KUNZMAN ASSOCIATES, INC.

WASHINGTON 50 PROJECT

TRAFFIC IMPACT ANALYSIS (REVISED)

December 15, 2015

Traffic Engineering | Transportation Planning | Parking | Noise/Vibration | Expert Witness
Air Quality | Global Climate Change | Health Risk Assessment

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December 15, 2015

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I. EXECUTIVE SUMMARY

A. Introduction

The purpose of this traffic impact analysis is to evaluate the development of the Washington 50 project. This traffic report presents the traffic study methodology, analysis, findings, recommendations, and supporting data.

Study objectives include (1) documentation of existing traffic conditions in the vicinity of the site; (2) calculation of existing plus project[1] traffic conditions; (3) evaluation of traffic conditions for the year at opening (2017) of the proposed project; and (4) determination of on-site and off-site improvements and system management actions needed to achieve City of La Quinta Level of Service requirements. This traffic impact analysis has been prepared in accordance with the City of La Quinta's Engineering Bulletin #06-13 (December 8, 2014).

Although this is a technical report, every effort has been made to write the report clearly and concisely. To assist the reader with those terms unique to transportation engineering, a glossary of terms is provided within Appendix A.

B. Summary of Findings

1. Site Location and Study Area

The project is located in the southwest corner of the Washington Street/Avenue 50 intersection in the City of La Quinta. Figure 1 illustrates the traffic analysis study area.

Pursuant to the scoping discussions with City of La Quinta staff, the study area includes the following:

Intersection Analysis Locations		
Location No.	Intersection	Jurisdiction
1	Eisenhower Drive/Avenue 50	La Quinta
2	Washington Street/Eisenhower Drive	La Quinta
3	Washington Street/Avenue 50	La Quinta
4	Washington Street/Project Driveway	La Quinta
5	Washington Street/Calle Tampico	La Quinta
6	Washington Street/Avenue 52	La Quinta
7	Project Driveway/Avenue 50	La Quinta
8	Jefferson Street/Avenue 50	La Quinta/Indio

[1] The existing plus project conditions has been analyzed to comply with the Sunnyvale West Neighborhood Association v. City of Sunnyvale CEQA court case. This scenario assumes the full development of the proposed project and full absorption of the proposed project trips on the circulation system at the present time.

Roadway Segment Analysis Locations		
Roadway	Segment	Jurisdiction
Eisenhower Drive	North of Avenue 50	La Quinta
	South of Avenue 50	La Quinta
Washington Street	North of Eisenhower Drive	La Quinta
	Eisenhower Drive to Avenue 50	La Quinta
	Avenue 50 to Calle Tampico	La Quinta
	Calle Tampico to Avenue 52	La Quinta
Jefferson Street	North of Avenue 50	La Quinta/Indio
	South of Avenue 50	La Quinta
Avenue 50	Eisenhower Drive to Washington Street	La Quinta
	East of Washington Street	La Quinta
	West of Jefferson Street	La Quinta
	East of Jefferson Street	La Quinta/Indio
Calle Tampico	West of Washington Street	Indio
	East of Washington Street	Indio
Avenue 52	West of Washington Street	La Quinta
	East of Washington Street	La Quinta

2. Development Description

The 7.48 acre project site is proposed to be developed with 18,000 square feet of office, 18,000 square feet of shopping center, 6,000 square feet of fast-food restaurant w/drive-thru, and a 20 fueling position service station w/mini mart & car wash. The project site will have access to Washington Street and Avenue 50.

3. Level of Service Summary

a. Required Level of Service: Level of Service D for intersections and street segments.

A potentially significant project traffic impact is defined to occur at any signalized intersection if the addition of project trips would result in the Level of Service for a given intersection to exceed the criteria below:

Significant Impact Criteria for Signalized Intersections	
Post-Project Level of Service	Change in Level of Service
E	Either an increase in delay of 2 seconds or more (HCM) or 30 peak hour trips or more (ICU) on critical movements per lane
F	Either an increase in delay of 1 second or more (HCM) or 15 peak hour trips or more (ICU) on critical movements per lane

A potentially significant project traffic impact at an unsignalized study intersection is defined to occur when, with the addition of project traffic, an

intersection has a projected Level of Service F on a side street for two-way stop control or Level of Service E or worse for the intersection at an all-way stop controlled intersection and the addition of project traffic results in an addition of 3 seconds or more of delay for any movement.

Roadway segment impacts are those defined to occur on any roadway segment if the segment is projected to be operating at Level of Service E or F with project traffic included and the peak hour V/C in the peak direction is increased by 0.02 or more by addition of project traffic at existing plus project or at project opening years.

b. For Existing traffic conditions, the study area roadway segments are currently operating within acceptable Levels of Service (see Table 1).

For Existing traffic conditions, the study area intersections are currently operating within acceptable Levels of Service during the weekday evening peak hour (see Table 2).

c. For Existing Plus Project traffic conditions, the study area roadway segments are projected to operate within acceptable Levels of Service (see Table 6). As shown in Table 7, there are no significant impacts projected at the study area roadway segments for Existing Plus Project traffic conditions.

For Existing Plus Project traffic conditions, the study area intersections are projected to operate within acceptable Levels of Service during the weekday evening peak hour (see Table 11). As shown in Table 12, there are no significant impacts projected at the study area intersections for Existing Plus Project traffic conditions.

d. For Opening Year (2017) Without Project traffic conditions, the study area roadway segments are projected to operate within acceptable Levels of Service (see Table 8).

For Opening Year (2017) Without Project traffic conditions, the study area intersections are projected to operate within acceptable Levels of Service during the weekday evening peak hour (see Table 13).

e. For Opening Year (2017) With Project traffic conditions, the study area roadway segments are projected to operate within acceptable Levels of Service (see Table 9). As shown in Table 10, there are no significant impacts projected at the study area roadway segments for Opening Year (2017) With Project traffic conditions.

For Opening Year (2017) With Project traffic conditions, the study area intersections are projected to operate within acceptable Levels of Service during the weekday evening peak hour (see Table 14). As shown in Table 15, there are no significant impacts projected at the study area intersections/roadway segments for Opening Year (2017) With Project traffic conditions.

4. Conclusions

The proposed development is projected to generate a total of approximately 3,540 daily vehicle trips, 290 of which occur during the morning peak hour and 294 of which occur during the evening peak hour.

The proposed project will have access to Washington Street and Avenue 50.

5. Recommendations

On-Site

Site-specific circulation and access recommendations are depicted on Figure 19.

Construct Washington Street from Avenue 50 to the south project boundary at its ultimate half-section width as a Major Arterial (128 foot right-of-way) including sidewalk and parkway improvements in conjunction with development.

Construct Avenue 50 from Washington Street to the east project boundary at its ultimate half-section width as a Primary Arterial (108 foot right-of-way) including sidewalk and parkway improvements in conjunction with development, as necessary.

A STOP sign should be installed to control outbound traffic on all site access driveways.

Sufficient on-site parking should be provided to meet the City of La Quinta parking code requirements.

On-site traffic signing/striping should be implemented in conjunction with detailed construction plans for the project site.

Sight distance at the project accesses shall comply with standard California Department of Transportation/City of La Quinta sight distance standards. The final grading, landscaping, and street improvement plans shall demonstrate that sight distance standards are met. Such plans must be reviewed by the City and approved as consistent with this measure prior to issue of grading permits.

Off-Site

Project Driveway/Avenue 50 - Provide a minimum 150 foot left turn lane with a minimum 150 foot transition length.

A deceleration lane and bike lane will be provided on Washington Street from CVWD property to the south to the proposed project driveway.

A deceleration lane and bike lane will be provided on Avenue 50 from the throat of the Washington Street/Avenue 50 intersection to the proposed project driveway.

As is the case for any roadway design, the City of La Quinta should periodically review traffic operations in the vicinity of the project once the project is constructed to assure that the traffic operations are satisfactory.

II. PROPOSED DEVELOPMENT

A. Location

The project is located in the southwest corner of the Washington Street/Avenue 50 intersection in the City of La Quinta. Figure 1 illustrates the traffic analysis study area.

B. Land Use and Intensity

The 7.48 acre project site is proposed to be developed with 18,000 square feet of office, 18,000 square feet of shopping center, 6,000 square feet of fast-food restaurant w/drive-thru, and a 20 fueling position service station w/mini mart & car wash. The project site will have access to Washington Street and Avenue 50.

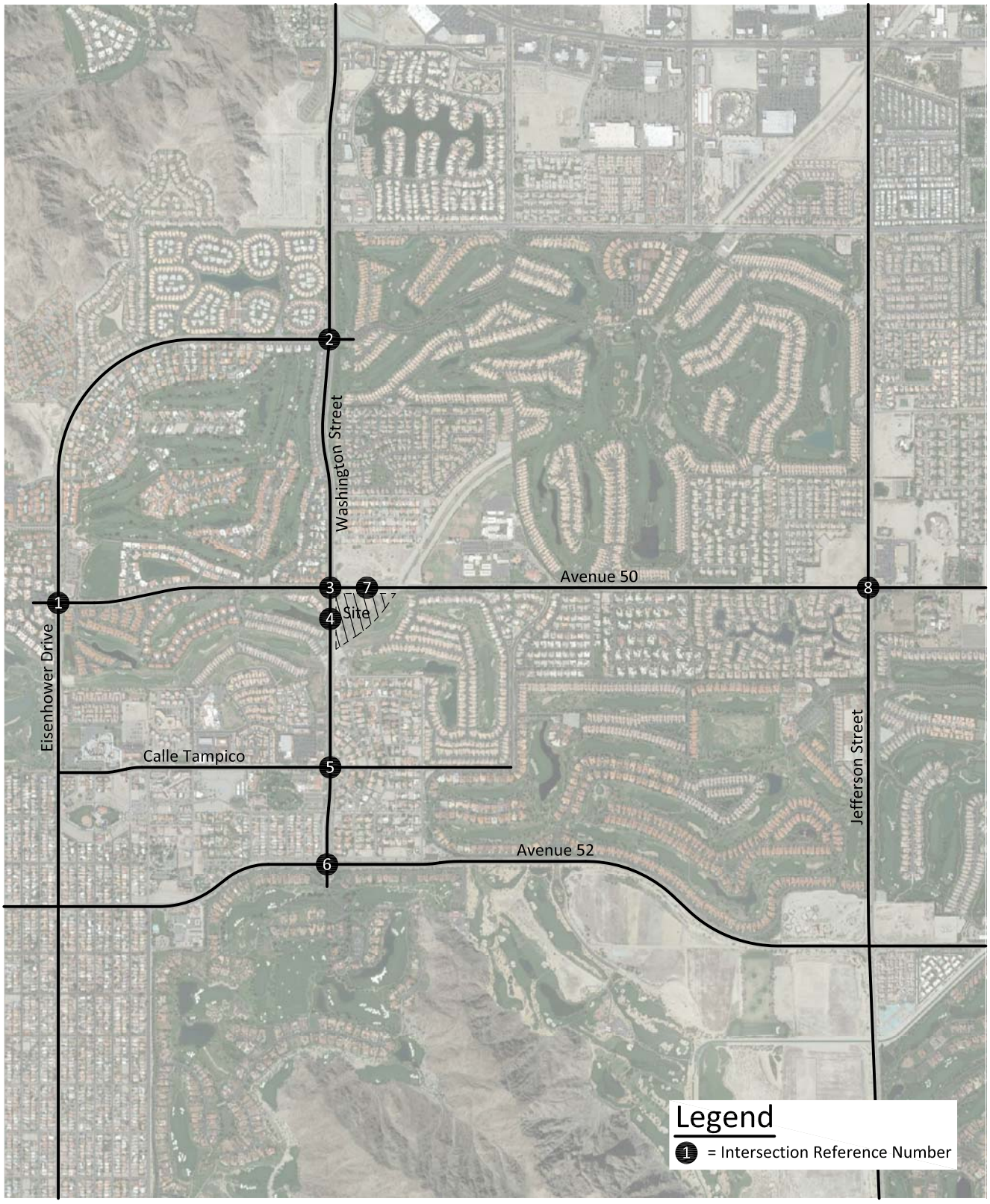
C. Site Plan

Figure 2 illustrates the project site plan.

D. Project Timing

The proposed project is anticipated for opening in Year 2017 and is proposed to be built in one phase. This traffic impact analysis is based upon 2 years of background traffic growth (2015-2017).

Figure 1
Project Location Map



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KUNZMAN ASSOCIATES, INC.

OVER 35 YEARS OF EXCELLENT SERVICE

Figure 2
Site Plan

III. AREA CONDITIONS

A. Study Area

Pursuant to the scoping discussions with City of La Quinta staff, the study area includes the following:

Intersection Analysis Locations		
Location No.	Intersection	Jurisdiction
1	Eisenhower Drive/Avenue 50	La Quinta
2	Washington Street/Eisenhower Drive	La Quinta
3	Washington Street/Avenue 50	La Quinta
4	Washington Street/Project Driveway	La Quinta
5	Washington Street/Calle Tampico	La Quinta
6	Washington Street/Avenue 52	La Quinta
7	Project Driveway/Avenue 50	La Quinta
8	Jefferson Street/Avenue 50	La Quinta/Indio

Roadway Segment Analysis Locations		
Roadway	Segment	Jurisdiction
Eisenhower Drive	North of Avenue 50	La Quinta
	South of Avenue 50	La Quinta
Washington Street	North of Eisenhower Drive	La Quinta
	Eisenhower Drive to Avenue 50	La Quinta
	Avenue 50 to Calle Tampico	La Quinta
	Calle Tampico to Avenue 52	La Quinta
Jefferson Street	North of Avenue 50	La Quinta/Indio
	South of Avenue 50	La Quinta
Avenue 50	Eisenhower Drive to Washington Street	La Quinta
	East of Washington Street	La Quinta
	West of Jefferson Street	La Quinta
	East of Jefferson Street	La Quinta/Indio
Calle Tampico	West of Washington Street	Indio
	East of Washington Street	Indio
Avenue 52	West of Washington Street	La Quinta
	East of Washington Street	La Quinta

B. Study Area Land Use

The project site is currently undeveloped and relatively low trip generation is currently being generated from the project site. Adjacent uses include the following:

North - Vacant
South - Golf Course
East - Golf Course
West - Single-Family Detached Residential

C. Area Roadway System

Figure 3 identifies the existing roadway conditions for study area roadways. The number of through lanes for existing roadways and the existing intersection controls are identified.

Eisenhower Drive: This north-south four lane divided roadway is classified as a Primary Arterial (108 foot right-of-way) in the study area on the City of La Quinta General Plan Circulation Element. It currently carries approximately 12,500 to 15,500 vehicles per day in the study area.

Washington Street: This north-south six lane divided roadway is classified as a Major Arterial (128 foot right-of-way) in the study area on the City of La Quinta General Plan Circulation Element. It currently carries approximately 23,100 to 40,500 vehicles per day in the study area.

Jefferson Street: This north-south six lane divided roadway is classified as a Major Arterial (128 foot right-of-way) in the study area on the City of La Quinta General Plan Circulation Element. It currently carries approximately 19,500 to 25,900 vehicles per day in the study area.

Avenue 50: This east-west three lane undivided to four lane divided roadway is classified as a Primary Arterial (108 foot right-of-way) in the study area on the City of La Quinta General Plan Circulation Element. It currently carries approximately 8,400 to 10,800 vehicles per day in the study area.

Calle Tampico: This east-west two lane undivided to four lane divided roadway is classified as a Primary Arterial (108 foot right-of-way) in the study area on the City of La Quinta General Plan Circulation Element. It currently carries approximately 2,300 to 16,600 vehicles per day in the study area.

Avenue 52: This east-west four lane divided roadway is classified as a Primary Arterial (108 foot right-of-way) west of Washington Street and as a Collector (80 foot right-of-way) east of Washington Street on the City of La Quinta General Plan Circulation Element. It currently carries approximately 11,500 to 15,600 vehicles per day in the study area.

Figure 4 exhibits the current City of La Quinta General Plan Circulation Element. Existing and future roadways are included in the Circulation Element of the General Plan and are graphically depicted on Figure 4. This figure shows the nature and extent of arterial highways that are needed to adequately serve the ultimate development depicted by the Land Use Element of the General Plan. The City of La Quinta General Plan roadway cross-sections are shown on Figure 5.

D. Average Daily Traffic Volumes

Table 1 depicts the Existing average daily traffic volumes. The Existing average daily traffic volumes were obtained from the 2015 Traffic Census Report prepared by the Coachella Valley Association of Governments (CVAG).

The following roadway segment capacities are approximate figures only, and are used at the General Plan level to assist in determining the roadway functional classification (number of through lanes) needed to meet traffic demand:

Roadway Classification	Lane Configuration	Capacity (Vehicles per Day)[2]
Local	2 Lane Undivided	9,000
Collector	2 Lanes Undivided	14,000
Modified Secondary	2 Lanes Divided	19,000
Secondary	4 Lanes Undivided	28,000
Primary	4 Lanes Divided	42,600
Major	6 Lanes Divided	61,000
Augmented Major	8 Lanes Divided	76,000

Table 1 provides a summary of the Existing traffic conditions roadway segment capacity analysis based on the roadway segment capacity thresholds identified above. As shown on Table 1, all study area roadway segments analyzed are currently operating within acceptable Levels of Service for Existing traffic conditions.

E. Intersection Levels of Service

The technique used to assess the capacity needs of an intersection is known as the Intersection Delay Method (see Appendix D). To calculate delay, the volume of traffic using the intersection is compared with the capacity of the intersection.

The existing delay and Level of Service for intersections in the vicinity of the project are shown in Table 2. Existing delay is based upon manual weekday evening peak hour turning movement counts made for Kunzman Associates, Inc. in August 2015 from 2:30 PM to 5:30 PM (see Figure 6). Traffic count worksheets are provided in Appendix B. In accordance with City of La Quinta Engineering Bulletin #06-13 (December 8, 2014), traffic counts consider the seasonal population variations. Traffic counts conducted during August (see Appendix B), have a 20% seasonal variation factor.

For Existing traffic conditions, the study area intersections currently operate within acceptable Levels of Service during the weekday evening peak hour (see Table 2). Existing delay worksheets are provided in Appendix C.

[2] Source: City of La Quinta Engineering Bulletin #06-13 (December 8, 2014).

F. Transit Service

The study area is currently served by the SunLine Transit Agency Route 70 along Washington Street. The existing bus route provided within the study area is shown on Figure 7.

G. Bicycle & Pedestrian Facilities

The City of La Quinta bike paths are illustrated on Figure 8, golf cart/NEV/multi-use paths are depicted on Figure 9 and the existing pedestrian facilities adjacent to the project site are shown on Figure 10.

Table 1

Existing Roadway Segment Level of Service

Roadway	Segment	Roadway Section	Level of Service Capacity	Existing			Acceptable Level of Service
				Average Daily Traffic Volume	V/C Ratio	Level of Service	
Eisenhower Drive	North of Avenue 50	4D	42,600	15,500	0.36	A	D
	South of Avenue 50	4D	42,600	12,500	0.29	A	D
Washington Street	North of Eisenhower Drive	6D	61,000	40,500	0.66	B	D
	Eisenhower Drive to Avenue 50	6D	61,000	26,900	0.44	A	D
	Avenue 50 to Calle Tampico	6D	61,000	23,100	0.38	A	D
	Calle Tampico to Avenue 52	6D	61,000	23,100	0.38	A	D
Jefferson Street	North of Avenue 50	6D	61,000	25,900	0.42	A	D
	South of Avenue 50	6D	61,000	19,500	0.32	A	D
Avenue 50	East of Washington Street	3D	31,950	8,400	0.26	A	D
	West of Jefferson Street	3D	31,950	10,700	0.33	A	D
	East of Jefferson Street	3D	31,950	10,800	0.34	A	D
Calle Tampico	West of Washington Street	4D	42,600	16,600	0.39	A	D
	East of Washington Street	2U	14,000	2,300	0.16	A	D
Avenue 52	West of Washington Street	4D	42,600	15,600	0.37	A	D
	East of Washington Street	4D	42,600	11,500	0.27	A	D

Table 2

Existing Intersection Delay and Level of Service

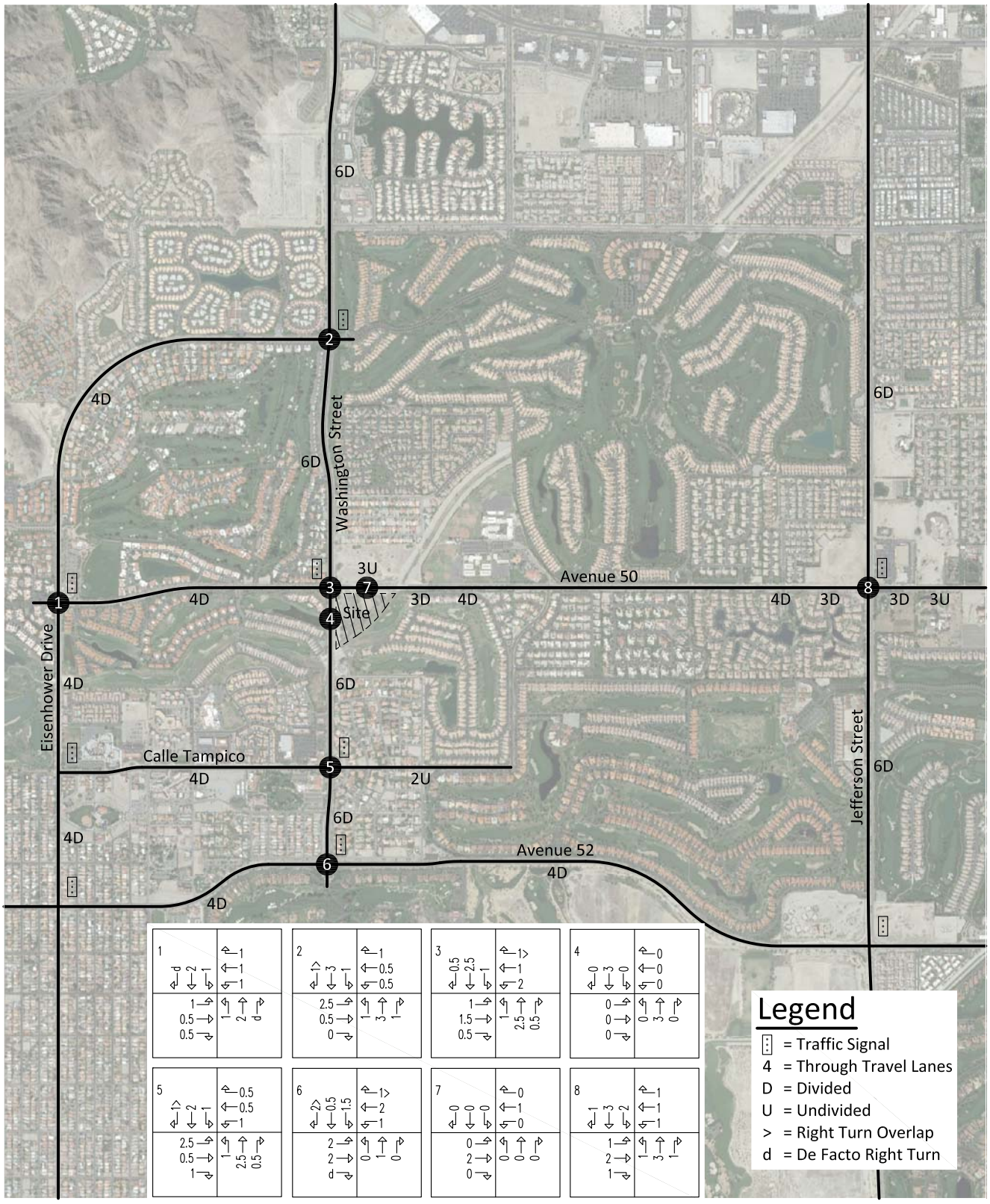
Intersection	Traffic Control[2]	Intersection Approach Lanes[1]												Evening Peak Hour		Acceptable Level of Service
		Northbound			Southbound			Eastbound			Westbound			Delay[3]	Level of Service	
		L	T	R	L	T	R	L	T	R	L	T	R			
Eisenhower Drive (NS) at:																
Avenue 50 (EW) - #1	TS	1	2	d	1	2	d	1	0.5	0.5	1	1	1	17.1	B	D
Washington Street (NS) at:																
Eisenhower Drive (EW) - #2	TS	1	3	1	1	3	1>	2.5	0.5	0	0.5	0.5	1	17.3	B	D
Avenue 50 (EW) - #3	TS	1	2.5	0.5	1	2.5	0.5	1	1.5	0.5	2	1	1>	17.0	B	D
Calle Tampico (EW) - #5	TS	1	2.5	0.5	1	2	1>	2.5	0.5	1	1	0.5	0.5	12.2	B	D
Avenue 52 (EW) - #6	TS	0	1	0	1.5	0.5	2>	2	2	d	1	2	1>	18.0	B	D
Jefferson Street (NS) at:																
Avenue 50 (EW) - #8	TS	1	3	1	2	3	1	1	2	1	1	1	1	21.3	C	D

[1] When a right turn lane is designated, the lane can either be striped or unstriped. To function as a right turn lane there must be sufficient width for right turning vehicles to travel outside the through lanes.
L = Left; T = Through; R = Right; > = Right Turn Overlap; d = De Facto Right Turn

[2] TS = Traffic Signal

[3] Delay and level of service has been calculated using the following analysis software: Traffix, Version 7.9.0215 (2008). Per the Highway Capacity Manual, overall average intersection delay and level of service are shown for intersections with traffic signal or all way stop control. For intersections with cross street stop control, the delay and level of service for the worst individual movement (or movements sharing a single lane) are shown.

Figure 3
Existing Through Travel Lanes and Intersection Controls



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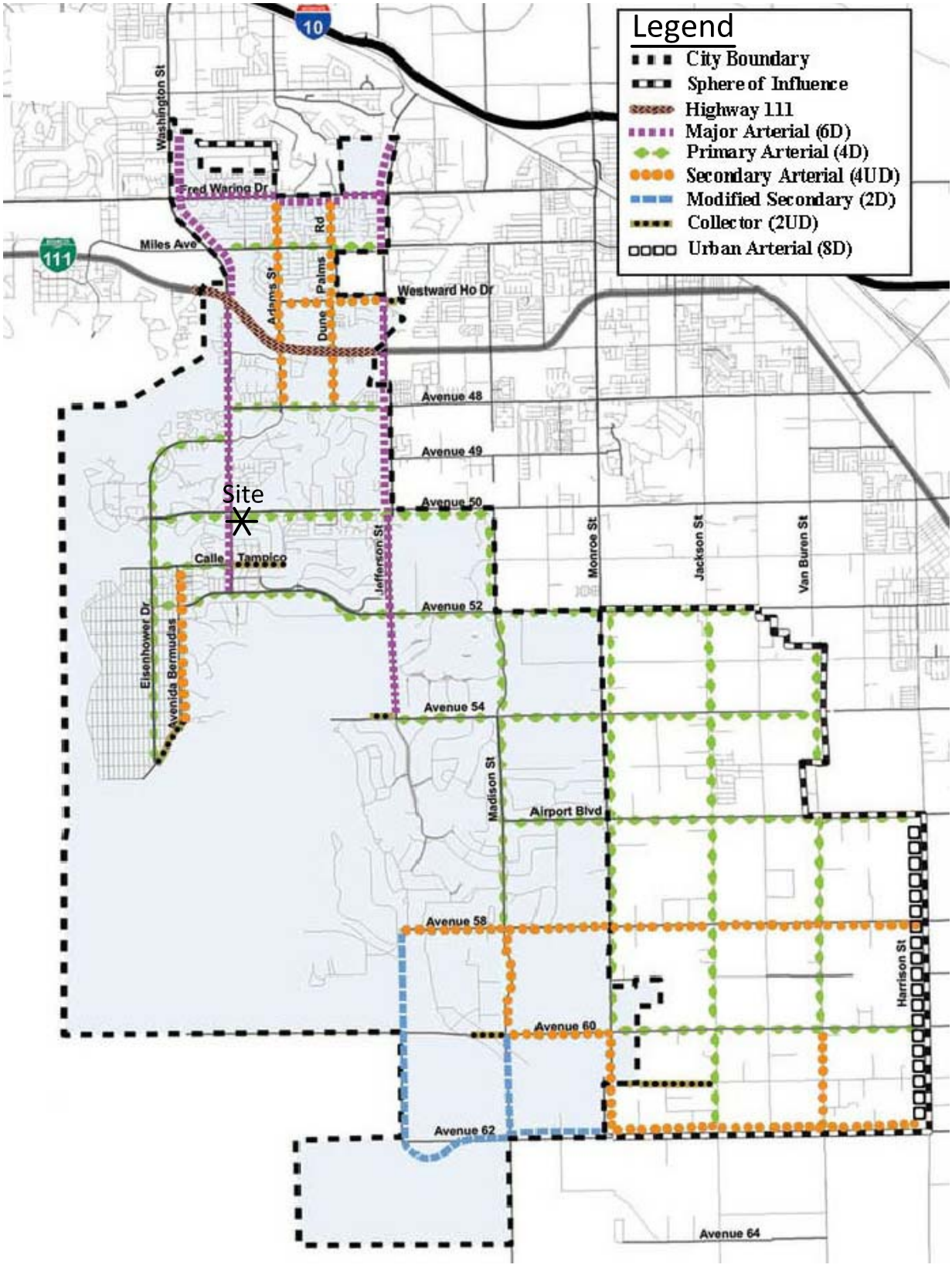
Intersection reference numbers are in upper left corner of turning movement boxes.

