Ratio	0.142	-	-	-	5.367	0.135	0.062	-	-
HCM Control Delay (s)	15	-	-	\$ 2440.9	13	10.6	-	-	-
HCM Lane LOS	B	-	-	-	F	B	B	-	-
HCM 95th %tile Q(veh)	0.5	-	-	-	11.5	0.5	0.2	-	-

Notes
 -: Volume exceeds capacity \$: Delay exceeds 300s +: Computation Not Defined *: All major volume in platoon

West Hollywood - Orange Grove Mixed Use - Traffic Impact Study

1: Fairfax Ave & Fountain Ave

06/06/2019

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	168	775	58	170	956	81	52	770	149	63	730	224
Future Volume (veh/h)	168	775	58	170	956	81	52	770	149	63	730	224
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	1588	1588	1620	1588	1588	1620	1588	1588	1620	1588	1588	1588
Adj Flow Rate, veh/h	177	816	61	179	1006	85	55	811	157	66	768	236
Adj No. of Lanes	1	2	0	1	2	0	1	2	0	1	2	1
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	260	1710	128	342	1692	143	134	874	169	87	1046	438
Arrive On Green	0.60	0.60	0.58	0.60	0.60	0.58	0.35	0.35	0.35	0.35	0.35	0.32
Sat Flow, veh/h	515	2847	213	630	2817	238	559	2523	488	578	3018	1350
Grp Volume(v), veh/h	177	432	445	179	539	552	55	485	483	66	768	236
Grp Sat Flow(s),veh/h/ln	515	1509	1551	630	1509	1546	559	1509	1502	578	1509	1350
Q Serve(g_s), s	35.9	17.6	17.7	24.5	24.4	24.5	10.5	34.1	34.1	4.1	24.5	15.7
Cycle Q Clear(g_c), s	60.4	17.6	17.7	42.2	24.4	24.5	35.1	34.1	34.1	38.1	24.5	15.7
Prop In Lane	1.00		0.14	1.00		0.15	1.00		0.33	1.00		1.00
Lane Grp Cap(c), veh/h	260	906	932	342	906	929	134	523	521	87	1046	438
V/C Ratio(X)	0.68	0.48	0.48	0.52	0.59	0.59	0.41	0.93	0.93	0.76	0.73	0.54
Avail Cap(c_a), veh/h	260	907	932	342	907	929	134	523	521	87	1046	438
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	0.97	0.97	0.97	1.00	1.00	1.00
Uniform Delay (d), s/veh	32.5	12.3	12.4	24.1	13.6	13.8	46.9	34.6	34.6	54.3	31.5	30.4
Incr Delay (d2), s/veh	9.0	0.8	0.8	2.7	1.6	1.5	8.7	24.4	24.5	46.1	4.6	4.7
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	5.7	7.5	7.8	4.5	10.4	10.9	1.9	17.7	17.6	3.1	10.9	6.4
LnGrp Delay(d),s/veh	41.4	13.1	13.2	26.8	15.2	15.3	55.5	59.0	59.1	100.4	36.1	35.1
LnGrp LOS	D	B	B	C	B	B	E	E	E	F	D	D
Approach Vol, veh/h		1054			1270			1023			1070	
Approach Delay, s/veh		17.9			16.9			58.9			39.8	
Approach LOS		B			B			E			D	
Timer	1	2	3	4	5	6	7	8				
Assigned Phs		2		4		6		8				
Phs Duration (G+Y+Rc), s		41.0		69.0		41.0		69.0				
Change Period (Y+Rc), s		* 5.3		* 5.3		* 5.3		* 5.3				
Max Green Setting (Gmax), s		* 36		* 64		* 36		* 64				
Max Q Clear Time (g_c+I1), s		37.1		62.4		40.1		44.2				
Green Ext Time (p_c), s		0.0		1.3		0.0		18.3				
Intersection Summary												
HCM 2010 Ctrl Delay				32.4								
HCM 2010 LOS				C								
Notes												

MIDDAY PEAK HOUR
Future With Project

* HCM 2010 computational engine requires equal clearance times for the phases crossing the barrier.

West Hollywood - Orange Grove Mixed Use - Traffic Impact Study
 2: Orange Grove Ave

06/06/2019

Intersection

Int Delay, s/veh 3.2

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↔			↔			↔			↔	
Traffic Vol, veh/h	19	960	30	24	1160	11	8	3	54	4	3	41
Future Vol, veh/h	19	960	30	24	1160	11	8	3	54	4	3	41
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	95	92	92	92	92	95	92	95	92	95	95	95
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	20	1043	33	26	1261	12	9	3	59	4	3	43

Major/Minor	Major1	Major2	Minor1	Minor2
Conflicting Flow All	1273	0	0	1076
Stage 1	-	-	-	-
Stage 2	-	-	-	-
Critical Hdwy	4.14	-	-	4.14
Critical Hdwy Stg 1	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-
Follow-up Hdwy	2.22	-	-	2.22
Pot Cap-1 Maneuver	541	-	-	644
Stage 1	-	-	-	-
Stage 2	-	-	-	-
Platoon blocked, %	-	-	-	-
Mov Cap-1 Maneuver	541	-	-	644
Mov Cap-2 Maneuver	-	-	-	-
Stage 1	-	-	-	-
Stage 2	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0.7	0.9	52.5	47.8
HCM LOS			F	E

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	143	541	-	-	644	-	-	133
HCM Lane V/C Ratio	0.493	0.037	-	-	0.041	-	-	0.38
HCM Control Delay (s)	52.5	11.9	0.5	-	10.8	0.7	-	47.8
HCM Lane LOS	F	B	A	-	B	A	-	E
HCM 95th %tile Q(veh)	2.3	0.1	-	-	0.1	-	-	1.6

MIDDAY PEAK HOUR
 Future With Project

West Hollywood - Orange Grove Mixed Use - Traffic Impact Study
 3: Ogden Ave

06/06/2019

Intersection

Int Delay, s/veh 2.9

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↔			↔			↔			↔	
Traffic Vol, veh/h	20	962	19	26	1151	9	11	3	54	1	1	24
Future Vol, veh/h	20	962	19	26	1151	9	11	3	54	1	1	24
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	95	92	92	92	92	95	92	95	92	95	95	95
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	21	1046	21	28	1251	9	12	3	59	1	1	25

Major/Minor	Major1	Major2	Minor1	Minor2
Conflicting Flow All	1260	0	0	1067
Stage 1	-	-	-	-
Stage 2	-	-	-	-
Critical Hdwy	4.14	-	-	4.14
Critical Hdwy Stg 1	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-
Follow-up Hdwy	2.22	-	-	2.22
Pot Cap-1 Maneuver	548	-	-	649
Stage 1	-	-	-	-
Stage 2	-	-	-	-
Platoon blocked, %	-	-	-	-
Mov Cap-1 Maneuver	548	-	-	649
Mov Cap-2 Maneuver	-	-	-	-
Stage 1	-	-	-	-
Stage 2	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0.7	0.9	60.7	26.1
HCM LOS			F	D
























Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	134	548	-	-	649	-	-	198
HCM Lane V/C Ratio	0.551	0.038	-	-	0.044	-	-	0.138
HCM Control Delay (s)	60.7	11.8	0.5	-	10.8	0.7	-	26.1
HCM Lane LOS	F	B	A	-	B	A	-	D
HCM 95th %tile Q(veh)	2.7	0.1	-	-	0.1	-	-	0.5

MIDDAY PEAK HOUR
 Future With Project

West Hollywood - Orange Grove Mixed Use - Traffic Impact Study

4: Fairfax Ave & Santa Monica Blvd

06/06/2019

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	173	1456	114	271	1476	89	171	746	236	87	787	125
Future Volume (veh/h)	173	1456	114	271	1476	89	171	746	236	87	787	125
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	1588	1588	1588	1588	1588	1620	1588	1588	1588	1588	1588	1588
Adj Flow Rate, veh/h	182	1533	120	285	1554	94	180	785	248	92	828	132
Adj No. of Lanes	1	2	1	1	2	0	1	2	1	1	2	1
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	148	1011	447	266	1196	72	149	930	416	156	920	406
Arrive On Green	0.06	0.34	0.33	0.13	0.41	0.41	0.05	0.31	0.31	0.04	0.30	0.30
Sat Flow, veh/h	1513	3018	1350	1513	2892	174	1513	3018	1350	1513	3018	1350
Grp Volume(v), veh/h	182	1533	120	285	807	841	180	785	248	92	828	132
Grp Sat Flow(s),veh/h/ln	1513	1509	1350	1513	1509	1558	1513	1509	1350	1513	1509	1350
Q Serve(g_s), s	6.5	38.5	7.5	15.5	47.5	47.5	5.5	28.0	17.9	5.0	30.2	8.7
Cycle Q Clear(g_c), s	6.5	38.5	7.5	15.5	47.5	47.5	5.5	28.0	17.9	5.0	30.2	8.7
Prop In Lane	1.00		1.00	1.00		0.11	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	148	1011	447	266	624	644	149	930	416	156	920	406
V/C Ratio(X)	1.23	1.52	0.27	1.07	1.29	1.31	1.21	0.84	0.60	0.59	0.90	0.33
Avail Cap(c_a), veh/h	148	1011	447	266	624	644	149	930	416	174	945	417
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	1.00	1.00	0.87	0.87	0.87
Uniform Delay (d), s/veh	34.5	38.2	28.3	33.6	33.7	33.8	40.0	37.2	33.7	31.3	38.3	31.2
Incr Delay (d2), s/veh	148.3	237.3	1.5	74.8	143.9	148.8	139.4	7.2	2.3	3.7	10.1	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	8.1	49.3	3.0	14.0	44.7	47.0	5.8	12.6	6.9	2.2	13.8	3.3
LnGrp Delay(d),s/veh	182.8	275.5	29.7	108.4	177.7	182.5	179.5	44.4	36.0	35.0	48.4	31.6
LnGrp LOS	F	F	C	F	F	F	F	D	D	D	D	C
Approach Vol, veh/h		1835			1933			1213			1052	
Approach Delay, s/veh		250.2			169.6			62.7			45.1	
Approach LOS		F			F			E			D	
Timer	1	2	3	4	5	6	7	8				
Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	21.0	43.1	11.0	39.9	12.0	52.1	10.6	40.2				
Change Period (Y+Rc), s	* 4	5.1	* 4	* 5.3	* 4	5.1	* 4	* 5.3				
Max Green Setting (Gmax), s	* 17	37.1	* 7	* 36	* 8	46.1	* 8	* 35				
Max Q Clear Time (g_c+I1), s	17.5	40.5	7.5	32.2	8.5	49.5	7.0	30.0				
Green Ext Time (p_c), s	0.0	0.0	0.0	2.3	0.0	0.0	0.0	3.8				
Intersection Summary												
HCM 2010 Ctrl Delay			150.9									
HCM 2010 LOS			F									
Notes												

MIDDAY PEAK HOUR
Future With Project

* HCM 2010 computational engine requires equal clearance times for the phases crossing the barrier.

West Hollywood - Orange Grove Mixed Use - Traffic Impact Study
 5: Orange Grove Ave

06/06/2019

Intersection												
Int Delay, s/veh	0.8											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↑↓			↑↓				↑			↑
Traffic Vol, veh/h	0	1744	35	1	1770	52	0	0	39	0	0	80
Future Vol, veh/h	0	1744	35	1	1770	52	0	0	39	0	0	80
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	0	-	-	0
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	95	95	92	92	95	95	95	92	95	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	1896	37	1	1924	57	0	0	41	0	0	87

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	-	0	0	1933	0	0	-	-	967	-	-	991
Stage 1	-	-	-	-	-	-	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-	-	-	-	-	-	-
Critical Hdwy	-	-	-	4.14	-	-	-	-	6.94	-	-	6.94
Critical Hdwy Stg 1	-	-	-	-	-	-	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-	-	-	-	-	-	-
Follow-up Hdwy	-	-	-	2.22	-	-	-	-	3.32	-	-	3.32
Pot Cap-1 Maneuver	0	-	-	301	-	-	0	0	254	0	0	245
Stage 1	0	-	-	-	-	-	0	0	-	0	0	-
Stage 2	0	-	-	-	-	-	0	0	-	0	0	-
Platoon blocked, %	-	-	-	-	-	-	-	-	-	-	-	-
Mov Cap-1 Maneuver	-	-	-	301	-	-	-	-	254	-	-	245
Mov Cap-2 Maneuver	-	-	-	-	-	-	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-	-	-	-	-	-	-

Approach	EB			WB			NB			SB		
HCM Control Delay, s	0			0			21.9			27.6		
HCM LOS							C			D		

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	254	-	-	301	-	-	245
HCM Lane V/C Ratio	0.162	-	-	0.003	-	-	0.355
HCM Control Delay (s)	21.9	-	-	17	-	-	27.6
HCM Lane LOS	C	-	-	C	-	-	D
HCM 95th %tile Q(veh)	0.6	-	-	0	-	-	1.5

MIDDAY PEAK HOUR
 Future With Project

West Hollywood - Orange Grove Mixed Use - Traffic Impact Study
6: Ogden Ave

06/06/2019

Intersection

Int Delay, s/veh 8.2

Movement EBL EBT WBT WBR SBL SBR

Lane Configurations		↑↑	↑↑		↑↑	
Traffic Vol, veh/h	54	1730	1812	34	12	49
Future Vol, veh/h	54	1730	1812	34	12	49
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	59	1880	1970	37	13	53

Major/Minor Major1 Major2 Minor2

Conflicting Flow All	2007	0	-	0	3047	1004
Stage 1	-	-	-	-	1989	-
Stage 2	-	-	-	-	1058	-
Critical Hdwy	4.14	-	-	-	6.84	6.94
Critical Hdwy Stg 1	-	-	-	-	5.84	-
Critical Hdwy Stg 2	-	-	-	-	5.84	-
Follow-up Hdwy	2.22	-	-	-	3.52	3.32
Pot Cap-1 Maneuver	281	-	-	-	~ 10	240
Stage 1	-	-	-	-	92	-
Stage 2	-	-	-	-	295	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	281	-	-	-	~ 10	240
Mov Cap-2 Maneuver	-	-	-	-	~ 10	-
Stage 1	-	-	-	-	92	-
Stage 2	-	-	-	-	295	-

Approach EB WB SB

HCM Control Delay, s	0.6	0	\$ 480.8
HCM LOS			F

Minor Lane/Major Mvmt EBL EBT WBT WBR SBLn1

Capacity (veh/h)	281	-	-	-	43
HCM Lane V/C Ratio	0.209	-	-	-	1.542
HCM Control Delay (s)	21.2	0	-	-	\$ 480.8
HCM Lane LOS	C	A	-	-	F
HCM 95th %tile Q(veh)	0.8	-	-	-	6.7

Notes

-: Volume exceeds capacity \$: Delay exceeds 300s +: Computation Not Defined *: All major volume in platoon

MIDDAY PEAK HOUR
Future With Project

Intersection						
Int Delay, s/veh	0.8					
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↑↑			↑↑	↑	
Traffic Vol, veh/h	1739	18	36	1826	3	39
Future Vol, veh/h	1739	18	36	1826	3	39
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	95	95	95	95	95	95
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	1831	19	38	1922	3	41

Major/Minor	Major1	Major2	Minor1		
Conflicting Flow All	0	0	1850	0	2878
Stage 1	-	-	-	-	1841
Stage 2	-	-	-	-	1037
Critical Hdwy	-	-	4.14	-	6.84
Critical Hdwy Stg 1	-	-	-	-	5.84
Critical Hdwy Stg 2	-	-	-	-	5.84
Follow-up Hdwy	-	-	2.22	-	3.52
Pot Cap-1 Maneuver	-	-	324	-	13
Stage 1	-	-	-	-	111
Stage 2	-	-	-	-	303
Platoon blocked, %	-	-	-	-	-
Mov Cap-1 Maneuver	-	-	324	-	13
Mov Cap-2 Maneuver	-	-	-	-	13
Stage 1	-	-	-	-	111
Stage 2	-	-	-	-	303

Approach	EB	WB	NB
HCM Control Delay, s	0	0.3	56.7
HCM LOS			F

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	112	-	-	324	-
HCM Lane V/C Ratio	0.395	-	-	0.117	-
HCM Control Delay (s)	56.7	-	-	17.6	0
HCM Lane LOS	F	-	-	C	A
HCM 95th %tile Q(veh)	1.6	-	-	0.4	-

MIDDAY PEAK HOUR
Future With Project

West Hollywood - Orange Grove Mixed Use - Traffic Impact Study
 7: Santa Monica Blvd & Genesse Ave

06/06/2019



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (vph)	43	1719	1817	31	33	53
Future Volume (vph)	43	1719	1817	31	33	53
Ideal Flow (vphpl)	1620	1620	1620	1620	1620	1620
Total Lost time (s)	4.5	5.6	5.6		4.6	
Lane Util. Factor	1.00	0.95	0.95		1.00	
Frt	1.00	1.00	1.00		0.92	
Flt Protected	0.95	1.00	1.00		0.98	
Satd. Flow (prot)	1509	3018	3010		1429	
Flt Permitted	0.06	1.00	1.00		0.98	
Satd. Flow (perm)	90	3018	3010		1429	
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	47	1868	1975	34	36	58
RTOR Reduction (vph)	0	0	1	0	49	0
Lane Group Flow (vph)	47	1868	2008	0	45	0
Turn Type	pm+pt	NA	NA		Prot	
Protected Phases	5	2	6		4	
Permitted Phases	2					
Actuated Green, G (s)	75.6	71.4	71.6		15.6	
Effective Green, g (s)	74.6	70.9	71.1		16.1	
Actuated g/C Ratio	0.71	0.67	0.67		0.15	
Clearance Time (s)	4.0	5.1	5.1		5.1	
Vehicle Extension (s)	1.0	3.0	3.0		3.0	
Lane Grp Cap (vph)	113	2026	2026		217	
v/s Ratio Prot	c0.01	0.62	c0.67		c0.03	
v/s Ratio Perm	0.28					
v/c Ratio	0.42	0.92	0.99		0.21	
Uniform Delay, d1	15.9	15.0	16.9		39.2	
Progression Factor	1.75	0.13	1.00		1.00	
Incremental Delay, d2	0.4	4.0	18.0		0.5	
Delay (s)	28.1	5.9	34.9		39.6	
Level of Service	C	A	C		D	
Approach Delay (s)		6.5	34.9		39.6	
Approach LOS		A	C		D	

Intersection Summary

HCM 2000 Control Delay	21.5	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.83		
Actuated Cycle Length (s)	105.6	Sum of lost time (s)	14.7
Intersection Capacity Utilization	81.1%	ICU Level of Service	D
Analysis Period (min)	15		

c Critical Lane Group

MIDDAY PEAK HOUR
 Future With Project

West Hollywood - Orange Grove Mixed Use - Traffic Impact Study
 8: Romaine St & Fairfax Ave

06/06/2019

Intersection

Int Delay, s/veh 11.9

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↔			↔	↗	↖	↗	↖	↖	↗	↗
Traffic Vol, veh/h	11	6	46	14	10	47	33	1096	18	55	1063	53
Future Vol, veh/h	11	6	46	14	10	47	33	1096	18	55	1063	53
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	0	90	-	0	102	-	0
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	12	7	50	15	11	51	36	1191	20	60	1155	58

Major/Minor	Minor2		Minor1		Major1		Major2					
Conflicting Flow All	1948	2558	578	1964	2596	596	1213	0	0	1211	0	0
Stage 1	1275	1275	-	1263	1263	-	-	-	-	-	-	-
Stage 2	673	1283	-	701	1333	-	-	-	-	-	-	-
Critical Hdwy	7.54	6.54	6.94	7.54	6.54	6.94	4.14	-	-	4.14	-	-
Critical Hdwy Stg 1	6.54	5.54	-	6.54	5.54	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.54	5.54	-	6.54	5.54	-	-	-	-	-	-	-
Follow-up Hdwy	3.52	4.02	3.32	3.52	4.02	3.32	2.22	-	-	2.22	-	-
Pot Cap-1 Maneuver	39	26	459	38	25	447	571	-	-	572	-	-
Stage 1	177	236	-	180	239	-	-	-	-	-	-	-
Stage 2	411	234	-	395	221	-	-	-	-	-	-	-
Platoon blocked, %								-	-	-	-	-
Mov Cap-1 Maneuver	18	22	459	23	21	447	571	-	-	572	-	-
Mov Cap-2 Maneuver	18	22	-	23	21	-	-	-	-	-	-	-
Stage 1	166	211	-	169	224	-	-	-	-	-	-	-
Stage 2	325	219	-	305	198	-	-	-	-	-	-	-

Approach	EB		WB		NB		SB	
HCM Control Delay, s	242.3		181.4		0.3		0.6	
HCM LOS	F		F					

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	WBLn2	SBL	SBT	SBR
Capacity (veh/h)	571	-	-	64	22	447	572	-	-
HCM Lane V/C Ratio	0.063	-	-	1.07	1.186	0.114	0.105	-	-
HCM Control Delay (s)	11.7	-	-	242.3	508.9	14.1	12	-	-
HCM Lane LOS	B	-	-	F	F	B	B	-	-
HCM 95th %tile Q(veh)	0.2	-	-	5.4	3.4	0.4	0.3	-	-

MIDDAY PEAK HOUR
 Future With Project

West Hollywood - Orange Grove Mixed Use - Traffic Impact Study

1: Fairfax Ave & Fountain Ave

06/06/2019

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	267	1334	45	98	881	107	54	1144	192	64	799	200
Future Volume (veh/h)	267	1334	45	98	881	107	54	1144	192	64	799	200
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	1588	1588	1620	1588	1588	1620	1588	1588	1620	1588	1588	1588
Adj Flow Rate, veh/h	281	1404	47	103	927	113	57	1204	202	67	841	211
Adj No. of Lanes	1	2	0	1	2	0	1	2	0	1	2	1
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	277	1791	60	155	1628	198	116	897	150	65	1045	438
Arrive On Green	0.60	0.60	0.58	0.60	0.60	0.58	0.35	0.35	0.35	0.35	0.35	0.32
Sat Flow, veh/h	540	2980	100	365	2709	330	534	2589	432	381	3018	1350
Grp Volume(v), veh/h	281	710	741	103	516	524	57	699	707	67	841	211
Grp Sat Flow(s),veh/h/ln	540	1509	1571	365	1509	1530	534	1509	1512	381	1509	1350
Q Serve(g_s), s	43.1	39.0	39.3	26.8	22.8	23.0	10.3	38.1	38.1	0.0	27.8	13.8
Cycle Q Clear(g_c), s	66.1	39.0	39.3	66.1	22.8	23.0	38.1	38.1	38.1	38.1	27.8	13.8
Prop In Lane	1.00		0.06	1.00		0.22	1.00		0.29	1.00		1.00
Lane Grp Cap(c), veh/h	277	907	944	155	907	919	116	523	524	65	1045	438
V/C Ratio(X)	1.01	0.78	0.79	0.67	0.57	0.57	0.49	1.34	1.35	1.02	0.80	0.48
Avail Cap(c_a), veh/h	277	907	944	155	907	919	116	523	524	65	1045	438
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	0.97	0.97	0.97	1.00	1.00	1.00
Uniform Delay (d), s/veh	38.5	16.5	16.7	43.4	13.3	13.5	50.5	35.9	36.0	55.0	32.6	29.7
Incr Delay (d2), s/veh	57.8	5.2	5.0	13.4	1.4	1.3	13.8	164.0	169.5	118.0	6.6	3.8
Initial Q Delay(d3),s/veh	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.3	0.0	0.0
%ile BackOfQ(50%),veh/ln	12.8	17.5	18.2	3.7	9.8	10.0	2.2	39.6	40.5	4.1	12.5	5.6
LnGrp Delay(d),s/veh	96.4	21.7	21.7	56.8	14.7	14.8	64.3	200.0	205.4	173.3	39.2	33.5
LnGrp LOS	F	C	C	E	B	B	E	F	F	F	D	C
Approach Vol, veh/h		1732			1143			1463			1119	
Approach Delay, s/veh		33.8			18.5			197.3			46.1	
Approach LOS		C			B			F			D	
Timer	1	2	3	4	5	6	7	8				
Assigned Phs		2		4		6		8				
Phs Duration (G+Y+Rc), s		41.0		69.0		41.0		69.0				
Change Period (Y+Rc), s		* 5.3		* 5.3		* 5.3		* 5.3				
Max Green Setting (Gmax), s		* 36		* 64		* 36		* 64				
Max Q Clear Time (g_c+I1), s		40.1		68.1		40.1		68.1				
Green Ext Time (p_c), s		0.0		0.0		0.0		0.0				
Intersection Summary												
HCM 2010 Ctrl Delay				77.0								
HCM 2010 LOS				E								
Notes												

PM PEAK HOUR
Future With Project

* HCM 2010 computational engine requires equal clearance times for the phases crossing the barrier.

West Hollywood - Orange Grove Mixed Use - Traffic Impact Study
 2: Orange Grove Ave

06/06/2019

Intersection

Int Delay, s/veh 46.5

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕↕			↕↕			↕			↕	
Traffic Vol, veh/h	45	1328	48	52	1097	17	5	8	64	2	4	29
Future Vol, veh/h	45	1328	48	52	1097	17	5	8	64	2	4	29
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	95	92	92	92	92	95	92	95	92	95	95	95
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	47	1443	52	57	1192	18	5	8	70	2	4	31

Major/Minor	Major1	Major2	Minor1	Minor2
Conflicting Flow All	1210	0	0	1495
Stage 1	-	-	-	-
Stage 2	-	-	-	-
Critical Hdwy	4.14	-	-	4.14
Critical Hdwy Stg 1	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-
Follow-up Hdwy	2.22	-	-	2.22
Pot Cap-1 Maneuver	572	-	-	445
Stage 1	-	-	-	-
Stage 2	-	-	-	-
Platoon blocked, %	-	-	-	-
Mov Cap-1 Maneuver	572	-	-	445
Mov Cap-2 Maneuver	-	-	-	-
Stage 1	-	-	-	-
Stage 2	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	3	3.1	\$ 1530.3	
HCM LOS			F	-

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	23	572	-	-	445	-	-	-
HCM Lane V/C Ratio	3.627	0.083	-	-	0.127	-	-	-
HCM Control Delay (s)	\$ 1530.3	11.9	2.8	-	14.3	2.6	-	-
HCM Lane LOS	F	B	A	-	B	A	-	-
HCM 95th %tile Q(veh)	10.5	0.3	-	-	0.4	-	-	-

Notes

-: Volume exceeds capacity \$: Delay exceeds 300s +: Computation Not Defined *: All major volume in platoon

PM PEAK HOUR
 Future With Project

West Hollywood - Orange Grove Mixed Use - Traffic Impact Study
 3: Ogden Ave

06/06/2019

Intersection

Int Delay, s/veh 414.3

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕↔			↕↔			↕↔			↕↔	
Traffic Vol, veh/h	40	1490	26	36	1039	6	9	20	153	2	1	12
Future Vol, veh/h	40	1490	26	36	1039	6	9	20	153	2	1	12
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	95	92	92	92	92	95	92	95	92	95	95	95
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	42	1620	28	39	1129	6	10	21	166	2	1	13

Major/Minor	Major1	Major2	Minor1	Minor2
Conflicting Flow All	1135	0	0	1648
Stage 1	-	-	-	-
Stage 2	-	-	-	-
Critical Hdwy	4.14	-	-	4.14
Critical Hdwy Stg 1	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-
Follow-up Hdwy	2.22	-	-	2.22
Pot Cap-1 Maneuver	611	-	-	388
Stage 1	-	-	-	-
Stage 2	-	-	-	-
Platoon blocked, %	-	-	-	-
Mov Cap-1 Maneuver	611	-	-	388
Mov Cap-2 Maneuver	-	-	-	-
Stage 1	-	-	-	-
Stage 2	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	4.6	2.4	\$ 6413.7	
HCM LOS			F	-

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	14	611	-	-	388	-	-	-
HCM Lane V/C Ratio	14.081	0.069	-	-	0.101	-	-	-
HCM Control Delay (s)	\$ 6413.7	11.3	4.5	-	15.3	2	-	-
HCM Lane LOS	F	B	A	-	C	A	-	-
HCM 95th %tile Q(veh)	25.8	0.2	-	-	0.3	-	-	-

Notes

~: Volume exceeds capacity \$: Delay exceeds 300s +: Computation Not Defined *: All major volume in platoon

PM PEAK HOUR
 Future With Project

West Hollywood - Orange Grove Mixed Use - Traffic Impact Study
 4: Fairfax Ave & Santa Monica Blvd

06/06/2019

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	348	1542	112	235	1323	115	132	905	285	69	796	109
Future Volume (veh/h)	348	1542	112	235	1323	115	132	905	285	69	796	109
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	1588	1588	1588	1588	1588	1620	1588	1588	1588	1588	1588	1588
Adj Flow Rate, veh/h	366	1623	118	247	1393	121	139	953	300	73	838	115
Adj No. of Lanes	1	2	1	1	2	0	1	2	1	1	2	1
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	148	1054	465	253	1177	102	142	956	427	109	904	399
Arrive On Green	0.06	0.35	0.34	0.13	0.42	0.41	0.05	0.32	0.32	0.03	0.30	0.30
Sat Flow, veh/h	1513	3018	1350	1513	2811	243	1513	3018	1350	1513	3018	1350
Grp Volume(v), veh/h	366	1623	118	247	745	769	139	953	300	73	838	115
Grp Sat Flow(s),veh/h/ln	1513	1509	1350	1513	1509	1545	1513	1509	1350	1513	1509	1350
Q Serve(g_s), s	6.5	40.1	7.2	13.9	48.2	48.2	5.5	36.3	22.5	3.5	31.0	7.5
Cycle Q Clear(g_c), s	6.5	40.1	7.2	13.9	48.2	48.2	5.5	36.3	22.5	3.5	31.0	7.5
Prop In Lane	1.00		1.00	1.00		0.16	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	148	1054	465	253	632	647	142	956	427	109	904	399
V/C Ratio(X)	2.47	1.54	0.25	0.97	1.18	1.19	0.98	1.00	0.70	0.67	0.93	0.29
Avail Cap(c_a), veh/h	148	1054	465	266	632	647	142	956	427	148	945	417
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	1.00	1.00	0.87	0.87	0.87
Uniform Delay (d), s/veh	33.6	37.4	27.0	32.9	33.4	33.5	39.1	39.2	34.5	35.7	39.1	31.2
Incr Delay (d2), s/veh	681.9	248.0	1.3	47.2	96.2	99.9	67.7	28.4	5.1	6.1	13.0	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	31.1	53.0	2.9	11.1	36.9	38.4	5.8	18.9	8.9	1.8	14.6	2.8
LnGrp Delay(d),s/veh	715.5	285.4	28.4	80.1	129.6	133.3	106.9	67.7	39.6	41.8	52.1	31.6
LnGrp LOS	F	F	C	F	F	F	F	E	D	D	D	C
Approach Vol, veh/h		2107			1761			1392			1026	
Approach Delay, s/veh		345.7			124.3			65.5			49.1	
Approach LOS		F			F			E			D	
Timer	1	2	3	4	5	6	7	8				
Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	20.0	44.7	11.0	39.2	12.0	52.8	9.0	41.2				
Change Period (Y+Rc), s	* 4	5.1	* 4	* 5.3	* 4	5.1	* 4	* 5.3				
Max Green Setting (Gmax), s	* 17	37.1	* 7	* 36	* 8	46.1	* 8	* 35				
Max Q Clear Time (g_c+I1), s	15.9	42.1	7.5	33.0	8.5	50.2	5.5	38.3				
Green Ext Time (p_c), s	0.1	0.0	0.0	1.0	0.0	0.0	0.0	0.0				
Intersection Summary												
HCM 2010 Ctrl Delay			173.2									
HCM 2010 LOS			F									
Notes												

PM PEAK HOUR
 Future With Project

* HCM 2010 computational engine requires equal clearance times for the phases crossing the barrier.

