TABLE 3-1

INTERSECTION ANALYSIS FOR EXISTING CONDITIONS

INTERSECTION	TRAFFIC CONTROL [1]	INTERSECTION APPROACH LANES [2]												DELAY [3] (SECS.)		LEVEL OF SERVICE	
		NORTH-BOUND			SOUTH-BOUND			EAST-BOUND			WEST-BOUND						
		L	T	R	L	T	R	L	T	R	L	T	R	AM	PM	AM	PM
Eisenhower Drive (NS) at:																	
• Calle Sinaloa (EW)	AWS	1	2	d	1	2	d	0	1	d	1	1	1	13.5	18.0	B	C
Avenida Navarro (NS) at:																	
• Avenida Montezuma (EW)	YIELD	0	1	0	0	1	0	0	1	0	0	1	0	3.3	3.3	A	A
Driveway 1 (NS) at:																	
• Avenida Montezuma (EW)	CSS	0	1	0	0	0	0	0	1	0	0	1	0	9.0	9.1	A	A
Driveway 2 (NS) at:																	
• Avenida Montezuma (EW)	CSS	0	1	0	0	0	0	0	1	0	0	1	0	9.0	9.1	A	A
Avenida Bermudas (NS) at:																	
• Avenida Montezuma (EW)	AWS	1	1	0	0	1	0	1	0	1	0	0	0	8.8	9.4	A	A
• Calle Estado (North) (EW)	CSS	0	1	0	0	1	0	0	0	0	0	1	0	9.6	9.7	A	A
• Driveway 3 (EW)	CSS	1	1	0	0	1	0	0	1	0	0	0	0	9.0	9.7	A	A
• Calle Estado (South) (EW)	CSS	0	1	0	1	1	0	0	0	0	0	0	0	9.8	10.7	A	A
• Calle Sinaloa/52nd Avenue (EW)	TS	0	1	1>	1	1	d	1	2	d	2	2	d	58.9	33.1	E	C
Washington Street (NS) at:																	
• Eisenhower Drive (EW)	TS	1	3	1	1	3	1>	2	1	0	0	1	1	50.6	51.2	D	D
• Calle Tampico (EW)	TS	1	3	d	1	2	1>	2	1	1	1	1	0	32.3	33.0	C	C
• 52nd Avenue (EW)	TS	0	1	0	1	1	2>	2	2	d	1	2	1>	80.1	32.6	F	C

[1] TS = Traffic Signal
CSS = Cross Street Stop
AWS = All Way Stop
YIELD = Roundabout

[2] When a right turn 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 Phase; d = Defacto Right-Turn Lane

[3] For signalized and unsignalized intersections, the intersection delay has been calculated using the HCM methodology. Delay and level of service calculated using the following analysis software: Traffix, Version 8.0 (2008). For intersections with cross street stop control, the delay and level of service for worst individual movement (or movements sharing a single lane) are shown.

Existing conditions operation analysis HCM worksheets are provided in Appendix "C".

H. City of La Quinta Required Roadway Segment Level of Service

The City of La Quinta has established LOS "D" as the minimum level of service for its roadway segments. Therefore, any road segment operating at LOS "E" or "F" will be considered deficient for the purposes of this analysis.

For purposes of this analysis, the Level of Service "E" capacity has been established as the acceptable capacity threshold for roadway segments. The capacities utilized for this analysis are consistent with the maximum daily capacity thresholds provided in *Engineering Bulletin #06-13*. The roadway capacity thresholds for City of La Quinta roadways are summarized in Table 3-2.

TABLE 3-2
ROADWAY CAPACITY THRESHOLDS

ROADWAY CLASSIFICATION	ROADWAY LANE CONFIGURATION	LOS "E" PEAK HOUR ROADWAY CAPACITY (VEHICLES PER DAY)
Augmented Major	8-Lane Divided	76,000
Major Roadway	6-Lane Divided	57,000
Primary Roadway	4-Lane Divided	38,000
Secondary Roadway	4-Lane Undivided	28,000
Modified Secondary Roadway	2-Lane Divided	19,000
Collector Roadway	2-Lane Undivided	14,000
Local Roadway	2-Lane Undivided	9,000

I. Existing Roadway Segment Level of Service

The City of La Quinta has established Level of Service capacities for the various types of roadway classifications. Table 3-3 shows the existing conditions roadway segment analysis with appropriate levels of service. As shown on Table 3-3, the study area roadway segments evaluated for this analysis were each found to operate at an acceptable level of service (i.e., LOS "A") based on the current ADTs and with the existing roadway design.

J. Existing Traffic Signal Warrant Analysis

For existing (2012) traffic conditions, the intersection of Eisenhower Drive at Calle Sinaloa appears to currently warrant a traffic signal based on the peak hour volume based warrant (2012 California Manual on Uniform Traffic Control Devices – based on the Federal Highway Administration's MUTCD, as amended for California). It is important to note that a signal warrant defines the

TABLE 3-3 (Page 1 of 2)

ROADWAY SEGMENT LEVEL OF SERVICE ANALYSIS FOR EXISTING TRAFFIC CONDITIONS [1]