Figure 4
City of La Quinta General Plan Circulation Element



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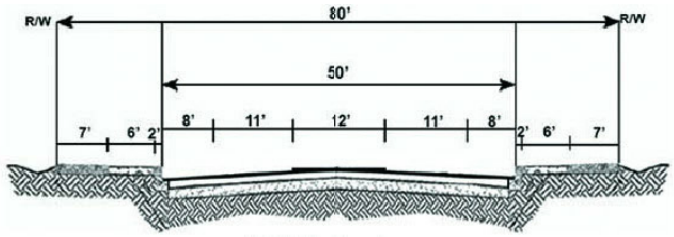
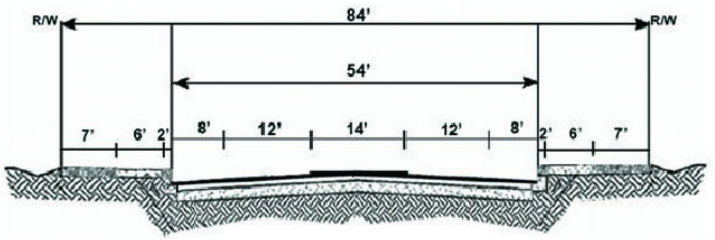
Source: City of La Quinta

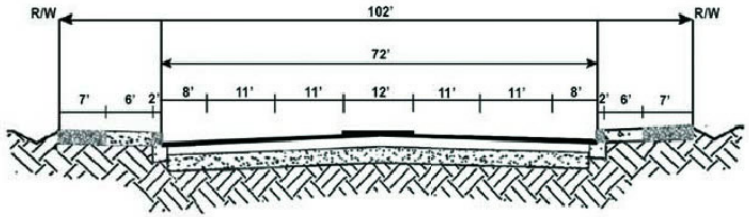
Figure 5
City of La Quinta General Plan Roadway Cross-Sections



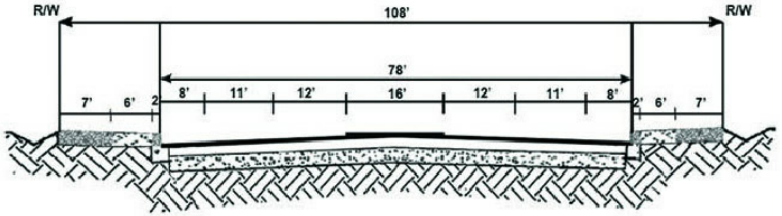
80' Collector



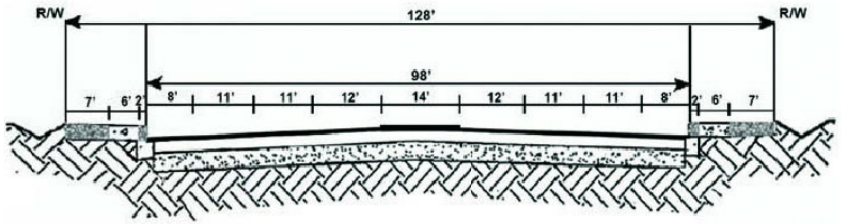
84' Modified Secondary Arterial



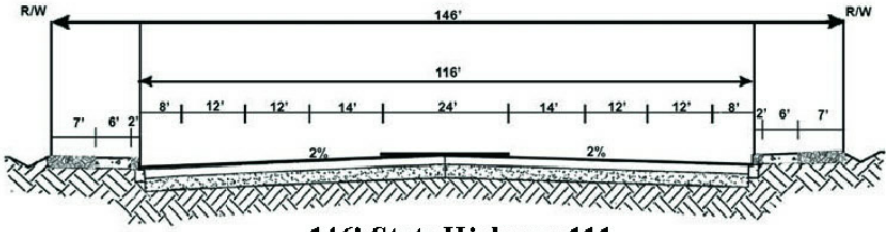
102' Secondary Arterial



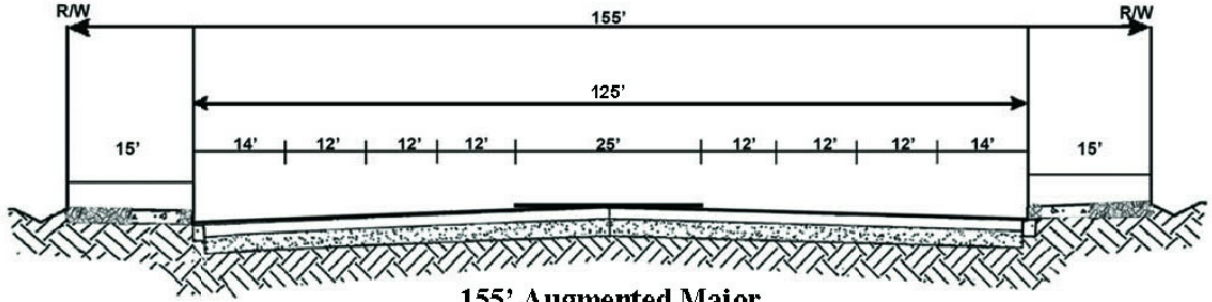
108' Primary Arterial



128' Major Arterial



146' State Highway 111



155' Augmented Major

Source: City of La Quinta

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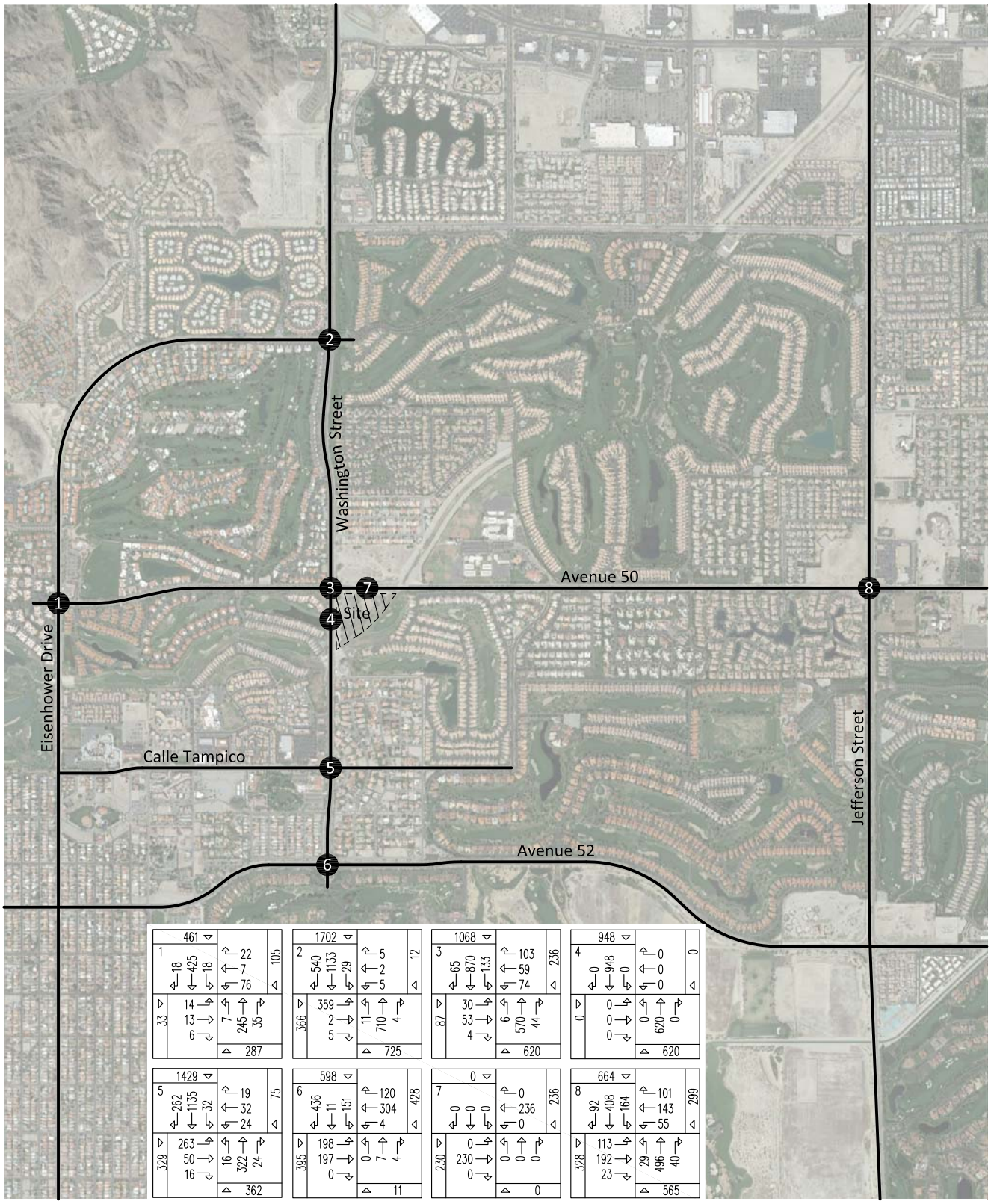
Figure 6
Existing Weekday
Evening Peak Hour Intersection Turning Movement Volumes



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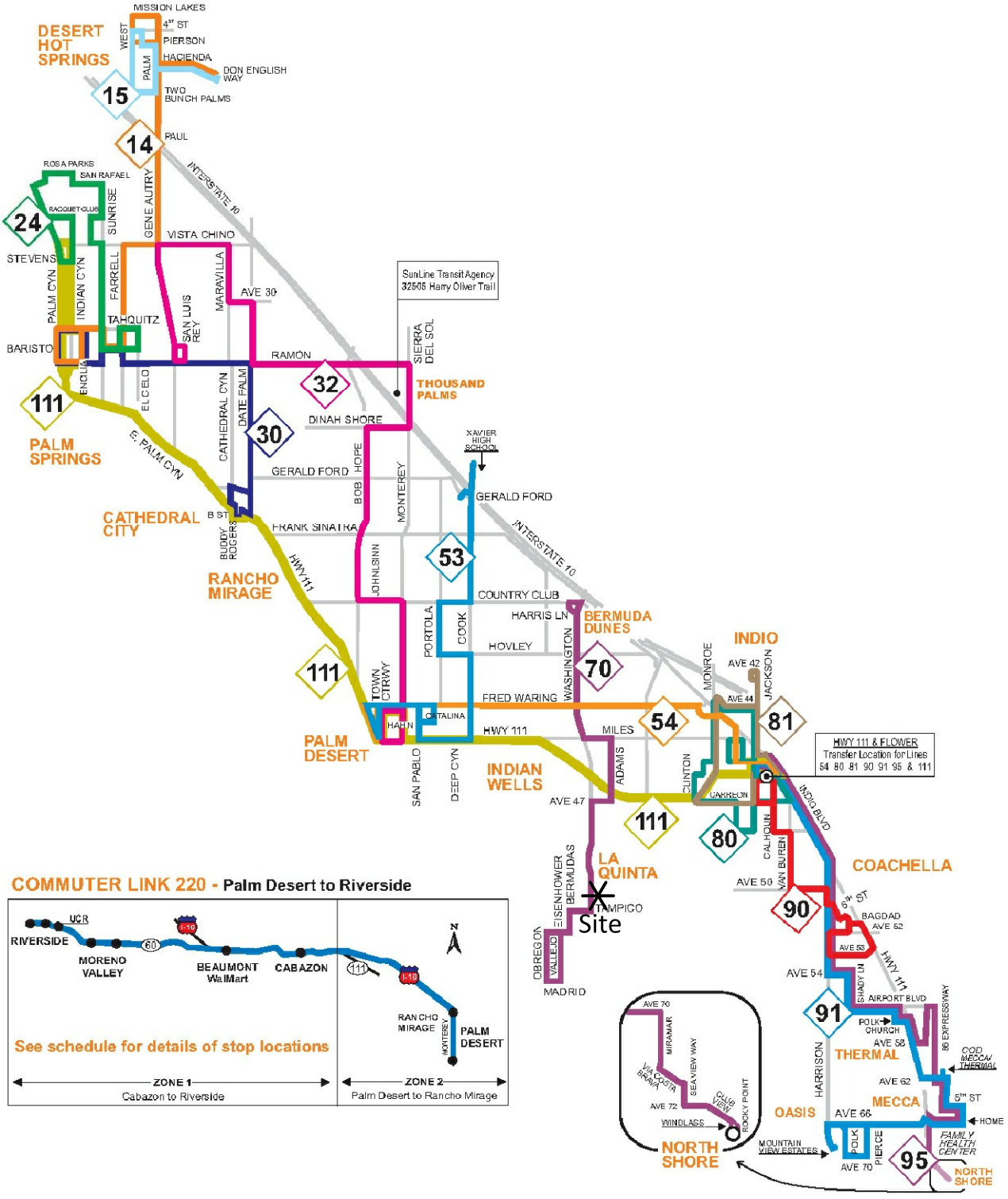
Intersection reference numbers are in upper left corner of turning movement boxes.

Figure 7
SunLine Transit Agency System Map



Source: SunLine Transit Agency

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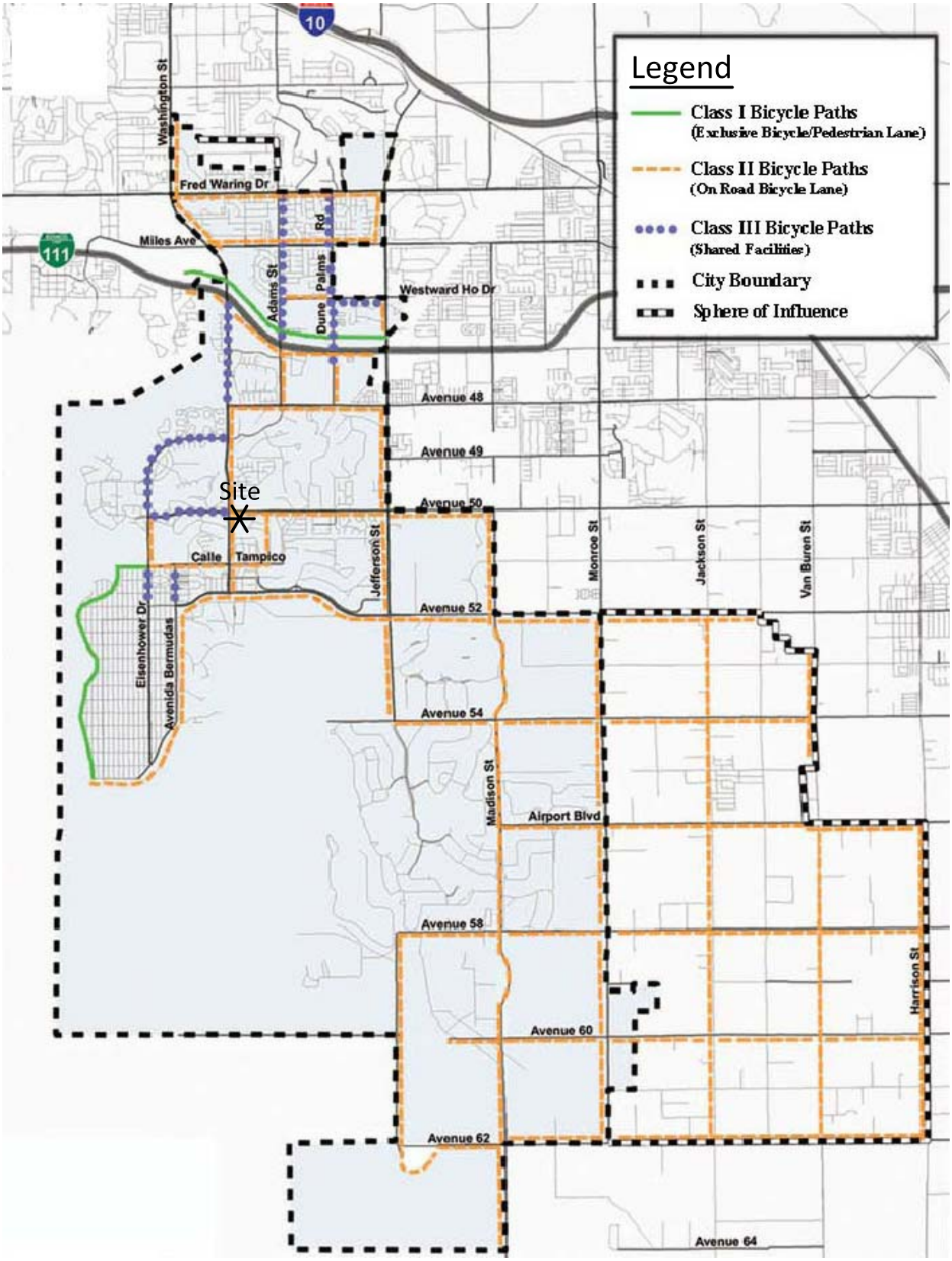
Figure 8
City of La Quinta Bike Paths Master Plan



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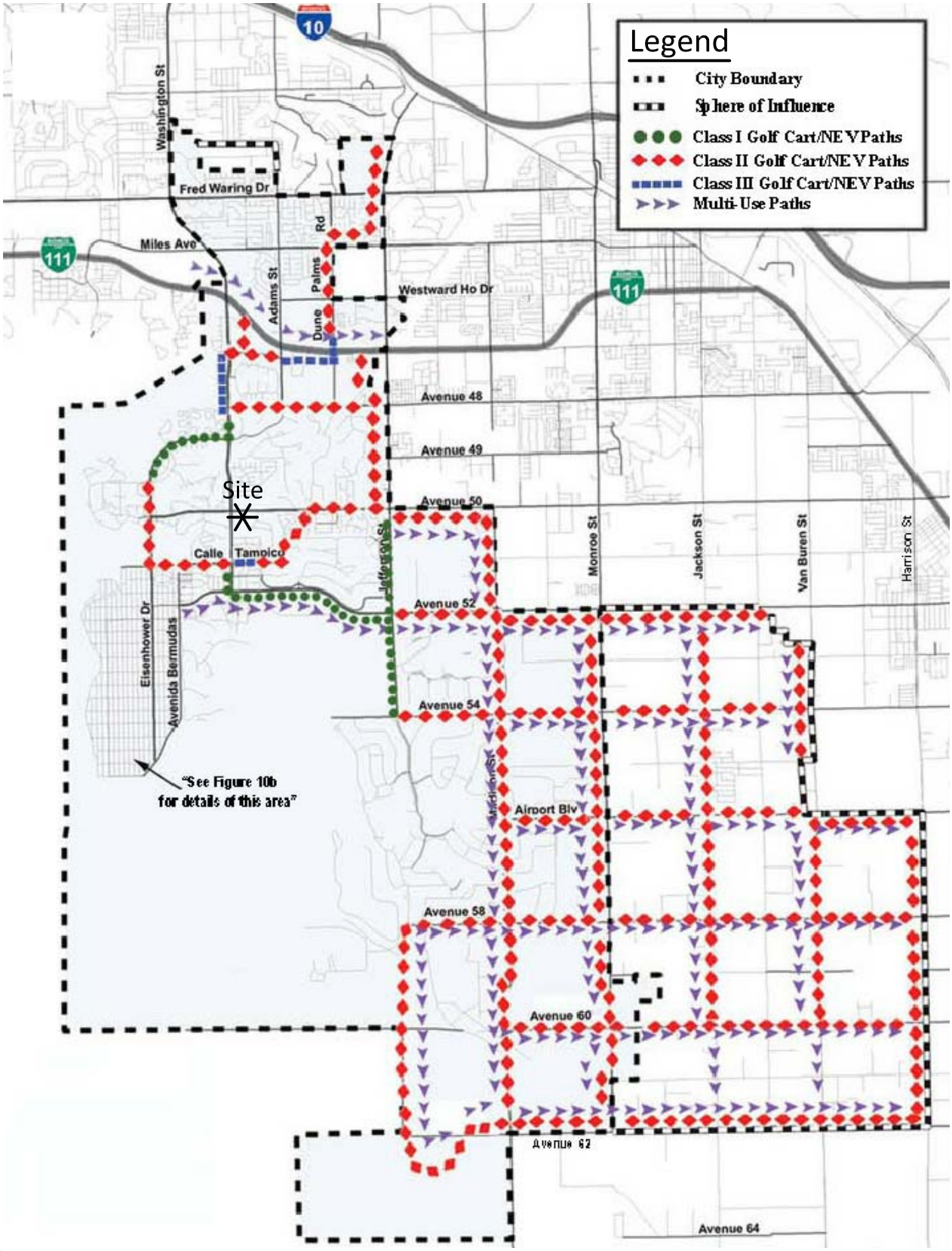
Source: City of La Quinta

Figure 9
City of La Quinta Golf Cart/ NEV/ Multi-Use Paths



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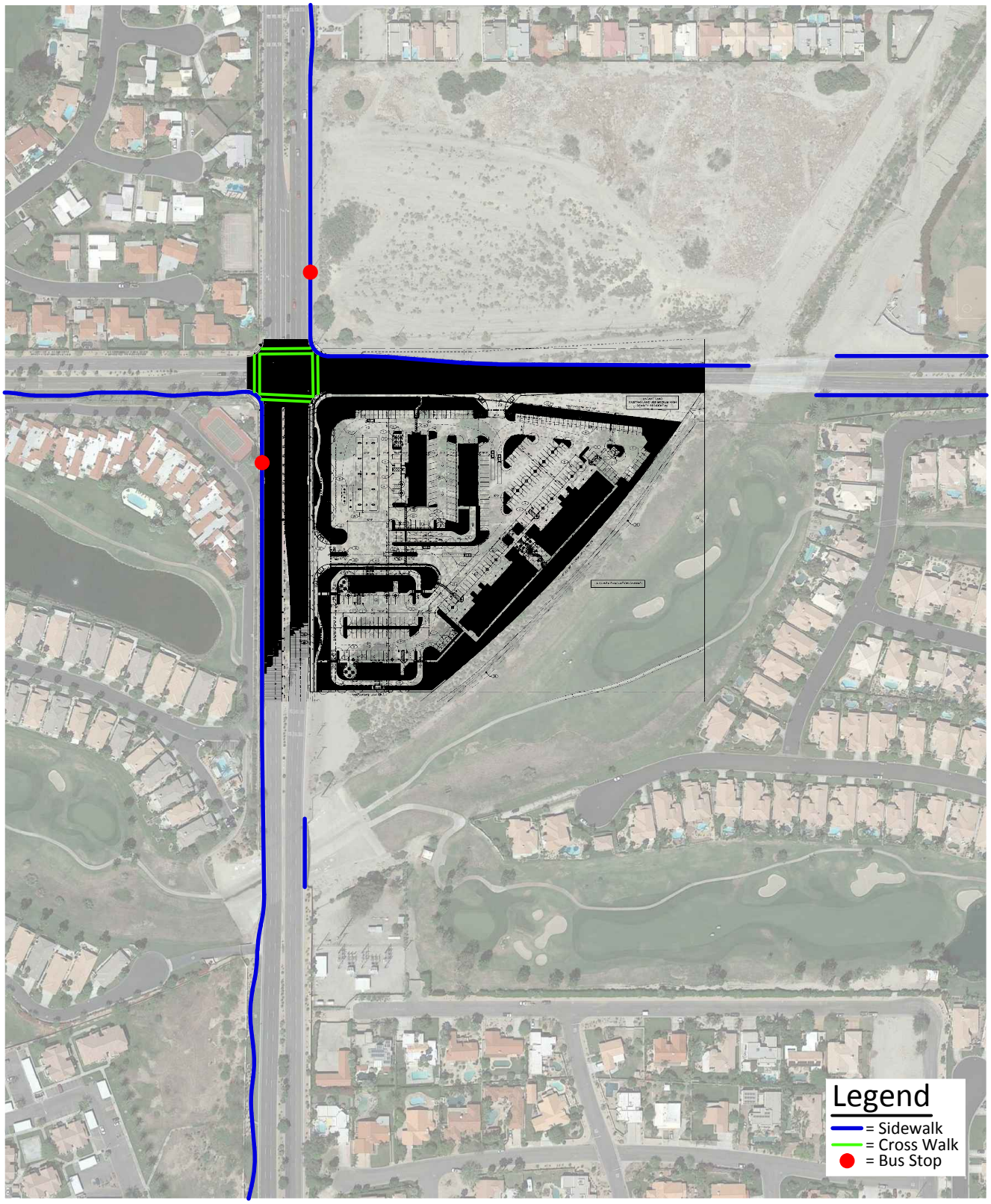
Source: City of La Quinta

Figure 10
Existing Pedestrian Facilities



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IV. PROJECT TRIPS

The 7.48 acre project site is proposed to be developed with 18,000 square feet of office, 18,000 square feet of shopping center, 6,000 square feet of fast-food restaurant w/drive-thru, and a 20 fueling position service station w/mini mart & car wash. The project site will have access to Washington Street and Avenue 50.

A. Site Traffic

1. Trip Generation

The trips generated by the project are determined by multiplying an appropriate trip generation rate by the quantity of land use. Trip generation rates are predicated on the assumption that energy costs, the availability of roadway capacity, the availability of vehicles to drive, and life styles remain similar to what are known today. A major change in these variables may affect trip generation rates.

Trip generation rates were determined for daily traffic, morning peak hour inbound and outbound traffic, and evening peak hour inbound and outbound traffic for the proposed land uses. By multiplying the traffic generation rates by the land use quantities, the traffic volumes are determined. Table 3 exhibits the traffic generation rates, project peak hour volumes, and project daily traffic volumes. The trip generation rates are from the Institute of Transportation Engineers, Trip Generation, 9th Edition, 2012.

The proposed development is projected to generate a total of approximately 3,540 daily vehicle trips, 290 of which occur during the morning peak hour and 294 of which occur during the evening peak hour.

It should be noted that for shopping center/fast-food restaurant/service station land uses, a portion of the trips would come from pass-by trips from adjacent roadways, trips that are currently on the roadway system. In order to analyze pass-by trips, the traffic volumes from the project have been reduced as a result of pass-by trips (see Table 3) based upon the Institute of Transportation Engineers, Trip Generation Handbook, 3rd Edition, August 2014.

Traffic volumes shown in Table 3 consist of the total trips generated for each project land use. As an office trip generated by the project will also be making trips to a shopping center/fast-food restaurant/service station land use within the project, a double counting of those trips occurs. In order to analyze a "conservative" scenario, the traffic volumes from the project site have not been reduced as a result of the internal interaction between the proposed land uses.

2. Trip Generation Comparison

The previous zoning for the project site was medium density residential. A total of approximately 60 single-family detached residential dwelling units have been compared to the proposed land uses.

As shown in Table 4, the proposed zoning compared to the previous zoning is projected to generate approximately 2,969 more daily vehicle trips, 245 more of which will occur during the morning peak hour and 234 more of which will occur during the evening peak hour.

3. Trip Distribution

Figures 11 and 12 contain the directional distribution of the project trips for the proposed land uses. To determine the trip distributions for the proposed project, existing traffic volumes of the existing directional distribution of traffic for existing areas in the vicinity of the site, locations of existing residential/employment/ commercial centers, and other additional information on future development and traffic impacts in the area were reviewed.

4. Trip Assignment

Based on the identified project trip generation and distributions, weekday evening peak hour intersection turning movement volumes expected from the project are shown on Figure 13.

5. Modal Split

The traffic reducing potential of public transit, walking, and/or bicycling have not been considered in this report. Essentially the traffic projections are conservative in that public transit might be able to reduce the traffic volumes.

Table 3

Project Trip Generation[1]

Land Use	Quantity	Units[2]	Peak Hour						Daily
			Morning			Evening			
			Inbound	Outbound	Total	Inbound	Outbound	Total	
Trip Generation Rates									
Office		TSF	1.37	0.19	1.56	0.25	1.24	1.49	11.03
Shopping Center		TSF	0.60	0.36	0.96	1.78	1.93	3.71	42.70
Fast-Food Restaurant W/Drive-Thru		TSF	25.17	24.18	49.35	17.60	16.24	33.84	496.12
Service Station W/Mini Mart & Car Wash		FP	6.04	5.80	11.84	7.07	6.79	13.86	152.84
Trips Generated									
Office	18.000	TSF	25	3	28	5	22	27	199
Shopping Center	18.000	TSF	11	6	17	32	35	67	769
Fast-Food Restaurant W/Drive-Thru	6.000	TSF	151	145	296	106	97	203	2,977
Service Station W/Mini Mart & Car Wash	20	FP	121	116	237	141	136	277	3,057
Subtotal			308	270	578	284	290	574	7,002
Pass-By (Shopping Center 34%)[3]			-4	-2	-6	-11	-12	-23	-261
Pass-By (Fast-Food Restaurant W/Drive-Thru 50%)[3]			-76	-73	-149	-53	-49	-102	-1,489
Pass-By (Service Station W/Mini-Mart & Car Wash 56%)[3]			-68	-65	-133	-79	-76	-155	-1,712
Total			160	130	290	141	153	294	3,540

[1] Source: Institute of Transportation Engineers, Trip Generation, 9th Edition, 2012, Land Use Categories 710, 820, 934, and 946.

[2] TSF = Thousand Square Feet; FP = Fueling Positions

[3] Source: Institute of Transportation Enginees, Trip Generation Handbook, 3rd Edition, August 2014, Pass-By Data.

Table 4

Trip Generation Comparison

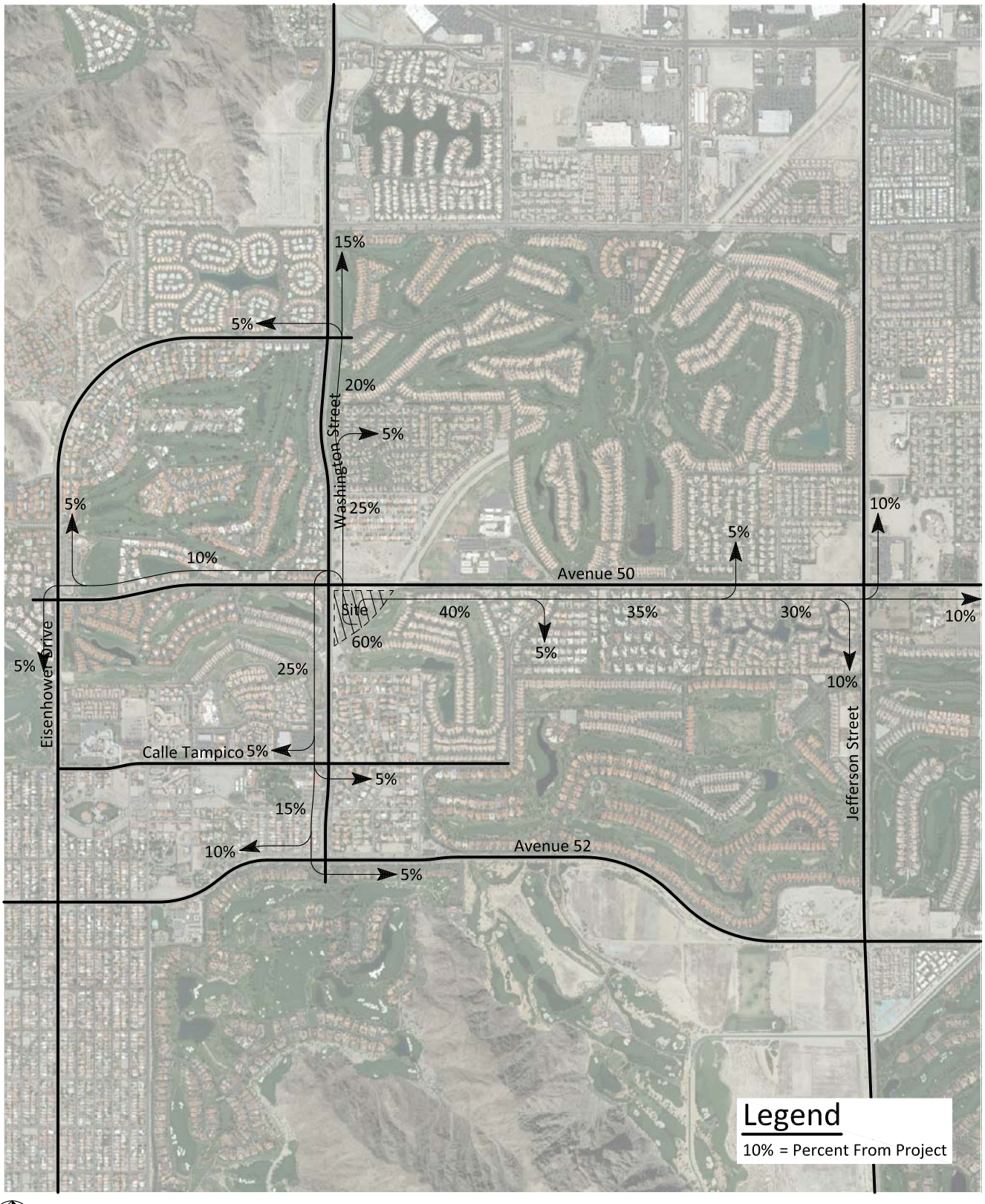
Descriptor	Land Use	Quantity	Units[1]	Peak Hour						Daily
				Morning			Evening			
				Inbound	Outbound	Total	Inbound	Outbound	Total	
Previous Zoning[2]	Single-Family Detached Residential	60	DU	11	34	45	38	22	60	571
Proposed Zoning	Mixed-Use	--[3]	--[3]	160	130	290	141	153	294	3,540
Difference				+149	+96	+245	+103	+131	+234	+2,969

[1] DU = Dwelling Units

[2] Approximately number of dwelling units

[3] See Table 3

Figure 11
Project Outbound Trip Distribution

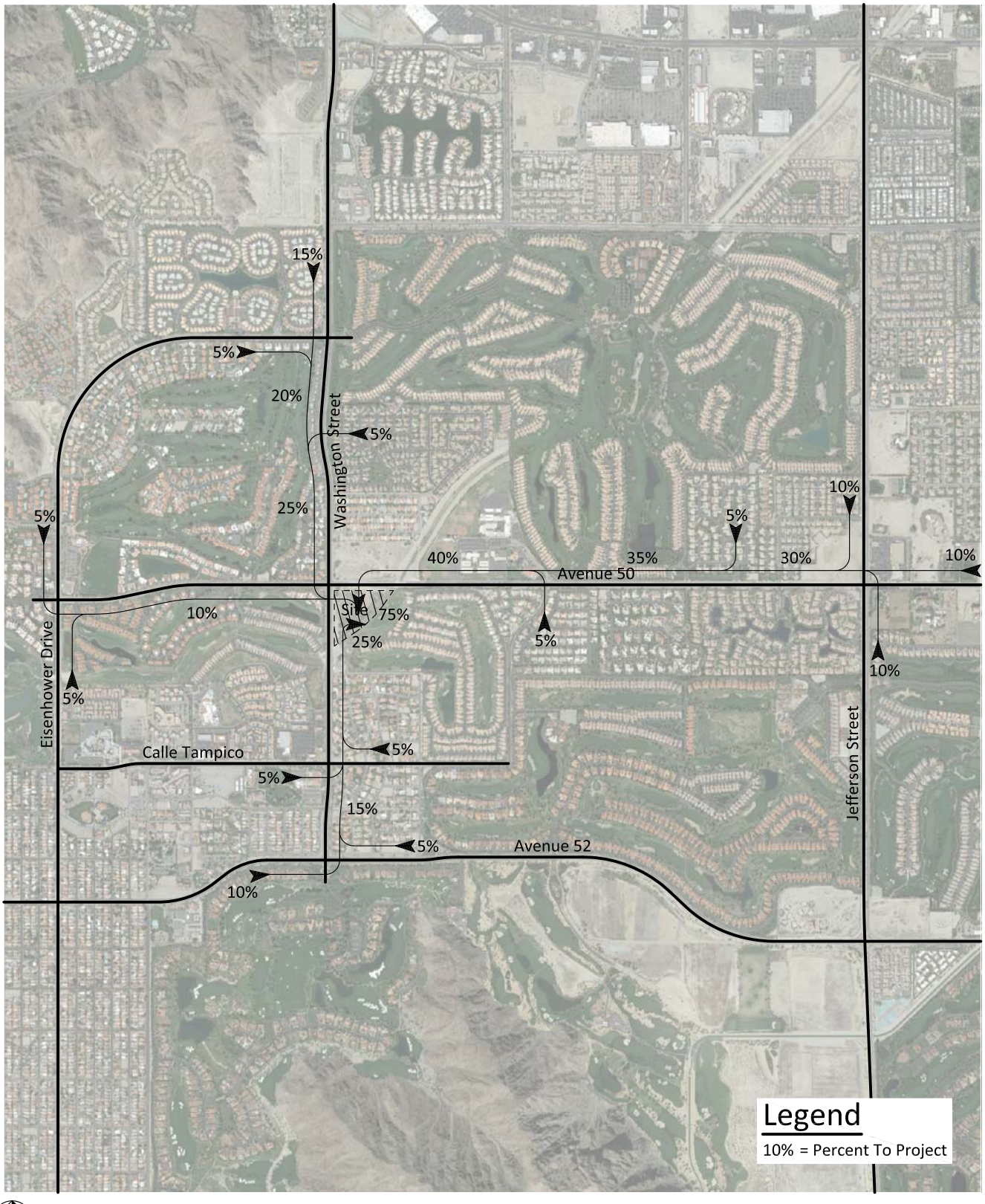


6209b/11

KUNZMAN ASSOCIATES, INC.

OVER 35 YEARS OF EXCELLENT SERVICE

Figure 12
Project Inbound Trip Distribution



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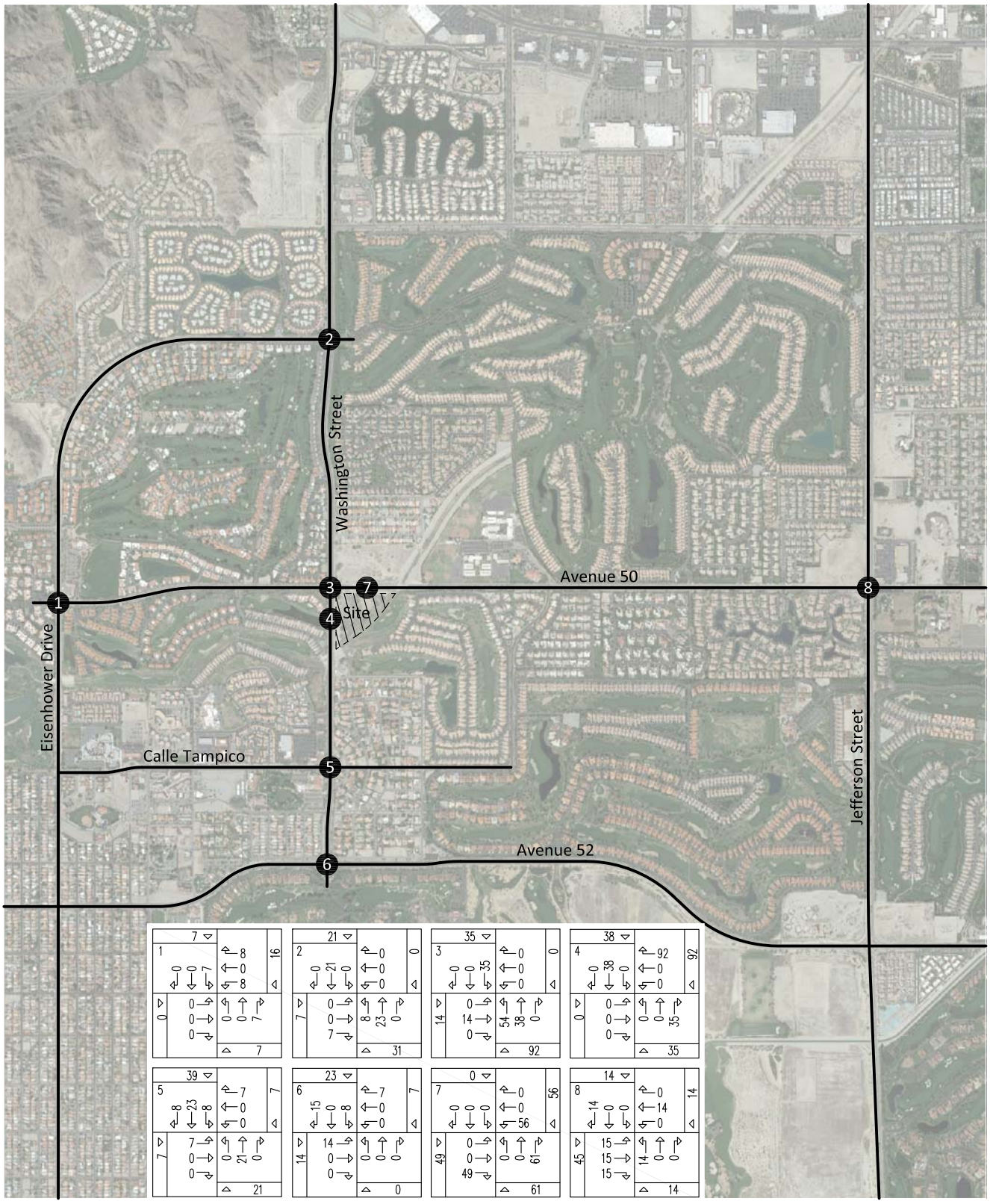
KUNZMAN ASSOCIATES, INC.