West Hollywood - Orange Grove Mixed Use - Traffic Impact Study
 5: Orange Grove Ave

06/06/2019

Intersection

Int Delay, s/veh 1

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↑↓			↑↓				↑			↑
Traffic Vol, veh/h	0	1884	38	1	1542	67	0	0	66	0	0	85
Future Vol, veh/h	0	1884	38	1	1542	67	0	0	66	0	0	85
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	0	-	-	0
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	95	95	92	92	95	95	95	92	95	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	2048	40	1	1676	73	0	0	69	0	0	92

Major/Minor	Major1	Major2	Minor1	Minor2
Conflicting Flow All	-	0	0	2088
Stage 1	-	-	-	-
Stage 2	-	-	-	-
Critical Hdwy	-	-	-	4.14
Critical Hdwy Stg 1	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-
Follow-up Hdwy	-	-	-	2.22
Pot Cap-1 Maneuver	0	-	-	261
Stage 1	0	-	-	-
Stage 2	0	-	-	-
Platoon blocked, %	-	-	-	-
Mov Cap-1 Maneuver	-	-	-	261
Mov Cap-2 Maneuver	-	-	-	-
Stage 1	-	-	-	-
Stage 2	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0	0	27.8	22.9
HCM LOS			D	C

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	226	-	-	261	-	-	292
HCM Lane V/C Ratio	0.307	-	-	0.004	-	-	0.316
HCM Control Delay (s)	27.8	-	-	18.8	-	-	22.9
HCM Lane LOS	D	-	-	C	-	-	C
HCM 95th %tile Q(veh)	1.3	-	-	0	-	-	1.3

PM PEAK HOUR
 Future With Project

West Hollywood - Orange Grove Mixed Use - Traffic Impact Study
6: Ogden Ave

06/06/2019

Intersection

Int Delay, s/veh 6.6

Movement EBL EBT WBT WBR SBL SBR

Lane Configurations		↑↑	↑↑		↑↑	
Traffic Vol, veh/h	142	1853	1548	53	10	52
Future Vol, veh/h	142	1853	1548	53	10	52
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	154	2014	1683	58	11	57

Major/Minor Major1 Major2 Minor2

Conflicting Flow All	1741	0	-	0	3027	871
Stage 1	-	-	-	-	1712	-
Stage 2	-	-	-	-	1315	-
Critical Hdwy	4.14	-	-	-	6.84	6.94
Critical Hdwy Stg 1	-	-	-	-	5.84	-
Critical Hdwy Stg 2	-	-	-	-	5.84	-
Follow-up Hdwy	2.22	-	-	-	3.52	3.32
Pot Cap-1 Maneuver	357	-	-	-	~ 10	294
Stage 1	-	-	-	-	131	-
Stage 2	-	-	-	-	215	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	357	-	-	-	~ 10	294
Mov Cap-2 Maneuver	-	-	-	-	~ 10	-
Stage 1	-	-	-	-	131	-
Stage 2	-	-	-	-	215	-

Approach EB WB SB

HCM Control Delay, s	1.6	0	\$ 340.4
HCM LOS			F

Minor Lane/Major Mvmt EBL EBT WBT WBR SBLn1

Capacity (veh/h)	357	-	-	-	53
HCM Lane V/C Ratio	0.432	-	-	-	1.272
HCM Control Delay (s)	22.5	0	-	-	\$ 340.4
HCM Lane LOS	C	A	-	-	F
HCM 95th %tile Q(veh)	2.1	-	-	-	6

Notes

~: Volume exceeds capacity \$: Delay exceeds 300s +: Computation Not Defined *: All major volume in platoon

PM PEAK HOUR
Future With Project

Intersection

Int Delay, s/veh 5.6

Movement EBT EBR WBL WBT NBL NBR

Lane Configurations ↑↑ ↑↑ ↑

Traffic Vol, veh/h 1907 33 33 1584 6 115

Future Vol, veh/h 1907 33 33 1584 6 115

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 95 95 95 95 95 95

Heavy Vehicles, % 2 2 2 2 2 2

Mvmt Flow 2007 35 35 1667 6 121

Major/Minor Major1 Major2 Minor1

Conflicting Flow All 0 0 2042 0 2929 1021

Stage 1 - - - - 2025 -

Stage 2 - - - - 904 -

Critical Hdwy - - 4.14 - 6.84 6.94

Critical Hdwy Stg 1 - - - - 5.84 -

Critical Hdwy Stg 2 - - - - 5.84 -

Follow-up Hdwy - - 2.22 - 3.52 3.32

Pot Cap-1 Maneuver - - 272 - 12 234

Stage 1 - - - - 88 -

Stage 2 - - - - 355 -

Platoon blocked, % - - - - -

Mov Cap-1 Maneuver - - 272 - 0 234

Mov Cap-2 Maneuver - - - - 0 -

Stage 1 - - - - 88 -

Stage 2 - - - - 0 -

Approach EB WB NB

HCM Control Delay, s 0 9.9 37.4

HCM LOS E

Minor Lane/Major Mvmt NBLn1 EBT EBR WBL WBT

Capacity (veh/h) 234 - - 272 -

HCM Lane V/C Ratio 0.544 - - 0.128 -

HCM Control Delay (s) 37.4 - - 20.2 9.7

HCM Lane LOS E - - C A

HCM 95th %tile Q(veh) 2.9 - - 0.4 -

West Hollywood - Orange Grove Mixed Use - Traffic Impact Study
 107: Genesee Ave & Santa Monica Blvd

06/06/2019



Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↑↑		↙	↑↑	↘	
Traffic Volume (vph)	1812	22	56	1592	46	75
Future Volume (vph)	1812	22	56	1592	46	75
Ideal Flow (vphpl)	1620	1620	1620	1620	1620	1620
Total Lost time (s)	5.6		4.5	5.6	3.5	
Lane Util. Factor	0.95		1.00	0.95	1.00	
Frt	1.00		1.00	1.00	0.92	
Flt Protected	1.00		0.95	1.00	0.98	
Satd. Flow (prot)	3012		1509	3018	1428	
Flt Permitted	1.00		0.06	1.00	0.98	
Satd. Flow (perm)	3012		94	3018	1428	
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	1970	24	61	1730	50	82
RTOR Reduction (vph)	1	0	0	0	58	0
Lane Group Flow (vph)	1993	0	61	1730	74	0
Turn Type	NA		pm+pt	NA	Prot	
Protected Phases	2		1	6	8	
Permitted Phases			6			
Actuated Green, G (s)	71.0		72.9	68.1	16.7	
Effective Green, g (s)	70.5		71.9	67.6	17.2	
Actuated g/C Ratio	0.67		0.68	0.64	0.16	
Clearance Time (s)	5.1		4.0	5.1	4.0	
Vehicle Extension (s)	3.0		3.0	3.0	3.0	
Lane Grp Cap (vph)	2010		121	1931	232	
v/s Ratio Prot	c0.66		c0.02	0.57	c0.05	
v/s Ratio Perm			0.32			
v/c Ratio	0.99		0.50	0.90	0.32	
Uniform Delay, d1	17.3		16.1	16.0	39.0	
Progression Factor	1.00		1.70	0.15	1.00	
Incremental Delay, d2	18.2		1.6	3.5	0.8	
Delay (s)	35.5		29.0	5.9	39.8	
Level of Service	D		C	A	D	
Approach Delay (s)	35.5			6.7	39.8	
Approach LOS	D			A	D	

Intersection Summary

HCM 2000 Control Delay	22.5	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.86		
Actuated Cycle Length (s)	105.6	Sum of lost time (s)	15.2
Intersection Capacity Utilization	76.0%	ICU Level of Service	D
Analysis Period (min)	15		

c Critical Lane Group

West Hollywood - Orange Grove Mixed Use - Traffic Impact Study
 8: Romaine St & Fairfax Ave

06/06/2019

Intersection

Int Delay, s/veh 133.4

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕↔			↕↔	↕↔	↕↔	↕↔	↕↔	↕↔	↕↔	↕↔
Traffic Vol, veh/h	25	46	74	3	10	32	50	1261	83	56	1000	50
Future Vol, veh/h	25	46	74	3	10	32	50	1261	83	56	1000	50
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	0	90	-	0	102	-	0
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	27	50	80	3	11	35	54	1371	90	61	1087	54

Major/Minor	Minor2		Minor1		Major1		Major2					
Conflicting Flow All	2008	2778	544	2170	2742	686	1141	0	0	1461	0	0
Stage 1	1209	1209	-	1479	1479	-	-	-	-	-	-	-
Stage 2	799	1569	-	691	1263	-	-	-	-	-	-	-
Critical Hdwy	7.54	6.54	6.94	7.54	6.54	6.94	4.14	-	-	4.14	-	-
Critical Hdwy Stg 1	6.54	5.54	-	6.54	5.54	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.54	5.54	-	6.54	5.54	-	-	-	-	-	-	-
Follow-up Hdwy	3.52	4.02	3.32	3.52	4.02	3.32	2.22	-	-	2.22	-	-
Pot Cap-1 Maneuver	35	~ 19	483	26	20	390	608	-	-	458	-	-
Stage 1	194	254	-	132	188	-	-	-	-	-	-	-
Stage 2	345	170	-	401	239	-	-	-	-	-	-	-
Platoon blocked, %								-	-	-	-	-
Mov Cap-1 Maneuver	~ 12	~ 15	483	-	16	390	608	-	-	458	-	-
Mov Cap-2 Maneuver	~ 12	~ 15	-	-	16	-	-	-	-	-	-	-
Stage 1	177	220	-	120	171	-	-	-	-	-	-	-
Stage 2	268	155	-	224	207	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, \$ 2465.6			0.4	0.7
HCM LOS	F	-		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	WBLn2	SBL	SBT	SBR
Capacity (veh/h)	608	-	-	27	-	390	458	-	-
HCM Lane V/C Ratio	0.089	-	-	5.837	-	0.089	0.133	-	-
HCM Control Delay (s)	11.5	-	-	\$ 2465.6	-	15.1	14.1	-	-
HCM Lane LOS	B	-	-	F	-	C	B	-	-
HCM 95th %tile Q(veh)	0.3	-	-	19.4	-	0.3	0.5	-	-

Notes
 -: Volume exceeds capacity \$: Delay exceeds 300s +: Computation Not Defined *: All major volume in platoon

PM PEAK HOUR
 Future With Project

APPENDIX G
Project Driveway Delay and Queueing Sheets

Intersection

Int Delay, s/veh 1

Movement WBL WBR NBT NBR SBL SBT

Lane Configurations	W		T		T	
Traffic Vol, veh/h	18	0	66	1	6	124
Future Vol, veh/h	18	0	66	1	6	124
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	-	-	-	-	-
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	20	0	72	1	7	135

Major/Minor Minor1 Major1 Major2

Conflicting Flow All	222	73	0	0	73	0
Stage 1	73	-	-	-	-	-
Stage 2	149	-	-	-	-	-
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	766	989	-	-	1527	-
Stage 1	950	-	-	-	-	-
Stage 2	879	-	-	-	-	-
Platoon blocked, %			-	-	-	-
Mov Cap-1 Maneuver	762	989	-	-	1527	-
Mov Cap-2 Maneuver	762	-	-	-	-	-
Stage 1	950	-	-	-	-	-
Stage 2	875	-	-	-	-	-

Approach WB NB SB

HCM Control Delay, s	9.8	0	0.3
HCM LOS	A		

Minor Lane/Major Mvmt NBT NBRWBLn1 SBL SBT

Capacity (veh/h)	-	-	762	1527	-
HCM Lane V/C Ratio	-	-	0.026	0.004	-
HCM Control Delay (s)	-	-	9.8	7.4	0
HCM Lane LOS	-	-	A	A	A
HCM 95th %tile Q(veh)	-	-	0.1	0	-

Intersection						
Int Delay, s/veh	0.4					
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations	T			T		T
Traffic Vol, veh/h	0	8	1	68	109	1
Future Vol, veh/h	0	8	1	68	109	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	-	-	-	-	-
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	9	1	74	118	1

Major/Minor	Minor2	Major1	Major2			
Conflicting Flow All	195	119	119	0	-	0
Stage 1	119	-	-	-	-	-
Stage 2	76	-	-	-	-	-
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	794	933	1469	-	-	-
Stage 1	906	-	-	-	-	-
Stage 2	947	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	793	933	1469	-	-	-
Mov Cap-2 Maneuver	793	-	-	-	-	-
Stage 1	905	-	-	-	-	-
Stage 2	947	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	8.9	0.1	0
HCM LOS	A		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	1469	-	933	-	-
HCM Lane V/C Ratio	0.001	-	0.009	-	-
HCM Control Delay (s)	7.5	0	8.9	-	-
HCM Lane LOS	A	A	A	-	-
HCM 95th %tile Q(veh)	0	-	0	-	-

West Hollywood - Orange Grove Mixed Use - TIS
 3: Santa Monica Boulevard & SMB Dwy.

Intersection						
Int Delay, s/veh	0.1					
Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		↑↑	↑↑			↑
Traffic Vol, veh/h	7	798	1251	8	0	0
Future Vol, veh/h	7	798	1251	8	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	8	867	1360	9	0	0

Major/Minor	Major1	Major2	Minor2
Conflicting Flow All	1369	0	0
Stage 1	-	-	-
Stage 2	-	-	-
Critical Hdwy	4.14	-	6.94
Critical Hdwy Stg 1	-	-	-
Critical Hdwy Stg 2	-	-	-
Follow-up Hdwy	2.22	-	3.32
Pot Cap-1 Maneuver	497	-	0
Stage 1	-	-	0
Stage 2	-	-	0
Platoon blocked, %	-	-	-
Mov Cap-1 Maneuver	497	-	391
Mov Cap-2 Maneuver	-	-	-
Stage 1	-	-	-
Stage 2	-	-	-

Approach	EB	WB	SB
HCM Control Delay, s	0.3	0	0
HCM LOS			A

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	497	-	-	-	-
HCM Lane V/C Ratio	0.015	-	-	-	-
HCM Control Delay (s)	12.4	0.2	-	-	0
HCM Lane LOS	B	A	-	-	A
HCM 95th %tile Q(veh)	0	-	-	-	-

Intersection						
Int Delay, s/veh	2.1					
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	24	0	61	2	11	52
Future Vol, veh/h	24	0	61	2	11	52
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	-	-	-	-	-
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	26	0	66	2	12	57

Major/Minor	Minor1	Major1	Major2		
Conflicting Flow All	148	67	0	0	68
Stage 1	67	-	-	-	-
Stage 2	81	-	-	-	-
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	844	997	-	-	1533
Stage 1	956	-	-	-	-
Stage 2	942	-	-	-	-
Platoon blocked, %			-	-	-
Mov Cap-1 Maneuver	837	997	-	-	1533
Mov Cap-2 Maneuver	837	-	-	-	-
Stage 1	956	-	-	-	-
Stage 2	934	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	9.4	0	1.3
HCM LOS	A		

Minor Lane/Major Mvmt	NBT	NBRWBLn1	SBL	SBT
Capacity (veh/h)	-	-	837	1533
HCM Lane V/C Ratio	-	-	0.031	0.008
HCM Control Delay (s)	-	-	9.4	7.4
HCM Lane LOS	-	-	A	A
HCM 95th %tile Q(veh)	-	-	0.1	0

Intersection						
Int Delay, s/veh	0.5					
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations	T			T		T
Traffic Vol, veh/h	0	7	1	79	50	1
Future Vol, veh/h	0	7	1	79	50	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	-	-	-	-	-
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	8	1	86	54	1

Major/Minor	Minor2	Major1		Major2	
Conflicting Flow All	143	55	55	0	0
Stage 1	55	-	-	-	-
Stage 2	88	-	-	-	-
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	850	1012	1550	-	-
Stage 1	968	-	-	-	-
Stage 2	935	-	-	-	-
Platoon blocked, %				-	-
Mov Cap-1 Maneuver	849	1012	1550	-	-
Mov Cap-2 Maneuver	849	-	-	-	-
Stage 1	967	-	-	-	-
Stage 2	935	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	8.6	0.1	0
HCM LOS	A		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	1550	-	1012	-	-
HCM Lane V/C Ratio	0.001	-	0.008	-	-
HCM Control Delay (s)	7.3	0	8.6	-	-
HCM Lane LOS	A	A	A	-	-
HCM 95th %tile Q(veh)	0	-	0	-	-

West Hollywood - Orange Grove Mixed Use - TIS
 3: Santa Monica Boulevard & SMB Dwy.

Driveway Analysis
 06/06/2019

Intersection						
Int Delay, s/veh	0.1					
Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		↕↕	↕↕			↕
Traffic Vol, veh/h	12	0	1041	13	0	0
Future Vol, veh/h	12	0	1041	13	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	13	0	1132	14	0	0

Major/Minor	Major1	Major2	Minor2
Conflicting Flow All	1146	0	573
Stage 1	-	-	-
Stage 2	-	-	-
Critical Hdwy	4.14	-	6.94
Critical Hdwy Stg 1	-	-	-
Critical Hdwy Stg 2	-	-	-
Follow-up Hdwy	2.22	-	3.32
Pot Cap-1 Maneuver	605	-	463
Stage 1	-	-	0
Stage 2	-	-	0
Platoon blocked, %	-	-	-
Mov Cap-1 Maneuver	605	-	463
Mov Cap-2 Maneuver	-	-	-
Stage 1	-	-	-
Stage 2	-	-	-

Approach	EB	WB	SB
HCM Control Delay, s	11.1	0	0
HCM LOS			A

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	605	-	-	-	-
HCM Lane V/C Ratio	0.022	-	-	-	-
HCM Control Delay (s)	11.1	0	-	-	0
HCM Lane LOS	B	A	-	-	A
HCM 95th %tile Q(veh)	0.1	-	-	-	-

West Hollywood - Orange Grove Mixed Use - TIS
 1: Orange Grove Dwy & Orange Grove Drive

Intersection

Int Delay, s/veh 1.6

Movement WBL WBR NBT NBR SBL SBT

Lane Configurations						
Traffic Vol, veh/h	25	0	74	1	9	89
Future Vol, veh/h	25	0	74	1	9	89
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	-	-	-	-	-
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	27	0	80	1	10	97

Major/Minor Minor1 Major1 Major2

Conflicting Flow All	198	81	0	0	81	0
Stage 1	81	-	-	-	-	-
Stage 2	117	-	-	-	-	-
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	791	979	-	-	1517	-
Stage 1	942	-	-	-	-	-
Stage 2	908	-	-	-	-	-
Platoon blocked, %			-	-	-	-
Mov Cap-1 Maneuver	785	979	-	-	1517	-
Mov Cap-2 Maneuver	785	-	-	-	-	-
Stage 1	942	-	-	-	-	-
Stage 2	902	-	-	-	-	-

Approach WB NB SB

HCM Control Delay, s	9.8	0	0.7
HCM LOS	A		

Minor Lane/Major Mvmt NBT NBRWBLn1 SBL SBT

Capacity (veh/h)	-	-	785	1517	-
HCM Lane V/C Ratio	-	-	0.035	0.006	-
HCM Control Delay (s)	-	-	9.8	7.4	0
HCM Lane LOS	-	-	A	A	A
HCM 95th %tile Q(veh)	-	-	0.1	0	-

Intersection						
Int Delay, s/veh	0.2					
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations	W			W	W	
Traffic Vol, veh/h	0	4	3	180	57	2
Future Vol, veh/h	0	4	3	180	57	2
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	-	-	-	-	-
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	3	196	62	2

Major/Minor	Minor2	Major1		Major2	
Conflicting Flow All	265	63	64	0	0
Stage 1	63	-	-	-	-
Stage 2	202	-	-	-	-
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	724	1002	1538	-	-
Stage 1	960	-	-	-	-
Stage 2	832	-	-	-	-
Platoon blocked, %				-	-
Mov Cap-1 Maneuver	723	1002	1538	-	-
Mov Cap-2 Maneuver	723	-	-	-	-
Stage 1	958	-	-	-	-
Stage 2	832	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	8.6	0.1	0
HCM LOS	A		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	1538	-	1002	-	-
HCM Lane V/C Ratio	0.002	-	0.004	-	-
HCM Control Delay (s)	7.3	0	8.6	-	-
HCM Lane LOS	A	A	A	-	-
HCM 95th %tile Q(veh)	0	-	0	-	-

West Hollywood - Orange Grove Mixed Use - TIS
 3: Santa Monica Boulevard & SMB Dwy.

Intersection						
Int Delay, s/veh	0.1					
Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		↕↕	↕↕			↕
Traffic Vol, veh/h	11	0	1065	12	0	0
Future Vol, veh/h	11	0	1065	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	12	0	1158	13	0	0

Major/Minor	Major1	Major2	Minor2
Conflicting Flow All	1171	0	586
Stage 1	-	-	-
Stage 2	-	-	-
Critical Hdwy	4.14	-	6.94
Critical Hdwy Stg 1	-	-	-
Critical Hdwy Stg 2	-	-	-
Follow-up Hdwy	2.22	-	3.32
Pot Cap-1 Maneuver	592	-	454
Stage 1	-	-	0
Stage 2	-	-	0
Platoon blocked, %	-	-	-
Mov Cap-1 Maneuver	592	-	454
Mov Cap-2 Maneuver	-	-	-
Stage 1	-	-	-
Stage 2	-	-	-

Approach	EB	WB	SB
HCM Control Delay, s	11.2	0	0
HCM LOS			A

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	592	-	-	-	-
HCM Lane V/C Ratio	0.02	-	-	-	-
HCM Control Delay (s)	11.2	0	-	-	0
HCM Lane LOS	B	A	-	-	A
HCM 95th %tile Q(veh)	0.1	-	-	-	-

Intersection						
Int Delay, s/veh	1					
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations	W		T			T
Traffic Vol, veh/h	18	0	70	1	6	131
Future Vol, veh/h	18	0	70	1	6	131
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	-	-	-	-	-
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	20	0	76	1	7	142

Major/Minor	Minor1	Major1	Major2			
Conflicting Flow All	233	77	0	0	77	0
Stage 1	77	-	-	-	-	-
Stage 2	156	-	-	-	-	-
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	755	984	-	-	1522	-
Stage 1	946	-	-	-	-	-
Stage 2	872	-	-	-	-	-
Platoon blocked, %			-	-	-	-
Mov Cap-1 Maneuver	751	984	-	-	1522	-
Mov Cap-2 Maneuver	751	-	-	-	-	-
Stage 1	946	-	-	-	-	-
Stage 2	868	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	9.9	0	0.3
HCM LOS	A		

Minor Lane/Major Mvmt	NBT	NBRWBLn1	SBL	SBT
Capacity (veh/h)	-	-	751	1522
HCM Lane V/C Ratio	-	-	0.026	0.004
HCM Control Delay (s)	-	-	9.9	7.4
HCM Lane LOS	-	-	A	A
HCM 95th %tile Q(veh)	-	-	0.1	0

Intersection						
Int Delay, s/veh	0.4					
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations	T			T		T
Traffic Vol, veh/h	0	8	1	72	117	1
Future Vol, veh/h	0	8	1	72	117	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	-	-	-	-	-
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	9	1	78	127	1

Major/Minor	Minor2	Major1		Major2	
Conflicting Flow All	208	128	128	0	0
Stage 1	128	-	-	-	-
Stage 2	80	-	-	-	-
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	780	922	1458	-	-
Stage 1	898	-	-	-	-
Stage 2	943	-	-	-	-
Platoon blocked, %				-	-
Mov Cap-1 Maneuver	779	922	1458	-	-
Mov Cap-2 Maneuver	779	-	-	-	-
Stage 1	897	-	-	-	-
Stage 2	943	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	8.9	0.1	0
HCM LOS	A		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	1458	-	922	-	-
HCM Lane V/C Ratio	0.001	-	0.009	-	-
HCM Control Delay (s)	7.5	0	8.9	-	-
HCM Lane LOS	A	A	A	-	-
HCM 95th %tile Q(veh)	0	-	0	-	-

West Hollywood - Orange Grove Mixed Use - TIS
 3: Santa Monica Boulevard & SMB Dwy.

Driveway Analysis
 06/06/2019

Intersection						
Int Delay, s/veh	0.1					
Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		↕↕	↕↕			↕
Traffic Vol, veh/h	7	0	1616	8	0	0
Future Vol, veh/h	7	0	1616	8	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	8	0	1757	9	0	0

Major/Minor	Major1	Major2	Minor2
Conflicting Flow All	1766	0	883
Stage 1	-	-	-
Stage 2	-	-	-
Critical Hdwy	4.14	-	6.94
Critical Hdwy Stg 1	-	-	-
Critical Hdwy Stg 2	-	-	-
Follow-up Hdwy	2.22	-	3.32
Pot Cap-1 Maneuver	349	-	289
Stage 1	-	-	0
Stage 2	-	-	0
Platoon blocked, %	-	-	-
Mov Cap-1 Maneuver	349	-	289
Mov Cap-2 Maneuver	-	-	-
Stage 1	-	-	-
Stage 2	-	-	-

Approach	EB	WB	SB
HCM Control Delay, s	15.5	0	0
HCM LOS			A

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	349	-	-	-	-
HCM Lane V/C Ratio	0.022	-	-	-	-
HCM Control Delay (s)	15.5	0	-	-	0
HCM Lane LOS	C	A	-	-	A
HCM 95th %tile Q(veh)	0.1	-	-	-	-

Intersection						
Int Delay, s/veh	1.9					
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations	W		T			T
Traffic Vol, veh/h	24	0	65	2	11	57
Future Vol, veh/h	24	0	65	2	11	57
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	-	-	-	-	-
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	26	0	71	2	12	62

Major/Minor	Minor1	Major1	Major2			
Conflicting Flow All	158	72	0	0	73	0
Stage 1	72	-	-	-	-	-
Stage 2	86	-	-	-	-	-
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	833	990	-	-	1527	-
Stage 1	951	-	-	-	-	-
Stage 2	937	-	-	-	-	-
Platoon blocked, %			-	-	-	-
Mov Cap-1 Maneuver	826	990	-	-	1527	-
Mov Cap-2 Maneuver	826	-	-	-	-	-
Stage 1	951	-	-	-	-	-
Stage 2	930	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	9.5	0	1.2
HCM LOS	A		

Minor Lane/Major Mvmt	NBT	NBRWBLn1	SBL	SBT
Capacity (veh/h)	-	-	826	1527
HCM Lane V/C Ratio	-	-	0.032	0.008
HCM Control Delay (s)	-	-	9.5	7.4
HCM Lane LOS	-	-	A	A
HCM 95th %tile Q(veh)	-	-	0.1	0

Intersection						
Int Delay, s/veh	0.5					
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations	T			T		T
Traffic Vol, veh/h	0	8	1	84	55	1
Future Vol, veh/h	0	8	1	84	55	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	-	-	-	-	-
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	9	1	91	60	1

Major/Minor	Minor2	Major1		Major2	
Conflicting Flow All	154	61	61	0	0
Stage 1	61	-	-	-	-
Stage 2	93	-	-	-	-
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	838	1004	1542	-	-
Stage 1	962	-	-	-	-
Stage 2	931	-	-	-	-
Platoon blocked, %				-	-
Mov Cap-1 Maneuver	837	1004	1542	-	-
Mov Cap-2 Maneuver	837	-	-	-	-
Stage 1	961	-	-	-	-
Stage 2	931	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	8.6	0.1	0
HCM LOS	A		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	1542	-	1004	-	-
HCM Lane V/C Ratio	0.001	-	0.009	-	-
HCM Control Delay (s)	7.3	0	8.6	-	-
HCM Lane LOS	A	A	A	-	-
HCM 95th %tile Q(veh)	0	-	0	-	-

Intersection						
Int Delay, s/veh	0.1					
Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		↕↕	↕↕			↕
Traffic Vol, veh/h	12	0	1820	13	0	0
Future Vol, veh/h	12	0	1820	13	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	13	0	1978	14	0	0

Major/Minor	Major1	Major2	Minor2
Conflicting Flow All	1992	0	0
Stage 1	-	-	-
Stage 2	-	-	-
Critical Hdwy	4.14	-	6.94
Critical Hdwy Stg 1	-	-	-
Critical Hdwy Stg 2	-	-	-
Follow-up Hdwy	2.22	-	3.32
Pot Cap-1 Maneuver	285	-	0
Stage 1	-	-	0
Stage 2	-	-	0
Platoon blocked, %	-	-	-
Mov Cap-1 Maneuver	285	-	243
Mov Cap-2 Maneuver	-	-	-
Stage 1	-	-	-
Stage 2	-	-	-

Approach	EB	WB	SB
HCM Control Delay, s	18.2	0	0
HCM LOS			A

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	285	-	-	-	-
HCM Lane V/C Ratio	0.046	-	-	-	-
HCM Control Delay (s)	18.2	0	-	-	0
HCM Lane LOS	C	A	-	-	A
HCM 95th %tile Q(veh)	0.1	-	-	-	-

Intersection						
Int Delay, s/veh	1.5					
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations	W		T			T
Traffic Vol, veh/h	25	0	78	1	9	96
Future Vol, veh/h	25	0	78	1	9	96
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	-	-	-	-	-
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	27	0	85	1	10	104

Major/Minor	Minor1	Major1	Major2		
Conflicting Flow All	210	86	0	0	86
Stage 1	86	-	-	-	-
Stage 2	124	-	-	-	-
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	778	973	-	-	1510
Stage 1	937	-	-	-	-
Stage 2	902	-	-	-	-
Platoon blocked, %			-	-	-
Mov Cap-1 Maneuver	773	973	-	-	1510
Mov Cap-2 Maneuver	773	-	-	-	-
Stage 1	937	-	-	-	-
Stage 2	896	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	9.8	0	0.6
HCM LOS	A		

Minor Lane/Major Mvmt	NBT	NBRWBLn1	SBL	SBT
Capacity (veh/h)	-	-	773	1510
HCM Lane V/C Ratio	-	-	0.035	0.006
HCM Control Delay (s)	-	-	9.8	7.4
HCM Lane LOS	-	-	A	A
HCM 95th %tile Q(veh)	-	-	0.1	0

Intersection						
Int Delay, s/veh	0.2					
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	0	4	3	190	61	2
Future Vol, veh/h	0	4	3	190	61	2
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	-	-	-	-	-
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	3	207	66	2

Major/Minor	Minor2	Major1		Major2	
Conflicting Flow All	280	67	68	0	0
Stage 1	67	-	-	-	-
Stage 2	213	-	-	-	-
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	710	997	1533	-	-
Stage 1	956	-	-	-	-
Stage 2	823	-	-	-	-
Platoon blocked, %				-	-
Mov Cap-1 Maneuver	709	997	1533	-	-
Mov Cap-2 Maneuver	709	-	-	-	-
Stage 1	954	-	-	-	-
Stage 2	823	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	8.6	0.1	0
HCM LOS	A		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	1533	-	997	-	-
HCM Lane V/C Ratio	0.002	-	0.004	-	-
HCM Control Delay (s)	7.4	0	8.6	-	-
HCM Lane LOS	A	A	A	-	-
HCM 95th %tile Q(veh)	0	-	0	-	-

West Hollywood - Orange Grove Mixed Use - TIS
 3: Santa Monica Boulevard & SMB Dwy.

Driveway Analysis
 06/06/2019

Intersection						
Int Delay, s/veh	0.1					
Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		↕↕	↕↕			↕
Traffic Vol, veh/h	11	0	1607	12	0	0
Future Vol, veh/h	11	0	1607	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	12	0	1747	13	0	0

Major/Minor	Major1	Major2	Minor2
Conflicting Flow All	1760	0	880
Stage 1	-	-	-
Stage 2	-	-	-
Critical Hdwy	4.14	-	6.94
Critical Hdwy Stg 1	-	-	-
Critical Hdwy Stg 2	-	-	-
Follow-up Hdwy	2.22	-	3.32
Pot Cap-1 Maneuver	351	-	290
Stage 1	-	-	0
Stage 2	-	-	0
Platoon blocked, %	-	-	-
Mov Cap-1 Maneuver	351	-	290
Mov Cap-2 Maneuver	-	-	-
Stage 1	-	-	-
Stage 2	-	-	-

Approach	EB	WB	SB
HCM Control Delay, s	15.6	0	0
HCM LOS			A






















Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	351	-	-	-	-
HCM Lane V/C Ratio	0.034	-	-	-	-
HCM Control Delay (s)	15.6	0	-	-	0
HCM Lane LOS	C	A	-	-	A
HCM 95th %tile Q(veh)	0.1	-	-	-	-

APPENDIX H
Construction Analysis Worksheets

West Hollywood - Orange Grove Mixed Use - Traffic Impact Study

1: Fairfax Ave & Fountain Ave/Fountain Ave

12/18/2018

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	104	649	92	244	1056	57	51	646	132	47	807	287
Future Volume (veh/h)	104	649	92	244	1056	57	51	646	132	47	807	287
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q, 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	1588	1588	1620	1588	1588	1620	1588	1588	1620	1588	1588	1588
Adj Flow Rate, veh/h	109	683	97	257	1112	60	54	680	139	49	849	302
Adj No. of Lanes	1	2	0	1	2	0	1	2	0	1	2	1
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Opposing Right Turn Influence	Yes			Yes			Yes			Yes		
Cap, veh/h	231	1585	225	380	1739	94	112	874	179	136	1057	443
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
Prop Arrive On Green	0.60	0.60	0.58	0.60	0.60	0.58	0.35	0.35	0.35	0.35	0.35	0.33
Ln Grp Delay, s/veh	33.4	12.7	12.9	32.0	16.5	16.5	64.1	42.3	42.5	54.6	38.8	40.2
Ln Grp LOS	C	B	B	C	B	B	E	D	D	D	D	D
Approach Vol, veh/h		889			1429			873			1200	
Approach Delay, s/veh		15.3			19.3			43.7			39.8	
Approach LOS		B			B			D			D	
Timer:		1	2	3	4	5	6	7	8			
Assigned Phs			2		4		6		8			
Case No			6.0		6.0		5.0		6.0			
Phs Duration (G+Y+Rc), s			41.4		68.6		41.4		68.6			
Change Period (Y+Rc), s			* 5.3		* 5.3		* 5.3		* 5.3			
Max Green (Gmax), s			* 36		* 64		* 36		* 64			
Max Allow Headway (MAH), s			7.2		7.4		7.2		7.4			
Max Q Clear (g_c+I1), s			40.5		50.8		36.6		53.1			
Green Ext Time (g_e), s			0.0		12.4		0.0		10.2			
Prob of Phs Call (p_c)			1.00		1.00		1.00		1.00			
Prob of Max Out (p_x)			0.00		0.98		0.00		0.99			
Left-Turn Movement Data												
Assigned Mvmt			5		7		1		3			
Mvmt Sat Flow, veh/h			486		477		665		690			
Through Movement Data												
Assigned Mvmt			2		4		6		8			
Mvmt Sat Flow, veh/h			2497		2654		3018		2912			
Right-Turn Movement Data												
Assigned Mvmt			12		14		16		18			
Mvmt Sat Flow, veh/h			510		377		1350		157			
Left Lane Group Data												
Assigned Mvmt		0	5	0	7	0	1	0	3			
Lane Assignment												

AM PEAK HOUR
EXISTING + PROJECT CONSTRUCTION

West Hollywood - Orange Grove Mixed Use - Traffic Impact Study
 1: Fairfax Ave & Fountain Ave/Fountain Ave

12/18/2018

Lanes in Grp	0	1	0	1	0	1	0	1
Grp Vol (v), veh/h	0	54	0	109	0	49	0	257
Grp Sat Flow (s), veh/h/ln	0	486	0	477	0	665	0	690
Q Serve Time (g_s), s	0.0	10.5	0.0	21.3	0.0	7.8	0.0	35.5
Cycle Q Clear Time (g_c), s	0.0	38.5	0.0	48.8	0.0	34.6	0.0	51.1
Perm LT Sat Flow (s_l), veh/h/ln	0	486	0	477	0	665	0	690
Shared LT Sat Flow (s_sh), veh/h/ln	0	0	0	0	0	0	0	0
Perm LT Eff Green (g_p), s	0.0	38.5	0.0	65.7	0.0	38.5	0.0	65.7
Perm LT Serve Time (g_u), s	0.0	10.5	0.0	38.2	0.0	11.7	0.0	50.2
Perm LT Q Serve Time (g_ps), s	0.0	10.5	0.0	21.3	0.0	7.8	0.0	35.5
Time to First Blk (g_f), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Serve Time pre Blk (g_fs), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prop LT Inside Lane (P_L)	0.00	1.00	0.00	1.00	0.00	1.00	0.00	1.00
Lane Grp Cap (c), veh/h	0	112	0	231	0	136	0	380
V/C Ratio (X)	0.00	0.48	0.00	0.47	0.00	0.36	0.00	0.68
Avail Cap (c_a), veh/h	0	112	0	233	0	136	0	383
Upstream Filter (I)	0.00	0.97	0.00	1.00	0.00	1.00	0.00	1.00
Uniform Delay (d1), s/veh	0.0	50.5	0.0	30.4	0.0	47.4	0.0	26.0
Incr Delay (d2), s/veh	0.0	13.7	0.0	3.0	0.0	7.2	0.0	6.0
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	64.1	0.0	33.4	0.0	54.6	0.0	32.0
1st-Term Q (Q1), veh/ln	0.0	1.6	0.0	2.8	0.0	1.4	0.0	6.7
2nd-Term Q (Q2), veh/ln	0.0	0.4	0.0	0.2	0.0	0.3	0.0	0.6
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	1.00	0.00	1.00	0.00	1.00	0.00	1.00
%ile Back of Q (50%), veh/ln	0.0	2.1	0.0	3.0	0.0	1.7	0.0	7.3
%ile Storage Ratio (RQ%)	0.00	0.57	0.00	1.89	0.00	0.22	0.00	2.03
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Middle Lane Group Data								
Assigned Mvmt	0	2	0	4	0	6	0	8
Lane Assignment		T		T		T		T
Lanes in Grp	0	1	0	1	0	2	0	1
Grp Vol (v), veh/h	0	411	0	388	0	849	0	576
Grp Sat Flow (s), veh/h/ln	0	1509	0	1509	0	1509	0	1509
Q Serve Time (g_s), s	0.0	26.7	0.0	15.3	0.0	28.0	0.0	27.4
Cycle Q Clear Time (g_c), s	0.0	26.7	0.0	15.3	0.0	28.0	0.0	27.4
Lane Grp Cap (c), veh/h	0	528	0	901	0	1057	0	901
V/C Ratio (X)	0.00	0.78	0.00	0.43	0.00	0.80	0.00	0.64
Avail Cap (c_a), veh/h	0	528	0	907	0	1057	0	907
Upstream Filter (I)	0.00	0.97	0.00	1.00	0.00	1.00	0.00	1.00
Uniform Delay (d1), s/veh	0.0	31.9	0.0	12.0	0.0	32.3	0.0	14.4
Incr Delay (d2), s/veh	0.0	10.4	0.0	0.7	0.0	6.5	0.0	2.1
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	42.3	0.0	12.7	0.0	38.8	0.0	16.5
1st-Term Q (Q1), veh/ln	0.0	11.1	0.0	6.4	0.0	11.7	0.0	11.4

AM PEAK HOUR
 EXISTING + PROJECT CONSTRUCTION

West Hollywood - Orange Grove Mixed Use - Traffic Impact Study
 1: Fairfax Ave & Fountain Ave/Fountain Ave

12/18/2018

2nd-Term Q (Q2), veh/ln	0.0	1.5	0.0	0.2	0.0	1.0	0.0	0.5
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	1.00	0.00	1.00	0.00	1.00	0.00	1.00
%ile Back of Q (50%), veh/ln	0.0	12.6	0.0	6.5	0.0	12.6	0.0	11.9
%ile Storage Ratio (RQ%)	0.00	0.35	0.00	0.47	0.00	0.26	0.00	1.09
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Right Lane Group Data

Assigned Mvmt	0	12	0	14	0	16	0	18
Lane Assignment		T+R		T+R		R		T+R
Lanes in Grp	0	1	0	1	0	1	0	1
Grp Vol (v), veh/h	0	408	0	392	0	302	0	596
Grp Sat Flow (s), veh/h/ln	0	1498	0	1522	0	1350	0	1561
Q Serve Time (g_s), s	0.0	26.8	0.0	15.5	0.0	21.3	0.0	27.5
Cycle Q Clear Time (g_c), s	0.0	26.8	0.0	15.5	0.0	21.3	0.0	27.5
Prot RT Sat Flow (s_R), veh/h/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prot RT Eff Green (g_R), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prop RT Outside Lane (P_R)	0.00	0.34	0.00	0.25	0.00	1.00	0.00	0.10
Lane Grp Cap (c), veh/h	0	525	0	909	0	443	0	932
V/C Ratio (X)	0.00	0.78	0.00	0.43	0.00	0.68	0.00	0.64
Avail Cap (c_a), veh/h	0	525	0	914	0	443	0	938
Upstream Filter (I)	0.00	0.97	0.00	1.00	0.00	1.00	0.00	1.00
Uniform Delay (d1), s/veh	0.0	31.9	0.0	12.2	0.0	32.0	0.0	14.5
Incr Delay (d2), s/veh	0.0	10.5	0.0	0.7	0.0	8.2	0.0	2.0
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	42.5	0.0	12.9	0.0	40.2	0.0	16.5
1st-Term Q (Q1), veh/ln	0.0	11.0	0.0	6.5	0.0	7.9	0.0	11.8
2nd-Term Q (Q2), veh/ln	0.0	1.5	0.0	0.2	0.0	1.0	0.0	0.5
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	1.00	0.00	1.00	0.00	1.00	0.00	1.00
%ile Back of Q (50%), veh/ln	0.0	12.5	0.0	6.6	0.0	8.9	0.0	12.3
%ile Storage Ratio (RQ%)	0.00	0.35	0.00	0.48	0.00	0.19	0.00	1.13
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Intersection Summary

HCM 2010 Ctrl Delay	29.0
HCM 2010 LOS	C

Notes

* HCM 2010 computational engine requires equal clearance times for the phases crossing the barrier.