OVER 35 YEARS OF EXCELLENT SERVICE

Figure 13
Project Weekday
Evening Peak Hour Intersection Turning Movement Volumes



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KUNZMAN ASSOCIATES, INC. Intersection reference numbers are in upper left corner of turning movement boxes.

OVER 35 YEARS OF EXCELLENT SERVICE

V. TRAFFIC ANALYSIS

A. Cumulative Development

1. Method of Projection

To assess Opening Year (2017) traffic conditions, project traffic is combined with existing traffic, other development, and areawide growth. The Opening Year for analysis purposes in this report is 2017.

2. Non-Site Traffic for Study Area

Table 5 lists the proposed land uses for the other development (see Appendix C) for Opening Year (2017) traffic conditions provided by the City of La Quinta. The other development location map is shown on Figure 14.

3. Ambient Growth Rate

To account for areawide growth on roadways, Opening Year (2017) traffic volumes have been calculated based on a "conservative" 2 percent annual growth rate of existing traffic volumes over a two (2) year period. The areawide growth rate was obtained from previous traffic studies conducted in the area.

B. Average Daily Traffic Volumes

1. Existing Plus Project

For Existing Plus Project traffic conditions, the study area roadway segments are projected to operate within acceptable Levels of Service (see Table 6). As shown in Table 7, there are no significant impacts projected at the study area roadway segments for Existing Plus Project traffic conditions.

2. Opening Year (2017) Without Project

For Opening Year (2017) Without Project traffic conditions, the study area roadway segments are projected to operate within acceptable Levels of Service (see Table 8).

3. Opening Year (2017) With Project

For Opening Year (2017) With Project traffic conditions, the study area roadway segments are projected to operate within acceptable Levels of Service (see Table 9). As shown in Table 10, there are no significant impacts projected at the study area roadway segments for Opening Year (2017) With Project traffic conditions.

C. Intersection Levels of Service

1. Existing Plus Project

The Existing Plus Project delay and Level of Service for the study area roadway network are shown in Table 11. Table 11 shows delay values based on the existing geometrics at the study area intersections. Existing Plus Project weekday evening peak hour intersection turning movement volumes are shown on Figure 15. Existing Plus Project delay worksheets are provided in Appendix D.

For Existing Plus Project traffic conditions, the study area intersections are projected to operate within acceptable Levels of Service during the weekday evening peak hour (see Table 11).

As shown in Table 12, there are no significant impacts projected at the study area intersections for Existing Plus Project traffic conditions.

2. Level of Service at Opening Year (2017) Without Project

The Opening Year (2017) delay and Level of Service for the study area roadway network without the proposed project are shown in Table 13. Table 13 shows delay values based on the existing geometrics at the study area intersections. Opening Year (2017) Without Project weekday evening peak hour intersection turning movement volumes are shown on Figure 16. Opening Year (2017) Without Project delay worksheets are provided in Appendix D.

For Opening Year (2017) Without Project traffic conditions, the study area intersections are projected to operate within acceptable Levels of Service during the weekday evening peak hour (see Table 13).

3. Level of Service at Opening Year (2017) With Project

The Opening Year (2017) delay and Level of Service for the study area roadway network with the proposed project are shown in Table 14. Table 14 shows delay values based on the existing geometrics at the study area intersections. Opening Year (2017) With Project weekday evening peak hour intersection turning movement volumes are shown on Figure 17. Opening Year (2017) With Project delay worksheets are provided in Appendix D.

For Opening Year (2017) With Project traffic conditions, the study area intersections are projected to operate within acceptable Levels of Service during the weekday evening peak hour (see Table 14).

As shown in Table 15, there are no significant impacts projected at the study area intersections for Opening Year (2017) With Project traffic conditions.

Table 5

Other Development Trip Generation[1]

Project	Land Use	Quantity	Units[2]	Peak Hour						Daily
				Morning			Evening			
				Inbound	Outbound	Total	Inbound	Outbound	Total	
Caleo Bay Park	Office	17.595	TSF	24	3	27	4	22	26	194
La Paloma Assisted Living Facility	Congregate Care	236	DU	9	5	14	21	19	40	477
	Assisted Living	38	BD	5	2	7	6	6	12	104
	Subtotal			14	7	21	27	25	52	581
SilverRock Resort	Resort Hotel	435	RM	96	39	135	78	104	182	3,554
	Conference Center	71.0	TSF	96	50	146	95	99	194	2,401
	Golf Course	18	HOLES	29	8	37	27	26	53	643
	Subtotal			221	97	318	200	229	429	6,598
Tradition Club	Single-Family Detached Residential	89	DU	17	50	67	56	33	89	847
TT 32397 - Laing Homes	Single-Family Detached Residential	74	DU	14	41	55	47	27	74	704
The Villas at Old Town	Condominiums	74	DU	5	27	32	26	13	39	430
	Specialty Retail	20.0	TSF	16	11	27	24	30	54	886
	Subtotal			21	38	59	50	43	93	1,316
Washington Park	Movie Theater	2,087	ST	63	63	126	357	248	605	3,673
Total				374	299	673	741	627	1,368	13,913

[1] See Appendix D.

[2] TSF = Thousand Square Feet; DU = Dwelling Units; BD = Beds; RM = Rooms; ST = Seats

Table 6

Existing Plus Project Roadway Segment Level of Service

Roadway	Segment	Roadway Section	Level of Service Capacity	Existing Plus Project			Acceptable Level of Service
				Average Daily Traffic Volume	V/C Ratio	Level of Service	
Eisenhower Drive	North of Avenue 50	4D	42,600	15,700	0.37	A	D
	South of Avenue 50	4D	42,600	12,700	0.30	A	D
Washington Street	North of Eisenhower Drive	6D	61,000	41,000	0.67	B	D
	Eisenhower Drive to Avenue 50	6D	61,000	27,800	0.46	A	D
	Avenue 50 to Calle Tampico	6D	61,000	24,000	0.39	A	D
	Calle Tampico to Avenue 52	6D	61,000	23,600	0.39	A	D
Jefferson Street	North of Avenue 50	6D	61,000	26,300	0.43	A	D
	South of Avenue 50	6D	61,000	19,900	0.33	A	D
Avenue 50	East of Washington Street	3D	31,950	9,600	0.30	A	D
	West of Jefferson Street	3D	31,950	11,800	0.37	A	D
	East of Jefferson Street	3D	31,950	11,200	0.35	A	D
Calle Tampico	West of Washington Street	4D	42,600	16,800	0.39	A	D
	East of Washington Street	2U	14,000	2,500	0.18	A	D
Avenue 52	West of Washington Street	4D	42,600	16,000	0.38	A	D
	East of Washington Street	4D	42,600	11,700	0.27	A	D

Table 7

Existing Plus Project Roadway Segment Comparison

Roadway	Segment	Roadway Section	Level of Service Capacity	Existing[1]		Existing Plus Project[2]		Acceptable Level of Service	Significant Impact?
				V/C Ratio	Level of Service	V/C Ratio	Level of Service		
Eisenhower Drive	North of Avenue 50	4D	42,600	0.36	A	0.37	A	D	No
	South of Avenue 50	4D	42,600	0.29	A	0.30	A	D	No
Washington Street	North of Eisenhower Drive	6D	61,000	0.66	B	0.67	B	D	No
	Eisenhower Drive to Avenue 50	6D	61,000	0.44	A	0.46	A	D	No
	Avenue 50 to Calle Tampico	6D	61,000	0.38	A	0.39	A	D	No
	Calle Tampico to Avenue 52	6D	61,000	0.38	A	0.39	A	D	No
Jefferson Street	North of Avenue 50	6D	61,000	0.42	A	0.43	A	D	No
	South of Avenue 50	6D	61,000	0.32	A	0.33	A	D	No
Avenue 50	East of Washington Street	3D	31,950	0.26	A	0.30	A	D	No
	West of Jefferson Street	3D	31,950	0.33	A	0.37	A	D	No
	East of Jefferson Street	3D	31,950	0.34	A	0.35	A	D	No
Calle Tampico	West of Washington Street	4D	42,600	0.39	A	0.39	A	D	No
	East of Washington Street	2U	14,000	0.16	A	0.18	A	D	No
Avenue 52	West of Washington Street	4D	42,600	0.37	A	0.38	A	D	No
	East of Washington Street	4D	42,600	0.27	A	0.27	A	D	No

[1] See Table 1

[2] See Table 6

Table 8

Opening Year (2017) Without Project Roadway Segment Level of Service

Roadway	Segment	Roadway Section	Level of Service Capacity	Opening Year (2017) Without Project			Acceptable Level of Service
				Average Daily Traffic Volume	V/C Ratio	Level of Service	
Eisenhower Drive	North of Avenue 50	4D	42,600	16,200	0.38	A	D
	South of Avenue 50	4D	42,600	13,100	0.31	A	D
Washington Street	North of Eisenhower Drive	6D	61,000	43,900	0.72	C	D
	Eisenhower Drive to Avenue 50	6D	61,000	29,700	0.49	A	D
	Avenue 50 to Calle Tampico	6D	61,000	25,800	0.42	A	D
	Calle Tampico to Avenue 52	6D	61,000	24,700	0.40	A	D
Jefferson Street	North of Avenue 50	6D	61,000	32,200	0.53	A	D
	South of Avenue 50	6D	61,000	25,600	0.42	A	D
Avenue 50	East of Washington Street	3D	31,950	9,400	0.29	A	D
	West of Jefferson Street	3D	31,950	11,400	0.36	A	D
	East of Jefferson Street	3D	31,950	11,400	0.36	A	D
Calle Tampico	West of Washington Street	4D	42,600	18,400	0.43	A	D
	East of Washington Street	2U	14,000	2,700	0.19	A	D
Avenue 52	West of Washington Street	4D	42,600	16,700	0.39	A	D
	East of Washington Street	4D	42,600	12,600	0.30	A	D

Table 9

Opening Year (2017) With Project Roadway Segment Level of Service

Roadway	Segment	Roadway Section	Level of Service Capacity	Opening Year (2017) With Project			Acceptable Level of Service
				Average Daily Traffic Volume	V/C Ratio	Level of Service	
Eisenhower Drive	North of Avenue 50	4D	42,600	16,400	0.38	A	D
	South of Avenue 50	4D	42,600	13,300	0.31	A	D
Washington Street	North of Eisenhower Drive	6D	61,000	44,400	0.73	C	D
	Eisenhower Drive to Avenue 50	6D	61,000	30,600	0.50	A	D
	Avenue 50 to Calle Tampico	6D	61,000	26,700	0.44	A	D
	Calle Tampico to Avenue 52	6D	61,000	25,200	0.41	A	D
Jefferson Street	North of Avenue 50	6D	61,000	32,600	0.53	A	D
	South of Avenue 50	6D	61,000	26,000	0.43	A	D
Avenue 50	East of Washington Street	3D	31,950	10,600	0.33	A	D
	West of Jefferson Street	3D	31,950	12,500	0.39	A	D
	East of Jefferson Street	3D	31,950	11,800	0.37	A	D
Calle Tampico	West of Washington Street	4D	42,600	18,600	0.44	A	D
	East of Washington Street	2U	14,000	2,900	0.21	A	D
Avenue 52	West of Washington Street	4D	42,600	17,100	0.40	A	D
	East of Washington Street	4D	42,600	12,800	0.30	A	D

Table 10

Opening Year (2017) With Project Roadway Segment Comparison

Roadway	Segment	Roadway Section	Level of Service Capacity	Opening Year (2017)				Acceptable Level of Service	Significant Impact?
				Without Project[1]		With Project[2]			
				V/C Ratio	Level of Service	V/C Ratio	Level of Service		
Eisenhower Drive	North of Avenue 50	4D	42,600	0.38	A	0.38	A	D	No
	South of Avenue 50	4D	42,600	0.31	A	0.31	A	D	No
Washington Street	North of Eisenhower Drive	6D	61,000	0.72	C	0.73	C	D	No
	Eisenhower Drive to Avenue 50	6D	61,000	0.49	A	0.50	A	D	No
	Avenue 50 to Calle Tampico	6D	61,000	0.42	A	0.44	A	D	No
	Calle Tampico to Avenue 52	6D	61,000	0.4	A	0.41	A	D	No
Jefferson Street	North of Avenue 50	6D	61,000	0.53	A	0.53	A	D	No
	South of Avenue 50	6D	61,000	0.42	A	0.43	A	D	No
Avenue 50	East of Washington Street	3D	31,950	0.29	A	0.33	A	D	No
	West of Jefferson Street	3D	31,950	0.36	A	0.39	A	D	No
	East of Jefferson Street	3D	31,950	0.36	A	0.37	A	D	No
Calle Tampico	West of Washington Street	4D	42,600	0.43	A	0.44	A	D	No
	East of Washington Street	2U	14,000	0.19	A	0.21	A	D	No
Avenue 52	West of Washington Street	4D	42,600	0.39	A	0.40	A	D	No
	East of Washington Street	4D	42,600	0.3	A	0.30	A	D	No

[1] See Table 8

[2] See Table 9

Table 11

Existing Plus Project Intersection Delay and Level of Service

Intersection	Traffic Control[2]	Intersection Approach Lanes[1]												Evening Peak Hour		Acceptable Level of Service
		Northbound			Southbound			Eastbound			Westbound			Delay[3]	Level of Service	
		L	T	R	L	T	R	L	T	R	L	T	R			
Eisenhower Drive (NS) at:																
Avenue 50 (EW) - #1	TS	1	2	d	1	2	d	1	0.5	0.5	1	1	1	17.5	B	D
Washington Street (NS) at:																
Eisenhower Drive (EW) - #2	TS	1	3	1	1	3	1>	2.5	0.5	0	0.5	0.5	1	18.3	B	D
Avenue 50 (EW) - #3	TS	1	2.5	0.5	1	2.5	0.5	1	1.5	0.5	2	1	1>	18.4	B	D
Project Driveway (EW) - #4	**CSS**	0	2.5	0.5	0	3	0	0	0	0	0	0	**1**	11.3	B	E
Calle Tampico (EW) - #5	TS	1	2.5	0.5	1	2	1>	2.5	0.5	1	1	0.5	0.5	12.4	B	D
Avenue 52 (EW) - #6	TS	0	1	0	1.5	0.5	2>	2	2	d	1	2	1>	18.0	B	D
Project Driveway (NS) at:																
Avenue 50 (EW) - #7	**CSS**	0	0	**1**	0	0	0	0	1.5	0.5	**1**	2	0	10.0	A	E
Jefferson Street (NS) at:																
Avenue 50 (EW) - #8	TS	1	3	1	2	3	1	1	2	1	1	1	1	21.6	C	D

[1] When a right turn lane is designated, the lane can either be striped or unstriped. To function as a right turn lane there must be sufficient width for right turning vehicles to travel outside the through lanes.
L = Left; T = Through; R = Right; > = Right Turn Overlap; d = De Facto Right Turn;**BOLD** = Improvement

[2] TS = Traffic Signal; CSS = Cross Street Stop

[3] Delay and level of service has been calculated using the following analysis software: Traffix, Version 7.9.0215 (2008). Per the Highway Capacity Manual, overall average intersection delay and level of service are shown for intersections with traffic signal or all way stop control. For intersections with cross street stop control, the delay and level of service for the worst individual movement (or movements sharing a single lane) are shown.

Table 12

Existing Plus Project Intersection Comparison

Intersection	Existing[1] Evening Peak Hour Delay[3]	Existing[1] Evening Peak Hour Level of Service	Existing Plus Project[2] Evening Peak Hour Delay[3]	Existing Plus Project[2] Evening Peak Hour Level of Service	Acceptable Level of Service	Significant Impact?
Eisenhower Drive (NS) at:						
Avenue 50 (EW) - #1	17.1	B	17.5	B	D	No
Washington Street (NS) at:						
Eisenhower Drive (EW) - #2	17.3	B	18.3	B	D	No
Avenue 50 (EW) - #3	17.0	B	18.4	B	D	No
Project Driveway (EW) - #4	N/A	N/A	11.3	B	E	No
Calle Tampico (EW) - #5	12.2	B	12.4	B	E	No
Avenue 52 (EW) - #6	18.0	B	18.0	B	D	No
Project Driveway (NS) at:						
Avenue 50 (EW) - #7	N/A	N/A	10.0	A	E	No
Jefferson Street (NS) at:						
Avenue 50 (EW) - #8	21.3	C	21.6	C	D	No

[1] See Table 2

[2] See Table 11

Table 13

Opening Year (2017) Without Project Intersection Delay and Level of Service

Intersection	Traffic Control[2]	Intersection Approach Lanes[1]												Evening Peak Hour		Acceptable Level of Service
		Northbound			Southbound			Eastbound			Westbound			Delay[3]	Level of Service	
		L	T	R	L	T	R	L	T	R	L	T	R			
Eisenhower Drive (NS) at:																
Avenue 50 (EW) - #1	TS	1	2	d	1	2	d	1	0.5	0.5	1	1	1	17.2	B	D
Washington Street (NS) at:																
Eisenhower Drive (EW) - #2	TS	1	3	1	1	3	1>	2.5	0.5	0	0.5	0.5	1	18.8	B	D
Avenue 50 (EW) - #3	TS	1	2.5	0.5	1	2.5	0.5	1	1.5	0.5	2	1	1>	17.3	B	D
Calle Tampico (EW) - #5	TS	1	2.5	0.5	1	2	1>	2.5	0.5	1	1	0.5	0.5	13.1	B	D
Avenue 52 (EW) - #6	TS	0	1	0	1.5	0.5	2>	2	2	d	1	2	1>	18.5	B	D
Jefferson Street (NS) at:																
Avenue 50 (EW) - #8	TS	1	3	1	2	3	1	1	2	1	1	1	1	21.4	C	D

[1] When a right turn lane is designated, the lane can either be striped or unstriped. To function as a right turn lane there must be sufficient width for right turning vehicles to travel outside the through lanes.
L = Left; T = Through; R = Right; > = Right Turn Overlap; d = De Facto Right Turn

[2] TS = Traffic Signal

[3] Delay and level of service has been calculated using the following analysis software: Traffix, Version 7.9.0215 (2008). Per the Highway Capacity Manual, overall average intersection delay and level of service are shown for intersections with traffic signal or all way stop control. For intersections with cross street stop control, the delay and level of service for the worst individual movement (or movements sharing a single lane) are shown.

Table 14

Opening Year (2017) With Project Intersection Delay and Level of Service

Intersection	Traffic Control[2]	Intersection Approach Lanes[1]												Evening Peak Hour		Acceptable Level of Service
		Northbound			Southbound			Eastbound			Westbound			Delay[3]	Level of Service	
		L	T	R	L	T	R	L	T	R	L	T	R			
Eisenhower Drive (NS) at:																
Avenue 50 (EW) - #1	TS	1	2	d	1	2	d	1	0.5	0.5	1	1	1	17.6	B	D
Washington Street (NS) at:																
Eisenhower Drive (EW) - #2	TS	1	3	1	1	3	1>	2.5	0.5	0	0.5	0.5	1	19.1	B	D
Avenue 50 (EW) - #3	TS	1	2.5	0.5	1	2.5	0.5	1	1.5	0.5	2	1	1>	22.0	C	D
Project Driveway (EW) - #4	**CSS**	0	2.5	0.5	0	3	0	0	0	0	0	0	**1**	11.8	B	E
Calle Tampico (EW) - #5	TS	1	2.5	0.5	1	2	1>	2.5	0.5	1	1	0.5	0.5	13.3	B	D
Avenue 52 (EW) - #6	TS	0	1	0	1.5	0.5	2>	2	2	d	1	2	1>	18.5	B	D
Project Driveway (NS) at:																
Avenue 50 (EW) - #7	**CSS**	0	0	**1**	0	0	0	0	1.5	0.5	**1**	2	0	10.1	B	E
Jefferson Street (NS) at:																
Avenue 50 (EW) - #8	TS	1	3	1	2	3	1	1	2	1	1	1	1	21.9	C	D

[1] When a right turn lane is designated, the lane can either be striped or unstriped. To function as a right turn lane there must be sufficient width for right turning vehicles to travel outside the through lanes.
L = Left; T = Through; R = Right; > = Right Turn Overlap; d = De Facto Right Turn; **BOLD** = Improvement

[2] TS = Traffic Signal; CSS = Cross Street Stop

[3] Delay and level of service has been calculated using the following analysis software: Traffix, Version 7.9.0215 (2008). Per the Highway Capacity Manual, overall average intersection delay and level of service are shown for intersections with traffic signal or all way stop control. For intersections with cross street stop control, the delay and level of service for the worst individual movement (or movements sharing a single lane) are shown.

Table 15

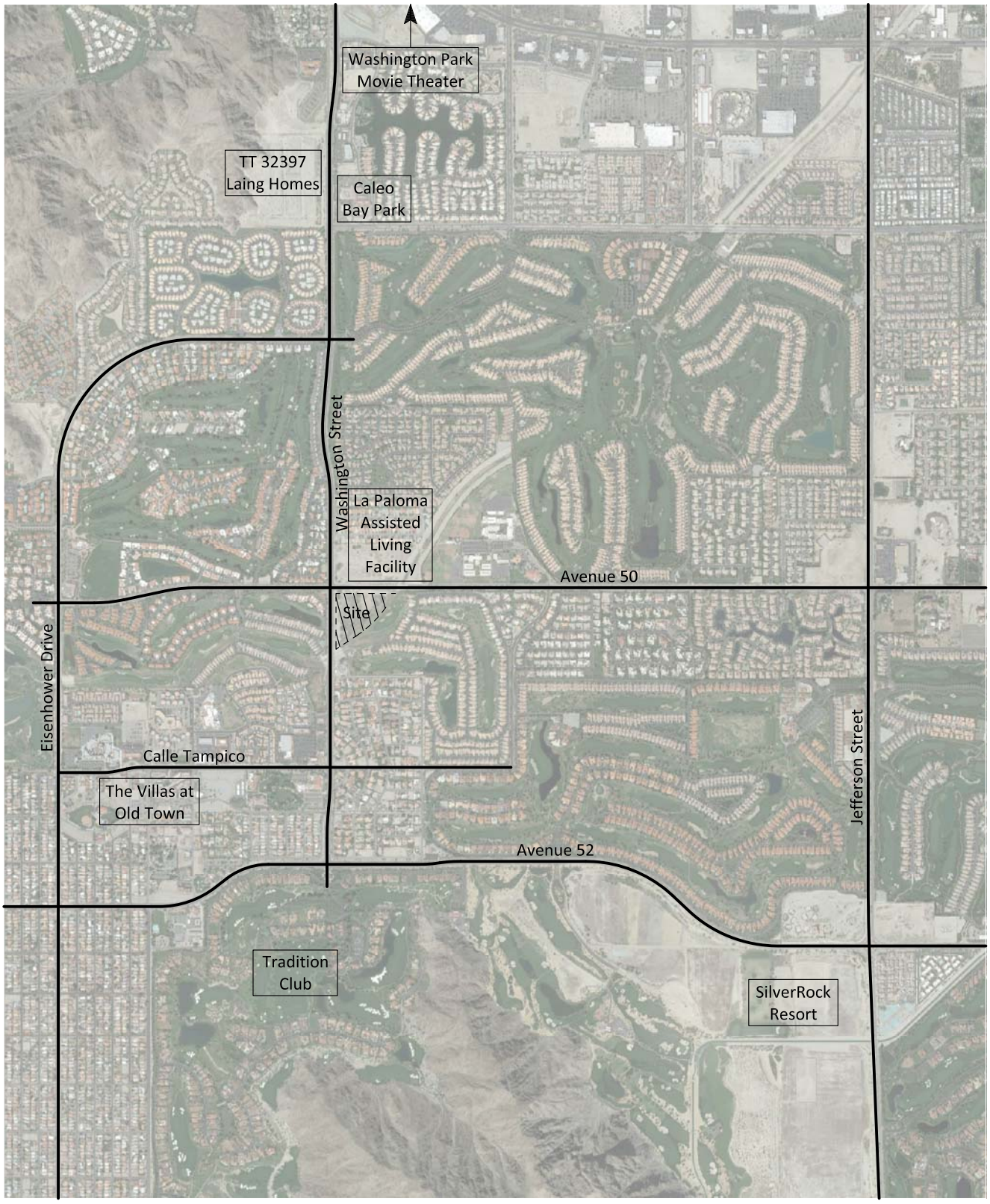
Opening Year (2017) With Project Intersection Comparison

Intersection	Opening Year (2017) Evening Peak Hour				Acceptable Level of Service	Significant Impact?
	Without Project[1]		With Project[2]			
	Delay[3]	Level of Service	Delay[3]	Level of Service		
Eisenhower Drive (NS) at:						
Avenue 50 (EW) - #1	17.2	B	17.6	B	D	No
Washington Street (NS) at:						
Eisenhower Drive (EW) - #2	18.8	B	19.1	B	D	No
Avenue 50 (EW) - #3	17.3	B	22.0	C	D	No
Project Driveway (EW) - #4	N/A	N/A	11.8	B	E	No
Calle Tampico (EW) - #5	13.1	B	13.3	B	D	No
Avenue 52 (EW) - #6	18.5	B	18.5	B	D	No
Project Driveway (NS) at:						
Avenue 50 (EW) - #7	N/A	N/A	10.1	B	E	No
Jefferson Street (NS) at:						
Avenue 50 (EW) - #8	21.4	C	21.9	C	D	No

[1] See Table 13

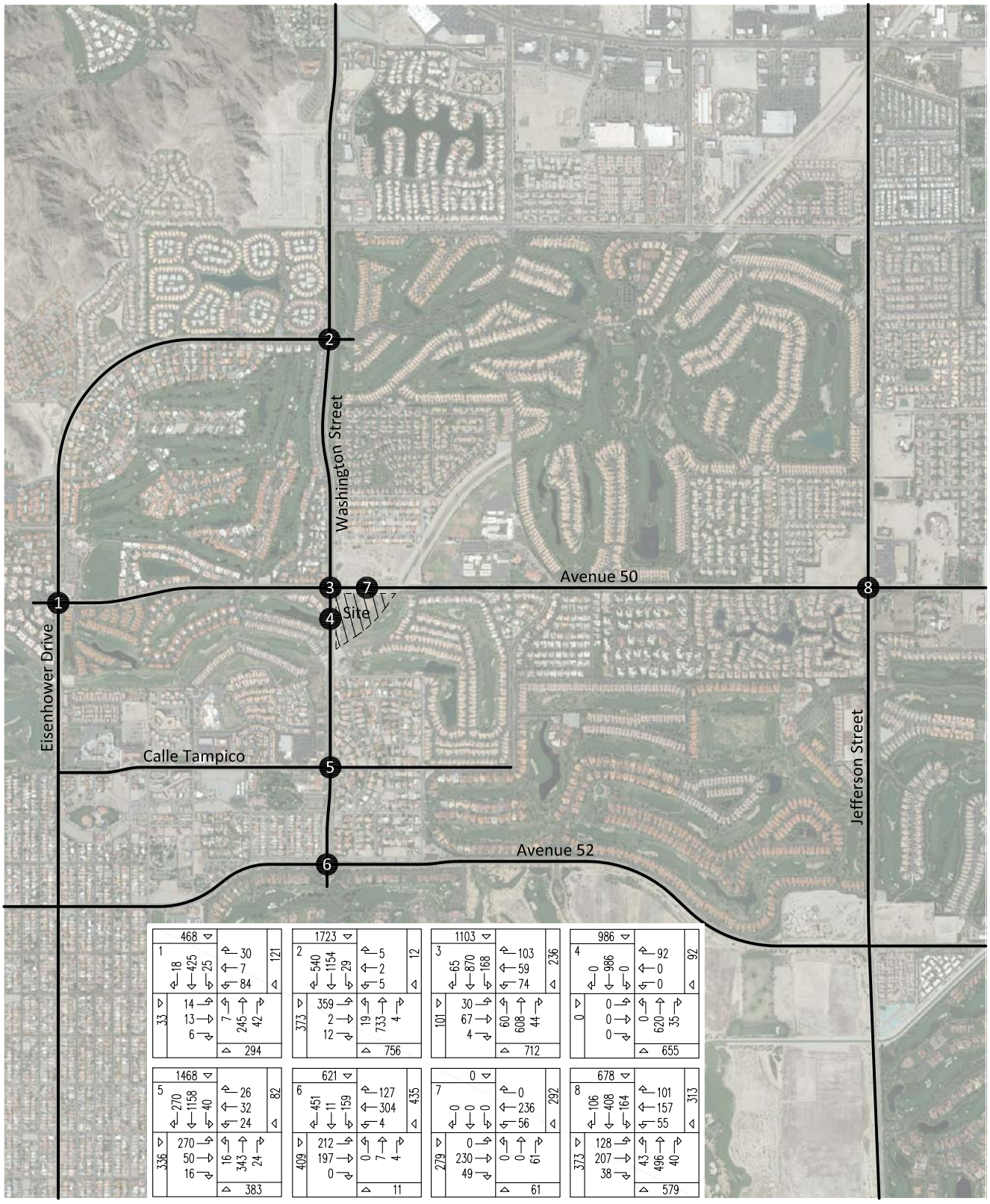
[2] See Table 14

Figure 14
Other Development Location Map



6209b/1

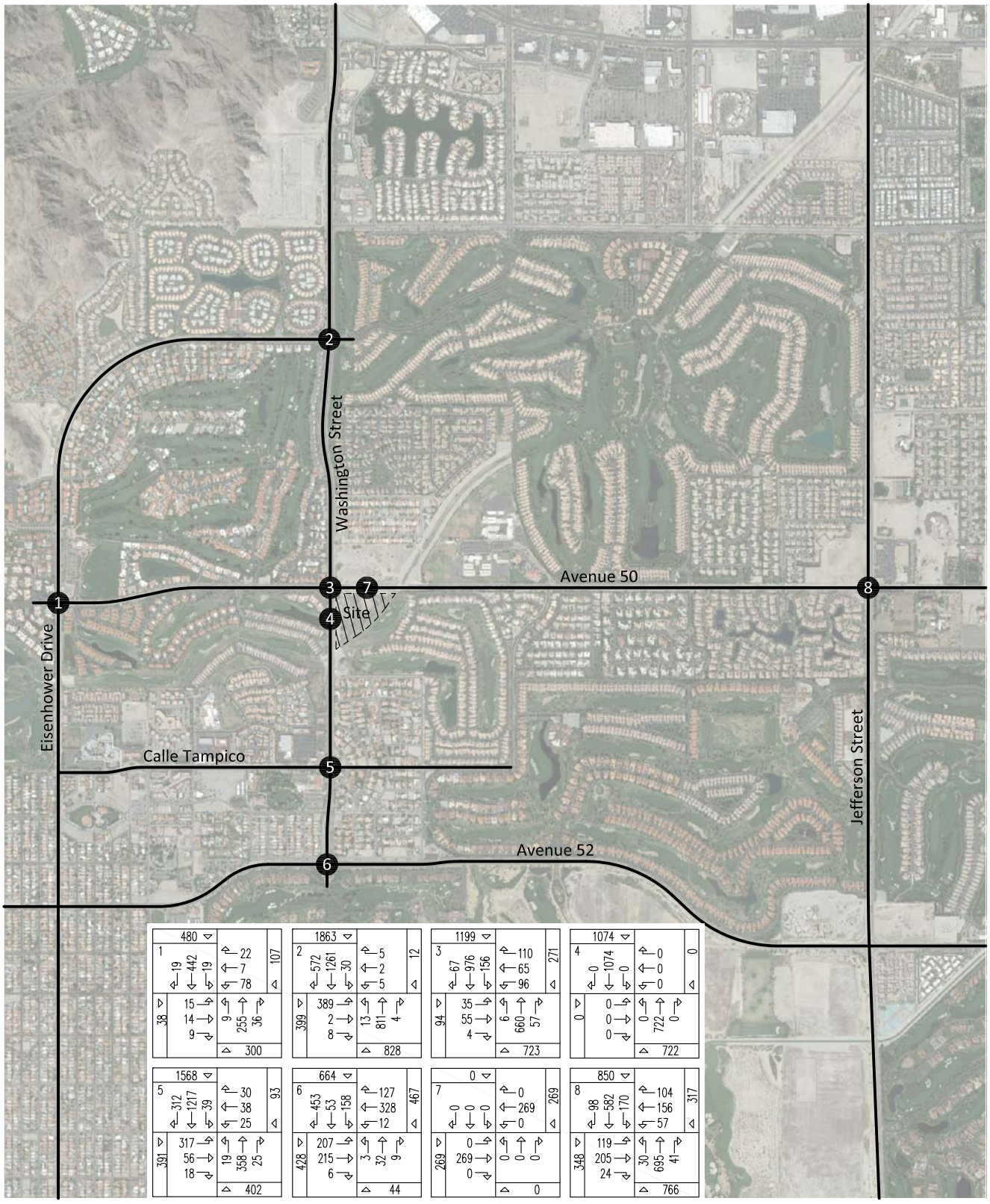
Figure 15
Existing Plus Project Weekday
Evening Peak Hour Intersection Turning Movement Volumes



6209b/15

Intersection reference numbers are in upper left corner of turning movement boxes.

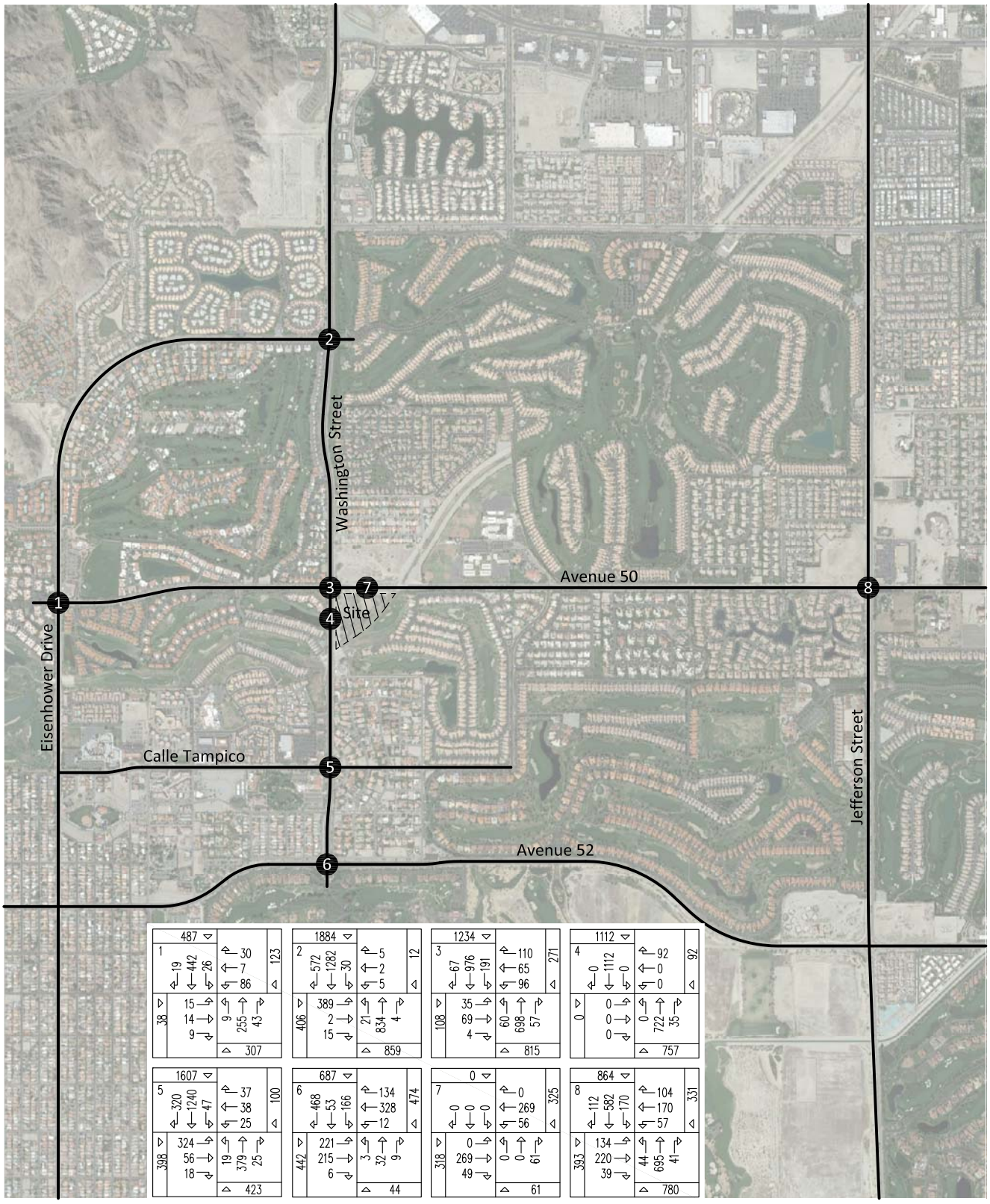
Figure 16
Opening Year (2017) Without Project Weekday
Evening Peak Hour Intersection Turning Movement Volumes



6209b/16

Intersection reference numbers are in upper left corner of turning movement boxes.

Figure 17
Opening Year (2017) With Project
Weekday Evening Peak Hour Intersection Turning Movement Volumes



6209b/17

Intersection reference numbers are in upper left corner of turning movement boxes.

VI. CONCLUSIONS AND RECOMMENDATIONS

A. Site Access

The project site will have access to Washington Street and Avenue 50.

A STOP sign should be installed to control outbound traffic on all site access driveways.

With more than one driveway, good emergency access is assured because there are two ways of reaching any point within the site.

B. Internal Circulation

Sufficient on-site parking should be provided to meet the City of La Quinta parking code requirements.

On-site traffic signing/striping should be implemented in conjunction with detailed construction plans for the project site.

Circulation within the parking areas allow for relatively free flow of vehicular traffic with no constrictions.

C. Drive-Thru Analysis

This analysis was conducted to ascertain if the proposed drive-thru's contain sufficient vehicular stacking distance to accommodate the projected queues without blocking the internal drive aisles. Kunzman Associates, Inc. staff has previously conducted surveys of existing queues at fast-food restaurants w/drive-thru's in order to determine the average adequate stacking length. The peak periods of drive-thru utilization were determined to be on Friday/Saturday from 7:00 AM to 9:00 AM, 11:00 AM to 1:00 PM, and 5:00 PM to 7:00 PM. The drive-thru queues were observed continuously during the peak periods and the peak queue length at any given moment was noted for each 15 minute interval. The drive-thru surveys are shown in Tables 16 and 17. Based upon the drive-thru surveys, sufficient stacking distance is provided for the proposed drive-thru's and the project provides adequate on-site circulation to accommodate the queuing of drive-thru vehicles. In addition, Figure 18 shows the drive-thru queues in graphical format.

D. Roadway Improvements

1. On-Site

Site-specific circulation and access recommendations are depicted on Figure 19.

Construct Washington Street from Avenue 50 to the south project boundary at its ultimate half-section width as a Major Arterial (128 foot right-of-way) including sidewalk and parkway improvements in conjunction with development.

Construct Avenue 50 from Washington Street to the east project boundary at its ultimate half-section width as a Primary Arterial (108 foot right-of-way) including sidewalk and parkway improvements in conjunction with development, as necessary. On-site traffic signing/striping should be implemented in conjunction with detailed construction plans for the project site.

Sight distance at the project accesses shall comply with standard California Department of Transportation/City of La Quinta sight distance standards. The final grading, landscaping, and street improvement plans shall demonstrate that sight distance standards are met. Such plans must be reviewed by the City and approved as consistent with this measure prior to issue of grading permits.

2. Off-Site

Project Driveway/Avenue 50 - Provide a minimum 150 foot left turn lane with a minimum 150 foot transition length.

A deceleration lane and bike lane will be provided on Washington Street from CVWD property to the south to the proposed project driveway.

A deceleration lane and bike lane will be provided on Avenue 50 from the throat of the Washington Street/Avenue 50 intersection to the proposed project driveway.

As is the case for any roadway design, the City of La Quinta should periodically review traffic operations in the vicinity of the project once the project is constructed to assure that the traffic operations are satisfactory.

3. Phasing

For the purposes of this traffic impact analysis, it is assumed that the project will be implemented in one phase and no additional phased improvements will be necessary.

Table 16

Drive-Thru Vehicle Queue Survey for an Average Friday

Time Period	Number of Vehicles in Drive-Thru								
	Jurisdiction								Average
	Bell Gardens[1]	Brea[2]	Buena Park[3]	Fullerton[4]	Norwalk[5]	Orange[6]	San Diego[7]	Yorba Linda[8]	
7:00 AM - 7:15 AM	1	6	3	3	3	4	5	4	4
7:15 AM - 7:30 AM	2	3	7	4	3	7	5	7	5
7:30 AM - 7:45 AM	6	4	5	6	10	10	6	4	6
7:45 AM - 8:00 AM	7	2	6	6	10	9	3	2	6
8:00 AM - 8:15 AM	6	5	4	5	12	4	5	5	6
8:15 AM - 8:30 AM	3	3	8	5	12	11	5	3	6
8:30 AM - 8:45 AM[8]	6	7	5	7	8	8	5	6	7
8:45 AM - 9:00 AM	5	6	6	6	5	7	2	8	6
11:00 AM - 11:15 AM	3	5	7	0	2	1	5	1	3
11:15 AM - 11:30 AM	6	9	4	9	5	4	5	2	6
11:30 AM - 11:45 AM	7	9	2	4	6	2	2	3	4
11:45 AM - 12:00 NOON	6	9	5	3	6	3	2	6	5
12:00 NOON - 12:15 PM	6	8	7	2	2	4	5	11	6
12:15 PM - 12:30 PM	0	9	6	5	3	6	7	5	5
12:30 PM - 12:45 PM	6	6	8	3	0	1	1	5	4
12:45 PM - 1:00 PM	7	8	8	3	3	4	5	7	6
5:00 PM - 5:15 PM	8	3	0	5	6	9	0	9	5
5:15 PM - 5:30 PM	7	0	0	4	0	5	1	5	3
5:30 PM - 5:45 PM	7	5	1	0	6	5	4	3	4
5:45 PM - 6:00 PM	2	2	3	0	6	5	7	4	4
6:00 PM - 6:15 PM	6	3	5	4	3	1	4	3	4
6:15 PM - 6:30 PM	5	1	4	6	6	10	2	3	5
6:30 PM - 6:45 PM	1	4	10	2	9	4	1	5	5
6:45 PM - 7:00 PM	3	5	0	5	3	5	5	5	4

[1] Survey completed at 5725 Florence Avenue, Bell Gardens (July 24, 2015).

[2] Survey completed at 825 East Imperial Highway, Brea (July 22, 2011).

[3] Survey completed at 7050 Knott Avenue, Buena Park (July 17, 2015).

[4] Survey completed at 1341 Brookhurst Street, Fullerton (August 17, 2012).

[5] Survey completed at 11053 Rosecrans Avenue, Norwalk (January 17, 2014).

[6] Survey completed at 4200 East Chapman Avenue, Orange (September 5, 2014)

[7] Survey completed at 1624 Rosecrans Street, San Diego (February 7, 2014).

[8] Survey completed at 18515 Yorba Linda Boulevard, Yorba Linda (January 24, 2014).

[9] Peak vehicle queue.

Table 17

Drive-Thru Vehicle Queue Surveys for an Average Saturday

Time Period	Number of Vehicles in Drive-Thru								
	Jurisdiction								Average
	Bell Gardens[1]	Brea[2]	Buena Park[3]	Fullerton[4]	Norwalk[5]	Orange[6]	San Diego[7]	Yorba Linda[8]	
7:00 AM - 7:15 AM	6	0	9	3	8	2	4	3	4
7:15 AM - 7:30 AM	6	5	9	6	3	2	4	5	5
7:30 AM - 7:45 AM[8]	6	5	10	7	7	8	5	4	7
7:45 AM - 8:00 AM	4	2	11	2	9	6	5	10	6
8:00 AM - 8:15 AM	7	5	4	6	11	7	4	5	6
8:15 AM - 8:30 AM	4	4	2	7	8	8	2	4	5
8:30 AM - 8:45 AM	5	5	2	1	12	8	1	7	5
8:45 AM - 9:00 AM	9	1	4	4	8	7	4	7	6
11:00 AM - 11:15 AM	3	3	5	8	10	6	6	5	6
11:15 AM - 11:30 AM	8	1	3	10	10	5	5	3	6
11:30 AM - 11:45 AM	7	2	1	2	2	1	2	6	3
11:45 AM - 12:00 NOON	6	3	5	2	5	3	4	6	4
12:00 NOON - 12:15 PM	3	8	6	6	2	9	6	5	6
12:15 PM - 12:30 PM	6	3	4	7	4	3	4	7	5
12:30 PM - 12:45 PM	4	4	6	5	12	4	5	7	6
12:45 PM - 1:00 PM	6	5	6	4	2	10	3	6	5
5:00 PM - 5:15 PM	0	3	6	5	2	10	5	5	5
5:15 PM - 5:30 PM	1	5	3	3	3	4	2	8	4
5:30 PM - 5:45 PM	3	2	5	2	3	2	3	5	3
5:45 PM - 6:00 PM	3	1	3	5	9	1	1	3	3
6:00 PM - 6:15 PM	5	3	2	4	6	3	2	1	3
6:15 PM - 6:30 PM	1	4	5	5	3	3	1	7	4
6:30 PM - 6:45 PM	1	4	1	8	3	1	2	4	3
6:45 PM - 7:00 PM	2	1	2	1	7	4	4	4	3

[1] Survey completed at 5725 Florence Avenue, Bell Gardens (July 25, 2015).

[2] Survey completed at 825 East Imperial Highway, Brea (July 23, 2011).

[3] Survey completed at 7050 Knott Avenue, Buena Park (July 18, 2015).

[4] Survey completed at 1341 Brookhurst Street, Fullerton (August 18, 2012).

[5] Survey completed at 11053 Rosecrans Avenue, Norwalk (January 18, 2014).

[6] Survey completed at 4200 East Chapman Avenue, Orange (September 6, 2014)

[7] Survey completed at 1624 Rosecrans Street, San Diego (February 8, 2014).

[8] Survey completed at 18515 Yorba Linda Boulevard, Yorba Linda (January 25, 2014).

[9] Peak vehicle queue.

Figure 18
Drive-Thru Vehicle Queue Summary

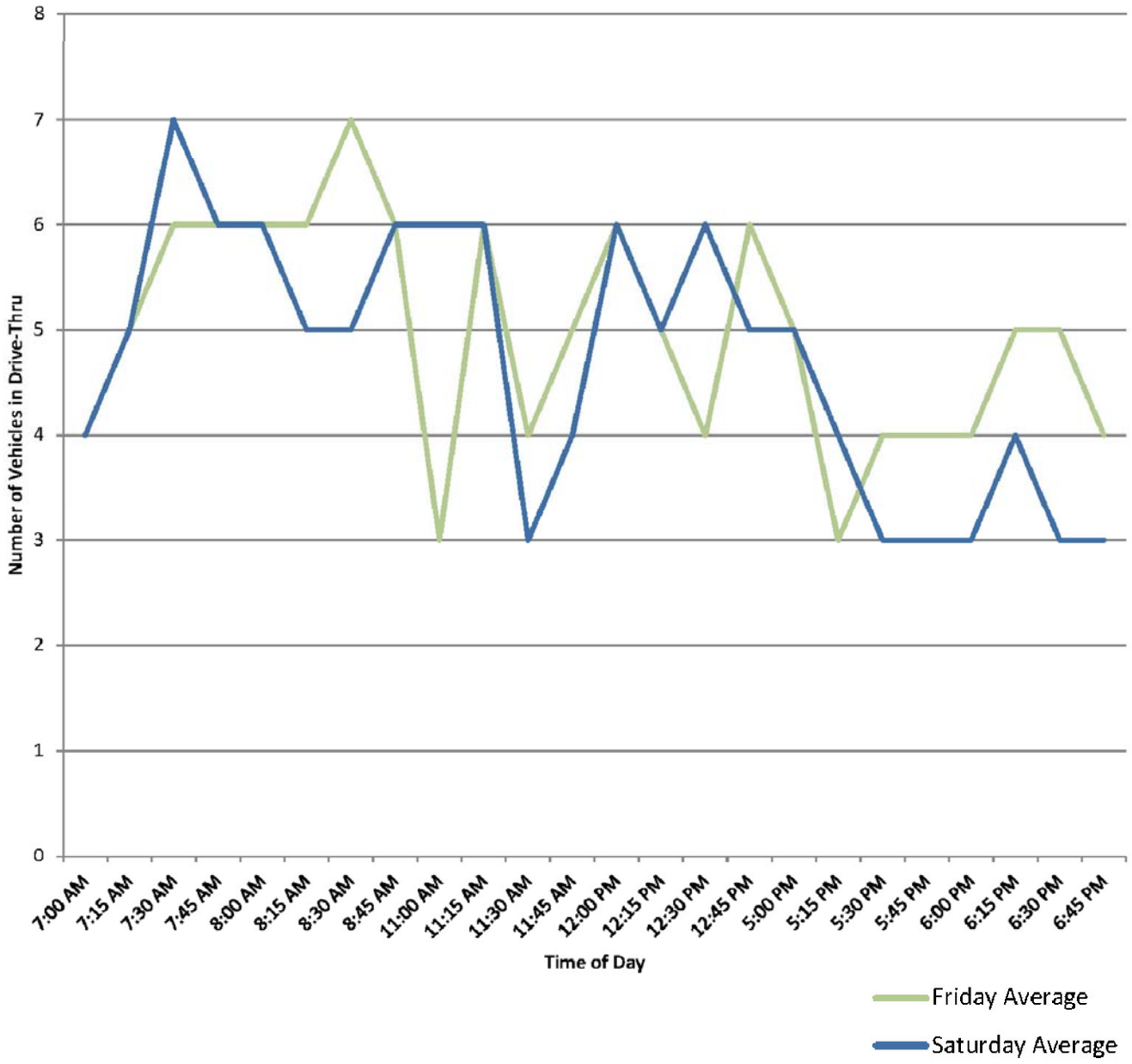


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Figure 19
Circulation Recommendations

Construct Avenue 50 from Washington Street to the east project boundary at its ultimate half-section width as a Primary Arterial (108 foot right-of-way) including sidewalk and parkway improvements in conjunction with development, as necessary.

A deceleration lane and bike lane will be provided on Avenue 50 from the throat of the Washington Street/Avenue 50 intersection to the proposed project driveway.

A deceleration lane and bike lane will be provided on Washington Street from CVWD property to the south to the proposed project driveway.

Construct Washington Street from Avenue 50 to the south project boundary at its ultimate half-section width as a Major Arterial (128 foot right-of-way) including sidewalk and parkway improvements in conjunction with development.

On-site traffic signing/striping should be implemented in conjunction with detailed construction plans for the project site.

Sight distance at the project accesses shall comply with standard California Department of Transportation/City of La Quinta sight distance standards. The final grading, landscaping, and street improvement plans shall demonstrate that sight distance standards are met. Such plans must be reviewed by the City and approved as consistent with this measure prior to issue of grading permits.

Sufficient on-site parking should be provided to meet the City of La Quinta parking code requirements.

As is the case for any roadway design, the City of La Quinta should periodically review traffic operations in the vicinity of the project once the project is constructed to assure that the traffic operations are satisfactory.

Legend

STOP = Stop Sign

= Right Turns In/Out and Left Turns In Only Access Driveway

= Right Turns In/Out Only Access Driveway

150' = Minimum Left Turn Storage Length

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APPENDICES

Appendix A – Glossary of Transportation Terms

Appendix B – Traffic Count Worksheets

Appendix C – Explanation and Calculation of Intersection Delay

Appendix D - City-Wide Cumulative Project Summary Report

APPENDIX A

Glossary of Transportation Terms

GLOSSARY OF TRANSPORTATION TERMS

COMMON ABBREVIATIONS

AC:	Acres
ADT:	Average Daily Traffic
Caltrans:	California Department of Transportation
DU:	Dwelling Unit
ICU:	Intersection Capacity Utilization
LOS:	Level of Service
TSF:	Thousand Square Feet
V/C:	Volume/Capacity
VMT:	Vehicle Miles Traveled

TERMS

AVERAGE DAILY TRAFFIC: The total volume during a year divided by the number of days in a year. Usually only weekdays are included.

BANDWIDTH: The number of seconds of green time available for through traffic in a signal progression.

BOTTLENECK: A constriction along a travelway that limits the amount of traffic that can proceed downstream from its location.

CAPACITY: The maximum number of vehicles that can be reasonably expected to pass over a given section of a lane or a roadway in a given time period.

CHANNELIZATION: The separation or regulation of conflicting traffic movements into definite paths of travel by the use of pavement markings, raised islands, or other suitable means to facilitate the safe and orderly movements of both vehicles and pedestrians.

CLEARANCE INTERVAL: Nearly same as yellow time. If there is an all red interval after the end of a yellow, then that is also added into the clearance interval.

CORDON: An imaginary line around an area across which vehicles, persons, or other items are counted (in and out).

CYCLE LENGTH: The time period in seconds required for one complete signal cycle.

CUL-DE-SAC STREET: A local street open at one end only, and with special provisions for turning around.

DAILY CAPACITY: The daily volume of traffic that will result in a volume during the peak hour equal to the capacity of the roadway.

DELAY: The time consumed while traffic is impeded in its movement by some element over which it has no control, usually expressed in seconds per vehicle.

DEMAND RESPONSIVE SIGNAL: Same as traffic-actuated signal.

DENSITY: The number of vehicles occupying in a unit length of the through traffic lanes of a roadway at any given instant. Usually expressed in vehicles per mile.

DETECTOR: A device that responds to a physical stimulus and transmits a resulting impulse to the signal controller.

DESIGN SPEED: A speed selected for purposes of design. Features of a highway, such as curvature, superelevation, and sight distance (upon which the safe operation of vehicles is dependent) are correlated to design speed.

DIRECTIONAL SPLIT: The percent of traffic in the peak direction at any point in time.

DIVERSION: The rerouting of peak hour traffic to avoid congestion.

FORCED FLOW: Opposite of free flow.

FREE FLOW: Volumes are well below capacity. Vehicles can maneuver freely and travel is unimpeded by other traffic.

GAP: Time or distance between successive vehicles in a traffic stream, rear bumper to front bumper.

HEADWAY: Time or distance spacing between successive vehicles in a traffic stream, front bumper to front bumper.

INTERCONNECTED SIGNAL SYSTEM: A number of intersections that are connected to achieve signal progression.

LEVEL OF SERVICE: A qualitative measure of a number of factors, which include speed and travel time, traffic interruptions, freedom to maneuver, safety, driving comfort and convenience, and operating costs.

LOOP DETECTOR: A vehicle detector consisting of a loop of wire embedded in the roadway, energized by alternating current and producing an output circuit closure when passed over by a vehicle.

MINIMUM ACCEPTABLE GAP: Smallest time headway between successive vehicles in a traffic stream into which another vehicle is willing and able to cross or merge.

MULTI-MODAL: More than one mode; such as automobile, bus transit, rail rapid transit, and bicycle transportation modes.

OFFSET: The time interval in seconds between the beginning of green at one intersection and the beginning of green at an adjacent intersection.

PLATOON: A closely grouped component of traffic that is composed of several vehicles moving, or standing ready to move, with clear spaces ahead and behind.

ORIGIN-DESTINATION SURVEY: A survey to determine the point of origin and the point of destination for a given vehicle trip.

PASSENGER CAR EQUIVALENTS (PCE): One car is one Passenger Car Equivalent. A truck is equal to 2 or 3 Passenger Car Equivalents in that a truck requires longer to start, goes slower, and accelerates slower. Loaded trucks have a higher Passenger Car Equivalent than empty trucks.

PEAK HOUR: The 60 consecutive minutes with the highest number of vehicles.

PRETIMED SIGNAL: A type of traffic signal that directs traffic to stop and go on a predetermined time schedule without regard to traffic conditions. Also, fixed time signal.

PROGRESSION: A term used to describe the progressive movement of traffic through several signalized intersections.

SCREEN-LINE: An imaginary line or physical feature across which all trips are counted, normally to verify the validity of mathematical traffic models.

SIGNAL CYCLE: The time period in seconds required for one complete sequence of signal indications.

SIGNAL PHASE: The part of the signal cycle allocated to one or more traffic movements.

STARTING DELAY: The delay experienced in initiating the movement of queued traffic from a stop to an average running speed through a signalized intersection.

TRAFFIC-ACTUATED SIGNAL: A type of traffic signal that directs traffic to stop and go in accordance with the demands of traffic, as registered by the actuation of detectors.

TRIP: The movement of a person or vehicle from one location (origin) to another (destination). For example, from home to store to home is two trips, not one.

TRIP-END: One end of a trip at either the origin or destination; i.e. each trip has two trip-ends. A trip-end occurs when a person, object, or message is transferred to or from a vehicle.

TRIP GENERATION RATE: The quantity of trips produced and/or attracted by a specific land use stated in terms of units such as per dwelling, per acre, and per 1,000 square feet of floor space.

TRUCK: A vehicle having dual tires on one or more axles, or having more than two axles.

UNBALANCED FLOW: Heavier traffic flow in one direction than the other. On a daily basis, most facilities have balanced flow. During the peak hours, flow is seldom balanced in an urban area.

VEHICLE MILES OF TRAVEL: A measure of the amount of usage of a section of highway, obtained by multiplying the average daily traffic by length of facility in miles.

APPENDIX B

Traffic Count Worksheets

Counts Unlimited
PO Box 1178
Corona, CA 92878
(951) 268-6268

City of La Quinta
N/S: Eisenhower Drive
E/W: Avenue 50
Weather: Clear

File Name : LQAEI50PM
Site Code : 07515000
Start Date : 8/6/2015
Page No : 1

Groups Printed- Total Volume

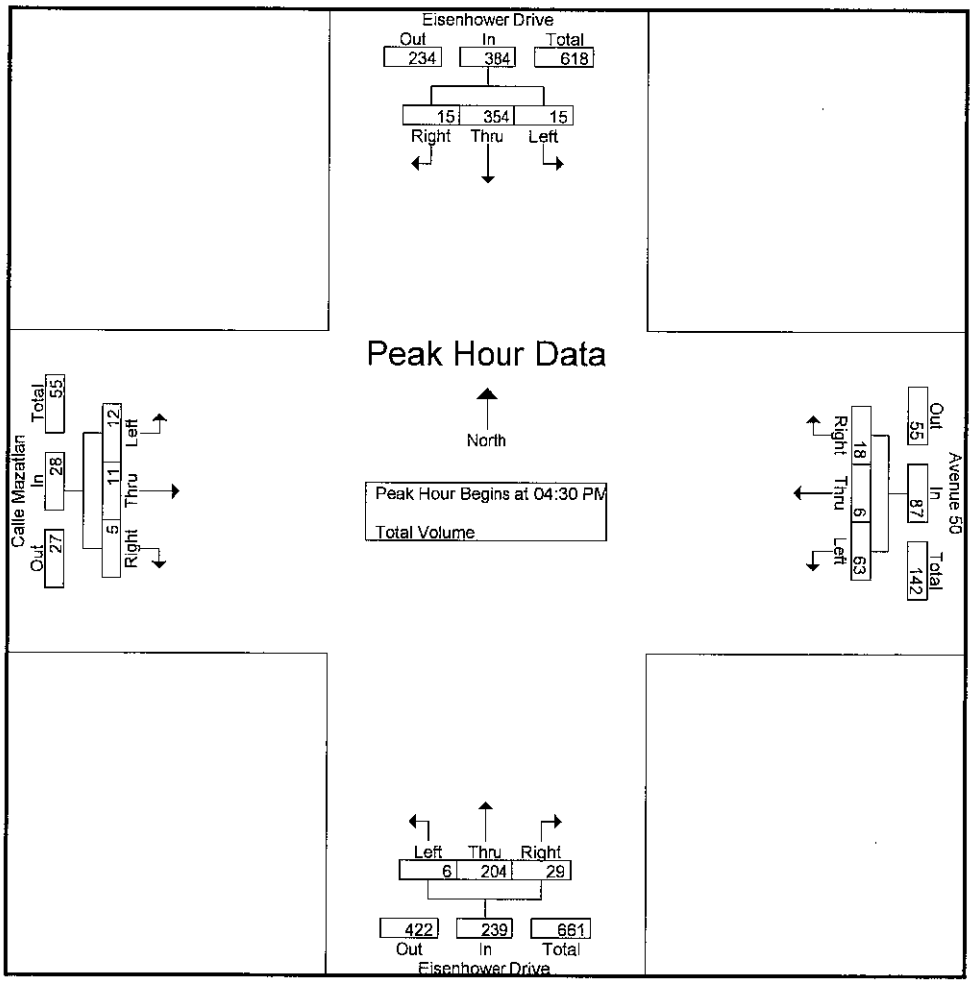
	Eisenhower Drive Southbound				Avenue 50 Westbound				Eisenhower Drive Northbound				Calle Mazatlan Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
02:30 PM	5	75	9	89	13	2	3	18	4	61	8	73	6	3	3	12	192
02:45 PM	2	79	5	86	7	3	6	16	1	45	8	54	6	4	2	12	168
Total	7	154	14	175	20	5	9	34	5	106	16	127	12	7	5	24	360
03:00 PM	3	79	4	86	11	0	5	16	1	54	4	59	8	5	0	13	174
03:15 PM	3	63	5	71	15	2	3	20	1	85	7	93	2	2	3	7	191
03:30 PM	5	69	4	78	10	1	2	13	3	61	9	73	4	0	2	6	170
03:45 PM	3	81	3	87	9	1	2	12	0	54	7	61	1	0	0	1	161
Total	14	292	16	322	45	4	12	61	5	254	27	286	15	7	5	27	696
04:00 PM	3	82	4	89	8	2	7	17	0	51	8	59	3	1	0	4	169
04:15 PM	1	83	2	86	14	1	2	17	0	53	5	58	6	0	2	8	169
04:30 PM	4	99	4	107	10	1	6	17	3	49	7	59	2	2	0	4	187
04:45 PM	2	73	6	81	15	4	4	23	1	49	5	55	4	4	2	10	169
Total	10	337	16	363	47	8	19	74	4	202	25	231	15	7	4	26	694
05:00 PM	7	81	3	91	16	0	3	19	2	52	9	63	4	4	1	9	182
05:15 PM	2	101	2	105	22	1	5	28	0	54	8	62	2	1	2	5	200
Grand Total	40	965	51	1056	150	18	48	216	16	668	85	769	48	26	17	91	2132
Apprch %	3.8	91.4	4.8		69.4	8.3	22.2		2.1	86.9	11.1		52.7	28.6	18.7		
Total %	1.9	45.3	2.4	49.5	7	0.8	2.3	10.1	0.8	31.3	4	36.1	2.3	1.2	0.8	4.3	

	Eisenhower Drive Southbound				Avenue 50 Westbound				Eisenhower Drive Northbound				Calle Mazatlan Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 02:30 PM to 05:15 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 04:30 PM																	
04:30 PM	4	99	4	**107**	10	1	**6**	17	**3**	49	7	59	2	2	0	4	187
04:45 PM	2	73	**6**	81	15	**4**	4	23	1	49	5	55	**4**	**4**	**2**	**10**	169
05:00 PM	**7**	81	3	91	16	0	3	19	2	52	**9**	**63**	4	4	1	9	182
05:15 PM	2	**101**	2	105	**22**	1	5	**28**	0	**54**	8	62	2	1	2	5	**200**
Total Volume	15	354	15	384	63	6	18	87	6	204	29	239	12	11	5	28	738
% App. Total	3.9	92.2	3.9		72.4	6.9	20.7		2.5	85.4	12.1		42.9	39.3	17.9		
PHF	.536	.876	.625	.897	.716	.375	.750	.777	.500	.944	.806	.948	.750	.688	.625	.700	.923

Counts Unlimited
PO Box 1178
Corona, CA 92878
(951) 268-6268

City of La Quinta
N/S: Eisenhower Drive
E/W: Avenue 50
Weather: Clear

File Name : LQAEI50PM
Site Code : 07515000
Start Date : 8/6/2015
Page No : 2



Peak Hour Analysis From 02:30 PM to 05:15 PM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	04:30 PM				04:30 PM				03:00 PM				02:30 PM			
+0 mins.	4	99	4	**107**	10	1	**6**	17	1	54	4	59	6	3	**3**	12
+15 mins.	2	73	**6**	81	15	**4**	4	23	1	**85**	7	**93**	6	4	2	12
+30 mins.	**7**	81	3	91	16	0	3	19	**3**	61	**9**	73	**8**	**5**	0	**13**
+45 mins.	2	**101**	2	105	**22**	1	5	**28**	0	54	7	61	2	2	3	7
Total Volume	15	354	15	384	63	6	18	87	5	254	27	286	22	14	8	44
% App. Total	3.9	92.2	3.9		72.4	6.9	20.7		1.7	88.8	9.4		50	31.8	18.2	
PHF	.536	.876	.625	.897	.716	.375	.750	.777	.417	.747	.750	.769	.688	.700	.667	.846

Counts Unlimited
PO Box 1178
Corona, CA 92878
(951) 268-6268

City of La Quinta
N/S: Washington Street
E/W: Eisenhower Drive
Weather: Clear

File Name : LQAWAEIPM
Site Code : 07515000
Start Date : 8/6/2015
Page No : 1

Groups Printed- Total Volume

	Washington Street Southbound				Rancho La Quinta Drive Westbound				Washington Street Northbound				Eisenhower Drive Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
02:30 PM	6	191	91	288	1	1	2	4	4	170	1	175	86	0	2	88	555
02:45 PM	8	189	105	302	1	0	7	8	1	151	1	153	65	0	5	70	533
Total	14	380	196	590	2	1	9	12	5	321	2	328	151	0	7	158	1088
03:00 PM	5	185	106	296	2	0	1	3	2	160	1	163	88	0	2	90	552
03:15 PM	9	215	90	314	0	0	7	7	0	130	4	134	100	1	3	104	559
03:30 PM	6	213	100	319	0	2	3	5	1	168	2	171	78	0	3	81	576
03:45 PM	5	229	107	341	1	0	3	4	5	134	1	140	84	1	1	86	571
Total	25	842	403	1270	3	2	14	19	8	592	8	608	350	2	9	361	2258
04:00 PM	4	205	98	307	1	0	5	6	1	142	0	143	85	1	5	91	547
04:15 PM	1	234	122	357	1	0	2	3	3	145	3	151	66	0	3	69	580
04:30 PM	10	219	123	352	1	1	0	2	3	168	1	172	70	0	2	72	598
04:45 PM	2	228	103	333	0	0	1	1	1	136	1	138	74	0	1	75	547
Total	17	886	446	1349	3	1	8	12	8	591	5	604	295	1	11	307	2272
05:00 PM	6	218	91	315	1	1	2	4	0	157	1	158	76	2	0	78	555
05:15 PM	6	279	133	418	2	0	1	3	5	131	0	136	79	0	1	80	637
Grand Total	68	2605	1269	3942	11	5	34	50	26	1792	16	1834	951	5	28	984	6810
Apprch %	1.7	66.1	32.2		22	10	68		1.4	97.7	0.9		96.6	0.5	2.8		
Total %	1	38.3	18.6	57.9	0.2	0.1	0.5	0.7	0.4	26.3	0.2	26.9	14	0.1	0.4	14.4	