AM PEAK HOUR
 EXISTING + PROJECT CONSTRUCTION

West Hollywood - Orange Grove Mixed Use - Traffic Impact Study

2: Orange Grove Ave & Foutain Ave

12/18/2018



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕↕			↕↕			↕			↕	
Traffic Volume (veh/h)	2	794	47	60	1201	6	3	3	60	4	24	156
Future Volume (Veh/h)	2	794	47	60	1201	6	3	3	60	4	24	156
Sign Control		Free			Free			Stop			Stop	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.95	0.92	0.92	0.92	0.92	0.95	0.92	0.95	0.92	0.95	0.95	0.95
Hourly flow rate (vph)	2	863	51	65	1305	6	3	3	65	4	25	164
Pedestrians												
Lane Width (ft)												
Walking Speed (ft/s)												
Percent Blockage												
Right turn flare (veh)												
Median type		None			None							
Median storage (veh)												
Upstream signal (ft)		377			1010							
pX, platoon unblocked				0.88			0.88	0.88	0.88	0.88	0.88	
vC, conflicting volume	1311			914			1852	2334	457	1940	2356	656
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	1311			627			1694	2242	108	1794	2268	656
tC, single (s)	4.1			4.1			7.5	6.5	6.9	7.5	6.5	6.9
tC, 2 stage (s)												
tF (s)	2.2			2.2			3.5	4.0	3.3	3.5	4.0	3.3
p0 queue free %	100			92			73	91	92	89	23	60
cM capacity (veh/h)	524			836			11	34	814	36	32	408

Direction, Lane #	EB 1	EB 2	WB 1	WB 2	NB 1	SB 1
Volume Total	434	482	718	658	71	193
Volume Left	2	0	65	0	3	4
Volume Right	0	51	0	6	65	164
cSH	524	1700	836	1700	160	150
Volume to Capacity	0.00	0.28	0.08	0.39	0.44	1.29
Queue Length 95th (ft)	0	0	6	0	51	290
Control Delay (s)	0.1	0.0	2.0	0.0	44.3	227.7
Lane LOS	A		A		E	F
Approach Delay (s)	0.1		1.0		44.3	227.7
Approach LOS					E	F

Intersection Summary

Average Delay	19.0
Intersection Capacity Utilization	93.4%
ICU Level of Service	F
Analysis Period (min)	15

AM PEAK HOUR
EXISTING + PROJECT CONSTRUCTION

West Hollywood - Orange Grove Mixed Use - Traffic Impact Study
 3: Ogden Ave

12/18/2018

Intersection

Int Delay, s/veh 9.1

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↔			↔			↔			↔	
Traffic Vol, veh/h	5	795	13	64	1361	6	11	2	55	0	7	16
Future Vol, veh/h	5	795	13	64	1361	6	11	2	55	0	7	16
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	95	92	92	92	92	95	92	95	92	95	95	95
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	5	864	14	70	1479	6	12	2	60	0	7	17

Major/Minor	Major1		Major2		Minor1		Minor2					
Conflicting Flow All	1485	0	0	878	0	0	1764	2506	439	2065	2510	743
Stage 1	-	-	-	-	-	-	881	881	-	1622	1622	-
Stage 2	-	-	-	-	-	-	883	1625	-	443	888	-
Critical Hdwy	4.14	-	-	4.14	-	-	7.54	6.54	6.94	7.54	6.54	6.94
Critical Hdwy Stg 1	-	-	-	-	-	-	6.54	5.54	-	6.54	5.54	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.54	5.54	-	6.54	5.54	-
Follow-up Hdwy	2.22	-	-	2.22	-	-	3.52	4.02	3.32	3.52	4.02	3.32
Pot Cap-1 Maneuver	449	-	-	765	-	-	53	28	566	32	28	358
Stage 1	-	-	-	-	-	-	308	363	-	107	160	-
Stage 2	-	-	-	-	-	-	307	159	-	564	360	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	449	-	-	765	-	-	17	13	566	15	13	358
Mov Cap-2 Maneuver	-	-	-	-	-	-	17	13	-	15	13	-
Stage 1	-	-	-	-	-	-	301	355	-	105	76	-
Stage 2	-	-	-	-	-	-	125	75	-	490	352	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0.2	2.7	190	193.8
HCM LOS			F	F

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	76	449	-	-	765	-	-	39
HCM Lane V/C Ratio	0.972	0.012	-	-	0.091	-	-	0.621
HCM Control Delay (s)	190	13.1	0.1	-	10.2	2.4	-	193.8
HCM Lane LOS	F	B	A	-	B	A	-	F
HCM 95th %tile Q(veh)	5.1	0	-	-	0.3	-	-	2.2

AM PEAK HOUR
 EXISTING + PROJECT CONSTRUCTION

West Hollywood - Orange Grove Mixed Use - Traffic Impact Study
 4: Fairfax Ave & Santa Monica Blvd/Santa Monica Boulevard

12/18/2018

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	124	614	63	361	911	49	90	671	133	65	922	109
Future Volume (veh/h)	124	614	63	361	911	49	90	671	133	65	922	109
Number	5	2	12	1	6	16	3	8	18	7	4	14
Initial Q, 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	1588	1588	1588	1588	1588	1620	1588	1588	1588	1588	1588	1588
Adj Flow Rate, veh/h	131	646	66	380	959	52	95	706	140	68	971	115
Adj No. of Lanes	1	2	1	1	2	0	1	2	1	1	2	1
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Opposing Right Turn Influence	Yes			Yes			Yes			Yes		
Cap, veh/h	203	994	439	361	1186	64	131	1005	450	174	945	417
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
Prop Arrive On Green	0.06	0.33	0.32	0.13	0.41	0.40	0.05	0.33	0.33	0.03	0.31	0.31
Ln Grp Delay, s/veh	36.5	36.2	28.3	91.3	41.1	40.8	48.5	35.6	28.9	34.5	74.2	30.3
Ln Grp LOS	D	D	C	F	D	D	D	D	C	C	F	C
Approach Vol, veh/h		843			1391			941			1154	
Approach Delay, s/veh		35.6			54.7			35.9			67.5	
Approach LOS		D			D			D			E	
Timer:		1	2	3	4	5	6	7	8			
Assigned Phs		1	2	3	4	5	6	7	8			
Case No		1.1	3.0	1.1	3.0	1.1	4.0	1.1	3.0			
Phs Duration (G+Y+Rc), s		21.0	42.5	10.7	40.8	12.0	51.5	8.4	43.1			
Change Period (Y+Rc), s		* 4	5.1	* 4	* 5.3	* 4	5.1	* 4	* 5.3			
Max Green (Gmax), s		* 17	37.1	* 7	* 36	* 8	46.1	* 8	* 35			
Max Allow Headway (MAH), s		3.8	5.2	3.8	5.1	3.8	5.2	3.8	5.1			
Max Q Clear (g_c+I1), s		17.5	23.0	7.1	38.0	8.5	35.5	4.9	25.4			
Green Ext Time (g_e), s		0.0	9.2	0.0	0.0	0.0	7.4	0.0	7.0			
Prob of Phs Call (p_c)		1.00	1.00	0.95	1.00	0.98	1.00	0.89	1.00			
Prob of Max Out (p_x)		1.00	0.68	1.00	1.00	1.00	0.79	1.00	0.86			
Left-Turn Movement Data												
Assigned Mvmt		1		3		5		7				
Mvmt Sat Flow, veh/h		1513		1513		1513		1513				
Through Movement Data												
Assigned Mvmt			2		4		6		8			
Mvmt Sat Flow, veh/h			3018		3018		2911		3018			
Right-Turn Movement Data												
Assigned Mvmt			12		14		16		18			
Mvmt Sat Flow, veh/h			1350		1350		158		1350			
Left Lane Group Data												
Assigned Mvmt		1	0	3	0	5	0	7	0			
Lane Assignment		(Pr/Pm)		(Pr/Pm)		(Pr/Pm)		(Pr/Pm)				

AM PEAK HOUR
 EXISTING + PROJECT CONSTRUCTION

West Hollywood - Orange Grove Mixed Use - Traffic Impact Study
 4: Fairfax Ave & Santa Monica Blvd/Santa Monica Boulevard

12/18/2018

Lanes in Grp	1	0	1	0	1	0	1	0
Grp Vol (v), veh/h	380	0	95	0	131	0	68	0
Grp Sat Flow (s), veh/h/ln	1513	0	1513	0	1513	0	1513	0
Q Serve Time (g_s), s	15.5	0.0	5.1	0.0	6.5	0.0	2.9	0.0
Cycle Q Clear Time (g_c), s	15.5	0.0	5.1	0.0	6.5	0.0	2.9	0.0
Perm LT Sat Flow (s_l), veh/h/ln	735	0	517	0	555	0	648	0
Shared LT Sat Flow (s_sh), veh/h/ln	0	0	0	0	0	0	0	0
Perm LT Eff Green (g_p), s	37.9	0.0	34.0	0.0	35.9	0.0	34.0	0.0
Perm LT Serve Time (g_u), s	14.9	0.0	0.0	0.0	11.4	0.0	12.9	0.0
Perm LT Q Serve Time (g_ps), s	14.9	0.0	0.0	0.0	8.8	0.0	4.3	0.0
Time to First Blk (g_f), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Serve Time pre Blk (g_fs), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prop LT Inside Lane (P_L)	1.00	0.00	1.00	0.00	1.00	0.00	1.00	0.00
Lane Grp Cap (c), veh/h	361	0	131	0	203	0	174	0
V/C Ratio (X)	1.05	0.00	0.72	0.00	0.65	0.00	0.39	0.00
Avail Cap (c_a), veh/h	361	0	135	0	203	0	221	0
Upstream Filter (I)	1.00	0.00	1.00	0.00	1.00	0.00	0.87	0.00
Uniform Delay (d1), s/veh	29.8	0.0	31.7	0.0	29.7	0.0	33.2	0.0
Incr Delay (d2), s/veh	61.5	0.0	16.8	0.0	6.9	0.0	1.3	0.0
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	91.3	0.0	48.5	0.0	36.5	0.0	34.5	0.0
1st-Term Q (Q1), veh/ln	4.9	0.0	2.1	0.0	1.3	0.0	0.8	0.0
2nd-Term Q (Q2), veh/ln	6.2	0.0	0.6	0.0	0.4	0.0	0.1	0.0
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	1.00	0.00	1.00	0.00	1.00	0.00	1.00	0.00
%ile Back of Q (50%), veh/ln	11.1	0.0	2.7	0.0	1.7	0.0	0.8	0.0
%ile Storage Ratio (RQ%)	1.51	0.00	0.55	0.00	0.27	0.00	0.20	0.00
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	4.7	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Middle Lane Group Data								
Assigned Mvmt	0	2	0	4	0	6	0	8
Lane Assignment		T		T		T		T
Lanes in Grp	0	2	0	2	0	1	0	2
Grp Vol (v), veh/h	0	646	0	971	0	497	0	706
Grp Sat Flow (s), veh/h/ln	0	1509	0	1509	0	1509	0	1509
Q Serve Time (g_s), s	0.0	21.0	0.0	36.0	0.0	33.5	0.0	23.4
Cycle Q Clear Time (g_c), s	0.0	21.0	0.0	36.0	0.0	33.5	0.0	23.4
Lane Grp Cap (c), veh/h	0	994	0	945	0	615	0	1005
V/C Ratio (X)	0.00	0.65	0.00	1.03	0.00	0.81	0.00	0.70
Avail Cap (c_a), veh/h	0	994	0	945	0	615	0	1005
Upstream Filter (I)	0.00	1.00	0.00	0.87	0.00	1.00	0.00	1.00
Uniform Delay (d1), s/veh	0.0	32.9	0.0	39.5	0.0	30.1	0.0	33.4
Incr Delay (d2), s/veh	0.0	3.3	0.0	34.7	0.0	11.0	0.0	2.2
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	36.2	0.0	74.2	0.0	41.1	0.0	35.6
1st-Term Q (Q1), veh/ln	0.0	8.7	0.0	15.0	0.0	13.9	0.0	9.7

AM PEAK HOUR
 EXISTING + PROJECT CONSTRUCTION

West Hollywood - Orange Grove Mixed Use - Traffic Impact Study
 4: Fairfax Ave & Santa Monica Blvd/Santa Monica Boulevard

12/18/2018

2nd-Term Q (Q2), veh/ln	0.0	0.5	0.0	4.6	0.0	1.9	0.0	0.3
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	1.00	0.00	1.00	0.00	1.00	0.00	1.00
%ile Back of Q (50%), veh/ln	0.0	9.2	0.0	19.5	0.0	15.8	0.0	10.0
%ile Storage Ratio (RQ%)	0.00	0.59	0.00	1.59	0.00	1.48	0.00	0.38
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	6.6	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.3	0.0	0.0	0.0	0.0

Right Lane Group Data

Assigned Mvmt	0	12	0	14	0	16	0	18
Lane Assignment		R		R		T+R		R
Lanes in Grp	0	1	0	1	0	1	0	1
Grp Vol (v), veh/h	0	66	0	115	0	514	0	140
Grp Sat Flow (s), veh/h/ln	0	1350	0	1350	0	1560	0	1350
Q Serve Time (g_s), s	0.0	4.0	0.0	7.4	0.0	33.5	0.0	8.9
Cycle Q Clear Time (g_c), s	0.0	4.0	0.0	7.4	0.0	33.5	0.0	8.9
Prot RT Sat Flow (s_R), veh/h/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prot RT Eff Green (g_R), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prop RT Outside Lane (P_R)	0.00	1.00	0.00	1.00	0.00	0.10	0.00	1.00
Lane Grp Cap (c), veh/h	0	439	0	417	0	636	0	450
V/C Ratio (X)	0.00	0.15	0.00	0.28	0.00	0.81	0.00	0.31
Avail Cap (c_a), veh/h	0	439	0	417	0	636	0	450
Upstream Filter (I)	0.00	1.00	0.00	0.87	0.00	1.00	0.00	1.00
Uniform Delay (d1), s/veh	0.0	27.6	0.0	30.0	0.0	30.1	0.0	28.5
Incr Delay (d2), s/veh	0.0	0.7	0.0	0.3	0.0	10.6	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
Control Delay (d), s/veh	0.0	28.3	0.0	30.3	0.0	40.8	0.0	28.9
1st-Term Q (Q1), veh/ln	0.0	1.5	0.0	2.8	0.0	14.4	0.0	3.3
2nd-Term Q (Q2), veh/ln	0.0	0.1	0.0	0.0	0.0	1.9	0.0	0.0
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	1.00	0.00	1.00	0.00	1.00	0.00	1.00
%ile Back of Q (50%), veh/ln	0.0	1.6	0.0	2.8	0.0	16.3	0.0	3.3
%ile Storage Ratio (RQ%)	0.00	0.10	0.00	0.23	0.00	1.52	0.00	0.80
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Intersection Summary

HCM 2010 Ctrl Delay	50.3
HCM 2010 LOS	D

Notes

* HCM 2010 computational engine requires equal clearance times for the phases crossing the barrier.

AM PEAK HOUR
 EXISTING + PROJECT CONSTRUCTION

West Hollywood - Orange Grove Mixed Use - Traffic Impact Study
 5: Santa Monica Boulevard & Orange Grove Ave

12/18/2018

Intersection

Int Delay, s/veh 1

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↑↓			↑↓				↑			↑
Traffic Vol, veh/h	0	793	16	0	1211	44	0	0	15	0	0	106
Future Vol, veh/h	0	793	16	0	1211	44	0	0	15	0	0	106
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	0	-	-	0
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	95	95	92	92	95	95	95	92	95	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	862	17	0	1316	48	0	0	16	0	0	115

Major/Minor	Major1	Major2	Minor1	Minor2								
Conflicting Flow All	-	0	0	-	-	0	-	-	440	-	-	682
Stage 1	-	-	-	-	-	-	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-	-	-	-	-	-	-
Critical Hdwy	-	-	-	-	-	-	-	-	6.94	-	-	6.94
Critical Hdwy Stg 1	-	-	-	-	-	-	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-	-	-	-	-	-	-
Follow-up Hdwy	-	-	-	-	-	-	-	-	3.32	-	-	3.32
Pot Cap-1 Maneuver	0	-	-	0	-	-	0	0	565	0	0	392
Stage 1	0	-	-	0	-	-	0	0	-	0	0	-
Stage 2	0	-	-	0	-	-	0	0	-	0	0	-
Platoon blocked, %	-	-	-	-	-	-	-	-	-	-	-	-
Mov Cap-1 Maneuver	-	-	-	-	-	-	-	-	565	-	-	392
Mov Cap-2 Maneuver	-	-	-	-	-	-	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0	0	11.6	18
HCM LOS			B	C

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBT	WBR	SBLn1
Capacity (veh/h)	565	-	-	-	-	392
HCM Lane V/C Ratio	0.028	-	-	-	-	0.294
HCM Control Delay (s)	11.6	-	-	-	-	18
HCM Lane LOS	B	-	-	-	-	C
HCM 95th %tile Q(veh)	0.1	-	-	-	-	1.2

AM PEAK HOUR
 EXISTING + PROJECT CONSTRUCTION

West Hollywood - Orange Grove Mixed Use - Traffic Impact Study
 6: Ogden Ave

12/18/2018

Intersection						
Int Delay, s/veh	1.5					
Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		↑↑	↑↑		↑	
Traffic Vol, veh/h	25	814	1198	32	4	105
Future Vol, veh/h	25	814	1198	32	4	105
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	27	885	1302	35	4	114

Major/Minor	Major1	Major2	Minor2
Conflicting Flow All	1337	0	0
Stage 1	-	-	-
Stage 2	-	-	-
Critical Hdwy	4.14	-	-
Critical Hdwy Stg 1	-	-	-
Critical Hdwy Stg 2	-	-	-
Follow-up Hdwy	2.22	-	-
Pot Cap-1 Maneuver	512	-	-
Stage 1	-	-	-
Stage 2	-	-	-
Platoon blocked, %	-	-	-
Mov Cap-1 Maneuver	512	-	-
Mov Cap-2 Maneuver	-	-	-
Stage 1	-	-	-
Stage 2	-	-	-

Approach	EB	WB	SB
HCM Control Delay, s	1	0	21.7
HCM LOS			C

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	512	-	-	-	333
HCM Lane V/C Ratio	0.053	-	-	-	0.356
HCM Control Delay (s)	12.4	0.6	-	-	21.7
HCM Lane LOS	B	A	-	-	C
HCM 95th %tile Q(veh)	0.2	-	-	-	1.6

AM PEAK HOUR
 EXISTING + PROJECT CONSTRUCTION

Intersection						
Int Delay, s/veh	1.5					
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↑↑			↑↑	↑	
Traffic Vol, veh/h	802	16	58	1245	7	34
Future Vol, veh/h	802	16	58	1245	7	34
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	95	95	95	95	95	95
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	844	17	61	1311	7	36

Major/Minor	Major1	Major2	Minor1		
Conflicting Flow All	0	0	861	0	1631
Stage 1	-	-	-	-	853
Stage 2	-	-	-	-	778
Critical Hdwy	-	-	4.14	-	6.84
Critical Hdwy Stg 1	-	-	-	-	5.84
Critical Hdwy Stg 2	-	-	-	-	5.84
Follow-up Hdwy	-	-	2.22	-	3.52
Pot Cap-1 Maneuver	-	-	776	-	92
Stage 1	-	-	-	-	378
Stage 2	-	-	-	-	413
Platoon blocked, %	-	-	-	-	-
Mov Cap-1 Maneuver	-	-	776	-	65
Mov Cap-2 Maneuver	-	-	-	-	65
Stage 1	-	-	-	-	378
Stage 2	-	-	-	-	294

Approach	EB	WB	NB
HCM Control Delay, s	0	1.7	22.8
HCM LOS			C

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	245	-	-	776	-
HCM Lane V/C Ratio	0.176	-	-	0.079	-
HCM Control Delay (s)	22.8	-	-	10	1.3
HCM Lane LOS	C	-	-	B	A
HCM 95th %tile Q(veh)	0.6	-	-	0.3	-

AM PEAK HOUR
EXISTING + PROJECT CONSTRUCTION

West Hollywood - Orange Grove Mixed Use - Traffic Impact Study
 7: Santa Monica Blvd & Genesse Ave

12/18/2018



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (vph)	20	829	1174	13	27	91
Future Volume (vph)	20	829	1174	13	27	91
Ideal Flow (vphpl)	1620	1620	1620	1620	1620	1620
Total Lost time (s)	4.5	5.6	5.6		4.6	
Lane Util. Factor	1.00	0.95	0.95		1.00	
Frt	1.00	1.00	1.00		0.90	
Flt Protected	0.95	1.00	1.00		0.99	
Satd. Flow (prot)	1509	3018	3013		1406	
Flt Permitted	0.18	1.00	1.00		0.99	
Satd. Flow (perm)	288	3018	3013		1406	
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	22	901	1276	14	29	99
RTOR Reduction (vph)	0	0	1	0	84	0
Lane Group Flow (vph)	22	901	1289	0	44	0
Turn Type	pm+pt	NA	NA		Prot	
Protected Phases	5	2	6		4	
Permitted Phases	2					
Actuated Green, G (s)	71.7	68.7	72.8		15.6	
Effective Green, g (s)	70.7	68.2	72.3		16.1	
Actuated g/C Ratio	0.67	0.65	0.68		0.15	
Clearance Time (s)	4.0	5.1	5.1		5.1	
Vehicle Extension (s)	1.0	3.0	3.0		3.0	
Lane Grp Cap (vph)	221	1949	2062		214	
v/s Ratio Prot	c0.00	0.30	c0.43		c0.03	
v/s Ratio Perm	0.06					
v/c Ratio	0.10	0.46	0.63		0.21	
Uniform Delay, d1	6.4	9.4	9.2		39.2	
Progression Factor	0.25	0.17	1.00		1.00	
Incremental Delay, d2	0.1	0.7	1.4		0.5	
Delay (s)	1.6	2.3	10.6		39.6	
Level of Service	A	A	B		D	
Approach Delay (s)		2.3	10.6		39.6	
Approach LOS		A	B		D	

Intersection Summary

HCM 2000 Control Delay	8.9	HCM 2000 Level of Service	A
HCM 2000 Volume to Capacity ratio	0.54		
Actuated Cycle Length (s)	105.6	Sum of lost time (s)	14.7
Intersection Capacity Utilization	59.5%	ICU Level of Service	B
Analysis Period (min)	15		

c Critical Lane Group

West Hollywood - Orange Grove Mixed Use - Traffic Impact Study
 8: Romaine St & Fairfax Ave

12/18/2018

Intersection												
Int Delay, s/veh	35.2											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↔			↔	↔	↔	↕	↕	↕	↕	↕
Traffic Vol, veh/h	4	3	56	25	47	61	50	831	12	34	1261	45
Future Vol, veh/h	4	3	56	25	47	61	50	831	12	34	1261	45
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	0	90	-	0	102	-	0
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	4	3	61	27	51	66	54	903	13	37	1371	49

Major/Minor	Minor2		Minor1		Major1		Major2					
Conflicting Flow All	2030	2469	686	1772	2505	452	1420	0	0	916	0	0
Stage 1	1445	1445	-	1011	1011	-	-	-	-	-	-	-
Stage 2	585	1024	-	761	1494	-	-	-	-	-	-	-
Critical Hdwy	7.54	6.54	6.94	7.54	6.54	6.94	4.14	-	-	4.14	-	-
Critical Hdwy Stg 1	6.54	5.54	-	6.54	5.54	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.54	5.54	-	6.54	5.54	-	-	-	-	-	-	-
Follow-up Hdwy	3.52	4.02	3.32	3.52	4.02	3.32	2.22	-	-	2.22	-	-
Pot Cap-1 Maneuver	34	30	390	53	~ 28	555	475	-	-	740	-	-
Stage 1	138	195	-	257	315	-	-	-	-	-	-	-
Stage 2	464	311	-	364	185	-	-	-	-	-	-	-
Platoon blocked, %								-	-	-	-	-
Mov Cap-1 Maneuver	-	25	390	35	~ 24	555	475	-	-	740	-	-
Mov Cap-2 Maneuver	-	25	-	35	~ 24	-	-	-	-	-	-	-
Stage 1	122	185	-	228	279	-	-	-	-	-	-	-
Stage 2	296	276	-	287	176	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s		\$ 635	0.8	0.3
HCM LOS	-	F		






















Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	WBLn2	SBL	SBT	SBR
Capacity (veh/h)	475	-	-	-	27	555	740	-	-
HCM Lane V/C Ratio	0.114	-	-	-	2.899	0.119	0.05	-	-
HCM Control Delay (s)	13.6	-	-	\$ 1162.5	12.4	10.1	-	-	-
HCM Lane LOS	B	-	-	-	F	B	B	-	-
HCM 95th %tile Q(veh)	0.4	-	-	-	9.5	0.4	0.2	-	-

Notes
 -: Volume exceeds capacity \$: Delay exceeds 300s +: Computation Not Defined *: All major volume in platoon

AM PEAK HOUR
 EXISTING + PROJECT CONSTRUCTION

West Hollywood - Orange Grove Mixed Use Project - Traffic Impact Study
 1: Fairfax Ave & Fountain Ave

12/18/2018

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	157	733	55	150	907	75	49	705	138	52	671	211
Future Volume (veh/h)	157	733	55	150	907	75	49	705	138	52	671	211
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q, 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	1588	1588	1620	1588	1588	1620	1588	1588	1620	1588	1588	1588
Adj Flow Rate, veh/h	165	772	58	158	955	79	52	742	145	55	706	222
Adj No. of Lanes	1	2	0	1	2	0	1	2	0	1	2	1
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Opposing Right Turn Influence	Yes			Yes			Yes			Yes		
Cap, veh/h	277	1698	128	359	1684	139	157	883	172	115	1058	444
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
Prop Arrive On Green	0.60	0.60	0.57	0.60	0.60	0.57	0.35	0.35	0.35	0.35	0.35	0.33
Ln Grp Delay, s/veh	34.5	13.0	13.1	24.0	14.8	15.0	48.7	47.3	47.4	64.7	33.6	33.7
Ln Grp LOS	C	B	B	C	B	B	D	D	D	E	C	C
Approach Vol, veh/h		995			1192			939			983	
Approach Delay, s/veh		16.6			16.1			47.4			35.4	
Approach LOS		B			B			D			D	
Timer:		1	2	3	4	5	6	7	8			
Assigned Phs			2		4		6		8			
Case No			6.0		6.0		5.0		6.0			
Phs Duration (G+Y+Rc), s			41.5		68.5		41.5		68.5			
Change Period (Y+Rc), s			* 5.3		* 5.3		* 5.3		* 5.3			
Max Green (Gmax), s			* 36		* 64		* 36		* 64			
Max Allow Headway (MAH), s			7.2		7.4		7.2		7.4			
Max Q Clear (g_c+I1), s			32.7		54.1		40.6		37.9			
Green Ext Time (g_e), s			2.9		9.1		0.0		23.3			
Prob of Phs Call (p_c)			1.00		1.00		1.00		1.00			
Prob of Max Out (p_x)			0.00		0.99		0.00		0.91			
Left-Turn Movement Data												
Assigned Mvmt			5		7		1		3			
Mvmt Sat Flow, veh/h			600		543		624		658			
Through Movement Data												
Assigned Mvmt			2		4		6		8			
Mvmt Sat Flow, veh/h			2518		2846		3018		2822			
Right-Turn Movement Data												
Assigned Mvmt			12		14		16		18			
Mvmt Sat Flow, veh/h			492		214		1350		233			
Left Lane Group Data												
Assigned Mvmt		0	5	0	7	0	1	0	3			
Lane Assignment												

MIDDAY PEAK HOUR
 EXISTING + PROJECT CONSTRUCTION

West Hollywood - Orange Grove Mixed Use Project - Traffic Impact Study

1: Fairfax Ave & Fountain Ave

12/18/2018

Lanes in Grp	0	1	0	1	0	1	0	1
Grp Vol (v), veh/h	0	52	0	165	0	55	0	158
Grp Sat Flow (s), veh/h/ln	0	600	0	543	0	624	0	658
Q Serve Time (g_s), s	0.0	8.8	0.0	29.3	0.0	8.7	0.0	19.3
Cycle Q Clear Time (g_c), s	0.0	30.7	0.0	52.1	0.0	38.6	0.0	35.9
Perm LT Sat Flow (s_l), veh/h/ln	0	600	0	543	0	624	0	658
Shared LT Sat Flow (s_sh), veh/h/ln	0	0	0	0	0	0	0	0
Perm LT Eff Green (g_p), s	0.0	38.6	0.0	65.6	0.0	38.6	0.0	65.6
Perm LT Serve Time (g_u), s	0.0	16.7	0.0	42.8	0.0	8.7	0.0	49.0
Perm LT Q Serve Time (g_ps), s	0.0	8.8	0.0	29.3	0.0	8.7	0.0	19.3
Time to First Blk (g_f), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Serve Time pre Blk (g_fs), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prop LT Inside Lane (P_L)	0.00	1.00	0.00	1.00	0.00	1.00	0.00	1.00
Lane Grp Cap (c), veh/h	0	157	0	277	0	115	0	359
V/C Ratio (X)	0.00	0.33	0.00	0.60	0.00	0.48	0.00	0.44
Avail Cap (c_a), veh/h	0	157	0	279	0	115	0	362
Upstream Filter (I)	0.00	0.97	0.00	1.00	0.00	1.00	0.00	1.00
Uniform Delay (d1), s/veh	0.0	43.3	0.0	29.4	0.0	51.1	0.0	22.2
Incr Delay (d2), s/veh	0.0	5.4	0.0	5.1	0.0	13.6	0.0	1.7
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	48.7	0.0	34.5	0.0	64.7	0.0	24.0
1st-Term Q (Q1), veh/ln	0.0	1.5	0.0	4.4	0.0	1.7	0.0	3.5
2nd-Term Q (Q2), veh/ln	0.0	0.2	0.0	0.4	0.0	0.4	0.0	0.2
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	1.00	0.00	1.00	0.00	1.00	0.00	1.00
%ile Back of Q (50%), veh/ln	0.0	1.7	0.0	4.8	0.0	2.1	0.0	3.6
%ile Storage Ratio (RQ%)	0.00	0.47	0.00	3.04	0.00	0.26	0.00	1.00
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Middle Lane Group Data								
Assigned Mvmt	0	2	0	4	0	6	0	8
Lane Assignment		T		T		T		T
Lanes in Grp	0	1	0	1	0	2	0	1
Grp Vol (v), veh/h	0	444	0	409	0	706	0	511
Grp Sat Flow (s), veh/h/ln	0	1509	0	1509	0	1509	0	1509
Q Serve Time (g_s), s	0.0	29.8	0.0	16.5	0.0	21.8	0.0	22.7
Cycle Q Clear Time (g_c), s	0.0	29.8	0.0	16.5	0.0	21.8	0.0	22.7
Lane Grp Cap (c), veh/h	0	529	0	900	0	1058	0	900
V/C Ratio (X)	0.00	0.84	0.00	0.45	0.00	0.67	0.00	0.57
Avail Cap (c_a), veh/h	0	529	0	907	0	1058	0	907
Upstream Filter (I)	0.00	0.97	0.00	1.00	0.00	1.00	0.00	1.00
Uniform Delay (d1), s/veh	0.0	32.9	0.0	12.3	0.0	30.3	0.0	13.5
Incr Delay (d2), s/veh	0.0	14.4	0.0	0.7	0.0	3.3	0.0	1.3
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	47.3	0.0	13.0	0.0	33.6	0.0	14.8
1st-Term Q (Q1), veh/ln	0.0	12.3	0.0	6.8	0.0	9.1	0.0	9.4

MIDDAY PEAK HOUR

EXISTING + PROJECT CONSTRUCTION

West Hollywood - Orange Grove Mixed Use Project - Traffic Impact Study
 1: Fairfax Ave & Fountain Ave

12/18/2018

2nd-Term Q (Q2), veh/ln	0.0	2.1	0.0	0.2	0.0	0.5	0.0	0.3
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	1.00	0.00	1.00	0.00	1.00	0.00	1.00
%ile Back of Q (50%), veh/ln	0.0	14.5	0.0	7.0	0.0	9.6	0.0	9.7
%ile Storage Ratio (RQ%)	0.00	0.40	0.00	0.50	0.00	0.20	0.00	0.89
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Right Lane Group Data

Assigned Mvmt	0	12	0	14	0	16	0	18
Lane Assignment		T+R		T+R		R		T+R
Lanes in Grp	0	1	0	1	0	1	0	1
Grp Vol (v), veh/h	0	443	0	421	0	222	0	523
Grp Sat Flow (s), veh/h/ln	0	1501	0	1551	0	1350	0	1547
Q Serve Time (g_s), s	0.0	29.9	0.0	16.6	0.0	14.5	0.0	22.8
Cycle Q Clear Time (g_c), s	0.0	29.9	0.0	16.6	0.0	14.5	0.0	22.8
Prot RT Sat Flow (s_R), veh/h/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prot RT Eff Green (g_R), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prop RT Outside Lane (P_R)	0.00	0.33	0.00	0.14	0.00	1.00	0.00	0.15
Lane Grp Cap (c), veh/h	0	526	0	925	0	444	0	923
V/C Ratio (X)	0.00	0.84	0.00	0.45	0.00	0.50	0.00	0.57
Avail Cap (c_a), veh/h	0	526	0	932	0	444	0	930
Upstream Filter (I)	0.00	0.97	0.00	1.00	0.00	1.00	0.00	1.00
Uniform Delay (d1), s/veh	0.0	32.9	0.0	12.4	0.0	29.7	0.0	13.7
Incr Delay (d2), s/veh	0.0	14.5	0.0	0.7	0.0	4.0	0.0	1.3
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	47.4	0.0	13.1	0.0	33.7	0.0	15.0
1st-Term Q (Q1), veh/ln	0.0	12.3	0.0	7.0	0.0	5.4	0.0	9.6
2nd-Term Q (Q2), veh/ln	0.0	2.1	0.0	0.2	0.0	0.5	0.0	0.3
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	1.00	0.00	1.00	0.00	1.00	0.00	1.00
%ile Back of Q (50%), veh/ln	0.0	14.4	0.0	7.2	0.0	5.9	0.0	10.0
%ile Storage Ratio (RQ%)	0.00	0.40	0.00	0.52	0.00	0.12	0.00	0.91
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Intersection Summary

HCM 2010 Ctrl Delay	28.0
HCM 2010 LOS	C

Notes

* HCM 2010 computational engine requires equal clearance times for the phases crossing the barrier.