	Washington Street Southbound				Rancho La Quinta Drive Westbound				Washington Street Northbound				Eisenhower Drive Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 02:30 PM to 05:15 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 04:30 PM																	
04:30 PM	**10**	219	123	352	1	**1**	0	2	3	**168**	**1**	**172**	70	0	**2**	72	598
04:45 PM	2	228	103	333	0	0	1	1	1	136	1	138	74	0	1	75	547
05:00 PM	6	218	91	315	1	1	**2**	**4**	0	157	1	158	76	**2**	0	78	555
05:15 PM	6	**279**	**133**	**418**	**2**	0	1	3	**5**	131	0	136	**79**	0	1	**80**	**637**
Total Volume	24	944	450	1418	4	2	4	10	9	592	3	604	299	2	4	305	2337
% App. Total	1.7	66.6	31.7		40	20	40		1.5	98	0.5		98	0.7	1.3		
PHF	.600	.846	.846	.848	.500	.500	.500	.625	.450	.881	.750	.878	.946	.250	.500	.953	.917

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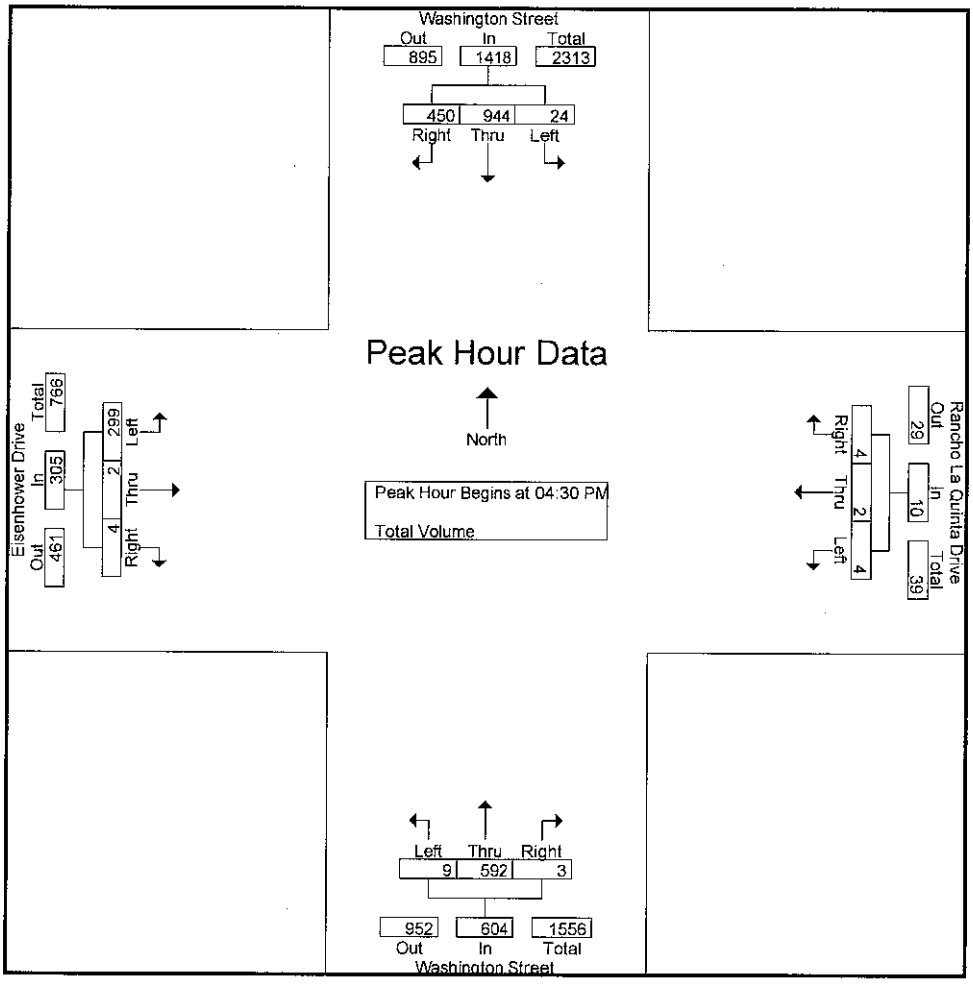
City of La Quinta
N/S: Washington Street
E/W: Eisenhower Drive
Weather: Clear

File Name : LQAWAEIPM
Site Code : 07515000
Start Date : 8/6/2015
Page No : 2



Peak Hour Analysis From 02:30 PM to 05:15 PM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	04:30 PM				02:45 PM				02:30 PM				03:15 PM			
+0 mins.	**10**	219	123	352	1	0	**7**	**8**	**4**	**170**	1	**175**	**100**	**1**	3	**104**
+15 mins.	2	228	103	333	**2**	0	1	3	1	151	1	153	78	0	3	81
+30 mins.	6	218	91	315	0	0	7	7	2	160	1	163	84	1	1	86
+45 mins.	6	**279**	**133**	**418**	0	**2**	3	5	0	130	**4**	134	85	1	**5**	91
Total Volume	24	944	450	1418	3	2	18	23	7	611	7	625	347	3	12	362
% App. Total	1.7	66.6	31.7		13	8.7	78.3		1.1	97.8	1.1		95.9	0.8	3.3	
PHF	.600	.846	.846	.848	.375	.250	.643	.719	.438	.899	.438	.893	.868	.750	.600	.870

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City of La Quinta
N/S: Washington Street
E/W: Avenue 50
Weather: Clear

File Name : LQAWA50PM
Site Code : 07515000
Start Date : 8/6/2015
Page No : 1

Groups Printed- Total Volume

	Washington Street Southbound				Avenue 50 Westbound				Washington Street Northbound				Avenue 50 Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
02:30 PM	29	142	8	179	10	13	25	48	3	140	6	149	10	16	2	28	404
02:45 PM	22	151	8	181	16	10	30	56	0	122	11	133	6	15	2	23	393
Total	51	293	16	360	26	23	55	104	3	262	17	282	16	31	4	51	797
03:00 PM	26	155	7	188	9	8	25	42	1	122	11	134	5	12	0	17	381
03:15 PM	23	172	13	208	15	14	21	50	1	117	7	125	4	13	1	18	401
03:30 PM	30	177	9	216	17	7	37	61	0	128	13	141	4	13	2	19	437
03:45 PM	35	173	11	219	13	6	18	37	2	109	21	132	9	3	2	14	402
Total	114	677	40	831	54	35	101	190	4	476	52	532	22	41	5	68	1621
04:00 PM	22	166	7	195	12	10	29	51	1	114	14	129	7	10	3	20	395
04:15 PM	29	197	7	233	18	15	26	59	1	119	7	127	5	12	2	19	438
04:30 PM	27	165	13	205	15	8	26	49	1	124	11	136	9	7	1	17	407
04:45 PM	29	173	12	214	16	13	23	52	2	107	8	117	3	11	0	14	397
Total	107	701	39	847	61	46	104	211	5	464	40	509	24	40	6	70	1637
05:00 PM	26	171	17	214	17	6	14	37	2	137	11	150	7	16	0	23	424
05:15 PM	29	216	12	257	14	22	23	59	0	107	7	114	6	10	2	18	448
Grand Total	327	2058	124	2509	172	132	297	601	14	1446	127	1587	75	138	17	230	4927
Apprch %	13	82	4.9		28.6	22	49.4		0.9	91.1	8		32.6	60	7.4		
Total %	6.6	41.8	2.5	50.9	3.5	2.7	6	12.2	0.3	29.3	2.6	32.2	1.5	2.8	0.3	4.7	

	Washington Street Southbound				Avenue 50 Westbound				Washington Street Northbound				Avenue 50 Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 02:30 PM to 05:15 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 04:30 PM																	
04:30 PM	27	165	13	205	15	8	**26**	49	1	124	**11**	136	**9**	7	1	17	407
04:45 PM	**29**	173	12	214	16	13	23	52	**2**	107	8	117	3	11	0	14	397
05:00 PM	26	171	**17**	214	**17**	6	14	37	2	**137**	11	**150**	7	**16**	0	**23**	424
05:15 PM	29	**216**	12	**257**	14	**22**	23	**59**	0	107	7	114	6	10	**2**	18	**448**
Total Volume	111	725	54	890	62	49	86	197	5	475	37	517	25	44	3	72	1676
% App. Total	12.5	81.5	6.1		31.5	24.9	43.7		1	91.9	7.2		34.7	61.1	4.2		
PHF	.957	.839	.794	.866	.912	.557	.827	.835	.625	.867	.841	.862	.694	.688	.375	.783	.935

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City of La Quinta
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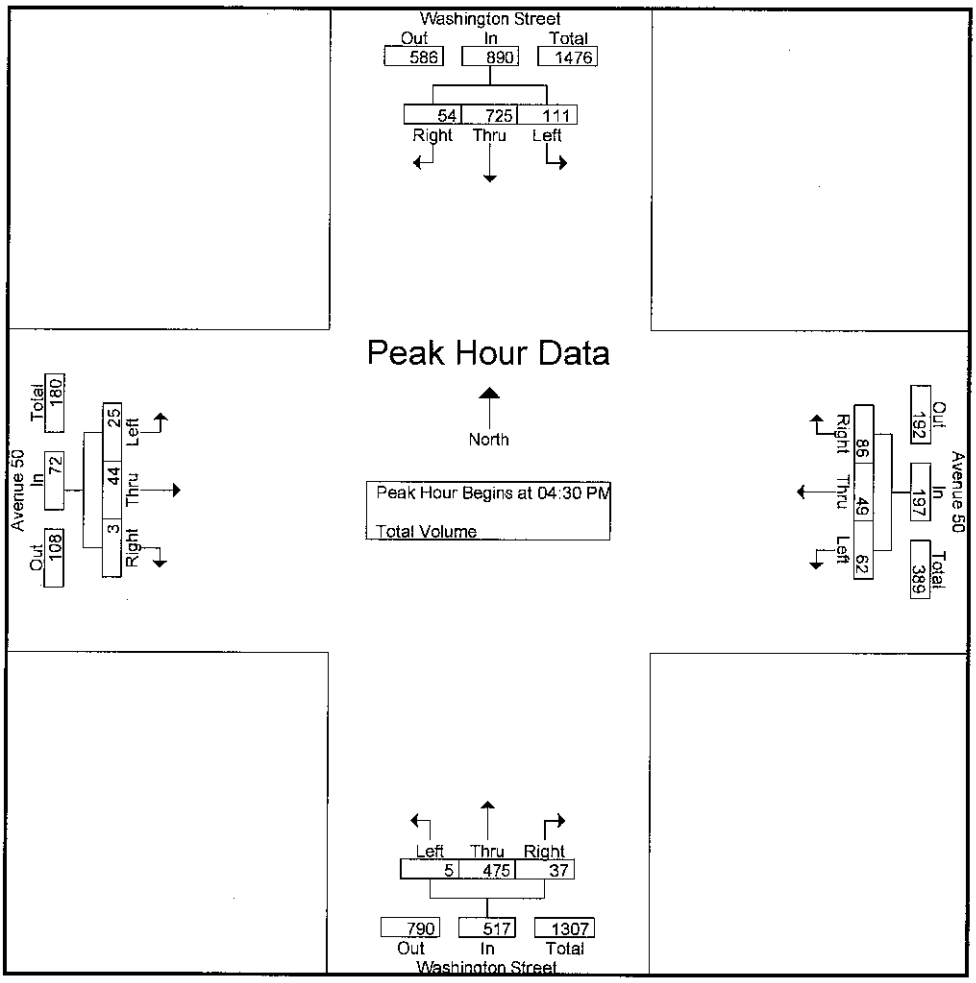
E/W: Avenue 50
Weather: Clear

File Name : LQAWA50PM
Site Code : 07515000
Start Date : 8/6/2015
Page No : 2



Peak Hour Analysis From 02:30 PM to 05:15 PM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	04:30 PM				04:00 PM				02:30 PM				02:30 PM			
+0 mins.	27	165	13	205	12	10	**29**	51	**3**	**140**	6	**149**	**10**	**16**	**2**	**28**
+15 mins.	**29**	173	12	214	**18**	**15**	26	**59**	0	122	**11**	133	6	15	2	23
+30 mins.	26	171	**17**	214	15	8	26	49	1	122	11	134	5	12	0	17
+45 mins.	29	**216**	12	**257**	16	13	23	52	1	117	7	125	4	13	1	18
Total Volume	111	725	54	890	61	46	104	211	5	501	35	541	25	56	5	86
% App. Total	12.5	81.5	6.1		28.9	21.8	49.3		0.9	92.6	6.5		29.1	65.1	5.8	
PHF	.957	.839	.794	.866	.847	.767	.897	.894	.417	.895	.795	.908	.625	.875	.625	.768

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City of La Quinta
N/S: Washington Street
E/W: Calle Tampico
Weather: Clear

File Name : LQAWACAPM
Site Code : 07515000
Start Date : 8/6/2015
Page No : 1

Groups Printed- Total Volume

	Washington Street Southbound				Calle Tampico Westbound				Washington Street Northbound				Calle Tampico Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
02:30 PM	6	81	50	137	3	4	7	14	6	92	3	101	40	12	5	57	309
02:45 PM	10	123	48	181	1	9	7	17	1	60	4	65	62	13	10	85	348
Total	16	204	98	318	4	13	14	31	7	152	7	166	102	25	15	142	657
03:00 PM	4	103	42	149	4	3	5	12	0	64	8	72	56	6	1	63	296
03:15 PM	9	121	55	185	1	5	4	10	6	72	3	81	42	14	9	65	341
03:30 PM	7	120	59	186	4	7	4	15	2	62	6	70	51	15	4	70	341
03:45 PM	10	104	58	172	5	8	3	16	8	71	4	83	51	8	10	69	340
Total	30	448	214	692	14	23	16	53	16	269	21	306	200	43	24	267	1318
04:00 PM	7	118	51	176	4	8	4	16	5	52	0	57	62	14	6	82	331
04:15 PM	4	146	64	214	4	6	5	15	5	66	5	76	48	8	3	59	364
04:30 PM	10	107	51	168	4	8	4	16	3	65	2	70	60	14	4	78	332
04:45 PM	3	115	57	175	4	8	3	15	1	61	9	71	46	6	3	55	316
Total	24	486	223	733	16	30	16	62	14	244	16	274	216	42	16	274	1343
05:00 PM	10	128	46	184	8	5	4	17	4	76	4	84	65	14	3	82	367
05:15 PM	9	157	55	221	8	4	5	17	5	53	2	60	50	5	5	60	358
Grand Total	89	1423	636	2148	50	75	55	180	46	794	50	890	633	129	63	825	4043
Apprch %	4.1	66.2	29.6		27.8	41.7	30.6		5.2	89.2	5.6		76.7	15.6	7.6		
Total %	2.2	35.2	15.7	53.1	1.2	1.9	1.4	4.5	1.1	19.6	1.2	22	15.7	3.2	1.6	20.4	

	Washington Street Southbound				Calle Tampico Westbound				Washington Street Northbound				Calle Tampico Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 02:30 PM to 05:15 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 04:15 PM																	
04:15 PM	4	**146**	**64**	**214**	4	6	**5**	15	**5**	66	5	76	48	8	3	59	364
04:30 PM	**10**	107	51	168	4	**8**	4	16	3	65	2	70	60	**14**	**4**	78	332
04:45 PM	3	115	57	175	4	8	3	15	1	61	**9**	71	46	6	3	55	316
05:00 PM	10	128	46	184	**8**	5	4	**17**	4	**76**	4	**84**	**65**	14	3	**82**	**367**
Total Volume	27	496	218	741	20	27	16	63	13	268	20	301	219	42	13	274	1379
% App. Total	3.6	66.9	29.4		31.7	42.9	25.4		4.3	89	6.6		79.9	15.3	4.7		
PHF	.675	.849	.852	.866	.625	.844	.800	.926	.650	.882	.556	.896	.842	.750	.813	.835	.939

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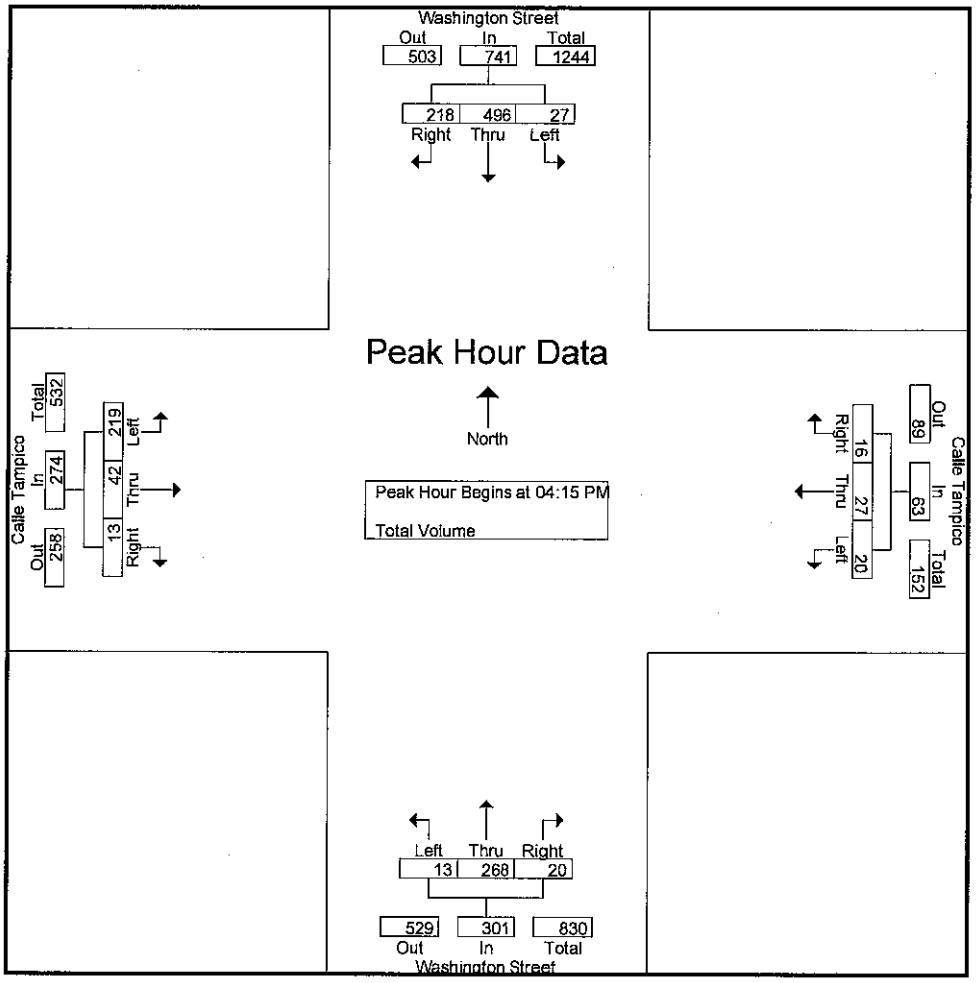
City of La Quinta
N/S: Washington Street
E/W: Calle Tampico
Weather: Clear

File Name : LQAWACAPM
Site Code : 07515000
Start Date : 8/6/2015
Page No : 2



Peak Hour Analysis From 02:30 PM to 05:15 PM - Peak 1 of 1

Peak Hour for Each Approach Begins at:

	03:30 PM				04:30 PM				02:30 PM				03:45 PM			
+0 mins.	7	120	59	186	4	**8**	4	16	**6**	**92**	3	**101**	51	8	**10**	69
+15 mins.	**10**	104	58	172	4	8	3	15	1	60	4	65	**62**	**14**	6	**82**
+30 mins.	7	118	51	176	**8**	5	4	**17**	0	64	**8**	72	48	8	3	59
+45 mins.	4	**146**	**64**	**214**	8	**4**	**5**	17	6	72	3	81	60	14	4	78
Total Volume	28	488	232	748	24	25	16	65	13	288	18	319	221	44	23	288
% App. Total	3.7	65.2	31		36.9	38.5	24.6		4.1	90.3	5.6		76.7	15.3	8	
PHF	.700	.836	.906	.874	.750	.781	.800	.956	.542	.783	.563	.790	.891	.786	.575	.878

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City of La Quinta
N/S: Washington Street
E/W: Avenue 52
Weather: Clear

File Name : LQAWA52PM
Site Code : 07515000
Start Date : 8/6/2015
Page No : 1

Groups Printed- Total Volume

	Washington Street Southbound				Avenue 52 Westbound				Washington Street Northbound				Avenue 52 Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
02:30 PM	28	1	53	82	1	54	40	95	0	2	0	2	53	51	1	105	284
02:45 PM	46	0	82	128	0	52	23	75	0	1	0	1	39	35	0	74	278
Total	74	1	135	210	1	106	63	170	0	3	0	3	92	86	1	179	562
03:00 PM	23	1	69	93	0	64	18	82	0	3	2	5	56	40	0	96	276
03:15 PM	41	4	72	117	0	57	28	85	0	0	1	1	46	42	0	88	291
03:30 PM	45	0	66	111	1	49	25	75	0	4	2	6	43	50	0	93	285
03:45 PM	43	0	75	118	0	52	31	83	1	3	1	5	40	37	1	78	284
Total	152	5	282	439	1	222	102	325	1	10	6	17	185	169	1	355	1136
04:00 PM	35	0	78	113	1	48	25	74	0	0	2	2	36	40	1	77	266
04:15 PM	40	2	96	138	1	52	20	73	0	1	0	1	47	25	0	72	284
04:30 PM	23	3	73	99	0	55	26	81	0	2	0	2	41	44	0	85	267
04:45 PM	30	2	83	115	1	80	21	102	0	0	0	0	44	28	0	72	289
Total	128	7	330	465	3	235	92	330	0	3	2	5	168	137	1	306	1106
05:00 PM	28	2	102	132	0	50	28	78	0	1	0	1	48	40	0	88	299
05:15 PM	45	2	105	152	2	68	25	95	0	3	3	6	32	52	0	84	337
Grand Total	427	17	954	1398	7	681	310	998	1	20	11	32	525	484	3	1012	3440
Apprch %	30.5	1.2	68.2		0.7	68.2	31.1		3.1	62.5	34.4		51.9	47.8	0.3		
Total %	12.4	0.5	27.7	40.6	0.2	19.8	9	29	0	0.6	0.3	0.9	15.3	14.1	0.1	29.4	

	Washington Street Southbound				Avenue 52 Westbound				Washington Street Northbound				Avenue 52 Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 02:30 PM to 05:15 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 04:30 PM																	
04:30 PM	23	**3**	73	99	0	55	26	81	0	2	0	2	41	44	0	85	267
04:45 PM	30	2	83	115	1	**80**	21	**102**	0	0	0	0	44	28	0	72	289
05:00 PM	28	2	102	132	0	50	**28**	78	0	1	0	1	**48**	40	0	**88**	299
05:15 PM	**45**	2	**105**	**152**	**2**	68	25	95	0	**3**	**3**	**6**	32	**52**	0	84	**337**
Total Volume	126	9	363	498	3	253	100	356	0	6	3	9	165	164	0	329	1192
% App. Total	25.3	1.8	72.9		0.8	71.1	28.1		0	66.7	33.3		50.2	49.8	0		
PHF	.700	.750	.864	.819	.375	.791	.893	.873	.000	.500	.250	.375	.859	.788	.000	.935	.884

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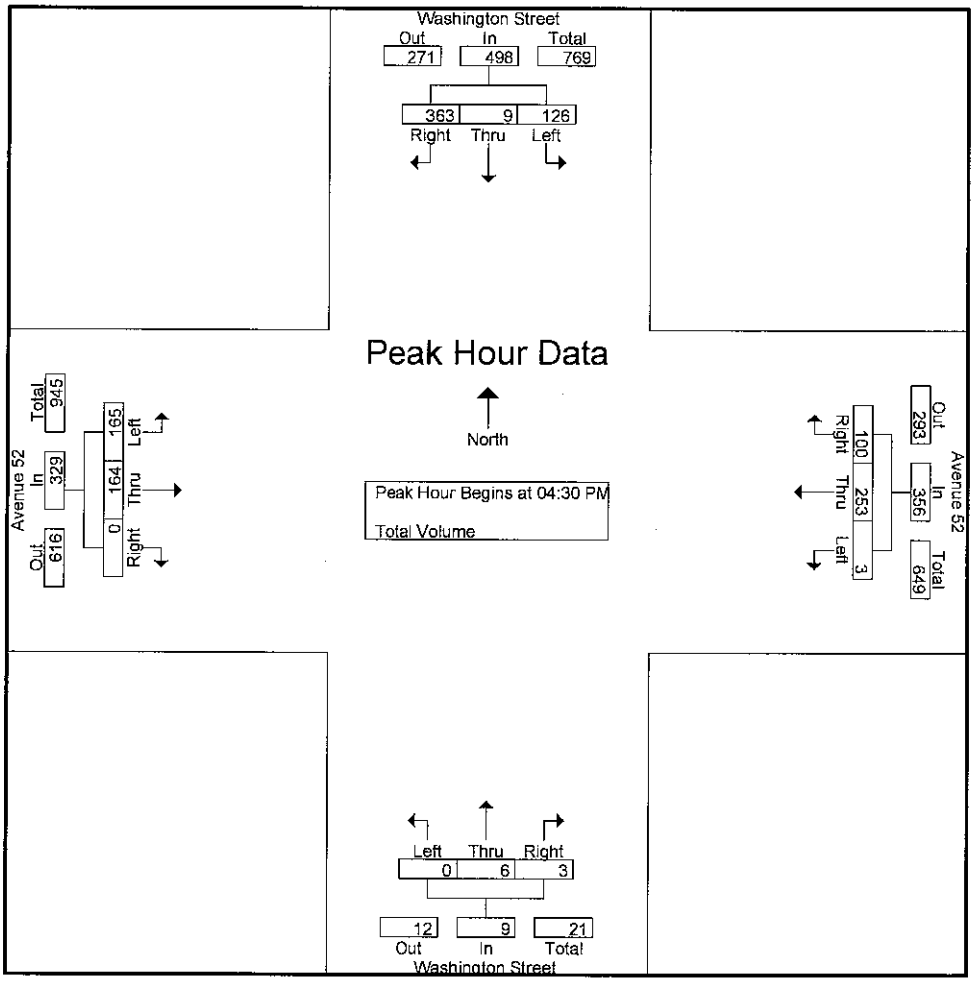
City of La Quinta
N/S: Washington Street
E/W: Avenue 52
Weather: Clear

File Name : LQAWA52PM
Site Code : 07515000
Start Date : 8/6/2015
Page No : 2



Peak Hour Analysis From 02:30 PM to 05:15 PM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	04:30 PM				04:30 PM				03:00 PM				02:30 PM			
+0 mins.	23	**3**	73	99	0	55	26	81	0	3	**2**	5	53	**51**	**1**	**105**
+15 mins.	30	2	83	115	1	**80**	21	**102**	0	0	1	1	39	35	0	74
+30 mins.	28	2	102	132	0	50	**28**	78	0	**4**	2	**6**	**56**	40	0	96
+45 mins.	**45**	2	**105**	**152**	**2**	68	25	95	**1**	3	1	5	46	42	0	88
Total Volume	126	9	363	498	3	253	100	356	1	10	6	17	194	168	1	363
% App. Total	25.3	1.8	72.9		0.8	71.1	28.1		5.9	58.8	35.3		53.4	46.3	0.3	
PHF	.700	.750	.864	.819	.375	.791	.893	.873	.250	.625	.750	.708	.866	.824	.250	.864

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City of La Quinta
N/S: Jefferson Street
E/W: Avenue 50
Weather: Clear

File Name : LQAJE50PM
Site Code : 07515000
Start Date : 8/6/2015
Page No : 1

Groups Printed- Total Volume

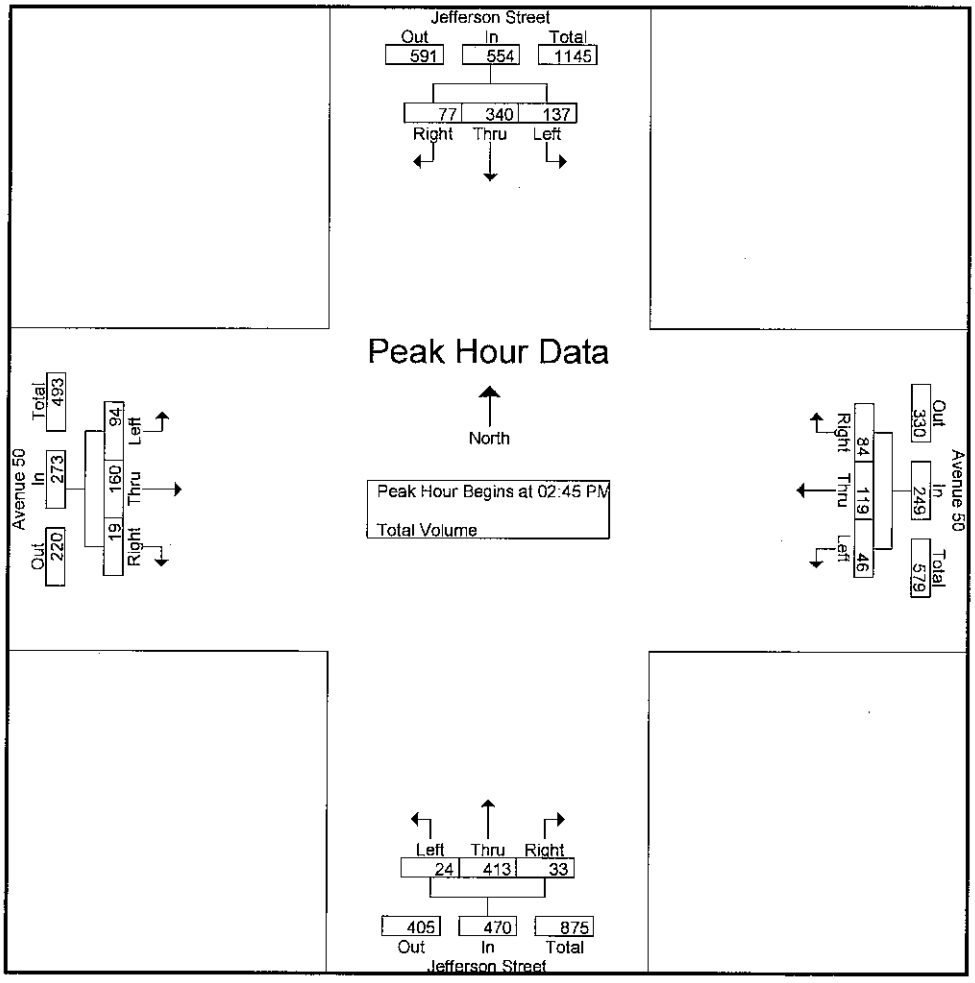
	Jefferson Street Southbound				Avenue 50 Westbound				Jefferson Street Northbound				Avenue 50 Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
02:30 PM	33	81	17	131	18	22	22	62	10	125	12	147	16	46	4	66	406
02:45 PM	27	81	21	129	11	28	25	64	10	115	13	138	23	46	4	73	404
Total	60	162	38	260	29	50	47	126	20	240	25	285	39	92	8	139	810
03:00 PM	39	95	19	153	12	27	22	61	6	100	3	109	22	32	6	60	383
03:15 PM	35	76	19	130	11	30	16	57	6	91	5	102	23	36	4	63	352
03:30 PM	36	88	18	142	12	34	21	67	2	107	12	121	26	46	5	77	407
03:45 PM	33	61	18	112	12	40	21	73	7	78	8	93	15	42	6	63	341
Total	143	320	74	537	47	131	80	258	21	376	28	425	86	156	21	263	1483
04:00 PM	24	53	16	93	19	25	15	59	3	81	14	98	30	35	2	67	317
04:15 PM	23	64	19	106	14	41	27	82	7	67	5	79	17	27	2	46	313
04:30 PM	31	84	23	138	13	28	20	61	5	77	9	91	19	33	4	56	346
04:45 PM	27	61	24	112	16	24	21	61	2	57	6	65	29	30	1	60	298
Total	105	262	82	449	62	118	83	263	17	282	34	333	95	125	9	229	1274
05:00 PM	35	59	25	119	8	31	21	60	3	78	5	86	21	38	5	64	329
05:15 PM	22	81	30	133	18	36	34	88	6	67	7	80	17	32	2	51	352
Grand Total	365	884	249	1498	164	366	265	795	67	1043	99	1209	258	443	45	746	4248
Apprch %	24.4	59	16.6		20.6	46	33.3		5.5	86.3	8.2		34.6	59.4	6		
Total %	8.6	20.8	5.9	35.3	3.9	8.6	6.2	18.7	1.6	24.6	2.3	28.5	6.1	10.4	1.1	17.6	

	Jefferson Street Southbound				Avenue 50 Westbound				Jefferson Street Northbound				Avenue 50 Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 02:30 PM to 05:15 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 02:45 PM																	
02:45 PM	27	81	**21**	129	11	28	**25**	64	**10**	**115**	**13**	**138**	23	**46**	4	73	404
03:00 PM	**39**	**95**	19	**153**	**12**	27	22	61	6	100	3	109	22	32	**6**	60	383
03:15 PM	35	76	19	130	11	30	16	57	6	91	5	102	23	36	4	63	352
03:30 PM	36	88	18	142	12	**34**	21	**67**	2	107	12	121	**26**	46	5	**77**	**407**
Total Volume	137	340	77	554	46	119	84	249	24	413	33	470	94	160	19	273	1546
% App. Total	24.7	61.4	13.9		18.5	47.8	33.7		5.1	87.9	7		34.4	58.6	7		
PHF	.878	.895	.917	.905	.958	.875	.840	.929	.600	.898	.635	.851	.904	.870	.792	.886	.950

Counts Unlimited
PO Box 1178
Corona, CA 92878
(951) 268-6268

City of La Quinta
N/S: Jefferson Street
E/W: Avenue 50
Weather: Clear

File Name : LQAJE50PM
Site Code : 07515000
Start Date : 8/6/2015
Page No : 2



Peak Hour Analysis From 02:30 PM to 05:15 PM - Peak 1 of 1

Peak Hour for Each Approach Begins at:

	02:45 PM				03:30 PM				02:30 PM				02:45 PM			
+0 mins.	27	81	**21**	129	12	34	21	67	**10**	**125**	12	**147**	23	**46**	4	73
+15 mins.	**39**	**95**	19	**153**	12	40	21	73	10	115	**13**	138	22	32	**6**	60
+30 mins.	35	76	19	130	**19**	25	15	59	6	100	3	109	23	36	4	63
+45 mins.	36	88	18	142	14	**41**	**27**	**82**	6	91	5	102	**26**	46	5	**77**
Total Volume	137	340	77	554	57	140	84	281	32	431	33	496	94	160	19	273
% App. Total	24.7	61.4	13.9		20.3	49.8	29.9		6.5	86.9	6.7		34.4	58.6	7	
PHF	.878	.895	.917	.905	.750	.854	.778	.857	.800	.862	.635	.844	.904	.870	.792	.886

APPENDIX C

Explanation and Calculation of Intersection Delay

EXPLANATION AND CALCULATION OF INTERSECTION LEVEL OF SERVICE USING DELAY METHODOLOGY

The levels of service at the unsignalized and signalized intersections are calculated using the delay methodology in the Highway Capacity Manual. This methodology views an intersection as consisting of several lane groups. A lane group is a set of lanes serving a movement. If there are two northbound left turn lanes, then the lane group serving the northbound left turn movement has two lanes. Similarly, there may be three lanes in the lane group serving the northbound through movement, one lane in the lane group serving the northbound right turn movement, and so forth. It is also possible for one lane to serve two lane groups. A shared lane might result in there being 1.5 lanes in the northbound left turn lane group and 2.5 lanes in the northbound through lane group.