MIDDAY PEAK HOUR
 EXISTING + PROJECT CONSTRUCTION

West Hollywood - Orange Grove Mixed Use Project - Traffic Impact Study

2: Orange Grove Ave

12/18/2018



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕↕			↕↕			↕			↕	
Traffic Volume (veh/h)	18	906	20	19	1088	10	8	3	50	4	3	39
Future Volume (Veh/h)	18	906	20	19	1088	10	8	3	50	4	3	39
Sign Control		Free			Free			Stop			Stop	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.95	0.92	0.92	0.92	0.92	0.95	0.92	0.95	0.92	0.95	0.95	0.95
Hourly flow rate (vph)	19	985	22	21	1183	11	9	3	54	4	3	41
Pedestrians												
Lane Width (ft)												
Walking Speed (ft/s)												
Percent Blockage												
Right turn flare (veh)												
Median type		None			None							
Median storage (veh)												
Upstream signal (ft)		377			1010							
pX, platoon unblocked				0.85			0.85	0.85	0.85	0.85	0.85	
vC, conflicting volume	1194			1007			1710	2270	504	1816	2276	597
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	1194			652			1480	2140	59	1606	2146	597
tC, single (s)	4.1			4.1			7.5	6.5	6.9	7.5	6.5	6.9
tC, 2 stage (s)												
tF (s)	2.2			2.2			3.5	4.0	3.3	3.5	4.0	3.3
p0 queue free %	97			97			85	92	94	92	92	91
cM capacity (veh/h)	580			790			60	39	844	50	38	446

Direction, Lane #	EB 1	EB 2	WB 1	WB 2	NB 1	SB 1
Volume Total	512	514	612	602	66	48
Volume Left	19	0	21	0	9	4
Volume Right	0	22	0	11	54	41
cSH	580	1700	790	1700	227	192
Volume to Capacity	0.03	0.30	0.03	0.35	0.29	0.25
Queue Length 95th (ft)	3	0	2	0	29	24
Control Delay (s)	0.9	0.0	0.7	0.0	27.2	29.9
Lane LOS	A		A		D	D
Approach Delay (s)	0.5		0.4		27.2	29.9
Approach LOS					D	D

Intersection Summary

Average Delay	1.8
Intersection Capacity Utilization	64.6%
ICU Level of Service	C
Analysis Period (min)	15

MIDDAY PEAK HOUR
EXISTING + PROJECT CONSTRUCTION

West Hollywood - Orange Grove Mixed Use Project - Traffic Impact Study
 3: Ogden Ave

12/18/2018

Intersection												
Int Delay, s/veh	2.2											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↔			↔			↔			↔	
Traffic Vol, veh/h	19	908	17	24	1075	9	10	3	50	1	1	23
Future Vol, veh/h	19	908	17	24	1075	9	10	3	50	1	1	23
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	95	92	92	92	92	95	92	95	92	95	95	95
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	20	987	18	26	1168	9	11	3	54	1	1	24

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	1177	0	0	1005	0	0	1673	2265	503	1760	2270	589
Stage 1	-	-	-	-	-	-	1036	1036	-	1225	1225	-
Stage 2	-	-	-	-	-	-	637	1229	-	535	1045	-
Critical Hdwy	4.14	-	-	4.14	-	-	7.54	6.54	6.94	7.54	6.54	6.94
Critical Hdwy Stg 1	-	-	-	-	-	-	6.54	5.54	-	6.54	5.54	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.54	5.54	-	6.54	5.54	-
Follow-up Hdwy	2.22	-	-	2.22	-	-	3.52	4.02	3.32	3.52	4.02	3.32
Pot Cap-1 Maneuver	589	-	-	685	-	-	62	40	514	54	40	452
Stage 1	-	-	-	-	-	-	248	307	-	190	249	-
Stage 2	-	-	-	-	-	-	432	248	-	497	304	-
Platoon blocked, %	-	-	-	-	-	-	-	-	-	-	-	-
Mov Cap-1 Maneuver	589	-	-	685	-	-	49	33	514	39	33	452
Mov Cap-2 Maneuver	-	-	-	-	-	-	49	33	-	39	33	-
Stage 1	-	-	-	-	-	-	229	283	-	175	222	-
Stage 2	-	-	-	-	-	-	362	221	-	406	281	-
























Approach	EB			WB			NB			SB		
HCM Control Delay, s	0.6			0.8			42.5			22.3		
HCM LOS							E			C		

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	162	589	-	-	685	-	-	234
HCM Lane V/C Ratio	0.422	0.034	-	-	0.038	-	-	0.112
HCM Control Delay (s)	42.5	11.3	0.4	-	10.5	0.6	-	22.3
HCM Lane LOS	E	B	A	-	B	A	-	C
HCM 95th %tile Q(veh)	1.9	0.1	-	-	0.1	-	-	0.4

MIDDAY PEAK HOUR
 EXISTING + PROJECT CONSTRUCTION

West Hollywood - Orange Grove Mixed Use Project - Traffic Impact Study
 4: Fairfax Ave & Santa Monica Blvd

12/18/2018

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	157	673	82	202	764	71	132	689	183	79	727	106
Future Volume (veh/h)	157	673	82	202	764	71	132	689	183	79	727	106
Number	5	2	12	1	6	16	3	8	18	7	4	14
Initial Q, 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	1588	1588	1588	1588	1588	1620	1588	1588	1588	1588	1588	1588
Adj Flow Rate, veh/h	165	708	86	213	804	75	139	725	193	83	765	112
Adj No. of Lanes	1	2	1	1	2	0	1	2	1	1	2	1
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Opposing Right Turn Influence	Yes			Yes			Yes			Yes		
Cap, veh/h	253	1158	512	323	1171	109	162	925	414	165	901	397
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
Prop Arrive On Green	0.06	0.38	0.38	0.09	0.42	0.42	0.05	0.31	0.31	0.04	0.30	0.29
Ln Grp Delay, s/veh	34.2	31.0	24.4	25.0	33.2	33.1	72.6	40.8	33.1	33.1	44.2	31.6
Ln Grp LOS	C	C	C	C	C	C	E	D	C	C	D	C
Approach Vol, veh/h		959			1092			1057			960	
Approach Delay, s/veh		30.9			31.6			43.6			41.7	
Approach LOS		C			C			D			D	
Timer:		1	2	3	4	5	6	7	8			
Assigned Phs		1	2	3	4	5	6	7	8			
Case No		1.1	3.0	1.1	3.0	1.1	4.0	1.1	3.0			
Phs Duration (G+Y+Rc), s		16.1	48.7	11.0	39.2	12.0	52.8	10.1	40.1			
Change Period (Y+Rc), s		* 4	5.1	* 4	* 5.3	* 4	5.1	* 4	* 5.3			
Max Green (Gmax), s		* 17	37.1	* 7	* 36	* 8	46.1	* 8	* 35			
Max Allow Headway (MAH), s		3.8	5.2	3.8	5.1	3.8	5.2	3.8	5.1			
Max Q Clear (g_c+I1), s		11.9	23.7	7.5	29.4	8.5	29.0	6.5	27.2			
Green Ext Time (g_e), s		0.3	8.6	0.0	4.5	0.0	10.2	0.0	5.5			
Prob of Phs Call (p_c)		1.00	1.00	0.99	1.00	0.99	1.00	0.93	1.00			
Prob of Max Out (p_x)		0.38	0.68	1.00	0.95	1.00	0.57	1.00	0.90			
Left-Turn Movement Data												
Assigned Mvmt		1		3		5		7				
Mvmt Sat Flow, veh/h		1513		1513		1513		1513				
Through Movement Data												
Assigned Mvmt			2		4		6		8			
Mvmt Sat Flow, veh/h			3018		3018		2791		3018			
Right-Turn Movement Data												
Assigned Mvmt			12		14		16		18			
Mvmt Sat Flow, veh/h			1350		1350		260		1350			
Left Lane Group Data												
Assigned Mvmt		1	0	3	0	5	0	7	0			
Lane Assignment		(Pr/Pm)		(Pr/Pm)		(Pr/Pm)		(Pr/Pm)				

MIDDAY PEAK HOUR
 EXISTING + PROJECT CONSTRUCTION

West Hollywood - Orange Grove Mixed Use Project - Traffic Impact Study
 4: Fairfax Ave & Santa Monica Blvd

12/18/2018

Lanes in Grp	1	0	1	0	1	0	1	0
Grp Vol (v), veh/h	213	0	139	0	165	0	83	0
Grp Sat Flow (s), veh/h/ln	1513	0	1513	0	1513	0	1513	0
Q Serve Time (g_s), s	9.9	0.0	5.5	0.0	6.5	0.0	4.5	0.0
Cycle Q Clear Time (g_c), s	9.9	0.0	5.5	0.0	6.5	0.0	4.5	0.0
Perm LT Sat Flow (s_l), veh/h/ln	681	0	630	0	629	0	606	0
Shared LT Sat Flow (s_sh), veh/h/ln	0	0	0	0	0	0	0	0
Perm LT Eff Green (g_p), s	44.1	0.0	32.4	0.0	42.1	0.0	32.4	0.0
Perm LT Serve Time (g_u), s	20.4	0.0	5.0	0.0	19.2	0.0	8.0	0.0
Perm LT Q Serve Time (g_ps), s	10.8	0.0	5.0	0.0	12.9	0.0	3.9	0.0
Time to First Blk (g_f), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Serve Time pre Blk (g_fs), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prop LT Inside Lane (P_L)	1.00	0.00	1.00	0.00	1.00	0.00	1.00	0.00
Lane Grp Cap (c), veh/h	323	0	162	0	253	0	165	0
V/C Ratio (X)	0.66	0.00	0.86	0.00	0.65	0.00	0.50	0.00
Avail Cap (c_a), veh/h	387	0	162	0	253	0	190	0
Upstream Filter (I)	1.00	0.00	1.00	0.00	1.00	0.00	0.87	0.00
Uniform Delay (d1), s/veh	21.9	0.0	38.7	0.0	28.4	0.0	31.0	0.0
Incr Delay (d2), s/veh	3.1	0.0	33.9	0.0	5.8	0.0	2.1	0.0
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	25.0	0.0	72.6	0.0	34.2	0.0	33.1	0.0
1st-Term Q (Q1), veh/ln	4.1	0.0	2.1	0.0	2.2	0.0	1.9	0.0
2nd-Term Q (Q2), veh/ln	0.3	0.0	1.5	0.0	0.4	0.0	0.1	0.0
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	1.00	0.00	1.00	0.00	1.00	0.00	1.00	0.00
%ile Back of Q (50%), veh/ln	4.4	0.0	3.6	0.0	2.6	0.0	2.0	0.0
%ile Storage Ratio (RQ%)	0.59	0.00	0.75	0.00	0.40	0.00	0.46	0.00
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Middle Lane Group Data

Assigned Mvmt	0	2	0	4	0	6	0	8
Lane Assignment		T		T		T		T
Lanes in Grp	0	2	0	2	0	1	0	2
Grp Vol (v), veh/h	0	708	0	765	0	435	0	725
Grp Sat Flow (s), veh/h/ln	0	1509	0	1509	0	1509	0	1509
Q Serve Time (g_s), s	0.0	21.7	0.0	27.4	0.0	27.0	0.0	25.2
Cycle Q Clear Time (g_c), s	0.0	21.7	0.0	27.4	0.0	27.0	0.0	25.2
Lane Grp Cap (c), veh/h	0	1158	0	901	0	633	0	925
V/C Ratio (X)	0.00	0.61	0.00	0.85	0.00	0.69	0.00	0.78
Avail Cap (c_a), veh/h	0	1158	0	945	0	633	0	925
Upstream Filter (I)	0.00	1.00	0.00	0.87	0.00	1.00	0.00	1.00
Uniform Delay (d1), s/veh	0.0	28.5	0.0	37.9	0.0	27.2	0.0	36.4
Incr Delay (d2), s/veh	0.0	2.4	0.0	6.3	0.0	6.0	0.0	4.5
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	31.0	0.0	44.2	0.0	33.2	0.0	40.8
1st-Term Q (Q1), veh/ln	0.0	9.0	0.0	11.4	0.0	11.2	0.0	10.5

MIDDAY PEAK HOUR
 EXISTING + PROJECT CONSTRUCTION

West Hollywood - Orange Grove Mixed Use Project - Traffic Impact Study
 4: Fairfax Ave & Santa Monica Blvd

12/18/2018

2nd-Term Q (Q2), veh/ln	0.0	0.4	0.0	0.8	0.0	1.1	0.0	0.6
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	1.00	0.00	1.00	0.00	1.00	0.00	1.00
%ile Back of Q (50%), veh/ln	0.0	9.4	0.0	12.2	0.0	12.3	0.0	11.0
%ile Storage Ratio (RQ%)	0.00	0.61	0.00	0.99	0.00	1.15	0.00	0.42
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Right Lane Group Data

Assigned Mvmt	0	12	0	14	0	16	0	18
Lane Assignment		R		R		T+R		R
Lanes in Grp	0	1	0	1	0	1	0	1
Grp Vol (v), veh/h	0	86	0	112	0	444	0	193
Grp Sat Flow (s), veh/h/ln	0	1350	0	1350	0	1542	0	1350
Q Serve Time (g_s), s	0.0	4.9	0.0	7.3	0.0	27.0	0.0	13.3
Cycle Q Clear Time (g_c), s	0.0	4.9	0.0	7.3	0.0	27.0	0.0	13.3
Prot RT Sat Flow (s_R), veh/h/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prot RT Eff Green (g_R), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prop RT Outside Lane (P_R)	0.00	1.00	0.00	1.00	0.00	0.17	0.00	1.00
Lane Grp Cap (c), veh/h	0	512	0	397	0	647	0	414
V/C Ratio (X)	0.00	0.17	0.00	0.28	0.00	0.69	0.00	0.47
Avail Cap (c_a), veh/h	0	512	0	417	0	647	0	414
Upstream Filter (I)	0.00	1.00	0.00	0.87	0.00	1.00	0.00	1.00
Uniform Delay (d1), s/veh	0.0	23.7	0.0	31.2	0.0	27.3	0.0	32.3
Incr Delay (d2), s/veh	0.0	0.7	0.0	0.3	0.0	5.9	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
Control Delay (d), s/veh	0.0	24.4	0.0	31.6	0.0	33.1	0.0	33.1
1st-Term Q (Q1), veh/ln	0.0	1.8	0.0	2.7	0.0	11.5	0.0	5.0
2nd-Term Q (Q2), veh/ln	0.0	0.1	0.0	0.0	0.0	1.1	0.0	0.1
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	1.00	0.00	1.00	0.00	1.00	0.00	1.00
%ile Back of Q (50%), veh/ln	0.0	1.9	0.0	2.8	0.0	12.5	0.0	5.1
%ile Storage Ratio (RQ%)	0.00	0.12	0.00	0.23	0.00	1.17	0.00	1.21
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Intersection Summary

HCM 2010 Ctrl Delay	36.9
HCM 2010 LOS	D

Notes

* HCM 2010 computational engine requires equal clearance times for the phases crossing the barrier.

MIDDAY PEAK HOUR
 EXISTING + PROJECT CONSTRUCTION

West Hollywood - Orange Grove Mixed Use Project - Traffic Impact Study
 5: Orange Grove Ave

12/18/2018

Intersection												
Int Delay, s/veh	0.5											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↑↓			↑↓				↑			↑
Traffic Vol, veh/h	0	901	32	0	998	48	0	0	33	0	0	52
Future Vol, veh/h	0	901	32	0	998	48	0	0	33	0	0	52
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	0	-	-	0
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	95	95	92	92	95	95	95	92	95	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	979	34	0	1085	52	0	0	35	0	0	57

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	-	0	0	-	-	0	-	-	507	-	-	569
Stage 1	-	-	-	-	-	-	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-	-	-	-	-	-	-
Critical Hdwy	-	-	-	-	-	-	-	-	6.94	-	-	6.94
Critical Hdwy Stg 1	-	-	-	-	-	-	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-	-	-	-	-	-	-
Follow-up Hdwy	-	-	-	-	-	-	-	-	3.32	-	-	3.32
Pot Cap-1 Maneuver	0	-	-	0	-	-	0	0	511	0	0	465
Stage 1	0	-	-	0	-	-	0	0	-	0	0	-
Stage 2	0	-	-	0	-	-	0	0	-	0	0	-
Platoon blocked, %	-	-	-	-	-	-	-	-	-	-	-	-
Mov Cap-1 Maneuver	-	-	-	-	-	-	-	-	511	-	-	465
Mov Cap-2 Maneuver	-	-	-	-	-	-	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0	0	12.6	13.8
HCM LOS			B	B

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBT	WBR	SBLn1
Capacity (veh/h)	511	-	-	-	-	465
HCM Lane V/C Ratio	0.068	-	-	-	-	0.122
HCM Control Delay (s)	12.6	-	-	-	-	13.8
HCM Lane LOS	B	-	-	-	-	B
HCM 95th %tile Q(veh)	0.2	-	-	-	-	0.4

MIDDAY PEAK HOUR
 EXISTING + PROJECT CONSTRUCTION

West Hollywood - Orange Grove Mixed Use Project - Traffic Impact Study
 6: Ogden Ave

12/18/2018

Intersection

Int Delay, s/veh 1.2

Movement EBL EBT WBT WBR SBL SBR

Lane Configurations		↑↑	↑↑		↑↑	
Traffic Vol, veh/h	48	898	1025	31	6	44
Future Vol, veh/h	48	898	1025	31	6	44
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	52	976	1114	34	7	48

Major/Minor Major1 Major2 Minor2

Conflicting Flow All	1148	0	-	0	1723	574
Stage 1	-	-	-	-	1131	-
Stage 2	-	-	-	-	592	-
Critical Hdwy	4.14	-	-	-	6.84	6.94
Critical Hdwy Stg 1	-	-	-	-	5.84	-
Critical Hdwy Stg 2	-	-	-	-	5.84	-
Follow-up Hdwy	2.22	-	-	-	3.52	3.32
Pot Cap-1 Maneuver	604	-	-	-	80	462
Stage 1	-	-	-	-	270	-
Stage 2	-	-	-	-	516	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	604	-	-	-	65	462
Mov Cap-2 Maneuver	-	-	-	-	65	-
Stage 1	-	-	-	-	219	-
Stage 2	-	-	-	-	516	-

Approach EB WB SB

HCM Control Delay, s	1.5	0	21.9
HCM LOS			C

Minor Lane/Major Mvmt EBL EBT WBT WBR SBLn1

Capacity (veh/h)	604	-	-	-	267
HCM Lane V/C Ratio	0.086	-	-	-	0.204
HCM Control Delay (s)	11.5	1	-	-	21.9
HCM Lane LOS	B	A	-	-	C
HCM 95th %tile Q(veh)	0.3	-	-	-	0.7

MIDDAY PEAK HOUR
 EXISTING + PROJECT CONSTRUCTION

Intersection						
Int Delay, s/veh	0.7					
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↑↑			↑↑	↑	
Traffic Vol, veh/h	905	15	31	1038	2	35
Future Vol, veh/h	905	15	31	1038	2	35
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	95	95	95	95	95	95
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	953	16	33	1093	2	37

Major/Minor	Major1	Major2	Minor1		
Conflicting Flow All	0	0	969	0	1574 485
Stage 1	-	-	-	-	961 -
Stage 2	-	-	-	-	613 -
Critical Hdwy	-	-	4.14	-	6.84 6.94
Critical Hdwy Stg 1	-	-	-	-	5.84 -
Critical Hdwy Stg 2	-	-	-	-	5.84 -
Follow-up Hdwy	-	-	2.22	-	3.52 3.32
Pot Cap-1 Maneuver	-	-	707	-	101 528
Stage 1	-	-	-	-	332 -
Stage 2	-	-	-	-	503 -
Platoon blocked, %	-	-	-	-	-
Mov Cap-1 Maneuver	-	-	707	-	89 528
Mov Cap-2 Maneuver	-	-	-	-	89 -
Stage 1	-	-	-	-	332 -
Stage 2	-	-	-	-	443 -

Approach	EB	WB	NB
HCM Control Delay, s	0	0.9	14.5
HCM LOS			B

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	417	-	-	707	-
HCM Lane V/C Ratio	0.093	-	-	0.046	-
HCM Control Delay (s)	14.5	-	-	10.3	0.6
HCM Lane LOS	B	-	-	B	A
HCM 95th %tile Q(veh)	0.3	-	-	0.1	-

MIDDAY PEAK HOUR
EXISTING + PROJECT CONSTRUCTION

West Hollywood - Orange Grove Mixed Use Project - Traffic Impact Study
 7: Santa Monica Blvd & Genesse Ave

12/18/2018



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (vph)	38	883	1028	22	23	47
Future Volume (vph)	38	883	1028	22	23	47
Ideal Flow (vphpl)	1620	1620	1620	1620	1620	1620
Total Lost time (s)	4.5	5.6	5.6		4.6	
Lane Util. Factor	1.00	0.95	0.95		1.00	
Frt	1.00	1.00	1.00		0.91	
Flt Protected	0.95	1.00	1.00		0.98	
Satd. Flow (prot)	1509	3018	3008		1421	
Flt Permitted	0.21	1.00	1.00		0.98	
Satd. Flow (perm)	335	3018	3008		1421	
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	41	960	1117	24	25	51
RTOR Reduction (vph)	0	0	1	0	43	0
Lane Group Flow (vph)	41	960	1140	0	33	0
Turn Type	pm+pt	NA	NA		Prot	
Protected Phases	5	2	6		4	
Permitted Phases	2					
Actuated Green, G (s)	75.8	72.8	72.8		15.6	
Effective Green, g (s)	74.8	72.3	72.3		16.1	
Actuated g/C Ratio	0.71	0.68	0.68		0.15	
Clearance Time (s)	4.0	5.1	5.1		5.1	
Vehicle Extension (s)	1.0	3.0	3.0		3.0	
Lane Grp Cap (vph)	265	2066	2059		216	
v/s Ratio Prot	c0.00	0.32	c0.38		c0.02	
v/s Ratio Perm	0.11					
v/c Ratio	0.15	0.46	0.55		0.15	
Uniform Delay, d1	5.3	7.7	8.5		38.8	
Progression Factor	0.28	0.20	1.00		1.00	
Incremental Delay, d2	0.1	0.7	1.1		0.3	
Delay (s)	1.5	2.2	9.5		39.2	
Level of Service	A	A	A		D	
Approach Delay (s)		2.2	9.5		39.2	
Approach LOS		A	A		D	

Intersection Summary

HCM 2000 Control Delay	7.2	HCM 2000 Level of Service	A
HCM 2000 Volume to Capacity ratio	0.47		
Actuated Cycle Length (s)	105.6	Sum of lost time (s)	14.7
Intersection Capacity Utilization	58.0%	ICU Level of Service	B
Analysis Period (min)	15		

c Critical Lane Group

MIDDAY PEAK HOUR
 EXISTING + PROJECT CONSTRUCTION

West Hollywood - Orange Grove Mixed Use Project - Traffic Impact Study
 8: Romaine St & Fairfax Ave

12/18/2018

Intersection												
Int Delay, s/veh	2.9											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↔			↔	↗	↖	↗	↖	↗	↖	↗
Traffic Vol, veh/h	8	2	41	13	6	45	27	953	16	49	915	47
Future Vol, veh/h	8	2	41	13	6	45	27	953	16	49	915	47
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	0	90	-	0	102	-	0
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	9	2	45	14	7	49	29	1036	17	53	995	51

Major/Minor	Minor2		Minor1		Major1		Major2					
Conflicting Flow All	1681	2212	498	1699	2246	518	1046	0	0	1053	0	0
Stage 1	1101	1101	-	1094	1094	-	-	-	-	-	-	-
Stage 2	580	1111	-	605	1152	-	-	-	-	-	-	-
Critical Hdwy	7.54	6.54	6.94	7.54	6.54	6.94	4.14	-	-	4.14	-	-
Critical Hdwy Stg 1	6.54	5.54	-	6.54	5.54	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.54	5.54	-	6.54	5.54	-	-	-	-	-	-	-
Follow-up Hdwy	3.52	4.02	3.32	3.52	4.02	3.32	2.22	-	-	2.22	-	-
Pot Cap-1 Maneuver	62	43	518	60	41	502	661	-	-	657	-	-
Stage 1	226	286	-	228	288	-	-	-	-	-	-	-
Stage 2	467	283	-	451	270	-	-	-	-	-	-	-
Platoon blocked, %								-	-	-	-	-
Mov Cap-1 Maneuver	44	38	518	48	36	502	661	-	-	657	-	-
Mov Cap-2 Maneuver	44	38	-	48	36	-	-	-	-	-	-	-
Stage 1	216	263	-	218	275	-	-	-	-	-	-	-
Stage 2	393	271	-	376	248	-	-	-	-	-	-	-

Approach	EB		WB		NB		SB	
HCM Control Delay, s	38.1		53.6		0.3		0.5	
HCM LOS	E		F					






















Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	WBLn2	SBL	SBT	SBR
Capacity (veh/h)	661	-	-	163	43	502	657	-	-
HCM Lane V/C Ratio	0.044	-	-	0.34	0.48	0.097	0.081	-	-
HCM Control Delay (s)	10.7	-	-	38.1	150	12.9	11	-	-
HCM Lane LOS	B	-	-	E	F	B	B	-	-
HCM 95th %tile Q(veh)	0.1	-	-	1.4	1.7	0.3	0.3	-	-

MIDDAY PEAK HOUR
 EXISTING + PROJECT CONSTRUCTION

West Hollywood - Orange Grove Mixed Use Project - Traffic Impact Study

1: Fairfax Ave & Fountain Ave

12/18/2018

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	251	1264	43	85	835	100	50	1065	169	54	741	188
Future Volume (veh/h)	251	1264	43	85	835	100	50	1065	169	54	741	188
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q, 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	1588	1588	1620	1588	1588	1620	1588	1588	1620	1588	1588	1588
Adj Flow Rate, veh/h	264	1331	45	89	879	105	53	1121	178	57	780	198
Adj No. of Lanes	1	2	0	1	2	0	1	2	0	1	2	1
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Opposing Right Turn Influence	Yes			Yes			Yes			Yes		
Cap, veh/h	298	1790	60	174	1632	195	133	904	143	65	1045	438
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
Prop Arrive On Green	0.60	0.60	0.58	0.60	0.60	0.58	0.35	0.35	0.35	0.35	0.35	0.32
Ln Grp Delay, s/veh	62.0	19.8	19.8	41.9	14.1	14.2	55.4	157.8	160.4	133.7	36.5	32.7
Ln Grp LOS	E	B	B	D	B	B	E	F	F	F	D	C
Approach Vol, veh/h		1640			1073			1352			1035	
Approach Delay, s/veh		26.6			16.5			155.0			41.2	
Approach LOS		C			B			F			D	
Timer:		1	2	3	4	5	6	7	8			
Assigned Phs			2		4		6		8			
Case No			6.0		6.0		5.0		6.0			
Phs Duration (G+Y+Rc), s			41.0		69.0		41.0		69.0			
Change Period (Y+Rc), s			* 5.3		* 5.3		* 5.3		* 5.3			
Max Green (Gmax), s			* 36		* 64		* 36		* 64			
Max Allow Headway (MAH), s			7.3		7.5		7.3		7.5			
Max Q Clear (g_c+I1), s			40.1		68.1		40.1		60.9			
Green Ext Time (g_e), s			0.0		0.0		0.0		2.8			
Prob of Phs Call (p_c)			1.00		1.00		1.00		1.00			
Prob of Max Out (p_x)			0.00		1.00		0.00		1.00			
Left-Turn Movement Data												
Assigned Mvmt			5		7		1		3			
Mvmt Sat Flow, veh/h			573		570		423		393			
Through Movement Data												
Assigned Mvmt			2		4		6		8			
Mvmt Sat Flow, veh/h			2611		2979		3018		2715			
Right-Turn Movement Data												
Assigned Mvmt			12		14		16		18			
Mvmt Sat Flow, veh/h			413		101		1350		324			
Left Lane Group Data												
Assigned Mvmt		0	5	0	7	0	1	0	3			
Lane Assignment												

PM PEAK HOUR
EXISTING + PROJECT CONSTRUCTION

West Hollywood - Orange Grove Mixed Use Project - Traffic Impact Study

1: Fairfax Ave & Fountain Ave

12/18/2018

Lanes in Grp	0	1	0	1	0	1	0	1
Grp Vol (v), veh/h	0	53	0	264	0	57	0	89
Grp Sat Flow (s), veh/h/ln	0	573	0	570	0	423	0	393
Q Serve Time (g_s), s	0.0	9.9	0.0	44.9	0.0	0.0	0.0	23.3
Cycle Q Clear Time (g_c), s	0.0	34.9	0.0	66.1	0.0	38.1	0.0	58.9
Perm LT Sat Flow (s_l), veh/h/ln	0	573	0	570	0	423	0	393
Shared LT Sat Flow (s_sh), veh/h/ln	0	0	0	0	0	0	0	0
Perm LT Eff Green (g_p), s	0.0	38.1	0.0	66.1	0.0	38.1	0.0	66.1
Perm LT Serve Time (g_u), s	0.0	13.0	0.0	44.9	0.0	0.0	0.0	30.5
Perm LT Q Serve Time (g_ps), s	0.0	9.9	0.0	44.9	0.0	0.0	0.0	23.3
Time to First Blk (g_f), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Serve Time pre Blk (g_fs), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prop LT Inside Lane (P_L)	0.00	1.00	0.00	1.00	0.00	1.00	0.00	1.00
Lane Grp Cap (c), veh/h	0	133	0	298	0	65	0	174
V/C Ratio (X)	0.00	0.40	0.00	0.89	0.00	0.87	0.00	0.51
Avail Cap (c_a), veh/h	0	133	0	298	0	65	0	174
Upstream Filter (I)	0.00	0.97	0.00	1.00	0.00	1.00	0.00	1.00
Uniform Delay (d1), s/veh	0.0	47.1	0.0	35.2	0.0	55.0	0.0	37.1
Incr Delay (d2), s/veh	0.0	8.3	0.0	26.8	0.0	78.7	0.0	4.8
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	55.4	0.0	62.0	0.0	133.7	0.0	41.9
1st-Term Q (Q1), veh/ln	0.0	1.6	0.0	8.0	0.0	1.7	0.0	2.5
2nd-Term Q (Q2), veh/ln	0.0	0.3	0.0	2.2	0.0	1.4	0.0	0.2
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	1.00	0.00	1.00	0.00	1.00	0.00	1.00
%ile Back of Q (50%), veh/ln	0.0	1.9	0.0	10.2	0.0	3.2	0.0	2.8
%ile Storage Ratio (RQ%)	0.00	0.52	0.00	6.49	0.00	0.40	0.00	0.76
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Middle Lane Group Data

Assigned Mvmt	0	2	0	4	0	6	0	8
Lane Assignment		T		T		T		T
Lanes in Grp	0	1	0	1	0	2	0	1
Grp Vol (v), veh/h	0	646	0	674	0	780	0	488
Grp Sat Flow (s), veh/h/ln	0	1509	0	1509	0	1509	0	1509
Q Serve Time (g_s), s	0.0	38.1	0.0	35.4	0.0	25.1	0.0	21.0
Cycle Q Clear Time (g_c), s	0.0	38.1	0.0	35.4	0.0	25.1	0.0	21.0
Lane Grp Cap (c), veh/h	0	523	0	907	0	1045	0	907
V/C Ratio (X)	0.00	1.24	0.00	0.74	0.00	0.75	0.00	0.54
Avail Cap (c_a), veh/h	0	523	0	907	0	1045	0	907
Upstream Filter (I)	0.00	0.97	0.00	1.00	0.00	1.00	0.00	1.00
Uniform Delay (d1), s/veh	0.0	35.9	0.0	15.8	0.0	31.7	0.0	13.0
Incr Delay (d2), s/veh	0.0	121.8	0.0	4.0	0.0	4.9	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
Control Delay (d), s/veh	0.0	157.8	0.0	19.8	0.0	36.5	0.0	14.1
1st-Term Q (Q1), veh/ln	0.0	15.8	0.0	14.6	0.0	10.4	0.0	8.7

PM PEAK HOUR

EXISTING + PROJECT CONSTRUCTION

West Hollywood - Orange Grove Mixed Use Project - Traffic Impact Study
 1: Fairfax Ave & Fountain Ave

12/18/2018

2nd-Term Q (Q2), veh/ln	0.0	17.7	0.0	1.0	0.0	0.7	0.0	0.3
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	1.00	0.00	1.00	0.00	1.00	0.00	1.00
%ile Back of Q (50%), veh/ln	0.0	33.5	0.0	15.6	0.0	11.1	0.0	9.0
%ile Storage Ratio (RQ%)	0.00	0.93	0.00	1.12	0.00	0.23	0.00	0.82
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	31.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.3	0.0	0.0	0.0	0.0	0.0	0.0

Right Lane Group Data

Assigned Mvmt	0	12	0	14	0	16	0	18
Lane Assignment		T+R		T+R		R		T+R
Lanes in Grp	0	1	0	1	0	1	0	1
Grp Vol (v), veh/h	0	653	0	702	0	198	0	496
Grp Sat Flow (s), veh/h/ln	0	1515	0	1570	0	1350	0	1531
Q Serve Time (g_s), s	0.0	38.1	0.0	35.6	0.0	12.8	0.0	21.2
Cycle Q Clear Time (g_c), s	0.0	38.1	0.0	35.6	0.0	12.8	0.0	21.2
Prot RT Sat Flow (s_R), veh/h/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prot RT Eff Green (g_R), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prop RT Outside Lane (P_R)	0.00	0.27	0.00	0.06	0.00	1.00	0.00	0.21
Lane Grp Cap (c), veh/h	0	525	0	944	0	438	0	920
V/C Ratio (X)	0.00	1.24	0.00	0.74	0.00	0.45	0.00	0.54
Avail Cap (c_a), veh/h	0	525	0	944	0	438	0	920
Upstream Filter (I)	0.00	0.97	0.00	1.00	0.00	1.00	0.00	1.00
Uniform Delay (d1), s/veh	0.0	36.0	0.0	15.9	0.0	29.4	0.0	13.1
Incr Delay (d2), s/veh	0.0	124.4	0.0	3.8	0.0	3.3	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
Control Delay (d), s/veh	0.0	160.4	0.0	19.8	0.0	32.7	0.0	14.2
1st-Term Q (Q1), veh/ln	0.0	15.9	0.0	15.2	0.0	4.7	0.0	8.9
2nd-Term Q (Q2), veh/ln	0.0	18.1	0.0	1.0	0.0	0.4	0.0	0.3
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	1.00	0.00	1.00	0.00	1.00	0.00	1.00
%ile Back of Q (50%), veh/ln	0.0	34.0	0.0	16.2	0.0	5.1	0.0	9.1
%ile Storage Ratio (RQ%)	0.00	0.95	0.00	1.17	0.00	0.11	0.00	0.84
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	31.9	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.3	0.0	0.0	0.0	0.0	0.0	0.0

Intersection Summary

HCM 2010 Ctrl Delay	61.5
HCM 2010 LOS	E

Notes

* HCM 2010 computational engine requires equal clearance times for the phases crossing the barrier.

PM PEAK HOUR
 EXISTING + PROJECT CONSTRUCTION

West Hollywood - Orange Grove Mixed Use Project - Traffic Impact Study

2: Orange Grove Ave

12/18/2018



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕↕			↕↕			↕			↕	
Traffic Volume (veh/h)	43	1362	38	47	1030	16	5	8	61	2	4	28
Future Volume (Veh/h)	43	1362	38	47	1030	16	5	8	61	2	4	28
Sign Control		Free			Free			Stop			Stop	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.95	0.92	0.92	0.92	0.92	0.95	0.92	0.95	0.92	0.95	0.95	0.95
Hourly flow rate (vph)	45	1480	41	51	1120	17	5	8	66	2	4	29
Pedestrians												
Lane Width (ft)												
Walking Speed (ft/s)												
Percent Blockage												
Right turn flare (veh)												
Median type		None			None							
Median storage (veh)												
Upstream signal (ft)		377			1010							
pX, platoon unblocked				0.67			0.67	0.67	0.67	0.67	0.67	
vC, conflicting volume	1137			1521			2284	2830	760	2130	2842	568
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	1137			793			1931	2746	0	1702	2763	568
tC, single (s)	4.1			4.1			7.5	6.5	6.9	7.5	6.5	6.9
tC, 2 stage (s)												
tF (s)	2.2			2.2			3.5	4.0	3.3	3.5	4.0	3.3
p0 queue free %	93			91			68	28	91	85	63	94
cM capacity (veh/h)	610			552			16	11	727	13	11	466

Direction, Lane #	EB 1	EB 2	WB 1	WB 2	NB 1	SB 1
Volume Total	785	781	611	577	79	35
Volume Left	45	0	51	0	5	2
Volume Right	0	41	0	17	66	29
cSH	610	1700	552	1700	70	60
Volume to Capacity	0.07	0.46	0.09	0.34	1.13	0.58
Queue Length 95th (ft)	6	0	8	0	151	60
Control Delay (s)	2.1	0.0	2.6	0.0	250.4	128.0
Lane LOS	A		A		F	F
Approach Delay (s)	1.0		1.3		250.4	128.0
Approach LOS					F	F

Intersection Summary

Average Delay	9.6
Intersection Capacity Utilization	95.8%
ICU Level of Service	F
Analysis Period (min)	15

PM PEAK HOUR
EXISTING + PROJECT CONSTRUCTION

West Hollywood - Orange Grove Mixed Use Project - Traffic Impact Study
 3: Ogden Ave

12/18/2018

Intersection

Int Delay, s/veh 133.9

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↔			↔			↔			↔	
Traffic Vol, veh/h	38	1441	24	32	972	6	9	19	151	2	1	11
Future Vol, veh/h	38	1441	24	32	972	6	9	19	151	2	1	11
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	95	92	92	92	92	95	92	95	92	95	95	95
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	40	1566	26	35	1057	6	10	20	164	2	1	12

Major/Minor	Major1	Major2	Minor1	Minor2
Conflicting Flow All	1063	0	0	1592
Stage 1	-	-	-	-
Stage 2	-	-	-	-
Critical Hdwy	4.14	-	-	4.14
Critical Hdwy Stg 1	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-
Follow-up Hdwy	2.22	-	-	2.22
Pot Cap-1 Maneuver	651	-	-	408
Stage 1	-	-	-	-
Stage 2	-	-	-	-
Platoon blocked, %	-	-	-	-
Mov Cap-1 Maneuver	651	-	-	408
Mov Cap-2 Maneuver	-	-	-	-
Stage 1	-	-	-	-
Stage 2	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	3	1.8	\$ 1993.7	
HCM LOS			F	-

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	39	651	-	-	408	-	-	-
HCM Lane V/C Ratio	4.972	0.061	-	-	0.085	-	-	-
HCM Control Delay (s)	\$ 1993.7	10.9	2.8	-	14.6	1.4	-	-
HCM Lane LOS	F	B	A	-	B	A	-	-
HCM 95th %tile Q(veh)	22.6	0.2	-	-	0.3	-	-	-
























Notes

-: Volume exceeds capacity \$: Delay exceeds 300s +: Computation Not Defined *: All major volume in platoon

PM PEAK HOUR
 EXISTING + PROJECT CONSTRUCTION

West Hollywood - Orange Grove Mixed Use Project - Traffic Impact Study
 4: Fairfax Ave & Santa Monica Blvd

12/18/2018

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	315	1061	88	184	839	97	102	844	241	63	740	93
Future Volume (veh/h)	315	1061	88	184	839	97	102	844	241	63	740	93
Number	5	2	12	1	6	16	3	8	18	7	4	14
Initial Q, 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	1588	1588	1588	1588	1588	1620	1588	1588	1588	1588	1588	1588
Adj Flow Rate, veh/h	332	1117	93	194	883	102	107	888	254	66	779	98
Adj No. of Lanes	1	2	1	1	2	0	1	2	1	1	2	1
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Opposing Right Turn Influence	Yes			Yes			Yes			Yes		
Cap, veh/h	224	1200	531	203	1162	134	153	950	425	106	881	388
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
Prop Arrive On Green	0.06	0.40	0.39	0.09	0.43	0.42	0.05	0.31	0.31	0.03	0.29	0.29
Ln Grp Delay, s/veh	275.6	47.1	23.4	62.5	36.2	36.2	47.3	54.1	35.6	43.5	47.3	31.8
Ln Grp LOS	F	D	C	E	D	D	D	D	D	D	D	C
Approach Vol, veh/h		1542			1179			1249			943	
Approach Delay, s/veh		94.8			40.5			49.8			45.4	
Approach LOS		F			D			D			D	
Timer:		1	2	3	4	5	6	7	8			
Assigned Phs		1	2	3	4	5	6	7	8			
Case No		1.1	3.0	1.1	3.0	1.1	4.0	1.1	3.0			
Phs Duration (G+Y+Rc), s		15.3	50.3	11.0	38.4	12.0	53.6	8.4	41.0			
Change Period (Y+Rc), s		* 4	5.1	* 4	* 5.3	* 4	5.1	* 4	* 5.3			
Max Green (Gmax), s		* 17	37.1	* 7	* 36	* 8	46.1	* 8	* 35			
Max Allow Headway (MAH), s		3.8	5.2	3.8	5.1	3.8	5.2	3.8	5.1			
Max Q Clear (g_c+I1), s		11.0	42.7	7.5	30.3	8.5	33.6	4.9	34.9			
Green Ext Time (g_e), s		0.3	0.0	0.0	2.8	0.0	10.0	0.0	0.0			
Prob of Phs Call (p_c)		1.00	1.00	0.97	1.00	1.00	1.00	0.88	1.00			
Prob of Max Out (p_x)		0.19	1.00	1.00	1.00	1.00	0.85	1.00	1.00			
Left-Turn Movement Data												
Assigned Mvmt		1		3		5		7				
Mvmt Sat Flow, veh/h		1513		1513		1513		1513				
Through Movement Data												
Assigned Mvmt			2		4		6		8			
Mvmt Sat Flow, veh/h			3018		3018		2727		3018			
Right-Turn Movement Data												
Assigned Mvmt			12		14		16		18			
Mvmt Sat Flow, veh/h			1350		1350		315		1350			
Left Lane Group Data												
Assigned Mvmt		1	0	3	0	5	0	7	0			
Lane Assignment		(Pr/Pm)		(Pr/Pm)		(Pr/Pm)		(Pr/Pm)				

PM PEAK HOUR
 EXISTING + PROJECT CONSTRUCTION

West Hollywood - Orange Grove Mixed Use Project - Traffic Impact Study
 4: Fairfax Ave & Santa Monica Blvd

12/18/2018

Lanes in Grp	1	0	1	0	1	0	1	0
Grp Vol (v), veh/h	194	0	107	0	332	0	66	0
Grp Sat Flow (s), veh/h/ln	1513	0	1513	0	1513	0	1513	0
Q Serve Time (g_s), s	9.0	0.0	5.5	0.0	6.5	0.0	2.9	0.0
Cycle Q Clear Time (g_c), s	9.0	0.0	5.5	0.0	6.5	0.0	2.9	0.0
Perm LT Sat Flow (s_l), veh/h/ln	460	0	630	0	569	0	491	0
Shared LT Sat Flow (s_sh), veh/h/ln	0	0	0	0	0	0	0	0
Perm LT Eff Green (g_p), s	43.7	0.0	31.6	0.0	43.7	0.0	31.6	0.0
Perm LT Serve Time (g_u), s	3.0	0.0	3.3	0.0	15.4	0.0	1.3	0.0
Perm LT Q Serve Time (g_ps), s	3.0	0.0	3.3	0.0	15.4	0.0	1.3	0.0
Time to First Blk (g_f), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Serve Time pre Blk (g_fs), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prop LT Inside Lane (P_L)	1.00	0.00	1.00	0.00	1.00	0.00	1.00	0.00
Lane Grp Cap (c), veh/h	203	0	153	0	224	0	106	0
V/C Ratio (X)	0.95	0.00	0.70	0.00	1.48	0.00	0.62	0.00
Avail Cap (c_a), veh/h	279	0	153	0	224	0	154	0
Upstream Filter (I)	1.00	0.00	1.00	0.00	1.00	0.00	0.87	0.00
Uniform Delay (d1), s/veh	27.1	0.0	34.0	0.0	37.0	0.0	38.4	0.0
Incr Delay (d2), s/veh	35.4	0.0	13.3	0.0	238.6	0.0	5.1	0.0
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	62.5	0.0	47.3	0.0	275.6	0.0	43.5	0.0
1st-Term Q (Q1), veh/ln	3.8	0.0	1.1	0.0	4.4	0.0	0.9	0.0
2nd-Term Q (Q2), veh/ln	2.0	0.0	0.6	0.0	14.9	0.0	0.2	0.0
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	1.00	0.00	1.00	0.00	1.00	0.00	1.00	0.00
%ile Back of Q (50%), veh/ln	5.8	0.0	1.7	0.0	19.3	0.0	1.0	0.0
%ile Storage Ratio (RQ%)	0.78	0.00	0.34	0.00	2.96	0.00	0.24	0.00
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	26.9	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.4	0.0	0.0	0.0
Middle Lane Group Data								
Assigned Mvmt	0	2	0	4	0	6	0	8
Lane Assignment		T		T		T		T
Lanes in Grp	0	2	0	2	0	1	0	2
Grp Vol (v), veh/h	0	1117	0	779	0	489	0	888
Grp Sat Flow (s), veh/h/ln	0	1509	0	1509	0	1509	0	1509
Q Serve Time (g_s), s	0.0	40.7	0.0	28.3	0.0	31.6	0.0	32.9
Cycle Q Clear Time (g_c), s	0.0	40.7	0.0	28.3	0.0	31.6	0.0	32.9
Lane Grp Cap (c), veh/h	0	1200	0	881	0	643	0	950
V/C Ratio (X)	0.00	0.93	0.00	0.88	0.00	0.76	0.00	0.94
Avail Cap (c_a), veh/h	0	1200	0	945	0	643	0	950
Upstream Filter (I)	0.00	1.00	0.00	0.87	0.00	1.00	0.00	1.00
Uniform Delay (d1), s/veh	0.0	33.1	0.0	38.8	0.0	28.0	0.0	38.3
Incr Delay (d2), s/veh	0.0	13.9	0.0	8.5	0.0	8.2	0.0	15.9
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	47.1	0.0	47.3	0.0	36.2	0.0	54.1
1st-Term Q (Q1), veh/ln	0.0	16.9	0.0	11.8	0.0	13.2	0.0	13.7

PM PEAK HOUR
 EXISTING + PROJECT CONSTRUCTION

West Hollywood - Orange Grove Mixed Use Project - Traffic Impact Study
 4: Fairfax Ave & Santa Monica Blvd

12/18/2018

2nd-Term Q (Q2), veh/ln	0.0	2.3	0.0	1.0	0.0	1.5	0.0	2.1
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	1.00	0.00	1.00	0.00	1.00	0.00	1.00
%ile Back of Q (50%), veh/ln	0.0	19.2	0.0	12.8	0.0	14.6	0.0	15.8
%ile Storage Ratio (RQ%)	0.00	1.24	0.00	1.04	0.00	1.37	0.00	0.59
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Right Lane Group Data

Assigned Mvmt	0	12	0	14	0	16	0	18
Lane Assignment		R		R		T+R		R
Lanes in Grp	0	1	0	1	0	1	0	1
Grp Vol (v), veh/h	0	93	0	98	0	496	0	254
Grp Sat Flow (s), veh/h/ln	0	1350	0	1350	0	1533	0	1350
Q Serve Time (g_s), s	0.0	5.2	0.0	6.4	0.0	31.6	0.0	18.3
Cycle Q Clear Time (g_c), s	0.0	5.2	0.0	6.4	0.0	31.6	0.0	18.3
Prot RT Sat Flow (s_R), veh/h/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prot RT Eff Green (g_R), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prop RT Outside Lane (P_R)	0.00	1.00	0.00	1.00	0.00	0.21	0.00	1.00
Lane Grp Cap (c), veh/h	0	531	0	388	0	653	0	425
V/C Ratio (X)	0.00	0.18	0.00	0.25	0.00	0.76	0.00	0.60
Avail Cap (c_a), veh/h	0	531	0	417	0	653	0	425
Upstream Filter (I)	0.00	1.00	0.00	0.87	0.00	1.00	0.00	1.00
Uniform Delay (d1), s/veh	0.0	22.7	0.0	31.5	0.0	28.0	0.0	33.3
Incr Delay (d2), s/veh	0.0	0.7	0.0	0.3	0.0	8.1	0.0	2.3
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	23.4	0.0	31.8	0.0	36.2	0.0	35.6
1st-Term Q (Q1), veh/ln	0.0	1.9	0.0	2.4	0.0	13.4	0.0	6.8
2nd-Term Q (Q2), veh/ln	0.0	0.1	0.0	0.0	0.0	1.5	0.0	0.3
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	1.00	0.00	1.00	0.00	1.00	0.00	1.00
%ile Back of Q (50%), veh/ln	0.0	2.0	0.0	2.4	0.0	14.9	0.0	7.1
%ile Storage Ratio (RQ%)	0.00	0.13	0.00	0.20	0.00	1.39	0.00	1.70
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Intersection Summary

HCM 2010 Ctrl Delay	60.9
HCM 2010 LOS	E

Notes

* HCM 2010 computational engine requires equal clearance times for the phases crossing the barrier.

PM PEAK HOUR
 EXISTING + PROJECT CONSTRUCTION

West Hollywood - Orange Grove Mixed Use Project - Traffic Impact Study
 5: Orange Grove Ave

12/18/2018

Intersection												
Int Delay, s/veh	0.8											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↑↓			↑↓				↑			↑
Traffic Vol, veh/h	0	1353	35	0	1008	62	0	0	58	0	0	68
Future Vol, veh/h	0	1353	35	0	1008	62	0	0	58	0	0	68
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	0	-	-	0
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	95	95	92	92	95	95	95	92	95	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	1471	37	0	1096	67	0	0	61	0	0	74

Major/Minor	Major1		Major2		Minor1		Minor2					
Conflicting Flow All	-	0	0	-	-	0	-	-	754	-	-	582
Stage 1	-	-	-	-	-	-	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-	-	-	-	-	-	-
Critical Hdwy	-	-	-	-	-	-	-	-	6.94	-	-	6.94
Critical Hdwy Stg 1	-	-	-	-	-	-	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-	-	-	-	-	-	-
Follow-up Hdwy	-	-	-	-	-	-	-	-	3.32	-	-	3.32
Pot Cap-1 Maneuver	0	-	-	0	-	-	0	0	352	0	0	456
Stage 1	0	-	-	0	-	-	0	0	-	0	0	-
Stage 2	0	-	-	0	-	-	0	0	-	0	0	-
Platoon blocked, %	-	-	-	-	-	-	-	-	-	-	-	-
Mov Cap-1 Maneuver	-	-	-	-	-	-	-	-	352	-	-	456
Mov Cap-2 Maneuver	-	-	-	-	-	-	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0	0	17.4	14.4
HCM LOS			C	B

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBT	WBR	SBLn1
Capacity (veh/h)	352	-	-	-	-	456
HCM Lane V/C Ratio	0.173	-	-	-	-	0.162
HCM Control Delay (s)	17.4	-	-	-	-	14.4
HCM Lane LOS	C	-	-	-	-	B
HCM 95th %tile Q(veh)	0.6	-	-	-	-	0.6

PM PEAK HOUR
 EXISTING + PROJECT CONSTRUCTION

West Hollywood - Orange Grove Mixed Use Project - Traffic Impact Study
 6: Ogden Ave

12/18/2018

Intersection						
Int Delay, s/veh	3.7					
Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		↑↑	↑↑		↑↑	
Traffic Vol, veh/h	131	1332	1001	49	11	48
Future Vol, veh/h	131	1332	1001	49	11	48
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	142	1448	1088	53	12	52

Major/Minor	Major1	Major2	Minor2
Conflicting Flow All	1141	0	0 2123 571
Stage 1	-	-	- 1115 -
Stage 2	-	-	- 1008 -
Critical Hdwy	4.14	-	- 6.84 6.94
Critical Hdwy Stg 1	-	-	- 5.84 -
Critical Hdwy Stg 2	-	-	- 5.84 -
Follow-up Hdwy	2.22	-	- 3.52 3.32
Pot Cap-1 Maneuver	608	-	- 43 464
Stage 1	-	-	- 275 -
Stage 2	-	-	- 313 -
Platoon blocked, %		-	-
Mov Cap-1 Maneuver	608	-	- 0 464
Mov Cap-2 Maneuver	-	-	- 0 -
Stage 1	-	-	- 0 -
Stage 2	-	-	- 313 -

Approach	EB	WB	SB
HCM Control Delay, s	6	0	14
HCM LOS			B

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	608	-	-	-	464
HCM Lane V/C Ratio	0.234	-	-	-	0.138
HCM Control Delay (s)	12.7	5.3	-	-	14
HCM Lane LOS	B	A	-	-	B
HCM 95th %tile Q(veh)	0.9	-	-	-	0.5

PM PEAK HOUR
 EXISTING + PROJECT CONSTRUCTION

Intersection						
Int Delay, s/veh	1.9					
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↑↑			↑↑	↑	
Traffic Vol, veh/h	1381	30	29	1036	5	108
Future Vol, veh/h	1381	30	29	1036	5	108
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	95	95	95	95	95	95
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	1454	32	31	1091	5	114
Major/Minor	Major1	Major2	Minor1			
Conflicting Flow All	0	0	1486	0	2078	743
Stage 1	-	-	-	-	1470	-
Stage 2	-	-	-	-	608	-
Critical Hdwy	-	-	4.14	-	6.84	6.94
Critical Hdwy Stg 1	-	-	-	-	5.84	-
Critical Hdwy Stg 2	-	-	-	-	5.84	-
Follow-up Hdwy	-	-	2.22	-	3.52	3.32
Pot Cap-1 Maneuver	-	-	448	-	46	358
Stage 1	-	-	-	-	178	-
Stage 2	-	-	-	-	506	-
Platoon blocked, %	-	-	-	-	-	-
Mov Cap-1 Maneuver	-	-	448	-	38	358
Mov Cap-2 Maneuver	-	-	-	-	38	-
Stage 1	-	-	-	-	178	-
Stage 2	-	-	-	-	417	-
Approach	EB	WB	NB			
HCM Control Delay, s	0	1.4	29.8			
HCM LOS			D			
Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT	
Capacity (veh/h)	261	-	-	448	-	
HCM Lane V/C Ratio	0.456	-	-	0.068	-	
HCM Control Delay (s)	29.8	-	-	13.6	1.1	
HCM Lane LOS	D	-	-	B	A	
HCM 95th %tile Q(veh)	2.2	-	-	0.2	-	

PM PEAK HOUR

EXISTING + PROJECT CONSTRUCTION

West Hollywood - Orange Grove Mixed Use Project - Traffic Impact Study
 442: Genesee Ave & Santa Monica Blvd

12/18/2018



Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↑↑		↙	↑↑	↘	
Traffic Volume (vph)	1304	15	43	1060	42	64
Future Volume (vph)	1304	15	43	1060	42	64
Ideal Flow (vphpl)	1620	1620	1620	1620	1620	1620
Total Lost time (s)	5.6		4.5	5.6	3.5	
Lane Util. Factor	0.95		1.00	0.95	1.00	
Frt	1.00		1.00	1.00	0.92	
Flt Protected	1.00		0.95	1.00	0.98	
Satd. Flow (prot)	3013		1509	3018	1430	
Flt Permitted	1.00		0.14	1.00	0.98	
Satd. Flow (perm)	3013		218	3018	1430	
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	1417	16	47	1152	46	70
RTOR Reduction (vph)	1	0	0	0	54	0
Lane Group Flow (vph)	1432	0	47	1152	62	0
Turn Type	NA		pm+pt	NA	Prot	
Protected Phases	2		1	6	8	
Permitted Phases			6			
Actuated Green, G (s)	71.3		74.5	70.0	16.7	
Effective Green, g (s)	70.8		73.5	69.5	17.2	
Actuated g/C Ratio	0.67		0.70	0.66	0.16	
Clearance Time (s)	5.1		4.0	5.1	4.0	
Vehicle Extension (s)	3.0		3.0	3.0	3.0	
Lane Grp Cap (vph)	2020		200	1986	232	
v/s Ratio Prot	c0.48		c0.01	0.38	c0.04	
v/s Ratio Perm			0.15			
v/c Ratio	0.71		0.23	0.58	0.27	
Uniform Delay, d1	10.9		6.9	10.0	38.7	
Progression Factor	1.00		0.26	0.18	1.00	
Incremental Delay, d2	2.1		0.5	1.1	0.6	
Delay (s)	13.1		2.3	2.8	39.3	
Level of Service	B		A	A	D	
Approach Delay (s)	13.1			2.8	39.3	
Approach LOS	B			A	D	

Intersection Summary

HCM 2000 Control Delay	9.7	HCM 2000 Level of Service	A
HCM 2000 Volume to Capacity ratio	0.62		
Actuated Cycle Length (s)	105.6	Sum of lost time (s)	15.2
Intersection Capacity Utilization	58.2%	ICU Level of Service	B
Analysis Period (min)	15		

c Critical Lane Group

West Hollywood - Orange Grove Mixed Use Project - Traffic Impact Study
 8: Romaine St & Fairfax Ave

12/18/2018

Intersection

Int Delay, s/veh 48.6

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕↔			↕↔	↕↔	↕↔	↕↔	↕↔	↕↔	↕↔	↕↔
Traffic Vol, veh/h	21	40	67	3	7	30	43	1130	78	49	884	44
Future Vol, veh/h	21	40	67	3	7	30	43	1130	78	49	884	44
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	0	90	-	0	102	-	0
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	23	43	73	3	8	33	47	1228	85	53	961	48

Major/Minor	Minor2		Minor1		Major1		Major2					
Conflicting Flow All	1779	2474	481	1930	2437	614	1009	0	0	1313	0	0
Stage 1	1067	1067	-	1322	1322	-	-	-	-	-	-	-
Stage 2	712	1407	-	608	1115	-	-	-	-	-	-	-
Critical Hdwy	7.54	6.54	6.94	7.54	6.54	6.94	4.14	-	-	4.14	-	-
Critical Hdwy Stg 1	6.54	5.54	-	6.54	5.54	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.54	5.54	-	6.54	5.54	-	-	-	-	-	-	-
Follow-up Hdwy	3.52	4.02	3.32	3.52	4.02	3.32	2.22	-	-	2.22	-	-
Pot Cap-1 Maneuver	52	~ 29	531	40	31	435	683	-	-	523	-	-
Stage 1	237	297	-	165	224	-	-	-	-	-	-	-
Stage 2	389	204	-	450	282	-	-	-	-	-	-	-
Platoon blocked, %								-	-	-	-	-
Mov Cap-1 Maneuver	33	~ 24	531	-	26	435	683	-	-	523	-	-
Mov Cap-2 Maneuver	33	~ 24	-	-	26	-	-	-	-	-	-	-
Stage 1	221	267	-	154	209	-	-	-	-	-	-	-
Stage 2	323	190	-	292	254	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s\$ 901.1			0.4	0.6
HCM LOS	F	-		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1WBLn1WBLn2	SBL	SBT	SBR
Capacity (veh/h)	683	-	-	53	-	435	523
HCM Lane V/C Ratio	0.068	-	-	2.625	-	0.075	0.102
HCM Control Delay (s)	10.7	-	-	\$ 901.1	-	13.9	12.7
HCM Lane LOS	B	-	-	F	-	B	B
HCM 95th %tile Q(veh)	0.2	-	-	14.4	-	0.2	0.3

Notes























~: Volume exceeds capacity \$: Delay exceeds 300s +: Computation Not Defined *: All major volume in platoon

PM PEAK HOUR
 EXISTING + PROJECT CONSTRUCTION

West Hollywood - Orange Grove Mixed Use - Traffic Impact Study

1: Fairfax Ave & Fountain Ave/Fountain Ave

02/26/2019

													
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR	
Lane Configurations													
Traffic Volume (veh/h)	109	678	96	258	1102	60	53	687	132	50	859	302	
Future Volume (veh/h)	109	678	96	258	1102	60	53	687	132	50	859	302	
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	1588	1588	1620	1588	1588	1620	1588	1588	1620	1588	1588	1588	
Adj Flow Rate, veh/h	115	714	101	272	1160	63	56	723	139	53	904	318	
Adj No. of Lanes	1	2	0	1	2	0	1	2	0	1	2	1	
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2	
Cap, veh/h	217	1594	225	367	1748	95	96	876	168	120	1047	439	
Arrive On Green	0.60	0.60	0.58	0.60	0.60	0.58	0.35	0.35	0.35	0.35	0.35	0.33	
Sat Flow, veh/h	454	2655	375	667	2911	158	455	2526	485	639	3018	1350	
Grp Volume(v), veh/h	115	406	409	272	601	622	56	432	430	53	904	318	
Grp Sat Flow(s),veh/h/ln	454	1509	1522	667	1509	1560	455	1509	1503	639	1509	1350	
Q Serve(g_s), s	24.8	16.2	16.3	41.5	29.1	29.2	7.4	28.8	28.8	9.1	30.7	22.9	
Cycle Q Clear(g_c), s	54.1	16.2	16.3	57.8	29.1	29.2	38.2	28.8	28.8	37.9	30.7	22.9	
Prop In Lane	1.00		0.25	1.00		0.10	1.00		0.32	1.00		1.00	
Lane Grp Cap(c), veh/h	217	906	914	367	906	937	96	524	521	120	1047	439	
V/C Ratio(X)	0.53	0.45	0.45	0.74	0.66	0.66	0.58	0.82	0.83	0.44	0.86	0.72	
Avail Cap(c_a), veh/h	218	907	915	367	907	938	96	524	521	120	1047	439	
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	0.97	0.97	0.97	1.00	1.00	1.00	
Uniform Delay (d), s/veh	32.6	12.0	12.2	27.9	14.6	14.7	53.0	32.9	32.9	50.2	33.5	32.8	
Incr Delay (d2), s/veh	4.3	0.7	0.7	9.2	2.4	2.3	22.5	13.4	13.5	11.4	9.4	10.0	
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	3.4	6.8	6.9	8.6	12.6	13.1	2.3	13.9	13.9	2.0	14.2	9.7	
LnGrp Delay(d),s/veh	36.9	12.7	12.9	37.1	17.0	17.0	75.4	46.2	46.3	61.6	42.9	42.7	
LnGrp LOS	D	B	B	D	B	B	E	D	D	E	D	D	
Approach Vol, veh/h		930			1495			918			1275		
Approach Delay, s/veh		15.8			20.7			48.0			43.6		
Approach LOS		B			C			D			D		
Timer	1	2	3	4	5	6	7	8					
Assigned Phs		2		4		6		8					
Phs Duration (G+Y+Rc), s		41.1		68.9		41.1		68.9					
Change Period (Y+Rc), s		* 5.3		* 5.3		* 5.3		* 5.3					
Max Green Setting (Gmax), s		* 36		* 64		* 36		* 64					
Max Q Clear Time (g_c+I1), s		40.2		56.1		39.9		59.8					
Green Ext Time (p_c), s		0.0		7.5		0.0		3.8					
Intersection Summary													
HCM 2010 Ctrl Delay				31.5									
HCM 2010 LOS				C									
Notes													

AM PEAK HOUR
FWOP - Construction

* HCM 2010 computational engine requires equal clearance times for the phases crossing the barrier.

West Hollywood - Orange Grove Mixed Use - Traffic Impact Study
 2: Orange Grove Ave & Fountain Ave

02/26/2019

Intersection

Int Delay, s/veh 47.1

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕↕			↕↕			↕			↕	
Traffic Vol, veh/h	2	832	43	62	1259	6	3	3	63	4	25	162
Future Vol, veh/h	2	832	43	62	1259	6	3	3	63	4	25	162
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	95	92	92	92	92	95	92	95	92	95	95	95
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	2	904	47	67	1368	6	3	3	68	4	26	171

Major/Minor	Major1	Major2	Minor1	Minor2
Conflicting Flow All	1374	0	0	951
Stage 1	-	-	-	-
Stage 2	-	-	-	-
Critical Hdwy	4.14	-	-	4.14
Critical Hdwy Stg 1	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-
Follow-up Hdwy	2.22	-	-	2.22
Pot Cap-1 Maneuver	495	-	-	718
Stage 1	-	-	-	-
Stage 2	-	-	-	-
Platoon blocked, %	-	-	-	-
Mov Cap-1 Maneuver	495	-	-	718
Mov Cap-2 Maneuver	-	-	-	-
Stage 1	-	-	-	-
Stage 2	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0.1	2.3		\$ 609
HCM LOS			-	F

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	-	495	-	-	718	-	-	95
HCM Lane V/C Ratio	-	0.004	-	-	0.094	-	-	2.116
HCM Control Delay (s)	-	12.3	0.1	-	10.5	1.9	-	\$ 609
HCM Lane LOS	-	B	A	-	B	A	-	F
HCM 95th %tile Q(veh)	-	0	-	-	0.3	-	-	17.6

Notes
 -: Volume exceeds capacity \$: Delay exceeds 300s +: Computation Not Defined *: All major volume in platoon

AM PEAK HOUR
 FWOP - Construction

West Hollywood - Orange Grove Mixed Use - Traffic Impact Study
 3: Ogden Ave

02/26/2019

Intersection

Int Delay, s/veh 6.8

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↔			↔			↔			↔	
Traffic Vol, veh/h	5	833	14	66	1425	6	11	2	58	0	7	17
Future Vol, veh/h	5	833	14	66	1425	6	11	2	58	0	7	17
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	95	92	92	92	92	95	92	95	92	95	95	95
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	5	905	15	72	1549	6	12	2	63	0	7	18

Major/Minor	Major1	Major2	Minor1	Minor2
Conflicting Flow All	1555	0	0	920
Stage 1	-	-	-	-
Stage 2	-	-	-	-
Critical Hdwy	4.14	-	-	4.14
Critical Hdwy Stg 1	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-
Follow-up Hdwy	2.22	-	-	2.22
Pot Cap-1 Maneuver	422	-	-	738
Stage 1	-	-	-	-
Stage 2	-	-	-	-
Platoon blocked, %	-	-	-	-
Mov Cap-1 Maneuver	422	-	-	738
Mov Cap-2 Maneuver	-	-	-	-
Stage 1	-	-	-	-
Stage 2	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0.3	3.7		\$ 462.7
HCM LOS			-	F

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	-	422	-	-	738	-	-	23
HCM Lane V/C Ratio	-	0.012	-	-	0.097	-	-	1.098
HCM Control Delay (s)	-	13.6	0.2	-	10.4	3.4	-	\$ 462.7
HCM Lane LOS	-	B	A	-	B	A	-	F
HCM 95th %tile Q(veh)	-	0	-	-	0.3	-	-	3.2
























Notes

-: Volume exceeds capacity \$: Delay exceeds 300s +: Computation Not Defined *: All major volume in platoon

AM PEAK HOUR
 FWOP - Construction

West Hollywood - Orange Grove Mixed Use - Traffic Impact Study
 4: Fairfax Ave & Santa Monica Blvd/Santa Monica Boulevard

02/26/2019

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	127	902	77	405	1215	53	102	708	166	73	977	123
Future Volume (veh/h)	127	902	77	405	1215	53	102	708	166	73	977	123
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	1588	1588	1588	1588	1588	1620	1588	1588	1588	1588	1588	1588
Adj Flow Rate, veh/h	134	949	81	426	1279	56	107	745	175	77	1028	129
Adj No. of Lanes	1	2	1	1	2	0	1	2	1	1	2	1
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	148	987	436	267	1194	52	135	981	439	169	945	417
Arrive On Green	0.06	0.33	0.32	0.13	0.41	0.40	0.05	0.33	0.33	0.04	0.31	0.31
Sat Flow, veh/h	1513	3018	1350	1513	2945	129	1513	3018	1350	1513	3018	1350
Grp Volume(v), veh/h	134	949	81	426	655	680	107	745	175	77	1028	129
Grp Sat Flow(s),veh/h/ln	1513	1509	1350	1513	1509	1565	1513	1509	1350	1513	1509	1350
Q Serve(g_s), s	6.5	35.5	5.0	15.5	46.6	46.6	5.5	25.4	11.6	4.1	36.0	8.4
Cycle Q Clear(g_c), s	6.5	35.5	5.0	15.5	46.6	46.6	5.5	25.4	11.6	4.1	36.0	8.4
Prop In Lane	1.00		1.00	1.00		0.08	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	148	987	436	267	611	634	135	981	439	169	945	417
V/C Ratio(X)	0.90	0.96	0.19	1.60	1.07	1.07	0.79	0.76	0.40	0.46	1.09	0.31
Avail Cap(c_a), veh/h	148	987	436	267	611	634	135	981	439	200	945	417
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	1.00	1.00	0.87	0.87	0.87
Uniform Delay (d), s/veh	32.7	38.0	28.1	33.3	34.2	34.2	32.7	34.8	30.1	30.0	39.5	30.4
Incr Delay (d2), s/veh	46.9	20.8	0.9	285.2	56.7	56.8	26.8	3.5	0.6	1.7	54.6	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	3.5	17.6	2.0	29.6	29.0	30.1	2.1	11.0	4.4	1.8	22.1	3.2
LnGrp Delay(d),s/veh	79.6	58.8	29.0	318.5	90.9	91.0	59.4	38.3	30.7	31.7	94.1	30.7
LnGrp LOS	E	E	C	F	F	F	E	D	C	C	F	C
Approach Vol, veh/h		1164			1761			1027			1234	
Approach Delay, s/veh		59.1			146.0			39.2			83.6	
Approach LOS		E			F			D			F	
Timer	1	2	3	4	5	6	7	8				
Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	21.0	42.2	11.0	40.8	12.0	51.2	9.6	42.2				
Change Period (Y+Rc), s	* 4	5.1	* 4	* 5.3	* 4	5.1	* 4	* 5.3				
Max Green Setting (Gmax), s	* 17	37.1	* 7	* 36	* 8	46.1	* 8	* 35				
Max Q Clear Time (g_c+I1), s	17.5	37.5	7.5	38.0	8.5	48.6	6.1	27.4				
Green Ext Time (p_c), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	5.9				
Intersection Summary												
HCM 2010 Ctrl Delay			90.5									
HCM 2010 LOS			F									
Notes												

AM PEAK HOUR
 FWOP - Construction

* HCM 2010 computational engine requires equal clearance times for the phases crossing the barrier.