For each lane group, there is a capacity. That capacity is calculated by multiplying the number of lanes in the lane group times a theoretical maximum lane capacity per lane time's 12 adjustment factors.

Each of the 12 adjustment factors has a value of approximately 1.00. A value less than 1.00 is generally assigned when a less than desirable condition occurs.

The 12 adjustment factors are as follows:

1. Peak hour factor (to account for peaking within the peak hour)
2. Lane utilization factor (to account for not all lanes loading equally)
3. Lane width
4. Percent of heavy trucks
5. Approach grade
6. Parking
7. Bus stops at intersections
8. Area type (CBD or other)
9. Right turns
10. Left turns

11. Pedestrian activity

12. Signal progression

The maximum theoretical lane capacity and the 12 adjustment factors for it are all unknowns for which approximate estimates have been recommended in the 2000 HCM. For the most part, the recommended values are not based on statistical analysis but rather on educated estimates. However, it is possible to use the delay method and get reasonable results as will be discussed below.

Once the lane group volume is known and the lane group capacity is known, a volume to capacity ratio can be calculated for the lane group.

With a volume to capacity ratio calculated, average delay per vehicle in a lane group can be estimated. The average delay per vehicle in a lane group is calculated using a complex formula provided by the 2000 HCM, which can be simplified and described as follows:

Delay per vehicle in a lane group is a function of the following:

1. Cycle length

2. Amount of red time faced by a lane group

3. Amount of yellow time for that lane group

4. The volume to capacity ratio of the lane group

The average delay per vehicle for each lane group is calculated, and eventually an overall average delay for all vehicles entering the intersection is calculated. This average delay per vehicle is then used to judge Level of Service. The Level of Services are defined in the table that follows this discussion.

Experience has shown that when a maximum lane capacity of 1,900 vehicles per hour is used (as recommended in the 2000 Highway Capacity Manual), little or no yellow time penalty is used, and none of the 12 penalty factors are applied, calculated delay is realistic. The delay calculation for instance assumes that yellow time is totally unused. Yet experience shows that most of the yellow time is used.

An idiosyncrasy of the delay methodology is that it is possible to add traffic to an intersection and reduce the average total delay per vehicle. If the average total delay is 30 seconds per vehicle for all vehicles traveling through an intersection, and traffic is added to a movement that has an average total delay of 15 seconds per vehicle, then the overall average total delay is reduced.

The delay calculation for a lane group is based on a concept that the delay is a function of the amount of unused capacity available. As the volume approaches capacity and there is no more unused capacity available, then the delay rapidly increases. Delay is not proportional to volume, but rather increases rapidly as the unused capacity approaches zero.

Because delay is not linearly related to volumes, the delay does not reflect how close an intersection is to overloading. If an intersection is operating at Level of Service C and has an average total delay of 18 seconds per vehicle, you know very little as to what percent the traffic can increase before Level of Service E is reached.

LEVEL OF SERVICE DESCRIPTION[1]

Level Of Service	Description	Average Total Delay Per Vehicle (Seconds)	
		Signalized	Unsignalized
A	Level of Service A occurs when progression is extremely favorable and most vehicles arrive during the green phase. Most vehicles do not stop at all. Short cycle lengths may also contribute to low delay.	0 to 10.00	0 to 10.00
B	Level of Service B generally occurs with good progression and/or short cycle lengths. More vehicles stop than for Level of Service A, causing higher levels of average total delay.	10.01 to 20.00	10.01 to 15.00
C	Level of Service C generally results when there is fair progression and/or longer cycle lengths. Individual cycle failures may begin to appear in this level. The number of vehicles stopping is significant at this level, although many still pass through the intersection without stopping.	20.01 to 35.00	15.01 to 25.00
D	Level of Service D generally results in noticeable congestion. Longer delays may result from some combination of unfavorable progression, long cycle lengths, or high volume to capacity ratios. Many vehicles stop, and the proportion of vehicles not stopping declines. Individual cycle failures are noticeable.	35.01 to 55.00	25.01 to 35.00
E	Level of Service E is considered to be the limit of acceptable delay. These high delay values generally indicate poor progression, long cycle lengths, and high volume to capacity ratios. Individual cycle failures are frequent occurrences.	55.01 to 80.00	35.01 to 50.00
F	Level of Service F is considered to be unacceptable to most drivers. This condition often occurs with oversaturation, i.e., when arrival flow rates exceed the capacity of the intersection. It may also occur at high volume to capacity ratios below 1.00 with many individual cycle failures. Poor progression and long cycle lengths may also be major contributing causes to such delay levels.	80.01 and up	50.01 and up

[1] Source: Highway Capacity Manual Special Report 209, Transportation Research Board, National Research Council, Washington, D.C., 2000.

Existing

Washington 50 Project
Existing
Evening Peak Hour

Level Of Service Computation Report
2000 HCM Operations Method (Base Volume Alternative)

Intersection #1 Eisenhower Drive (NS) at Avenue 50 (EW)

Cycle (sec):	60	Critical Vol./Cap.(X):	0.264
Loss Time (sec):	16 (Y+R=4.0 sec)	Average Delay (sec/veh):	17.1
Optimal Cycle: OPTIMIZED		Level Of Service:	B

Approach:	North Bound			South Bound			East Bound						West Bound					
Movement:	L	-	T	-	R	L	-	T	-	R	L	-	T	-	R	L	-	T	-	R
Control:	Protected					Protected					Protected					Protected				
Rights:	Include					Include					Include					Include				
Min. Green:	7	7	7			7	7	7			7	7	7			7	7	7		
Lanes:	1	0	2	0	1	1	0	2	0	1	1	0	0	1	0	1	0	1	0	1
Volume Module:																				
Base Vol:	6	204	29			15	354	15			12	11	5			63	6	18		
Growth Adj:	1.20	1.20	1.20			1.20	1.20	1.20			1.20	1.20	1.20			1.20	1.20	1.20		
Initial Bse:	7	245	35			18	425	18			14	13	6			76	7	22		
User Adj:	1.00	1.00	1.00			1.00	1.00	1.00			1.00	1.00	1.00			1.00	1.00	1.00		
PHF Adj:	0.92	0.92	0.92			0.92	0.92	0.92			0.92	0.92	0.92			0.92	0.92	0.92		
PHF Volume:	8	265	38			20	460	20			16	14	7			82	8	23		
Reduct Vol:	0	0	0			0	0	0			0	0	0			0	0	0		
Reduced Vol:	8	265	38			20	460	20			16	14	7			82	8	23		
PCE Adj:	1.00	1.00	1.00			1.00	1.00	1.00			1.00	1.00	1.00			1.00	1.00	1.00		
MLF Adj:	1.00	1.00	1.00			1.00	1.00	1.00			1.00	1.00	1.00			1.00	1.00	1.00		
FinalVolume:	8	265	38			20	460	20			16	14	7			82	8	23		
Saturation Flow Module:																				
Sat/Lane:	1850	1850	1850			1850	1850	1850			1850	1850	1850			1850	1850	1850		
Adjustment:	0.95	0.95	0.85			0.95	0.95	0.85			0.95	0.95	0.95			0.95	1.00	0.85		
Lanes:	1.00	2.00	1.00			1.00	2.00	1.00			1.00	0.69	0.31			1.00	1.00	1.00		
Final Sat.:	1758	3515	1573			1758	3515	1573			1758	1212	551			1758	1850	1573		
Capacity Analysis Module:																				
Vol/Sat:	0.00	0.08	0.02			0.01	0.13	0.01			0.01	0.01	0.01			0.05	0.00	0.01		
Crit Moves:	****						****					****				****				
Green/Cycle:	0.12	0.24	0.24			0.24	0.37	0.37			0.12	0.12	0.12			0.13	0.12	0.12		
Volume/Cap:	0.04	0.31	0.10			0.05	0.36	0.03			0.07	0.10	0.10			0.36	0.03	0.12		
Delay/Veh:	23.6	18.8	17.7			17.4	13.9	12.1			23.4	23.9	23.9			24.7	23.2	23.6		
User DelAdj:	1.00	1.00	1.00			1.00	1.00	1.00			1.00	1.00	1.00			1.00	1.00	1.00		
AdjDel/Veh:	23.6	18.8	17.7			17.4	13.9	12.1			23.4	23.9	23.9			24.7	23.2	23.6		
LOS by Move:	C	B	B			B	B	B			C	C	C			C	C	C		
HCM2kAvgQ:	0	2	1			0	3	0			0	0	0			2	0	0		

Note: Queue reported is the number of cars per lane.

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Washington 50 Project
Existing
Evening Peak Hour

Level Of Service Computation Report
2000 HCM Operations Method (Base Volume Alternative)

Intersection #2 Washington Street (NS) at Eisenhower Drive (EW)

Cycle (sec):	80	Critical Vol./Cap.(X):	0.482
Loss Time (sec):	16 (Y+R=4.0 sec)	Average Delay (sec/veh):	17.3
Optimal Cycle: OPTIMIZED		Level Of Service:	B

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Protected			Protected			Protected			Protected		
Rights:	Include			Ovl			Include			Include		
Min. Green:	7	7	7	7	7	7	7	7	7	7	7	7
Lanes:	1 0 3	0	1	1 0 3	0	1	2 0 1!	0	0	0 1	0	0 1
Volume Module:												
Base Vol:	9	592	3	24	944	450	299	2	4	4	2	4
Growth Adj:	1.20	1.20	1.20	1.20	1.20	1.20	1.20	1.20	1.20	1.20	1.20	1.20
Initial Bse:	11	710	4	29	1133	540	359	2	5	5	2	5
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
PHF Volume:	12	775	4	31	1235	589	391	3	5	5	3	5
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	12	775	4	31	1235	589	391	3	5	5	3	5
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	12	775	4	31	1235	589	391	3	5	5	3	5
Saturation Flow Module:												
Sat/Lane:	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850
Adjustment:	0.95	0.91	0.85	0.95	0.91	0.85	0.92	0.95	0.95	0.97	0.97	0.85
Lanes:	1.00	3.00	1.00	1.00	3.00	1.00	2.94	0.02	0.04	0.67	0.33	1.00
Final Sat.:	1758	5051	1573	1758	5051	1573	5026	32	65	1194	597	1573
Capacity Analysis Module:												
Vol/Sat:	0.01	0.15	0.00	0.02	0.24	0.37	0.08	0.08	0.08	0.00	0.00	0.00
Crit Moves:	****					****	****				****	
Green/Cycle:	0.09	0.37	0.37	0.21	0.49	0.63	0.13	0.11	0.11	0.11	0.09	0.09
Volume/Cap:	0.08	0.42	0.01	0.08	0.50	0.60	0.58	0.73	0.73	0.04	0.05	0.04
Delay/Veh:	33.7	19.0	16.0	25.5	13.8	10.0	33.9	39.5	39.5	31.9	33.6	33.5
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	33.7	19.0	16.0	25.5	13.8	10.0	33.9	39.5	39.5	31.9	33.6	33.5
LOS by Move:	C	B	B	C	B	B	C	D	D	C	C	C
HCM2kAvgQ:	0	5	0	1	8	9	4	5	5	0	0	0

Note: Queue reported is the number of cars per lane.

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Washington 50 Project
Existing
Evening Peak Hour

Level Of Service Computation Report
2000 HCM Operations Method (Base Volume Alternative)

Intersection #3 Washington Street (NS) at Avenue 50 (EW)

Cycle (sec):	70	Critical Vol./Cap.(X):	0.332
Loss Time (sec):	16 (Y+R=4.0 sec)	Average Delay (sec/veh):	17.0
Optimal Cycle:	OPTIMIZED	Level Of Service:	B

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Protected			Protected			Protected			Protected		
Rights:	Include			Include			Include			Ovl		
Min. Green:	7	7	7	7	7	7	7	7	7	7	7	7
Lanes:	1 0 2		1 0	1 0 2		1 0	1 0 1		1 0	2 0 1		0 1
Volume Module:												
Base Vol:	5	475	37	111	725	54	25	44	3	62	49	86
Growth Adj:	1.20	1.20	1.20	1.20	1.20	1.20	1.20	1.20	1.20	1.20	1.20	1.20
Initial Bse:	6	570	44	133	870	65	30	53	4	74	59	103
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
PHF Volume:	6	610	47	142	930	69	32	56	4	80	63	110
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	6	610	47	142	930	69	32	56	4	80	63	110
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	6	610	47	142	930	69	32	56	4	80	63	110
Saturation Flow Module:												
Sat/Lane:	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850
Adjustment:	0.95	0.90	0.90	0.95	0.90	0.90	0.95	0.94	0.94	0.92	1.00	0.85
Lanes:	1.00	2.78	0.22	1.00	2.79	0.21	1.00	1.87	0.13	2.00	1.00	1.00
Final Sat.:	1758	4634	361	1758	4653	347	1758	3258	222	3410	1850	1573
Capacity Analysis Module:												
Vol/Sat:	0.00	0.13	0.13	0.08	0.20	0.20	0.02	0.02	0.02	0.02	0.03	0.07
Crit Moves:	****				****		****				****	
Green/Cycle:	0.10	0.32	0.32	0.25	0.47	0.47	0.10	0.10	0.10	0.10	0.10	0.35
Volume/Cap:	0.04	0.41	0.41	0.33	0.42	0.42	0.18	0.17	0.17	0.23	0.34	0.20
Delay/Veh:	28.5	18.5	18.5	22.1	12.3	12.3	29.4	29.1	29.1	29.4	30.4	16.2
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	28.5	18.5	18.5	22.1	12.3	12.3	29.4	29.1	29.1	29.4	30.4	16.2
LOS by Move:	C	B	B	C	B	B	C	C	C	C	C	B
HCM2kAvgQ:	0	4	4	3	5	5	1	1	1	1	2	2

Note: Queue reported is the number of cars per lane.

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Washington 50 Project
Existing
Evening Peak Hour

Level Of Service Computation Report
1994 HCM Operations Method (Base Volume Alternative)

Intersection #5 Washington Street (NS) at Calle Tampico (EW)

Cycle (sec):	75	Critical Vol./Cap.(X):	0.561
Loss Time (sec):	16 (Y+R=4.0 sec)	Average Delay (sec/veh):	12.2
Optimal Cycle:	OPTIMIZED	Level Of Service:	B

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Protected			Protected			Split Phase			Split Phase		
Rights:	Include			Ovl			Include			Include		
Min. Green:	7	7	7	7	7	7	7	7	7	7	7	7
Lanes:	1 0	2	1 0	1 0	2	0 1	2	1 0	0 1	1 0	0	1 0
Volume Module:												
Base Vol:	13	268	20	27	946	218	219	42	13	20	27	16
Growth Adj:	1.20	1.20	1.20	1.20	1.20	1.20	1.20	1.20	1.20	1.20	1.20	1.20
Initial Bse:	16	322	24	32	1135	262	263	50	16	24	32	19
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
PHF Volume:	17	342	26	35	1209	279	280	54	17	26	35	20
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	17	342	26	35	1209	279	280	54	17	26	35	20
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.10	1.10	1.00	1.05	1.00	1.10	1.10	1.00	1.00	1.00	1.00
FinalVolume:	17	377	28	35	1269	279	308	59	17	26	35	20
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.95	0.99	0.99	0.95	1.00	0.85	0.96	0.96	0.85	0.95	0.94	0.94
Lanes:	1.00	2.79	0.21	1.00	2.00	1.00	2.52	0.48	1.00	1.00	0.63	0.37
Final Sat.:	1805	5251	392	1805	3800	1615	4591	881	1615	1805	1121	665
Capacity Analysis Module:												
Vol/Sat:	0.01	0.07	0.07	0.02	0.33	0.17	0.07	0.07	0.01	0.01	0.03	0.03
Crit Moves:	****				****			****			****	
Green/Cycle:	0.09	0.30	0.30	0.30	0.50	0.60	0.10	0.10	0.10	0.09	0.09	0.09
Volume/Cap:	0.10	0.24	0.24	0.06	0.67	0.29	0.67	0.67	0.10	0.15	0.33	0.33
Delay/Veh:	20.1	12.9	12.9	12.2	9.8	4.7	23.2	23.2	19.8	20.2	21.0	21.0
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	20.1	12.9	12.9	12.2	9.8	4.7	23.2	23.2	19.8	20.2	21.0	21.0
DesignQueue:	1	4	4	1	15	5	5	5	1	1	2	2

Note: Queue reported is the number of cars per lane.

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Washington 50 Project
Existing
Evening Peak Hour

Level Of Service Computation Report
2000 HCM Operations Method (Base Volume Alternative)

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Intersection #6 Washington Street (NS) at Avenue 52 (EW)

****

Cycle (sec): 60 Critical Vol./Cap.(X): 0.303
Loss Time (sec): 16 (Y+R=4.0 sec) Average Delay (sec/veh): 18.0
Optimal Cycle: OPTIMIZED Level Of Service: B

****

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Split Phase			Split Phase			Protected			Protected		
Rights:	Include			Ovl			Include			Ovl		
Min. Green:	7	7	7	7	7	7	7	7	7	7	7	7
Lanes:	0 0	0 1	0	1 1	0 0	2	2 0	2 0	1	1 0	2 0	1
Volume Module:												
Base Vol:	0	6	3	126	9	363	165	164	0	3	253	100
Growth Adj:	1.20	1.20	1.20	1.20	1.20	1.20	1.20	1.20	1.20	1.20	1.20	1.20
Initial Bse:	0	7	4	151	11	436	198	197	0	4	304	120
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88
PHF Volume:	0	8	4	171	12	493	224	223	0	4	343	136
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	0	8	4	171	12	493	224	223	0	4	343	136
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	0	8	4	171	12	493	224	223	0	4	343	136
Saturation Flow Module:												
Sat/Lane:	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850
Adjustment:	1.00	0.96	0.96	0.96	0.96	0.75	0.92	0.95	1.00	0.95	0.95	0.85
Lanes:	0.00	0.67	0.33	1.87	0.13	2.00	2.00	2.00	1.00	1.00	2.00	1.00
Final Sat.:	0	1178	589	3298	236	2768	3410	3515	1850	1758	3515	1573
Capacity Analysis Module:												
Vol/Sat:	0.00	0.01	0.01	0.05	0.05	0.18	0.07	0.06	0.00	0.00	0.10	0.09
Crit Moves:		****		****			****				****	
Green/Cycle:	0.00	0.12	0.12	0.17	0.17	0.35	0.18	0.22	0.00	0.22	0.27	0.44
Volume/Cap:	0.00	0.06	0.06	0.31	0.31	0.51	0.36	0.28	0.00	0.01	0.36	0.20
Delay/Veh:	0.0	23.7	23.7	22.2	22.2	15.9	21.9	19.5	0.0	18.1	18.1	10.6
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	0.0	23.7	23.7	22.2	22.2	15.9	21.9	19.5	0.0	18.1	18.1	10.6
LOS by Move:	A	C	C	C	C	B	C	B	A	B	B	B
HCM2kAvgQ:	0	0	0	2	2	5	2	2	0	0	3	2

****

Note: Queue reported is the number of cars per lane.

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Washington 50 Project
Existing
Evening Peak Hour

Level Of Service Computation Report
2000 HCM Operations Method (Base Volume Alternative)

Intersection #8 Jefferson Street (NS) at Avenue 50 (EW)

Cycle (sec):	60	Critical Vol./Cap.(X):	0.413
Loss Time (sec):	16 (Y+R=4.0 sec)	Average Delay (sec/veh):	21.3
Optimal Cycle: OPTIMIZED		Level Of Service:	C

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Protected			Protected			Protected			Protected		
Rights:	Include			Include			Include			Include		
Min. Green:	7	7	7	7	7	7	7	7	7	7	7	7
Lanes:	1 0 3	0	1	2 0 3	0	1	1 0 2	0	1	1 0 1	0	1
Volume Module:												
Base Vol:	24	413	33	137	340	77	94	160	19	46	119	84
Growth Adj:	1.20	1.20	1.20	1.20	1.20	1.20	1.20	1.20	1.20	1.20	1.20	1.20
Initial Bse:	29	496	40	164	408	92	113	192	23	55	143	101
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
PHF Volume:	30	522	42	173	429	97	119	202	24	58	150	106
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	30	522	42	173	429	97	119	202	24	58	150	106
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	30	522	42	173	429	97	119	202	24	58	150	106
Saturation Flow Module:												
Sat/Lane:	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850
Adjustment:	0.95	0.91	0.85	0.92	0.91	0.85	0.95	0.95	0.85	0.95	1.00	0.85
Lanes:	1.00	3.00	1.00	2.00	3.00	1.00	1.00	2.00	1.00	1.00	1.00	1.00
Final Sat.:	1758	5051	1573	3410	5051	1573	1758	3515	1573	1758	1850	1573
Capacity Analysis Module:												
Vol/Sat:	0.02	0.10	0.03	0.05	0.09	0.06	0.07	0.06	0.02	0.03	0.08	0.07
Crit Moves:		****		****			****				****	
Green/Cycle:	0.19	0.25	0.25	0.12	0.19	0.19	0.16	0.18	0.18	0.18	0.20	0.20
Volume/Cap:	0.09	0.41	0.11	0.41	0.46	0.33	0.41	0.32	0.08	0.18	0.41	0.34
Delay/Veh:	20.3	19.0	17.4	25.0	22.1	21.8	23.5	21.7	20.6	21.1	21.8	21.4
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	20.3	19.0	17.4	25.0	22.1	21.8	23.5	21.7	20.6	21.1	21.8	21.4
LOS by Move:	C	B	B	C	C	C	C	C	C	C	C	C
HCM2kAvgQ:	1	3	1	2	3	2	2	2	0	1	3	2

Note: Queue reported is the number of cars per lane.

Existing Plus Project

Washington 50 Project
Existing Plus Project
Evening Peak Hour

Level Of Service Computation Report
2000 HCM Operations Method (Future Volume Alternative)

Intersection #1 Eisenhower Drive (NS) at Avenue 50 (EW)

Cycle (sec):	60	Critical Vol./Cap.(X):	0.271
Loss Time (sec):	16 (Y+R=4.0 sec)	Average Delay (sec/veh):	17.5
Optimal Cycle:	OPTIMIZED	Level Of Service:	B

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Protected			Protected			Protected			Protected		
Rights:	Include			Include			Include			Include		
Min. Green:	7	7	7	7	7	7	7	7	7	7	7	7
Lanes:	1 0	2 0	1	1 0	2 0	1	1 0	0 1	0	1 0	1 0	1
Volume Module:												
Base Vol:	6	204	29	15	354	15	12	11	5	63	6	18
Growth Adj:	1.20	1.20	1.20	1.20	1.20	1.20	1.20	1.20	1.20	1.20	1.20	1.20
Initial Bse:	7	245	35	18	425	18	14	13	6	76	7	22
Added Vol:	0	0	7	7	0	0	0	0	0	8	0	8
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	7	245	42	25	425	18	14	13	6	84	7	30
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
PHF Volume:	8	265	45	27	460	20	16	14	7	91	8	32
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	8	265	45	27	460	20	16	14	7	91	8	32
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	8	265	45	27	460	20	16	14	7	91	8	32
Saturation Flow Module:												
Sat/Lane:	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850
Adjustment:	0.95	0.95	0.85	0.95	0.95	0.85	0.95	0.95	0.95	0.95	1.00	0.85
Lanes:	1.00	2.00	1.00	1.00	2.00	1.00	1.00	0.69	0.31	1.00	1.00	1.00
Final Sat.:	1758	3515	1573	1758	3515	1573	1758	1212	551	1758	1850	1573
Capacity Analysis Module:												
Vol/Sat:	0.00	0.08	0.03	0.02	0.13	0.01	0.01	0.01	0.01	0.05	0.00	0.02
Crit Moves:	****				****			****		****		
Green/Cycle:	0.12	0.24	0.24	0.24	0.36	0.36	0.13	0.12	0.12	0.14	0.13	0.13
Volume/Cap:	0.04	0.32	0.12	0.06	0.36	0.03	0.07	0.10	0.10	0.36	0.03	0.16
Delay/Veh:	23.6	19.1	18.1	17.8	14.4	12.5	23.1	23.9	23.9	24.2	22.9	23.6
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	23.6	19.1	18.1	17.8	14.4	12.5	23.1	23.9	23.9	24.2	22.9	23.6
LOS by Move:	C	B	B	B	B	B	C	C	C	C	C	C
HCM2kAvgQ:	0	2	1	0	4	0	0	0	0	2	0	1

Note: Queue reported is the number of cars per lane.

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Washington 50 Project
Existing Plus Project
Evening Peak Hour

Level Of Service Computation Report
2000 HCM Operations Method (Future Volume Alternative)

Intersection #2 Washington Street (NS) at Eisenhower Drive (EW)

Cycle (sec):	70	Critical Vol./Cap.(X):	0.514
Loss Time (sec):	16 (Y+R=4.0 sec)	Average Delay (sec/veh):	18.3
Optimal Cycle:	OPTIMIZED	Level Of Service:	B

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Protected			Protected			Protected			Protected		
Rights:	Include			Ovl			Include			Include		
Min. Green:	7	7	7	7	7	7	7	7	7	7	7	7
Lanes:	1 0 3	0	1	1 0 3	0	1	2 0 1!	0	0	0 1 0	0	1
Volume Module:												
Base Vol:	9	592	3	24	944	450	299	2	4	4	2	4
Growth Adj:	1.20	1.20	1.20	1.20	1.20	1.20	1.20	1.20	1.20	1.20	1.20	1.20
Initial Bse:	11	710	4	29	1133	540	359	2	5	5	2	5
Added Vol:	8	23	0	0	21	0	0	0	7	0	0	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	19	733	4	29	1154	540	359	2	12	5	2	5
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
PHF Volume:	21	800	4	31	1258	589	391	3	13	5	3	5
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	21	800	4	31	1258	589	391	3	13	5	3	5
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	21	800	4	31	1258	589	391	3	13	5	3	5
Saturation Flow Module:												
Sat/Lane:	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850
Adjustment:	0.95	0.91	0.85	0.95	0.91	0.85	0.92	0.95	0.95	0.97	0.97	0.85
Lanes:	1.00	3.00	1.00	1.00	3.00	1.00	2.90	0.02	0.08	0.67	0.33	1.00
Final Sat.:	1758	5051	1573	1758	5051	1573	4934	31	151	1194	597	1573
Capacity Analysis Module:												
Vol/Sat:	0.01	0.16	0.00	0.02	0.25	0.37	0.08	0.09	0.09	0.00	0.00	0.00
Crit Moves:	****					****		****		****		
Green/Cycle:	0.10	0.33	0.33	0.21	0.44	0.55	0.12	0.14	0.14	0.10	0.12	0.12
Volume/Cap:	0.12	0.48	0.01	0.09	0.57	0.68	0.67	0.63	0.63	0.04	0.04	0.03
Delay/Veh:	29.0	19.0	15.8	22.5	15.2	13.3	32.6	30.6	30.6	28.6	27.4	27.4
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	29.0	19.0	15.8	22.5	15.2	13.3	32.6	30.6	30.6	28.6	27.4	27.4
LOS by Move:	C	B	B	C	B	B	C	C	C	C	C	C
HCM2kAvgQ:	0	5	0	1	8	10	4	4	4	0	0	0

Note: Queue reported is the number of cars per lane.

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Washington 50 Project
Existing Plus Project
Evening Peak Hour

Level Of Service Computation Report
2000 HCM Operations Method (Future Volume Alternative)

Intersection #3 Washington Street (NS) at Avenue 50 (EW)

Cycle (sec):	60	Critical Vol./Cap.(X):	0.434
Loss Time (sec):	16 (Y+R=4.0 sec)	Average Delay (sec/veh):	18.4
Optimal Cycle: OPTIMIZED		Level Of Service:	B

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Protected			Protected			Protected			Protected		
Rights:	Include			Include			Include			Ovl		
Min. Green:	7	7	7	7	7	7	7	7	7	7	7	7
Lanes:	1 0	2	1 0	1 0	2	1 0	1 0	1	1 0	2 0	1	0 1
Volume Module:												
Base Vol:	5	475	37	111	725	54	25	44	3	62	49	86
Growth Adj:	1.20	1.20	1.20	1.20	1.20	1.20	1.20	1.20	1.20	1.20	1.20	1.20
Initial Bse:	6	570	44	133	870	65	30	53	4	74	59	103
Added Vol:	102	73	0	71	0	0	0	28	0	0	0	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	108	643	44	204	870	65	30	81	4	74	59	103
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
PHF Volume:	116	688	47	218	930	69	32	86	4	80	63	110
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	116	688	47	218	930	69	32	86	4	80	63	110
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	116	688	47	218	930	69	32	86	4	80	63	110
Saturation Flow Module:												
Sat/Lane:	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850
Adjustment:	0.95	0.90	0.90	0.95	0.90	0.90	0.95	0.94	0.94	0.92	1.00	0.85
Lanes:	1.00	2.81	0.19	1.00	2.79	0.21	1.00	1.91	0.09	2.00	1.00	1.00
Final Sat.:	1758	4677	323	1758	4653	347	1758	3345	149	3410	1850	1573
Capacity Analysis Module:												
Vol/Sat:	0.07	0.15	0.15	0.12	0.20	0.20	0.02	0.03	0.03	0.02	0.03	0.07
Crit Moves:	****				****		****				****	
Green/Cycle:	0.12	0.27	0.27	0.23	0.38	0.38	0.12	0.12	0.12	0.12	0.12	0.35
Volume/Cap:	0.53	0.54	0.54	0.54	0.53	0.53	0.16	0.22	0.22	0.20	0.29	0.20
Delay/Veh:	27.2	19.1	19.1	21.9	14.9	14.9	24.2	24.3	24.3	24.2	25.0	14.0
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	27.2	19.1	19.1	21.9	14.9	14.9	24.2	24.3	24.3	24.2	25.0	14.0
LOS by Move:	C	B	B	C	B	B	C	C	C	C	C	B
HCM2kAvgQ:	3	5	5	4	6	6	1	1	1	1	1	2

Note: Queue reported is the number of cars per lane.

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Washington 50 Project
Existing Plus Project
Evening Peak Hour

Level Of Service Computation Report
2000 HCM Unsignalized Method (Future Volume Alternative)

****

Intersection #4 Washington Street (NS) at Project North Driveway (EW)

****

Average Delay (sec/veh): 1.0 Worst Case Level Of Service: B[11.3]

****

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Uncontrolled			Uncontrolled			Stop Sign			Stop Sign		
Rights:	Include			Include			Include			Include		
Lanes:	0 0 2	1	0	0 0 3	0	0	0 0 0	0	0	0 0 0	0	1
Volume Module:												
Base Vol:	0	517	0	0	790	0	0	0	0	0	0	0
Growth Adj:	1.20	1.20	1.20	1.20	1.20	1.20	1.20	1.20	1.20	1.20	1.20	1.20
Initial Bse:	0	620	0	0	948	0	0	0	0	0	0	0
Added Vol:	0	0	71	0	73	0	0	0	0	0	0	174
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	0	620	71	0	1021	0	0	0	0	0	0	174
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
PHF Volume:	0	653	75	0	1075	0	0	0	0	0	0	183
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
FinalVolume:	0	653	75	0	1075	0	0	0	0	0	0	183
Critical Gap Module:												
Critical Gp:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	6.9
FollowUpTim:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	3.3
Capacity Module:												
Cnflict Vol:	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	255
Potent Cap.:	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	750
Move Cap.:	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	750
Volume/Cap:	xxxx	xxxx	xxxx	xxxx	xxxx	xxxx	xxxx	xxxx	xxxx	xxxx	xxxx	0.24
Level Of Service Module:												
2Way95thQ:	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	1.0
Control Del:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	11.3
LOS by Move:	*	*	*	*	*	*	*	*	*	*	*	B
Movement:	LT -	LTR -	RT	LT -	LTR -	RT	LT -	LTR -	RT	LT -	LTR -	RT
Shared Cap.:	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx
SharedQueue:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx
Shrd ConDel:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx
Shared LOS:	*	*	*	*	*	*	*	*	*	*	*	*
ApproachDel:	xxxxxx			xxxxxx			xxxxxx			11.3		
ApproachLOS:	*			*			*			B		

****

Note: Queue reported is the number of cars per lane.

****

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Washington 50 Project
Existing Plus Project
Evening Peak Hour

Level Of Service Computation Report
1994 HCM Operations Method (Future Volume Alternative)

Intersection #5 Washington Street (NS) at Calle Tampico (EW)

Cycle (sec): 75 Critical Vol./Cap.(X): 0.577
Loss Time (sec): 16 (Y+R=4.0 sec) Average Delay (sec/veh): 12.4
Optimal Cycle: OPTIMIZED Level Of Service: B

Approach:	North Bound					South Bound					East Bound					West Bound				
Movement:	L	-	T	-	R	L	-	T	-	R	L	-	T	-	R	L	-	T	-	R
Control:	Protected					Protected					Split Phase					Split Phase				
Rights:	Include					Ovl					Include					Include				
Min. Green:	7	7	7			7	7	7			7	7	7			7	7	7		
Lanes:	1	0	2	1	0	1	0	2	0	1	2	1	0	0	1	1	0	0	1	0
Volume Module:																				
Base Vol:	13	268		20		27	946		218		219	42		13		20	27		16	
Growth Adj:	1.20	1.20		1.20		1.20	1.20		1.20		1.20	1.20		1.20		1.20	1.20		1.20	
Initial Bse:	16	322		24		32	1135		262		263	50		16		24	32		19	
Added Vol:	0	21		0		8	23		8		7	0		0		0	0		7	
PasserByVol:	0	0		0		0	0		0		0	0		0		0	0		0	
Initial Fut:	16	343		24		40	1158		270		270	50		16		24	32		26	
User Adj:	1.00	1.00		1.00		1.00	1.00		1.00		1.00	1.00		1.00		1.00	1.00		1.00	
PHF Adj:	0.94	0.94		0.94		0.94	0.94		0.94		0.94	0.94		0.94		0.94	0.94		0.94	
PHF Volume:	17	365		26		43	1233		287		287	54		17		26	35		28	
Reduct Vol:	0	0		0		0	0		0		0	0		0		0	0		0	
Reduced Vol:	17	365		26		43	1233		287		287	54		17		26	35		28	
PCE Adj:	1.00	1.00		1.00		1.00	1.00		1.00		1.00	1.00		1.00		1.00	1.00		1.00	
MLF Adj:	1.00	1.10		1.10		1.00	1.05		1.00		1.10	1.10		1.00		1.00	1.00		1.00	
FinalVolume:	17	401		28		43	1295		287		316	59		17		26	35		28	
Saturation Flow Module:																				
Sat/Lane:	1900	1900		1900		1900	1900		1900		1900	1900		1900		1900	1900		1900	
Adjustment:	0.95	0.99		0.99		0.95	1.00		0.85		0.96	0.96		0.85		0.95	0.93		0.93	
Lanes:	1.00	2.80		0.20		1.00	2.00		1.00		2.53	0.47		1.00		1.00	0.55		0.45	
Final Sat.:	1805	5274		369		1805	3800		1615		4611	861		1615		1805	977		790	
Capacity Analysis Module:																				
Vol/Sat:	0.01	0.08		0.08		0.02	0.34		0.18		0.07	0.07		0.01		0.01	0.04		0.04	
Crit Moves:	****						****				****						****			
Green/Cycle:	0.09	0.30		0.30		0.30	0.50		0.60		0.10	0.10		0.10		0.09	0.09		0.09	
Volume/Cap:	0.10	0.26		0.26		0.08	0.68		0.30		0.68	0.68		0.10		0.15	0.38		0.38	
Delay/Veh:	20.1	13.0		13.0		12.3	9.9		4.8		23.4	23.4		19.8		20.2	21.4		21.4	
User DelAdj:	1.00	1.00		1.00		1.00	1.00		1.00		1.00	1.00		1.00		1.00	1.00		1.00	
AdjDel/Veh:	20.1	13.0		13.0		12.3	9.9		4.8		23.4	23.4		19.8		20.2	21.4		21.4	
DesignQueue:	1	4		4		1	15		5		5	5		1		1	2		2	

Note: Queue reported is the number of cars per lane.