West Hollywood - Orange Grove Mixed Use - Traffic Impact Study
 5: Santa Monica Boulevard & Orange Grove Ave

02/26/2019

Intersection

Int Delay, s/veh 1.1

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↑↓			↑↓				↑			↑
Traffic Vol, veh/h	0	1121	17	0	1557	46	1	0	17	0	0	111
Future Vol, veh/h	0	1121	17	0	1557	46	1	0	17	0	0	111
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	0	-	-	0
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	95	95	92	92	95	95	95	92	95	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	1218	18	0	1692	50	1	0	18	0	0	121

Major/Minor	Major1		Major2		Minor1		Minor2					
Conflicting Flow All	-	0	0	-	-	0	2073	-	618	-	-	871
Stage 1	-	-	-	-	-	-	1227	-	-	-	-	-
Stage 2	-	-	-	-	-	-	846	-	-	-	-	-
Critical Hdwy	-	-	-	-	-	-	7.54	-	6.94	-	-	6.94
Critical Hdwy Stg 1	-	-	-	-	-	-	6.54	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.54	-	-	-	-	-
Follow-up Hdwy	-	-	-	-	-	-	3.52	-	3.32	-	-	3.32
Pot Cap-1 Maneuver	0	-	-	0	-	-	31	0	432	0	0	294
Stage 1	0	-	-	0	-	-	189	0	-	0	0	-
Stage 2	0	-	-	0	-	-	323	0	-	0	0	-
Platoon blocked, %	-	-	-	-	-	-	-	-	-	-	-	-
Mov Cap-1 Maneuver	-	-	-	-	-	-	18	-	432	-	-	294
Mov Cap-2 Maneuver	-	-	-	-	-	-	18	-	-	-	-	-
Stage 1	-	-	-	-	-	-	189	-	-	-	-	-
Stage 2	-	-	-	-	-	-	190	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0	0	13.7	25.5
HCM LOS			B	D

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBT	WBR	SBLn1
Capacity (veh/h)	432	-	-	-	-	294
HCM Lane V/C Ratio	0.041	-	-	-	-	0.41
HCM Control Delay (s)	13.7	-	-	-	-	25.5
HCM Lane LOS	B	-	-	-	-	D
HCM 95th %tile Q(veh)	0.1	-	-	-	-	1.9

AM PEAK HOUR
 FWOP - Construction

West Hollywood - Orange Grove Mixed Use - Traffic Impact Study
 6: Ogden Ave

02/26/2019

Intersection						
Int Delay, s/veh	2.8					
Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		↑↑	↑↑		↑	
Traffic Vol, veh/h	22	1150	1541	25	5	110
Future Vol, veh/h	22	1150	1541	25	5	110
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	24	1250	1675	27	5	120

Major/Minor	Major1	Major2	Minor2		
Conflicting Flow All	1702	0	-	0	2362 851
Stage 1	-	-	-	-	1689 -
Stage 2	-	-	-	-	673 -
Critical Hdwy	4.14	-	-	-	6.84 6.94
Critical Hdwy Stg 1	-	-	-	-	5.84 -
Critical Hdwy Stg 2	-	-	-	-	5.84 -
Follow-up Hdwy	2.22	-	-	-	3.52 3.32
Pot Cap-1 Maneuver	370	-	-	-	29 303
Stage 1	-	-	-	-	135 -
Stage 2	-	-	-	-	468 -
Platoon blocked, %		-	-	-	
Mov Cap-1 Maneuver	370	-	-	-	23 303
Mov Cap-2 Maneuver	-	-	-	-	23 -
Stage 1	-	-	-	-	106 -
Stage 2	-	-	-	-	468 -

Approach	EB	WB	SB
HCM Control Delay, s	1.9	0	50
HCM LOS			F

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	370	-	-	-	198
HCM Lane V/C Ratio	0.065	-	-	-	0.631
HCM Control Delay (s)	15.4	1.6	-	-	50
HCM Lane LOS	C	A	-	-	F
HCM 95th %tile Q(veh)	0.2	-	-	-	3.7

AM PEAK HOUR
 FWOP - Construction

Intersection

Int Delay, s/veh 3.6

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↑↑			↑↑	↑	
Traffic Vol, veh/h	1132	17	61	1591	8	38
Future Vol, veh/h	1132	17	61	1591	8	38
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	95	95	95	95	95	95
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	1192	18	64	1675	8	40

Major/Minor

	Major1	Major2	Minor1		
Conflicting Flow All	0	0	1210	0	2167
Stage 1	-	-	-	-	1201
Stage 2	-	-	-	-	966
Critical Hdwy	-	-	4.14	-	6.84
Critical Hdwy Stg 1	-	-	-	-	5.84
Critical Hdwy Stg 2	-	-	-	-	5.84
Follow-up Hdwy	-	-	2.22	-	3.52
Pot Cap-1 Maneuver	-	-	572	-	40
Stage 1	-	-	-	-	248
Stage 2	-	-	-	-	330
Platoon blocked, %	-	-	-	-	-
Mov Cap-1 Maneuver	-	-	572	-	0
Mov Cap-2 Maneuver	-	-	-	-	0
Stage 1	-	-	-	-	248
Stage 2	-	-	-	-	0

Approach

	EB	WB	NB
HCM Control Delay, s	0	5.8	14.2
HCM LOS			B

Minor Lane/Major Mvmt

	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	441	-	-	572	-
HCM Lane V/C Ratio	0.11	-	-	0.112	-
HCM Control Delay (s)	14.2	-	-	12.1	5.6
HCM Lane LOS	B	-	-	B	A
HCM 95th %tile Q(veh)	0.4	-	-	0.4	-

West Hollywood - Orange Grove Mixed Use - Traffic Impact Study
 7: Santa Monica Blvd & Genesse Ave

02/26/2019



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (vph)	25	1171	1506	20	33	96
Future Volume (vph)	25	1171	1506	20	33	96
Ideal Flow (vphpl)	1620	1620	1620	1620	1620	1620
Total Lost time (s)	4.5	5.6	5.6		4.6	
Lane Util. Factor	1.00	0.95	0.95		1.00	
Frt	1.00	1.00	1.00		0.90	
Flt Protected	0.95	1.00	1.00		0.99	
Satd. Flow (prot)	1509	3018	3012		1411	
Flt Permitted	0.10	1.00	1.00		0.99	
Satd. Flow (perm)	161	3018	3012		1411	
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	27	1273	1637	22	36	104
RTOR Reduction (vph)	0	0	1	0	88	0
Lane Group Flow (vph)	27	1273	1658	0	52	0
Turn Type	pm+pt	NA	NA		Prot	
Protected Phases	5	2	6		4	
Permitted Phases	2					
Actuated Green, G (s)	71.1	68.1	72.8		15.6	
Effective Green, g (s)	70.1	67.6	72.3		16.1	
Actuated g/C Ratio	0.66	0.64	0.68		0.15	
Clearance Time (s)	4.0	5.1	5.1		5.1	
Vehicle Extension (s)	1.0	3.0	3.0		3.0	
Lane Grp Cap (vph)	138	1931	2062		215	
v/s Ratio Prot	c0.00	0.42	c0.55		c0.04	
v/s Ratio Perm	0.12					
v/c Ratio	0.20	0.66	0.80		0.24	
Uniform Delay, d1	8.5	11.8	11.7		39.4	
Progression Factor	0.31	0.25	1.00		1.00	
Incremental Delay, d2	0.2	1.5	3.5		0.6	
Delay (s)	2.9	4.5	15.1		40.0	
Level of Service	A	A	B		D	
Approach Delay (s)		4.5	15.1		40.0	
Approach LOS		A	B		D	

Intersection Summary

HCM 2000 Control Delay	11.8	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.69		
Actuated Cycle Length (s)	105.6	Sum of lost time (s)	14.7
Intersection Capacity Utilization	70.6%	ICU Level of Service	C
Analysis Period (min)	15		

c Critical Lane Group

West Hollywood - Orange Grove Mixed Use - Traffic Impact Study
 8: Romaine St & Fairfax Ave

02/26/2019

Intersection

Int Delay, s/veh 68.8

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↔			↔	↔	↔	↕	↕	↕	↕	↕
Traffic Vol, veh/h	8	5	62	27	52	63	54	907	12	35	1368	49
Future Vol, veh/h	8	5	62	27	52	63	54	907	12	35	1368	49
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	0	90	-	0	102	-	0
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	9	5	67	29	57	68	59	986	13	38	1487	53

Major/Minor	Minor2		Minor1		Major1		Major2					
Conflicting Flow All	2203	2680	744	1926	2720	493	1540	0	0	999	0	0
Stage 1	1563	1563	-	1104	1104	-	-	-	-	-	-	-
Stage 2	640	1117	-	822	1616	-	-	-	-	-	-	-
Critical Hdwy	7.54	6.54	6.94	7.54	6.54	6.94	4.14	-	-	4.14	-	-
Critical Hdwy Stg 1	6.54	5.54	-	6.54	5.54	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.54	5.54	-	6.54	5.54	-	-	-	-	-	-	-
Follow-up Hdwy	3.52	4.02	3.32	3.52	4.02	3.32	2.22	-	-	2.22	-	-
Pot Cap-1 Maneuver	25	22	357	40	~ 20	522	427	-	-	689	-	-
Stage 1	117	171	-	225	285	-	-	-	-	-	-	-
Stage 2	430	281	-	334	161	-	-	-	-	-	-	-
Platoon blocked, %								-	-	-	-	-
Mov Cap-1 Maneuver	-	18	357	~ 21	~ 16	522	427	-	-	689	-	-
Mov Cap-2 Maneuver	-	18	-	~ 21	~ 16	-	-	-	-	-	-	-
Stage 1	101	162	-	194	246	-	-	-	-	-	-	-
Stage 2	248	242	-	247	152	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s		\$ 1270.7	0.8	0.3
HCM LOS	-	F		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	WBLn2	SBL	SBT	SBR
Capacity (veh/h)	427	-	-	-	17	522	689	-	-
HCM Lane V/C Ratio	0.137	-	-	-	5.051	0.131	0.055	-	-
HCM Control Delay (s)	14.8	-	-	-	\$ 2273.8	12.9	10.5	-	-
HCM Lane LOS	B	-	-	-	F	B	B	-	-
HCM 95th %tile Q(veh)	0.5	-	-	-	11.4	0.4	0.2	-	-

Notes






















~: Volume exceeds capacity \$: Delay exceeds 300s +: Computation Not Defined *: All major volume in platoon

AM PEAK HOUR
 FWOP - Construction

West Hollywood - Orange Grove Mixed Use - Traffic Impact Study

1: Fairfax Ave & Fountain Ave

02/26/2019

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	166	766	57	168	947	80	51	757	147	56	723	222
Future Volume (veh/h)	166	766	57	168	947	80	51	757	147	56	723	222
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	1588	1588	1620	1588	1588	1620	1588	1588	1620	1588	1588	1588
Adj Flow Rate, veh/h	175	806	60	177	997	84	54	797	155	59	761	234
Adj No. of Lanes	1	2	0	1	2	0	1	2	0	1	2	1
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	263	1710	127	347	1692	143	137	874	170	92	1047	439
Arrive On Green	0.60	0.60	0.58	0.60	0.60	0.58	0.35	0.35	0.35	0.35	0.35	0.33
Sat Flow, veh/h	520	2848	212	636	2818	237	564	2520	490	587	3018	1350
Grp Volume(v), veh/h	175	427	439	177	534	547	54	477	475	59	761	234
Grp Sat Flow(s),veh/h/ln	520	1509	1551	636	1509	1546	564	1509	1502	587	1509	1350
Q Serve(g_s), s	34.6	17.4	17.5	23.7	24.1	24.2	10.2	33.2	33.2	4.9	24.2	15.6
Cycle Q Clear(g_c), s	58.8	17.4	17.5	41.1	24.1	24.2	34.4	33.2	33.2	38.2	24.2	15.6
Prop In Lane	1.00		0.14	1.00		0.15	1.00		0.33	1.00		1.00
Lane Grp Cap(c), veh/h	263	906	931	347	906	928	137	523	521	92	1047	439
V/C Ratio(X)	0.67	0.47	0.47	0.51	0.59	0.59	0.39	0.91	0.91	0.64	0.73	0.53
Avail Cap(c_a), veh/h	263	907	932	347	907	929	137	523	521	92	1047	439
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	0.97	0.97	0.97	1.00	1.00	1.00
Uniform Delay (d), s/veh	31.8	12.3	12.4	23.7	13.6	13.7	46.4	34.3	34.3	53.9	31.4	30.3
Incr Delay (d2), s/veh	8.1	0.8	0.8	2.4	1.5	1.5	8.0	22.0	22.1	29.8	4.4	4.6
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	5.5	7.3	7.7	4.4	10.3	10.6	1.9	17.0	16.9	2.5	10.7	6.3
LnGrp Delay(d),s/veh	39.9	13.0	13.1	26.2	15.1	15.2	54.4	56.3	56.4	83.7	35.8	34.9
LnGrp LOS	D	B	B	C	B	B	D	E	E	F	D	C
Approach Vol, veh/h		1041			1258			1006			1054	
Approach Delay, s/veh		17.6			16.7			56.3			38.3	
Approach LOS		B			B			E			D	
Timer	1	2	3	4	5	6	7	8				
Assigned Phs		2		4		6		8				
Phs Duration (G+Y+Rc), s		41.1		68.9		41.1		68.9				
Change Period (Y+Rc), s		* 5.3		* 5.3		* 5.3		* 5.3				
Max Green Setting (Gmax), s		* 36		* 64		* 36		* 64				
Max Q Clear Time (g_c+I1), s		36.4		60.8		40.2		43.1				
Green Ext Time (p_c), s		0.0		2.8		0.0		19.2				
Intersection Summary												
HCM 2010 Ctrl Delay				31.3								
HCM 2010 LOS				C								
Notes												

MIDDAY PEAK HOUR
FWOP Construction

* HCM 2010 computational engine requires equal clearance times for the phases crossing the barrier.

West Hollywood - Orange Grove Mixed Use - Traffic Impact Study
 2: Orange Grove Ave

02/26/2019

Intersection

Int Delay, s/veh 3

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↔			↔			↔			↔	
Traffic Vol, veh/h	19	949	23	20	1149	10	8	3	53	4	3	41
Future Vol, veh/h	19	949	23	20	1149	10	8	3	53	4	3	41
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	95	92	92	92	92	95	92	95	92	95	95	95
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	20	1032	25	22	1249	11	9	3	58	4	3	43

Major/Minor	Major1	Major2	Minor1	Minor2
Conflicting Flow All	1260	0	0	1057
Stage 1	-	-	-	-
Stage 2	-	-	-	-
Critical Hdwy	4.14	-	-	4.14
Critical Hdwy Stg 1	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-
Follow-up Hdwy	2.22	-	-	2.22
Pot Cap-1 Maneuver	548	-	-	655
Stage 1	-	-	-	-
Stage 2	-	-	-	-
Platoon blocked, %	-	-	-	-
Mov Cap-1 Maneuver	548	-	-	655
Mov Cap-2 Maneuver	-	-	-	-
Stage 1	-	-	-	-
Stage 2	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0.7	0.8	48.2	43.3
HCM LOS			E	E

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	150	548	-	-	655	-	-	143
HCM Lane V/C Ratio	0.463	0.036	-	-	0.033	-	-	0.353
HCM Control Delay (s)	48.2	11.8	0.5	-	10.7	0.6	-	43.3
HCM Lane LOS	E	B	A	-	B	A	-	E
HCM 95th %tile Q(veh)	2.1	0.1	-	-	0.1	-	-	1.5

MIDDAY PEAK HOUR
 FWOP Construction

West Hollywood - Orange Grove Mixed Use - Traffic Impact Study
 3: Ogden Ave

02/26/2019

Intersection												
Int Delay, s/veh	2.6											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↔			↔			↔			↔	
Traffic Vol, veh/h	20	951	19	26	1136	9	10	3	53	1	1	24
Future Vol, veh/h	20	951	19	26	1136	9	10	3	53	1	1	24
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	95	92	92	92	92	95	92	95	92	95	95	95
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	21	1034	21	28	1235	9	11	3	58	1	1	25

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	1244	0	0	1055	0	0	1761	2387	528	1857	2393	622
Stage 1	-	-	-	-	-	-	1087	1087	-	1296	1296	-
Stage 2	-	-	-	-	-	-	674	1300	-	561	1097	-
Critical Hdwy	4.14	-	-	4.14	-	-	7.54	6.54	6.94	7.54	6.54	6.94
Critical Hdwy Stg 1	-	-	-	-	-	-	6.54	5.54	-	6.54	5.54	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.54	5.54	-	6.54	5.54	-
Follow-up Hdwy	2.22	-	-	2.22	-	-	3.52	4.02	3.32	3.52	4.02	3.32
Pot Cap-1 Maneuver	555	-	-	656	-	-	54	34	495	45	33	430
Stage 1	-	-	-	-	-	-	231	290	-	171	231	-
Stage 2	-	-	-	-	-	-	410	230	-	480	287	-
Platoon blocked, %	-	-	-	-	-	-	-	-	-	-	-	-
Mov Cap-1 Maneuver	555	-	-	656	-	-	41	27	495	30	26	430
Mov Cap-2 Maneuver	-	-	-	-	-	-	41	27	-	30	26	-
Stage 1	-	-	-	-	-	-	210	263	-	155	199	-
Stage 2	-	-	-	-	-	-	331	198	-	380	261	-
























Approach	EB			WB			NB			SB		
HCM Control Delay, s	0.7			0.9			52.5			25.4		
HCM LOS							F			D		

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	144	555	-	-	656	-	-	204
HCM Lane V/C Ratio	0.497	0.038	-	-	0.043	-	-	0.134
HCM Control Delay (s)	52.5	11.7	0.5	-	10.7	0.7	-	25.4
HCM Lane LOS	F	B	A	-	B	A	-	D
HCM 95th %tile Q(veh)	2.4	0.1	-	-	0.1	-	-	0.5

MIDDAY PEAK HOUR
 FWOP Construction

West Hollywood - Orange Grove Mixed Use - Traffic Impact Study
 4: Fairfax Ave & Santa Monica Blvd

02/26/2019

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	171	1439	113	259	1461	79	169	739	230	86	780	124
Future Volume (veh/h)	171	1439	113	259	1461	79	169	739	230	86	780	124
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	1588	1588	1588	1588	1588	1620	1588	1588	1588	1588	1588	1588
Adj Flow Rate, veh/h	180	1515	119	273	1538	83	178	778	242	91	821	131
Adj No. of Lanes	1	2	1	1	2	0	1	2	1	1	2	1
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	148	1013	447	266	1206	65	151	930	416	157	918	405
Arrive On Green	0.06	0.34	0.33	0.13	0.41	0.41	0.05	0.31	0.31	0.04	0.30	0.30
Sat Flow, veh/h	1513	3018	1350	1513	2913	157	1513	3018	1350	1513	3018	1350
Grp Volume(v), veh/h	180	1515	119	273	794	827	178	778	242	91	821	131
Grp Sat Flow(s),veh/h/ln	1513	1509	1350	1513	1509	1561	1513	1509	1350	1513	1509	1350
Q Serve(g_s), s	6.5	38.6	7.4	15.5	47.6	47.6	5.5	27.6	17.4	4.9	29.9	8.7
Cycle Q Clear(g_c), s	6.5	38.6	7.4	15.5	47.6	47.6	5.5	27.6	17.4	4.9	29.9	8.7
Prop In Lane	1.00		1.00	1.00		0.10	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	148	1013	447	266	625	646	151	930	416	157	918	405
V/C Ratio(X)	1.22	1.50	0.27	1.02	1.27	1.28	1.18	0.84	0.58	0.58	0.89	0.32
Avail Cap(c_a), veh/h	148	1013	447	266	625	646	151	930	416	176	945	417
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	1.00	1.00	0.87	0.87	0.87
Uniform Delay (d), s/veh	34.5	38.2	28.2	33.6	33.7	33.7	40.2	37.1	33.5	31.2	38.2	31.2
Incr Delay (d2), s/veh	143.3	228.2	1.5	61.6	134.1	137.9	130.2	6.8	2.1	3.3	9.6	0.4
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	9.1	48.2	3.0	13.0	43.0	45.2	11.3	12.3	6.7	2.2	13.7	3.3
LnGrp Delay(d),s/veh	177.8	266.4	29.6	95.3	167.8	171.6	170.3	43.9	35.6	34.6	47.8	31.6
LnGrp LOS	F	F	C	F	F	F	F	D	D	C	D	C
Approach Vol, veh/h		1814			1894			1198			1043	
Approach Delay, s/veh		242.1			159.0			61.0			44.6	
Approach LOS		F			F			E			D	
Timer	1	2	3	4	5	6	7	8				
Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	21.0	43.2	11.0	39.8	12.0	52.2	10.6	40.2				
Change Period (Y+Rc), s	* 4	5.1	* 4	* 5.3	* 4	5.1	* 4	* 5.3				
Max Green Setting (Gmax), s	* 17	37.1	* 7	* 36	* 8	46.1	* 8	* 35				
Max Q Clear Time (g_c+I1), s	17.5	40.6	7.5	31.9	8.5	49.6	6.9	29.6				
Green Ext Time (p_c), s	0.0	0.0	0.0	2.6	0.0	0.0	0.0	4.0				
Intersection Summary												
HCM 2010 Ctrl Delay			144.6									
HCM 2010 LOS			F									
Notes												

MIDDAY PEAK HOUR
 FWOP Construction

* HCM 2010 computational engine requires equal clearance times for the phases crossing the barrier.

West Hollywood - Orange Grove Mixed Use - Traffic Impact Study
 5: Orange Grove Ave

02/26/2019

Intersection												
Int Delay, s/veh	0.6											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↑↑			↑↑				↑			↑
Traffic Vol, veh/h	0	1720	34	1	1757	51	0	0	35	0	0	55
Future Vol, veh/h	0	1720	34	1	1757	51	0	0	35	0	0	55
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	0	-	-	0
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	95	95	92	92	95	95	95	92	95	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	1870	36	1	1910	55	0	0	37	0	0	60

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	-	0	0	1906	0	0	-	-	953	-	-	983
Stage 1	-	-	-	-	-	-	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-	-	-	-	-	-	-
Critical Hdwy	-	-	-	4.14	-	-	-	-	6.94	-	-	6.94
Critical Hdwy Stg 1	-	-	-	-	-	-	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-	-	-	-	-	-	-
Follow-up Hdwy	-	-	-	2.22	-	-	-	-	3.32	-	-	3.32
Pot Cap-1 Maneuver	0	-	-	308	-	-	0	0	260	0	0	248
Stage 1	0	-	-	-	-	-	0	0	-	0	0	-
Stage 2	0	-	-	-	-	-	0	0	-	0	0	-
Platoon blocked, %	-	-	-	-	-	-	-	-	-	-	-	-
Mov Cap-1 Maneuver	-	-	-	308	-	-	-	-	260	-	-	248
Mov Cap-2 Maneuver	-	-	-	-	-	-	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-	-	-	-	-	-	-

Approach	EB			WB			NB			SB		
HCM Control Delay, s	0			0			21.1			24.1		
HCM LOS							C			C		

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	260	-	-	308	-	-	248
HCM Lane V/C Ratio	0.142	-	-	0.003	-	-	0.241
HCM Control Delay (s)	21.1	-	-	16.7	-	-	24.1
HCM Lane LOS	C	-	-	C	-	-	C
HCM 95th %tile Q(veh)	0.5	-	-	0	-	-	0.9

MIDDAY PEAK HOUR
 FWOP Construction

West Hollywood - Orange Grove Mixed Use - Traffic Impact Study
6: Ogden Ave

02/26/2019

Intersection						
Int Delay, s/veh	3.1					
Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		↑↑	↑↑		↑	
Traffic Vol, veh/h	51	1716	1788	32	7	47
Future Vol, veh/h	51	1716	1788	32	7	47
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	55	1865	1943	35	8	51

Major/Minor	Major1	Major2	Minor2
Conflicting Flow All	1978	0	0
Stage 1	-	-	-
Stage 2	-	-	-
Critical Hdwy	4.14	-	-
Critical Hdwy Stg 1	-	-	-
Critical Hdwy Stg 2	-	-	-
Follow-up Hdwy	2.22	-	-
Pot Cap-1 Maneuver	289	-	-
Stage 1	-	-	-
Stage 2	-	-	-
Platoon blocked, %	-	-	-
Mov Cap-1 Maneuver	289	-	-
Mov Cap-2 Maneuver	-	-	-
Stage 1	-	-	-
Stage 2	-	-	-

Approach	EB	WB	SB
HCM Control Delay, s	0.6	0	190.2
HCM LOS			F

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	289	-	-	-	65
HCM Lane V/C Ratio	0.192	-	-	-	0.903
HCM Control Delay (s)	20.4	0	-	-	190.2
HCM Lane LOS	C	A	-	-	F
HCM 95th %tile Q(veh)	0.7	-	-	-	4.3

MIDDAY PEAK HOUR
FWOP Construction

Intersection

Int Delay, s/veh	0.8					
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↑↑			↑↑	↑	
Traffic Vol, veh/h	1724	18	35	1800	3	38
Future Vol, veh/h	1724	18	35	1800	3	38
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	95	95	95	95	95	95
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	1815	19	37	1895	3	40

Major/Minor	Major1	Major2	Minor1		
Conflicting Flow All	0	0	1834	0	2847
Stage 1	-	-	-	-	1825
Stage 2	-	-	-	-	1022
Critical Hdwy	-	-	4.14	-	6.84
Critical Hdwy Stg 1	-	-	-	-	5.84
Critical Hdwy Stg 2	-	-	-	-	5.84
Follow-up Hdwy	-	-	2.22	-	3.52
Pot Cap-1 Maneuver	-	-	329	-	14
Stage 1	-	-	-	-	114
Stage 2	-	-	-	-	308
Platoon blocked, %	-	-	-	-	-
Mov Cap-1 Maneuver	-	-	329	-	14
Mov Cap-2 Maneuver	-	-	-	-	14
Stage 1	-	-	-	-	114
Stage 2	-	-	-	-	308

Approach	EB	WB	NB
HCM Control Delay, s	0	0.3	53.4
HCM LOS			F

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	116	-	-	329	-
HCM Lane V/C Ratio	0.372	-	-	0.112	-
HCM Control Delay (s)	53.4	-	-	17.3	0
HCM Lane LOS	F	-	-	C	A
HCM 95th %tile Q(veh)	1.5	-	-	0.4	-

MIDDAY PEAK HOUR
FWOP Construction

West Hollywood - Orange Grove Mixed Use - Traffic Impact Study
 7: Santa Monica Blvd & Genesse Ave

02/26/2019



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (vph)	43	1702	1796	31	33	53
Future Volume (vph)	43	1702	1796	31	33	53
Ideal Flow (vphpl)	1620	1620	1620	1620	1620	1620
Total Lost time (s)	4.5	5.6	5.6		4.6	
Lane Util. Factor	1.00	0.95	0.95		1.00	
Frt	1.00	1.00	1.00		0.92	
Flt Protected	0.95	1.00	1.00		0.98	
Satd. Flow (prot)	1509	3018	3010		1429	
Flt Permitted	0.06	1.00	1.00		0.98	
Satd. Flow (perm)	93	3018	3010		1429	
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	47	1850	1952	34	36	58
RTOR Reduction (vph)	0	0	1	0	49	0
Lane Group Flow (vph)	47	1850	1985	0	45	0
Turn Type	pm+pt	NA	NA		Prot	
Protected Phases	5	2	6		4	
Permitted Phases	2					
Actuated Green, G (s)	72.7	68.5	71.6		15.6	
Effective Green, g (s)	71.7	68.0	71.1		16.1	
Actuated g/C Ratio	0.68	0.64	0.67		0.15	
Clearance Time (s)	4.0	5.1	5.1		5.1	
Vehicle Extension (s)	1.0	3.0	3.0		3.0	
Lane Grp Cap (vph)	112	1943	2026		217	
v/s Ratio Prot	c0.01	0.61	c0.66		c0.03	
v/s Ratio Perm	0.27					
v/c Ratio	0.42	0.95	0.98		0.21	
Uniform Delay, d1	14.8	17.3	16.6		39.2	
Progression Factor	1.65	0.21	1.00		1.00	
Incremental Delay, d2	0.4	6.6	15.8		0.5	
Delay (s)	24.9	10.3	32.3		39.6	
Level of Service	C	B	C		D	
Approach Delay (s)		10.7	32.3		39.6	
Approach LOS		B	C		D	

Intersection Summary

HCM 2000 Control Delay	22.2	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.82		
Actuated Cycle Length (s)	105.6	Sum of lost time (s)	14.7
Intersection Capacity Utilization	80.4%	ICU Level of Service	D
Analysis Period (min)	15		

c Critical Lane Group

MIDDAY PEAK HOUR
 FWOP Construction

West Hollywood - Orange Grove Mixed Use - Traffic Impact Study
 8: Romaine St & Fairfax Ave

02/26/2019

Intersection												
Int Delay, s/veh	10.3											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↔			↔	↗	↖	↗	↖	↗	↖	↗
Traffic Vol, veh/h	11	6	46	14	10	47	33	1082	18	51	1048	53
Future Vol, veh/h	11	6	46	14	10	47	33	1082	18	51	1048	53
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	0	90	-	0	102	-	0
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	12	7	50	15	11	51	36	1176	20	55	1139	58

Major/Minor	Minor2		Minor1		Major1		Major2					
Conflicting Flow All	1915	2517	570	1931	2555	588	1197	0	0	1196	0	0
Stage 1	1249	1249	-	1248	1248	-	-	-	-	-	-	-
Stage 2	666	1268	-	683	1307	-	-	-	-	-	-	-
Critical Hdwy	7.54	6.54	6.94	7.54	6.54	6.94	4.14	-	-	4.14	-	-
Critical Hdwy Stg 1	6.54	5.54	-	6.54	5.54	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.54	5.54	-	6.54	5.54	-	-	-	-	-	-	-
Follow-up Hdwy	3.52	4.02	3.32	3.52	4.02	3.32	2.22	-	-	2.22	-	-
Pot Cap-1 Maneuver	41	28	465	40	26	452	579	-	-	579	-	-
Stage 1	183	243	-	183	243	-	-	-	-	-	-	-
Stage 2	415	238	-	405	228	-	-	-	-	-	-	-
Platoon blocked, %								-	-	-	-	-
Mov Cap-1 Maneuver	20	24	465	25	22	452	579	-	-	579	-	-
Mov Cap-2 Maneuver	20	24	-	25	22	-	-	-	-	-	-	-
Stage 1	172	220	-	172	228	-	-	-	-	-	-	-
Stage 2	329	223	-	317	206	-	-	-	-	-	-	-

Approach	EB		WB		NB		SB	
HCM Control Delay, s	202.1		160.1		0.3		0.5	
HCM LOS	F		F					

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	WBLn2	SBL	SBT	SBR
Capacity (veh/h)	579	-	-	70	24	452	579	-	-
HCM Lane V/C Ratio	0.062	-	-	0.978	1.087	0.113	0.096	-	-
HCM Control Delay (s)	11.6	-	-	202.1	446.1	14	11.9	-	-
HCM Lane LOS	B	-	-	F	F	B	B	-	-
HCM 95th %tile Q(veh)	0.2	-	-	5	3.3	0.4	0.3	-	-

MIDDAY PEAK HOUR
 FWOP Construction

West Hollywood - Orange Grove Mixed Use - Traffic Impact Study

1: Fairfax Ave & Fountain Ave

02/26/2019

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	264	1319	45	97	872	106	52	1127	188	58	791	198
Future Volume (veh/h)	264	1319	45	97	872	106	52	1127	188	58	791	198
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	1588	1588	1620	1588	1588	1620	1588	1588	1620	1588	1588	1588
Adj Flow Rate, veh/h	278	1388	47	102	918	112	55	1186	198	61	833	208
Adj No. of Lanes	1	2	0	1	2	0	1	2	0	1	2	1
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	281	1790	61	159	1627	199	118	897	149	65	1045	438
Arrive On Green	0.60	0.60	0.58	0.60	0.60	0.58	0.35	0.35	0.35	0.35	0.35	0.32
Sat Flow, veh/h	545	2979	101	371	2708	330	540	2591	430	390	3018	1350
Grp Volume(v), veh/h	278	702	733	102	511	519	55	688	696	61	833	208
Grp Sat Flow(s),veh/h/ln	545	1509	1570	371	1509	1530	540	1509	1512	390	1509	1350
Q Serve(g_s), s	43.4	38.2	38.5	27.6	22.5	22.7	10.7	38.1	38.1	0.0	27.4	13.5
Cycle Q Clear(g_c), s	66.1	38.2	38.5	66.1	22.5	22.7	38.1	38.1	38.1	38.1	27.4	13.5
Prop In Lane	1.00		0.06	1.00		0.22	1.00		0.28	1.00		1.00
Lane Grp Cap(c), veh/h	281	907	944	159	907	919	118	523	524	65	1045	438
V/C Ratio(X)	0.99	0.77	0.78	0.64	0.56	0.56	0.47	1.32	1.33	0.93	0.80	0.47
Avail Cap(c_a), veh/h	281	907	944	159	907	919	118	523	524	65	1045	438
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	0.97	0.97	0.97	1.00	1.00	1.00
Uniform Delay (d), s/veh	38.2	16.4	16.5	42.4	13.3	13.4	49.9	35.9	36.0	55.0	32.5	29.7
Incr Delay (d2), s/veh	51.0	4.9	4.7	11.5	1.3	1.3	12.3	155.3	160.1	93.2	6.3	3.7
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	12.4	17.0	17.7	3.6	9.6	9.9	2.1	38.4	39.2	3.5	12.3	5.5
LnGrp Delay(d),s/veh	89.2	21.3	21.2	53.8	14.6	14.7	62.2	191.3	196.1	148.2	38.8	33.3
LnGrp LOS	F	C	C	D	B	B	E	F	F	F	D	C
Approach Vol, veh/h		1713			1132			1439			1102	
Approach Delay, s/veh		32.3			18.2			188.7			43.8	
Approach LOS		C			B			F			D	
Timer	1	2	3	4	5	6	7	8				
Assigned Phs		2		4		6		8				
Phs Duration (G+Y+Rc), s		41.0		69.0		41.0		69.0				
Change Period (Y+Rc), s		* 5.3		* 5.3		* 5.3		* 5.3				
Max Green Setting (Gmax), s		* 36		* 64		* 36		* 64				
Max Q Clear Time (g_c+I1), s		40.1		68.1		40.1		68.1				
Green Ext Time (p_c), s		0.0		0.0		0.0		0.0				
Intersection Summary												
HCM 2010 Ctrl Delay				73.5								
HCM 2010 LOS				E								
Notes												

PM PEAK HOUR
FWOP Construction

* HCM 2010 computational engine requires equal clearance times for the phases crossing the barrier.

West Hollywood - Orange Grove Mixed Use - Traffic Impact Study
 2: Orange Grove Ave

07/26/2019

Intersection

Int Delay, s/veh 47.7

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	45	1350	42	49	1086	17	5	8	63	2	4	29
Future Vol, veh/h	45	1350	42	49	1086	17	5	8	63	2	4	29
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	95	92	92	92	92	95	92	95	92	95	95	95
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	47	1467	46	53	1180	18	5	8	68	2	4	31

Major/Minor	Major1	Major2	Minor1	Minor2
Conflicting Flow All	1198	0	0	1513
Stage 1	-	-	-	-
Stage 2	-	-	-	-
Critical Hdwy	4.14	-	-	4.14
Critical Hdwy Stg 1	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-
Follow-up Hdwy	2.22	-	-	2.22
Pot Cap-1 Maneuver	578	-	-	438
Stage 1	-	-	-	-
Stage 2	-	-	-	-
Platoon blocked, %	-	-	-	-
Mov Cap-1 Maneuver	578	-	-	438
Mov Cap-2 Maneuver	-	-	-	-
Stage 1	-	-	-	-
Stage 2	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	3.1	2.9	\$ 1595.8	
HCM LOS			F	-

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	22	578	-	-	438	-	-	-
HCM Lane V/C Ratio	3.742	0.082	-	-	0.122	-	-	-
HCM Control Delay (s)	\$ 1595.8	11.8	2.9	-	14.4	2.4	-	-
HCM Lane LOS	F	B	A	-	B	A	-	-
HCM 95th %tile Q(veh)	10.5	0.3	-	-	0.4	-	-	-

Notes

-: Volume exceeds capacity \$: Delay exceeds 300s +: Computation Not Defined *: All major volume in platoon

PM PEAK HOUR
 FWOP Construction

West Hollywood - Orange Grove Mixed Use - Traffic Impact Study
 3: Ogden Ave

07/26/2019

Intersection

Int Delay, s/veh 411.6

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↔			↔			↔			↔	
Traffic Vol, veh/h	40	1496	25	34	1025	6	9	20	152	2	1	11
Future Vol, veh/h	40	1496	25	34	1025	6	9	20	152	2	1	11
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	95	92	92	92	92	95	92	95	92	95	95	95
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	42	1626	27	37	1114	6	10	21	165	2	1	12

Major/Minor	Major1	Major2	Minor1	Minor2
Conflicting Flow All	1120	0	0	1653
Stage 1	-	-	-	-
Stage 2	-	-	-	-
Critical Hdwy	4.14	-	-	4.14
Critical Hdwy Stg 1	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-
Follow-up Hdwy	2.22	-	-	2.22
Pot Cap-1 Maneuver	619	-	-	386
Stage 1	-	-	-	-
Stage 2	-	-	-	-
Platoon blocked, %	-	-	-	-
Mov Cap-1 Maneuver	619	-	-	386
Mov Cap-2 Maneuver	-	-	-	-
Stage 1	-	-	-	-
Stage 2	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	4.7	2.2	\$ 6378.8	
HCM LOS			F	-

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	14	619	-	-	386	-	-	-
HCM Lane V/C Ratio	14.004	0.068	-	-	0.096	-	-	-
HCM Control Delay (s)	\$ 6378.8	11.2	4.6	-	15.3	1.8	-	-
HCM Lane LOS	F	B	A	-	C	A	-	-
HCM 95th %tile Q(veh)	25.6	0.2	-	-	0.3	-	-	-
























Notes

~: Volume exceeds capacity \$: Delay exceeds 300s +: Computation Not Defined *: All major volume in platoon

PM PEAK HOUR
 FWOP Construction

West Hollywood - Orange Grove Mixed Use - Traffic Impact Study
 4: Fairfax Ave & Santa Monica Blvd

07/26/2019

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	345	1521	112	223	1308	106	131	896	279	69	788	108
Future Volume (veh/h)	345	1521	112	223	1308	106	131	896	279	69	788	108
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	1588	1588	1588	1588	1588	1620	1588	1588	1588	1588	1588	1588
Adj Flow Rate, veh/h	363	1601	118	235	1377	112	138	943	294	73	829	114
Adj No. of Lanes	1	2	1	1	2	0	1	2	1	1	2	1
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	148	1070	473	242	1179	95	146	961	430	109	910	401
Arrive On Green	0.06	0.35	0.35	0.12	0.42	0.41	0.05	0.32	0.32	0.03	0.30	0.30
Sat Flow, veh/h	1513	3018	1350	1513	2828	229	1513	3018	1350	1513	3018	1350
Grp Volume(v), veh/h	363	1601	118	235	732	757	138	943	294	73	829	114
Grp Sat Flow(s),veh/h/ln	1513	1509	1350	1513	1509	1548	1513	1509	1350	1513	1509	1350
Q Serve(g_s), s	6.5	40.8	7.2	13.0	47.9	47.9	5.5	35.6	21.8	3.5	30.4	7.5
Cycle Q Clear(g_c), s	6.5	40.8	7.2	13.0	47.9	47.9	5.5	35.6	21.8	3.5	30.4	7.5
Prop In Lane	1.00		1.00	1.00		0.15	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	148	1070	473	242	629	645	146	961	430	109	910	401
V/C Ratio(X)	2.45	1.50	0.25	0.97	1.16	1.17	0.94	0.98	0.68	0.67	0.91	0.28
Avail Cap(c_a), veh/h	148	1070	473	266	629	645	146	961	430	148	945	417
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	1.00	1.00	0.87	0.87	0.87
Uniform Delay (d), s/veh	33.2	37.1	26.6	32.5	33.5	33.6	38.8	38.8	34.1	35.6	38.7	31.0
Incr Delay (d2), s/veh	672.9	228.0	1.3	45.4	90.6	93.5	57.0	24.4	4.4	6.1	11.2	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	30.8	50.8	2.8	10.5	35.7	37.2	5.4	18.1	8.6	1.8	14.1	2.8
LnGrp Delay(d),s/veh	706.1	265.1	27.8	77.9	124.1	127.1	95.9	63.2	38.6	41.7	49.9	31.4
LnGrp LOS	F	F	C	E	F	F	F	E	D	D	D	C
Approach Vol, veh/h		2082			1724			1375			1016	
Approach Delay, s/veh		328.5			119.1			61.2			47.2	
Approach LOS		F			F			E			D	
Timer	1	2	3	4	5	6	7	8				
Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	19.1	45.4	11.0	39.5	12.0	52.5	9.0	41.4				
Change Period (Y+Rc), s	* 4	5.1	* 4	* 5.3	* 4	5.1	* 4	* 5.3				
Max Green Setting (Gmax), s	* 17	37.1	* 7	* 36	* 8	46.1	* 8	* 35				
Max Q Clear Time (g_c+I1), s	15.0	42.8	7.5	32.4	8.5	49.9	5.5	37.6				
Green Ext Time (p_c), s	0.1	0.0	0.0	1.7	0.0	0.0	0.0	0.0				
Intersection Summary												
HCM 2010 Ctrl Delay			164.8									
HCM 2010 LOS			F									
Notes												

PM PEAK HOUR
 FWOP Construction

* HCM 2010 computational engine requires equal clearance times for the phases crossing the barrier.

West Hollywood - Orange Grove Mixed Use - Traffic Impact Study
 5: Orange Grove Ave

02/26/2019

Intersection												
Int Delay, s/veh	0.8											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↑↓			↑↓				↑			↑
Traffic Vol, veh/h	0	1857	37	1	1531	66	0	0	61	0	0	60
Future Vol, veh/h	0	1857	37	1	1531	66	0	0	61	0	0	60
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	0	-	-	0
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	95	95	92	92	95	95	95	92	95	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	2018	39	1	1664	72	0	0	64	0	0	65

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	-	0	0	2057	0	0	-	-	1029	-	-	868
Stage 1	-	-	-	-	-	-	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-	-	-	-	-	-	-
Critical Hdwy	-	-	-	4.14	-	-	-	-	6.94	-	-	6.94
Critical Hdwy Stg 1	-	-	-	-	-	-	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-	-	-	-	-	-	-
Follow-up Hdwy	-	-	-	2.22	-	-	-	-	3.32	-	-	3.32
Pot Cap-1 Maneuver	0	-	-	269	-	-	0	0	231	0	0	296
Stage 1	0	-	-	-	-	-	0	0	-	0	0	-
Stage 2	0	-	-	-	-	-	0	0	-	0	0	-
Platoon blocked, %	-	-	-	-	-	-	-	-	-	-	-	-
Mov Cap-1 Maneuver	-	-	-	269	-	-	-	-	231	-	-	296
Mov Cap-2 Maneuver	-	-	-	-	-	-	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-	-	-	-	-	-	-

Approach	EB			WB			NB			SB		
HCM Control Delay, s	0			0			26.5			20.6		
HCM LOS							D			C		

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	231	-	-	269	-	-	296
HCM Lane V/C Ratio	0.278	-	-	0.004	-	-	0.22
HCM Control Delay (s)	26.5	-	-	18.4	-	-	20.6
HCM Lane LOS	D	-	-	C	-	-	C
HCM 95th %tile Q(veh)	1.1	-	-	0	-	-	0.8

PM PEAK HOUR
 FWOP Construction

West Hollywood - Orange Grove Mixed Use - Traffic Impact Study
6: Ogden Ave

02/26/2019

Intersection						
Int Delay, s/veh	3.5					
Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		↑↑	↑↑		↑	
Traffic Vol, veh/h	137	1835	1525	51	7	50
Future Vol, veh/h	137	1835	1525	51	7	50
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	149	1995	1658	55	8	54

Major/Minor	Major1	Major2	Minor2		
Conflicting Flow All	1713	0	-	0	2982 857
Stage 1	-	-	-	-	1686 -
Stage 2	-	-	-	-	1296 -
Critical Hdwy	4.14	-	-	-	6.84 6.94
Critical Hdwy Stg 1	-	-	-	-	5.84 -
Critical Hdwy Stg 2	-	-	-	-	5.84 -
Follow-up Hdwy	2.22	-	-	-	3.52 3.32
Pot Cap-1 Maneuver	366	-	-	-	11 301
Stage 1	-	-	-	-	135 -
Stage 2	-	-	-	-	220 -
Platoon blocked, %		-	-	-	
Mov Cap-1 Maneuver	366	-	-	-	11 301
Mov Cap-2 Maneuver	-	-	-	-	11 -
Stage 1	-	-	-	-	135 -
Stage 2	-	-	-	-	220 -

Approach	EB	WB	SB
HCM Control Delay, s	1.5	0	171
HCM LOS			F

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	366	-	-	-	71
HCM Lane V/C Ratio	0.407	-	-	-	0.873
HCM Control Delay (s)	21.4	0	-	-	171
HCM Lane LOS	C	A	-	-	F
HCM 95th %tile Q(veh)	1.9	-	-	-	4.3

PM PEAK HOUR
FWOP Construction

Intersection						
Int Delay, s/veh	5.4					
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↑↑			↑↑	↑	
Traffic Vol, veh/h	1885	32	33	1560	6	113
Future Vol, veh/h	1885	32	33	1560	6	113
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	95	95	95	95	95	95
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	1984	34	35	1642	6	119

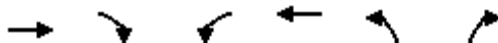
Major/Minor	Major1	Major2	Minor1	Minor2	Minor3
Conflicting Flow All	0	0	2018	0	2892
Stage 1	-	-	-	-	2001
Stage 2	-	-	-	-	891
Critical Hdwy	-	-	4.14	-	6.84
Critical Hdwy Stg 1	-	-	-	-	5.84
Critical Hdwy Stg 2	-	-	-	-	5.84
Follow-up Hdwy	-	-	2.22	-	3.52
Pot Cap-1 Maneuver	-	-	278	-	13
Stage 1	-	-	-	-	91
Stage 2	-	-	-	-	361
Platoon blocked, %	-	-	-	-	-
Mov Cap-1 Maneuver	-	-	278	-	0
Mov Cap-2 Maneuver	-	-	-	-	0
Stage 1	-	-	-	-	91
Stage 2	-	-	-	-	0

Approach	EB	WB	NB
HCM Control Delay, s	0	9.7	35.8
HCM LOS			E

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	238	-	-	278	-
HCM Lane V/C Ratio	0.526	-	-	0.125	-
HCM Control Delay (s)	35.8	-	-	19.8	9.5
HCM Lane LOS	E	-	-	C	A
HCM 95th %tile Q(veh)	2.8	-	-	0.4	-

West Hollywood - Orange Grove Mixed Use - Traffic Impact Study
 442: Genesee Ave & Santa Monica Blvd

02/26/2019



Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↑↑		↙	↑↑	↘	
Traffic Volume (vph)	1744	14	75	1396	38	109
Future Volume (vph)	1744	14	75	1396	38	109
Ideal Flow (vphpl)	1620	1620	1620	1620	1620	1620
Total Lost time (s)	5.6		4.5	5.6	3.5	
Lane Util. Factor	0.95		1.00	0.95	1.00	
Frt	1.00		1.00	1.00	0.90	
Flt Protected	1.00		0.95	1.00	0.99	
Satd. Flow (prot)	3014		1509	3018	1411	
Flt Permitted	1.00		0.06	1.00	0.99	
Satd. Flow (perm)	3014		94	3018	1411	
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	1896	15	82	1517	41	118
RTOR Reduction (vph)	0	0	0	0	69	0
Lane Group Flow (vph)	1911	0	82	1517	90	0
Turn Type	NA		pm+pt	NA	Prot	
Protected Phases	2		1	6	8	
Permitted Phases			6			
Actuated Green, G (s)	69.5		74.5	68.2	16.7	
Effective Green, g (s)	69.0		73.5	67.7	17.2	
Actuated g/C Ratio	0.65		0.70	0.64	0.16	
Clearance Time (s)	5.1		4.0	5.1	4.0	
Vehicle Extension (s)	3.0		3.0	3.0	3.0	
Lane Grp Cap (vph)	1969		143	1934	229	
v/s Ratio Prot	c0.63		c0.03	0.50	c0.06	
v/s Ratio Perm			0.37			
v/c Ratio	0.97		0.57	0.78	0.39	
Uniform Delay, d1	17.3		16.8	13.7	39.5	
Progression Factor	1.00		1.80	0.13	1.00	
Incremental Delay, d2	14.4		2.6	1.5	1.1	
Delay (s)	31.7		32.7	3.3	40.6	
Level of Service	C		C	A	D	
Approach Delay (s)	31.7			4.8	40.6	
Approach LOS	C			A	D	

Intersection Summary

HCM 2000 Control Delay	20.4	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.85		
Actuated Cycle Length (s)	105.6	Sum of lost time (s)	15.2
Intersection Capacity Utilization	84.0%	ICU Level of Service	E
Analysis Period (min)	15		

c Critical Lane Group

West Hollywood - Orange Grove Mixed Use - Traffic Impact Study
 8: Romaine St & Fairfax Ave

02/26/2019

Intersection

Int Delay, s/veh 119.5

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕↔			↕	↕	↕	↕↕	↕	↕	↕↕	↕
Traffic Vol, veh/h	25	46	74	3	10	31	50	1245	82	51	985	50
Future Vol, veh/h	25	46	74	3	10	31	50	1245	82	51	985	50
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	0	90	-	0	102	-	0
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	27	50	80	3	11	34	54	1353	89	55	1071	54

Major/Minor	Minor2		Minor1		Major1		Major2					
Conflicting Flow All	1971	2731	536	2132	2696	677	1125	0	0	1442	0	0
Stage 1	1181	1181	-	1461	1461	-	-	-	-	-	-	-
Stage 2	790	1550	-	671	1235	-	-	-	-	-	-	-
Critical Hdwy	7.54	6.54	6.94	7.54	6.54	6.94	4.14	-	-	4.14	-	-
Critical Hdwy Stg 1	6.54	5.54	-	6.54	5.54	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.54	5.54	-	6.54	5.54	-	-	-	-	-	-	-
Follow-up Hdwy	3.52	4.02	3.32	3.52	4.02	3.32	2.22	-	-	2.22	-	-
Pot Cap-1 Maneuver	37	~ 20	489	28	21	395	617	-	-	466	-	-
Stage 1	202	262	-	135	192	-	-	-	-	-	-	-
Stage 2	350	173	-	412	247	-	-	-	-	-	-	-
Platoon blocked, %								-	-	-	-	-
Mov Cap-1 Maneuver	~ 14	~ 16	489	-	17	395	617	-	-	466	-	-
Mov Cap-2 Maneuver	~ 14	~ 16	-	-	17	-	-	-	-	-	-	-
Stage 1	184	231	-	123	175	-	-	-	-	-	-	-
Stage 2	274	158	-	238	218	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, \$ 2177.4			0.4	0.6
HCM LOS	F	-		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	WBLn2	SBL	SBT	SBR
Capacity (veh/h)	617	-	-	30	-	395	466	-	-
HCM Lane V/C Ratio	0.088	-	-	5.254	-	0.085	0.119	-	-
HCM Control Delay (s)	11.4	-	-	\$ 2177.4	-	15	13.8	-	-
HCM Lane LOS	B	-	-	F	-	C	B	-	-
HCM 95th %tile Q(veh)	0.3	-	-	19.1	-	0.3	0.4	-	-

Notes























~: Volume exceeds capacity \$: Delay exceeds 300s +: Computation Not Defined *: All major volume in platoon

PM PEAK HOUR
 FWOP Construction

West Hollywood - Orange Grove Mixed Use - Traffic Impact Study

1: Fairfax Ave & Fountain Ave/Fountain Ave

07/26/2019

													
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR	
Lane Configurations													
Traffic Volume (veh/h)	109	678	96	258	1102	60	53	687	139	50	859	302	
Future Volume (veh/h)	109	678	96	258	1102	60	53	687	139	50	859	302	
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	1588	1588	1620	1588	1588	1620	1588	1588	1620	1588	1588	1588	
Adj Flow Rate, veh/h	115	714	101	272	1160	63	56	723	146	53	904	318	
Adj No. of Lanes	1	2	0	1	2	0	1	2	0	1	2	1	
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2	
Cap, veh/h	216	1588	224	365	1741	94	98	874	176	119	1054	442	
Arrive On Green	0.60	0.60	0.58	0.60	0.60	0.58	0.35	0.35	0.35	0.35	0.35	0.33	
Sat Flow, veh/h	454	2655	375	667	2911	158	455	2503	505	635	3018	1350	
Grp Volume(v), veh/h	115	406	409	272	601	622	56	436	433	53	904	318	
Grp Sat Flow(s),veh/h/ln	454	1509	1522	667	1509	1560	455	1509	1499	635	1509	1350	
Q Serve(g_s), s	25.0	16.3	16.4	41.7	29.3	29.4	7.8	29.1	29.1	9.2	30.6	22.8	
Cycle Q Clear(g_c), s	54.4	16.3	16.4	58.2	29.3	29.4	38.4	29.1	29.1	38.3	30.6	22.8	
Prop In Lane	1.00		0.25	1.00		0.10	1.00		0.34	1.00		1.00	
Lane Grp Cap(c), veh/h	216	902	910	365	902	933	98	527	524	119	1054	442	
V/C Ratio(X)	0.53	0.45	0.45	0.75	0.67	0.67	0.57	0.83	0.83	0.44	0.86	0.72	
Avail Cap(c_a), veh/h	217	907	915	367	907	938	98	527	524	119	1054	442	
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	0.97	0.97	0.97	1.00	1.00	1.00	
Uniform Delay (d), s/veh	33.0	12.2	12.4	28.2	14.8	14.9	52.7	32.7	32.7	50.3	33.2	32.5	
Incr Delay (d2), s/veh	4.4	0.7	0.7	9.5	2.4	2.4	21.4	13.4	13.5	11.5	9.0	9.7	
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	3.4	6.9	7.1	8.6	12.6	13.3	2.3	14.1	14.0	2.0	14.0	9.7	
LnGrp Delay(d),s/veh	37.5	12.9	13.1	37.7	17.2	17.3	74.2	46.2	46.3	61.8	42.2	42.2	
LnGrp LOS	D	B	B	D	B	B	E	D	D	E	D	D	
Approach Vol, veh/h		930			1495			925			1275		
Approach Delay, s/veh		16.0			21.0			47.9			43.1		
Approach LOS		B			C			D			D		
Timer	1	2	3	4	5	6	7	8					
Assigned Phs		2		4		6		8					
Phs Duration (G+Y+Rc), s		41.3		68.7		41.3		68.7					
Change Period (Y+Rc), s		* 5.3		* 5.3		* 5.3		* 5.3					
Max Green Setting (Gmax), s		* 36		* 64		* 36		* 64					
Max Q Clear Time (g_c+I1), s		40.4		56.4		40.3		60.2					
Green Ext Time (p_c), s		0.0		5.0		0.0		3.2					
Intersection Summary													
HCM 2010 Ctrl Delay				31.4									
HCM 2010 LOS				C									
Notes													

AM PEAK HOUR
FWP Construction

* HCM 2010 computational engine requires equal clearance times for the phases crossing the barrier.

West Hollywood - Orange Grove Mixed Use - Traffic Impact Study
 2: Orange Grove Ave & Fountain Ave

07/26/2019

Intersection

Int Delay, s/veh 47

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕↕			↕↕			↕			↕	
Traffic Vol, veh/h	2	832	49	62	1259	6	3	3	63	4	25	162
Future Vol, veh/h	2	832	49	62	1259	6	3	3	63	4	25	162
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	95	92	92	92	92	95	92	95	92	95	95	95
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	2	904	53	67	1368	6	3	3	68	4	26	171

Major/Minor	Major1	Major2	Minor1	Minor2
Conflicting Flow All	1374	0	0	957
Stage 1	-	-	-	-
Stage 2	-	-	-	-
Critical Hdwy	4.14	-	-	4.14
Critical Hdwy Stg 1	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-
Follow-up Hdwy	2.22	-	-	2.22
Pot Cap-1 Maneuver	495	-	-	714
Stage 1	-	-	-	-
Stage 2	-	-	-	-
Platoon blocked, %	-	-	-	-
Mov Cap-1 Maneuver	495	-	-	714
Mov Cap-2 Maneuver	-	-	-	-
Stage 1	-	-	-	-
Stage 2	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0.1	2.3		\$ 609
HCM LOS			-	F

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	-	495	-	-	714	-	-	95
HCM Lane V/C Ratio	-	0.004	-	-	0.094	-	-	2.116
HCM Control Delay (s)	-	12.3	0.1	-	10.6	1.9	-	\$ 609
HCM Lane LOS	-	B	A	-	B	A	-	F
HCM 95th %tile Q(veh)	-	0	-	-	0.3	-	-	17.6

Notes

-: Volume exceeds capacity \$: Delay exceeds 300s +: Computation Not Defined *: All major volume in platoon

AM PEAK HOUR
 FWP Construction

West Hollywood - Orange Grove Mixed Use - Traffic Impact Study
 3: Ogden Ave

07/26/2019

Intersection

Int Delay, s/veh 7.8

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↔			↔			↔			↔	
Traffic Vol, veh/h	5	833	14	67	1425	6	11	2	58	0	7	17
Future Vol, veh/h	5	833	14	67	1425	6	11	2	58	0	7	17
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	95	92	92	92	92	95	92	95	92	95	95	95
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	5	905	15	73	1549	6	12	2	63	0	7	18

Major/Minor	Major1	Major2	Minor1	Minor2
Conflicting Flow All	1555	0	0	920
Stage 1	-	-	-	-
Stage 2	-	-	-	-
Critical Hdwy	4.14	-	-	4.14
Critical Hdwy Stg 1	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-
Follow-up Hdwy	2.22	-	-	2.22
Pot Cap-1 Maneuver	422	-	-	738
Stage 1	-	-	-	-
Stage 2	-	-	-	-
Platoon blocked, %	-	-	-	-
Mov Cap-1 Maneuver	422	-	-	738
Mov Cap-2 Maneuver	-	-	-	-
Stage 1	-	-	-	-
Stage 2	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0.3	3.8		\$ 569.5
HCM LOS			-	F
























Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	-	422	-	-	738	-	-	20
HCM Lane V/C Ratio	-	0.012	-	-	0.099	-	-	1.263
HCM Control Delay (s)	-	13.6	0.2	-	10.4	3.5	-	\$ 569.5
HCM Lane LOS	-	B	A	-	B	A	-	F
HCM 95th %tile Q(veh)	-	0	-	-	0.3	-	-	3.4

Notes
 -: Volume exceeds capacity \$: Delay exceeds 300s +: Computation Not Defined *: All major volume in platoon

AM PEAK HOUR
 FWP Construction

West Hollywood - Orange Grove Mixed Use - Traffic Impact Study
 4: Fairfax Ave & Santa Monica Blvd/Santa Monica Boulevard

07/26/2019

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	131	909	77	406	1219	53	102	711	168	73	977	123
Future Volume (veh/h)	131	909	77	406	1219	53	102	711	168	73	977	123
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	1588	1588	1588	1588	1588	1620	1588	1588	1588	1588	1588	1588
Adj Flow Rate, veh/h	138	957	81	427	1283	56	107	748	177	77	1028	129
Adj No. of Lanes	1	2	1	1	2	0	1	2	1	1	2	1
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	148	987	436	266	1194	52	135	981	439	168	945	417
Arrive On Green	0.06	0.33	0.32	0.13	0.41	0.40	0.05	0.33	0.33	0.04	0.31	0.31
Sat Flow, veh/h	1513	3018	1350	1513	2946	128	1513	3018	1350	1513	3018	1350
Grp Volume(v), veh/h	138	957	81	427	656	683	107	748	177	77	1028	129
Grp Sat Flow(s),veh/h/ln	1513	1509	1350	1513	1509	1566	1513	1509	1350	1513	1509	1350
Q Serve(g_s), s	6.5	35.9	5.0	15.5	46.6	46.6	5.5	25.6	11.7	4.1	36.0	8.4
Cycle Q Clear(g_c), s	6.5	35.9	5.0	15.5	46.6	46.6	5.5	25.6	11.7	4.1	36.0	8.4
Prop In Lane	1.00		1.00	1.00		0.08	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	148	987	436	266	611	634	135	981	439	168	945	417
V/C Ratio(X)	0.93	0.97	0.19	1.60	1.07	1.08	0.79	0.76	0.40	0.46	1.09	0.31
Avail Cap(c_a), veh/h	148	987	436	266	611	634	135	981	439	199	945	417
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	1.00	1.00	0.87	0.87	0.87
Uniform Delay (d), s/veh	33.4	38.1	28.1	33.4	34.2	34.2	32.7	34.8	30.1	30.1	39.5	30.4
Incr Delay (d2), s/veh	53.8	22.3	0.9	288.0	57.8	57.9	26.8	3.6	0.6	1.7	54.6	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	3.9	17.9	2.0	29.8	29.2	30.3	2.1	11.1	4.4	1.8	22.1	3.2
LnGrp Delay(d),s/veh	87.3	60.4	29.0	321.4	92.0	92.1	59.4	38.4	30.7	31.8	94.1	30.7
LnGrp LOS	F	E	C	F	F	F	E	D	C	C	F	C
Approach Vol, veh/h		1176			1766			1032			1234	
Approach Delay, s/veh		61.4			147.5			39.3			83.6	
Approach LOS		E			F			D			F	
Timer	1	2	3	4	5	6	7	8				
Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	21.0	42.2	11.0	40.8	12.0	51.2	9.6	42.2				
Change Period (Y+Rc), s	* 4	5.1	* 4	* 5.3	* 4	5.1	* 4	* 5.3				
Max Green Setting (Gmax), s	* 17	37.1	* 7	* 36	* 8	46.1	* 8	* 35				
Max Q Clear Time (g_c+I1), s	17.5	37.9	7.5	38.0	8.5	48.6	6.1	27.6				
Green Ext Time (p_c), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	3.2				
Intersection Summary												
HCM 2010 Ctrl Delay			91.5									
HCM 2010 LOS			F									
Notes												

AM PEAK HOUR
 FWP Construction

* HCM 2010 computational engine requires equal clearance times for the phases crossing the barrier.

West Hollywood - Orange Grove Mixed Use - Traffic Impact Study
 5: Santa Monica Boulevard & Orange Grove Ave

07/26/2019

Intersection

Int Delay, s/veh 1.1

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↑↓			↑↓				↑			↑
Traffic Vol, veh/h	0	1130	17	0	1562	46	1	0	17	0	0	111
Future Vol, veh/h	0	1130	17	0	1562	46	1	0	17	0	0	111
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	0	-	-	0
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	95	95	92	92	95	95	95	92	95	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	1228	18	0	1698	50	1	0	18	0	0	121

Major/Minor	Major1		Major2		Minor1		Minor2					
Conflicting Flow All	-	0	0	-	-	0	2086	-	623	-	-	874
Stage 1	-	-	-	-	-	-	1237	-	-	-	-	-
Stage 2	-	-	-	-	-	-	849	-	-	-	-	-
Critical Hdwy	-	-	-	-	-	-	7.54	-	6.94	-	-	6.94
Critical Hdwy Stg 1	-	-	-	-	-	-	6.54	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.54	-	-	-	-	-
Follow-up Hdwy	-	-	-	-	-	-	3.52	-	3.32	-	-	3.32
Pot Cap-1 Maneuver	0	-	-	0	-	-	30	0	429	0	0	293
Stage 1	0	-	-	0	-	-	186	0	-	0	0	-
Stage 2	0	-	-	0	-	-	322	0	-	0	0	-
Platoon blocked, %	-	-	-	-	-	-	-	-	-	-	-	-
Mov Cap-1 Maneuver	-	-	-	-	-	-	18	-	429	-	-	293
Mov Cap-2 Maneuver	-	-	-	-	-	-	18	-	-	-	-	-
Stage 1	-	-	-	-	-	-	186	-	-	-	-	-
Stage 2	-	-	-	-	-	-	189	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0	0	13.8	25.6
HCM LOS			B	D

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBT	WBR	SBLn1
Capacity (veh/h)	429	-	-	-	-	293
HCM Lane V/C Ratio	0.042	-	-	-	-	0.412
HCM Control Delay (s)	13.8	-	-	-	-	25.6
HCM Lane LOS	B	-	-	-	-	D
HCM 95th %tile Q(veh)	0.1	-	-	-	-	1.9

AM PEAK HOUR
 FWP Construction

West Hollywood - Orange Grove Mixed Use - Traffic Impact Study
6: Ogden Ave

07/26/2019

Intersection

Int Delay, s/veh 3

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		↑↑	↑↑		↑	
Traffic Vol, veh/h	26	1155	1546	33	5	110
Future Vol, veh/h	26	1155	1546	33	5	110
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	28	1255	1680	36	5	120

Major/Minor

	Major1	Major2	Minor2		
Conflicting Flow All	1716	0	0	2382	858
Stage 1	-	-	-	1698	-
Stage 2	-	-	-	684	-
Critical Hdwy	4.14	-	-	6.84	6.94
Critical Hdwy Stg 1	-	-	-	5.84	-
Critical Hdwy Stg 2	-	-	-	5.84	-
Follow-up Hdwy	2.22	-	-	3.52	3.32
Pot Cap-1 Maneuver	365	-	-	29	300
Stage 1	-	-	-	133	-
Stage 2	-	-	-	462	-
Platoon blocked, %	-	-	-	-	-
Mov Cap-1 Maneuver	365	-	-	22	300
Mov Cap-2 Maneuver	-	-	-	22	-
Stage 1	-	-	-	99	-
Stage 2	-	-	-	462	-

Approach

	EB	WB	SB
HCM Control Delay, s	2.2	0	52.1
HCM LOS			F

Minor Lane/Major Mvmt

	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	365	-	-	-	194
HCM Lane V/C Ratio	0.077	-	-	-	0.644
HCM Control Delay (s)	15.7	1.9	-	-	52.1
HCM Lane LOS	C	A	-	-	F
HCM 95th %tile Q(veh)	0.2	-	-	-	3.8

AM PEAK HOUR
FWP Construction

West Hollywood - Orange Grove Mixed Use - Traffic Impact Study

106:

07/26/2019

Intersection

Int Delay, s/veh	3.6					
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↑↑			↑↑	↑	
Traffic Vol, veh/h	1140	17	61	1595	8	38
Future Vol, veh/h	1140	17	61	1595	8	38
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	95	95	95	95	95	95
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	1200	18	64	1679	8	40

Major/Minor

	Major1	Major2	Minor1		
Conflicting Flow All	0	0	1218	0	2177
Stage 1	-	-	-	-	1209
Stage 2	-	-	-	-	968
Critical Hdwy	-	-	4.14	-	6.84
Critical Hdwy Stg 1	-	-	-	-	5.84
Critical Hdwy Stg 2	-	-	-	-	5.84
Follow-up Hdwy	-	-	2.22	-	3.52
Pot Cap-1 Maneuver	-	-	568	-	39
Stage 1	-	-	-	-	245
Stage 2	-	-	-	-	329
Platoon blocked, %	-	-	-	-	-
Mov Cap-1 Maneuver	-	-	568	-	0
Mov Cap-2 Maneuver	-	-	-	-	0
Stage 1	-	-	-	-	245
Stage 2	-	-	-	-	0

Approach

	EB	WB	NB
HCM Control Delay, s	0	5.8	14.2
HCM LOS			B

Minor Lane/Major Mvmt

	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	438	-	-	568	-
HCM Lane V/C Ratio	0.111	-	-	0.113	-
HCM Control Delay (s)	14.2	-	-	12.1	5.6
HCM Lane LOS	B	-	-	B	A
HCM 95th %tile Q(veh)	0.4	-	-	0.4	-

AM PEAK HOUR
FWP Construction

West Hollywood - Orange Grove Mixed Use - Traffic Impact Study
 7: Santa Monica Blvd & Genesse Ave

07/26/2019



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (vph)	25	1175	1519	20	33	96
Future Volume (vph)	25	1175	1519	20	33	96
Ideal Flow (vphpl)	1620	1620	1620	1620	1620	1620
Total Lost time (s)	4.5	5.6	5.6		4.6	
Lane Util. Factor	1.00	0.95	0.95		1.00	
Frt	1.00	1.00	1.00		0.90	
Flt Protected	0.95	1.00	1.00		0.99	
Satd. Flow (prot)	1509	3018	3012		1411	
Flt Permitted	0.10	1.00	1.00		0.99	
Satd. Flow (perm)	157	3018	3012		1411	
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	27	1277	1651	22	36	104
RTOR Reduction (vph)	0	0	1	0	88	0
Lane Group Flow (vph)	27	1277	1672	0	52	0
Turn Type	pm+pt	NA	NA		Prot	
Protected Phases	5	2	6		4	
Permitted Phases	2					
Actuated Green, G (s)	71.1	68.1	72.8		15.6	
Effective Green, g (s)	70.1	67.6	72.3		16.1	
Actuated g/C Ratio	0.66	0.64	0.68		0.15	
Clearance Time (s)	4.0	5.1	5.1		5.1	
Vehicle Extension (s)	1.0	3.0	3.0		3.0	
Lane Grp Cap (vph)	136	1931	2062		215	
v/s Ratio Prot	c0.00	0.42	c0.56		c0.04	
v/s Ratio Perm	0.13					
v/c Ratio	0.20	0.66	0.81		0.24	
Uniform Delay, d1	8.6	11.9	11.8		39.4	
Progression Factor	0.31	0.26	1.00		1.00	
Incremental Delay, d2	0.2	1.6	3.6		0.6	
Delay (s)	2.9	4.6	15.4		40.0	
Level of Service	A	A	B		D	
Approach Delay (s)		4.6	15.4		40.0	
Approach LOS		A	B		D	

Intersection Summary

HCM 2000 Control Delay	12.0	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.69		
Actuated Cycle Length (s)	105.6	Sum of lost time (s)	14.7
Intersection Capacity Utilization	71.0%	ICU Level of Service	C
Analysis Period (min)	15		

c Critical Lane Group

West Hollywood - Orange Grove Mixed Use - Traffic Impact Study
 8: Romaine St & Fairfax Ave

07/26/2019

Intersection												
Int Delay, s/veh	68.6											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↔			↔	↔	↔	↕	↕	↕	↕	↕
Traffic Vol, veh/h	8	5	62	27	52	63	54	911	12	35	1370	49
Future Vol, veh/h	8	5	62	27	52	63	54	911	12	35	1370	49
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	0	90	-	0	102	-	0
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	9	5	67	29	57	68	59	990	13	38	1489	53

Major/Minor	Minor2		Minor1		Major1		Major2					
Conflicting Flow All	2207	2686	745	1931	2726	495	1542	0	0	1003	0	0
Stage 1	1565	1565	-	1108	1108	-	-	-	-	-	-	-
Stage 2	642	1121	-	823	1618	-	-	-	-	-	-	-
Critical Hdwy	7.54	6.54	6.94	7.54	6.54	6.94	4.14	-	-	4.14	-	-
Critical Hdwy Stg 1	6.54	5.54	-	6.54	5.54	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.54	5.54	-	6.54	5.54	-	-	-	-	-	-	-
Follow-up Hdwy	3.52	4.02	3.32	3.52	4.02	3.32	2.22	-	-	2.22	-	-
Pot Cap-1 Maneuver	25	21	357	40	~ 20	520	427	-	-	686	-	-
Stage 1	116	170	-	224	284	-	-	-	-	-	-	-
Stage 2	429	280	-	334	161	-	-	-	-	-	-	-
Platoon blocked, %	-	-	-	-	-	-	-	-	-	-	-	-
Mov Cap-1 Maneuver	-	17	357	~ 21	~ 16	520	427	-	-	686	-	-
Mov Cap-2 Maneuver	-	17	-	~ 21	~ 16	-	-	-	-	-	-	-
Stage 1	100	161	-	193	245	-	-	-	-	-	-	-
Stage 2	247	241	-	247	152	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s		\$ 1270.8	0.8	0.3
HCM LOS	-	F		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	WBLn2	SBL	SBT	SBR
Capacity (veh/h)	427	-	-	-	17	520	686	-	-
HCM Lane V/C Ratio	0.137	-	-	-	5.051	0.132	0.055	-	-
HCM Control Delay (s)	14.8	-	-	-	\$ 2273.8	13	10.6	-	-
HCM Lane LOS	B	-	-	-	F	B	B	-	-
HCM 95th %tile Q(veh)	0.5	-	-	-	11.4	0.5	0.2	-	-






















Notes
 -: Volume exceeds capacity \$: Delay exceeds 300s +: Computation Not Defined *: All major volume in platoon

AM PEAK HOUR
 FWP Construction

West Hollywood - Orange Grove Mixed Use - Traffic Impact Study

1: Fairfax Ave & Fountain Ave

02/26/2019

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	166	766	57	168	947	80	51	757	147	56	723	222
Future Volume (veh/h)	166	766	57	168	947	80	51	757	147	56	723	222
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	1588	1588	1620	1588	1588	1620	1588	1588	1620	1588	1588	1588
Adj Flow Rate, veh/h	175	806	60	177	997	84	54	797	155	59	761	234
Adj No. of Lanes	1	2	0	1	2	0	1	2	0	1	2	1
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	263	1710	127	347	1692	143	137	874	170	92	1047	439
Arrive On Green	0.60	0.60	0.58	0.60	0.60	0.58	0.35	0.35	0.35	0.35	0.35	0.33
Sat Flow, veh/h	520	2848	212	636	2818	237	564	2520	490	587	3018	1350
Grp Volume(v), veh/h	175	427	439	177	534	547	54	477	475	59	761	234
Grp Sat Flow(s),veh/h/ln	520	1509	1551	636	1509	1546	564	1509	1502	587	1509	1350
Q Serve(g_s), s	34.6	17.4	17.5	23.7	24.1	24.2	10.2	33.2	33.2	4.9	24.2	15.6
Cycle Q Clear(g_c), s	58.8	17.4	17.5	41.1	24.1	24.2	34.4	33.2	33.2	38.2	24.2	15.6
Prop In Lane	1.00		0.14	1.00		0.15	1.00		0.33	1.00		1.00
Lane Grp Cap(c), veh/h	263	906	931	347	906	928	137	523	521	92	1047	439
V/C Ratio(X)	0.67	0.47	0.47	0.51	0.59	0.59	0.39	0.91	0.91	0.64	0.73	0.53
Avail Cap(c_a), veh/h	263	907	932	347	907	929	137	523	521	92	1047	439
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	0.97	0.97	0.97	1.00	1.00	1.00
Uniform Delay (d), s/veh	31.8	12.3	12.4	23.7	13.6	13.7	46.4	34.3	34.3	53.9	31.4	30.3
Incr Delay (d2), s/veh	8.1	0.8	0.8	2.4	1.5	1.5	8.0	22.0	22.1	29.8	4.4	4.6
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	5.5	7.3	7.7	4.4	10.3	10.6	1.9	17.0	16.9	2.5	10.7	6.3
LnGrp Delay(d),s/veh	39.9	13.0	13.1	26.2	15.1	15.2	54.4	56.3	56.4	83.7	35.8	34.9
LnGrp LOS	D	B	B	C	B	B	D	E	E	F	D	C
Approach Vol, veh/h		1041			1258			1006			1054	
Approach Delay, s/veh		17.6			16.7			56.3			38.3	
Approach LOS		B			B			E			D	
Timer	1	2	3	4	5	6	7	8				
Assigned Phs		2		4		6		8				
Phs Duration (G+Y+Rc), s		41.1		68.9		41.1		68.9				
Change Period (Y+Rc), s		* 5.3		* 5.3		* 5.3		* 5.3				
Max Green Setting (Gmax), s		* 36		* 64		* 36		* 64				
Max Q Clear Time (g_c+I1), s		36.4		60.8		40.2		43.1				
Green Ext Time (p_c), s		0.0		2.8		0.0		19.2				
Intersection Summary												
HCM 2010 Ctrl Delay				31.3								
HCM 2010 LOS				C								
Notes												

MIDDAY PEAK HOUR
FWP Construction

* HCM 2010 computational engine requires equal clearance times for the phases crossing the barrier.