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Washington 50 Project
Existing Plus Project
Evening Peak Hour

Level Of Service Computation Report
2000 HCM Operations Method (Future Volume Alternative)

Intersection #6 Washington Street (NS) at Avenue 52 (EW)

Cycle (sec):	60	Critical Vol./Cap.(X):	0.313
Loss Time (sec):	16 (Y+R=4.0 sec)	Average Delay (sec/veh):	18.0
Optimal Cycle:	OPTIMIZED	Level Of Service:	B

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Split Phase			Split Phase			Protected			Protected		
Rights:	Include			Ovl			Include			Ovl		
Min. Green:	7	7	7	7	7	7	7	7	7	7	7	7
Lanes:	0 0	0 1	0	1 1	0 0	2	2 0	2 0	1	1 0	2 0	1
Volume Module:												
Base Vol:	0	6	3	126	9	363	165	164	0	3	253	100
Growth Adj:	1.20	1.20	1.20	1.20	1.20	1.20	1.20	1.20	1.20	1.20	1.20	1.20
Initial Bse:	0	7	4	151	11	436	198	197	0	4	304	120
Added Vol:	0	0	0	8	0	15	14	0	0	0	0	7
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	0	7	4	159	11	451	212	197	0	4	304	127
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88
PHF Volume:	0	8	4	180	12	510	240	223	0	4	343	144
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	0	8	4	180	12	510	240	223	0	4	343	144
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	0	8	4	180	12	510	240	223	0	4	343	144
Saturation Flow Module:												
Sat/Lane:	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850
Adjustment:	1.00	0.96	0.96	0.96	0.96	0.75	0.92	0.95	1.00	0.95	0.95	0.85
Lanes:	0.00	0.67	0.33	1.87	0.13	2.00	2.00	2.00	1.00	1.00	2.00	1.00
Final Sat.:	0	1178	589	3309	224	2768	3410	3515	1850	1758	3515	1573
Capacity Analysis Module:												
Vol/Sat:	0.00	0.01	0.01	0.05	0.05	0.18	0.07	0.06	0.00	0.00	0.10	0.09
Crit Moves:		****		****			****				****	
Green/Cycle:	0.00	0.12	0.12	0.18	0.18	0.36	0.18	0.22	0.00	0.22	0.26	0.43
Volume/Cap:	0.00	0.06	0.06	0.31	0.31	0.51	0.38	0.29	0.00	0.01	0.38	0.21
Delay/Veh:	0.0	23.7	23.7	21.8	21.8	15.5	21.9	19.7	0.0	18.3	18.7	10.8
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	0.0	23.7	23.7	21.8	21.8	15.5	21.9	19.7	0.0	18.3	18.7	10.8
LOS by Move:	A	C	C	C	C	B	C	B	A	B	B	B
HCM2kAvgQ:	0	0	0	2	2	5	2	2	0	0	3	2

Note: Queue reported is the number of cars per lane.

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Washington 50 Project
Existing Plus Project
Evening Peak Hour

Level Of Service Computation Report
2000 HCM Unsignalized Method (Future Volume Alternative)

****

Intersection #7 Project Driveway (NS) at Avenue 50 (EW)

****

Average Delay (sec/veh): 2.6 Worst Case Level Of Service: A[10.0]

****

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Stop Sign			Stop Sign			Uncontrolled			Uncontrolled		
Rights:	Include			Include			Include			Include		
Lanes:	0 0 0	0 1		0 0 0	0 0		0 0 1	1 0		1 0 2	0 0	
Volume Module:												
Base Vol:	0	0	0	0	0	0	0	192	0	0	197	0
Growth Adj:	1.20	1.20	1.20	1.20	1.20	1.20	1.20	1.20	1.20	1.20	1.20	1.20
Initial Bse:	0	0	0	0	0	0	0	230	0	0	236	0
Added Vol:	0	0	116	0	0	0	0	0	99	114	0	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	0	0	116	0	0	0	0	230	99	114	236	0
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
PHF Volume:	0	0	122	0	0	0	0	243	104	120	249	0
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
FinalVolume:	0	0	122	0	0	0	0	243	104	120	249	0
Critical Gap Module:												
Critical Gp:	xxxxx	xxxx	6.9	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	4.1	xxxx	xxxxx
FollowUpTim:	xxxxx	xxxx	3.3	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	2.2	xxxx	xxxxx
Capacity Module:												
Cnflict Vol:	xxxx	xxxx	173	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	347	xxxx	xxxxx
Potent Cap.:	xxxx	xxxx	846	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	1223	xxxx	xxxxx
Move Cap.:	xxxx	xxxx	846	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	1223	xxxx	xxxxx
Volume/Cap:	xxxx	xxxx	0.14	xxxx	xxxx	xxxx	xxxx	xxxx	xxxx	0.10	xxxx	xxxx
Level Of Service Module:												
2Way95thQ:	xxxx	xxxx	0.5	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	0.3	xxxx	xxxxx
Control Del:	xxxxx	xxxx	10.0	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	8.3	xxxx	xxxxx
LOS by Move:	*	*	A	*	*	*	*	*	*	A	*	*
Movement:	LT -	LTR -	RT	LT -	LTR -	RT	LT -	LTR -	RT	LT -	LTR -	RT
Shared Cap.:	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx
SharedQueue:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx
Shrd ConDel:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx
Shared LOS:	*	*	*	*	*	*	*	*	*	*	*	*
ApproachDel:		10.0			xxxxxx			xxxxxx			xxxxxx	
ApproachLOS:		A			*			*			*	

****

Note: Queue reported is the number of cars per lane.

****

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Washington 50 Project
Existing Plus Project
Evening Peak Hour

Level Of Service Computation Report
2000 HCM Operations Method (Future Volume Alternative)

Intersection #8 Jefferson Street (NS) at Avenue 50 (EW)

Cycle (sec):	60	Critical Vol./Cap.(X):	0.436
Loss Time (sec):	16 (Y+R=4.0 sec)	Average Delay (sec/veh):	21.6
Optimal Cycle: OPTIMIZED		Level Of Service:	C

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Protected			Protected			Protected			Protected		
Rights:	Include			Include			Include			Include		
Min. Green:	7	7	7	7	7	7	7	7	7	7	7	7
Lanes:	1 0 3	0	1	2 0 3	0	1	1 0 2	0	1	1 0 1	0	1
Volume Module:												
Base Vol:	24	413	33	137	340	77	94	160	19	46	119	84
Growth Adj:	1.20	1.20	1.20	1.20	1.20	1.20	1.20	1.20	1.20	1.20	1.20	1.20
Initial Bse:	29	496	40	164	408	92	113	192	23	55	143	101
Added Vol:	14	0	0	0	0	14	15	15	15	0	14	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	43	496	40	164	408	106	128	207	38	55	157	101
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
PHF Volume:	45	522	42	173	429	112	135	218	40	58	165	106
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	45	522	42	173	429	112	135	218	40	58	165	106
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	45	522	42	173	429	112	135	218	40	58	165	106
Saturation Flow Module:												
Sat/Lane:	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850
Adjustment:	0.95	0.91	0.85	0.92	0.91	0.85	0.95	0.95	0.85	0.95	1.00	0.85
Lanes:	1.00	3.00	1.00	2.00	3.00	1.00	1.00	2.00	1.00	1.00	1.00	1.00
Final Sat.:	1758	5051	1573	3410	5051	1573	1758	3515	1573	1758	1850	1573
Capacity Analysis Module:												
Vol/Sat:	0.03	0.10	0.03	0.05	0.09	0.07	0.08	0.06	0.03	0.03	0.09	0.07
Crit Moves:		****		****			****				****	
Green/Cycle:	0.18	0.24	0.24	0.12	0.18	0.18	0.18	0.19	0.19	0.19	0.20	0.20
Volume/Cap:	0.15	0.44	0.11	0.44	0.48	0.40	0.44	0.33	0.13	0.17	0.44	0.33
Delay/Veh:	21.1	19.7	18.1	25.4	22.6	22.9	23.1	21.3	20.4	20.6	21.7	21.0
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	21.1	19.7	18.1	25.4	22.6	22.9	23.1	21.3	20.4	20.6	21.7	21.0
LOS by Move:	C	B	B	C	C	C	C	C	C	C	C	C
HCM2kAvgQ:	1	3	1	2	3	2	3	2	1	1	3	2

Note: Queue reported is the number of cars per lane.

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Opening Year (2017) Without Project

Washington 50 Project
Opening Year (2017) Without Project
Evening Peak Hour

Level Of Service Computation Report
2000 HCM Operations Method (Future Volume Alternative)

Intersection #1 Eisenhower Drive (NS) at Avenue 50 (EW)

Cycle (sec):	60	Critical Vol./Cap.(X):	0.279
Loss Time (sec):	16 (Y+R=4.0 sec)	Average Delay (sec/veh):	17.2
Optimal Cycle: OPTIMIZED		Level Of Service:	B

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Protected			Protected			Protected			Protected		
Rights:	Include			Include			Include			Include		
Min. Green:	7	7	7	7	7	7	7	7	7	7	7	7
Lanes:	1 0	2 0	1	1 0	2 0	1	1 0	0 1	0	1 0	1 0	1
Volume Module:												
Base Vol:	6	204	29	15	354	15	12	11	5	63	6	18
Growth Adj:	1.24	1.24	1.24	1.24	1.24	1.24	1.24	1.24	1.24	1.24	1.24	1.24
Initial Bse:	7	253	36	19	439	19	15	14	6	78	7	22
Added Vol:	2	2	0	0	3	0	0	0	3	0	0	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	9	255	36	19	442	19	15	14	9	78	7	22
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
PHF Volume:	10	276	39	20	479	20	16	15	10	85	8	24
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	10	276	39	20	479	20	16	15	10	85	8	24
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	10	276	39	20	479	20	16	15	10	85	8	24
Saturation Flow Module:												
Sat/Lane:	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850
Adjustment:	0.95	0.95	0.85	0.95	0.95	0.85	0.95	0.94	0.94	0.95	1.00	0.85
Lanes:	1.00	2.00	1.00	1.00	2.00	1.00	1.00	0.60	0.40	1.00	1.00	1.00
Final Sat.:	1758	3515	1573	1758	3515	1573	1758	1039	700	1758	1850	1573
Capacity Analysis Module:												
Vol/Sat:	0.01	0.08	0.02	0.01	0.14	0.01	0.01	0.01	0.01	0.05	0.00	0.02
Crit Moves:	****				****			****		****		
Green/Cycle:	0.12	0.24	0.24	0.24	0.37	0.37	0.12	0.12	0.12	0.13	0.12	0.12
Volume/Cap:	0.05	0.32	0.10	0.05	0.37	0.03	0.07	0.12	0.12	0.37	0.04	0.12
Delay/Veh:	23.6	18.9	17.7	17.4	14.0	12.1	23.4	24.0	24.0	24.8	23.2	23.7
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	23.6	18.9	17.7	17.4	14.0	12.1	23.4	24.0	24.0	24.8	23.2	23.7
LOS by Move:	C	B	B	B	B	B	C	C	C	C	C	C
HCM2kAvgQ:	0	2	1	0	4	0	0	1	1	2	0	0

Note: Queue reported is the number of cars per lane.

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Washington 50 Project
Opening Year (2017) Without Project
Evening Peak Hour

Level Of Service Computation Report
2000 HCM Operations Method (Future Volume Alternative)

Intersection #2 Washington Street (NS) at Eisenhower Drive (EW)

Cycle (sec):	70	Critical Vol./Cap.(X):	0.537
Loss Time (sec):	16 (Y+R=4.0 sec)	Average Delay (sec/veh):	18.8
Optimal Cycle:	OPTIMIZED	Level Of Service:	B

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Protected			Protected			Protected			Protected		
Rights:	Include			Ovl			Include			Include		
Min. Green:	7	7	7	7	7	7	7	7	7	7	7	7
Lanes:	1 0	3 0	1	1 0	3 0	1	2 0	1! 0	0	0 1	0 0	1
Volume Module:												
Base Vol:	9	592	3	24	944	450	299	2	4	4	2	4
Growth Adj:	1.24	1.24	1.24	1.24	1.24	1.24	1.24	1.24	1.24	1.24	1.24	1.24
Initial Bse:	11	734	4	30	1171	558	371	2	5	5	2	5
Added Vol:	3	77	0	0	90	14	18	0	3	0	0	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	14	811	4	30	1261	572	389	2	8	5	2	5
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
PHF Volume:	15	884	4	32	1375	624	424	3	9	5	3	5
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	15	884	4	32	1375	624	424	3	9	5	3	5
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	15	884	4	32	1375	624	424	3	9	5	3	5
Saturation Flow Module:												
Sat/Lane:	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850
Adjustment:	0.95	0.91	0.85	0.95	0.91	0.85	0.92	0.95	0.95	0.97	0.97	0.85
Lanes:	1.00	3.00	1.00	1.00	3.00	1.00	2.93	0.02	0.05	0.67	0.33	1.00
Final Sat.:	1758	5051	1573	1758	5051	1573	4997	30	97	1194	597	1573
Capacity Analysis Module:												
Vol/Sat:	0.01	0.18	0.00	0.02	0.27	0.40	0.08	0.09	0.09	0.00	0.00	0.00
Crit Moves:	****					****		****		****		
Green/Cycle:	0.10	0.34	0.34	0.20	0.44	0.56	0.12	0.13	0.13	0.10	0.12	0.12
Volume/Cap:	0.09	0.51	0.01	0.09	0.62	0.71	0.73	0.68	0.68	0.05	0.04	0.03
Delay/Veh:	28.8	18.6	15.1	23.2	15.7	14.3	34.5	31.8	31.8	28.6	27.5	27.5
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	28.8	18.6	15.1	23.2	15.7	14.3	34.5	31.8	31.8	28.6	27.5	27.5
LOS by Move:	C	B	B	C	B	B	C	C	C	C	C	C
HCM2kAvgQ:	0	6	0	1	9	11	5	5	5	0	0	0

Note: Queue reported is the number of cars per lane.

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Washington 50 Project
Opening Year (2017) Without Project
Evening Peak Hour

Level Of Service Computation Report
2000 HCM Operations Method (Future Volume Alternative)

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Intersection #3 Washington Street (NS) at Avenue 50 (EW)

****

Cycle (sec): 75 Critical Vol./Cap.(X): 0.363
Loss Time (sec): 16 (Y+R=4.0 sec) Average Delay (sec/veh): 17.3
Optimal Cycle: OPTIMIZED Level Of Service: B

****

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Protected			Protected			Protected			Protected		
Rights:	Include			Include			Include			Ovl		
Min. Green:	7	7	7	7	7	7	7	7	7	7	7	7
Lanes:	1 0 2	1 0		1 0 2	1 0		1 0 1	1 0		2 0 1	0 1	
Volume Module:												
Base Vol:	5	475	37	111	725	54	25	44	3	62	49	86
Growth Adj:	1.24	1.24	1.24	1.24	1.24	1.24	1.24	1.24	1.24	1.24	1.24	1.24
Initial Bse:	6	589	46	138	899	67	31	55	4	77	61	107
Added Vol:	0	70	11	17	77	0	4	0	0	19	4	3
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	6	659	57	155	976	67	35	55	4	96	65	110
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
PHF Volume:	7	705	61	165	1044	72	37	58	4	103	69	117
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	7	705	61	165	1044	72	37	58	4	103	69	117
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	7	705	61	165	1044	72	37	58	4	103	69	117
Saturation Flow Module:												
Sat/Lane:	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850
Adjustment:	0.95	0.90	0.90	0.95	0.90	0.90	0.95	0.94	0.94	0.92	1.00	0.85
Lanes:	1.00	2.76	0.24	1.00	2.81	0.19	1.00	1.87	0.13	2.00	1.00	1.00
Final Sat.:	1758	4593	396	1758	4679	321	1758	3258	222	3410	1850	1573
Capacity Analysis Module:												
Vol/Sat:	0.00	0.15	0.15	0.09	0.22	0.22	0.02	0.02	0.02	0.03	0.04	0.07
Crit Moves:	****				****		****				****	
Green/Cycle:	0.09	0.37	0.37	0.23	0.51	0.51	0.09	0.09	0.09	0.09	0.09	0.32
Volume/Cap:	0.04	0.41	0.41	0.41	0.44	0.44	0.23	0.19	0.19	0.32	0.40	0.23
Delay/Veh:	31.0	17.6	17.6	25.4	11.9	11.9	32.2	31.7	31.7	32.4	33.6	18.9
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	31.0	17.6	17.6	25.4	11.9	11.9	32.2	31.7	31.7	32.4	33.6	18.9
LOS by Move:	C	B	B	C	B	B	C	C	C	C	C	B
HCM2kAvgQ:	0	5	5	4	6	6	1	1	1	1	2	2

****

Note: Queue reported is the number of cars per lane.

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Washington 50 Project
Opening Year (2017) Without Project
Evening Peak Hour

Level Of Service Computation Report
1994 HCM Operations Method (Future Volume Alternative)

****

Intersection #5 Washington Street (NS) at Calle Tampico (EW)

****

Cycle (sec): 75 Critical Vol./Cap.(X): 0.623
Loss Time (sec): 16 (Y+R=4.0 sec) Average Delay (sec/veh): 13.1
Optimal Cycle: OPTIMIZED Level Of Service: B

****

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Protected			Protected			Split Phase			Split Phase		
Rights:	Include			Ovl			Include			Include		
Min. Green:	7	7	7	7	7	7	7	7	7	7	7	7
Lanes:	1 0	2	1 0	1 0	2	0 1	2	1 0	0 1	1 0	0	1 0
Volume Module:												
Base Vol:	13	268	20	27	946	218	219	42	13	20	27	16
Growth Adj:	1.24	1.24	1.24	1.24	1.24	1.24	1.24	1.24	1.24	1.24	1.24	1.24
Initial Bse:	16	332	25	33	1173	270	272	52	16	25	33	20
Added Vol:	3	26	0	7	44	42	45	4	2	0	5	10
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	19	358	25	40	1217	312	317	56	18	25	38	30
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
PHF Volume:	20	382	26	43	1296	333	337	60	19	26	41	32
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	20	382	26	43	1296	333	337	60	19	26	41	32
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.10	1.10	1.00	1.05	1.00	1.10	1.10	1.00	1.00	1.00	1.00
FinalVolume:	20	420	29	43	1361	333	371	66	19	26	41	32
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.95	0.99	0.99	0.95	1.00	0.85	0.96	0.96	0.85	0.95	0.93	0.93
Lanes:	1.00	2.81	0.19	1.00	2.00	1.00	2.55	0.45	1.00	1.00	0.56	0.44
Final Sat.:	1805	5278	365	1805	3800	1615	4648	824	1615	1805	995	772
Capacity Analysis Module:												
Vol/Sat:	0.01	0.08	0.08	0.02	0.36	0.21	0.08	0.08	0.01	0.01	0.04	0.04
Crit Moves:	****				****		****				****	
Green/Cycle:	0.09	0.29	0.29	0.29	0.49	0.60	0.11	0.11	0.11	0.09	0.09	0.09
Volume/Cap:	0.12	0.27	0.27	0.08	0.73	0.34	0.73	0.73	0.11	0.16	0.44	0.44
Delay/Veh:	20.2	13.2	13.2	12.4	10.8	5.0	24.0	24.0	19.5	20.2	22.0	22.0
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	20.2	13.2	13.2	12.4	10.8	5.0	24.0	24.0	19.5	20.2	22.0	22.0
DesignQueue:	1	5	5	1	16	6	6	6	1	1	3	3

****

Note: Queue reported is the number of cars per lane.

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Washington 50 Project
Opening Year (2017) Without Project
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Level Of Service Computation Report
2000 HCM Operations Method (Future Volume Alternative)

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Intersection #6 Washington Street (NS) at Avenue 52 (EW)

****

Cycle (sec):	60	Critical Vol./Cap.(X):	0.367
Loss Time (sec):	16 (Y+R=4.0 sec)	Average Delay (sec/veh):	18.5
Optimal Cycle: OPTIMIZED		Level Of Service:	B

****

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Split Phase			Split Phase			Protected			Protected		
Rights:	Include			Ovl			Include			Ovl		
Min. Green:	7	7	7	7	7	7	7	7	7	7	7	7
Lanes:	0 0	1! 0	0	1 1	0 0	2	2 0	2 0	1	1 0	2 0	1
Volume Module:												
Base Vol:	0	6	3	126	9	363	165	164	0	3	253	100
Growth Adj:	1.24	1.24	1.24	1.24	1.24	1.24	1.24	1.24	1.24	1.24	1.24	1.24
Initial Bse:	0	7	4	156	11	450	205	203	0	4	314	124
Added Vol:	3	25	5	2	42	2	2	12	6	8	14	3
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	3	32	9	158	53	452	207	215	6	12	328	127
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88
PHF Volume:	3	37	10	179	60	511	234	244	7	13	371	144
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	3	37	10	179	60	511	234	244	7	13	371	144
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	3	37	10	179	60	511	234	244	7	13	371	144
Saturation Flow Module:												
Sat/Lane:	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850
Adjustment:	0.97	0.97	0.97	0.96	0.96	0.75	0.92	0.95	0.85	0.95	0.95	0.85
Lanes:	0.07	0.73	0.20	1.50	0.50	2.00	2.00	2.00	1.00	1.00	2.00	1.00
Final Sat.:	122	1318	354	2670	897	2768	3410	3515	1573	1758	3515	1573
Capacity Analysis Module:												
Vol/Sat:	0.03	0.03	0.03	0.07	0.07	0.18	0.07	0.07	0.00	0.01	0.11	0.09
Crit Moves:	****				****		****				****	
Green/Cycle:	0.12	0.12	0.12	0.17	0.17	0.35	0.17	0.22	0.22	0.22	0.27	0.44
Volume/Cap:	0.24	0.24	0.24	0.39	0.39	0.53	0.39	0.31	0.02	0.03	0.39	0.21
Delay/Veh:	24.7	24.7	24.7	22.4	22.4	16.2	22.4	19.8	18.3	18.4	18.2	10.4
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	24.7	24.7	24.7	22.4	22.4	16.2	22.4	19.8	18.3	18.4	18.2	10.4
LOS by Move:	C	C	C	C	C	B	C	B	B	B	B	B
HCM2kAvgQ:	1	1	1	2	2	5	2	2	0	0	3	2

****

Note: Queue reported is the number of cars per lane.

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Washington 50 Project
Opening Year (2017) Without Project
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Level Of Service Computation Report
2000 HCM Operations Method (Future Volume Alternative)

Intersection #8 Jefferson Street (NS) at Avenue 50 (EW)

Cycle (sec):	61	Critical Vol./Cap.(X):	0.484
Loss Time (sec):	16 (Y+R=4.0 sec)	Average Delay (sec/veh):	21.4
Optimal Cycle: OPTIMIZED		Level Of Service:	C

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Protected			Protected			Protected			Protected		
Rights:	Include			Include			Include			Include		
Min. Green:	7	7	7	7	7	7	7	7	7	7	7	7
Lanes:	1 0	3 0	1	2 0	3 0	1	1 0	2 0	1	1 0	1 0	1
Volume Module:												
Base Vol:	24	413	33	137	340	77	94	160	19	46	119	84
Growth Adj:	1.24	1.24	1.24	1.24	1.24	1.24	1.24	1.24	1.24	1.24	1.24	1.24
Initial Bse:	30	512	41	170	422	95	117	198	24	57	148	104
Added Vol:	0	183	0	0	160	3	2	7	0	0	8	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	30	695	41	170	582	98	119	205	24	57	156	104
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
PHF Volume:	31	732	43	179	612	104	125	216	25	60	164	110
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	31	732	43	179	612	104	125	216	25	60	164	110
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	31	732	43	179	612	104	125	216	25	60	164	110
Saturation Flow Module:												
Sat/Lane:	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850
Adjustment:	0.95	0.91	0.85	0.92	0.91	0.85	0.95	0.95	0.85	0.95	1.00	0.85
Lanes:	1.00	3.00	1.00	2.00	3.00	1.00	1.00	2.00	1.00	1.00	1.00	1.00
Final Sat.:	1758	5051	1573	3410	5051	1573	1758	3515	1573	1758	1850	1573
Capacity Analysis Module:												
Vol/Sat:	0.02	0.14	0.03	0.05	0.12	0.07	0.07	0.06	0.02	0.03	0.09	0.07
Crit Moves:		****		****			****				****	
Green/Cycle:	0.20	0.30	0.30	0.11	0.21	0.21	0.15	0.16	0.16	0.16	0.18	0.18
Volume/Cap:	0.09	0.49	0.09	0.46	0.57	0.31	0.49	0.38	0.10	0.21	0.49	0.38
Delay/Veh:	20.0	17.9	15.6	26.1	22.4	20.9	25.5	23.2	21.9	22.5	23.6	22.9
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	20.0	17.9	15.6	26.1	22.4	20.9	25.5	23.2	21.9	22.5	23.6	22.9
LOS by Move:	B	B	B	C	C	C	C	C	C	C	C	C
HCM2kAvgQ:	1	5	1	2	5	2	3	2	0	1	3	2

Note: Queue reported is the number of cars per lane.

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Opening Year (2017) With Project

Washington 50 Project
Opening Year (2017) With Project
Evening Peak Hour

Level Of Service Computation Report
2000 HCM Operations Method (Future Volume Alternative)

Intersection #1 Eisenhower Drive (NS) at Avenue 50 (EW)

Cycle (sec):	60	Critical Vol./Cap.(X):	0.285
Loss Time (sec):	16 (Y+R=4.0 sec)	Average Delay (sec/veh):	17.6
Optimal Cycle: OPTIMIZED		Level Of Service:	B

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Protected			Protected			Protected			Protected		
Rights:	Include			Include			Include			Include		
Min. Green:	7	7	7	7	7	7	7	7	7	7	7	7
Lanes:	1 0	2 0	1	1 0	2 0	1	1 0	0 1	0	1 0	1 0	1
Volume Module:												
Base Vol:	6	204	29	15	354	15	12	11	5	63	6	18
Growth Adj:	1.24	1.24	1.24	1.24	1.24	1.24	1.24	1.24	1.24	1.24	1.24	1.24
Initial Bse:	7	253	36	19	439	19	15	14	6	78	7	22
Added Vol:	2	2	7	7	3	0	0	0	3	8	0	8
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	9	255	43	26	442	19	15	14	9	86	7	30
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
PHF Volume:	10	276	47	28	479	20	16	15	10	93	8	33
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	10	276	47	28	479	20	16	15	10	93	8	33
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	10	276	47	28	479	20	16	15	10	93	8	33
Saturation Flow Module:												
Sat/Lane:	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850
Adjustment:	0.95	0.95	0.85	0.95	0.95	0.85	0.95	0.94	0.94	0.95	1.00	0.85
Lanes:	1.00	2.00	1.00	1.00	2.00	1.00	1.00	0.60	0.40	1.00	1.00	1.00
Final Sat.:	1758	3515	1573	1758	3515	1573	1758	1039	700	1758	1850	1573
Capacity Analysis Module:												
Vol/Sat:	0.01	0.08	0.03	0.02	0.14	0.01	0.01	0.01	0.01	0.05	0.00	0.02
Crit Moves:	****				****			****		****		
Green/Cycle:	0.12	0.24	0.24	0.24	0.36	0.36	0.13	0.12	0.12	0.14	0.13	0.13
Volume/Cap:	0.05	0.33	0.12	0.07	0.38	0.04	0.07	0.12	0.12	0.38	0.03	0.16
Delay/Veh:	23.6	19.1	18.1	17.8	14.4	12.5	23.1	24.0	24.0	24.4	22.9	23.7
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	23.6	19.1	18.1	17.8	14.4	12.5	23.1	24.0	24.0	24.4	22.9	23.7
LOS by Move:	C	B	B	B	B	B	C	C	C	C	C	C
HCM2kAvgQ:	0	2	1	0	4	0	0	1	1	2	0	1

Note: Queue reported is the number of cars per lane.

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Washington 50 Project
Opening Year (2017) With Project
Evening Peak Hour

Level Of Service Computation Report
2000 HCM Operations Method (Future Volume Alternative)

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Intersection #2 Washington Street (NS) at Eisenhower Drive (EW)

****

Cycle (sec):	119	Critical Vol./Cap.(X):	0.479
Loss Time (sec):	16 (Y+R=4.0 sec)	Average Delay (sec/veh):	19.1
Optimal Cycle:	OPTIMIZED	Level Of Service:	B

****

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Protected			Protected			Protected			Protected		
Rights:	Include			Ovl			Include			Include		
Min. Green:	7	7	7	7	7	7	7	7	7	7	7	7
Lanes:	1 0 3	0	1	1 0 3	0	1	2 0 1!	0	0	0 1 0	0	1
Volume Module:												
Base Vol:	9	592	3	24	944	450	299	2	4	4	2	4
Growth Adj:	1.24	1.24	1.24	1.24	1.24	1.24	1.24	1.24	1.24	1.24	1.24	1.24
Initial Bse:	11	734	4	30	1171	558	371	2	5	5	2	5
Added Vol:	10	100	0	0	111	14	18	0	10	0	0	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	21	834	4	30	1282	572	389	2	15	5	2	5
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
PHF Volume:	23	910	4	32	1398	624	424	3	16	5	3	5
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	23	910	4	32	1398	624	424	3	16	5	3	5
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	23	910	4	32	1398	624	424	3	16	5	3	5
Saturation Flow Module:												
Sat/Lane:	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850
Adjustment:	0.95	0.91	0.85	0.95	0.91	0.85	0.92	0.95	0.95	0.97	0.97	0.85
Lanes:	1.00	3.00	1.00	1.00	3.00	1.00	2.88	0.02	0.10	0.67	0.33	1.00
Final Sat.:	1758	5051	1573	1758	5051	1573	4909	29	174	1194	597	1573
Capacity Analysis Module:												
Vol/Sat:	0.01	0.18	0.00	0.02	0.28	0.40	0.09	0.09	0.09	0.00	0.00	0.00
Crit Moves:	****					****	****				****	
Green/Cycle:	0.06	0.49	0.49	0.16	0.59	0.75	0.16	0.14	0.14	0.09	0.06	0.06
Volume/Cap:	0.22	0.37	0.01	0.12	0.47	0.53	0.53	0.69	0.69	0.05	0.08	0.06
Delay/Veh:	54.5	19.3	15.8	43.1	14.3	6.7	46.3	52.2	52.2	50.1	53.3	53.2
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	54.5	19.3	15.8	43.1	14.3	6.7	46.3	52.2	52.2	50.1	53.3	53.2
LOS by Move:	D	B	B	D	B	A	D	D	D	D	D	D
HCM2kAvgQ:	1	7	0	1	11	10	6	7	7	0	0	0

****

Note: Queue reported is the number of cars per lane.

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Washington 50 Project
Opening Year (2017) With Project
Evening Peak Hour

Level Of Service Computation Report
2000 HCM Operations Method (Future Volume Alternative)

Intersection #3 Washington Street (NS) at Avenue 50 (EW)

Cycle (sec):	90	Critical Vol./Cap.(X):	0.444
Loss Time (sec):	16 (Y+R=4.0 sec)	Average Delay (sec/veh):	22.0
Optimal Cycle:	OPTIMIZED	Level Of Service:	C

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Protected			Protected			Protected			Protected		
Rights:	Include			Include			Include			Ovl		
Min. Green:	7	7	7	7	7	7	7	7	7	7	7	7
Lanes:	1 0	2 1	0	1 0	2 1	0	1 0	1 1	0	2 0	1 0	1
Volume Module:												
Base Vol:	5	475	37	111	725	54	25	44	3	62	49	86
Growth Adj:	1.24	1.24	1.24	1.24	1.24	1.24	1.24	1.24	1.24	1.24	1.24	1.24
Initial Bse:	6	589	46	138	899	67	31	55	4	77	61	107
Added Vol:	102	143	11	88	77	0	4	28	0	19	4	3
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	108	732	57	226	976	67	35	83	4	96	65	110
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
PHF Volume:	116	783	61	241	1044	72	37	88	4	103	69	117
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	116	783	61	241	1044	72	37	88	4	103	69	117
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	116	783	61	241	1044	72	37	88	4	103	69	117
Saturation Flow Module:												
Sat/Lane:	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850
Adjustment:	0.95	0.90	0.90	0.95	0.90	0.90	0.95	0.94	0.94	0.92	1.00	0.85
Lanes:	1.00	2.78	0.22	1.00	2.81	0.19	1.00	1.91	0.09	2.00	1.00	1.00
Final Sat.:	1758	4635	360	1758	4679	321	1758	3343	151	3410	1850	1573
Capacity Analysis Module:												
Vol/Sat:	0.07	0.17	0.17	0.14	0.22	0.22	0.02	0.03	0.03	0.03	0.04	0.07
Crit Moves:		****		****			****				****	
Green/Cycle:	0.17	0.37	0.37	0.30	0.49	0.49	0.08	0.08	0.08	0.08	0.08	0.38
Volume/Cap:	0.38	0.46	0.46	0.46	0.45	0.45	0.27	0.33	0.33	0.38	0.46	0.20
Delay/Veh:	33.9	22.0	22.0	26.4	15.1	15.1	40.2	39.9	39.9	40.2	41.7	18.9
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	33.9	22.0	22.0	26.4	15.1	15.1	40.2	39.9	39.9	40.2	41.7	18.9
LOS by Move:	C	C	C	C	B	B	D	D	D	D	D	B
HCM2kAvgQ:	3	7	7	6	8	8	1	2	2	2	2	2

Note: Queue reported is the number of cars per lane.