West Hollywood - Orange Grove Mixed Use - Traffic Impact Study
 2: Orange Grove Ave

02/26/2019

Intersection

Int Delay, s/veh 3

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↔			↔			↔			↔	
Traffic Vol, veh/h	19	949	23	20	1149	10	8	3	53	4	3	41
Future Vol, veh/h	19	949	23	20	1149	10	8	3	53	4	3	41
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	95	92	92	92	92	95	92	95	92	95	95	95
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	20	1032	25	22	1249	11	9	3	58	4	3	43

Major/Minor	Major1	Major2	Minor1	Minor2
Conflicting Flow All	1260	0	0	1057
Stage 1	-	-	-	-
Stage 2	-	-	-	-
Critical Hdwy	4.14	-	-	4.14
Critical Hdwy Stg 1	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-
Follow-up Hdwy	2.22	-	-	2.22
Pot Cap-1 Maneuver	548	-	-	655
Stage 1	-	-	-	-
Stage 2	-	-	-	-
Platoon blocked, %	-	-	-	-
Mov Cap-1 Maneuver	548	-	-	655
Mov Cap-2 Maneuver	-	-	-	-
Stage 1	-	-	-	-
Stage 2	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0.7	0.8	48.2	43.3
HCM LOS			E	E

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	150	548	-	-	655	-	-	143
HCM Lane V/C Ratio	0.463	0.036	-	-	0.033	-	-	0.353
HCM Control Delay (s)	48.2	11.8	0.5	-	10.7	0.6	-	43.3
HCM Lane LOS	E	B	A	-	B	A	-	E
HCM 95th %tile Q(veh)	2.1	0.1	-	-	0.1	-	-	1.5

MIDDAY PEAK HOUR
 FWP Construction

West Hollywood - Orange Grove Mixed Use - Traffic Impact Study
 3: Ogden Ave

02/26/2019

Intersection												
Int Delay, s/veh	2.6											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↔↔			↔↔			↔			↔	
Traffic Vol, veh/h	20	951	19	26	1136	9	10	3	53	1	1	24
Future Vol, veh/h	20	951	19	26	1136	9	10	3	53	1	1	24
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	95	92	92	92	92	95	92	95	92	95	95	95
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	21	1034	21	28	1235	9	11	3	58	1	1	25

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	1244	0	0	1055	0	0	1761	2387	528	1857	2393	622
Stage 1	-	-	-	-	-	-	1087	1087	-	1296	1296	-
Stage 2	-	-	-	-	-	-	674	1300	-	561	1097	-
Critical Hdwy	4.14	-	-	4.14	-	-	7.54	6.54	6.94	7.54	6.54	6.94
Critical Hdwy Stg 1	-	-	-	-	-	-	6.54	5.54	-	6.54	5.54	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.54	5.54	-	6.54	5.54	-
Follow-up Hdwy	2.22	-	-	2.22	-	-	3.52	4.02	3.32	3.52	4.02	3.32
Pot Cap-1 Maneuver	555	-	-	656	-	-	54	34	495	45	33	430
Stage 1	-	-	-	-	-	-	231	290	-	171	231	-
Stage 2	-	-	-	-	-	-	410	230	-	480	287	-
Platoon blocked, %	-	-	-	-	-	-	-	-	-	-	-	-
Mov Cap-1 Maneuver	555	-	-	656	-	-	41	27	495	30	26	430
Mov Cap-2 Maneuver	-	-	-	-	-	-	41	27	-	30	26	-
Stage 1	-	-	-	-	-	-	210	263	-	155	199	-
Stage 2	-	-	-	-	-	-	331	198	-	380	261	-
























Approach	EB			WB			NB			SB		
HCM Control Delay, s	0.7			0.9			52.5			25.4		
HCM LOS							F			D		

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	144	555	-	-	656	-	-	204
HCM Lane V/C Ratio	0.497	0.038	-	-	0.043	-	-	0.134
HCM Control Delay (s)	52.5	11.7	0.5	-	10.7	0.7	-	25.4
HCM Lane LOS	F	B	A	-	B	A	-	D
HCM 95th %tile Q(veh)	2.4	0.1	-	-	0.1	-	-	0.5

MIDDAY PEAK HOUR
 FWP Construction

West Hollywood - Orange Grove Mixed Use - Traffic Impact Study
 4: Fairfax Ave & Santa Monica Blvd

02/26/2019

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	171	1443	113	261	1464	79	169	739	231	86	780	124
Future Volume (veh/h)	171	1443	113	261	1464	79	169	739	231	86	780	124
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	1588	1588	1588	1588	1588	1620	1588	1588	1588	1588	1588	1588
Adj Flow Rate, veh/h	180	1519	119	275	1541	83	178	778	243	91	821	131
Adj No. of Lanes	1	2	1	1	2	0	1	2	1	1	2	1
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	148	1013	447	266	1206	65	151	930	416	157	918	405
Arrive On Green	0.06	0.34	0.33	0.13	0.41	0.41	0.05	0.31	0.31	0.04	0.30	0.30
Sat Flow, veh/h	1513	3018	1350	1513	2913	156	1513	3018	1350	1513	3018	1350
Grp Volume(v), veh/h	180	1519	119	275	795	829	178	778	243	91	821	131
Grp Sat Flow(s),veh/h/ln	1513	1509	1350	1513	1509	1561	1513	1509	1350	1513	1509	1350
Q Serve(g_s), s	6.5	38.6	7.4	15.5	47.6	47.6	5.5	27.6	17.5	4.9	29.9	8.7
Cycle Q Clear(g_c), s	6.5	38.6	7.4	15.5	47.6	47.6	5.5	27.6	17.5	4.9	29.9	8.7
Prop In Lane	1.00		1.00	1.00		0.10	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	148	1013	447	266	625	646	151	930	416	157	918	405
V/C Ratio(X)	1.22	1.50	0.27	1.03	1.27	1.28	1.18	0.84	0.58	0.58	0.89	0.32
Avail Cap(c_a), veh/h	148	1013	447	266	625	646	151	930	416	176	945	417
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	1.00	1.00	0.87	0.87	0.87
Uniform Delay (d), s/veh	34.5	38.2	28.2	33.6	33.7	33.7	40.2	37.1	33.6	31.2	38.2	31.2
Incr Delay (d2), s/veh	143.3	230.0	1.5	63.7	135.1	138.9	130.2	6.8	2.1	3.3	9.6	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	7.9	48.4	3.0	13.2	43.2	45.4	5.4	12.3	6.8	2.2	13.7	3.3
LnGrp Delay(d),s/veh	177.8	268.2	29.6	97.3	168.8	172.6	170.3	43.9	35.7	34.6	47.8	31.6
LnGrp LOS	F	F	C	F	F	F	F	D	D	C	D	C
Approach Vol, veh/h		1818			1899			1199			1043	
Approach Delay, s/veh		243.6			160.1			61.0			44.6	
Approach LOS		F			F			E			D	
Timer	1	2	3	4	5	6	7	8				
Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	21.0	43.2	11.0	39.8	12.0	52.2	10.6	40.2				
Change Period (Y+Rc), s	* 4	5.1	* 4	* 5.3	* 4	5.1	* 4	* 5.3				
Max Green Setting (Gmax), s	* 17	37.1	* 7	* 36	* 8	46.1	* 8	* 35				
Max Q Clear Time (g_c+I1), s	17.5	40.6	7.5	31.9	8.5	49.6	6.9	29.6				
Green Ext Time (p_c), s	0.0	0.0	0.0	2.6	0.0	0.0	0.0	4.0				
Intersection Summary												
HCM 2010 Ctrl Delay			145.4									
HCM 2010 LOS			F									
Notes												

MIDDAY PEAK HOUR
 FWP Construction

* HCM 2010 computational engine requires equal clearance times for the phases crossing the barrier.

West Hollywood - Orange Grove Mixed Use - Traffic Impact Study
 5: Orange Grove Ave

02/26/2019

Intersection												
Int Delay, s/veh	0.6											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↑↑			↑↑				↑			↑
Traffic Vol, veh/h	0	1725	34	1	1763	51	0	0	35	0	0	55
Future Vol, veh/h	0	1725	34	1	1763	51	0	0	35	0	0	55
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	0	-	-	0
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	95	95	92	92	95	95	95	92	95	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	1875	36	1	1916	55	0	0	37	0	0	60

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	-	0	0	1911	0	0	-	-	956	-	-	986
Stage 1	-	-	-	-	-	-	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-	-	-	-	-	-	-
Critical Hdwy	-	-	-	4.14	-	-	-	-	6.94	-	-	6.94
Critical Hdwy Stg 1	-	-	-	-	-	-	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-	-	-	-	-	-	-
Follow-up Hdwy	-	-	-	2.22	-	-	-	-	3.32	-	-	3.32
Pot Cap-1 Maneuver	0	-	-	307	-	-	0	0	258	0	0	247
Stage 1	0	-	-	-	-	-	0	0	-	0	0	-
Stage 2	0	-	-	-	-	-	0	0	-	0	0	-
Platoon blocked, %	-	-	-	-	-	-	-	-	-	-	-	-
Mov Cap-1 Maneuver	-	-	-	307	-	-	-	-	258	-	-	247
Mov Cap-2 Maneuver	-	-	-	-	-	-	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-	-	-	-	-	-	-

Approach	EB			WB			NB			SB		
HCM Control Delay, s	0			0			21.3			24.2		
HCM LOS							C			C		

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	258	-	-	307	-	-	247
HCM Lane V/C Ratio	0.143	-	-	0.003	-	-	0.242
HCM Control Delay (s)	21.3	-	-	16.8	-	-	24.2
HCM Lane LOS	C	-	-	C	-	-	C
HCM 95th %tile Q(veh)	0.5	-	-	0	-	-	0.9

MIDDAY PEAK HOUR
 FWP Construction

West Hollywood - Orange Grove Mixed Use - Traffic Impact Study
 6: Ogden Ave

02/26/2019

Intersection						
Int Delay, s/veh	3.6					
Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		↑↑	↑↑		↑	
Traffic Vol, veh/h	51	1721	1793	32	7	47
Future Vol, veh/h	51	1721	1793	32	7	47
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	55	1871	1949	35	8	51

Major/Minor	Major1	Major2	Minor2		
Conflicting Flow All	1984	0	-	0	3013 992
Stage 1	-	-	-	-	1967 -
Stage 2	-	-	-	-	1046 -
Critical Hdwy	4.14	-	-	-	6.84 6.94
Critical Hdwy Stg 1	-	-	-	-	5.84 -
Critical Hdwy Stg 2	-	-	-	-	5.84 -
Follow-up Hdwy	2.22	-	-	-	3.52 3.32
Pot Cap-1 Maneuver	287	-	-	-	10 244
Stage 1	-	-	-	-	95 -
Stage 2	-	-	-	-	299 -
Platoon blocked, %		-	-	-	
Mov Cap-1 Maneuver	287	-	-	-	10 244
Mov Cap-2 Maneuver	-	-	-	-	10 -
Stage 1	-	-	-	-	95 -
Stage 2	-	-	-	-	299 -

Approach	EB	WB	SB
HCM Control Delay, s	0.6	0	222.7
HCM LOS			F

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	287	-	-	-	60
HCM Lane V/C Ratio	0.193	-	-	-	0.978
HCM Control Delay (s)	20.5	0	-	-	222.7
HCM Lane LOS	C	A	-	-	F
HCM 95th %tile Q(veh)	0.7	-	-	-	4.6

MIDDAY PEAK HOUR
 FWP Construction

Intersection						
Int Delay, s/veh	0.8					
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↑↑			↑↑	↑	
Traffic Vol, veh/h	1728	18	35	1805	3	38
Future Vol, veh/h	1728	18	35	1805	3	38
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	95	95	95	95	95	95
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	1819	19	37	1900	3	40

Major/Minor	Major1	Major2	Minor1		
Conflicting Flow All	0	0	1838	0	2853
Stage 1	-	-	-	-	1829
Stage 2	-	-	-	-	1024
Critical Hdwy	-	-	4.14	-	6.84
Critical Hdwy Stg 1	-	-	-	-	5.84
Critical Hdwy Stg 2	-	-	-	-	5.84
Follow-up Hdwy	-	-	2.22	-	3.52
Pot Cap-1 Maneuver	-	-	327	-	13
Stage 1	-	-	-	-	113
Stage 2	-	-	-	-	307
Platoon blocked, %	-	-	-	-	-
Mov Cap-1 Maneuver	-	-	327	-	13
Mov Cap-2 Maneuver	-	-	-	-	13
Stage 1	-	-	-	-	113
Stage 2	-	-	-	-	307

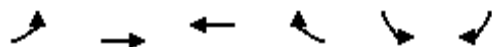
Approach	EB	WB	NB
HCM Control Delay, s	0	0.3	56.7
HCM LOS			F

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	111	-	-	327	-
HCM Lane V/C Ratio	0.389	-	-	0.113	-
HCM Control Delay (s)	56.7	-	-	17.4	0
HCM Lane LOS	F	-	-	C	A
HCM 95th %tile Q(veh)	1.6	-	-	0.4	-

MIDDAY PEAK HOUR
FWP Construction

West Hollywood - Orange Grove Mixed Use - Traffic Impact Study
 7: Santa Monica Blvd & Genesse Ave

02/26/2019



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (vph)	43	1707	1800	31	33	53
Future Volume (vph)	43	1707	1800	31	33	53
Ideal Flow (vphpl)	1620	1620	1620	1620	1620	1620
Total Lost time (s)	4.5	5.6	5.6		4.6	
Lane Util. Factor	1.00	0.95	0.95		1.00	
Frt	1.00	1.00	1.00		0.92	
Flt Protected	0.95	1.00	1.00		0.98	
Satd. Flow (prot)	1509	3018	3010		1429	
Flt Permitted	0.06	1.00	1.00		0.98	
Satd. Flow (perm)	93	3018	3010		1429	
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	47	1855	1957	34	36	58
RTOR Reduction (vph)	0	0	1	0	49	0
Lane Group Flow (vph)	47	1855	1990	0	45	0
Turn Type	pm+pt	NA	NA		Prot	
Protected Phases	5	2	6		4	
Permitted Phases	2					
Actuated Green, G (s)	72.7	68.5	71.6		15.6	
Effective Green, g (s)	71.7	68.0	71.1		16.1	
Actuated g/C Ratio	0.68	0.64	0.67		0.15	
Clearance Time (s)	4.0	5.1	5.1		5.1	
Vehicle Extension (s)	1.0	3.0	3.0		3.0	
Lane Grp Cap (vph)	112	1943	2026		217	
v/s Ratio Prot	c0.01	0.61	c0.66		c0.03	
v/s Ratio Perm	0.27					
v/c Ratio	0.42	0.95	0.98		0.21	
Uniform Delay, d1	14.9	17.4	16.6		39.2	
Progression Factor	1.64	0.22	1.00		1.00	
Incremental Delay, d2	0.4	6.8	16.2		0.5	
Delay (s)	24.9	10.6	32.9		39.6	
Level of Service	C	B	C		D	
Approach Delay (s)		10.9	32.9		39.6	
Approach LOS		B	C		D	

Intersection Summary

HCM 2000 Control Delay	22.6	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.82		
Actuated Cycle Length (s)	105.6	Sum of lost time (s)	14.7
Intersection Capacity Utilization	80.5%	ICU Level of Service	D
Analysis Period (min)	15		

c Critical Lane Group

MIDDAY PEAK HOUR
 FWP Construction

West Hollywood - Orange Grove Mixed Use - Traffic Impact Study
 8: Romaine St & Fairfax Ave

02/26/2019

Intersection

Int Delay, s/veh 10.3

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↔			↔	↗	↖	↗	↖	↖	↗	↗
Traffic Vol, veh/h	11	6	46	14	10	47	33	1084	18	51	1049	53
Future Vol, veh/h	11	6	46	14	10	47	33	1084	18	51	1049	53
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	0	90	-	0	102	-	0
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	12	7	50	15	11	51	36	1178	20	55	1140	58

Major/Minor	Minor2		Minor1		Major1		Major2					
Conflicting Flow All	1917	2520	570	1934	2558	589	1198	0	0	1198	0	0
Stage 1	1250	1250	-	1250	1250	-	-	-	-	-	-	-
Stage 2	667	1270	-	684	1308	-	-	-	-	-	-	-
Critical Hdwy	7.54	6.54	6.94	7.54	6.54	6.94	4.14	-	-	4.14	-	-
Critical Hdwy Stg 1	6.54	5.54	-	6.54	5.54	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.54	5.54	-	6.54	5.54	-	-	-	-	-	-	-
Follow-up Hdwy	3.52	4.02	3.32	3.52	4.02	3.32	2.22	-	-	2.22	-	-
Pot Cap-1 Maneuver	41	28	465	40	26	452	578	-	-	578	-	-
Stage 1	183	243	-	183	243	-	-	-	-	-	-	-
Stage 2	414	237	-	405	228	-	-	-	-	-	-	-
Platoon blocked, %								-	-	-	-	-
Mov Cap-1 Maneuver	20	24	465	25	22	452	578	-	-	578	-	-
Mov Cap-2 Maneuver	20	24	-	25	22	-	-	-	-	-	-	-
Stage 1	172	220	-	172	228	-	-	-	-	-	-	-
Stage 2	328	222	-	317	206	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	202.1	160.1	0.3	0.5
HCM LOS	F	F		























Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	WBLn2	SBL	SBT	SBR
Capacity (veh/h)	578	-	-	70	24	452	578	-	-
HCM Lane V/C Ratio	0.062	-	-	0.978	1.087	0.113	0.096	-	-
HCM Control Delay (s)	11.6	-	-	202.1	446.1	14	11.9	-	-
HCM Lane LOS	B	-	-	F	F	B	B	-	-
HCM 95th %tile Q(veh)	0.2	-	-	5	3.3	0.4	0.3	-	-

MIDDAY PEAK HOUR
 FWP Construction

West Hollywood - Orange Grove Mixed Use - Traffic Impact Study

1: Fairfax Ave & Fountain Ave

07/26/2019

													
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR	
Lane Configurations													
Traffic Volume (veh/h)	264	1319	45	97	872	106	52	1127	188	58	791	198	
Future Volume (veh/h)	264	1319	45	97	872	106	52	1127	188	58	791	198	
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	1588	1588	1620	1588	1588	1620	1588	1588	1620	1588	1588	1588	
Adj Flow Rate, veh/h	278	1388	47	102	918	112	55	1186	198	61	833	208	
Adj No. of Lanes	1	2	0	1	2	0	1	2	0	1	2	1	
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2	
Cap, veh/h	281	1790	61	159	1627	199	118	897	149	65	1045	438	
Arrive On Green	0.60	0.60	0.58	0.60	0.60	0.58	0.35	0.35	0.35	0.35	0.35	0.32	
Sat Flow, veh/h	545	2979	101	371	2708	330	540	2591	430	390	3018	1350	
Grp Volume(v), veh/h	278	702	733	102	511	519	55	688	696	61	833	208	
Grp Sat Flow(s),veh/h/ln	545	1509	1570	371	1509	1530	540	1509	1512	390	1509	1350	
Q Serve(g_s), s	43.4	38.2	38.5	27.6	22.5	22.7	10.7	38.1	38.1	0.0	27.4	13.5	
Cycle Q Clear(g_c), s	66.1	38.2	38.5	66.1	22.5	22.7	38.1	38.1	38.1	38.1	27.4	13.5	
Prop In Lane	1.00		0.06	1.00		0.22	1.00		0.28	1.00		1.00	
Lane Grp Cap(c), veh/h	281	907	944	159	907	919	118	523	524	65	1045	438	
V/C Ratio(X)	0.99	0.77	0.78	0.64	0.56	0.56	0.47	1.32	1.33	0.93	0.80	0.47	
Avail Cap(c_a), veh/h	281	907	944	159	907	919	118	523	524	65	1045	438	
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	0.97	0.97	0.97	1.00	1.00	1.00	
Uniform Delay (d), s/veh	38.2	16.4	16.5	42.4	13.3	13.4	49.9	35.9	36.0	55.0	32.5	29.7	
Incr Delay (d2), s/veh	51.0	4.9	4.7	11.5	1.3	1.3	12.3	155.3	160.1	93.2	6.3	3.7	
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	12.4	17.0	17.7	3.6	9.6	9.9	2.1	38.4	39.2	3.5	12.3	5.5	
LnGrp Delay(d),s/veh	89.2	21.3	21.2	53.8	14.6	14.7	62.2	191.3	196.1	148.2	38.8	33.3	
LnGrp LOS	F	C	C	D	B	B	E	F	F	F	D	C	
Approach Vol, veh/h		1713			1132			1439			1102		
Approach Delay, s/veh		32.3			18.2			188.7			43.8		
Approach LOS		C			B			F			D		
Timer	1	2	3	4	5	6	7	8					
Assigned Phs		2		4		6		8					
Phs Duration (G+Y+Rc), s		41.0		69.0		41.0		69.0					
Change Period (Y+Rc), s		* 5.3		* 5.3		* 5.3		* 5.3					
Max Green Setting (Gmax), s		* 36		* 64		* 36		* 64					
Max Q Clear Time (g_c+I1), s		40.1		68.1		40.1		68.1					
Green Ext Time (p_c), s		0.0		0.0		0.0		0.0					
Intersection Summary													
HCM 2010 Ctrl Delay				73.5									
HCM 2010 LOS				E									
Notes													

PM PEAK HOUR
FWP Construction

* HCM 2010 computational engine requires equal clearance times for the phases crossing the barrier.

West Hollywood - Orange Grove Mixed Use - Traffic Impact Study
 2: Orange Grove Ave

07/26/2019

Intersection

Int Delay, s/veh 47.7

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	45	1350	42	49	1086	17	5	8	63	2	4	29
Future Vol, veh/h	45	1350	42	49	1086	17	5	8	63	2	4	29
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	95	92	92	92	92	95	92	95	92	95	95	95
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	47	1467	46	53	1180	18	5	8	68	2	4	31

Major/Minor	Major1	Major2	Minor1	Minor2
Conflicting Flow All	1198	0	0	1513
Stage 1	-	-	-	-
Stage 2	-	-	-	-
Critical Hdwy	4.14	-	-	4.14
Critical Hdwy Stg 1	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-
Follow-up Hdwy	2.22	-	-	2.22
Pot Cap-1 Maneuver	578	-	-	438
Stage 1	-	-	-	-
Stage 2	-	-	-	-
Platoon blocked, %	-	-	-	-
Mov Cap-1 Maneuver	578	-	-	438
Mov Cap-2 Maneuver	-	-	-	-
Stage 1	-	-	-	-
Stage 2	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	3.1	2.9	\$ 1595.8	
HCM LOS			F	-

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	22	578	-	-	438	-	-	-
HCM Lane V/C Ratio	3.742	0.082	-	-	0.122	-	-	-
HCM Control Delay (s)	\$ 1595.8	11.8	2.9	-	14.4	2.4	-	-
HCM Lane LOS	F	B	A	-	B	A	-	-
HCM 95th %tile Q(veh)	10.5	0.3	-	-	0.4	-	-	-

Notes
 -: Volume exceeds capacity \$: Delay exceeds 300s +: Computation Not Defined *: All major volume in platoon

PM PEAK HOUR
 FWP Construction

West Hollywood - Orange Grove Mixed Use - Traffic Impact Study
 3: Ogden Ave

07/26/2019

Intersection

Int Delay, s/veh 411.6

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↔			↔			↔			↔	
Traffic Vol, veh/h	40	1496	25	34	1025	6	9	20	152	2	1	11
Future Vol, veh/h	40	1496	25	34	1025	6	9	20	152	2	1	11
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	95	92	92	92	92	95	92	95	92	95	95	95
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	42	1626	27	37	1114	6	10	21	165	2	1	12

Major/Minor	Major1	Major2	Minor1	Minor2
Conflicting Flow All	1120	0	0	1653
Stage 1	-	-	-	-
Stage 2	-	-	-	-
Critical Hdwy	4.14	-	-	4.14
Critical Hdwy Stg 1	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-
Follow-up Hdwy	2.22	-	-	2.22
Pot Cap-1 Maneuver	619	-	-	386
Stage 1	-	-	-	-
Stage 2	-	-	-	-
Platoon blocked, %	-	-	-	-
Mov Cap-1 Maneuver	619	-	-	386
Mov Cap-2 Maneuver	-	-	-	-
Stage 1	-	-	-	-
Stage 2	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	4.7	2.2	\$ 6378.8	
HCM LOS			F	-

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	14	619	-	-	386	-	-	-
HCM Lane V/C Ratio	14.004	0.068	-	-	0.096	-	-	-
HCM Control Delay (s)	\$ 6378.8	11.2	4.6	-	15.3	1.8	-	-
HCM Lane LOS	F	B	A	-	C	A	-	-
HCM 95th %tile Q(veh)	25.6	0.2	-	-	0.3	-	-	-
























Notes

~: Volume exceeds capacity \$: Delay exceeds 300s +: Computation Not Defined *: All major volume in platoon

PM PEAK HOUR
 FWP Construction

West Hollywood - Orange Grove Mixed Use - Traffic Impact Study
 4: Fairfax Ave & Santa Monica Blvd

07/26/2019

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	345	1525	112	227	1319	106	131	896	281	69	788	108
Future Volume (veh/h)	345	1525	112	227	1319	106	131	896	281	69	788	108
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	1588	1588	1588	1588	1588	1620	1588	1588	1588	1588	1588	1588
Adj Flow Rate, veh/h	363	1605	118	239	1388	112	138	943	296	73	829	114
Adj No. of Lanes	1	2	1	1	2	0	1	2	1	1	2	1
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	148	1063	470	246	1179	95	146	961	430	109	910	401
Arrive On Green	0.06	0.35	0.35	0.12	0.42	0.41	0.05	0.32	0.32	0.03	0.30	0.30
Sat Flow, veh/h	1513	3018	1350	1513	2830	227	1513	3018	1350	1513	3018	1350
Grp Volume(v), veh/h	363	1605	118	239	738	762	138	943	296	73	829	114
Grp Sat Flow(s),veh/h/ln	1513	1509	1350	1513	1509	1548	1513	1509	1350	1513	1509	1350
Q Serve(g_s), s	6.5	40.5	7.2	13.3	47.9	47.9	5.5	35.6	22.0	3.5	30.4	7.5
Cycle Q Clear(g_c), s	6.5	40.5	7.2	13.3	47.9	47.9	5.5	35.6	22.0	3.5	30.4	7.5
Prop In Lane	1.00		1.00	1.00		0.15	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	148	1063	470	246	629	645	146	961	430	109	910	401
V/C Ratio(X)	2.45	1.51	0.25	0.97	1.17	1.18	0.94	0.98	0.69	0.67	0.91	0.28
Avail Cap(c_a), veh/h	148	1063	470	266	629	645	146	961	430	148	945	417
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	1.00	1.00	0.87	0.87	0.87
Uniform Delay (d), s/veh	33.4	37.2	26.8	32.7	33.5	33.6	38.8	38.8	34.2	35.6	38.7	31.0
Incr Delay (d2), s/veh	672.9	234.4	1.3	46.0	93.8	97.0	57.0	24.4	4.6	6.1	11.2	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	29.7	51.4	2.9	10.7	36.3	37.8	4.4	18.1	8.7	1.8	14.1	2.8
LnGrp Delay(d),s/veh	706.3	271.7	28.1	78.6	127.4	130.6	95.9	63.2	38.8	41.7	49.9	31.4
LnGrp LOS	F	F	C	E	F	F	F	E	D	D	D	C
Approach Vol, veh/h		2086			1739			1377			1016	
Approach Delay, s/veh		333.5			122.1			61.2			47.2	
Approach LOS		F			F			E			D	
Timer	1	2	3	4	5	6	7	8				
Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	19.4	45.1	11.0	39.5	12.0	52.5	9.0	41.4				
Change Period (Y+Rc), s	* 4	5.1	* 4	* 5.3	* 4	5.1	* 4	* 5.3				
Max Green Setting (Gmax), s	* 17	37.1	* 7	* 36	* 8	46.1	* 8	* 35				
Max Q Clear Time (g_c+I1), s	15.3	42.5	7.5	32.4	8.5	49.9	5.5	37.6				
Green Ext Time (p_c), s	0.1	0.0	0.0	1.7	0.0	0.0	0.0	0.0				
Intersection Summary												
HCM 2010 Ctrl Delay			167.3									
HCM 2010 LOS			F									
Notes												

PM PEAK HOUR
 FWP Construction

* HCM 2010 computational engine requires equal clearance times for the phases crossing the barrier.

West Hollywood - Orange Grove Mixed Use - Traffic Impact Study
 5: Orange Grove Ave

07/26/2019

Intersection												
Int Delay, s/veh	0.8											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↑↓			↑↓				↑			↑
Traffic Vol, veh/h	0	1862	37	1	1536	66	0	0	61	0	0	70
Future Vol, veh/h	0	1862	37	1	1536	66	0	0	61	0	0	70
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	0	-	-	0
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	95	95	92	92	95	95	95	92	95	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	2024	39	1	1670	72	0	0	64	0	0	76

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	-	0	0	2063	0	0	-	-	1032	-	-	871
Stage 1	-	-	-	-	-	-	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-	-	-	-	-	-	-
Critical Hdwy	-	-	-	4.14	-	-	-	-	6.94	-	-	6.94
Critical Hdwy Stg 1	-	-	-	-	-	-	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-	-	-	-	-	-	-
Follow-up Hdwy	-	-	-	2.22	-	-	-	-	3.32	-	-	3.32
Pot Cap-1 Maneuver	0	-	-	267	-	-	0	0	230	0	0	294
Stage 1	0	-	-	-	-	-	0	0	-	0	0	-
Stage 2	0	-	-	-	-	-	0	0	-	0	0	-
Platoon blocked, %	-	-	-	-	-	-	-	-	-	-	-	-
Mov Cap-1 Maneuver	-	-	-	267	-	-	-	-	230	-	-	294
Mov Cap-2 Maneuver	-	-	-	-	-	-	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-	-	-	-	-	-	-

Approach	EB			WB			NB			SB		
HCM Control Delay, s	0			0			26.6			21.5		
HCM LOS							D			C		

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	230	-	-	267	-	-	294
HCM Lane V/C Ratio	0.279	-	-	0.004	-	-	0.259
HCM Control Delay (s)	26.6	-	-	18.5	-	-	21.5
HCM Lane LOS	D	-	-	C	-	-	C
HCM 95th %tile Q(veh)	1.1	-	-	0	-	-	1

PM PEAK HOUR
 FWP Construction

West Hollywood - Orange Grove Mixed Use - Traffic Impact Study
6: Ogden Ave

07/26/2019

Intersection

Int Delay, s/veh 11.3

Movement EBL EBT WBT WBR SBL SBR

Lane Configurations		↑↑	↑↑		↓	
Traffic Vol, veh/h	137	1839	1530	51	16	50
Future Vol, veh/h	137	1839	1530	51	16	50
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	149	1999	1663	55	17	54

Major/Minor Major1 Major2 Minor2

Conflicting Flow All	1718	0	-	0	2989	859
Stage 1	-	-	-	-	1691	-
Stage 2	-	-	-	-	1298	-
Critical Hdwy	4.14	-	-	-	6.84	6.94
Critical Hdwy Stg 1	-	-	-	-	5.84	-
Critical Hdwy Stg 2	-	-	-	-	5.84	-
Follow-up Hdwy	2.22	-	-	-	3.52	3.32
Pot Cap-1 Maneuver	365	-	-	-	~ 11	300
Stage 1	-	-	-	-	135	-
Stage 2	-	-	-	-	220	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	365	-	-	-	~ 11	300
Mov Cap-2 Maneuver	-	-	-	-	~ 11	-
Stage 1	-	-	-	-	135	-
Stage 2	-	-	-	-	220	-

Approach EB WB SB

HCM Control Delay, s	1.5	0	\$ 573.9
HCM LOS			F

Minor Lane/Major Mvmt EBL EBT WBT WBR SBLn1

Capacity (veh/h)	365	-	-	-	41
HCM Lane V/C Ratio	0.408	-	-	-	1.75
HCM Control Delay (s)	21.5	0	-	-	\$ 573.9
HCM Lane LOS	C	A	-	-	F
HCM 95th %tile Q(veh)	1.9	-	-	-	7.5

Notes

-: Volume exceeds capacity \$: Delay exceeds 300s +: Computation Not Defined *: All major volume in platoon

PM PEAK HOUR
FWP Construction

Intersection						
Int Delay, s/veh	5.4					
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↑↑			↑↑	↑	
Traffic Vol, veh/h	1890	32	33	1565	6	113
Future Vol, veh/h	1890	32	33	1565	6	113
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	95	95	95	95	95	95
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	1989	34	35	1647	6	119

Major/Minor	Major1	Major2	Minor1			
Conflicting Flow All	0	0	2023	0	2900	1012
Stage 1	-	-	-	-	2006	-
Stage 2	-	-	-	-	894	-
Critical Hdwy	-	-	4.14	-	6.84	6.94
Critical Hdwy Stg 1	-	-	-	-	5.84	-
Critical Hdwy Stg 2	-	-	-	-	5.84	-
Follow-up Hdwy	-	-	2.22	-	3.52	3.32
Pot Cap-1 Maneuver	-	-	277	-	12	237
Stage 1	-	-	-	-	90	-
Stage 2	-	-	-	-	360	-
Platoon blocked, %	-	-	-	-	-	-
Mov Cap-1 Maneuver	-	-	277	-	0	237
Mov Cap-2 Maneuver	-	-	-	-	0	-
Stage 1	-	-	-	-	90	-
Stage 2	-	-	-	-	0	-

Approach	EB	WB	NB
HCM Control Delay, s	0	9.7	36
HCM LOS			E

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	237	-	-	277	-
HCM Lane V/C Ratio	0.529	-	-	0.125	-
HCM Control Delay (s)	36	-	-	19.9	9.5
HCM Lane LOS	E	-	-	C	A
HCM 95th %tile Q(veh)	2.8	-	-	0.4	-

West Hollywood - Orange Grove Mixed Use - Traffic Impact Study
 7: Santa Monica Blvd & Genesse Ave

07/26/2019



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (vph)	113	1808	1544	42	24	45
Future Volume (vph)	113	1808	1544	42	24	45
Ideal Flow (vphpl)	1620	1620	1620	1620	1620	1620
Total Lost time (s)	4.5	5.6	5.6		4.6	
Lane Util. Factor	1.00	0.95	0.95		1.00	
Frt	1.00	1.00	1.00		0.91	
Flt Protected	0.95	1.00	1.00		0.98	
Satd. Flow (prot)	1509	3018	3006		1423	
Flt Permitted	0.07	1.00	1.00		0.98	
Satd. Flow (perm)	110	3018	3006		1423	
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	123	1965	1678	46	26	49
RTOR Reduction (vph)	0	0	2	0	42	0
Lane Group Flow (vph)	123	1965	1722	0	33	0
Turn Type	pm+pt	NA	NA		Prot	
Protected Phases	5	2	6		4	
Permitted Phases	2					
Actuated Green, G (s)	77.1	69.5	68.2		15.6	
Effective Green, g (s)	76.1	69.0	67.7		16.1	
Actuated g/C Ratio	0.72	0.65	0.64		0.15	
Clearance Time (s)	4.0	5.1	5.1		5.1	
Vehicle Extension (s)	1.0	3.0	3.0		3.0	
Lane Grp Cap (vph)	173	1971	1927		216	
v/s Ratio Prot	c0.05	c0.65	0.57		c0.02	
v/s Ratio Perm	0.46					
v/c Ratio	0.71	1.00	0.89		0.15	
Uniform Delay, d1	19.0	18.2	15.9		38.8	
Progression Factor	1.84	0.20	1.00		1.00	
Incremental Delay, d2	4.5	12.0	6.9		0.3	
Delay (s)	39.5	15.8	22.8		39.2	
Level of Service	D	B	C		D	
Approach Delay (s)		17.2	22.8		39.2	
Approach LOS		B	C		D	

Intersection Summary

HCM 2000 Control Delay	20.1	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.84		
Actuated Cycle Length (s)	105.6	Sum of lost time (s)	14.7
Intersection Capacity Utilization	83.7%	ICU Level of Service	E
Analysis Period (min)	15		

c Critical Lane Group

West Hollywood - Orange Grove Mixed Use - Traffic Impact Study
 8: Romaine St & Fairfax Ave

07/26/2019

Intersection

Int Delay, s/veh 119.2

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↔			↔	↔	↔	↕	↕	↕	↕	↕
Traffic Vol, veh/h	25	46	74	3	10	31	50	1246	82	51	990	50
Future Vol, veh/h	25	46	74	3	10	31	50	1246	82	51	990	50
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	0	90	-	0	102	-	0
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	27	50	80	3	11	34	54	1354	89	55	1076	54

Major/Minor	Minor2		Minor1		Major1		Major2					
Conflicting Flow All	1977	2737	538	2135	2702	677	1130	0	0	1443	0	0
Stage 1	1186	1186	-	1462	1462	-	-	-	-	-	-	-
Stage 2	791	1551	-	673	1240	-	-	-	-	-	-	-
Critical Hdwy	7.54	6.54	6.94	7.54	6.54	6.94	4.14	-	-	4.14	-	-
Critical Hdwy Stg 1	6.54	5.54	-	6.54	5.54	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.54	5.54	-	6.54	5.54	-	-	-	-	-	-	-
Follow-up Hdwy	3.52	4.02	3.32	3.52	4.02	3.32	2.22	-	-	2.22	-	-
Pot Cap-1 Maneuver	37	~ 20	488	28	21	395	614	-	-	466	-	-
Stage 1	200	260	-	135	192	-	-	-	-	-	-	-
Stage 2	349	173	-	411	245	-	-	-	-	-	-	-
Platoon blocked, %								-	-	-	-	-
Mov Cap-1 Maneuver	~ 14	~ 16	488	-	17	395	614	-	-	466	-	-
Mov Cap-2 Maneuver	~ 14	~ 16	-	-	17	-	-	-	-	-	-	-
Stage 1	182	229	-	123	175	-	-	-	-	-	-	-
Stage 2	273	158	-	237	216	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, \$ 2177.4			0.4	0.6
HCM LOS	F	-		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	WBLn2	SBL	SBT	SBR
Capacity (veh/h)	614	-	-	30	-	395	466	-	-
HCM Lane V/C Ratio	0.089	-	-	5.254	-	0.085	0.119	-	-
HCM Control Delay (s)	11.4	-	-	\$ 2177.4	-	15	13.8	-	-
HCM Lane LOS	B	-	-	F	-	C	B	-	-
HCM 95th %tile Q(veh)	0.3	-	-	19.1	-	0.3	0.4	-	-

Notes
 -: Volume exceeds capacity \$: Delay exceeds 300s +: Computation Not Defined *: All major volume in platoon

PM PEAK HOUR
 FWP Construction