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Washington 50 Project
Opening Year (2017) With Project
Evening Peak Hour

Level Of Service Computation Report
2000 HCM Unsignalized Method (Future Volume Alternative)

Intersection #4 Washington Street (NS) at Project North Driveway (EW)

Average Delay (sec/veh): 1.0 Worst Case Level Of Service: B[11.8]

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Uncontrolled			Uncontrolled			Stop Sign			Stop Sign		
Rights:	Include			Include			Include			Include		
Lanes:	0 0	2 1	0	0 0	3 0	0	0 0	0 0	0	0 0	0 0	1
Volume Module:												
Base Vol:	0	517	0	0	790	0	0	0	0	0	0	0
Growth Adj:	1.24	1.24	1.24	1.24	1.24	1.24	1.24	1.24	1.24	1.24	1.24	1.24
Initial Bse:	0	641	0	0	980	0	0	0	0	0	0	0
Added Vol:	0	81	71	0	166	0	0	0	0	0	0	174
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	0	722	71	0	1146	0	0	0	0	0	0	174
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
PHF Volume:	0	760	75	0	1206	0	0	0	0	0	0	183
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
FinalVolume:	0	760	75	0	1206	0	0	0	0	0	0	183
Critical Gap Module:												
Critical Gp:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	6.9
FollowUpTim:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	3.3
Capacity Module:												
Cnflict Vol:	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	291
Potent Cap.:	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	712
Move Cap.:	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	712
Volume/Cap:	xxxx	xxxx	xxxx	xxxx	xxxx	xxxx	xxxx	xxxx	xxxx	xxxx	xxxx	0.26
Level Of Service Module:												
2Way95thQ:	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	1.0
Control Del:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	11.8
LOS by Move:	*	*	*	*	*	*	*	*	*	*	*	B
Movement:	LT - LTR - RT			LT - LTR - RT			LT - LTR - RT			LT - LTR - RT		
Shared Cap.:	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx
SharedQueue:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx
Shrd ConDel:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx
Shared LOS:	*	*	*	*	*	*	*	*	*	*	*	*
ApproachDel:	xxxxxx			xxxxxx			xxxxxx			11.8		
ApproachLOS:	*			*			*			B		

Note: Queue reported is the number of cars per lane.

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Washington 50 Project
Opening Year (2017) With Project
Evening Peak Hour

Level Of Service Computation Report
1994 HCM Operations Method (Future Volume Alternative)

Intersection #5 Washington Street (NS) at Calle Tampico (EW)

Cycle (sec):	75	Critical Vol./Cap.(X):	0.639
Loss Time (sec):	16 (Y+R=4.0 sec)	Average Delay (sec/veh):	13.3
Optimal Cycle:	OPTIMIZED	Level Of Service:	B

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Protected			Protected			Split Phase			Split Phase		
Rights:	Include			Ovl			Include			Include		
Min. Green:	7	7	7	7	7	7	7	7	7	7	7	7
Lanes:	1 0	2	1 0	1 0	2	0 1	2	1 0	0 1	1 0	0	1 0
Volume Module:												
Base Vol:	13	268	20	27	946	218	219	42	13	20	27	16
Growth Adj:	1.24	1.24	1.24	1.24	1.24	1.24	1.24	1.24	1.24	1.24	1.24	1.24
Initial Bse:	16	332	25	33	1173	270	272	52	16	25	33	20
Added Vol:	3	47	0	14	67	50	52	4	2	0	5	17
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	19	379	25	47	1240	320	324	56	18	25	38	37
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
PHF Volume:	20	404	26	51	1321	341	345	60	19	26	41	39
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	20	404	26	51	1321	341	345	60	19	26	41	39
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.10	1.10	1.00	1.05	1.00	1.10	1.10	1.00	1.00	1.00	1.00
FinalVolume:	20	444	29	51	1387	341	379	66	19	26	41	39
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.95	0.99	0.99	0.95	1.00	0.85	0.96	0.96	0.85	0.95	0.93	0.93
Lanes:	1.00	2.82	0.18	1.00	2.00	1.00	2.56	0.44	1.00	1.00	0.51	0.49
Final Sat.:	1805	5297	346	1805	3800	1615	4664	808	1615	1805	903	864
Capacity Analysis Module:												
Vol/Sat:	0.01	0.08	0.08	0.03	0.36	0.21	0.08	0.08	0.01	0.01	0.05	0.05
Crit Moves:	****				****			****			****	
Green/Cycle:	0.09	0.29	0.29	0.29	0.49	0.60	0.11	0.11	0.11	0.09	0.09	0.09
Volume/Cap:	0.12	0.29	0.29	0.10	0.74	0.35	0.74	0.74	0.11	0.16	0.49	0.49
Delay/Veh:	20.2	13.3	13.3	12.5	11.1	5.0	24.4	24.4	19.5	20.2	22.7	22.7
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	20.2	13.3	13.3	12.5	11.1	5.0	24.4	24.4	19.5	20.2	22.7	22.7
DesignQueue:	1	5	5	2	16	6	6	6	1	1	3	3

Note: Queue reported is the number of cars per lane.

Washington 50 Project
Opening Year (2017) With Project
Evening Peak Hour

Level Of Service Computation Report
2000 HCM Operations Method (Future Volume Alternative)

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Intersection #6 Washington Street (NS) at Avenue 52 (EW)

****

Cycle (sec):	60	Critical Vol./Cap.(X):	0.377
Loss Time (sec):	16 (Y+R=4.0 sec)	Average Delay (sec/veh):	18.5
Optimal Cycle:	OPTIMIZED	Level Of Service:	B

****

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Split Phase			Split Phase			Protected			Protected		
Rights:	Include			Ovl			Include			Ovl		
Min. Green:	7	7	7	7	7	7	7	7	7	7	7	7
Lanes:	0 0	1! 0	0	1 1	0 0	2	2 0	2 0	1	1 0	2 0	1
Volume Module:												
Base Vol:	0	6	3	126	9	363	165	164	0	3	253	100
Growth Adj:	1.24	1.24	1.24	1.24	1.24	1.24	1.24	1.24	1.24	1.24	1.24	1.24
Initial Bse:	0	7	4	156	11	450	205	203	0	4	314	124
Added Vol:	3	25	5	10	42	18	16	12	6	8	14	10
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	3	32	9	166	53	468	221	215	6	12	328	134
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88
PHF Volume:	3	37	10	188	60	530	250	244	7	13	371	152
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	3	37	10	188	60	530	250	244	7	13	371	152
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	3	37	10	188	60	530	250	244	7	13	371	152
Saturation Flow Module:												
Sat/Lane:	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850
Adjustment:	0.97	0.97	0.97	0.96	0.96	0.75	0.92	0.95	0.85	0.95	0.95	0.85
Lanes:	0.07	0.73	0.20	1.52	0.48	2.00	2.00	2.00	1.00	1.00	2.00	1.00
Final Sat.:	122	1318	354	2700	863	2768	3410	3515	1573	1758	3515	1573
Capacity Analysis Module:												
Vol/Sat:	0.03	0.03	0.03	0.07	0.07	0.19	0.07	0.07	0.00	0.01	0.11	0.10
Crit Moves:	****				****		****				****	
Green/Cycle:	0.12	0.12	0.12	0.18	0.18	0.36	0.18	0.22	0.22	0.22	0.26	0.44
Volume/Cap:	0.24	0.24	0.24	0.38	0.38	0.53	0.41	0.32	0.02	0.03	0.41	0.22
Delay/Veh:	24.7	24.7	24.7	22.0	22.0	15.8	22.3	20.0	18.5	18.5	18.8	10.6
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	24.7	24.7	24.7	22.0	22.0	15.8	22.3	20.0	18.5	18.5	18.8	10.6
LOS by Move:	C	C	C	C	C	B	C	B	B	B	B	B
HCM2kAvgQ:	1	1	1	2	2	5	3	2	0	0	3	2

****

Note: Queue reported is the number of cars per lane.

****

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Washington 50 Project
Opening Year (2017) With Project
Evening Peak Hour

Level Of Service Computation Report
2000 HCM Unsignalized Method (Future Volume Alternative)

Intersection #7 Project Driveway (NS) at Avenue 50 (EW)

Average Delay (sec/veh): 2.5 Worst Case Level Of Service: B[10.1]

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Stop Sign			Stop Sign			Uncontrolled			Uncontrolled		
Rights:	Include			Include			Include			Include		
Lanes:	0 0 0 0 1			0 0 0 0 0			0 0 1 1 0			1 0 2 0 0		
Volume Module:												
Base Vol:	0	0	0	0	0	0	0	192	0	0	197	0
Growth Adj:	1.24	1.24	1.24	1.24	1.24	1.24	1.24	1.24	1.24	1.24	1.24	1.24
Initial Bse:	0	0	0	0	0	0	0	238	0	0	244	0
Added Vol:	0	0	116	0	0	0	0	31	99	114	25	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	0	0	116	0	0	0	0	269	99	114	269	0
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
PHF Volume:	0	0	122	0	0	0	0	283	104	120	283	0
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
FinalVolume:	0	0	122	0	0	0	0	283	104	120	283	0
Critical Gap Module:												
Critical Gp:	xxxxx	xxxx	6.9	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	4.1	xxxx	xxxxx
FollowUpTim:	xxxxx	xxxx	3.3	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	2.2	xxxx	xxxxx
Capacity Module:												
Cnflict Vol:	xxxx	xxxx	194	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	387	xxxx	xxxxx
Potent Cap.:	xxxx	xxxx	821	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	1182	xxxx	xxxxx
Move Cap.:	xxxx	xxxx	821	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	1182	xxxx	xxxxx
Volume/Cap:	xxxx	xxxx	0.15	xxxx	xxxx	xxxx	xxxx	xxxx	xxxx	0.10	xxxx	xxxx
Level Of Service Module:												
2Way95thQ:	xxxx	xxxx	0.5	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	0.3	xxxx	xxxxx
Control Del:	xxxxx	xxxx	10.1	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	8.4	xxxx	xxxxx
LOS by Move:	*	*	B	*	*	*	*	*	*	A	*	*
Movement:	LT - LTR - RT			LT - LTR - RT			LT - LTR - RT			LT - LTR - RT		
Shared Cap.:	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx
SharedQueue:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx
Shrd ConDel:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx
Shared LOS:	*	*	*	*	*	*	*	*	*	*	*	*
ApproachDel:	10.1			xxxxxx			xxxxxx			xxxxxx		
ApproachLOS:	B			*			*			*		

Note: Queue reported is the number of cars per lane.

Traffix 7.9.0215 (c) 2008 Dowling Assoc. Licensed to KUNZMAN ASSOC, ORANGE CA

Washington 50 Project
Opening Year (2017) With Project
Evening Peak Hour

Level Of Service Computation Report
2000 HCM Operations Method (Future Volume Alternative)

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Intersection #8 Jefferson Street (NS) at Avenue 50 (EW)

****

Cycle (sec):	61	Critical Vol./Cap.(X):	0.507
Loss Time (sec):	16 (Y+R=4.0 sec)	Average Delay (sec/veh):	21.9
Optimal Cycle: OPTIMIZED		Level Of Service:	C

****

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L - T - R			L - T - R			L - T - R			L - T - R		
Control:	Protected			Protected			Protected			Protected		
Rights:	Include			Include			Include			Include		
Min. Green:	7	7	7	7	7	7	7	7	7	7	7	7
Lanes:	1 0 3	0	1	2 0 3	0	1	1 0 2	0	1	1 0 1	0	1
Volume Module:												
Base Vol:	24	413	33	137	340	77	94	160	19	46	119	84
Growth Adj:	1.24	1.24	1.24	1.24	1.24	1.24	1.24	1.24	1.24	1.24	1.24	1.24
Initial Bse:	30	512	41	170	422	95	117	198	24	57	148	104
Added Vol:	14	183	0	0	160	17	17	22	15	0	22	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	44	695	41	170	582	112	134	220	39	57	170	104
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
PHF Volume:	46	732	43	179	612	118	141	232	41	60	178	110
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	46	732	43	179	612	118	141	232	41	60	178	110
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	46	732	43	179	612	118	141	232	41	60	178	110
Saturation Flow Module:												
Sat/Lane:	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850
Adjustment:	0.95	0.91	0.85	0.92	0.91	0.85	0.95	0.95	0.85	0.95	1.00	0.85
Lanes:	1.00	3.00	1.00	2.00	3.00	1.00	1.00	2.00	1.00	1.00	1.00	1.00
Final Sat.:	1758	5051	1573	3410	5051	1573	1758	3515	1573	1758	1850	1573
Capacity Analysis Module:												
Vol/Sat:	0.03	0.14	0.03	0.05	0.12	0.08	0.08	0.07	0.03	0.03	0.10	0.07
Crit Moves:		****		****			****				****	
Green/Cycle:	0.19	0.28	0.28	0.11	0.20	0.20	0.16	0.17	0.17	0.17	0.19	0.19
Volume/Cap:	0.14	0.52	0.10	0.46	0.60	0.37	0.52	0.39	0.15	0.20	0.52	0.37
Delay/Veh:	20.6	18.8	16.3	26.1	23.0	21.7	25.4	22.9	21.8	22.0	23.7	22.5
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	20.6	18.8	16.3	26.1	23.0	21.7	25.4	22.9	21.8	22.0	23.7	22.5
LOS by Move:	C	B	B	C	C	C	C	C	C	C	C	C
HCM2kAvgQ:	1	5	1	2	5	2	3	2	1	1	4	2

****

Note: Queue reported is the number of cars per lane.

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APPENDIX D

City-Wide Cumulative Project Summary Report

Carl Ballard

From: Wally Nesbit [wnesbit@la-quinta.org]
Sent: Monday, August 10, 2015 2:12 PM
To: Carl Ballard
Subject: RE: Washington 50 Project

Hi Carl – I am sending the info for the Village project Bryan referenced. Sorry for the delays:

Mixed use project with 20 KSF of ground floor retail/office space and 84 condominium units above.
Located near SEC Desert Club Drive and Calle Tampico on 3.4 acres

Wallace Nesbit | Principal Planner
City of La Quinta
78495 Calle Tampico ◦ La Quinta, CA 92253
Ph. 760.777.7069
wnesbit@la-quinta.org
Website: www.la-quinta.org

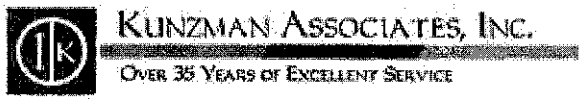
From: Carl Ballard [mailto:carl@traffic-engineer.com]
Sent: Wednesday, August 05, 2015 8:54 AM
To: Wally Nesbit
Subject: Washington 50 Project

Wally,

We are working on the Washington 50 traffic study.
The project is located in the SE corner of the Washington Street/Avenue 50 intersection.

Bryan McKinney mentioned that you are the person to talk to about cumulative projects.
Can you provide me with any cumulative projects information in our study area?

Thank you.



Carl Ballard, LEED GA | Principal
Kunzman Associates, Inc.
1111 Town & Country Road, Suite 34
Orange, California 92868
P: (714) 973-8383 x 202
C: (949) 244-5665
carl@traffic-engineer.com

"We are proud to announce that we now conduct Air Quality/Global Climate Change/Health Risk Assessments and Noise/Vibration studies."

Projects as of 8/1/2015

Unit counts as of 1/1/2013

CITY-WIDE CUMULATIVE PROJECT SUMMARY REPORT
PROJECTS APPROVED/UNDER CONSTRUCTION/PENDING

RESIDENTIAL PROJECTS

APPROVED AND /OR UNDER CONSTRUCTION

	Project	Lots/Units Approved	**Permits Issued**	Lot/Unit Balance	Round Acres
1.	TR 29894 - Hideaway - CONSTRUCTION Between Jefferson, Madison, 52 and 54 – SFD **Completed by 1/1/2011: 290**	495	**278**	218	560
2.	TR 33076 - Madison Club - CONSTRUCTION NEC Ave 54 and Madison - SFD **Completed by 1/1/2011: 35**	217	**33**	184	470
3.	TR 30092 - Piazza Serena – CONSTRUCTION NWC Ave 58 and Monroe – SFD **Completed by 1/1/2011: 37**	97	**37**	60	37
4.	TR 28983 - The Palms – CONSTRUCTION SWC Ave 56 and Monroe – SFD **Completed by 1/1/2011: 90**	101	**87**	14	200
5.	TT 30834 - Stone Creek – CONSTRUCTION North side Ave 58, ½ mile west of Madison – SFD **Completed by 1/1/2011: 5**	76	**5**	71	29
6.	TR 31202 - Rancho Santana – CONSTRUCTION SWC Ave 52 and Monroe – SFD **Completed by 1/1/2011: 165**	201	**163**	40	77
7.	TR 31249 - Coral Ridge Estates – APPROVED South side Ave 58, ½ mile west of Madison – SFD **Completed by 1/1/2011: 0**	85	**0**	85	33
8.	TR 30138 – Diamonte – APPROVED North side Ave 52, ½ mile east of Jefferson – SFD **Completed by 1/1/2011: 0**	47	**0**	47	14
9.	SP 2001-055 – Centerpointe - CONSTRUCTION SEC Miles Ave and Washington – SFD/CONDO **Completed by 1/1/2011: 44**	224	**44**	180	55
10.	SP 2003-069 – Watermark – APPROVED NWC Ave 52 and Jefferson Street – SFD **Completed by 1/1/2016: 12**	82	**0**	82	21
11.	SP 2003-070 - Codorniz – CONSTRUCTION SEC Ave 52 and Jefferson Street – SFA **Completed by 1/1/2016: 60**	145	**55**	97	15
12.	SP 2004-072 - Schumacher – APPROVED NEC Ave 60 and Monroe Street – SFD **Completed by 1/1/2011: 0**	392	**0**	392	100
13.	TR 31910 – Capistrano – CONSTRUCTION West side Monroe St, ¼ mile north of Ave 58 – SFD **Completed by 1/1/2016: 15**	130	**15**	115	39
14.	TR 31348 - Estates at Point Happy – CONSTRUCT West side Washington St at Simon Dr. – SFD	72	**41**	31	38

	Completed by 1/1/2011: 41				
15.	SP 2003-067 – Andalusia – CONSTRUCTION Between Ave 58, Ave 60, west of Monroe – SFD **Completed by 1/1/2011: 160**	1,400	**160**	1,240	934
16.	TR 32279 – Palo Verde – CONSTRUCTION N side Ave 58, ½ mile W of Madison - SFD **Completed by 1/1/2011: 19**	31	**19**	12	10
17.	TT 32201 - Desert Shell – APPROVED NWC Ave 60 and Madison St – SFD **Completed by 1/1/2011: 0**	24	**0**	24	7
18.	TR 32225 – Santerra – CONSTRUCTION NWC Madison and Ave 58 – SFD **Completed by 1/1/2011: 20**	29	**17**	12	8
19.	TT 32597 - Laing Homes – APPROVED W/side Washington, north of Ave 48 – SFD **Completed by 1/1/2011: 0**	74	**0**	74	28
20.	TT 32848 – Khatchadourian – APPROVED N/side Ave 60, 660' west of Madison – SFD **Completed by 1/1/2011: 0**	16	**0**	16	4
21.	TR 32879 / 34642 - Griffin Ranch – CONSTRUCT S/side Ave 54 between Madison and Monroe – SFD **Completed by 1/1/2011: 70**	393	**67**	326	242
22.	TR 36744 – Estates at Griffin Lake – APPROVED S/side Ave 54 between Madison and Monroe – SFD **Completed by 1/1/2016: 0**	78	**0**	78	38
23.	TR 31852 – Polo Estates – APPROVED NWC Madison and Ave 52 – SFD **Completed by 1/1/2011: 0**	14	**0**	14	8
24.	TT 33085 – Core Homes – APPROVED W/side Madison, N of Ave 52 – SFD **Completed by 1/1/2011: 0**	7	**0**	7	5
25.	TR 33597 – Malaga – CONSTRUCTION SWC Ave 60 and Madison – SFD **Completed by 1/1/2011: 3**	57	**3**	54	23
26.	TR 32742 – Four Seasons – APPROVED W/side Monroe, ½ mi S of Ave 54 – SFD **Completed by 1/1/2011: 0**	40	**0**	40	15
27.	TR 33444 – Coral Canyon – APPROVED SW'ly of Jefferson and Ave 59 – SFD **Completed by 1/1/2011: 0**	219	**0**	219	331
28.	TR 31732, TT 31733 - Palizada – APPROVED SEC Ave 60 and Monroe – SFD **Completed by 1/1/2011: 6**	326	**0**	326	80
29.	SP 94-026 – Travertine – *CURRENT APPROVAL Between Jefferson, Madison, 62 and 64 *Revision to 1,400 units in process – NS* **Completed by 1/1/2011: 0**	2,300	**0**	2,300	909
30.	TR 28409 - Flores de Montañas - CONSTR - SFD NW'ly of Montezuma, NW edge of LQ Cove area **Completed by 1/1/2011: 9**	19	**9**	10	9
31.	TT 31087 – Avignon - APPROVED S/side Darby Road, E of Palm Royale – SFD **Completed by 1/1/2011: 0**	19	**0**	19	5

32.	TR 31874 - Carmela – CONSTRUCTION NWC Ave 53 and Monroe - SFD **Completed by 1/1/2011: 75**	101	**60**	41	38
33.	TR 31816 - Westward Shadows - CONSTRUCTION SEC Roadrunner Lane and Ave 46 – SFD **Completed by 1/1/2011: 20**	26	**18**	8	8
34.	TT 36537 - Signature – APPROVED In PGA West - old resort core site 100 CONDO/130SFD **Completed by 1/1/2011: 0**	230	**0**	230	42
35.	Tradition Club - CONSTRUCTION Ave 52/Bermudas – SFD **Completed by 1/1/2011: 205**	292	**203**	89	746
36.	The Quarry - CONSTRUCTION SW of Lake Cahuilla, off Ave 58 – SFD **Completed by 1/1/2011: 60**	100	**60**	40	367
37.	TR 28034 - Lion's Gate - CONSTRUCTION N/side Ave 58, 1/8 mile west of Madison – SFD **Completed by 1/1/2011: 15**	25	**17**	8	19
38	TR 34243 – Alta Verde –CONSTRUCTION N/side Ave 58, ¼ mile west of Madison - SFD **Completed by 1/1/2011: 3**	70	**29**	41	20
39.	TT 33336 – Mirage - APPROVED N/side Ave 58, W of Madison – SFD **Completed by 1/1/2011: 0**	23	**0**	23	9
40.	TT 33848 – Maman – APPROVED S/side Ave 58, W of Monroe – SFD **Completed by 1/1/2011: 0**	12	**0**	12	5
41.	TT 31434 – Monroe Dates – APPROVED W/side Monroe at Ave 61 – SFD **Completed by 1/1/2011: 0**	94	**0**	94	30
42.	TR 32571 – Dorado – APPROVED In Citrus CC off Jefferson – SFD **Completed by 1/1/2011:**	29	**10**	15	426
44.	TT 36279 - Orchards - APPROVED SW corner of Vista Bonita Trail and Madison – SFD **Completed by**	11	**0**	11	9
44.	TT 36403 - Schivarelli - APPROVED W/side Madison, N of Ave 60 – SFD **Completed by**	11	**0**	11	9

NS* - Unit type not specified

UNAPPROVED / IN PROCESS

A. Isle of Travertine Specific Plan – Amendment #1 of approved SP (see APPROVED AND/OR UNDER CONSTRUCTION listing) for 1,400 DU's (unit types unknown) on 907 acres. Commercial includes up to 500-key hotel rooms with unspecified associated commercial facilities, and one 18-hole golf course.

Completed by 1/1/2011: 0%
Completed by 1/1/2016: 50%

Note: It is unknown what type of units will be in the Travertine project

PROJECTS PROPOSED IN CITY SPHERE OF INFLUENCE

These are projects under review as City projects but are in unincorporated territory, within the City's SOI. There are also projects approved or under review by Riverside County.

No City applications at this time. Contact Riverside County directly for specific project info / updates under their jurisdiction.

COMMERCIAL PROJECTS

APPROVED / NOT YET PERMITTED:

B. Mayer Villa Capri – 104 KSF retail; 130,500 SF medical office – NEC Fred Waring/Washington

Completed by 1/1/2011: 0%
Completed by 1/1/2016: 0%

C. SilverRock Resort - One 18-hole golf course (existing) and potential second 18 holes with support services; to include a 15 KSF golf clubhouse, up to 71 KSF of conference space, a 140-room luxury/spa hotel, 200 lifestyle hotel units and up to 95 hotel-branded residential units; and resort mixed-use village of up to 390 units. The 575-acre SilverRock project site lies south of Avenue 52, west of Jefferson and north of Avenue 54, along the base of the Coral Reef Mtns. One course operational.

Completed at present: 18 golf holes

D. Shopping center – NWC Jefferson and Avenue 50 – 100 KSF neighborhood retail center. No approved plans, specific plan concept only

Completed by 1/1/2011: 0%
Completed by 1/1/2016: 0%

E. La Paloma Assisted Living care facility – Specific Plan approved for 236 assisted and independent living units, and 38 dementia and nursing care beds, at north and southeast corners of Ave 50 and Washington.

Completed by 1/1/2011: 0%
Completed by 1/1/2016: 0%

APPROVED & UNDER CONSTRUCTION:

F. Jefferson Square/Regency Marinita – 90,440 SF retail complex, SWC Jefferson and Fred Waring. 26 KSF under construction includes 14 KSF Fresh N' Easy market.

Completed at present: 40%
Completed by 1/1/2011: 40%
Completed by 1/1/2016: 40%

G. Washington Park – Approved for up to 731 KSF retail/office/restaurant. 80% complete (140 KSF retail and 16 KSF restaurant remain per SP). Between Adams Street, Avenue 47, Washington Street, Simon Drive and Highway 111. Includes Lowe's, Target, Circuit City, Steinmart, Trader Joe's, Office Depot, Century Theaters (opening Fall 2015). Most existing spaces occupied.

Completed at present: 80%
Completed by 1/1/2011: 80%
Completed by 1/1/2016: 95%

H. Centerpointe – Commercial only - Approved for a 130-room hotel and 196.5 KSF of medical office space. 84 KSF PH 1 of 196.5 KSF medical office space underway. 5,900 s.f. Applebee restaurant completed as part of 12 KSF of approved restaurant space (also see under Residential Projects). 130-room Homewood Suites completed in 2007.

Completed (commercial only) at present – 40% of office, 50% of restaurant, 100% hotel
Completed (commercial only) by 1/1/2011 – 40% of office, 50% of restaurant
Completed (commercial only) by 1/1/2016 – 75% of office, 100% of restaurant

I. Centre at La Quinta – Approved for up to 839 KSF; 539 KSF completed. About 65% complete. South side of Highway 111, between Dune Palms Road and Adams Street.

Completed at present: 65%
Completed by 1/1/2011: 75%
Completed by 1/1/2016: 85%

J. 111 La Quinta Centre – Approved for up to 618 KSF; about 80% completed. Located north side Hwy 111 between Washington and Adams.

Completed at present: 80%
Completed by 1/1/2011: 80%
Completed by 1/1/2016: 90%

K. Caleo Bay Park – 27,595 s.f. office complex, with 10 KSF completed to date. Located at NWC of Ave 48/Caleo Bay

Completed at present: 35%
Completed by 1/1/2011: 35%
Completed by 1/1/2016: 35%

L. La Quinta Square - 30,270 square feet of building area, including: 1) 3,750 square foot fast food restaurant with drive-through and 1,000 square feet of outdoor seating; 2) 17,020 square foot food market, and 3) 8,500 square foot retail building Southwest corner of Highway 111 and Simon Drive

Completed at present: 0%
Completed by 1/1/2016: 100%

Table 4-1

Trip Generation Summary

Trip Generation Rates

Land Use	ITE LU Code	Units[4]	AM Peak Hour			PM Peak Hour			Daily	Weekend Peak Hour		
			Inbound	Outbound	Total	Inbound	Outbound	Total		Inbound	Outbound	Total
Multiplex Movie Theater[1,2]	445/443	Seats	0.03	0.03	0.06	0.17	0.12	0.29	1.76	0.16	0.14	0.30
Shopping Center[1,3]	820	TSF	0.60	0.36	0.96	1.78	1.93	3.71	42.70	2.51	2.31	4.82

Project Trip Generation Summary

Land Use	Quantity	Units	AM Peak Hour			PM Peak Hour			Daily	Weekend Peak Hour		
			Inbound	Outbound	Total	Inbound	Outbound	Total		Inbound	Outbound	Total
Multiplex Movie Theater	2087	Seats	63	63	125	357	248	605	3,673	326	301	626
Shopping Center	27.373	TSF	16	10	26	49	53	102	1,169	69	63	132
Total			**79**	**73**	**151**	**406**	**301**	**707**	**4,842**	**394**	**364**	**758**

[1] Trip Generation Source: ITE (Institute of Transportation Engineers) *Trip Generation,* 9th Edition, 2012.

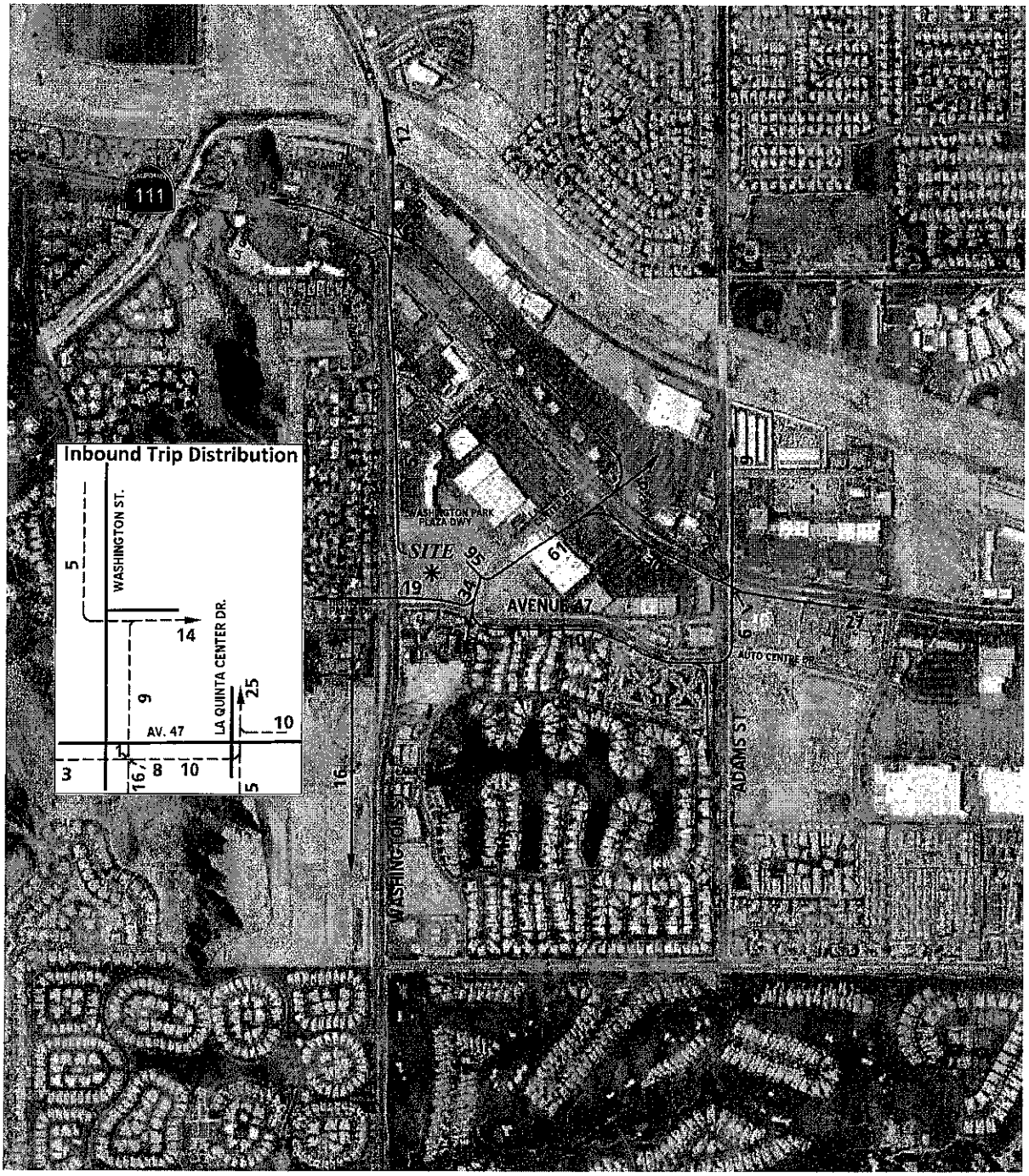
[2] ITE Land Use 443 Movie Theater without Matinee Weekday AM Peak Hour of generator and daily rates were utilized as ITE Land Use 445 Multiplex Movie Theater did not have a corresponding trip generation rate.

[3] Trip generation rates for the AM and PM peak hour of adjacent street traffic were utilized as AM and PM peak hour trip generation rates of the generator for ITE Land Use 820: Shopping Center are not shown in *Trip Generation* . Saturday peak hour of the generator rates were utilized as they are provided in *Trip Generation*. In addition, the average AM, PM, Saturday peak hour and weekday ADT rates as opposed to regression equation based rates were utilized due to the small size of the proposed use in relation to the average size of shopping centers surveyed in the *Trip Generation* manual. Lastly, as the proposed land use would represent a small portion of the existing Washington Park Shopping Center, utilization of the regression equation would significantly overstate the trip generation of this component of the Project.

[4] TSF = Thousand Square Feet

[5] Internal Capture Percentage Source: ITE *Trip Generation Handbook*, 2nd Edition

EXHIBIT 4-1: PROJECT TRIP DISTRIBUTION



LEGEND:

10 = PERCENT TO/FROM PROJECT

⟵ = OUTBOUND

⟵ - - = INBOUND

N

09228 - trips.dwg

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