ROADWAY SEGMENT	GENERAL PLAN ROADWAY CLASSIFICATION [2]	EXISTING NUMBER OF LANES	PEAK HOUR DIRECTIONAL LOS "E" CAPACITY [3] (VEHICLES PER DAY)	EXISTING DAILY SEGMENT VOLUMES	VOLUME TO CAPACITY	LOS[4]
Eisenhower Drive (NS):						
• N of Calle Sinaloa	Primary Arterial (4D)	4	38,000	9,200	0.24	A
• S of Calle Sinaloa	Primary Arterial (4D)	4	38,000	11,400	0.30	A
Avenida Navarro (NS):						
• North of Avenida Montezuma	Local Street (2U)	2	9,000	700	0.08	A
• South of Avenida Montezuma	Local Street (2U)	2	9,000	1,300	0.14	A
Avenida Bermudas (NS):						
• North of Avenida Montezuma	Collector (2U)	2	14,000	5,000	0.36	A
• Avenida Montezuma to Calle Estado N	Collector (2U)	2	14,000	3,900	0.28	A
• Calle Estado N to Driveay 3	Collector (2U)	2	14,000	3,900	0.28	A
• Driveway 3 to Calle Estado S	Collector (2U)	2	14,000	4,300	0.31	A
• S of Calle Estado	Collector (2U)	2	14,000	4,300	0.31	A
• N of Avenue 52	Collector (2U)	2	14,000	3,200	0.23	A
• S of Avenue 52	Secondary Arterial (4U)	4	28,000	12,900	0.46	A
Avenida Montezuma (NS):						
• NW of Avenida Navarro	Local Street (2U)	2	9,000	500	0.06	A
• SW of Avenida Navarro	Local Street (2U)	2	9,000	900	0.10	A
• Avenida Navarro to Driveway 1	Local Street (2U)	2	9,000	1,900	0.21	A
• Driveway 1 to Driveway 2	Local Street (2U)	2	9,000	1,900	0.21	A
• Driveway 2 to Avenida Bermudas	Local Street (2U)	2	9,000	2,200	0.24	A
Calle Estado N (NS):						
• E of Avenida Bermudas	Local Street (2U)	2	9,000	400	0.04	A
Calle Estado S (NS):						
• E of Avenida Bermudas	Local Street (2U)	2	9,000	300	0.03	A
Avenue 52 (EW):						
• W of Eisenhower Dr.	Local Street (2U)	2	9,000	3,600	0.40	A
• E of Eisenhower Dr.	Primary Arterial (4D)	4	38,000	6,900	0.18	A
• W of Avenida Bermudas	Primary Arterial (4D)	4	38,000	8,200	0.22	A
• E of Avenida Bermudas	Primary Arterial (4D)	4	38,000	19,000	0.50	A
• W of Washington Street	Primary Arterial (4D)	4	38,000	17,000	0.45	A
• E of Washington Street	Primary Arterial (4D)	4	38,000	12,000	0.32	A
Washington Street (NS):						
• N of Eisenhower Drive	Major Roadway (6D)	6	57,000	25,300	0.44	A
• S of Eisenhower Drive	Major Roadway (6D)	6	57,000	30,600	0.54	A
• N of Calle Tampico	Major Roadway (6D)	6	57,000	23,300	0.41	A
• S of Calle Tampico	Major Roadway (6D)	6	57,000	15,700	0.28	A
• N of Avenue 52	Major Roadway (6D)	6	57,000	14,500	0.25	A
• S of Avenue 52	Local Street (2U)	2	9,000	700	0.08	A
Eisenhower Drive (EW):						
• W of Washington Street	Primary Arterial (4D)	4	38,000	9,700	0.26	A
• E of Washington Street	Local Street (3D)	3	13,500	4,900	0.36	A

TABLE 3-3 (Page 2 of 2)

ROADWAY SEGMENT LEVEL OF SERVICE ANALYSIS FOR EXISTING TRAFFIC CONDITIONS [1]

ROADWAY SEGMENT	GENERAL PLAN ROADWAY CLASSIFICATION [2]	EXISTING NUMBER OF LANES	PEAK HOUR DIRECTIONAL LOS "E" CAPACITY [3] (VEHICLES PER DAY)	EXISTING DAILY SEGMENT VOLUMES	VOLUME TO CAPACITY	LOS[4]
Calle Tampico (NS):						
• W of Washington Street	Primary Arterial (4D)	4	38,000	10,700	0.28	A
• E of Washington Street	Collector (2U)	2	14,000	3,100	0.22	A
Driveway 1 (NS):						
• S of Avenida Montezuma	Local Street (2U)	2	9,000	600	0.07	A
Driveway 2 (NS):						
• S of Avenida Montezuma	Local Street (2U)	2	9,000	700	0.08	A
Driveway 3 (NS):						
• S of Avenida Montezuma	Local Street (2U)	2	9,000	500	0.06	A

[1] As indicated by City of La Quinta staff, impact criteria will utilize peak hour segments in the peak direction.

[2] General Plan Roadway Classification based on the adopted City of La Quinta Circulation Element.

[3] For the purpose of this analysis, the Level of service "D" capacity has been established as the acceptable capacity threshold for roadway segments. Therefore, volume to capacity ratios greater than 0.9 (LOS "E") is considered unacceptable. The capacity utilized for this analysis are consistent with the thresholds provided in EB 06-13.

[4] Level of Service:
A = 0.00 - 0.60
B = 0.61 - 0.70
C = 0.71 - 0.80
D = 0.81 - 0.90
E = 0.91 - 1.00
F = > 1.00

minimum condition under which the installation of a traffic signal might be warranted. Meeting this threshold condition does not require that a traffic control signal be installed at a particular location, but rather, that other traffic factors and conditions be evaluated in order to determine whether the signal is truly justified. It should also be noted that signal warrants do not necessarily correlate with level of service. An intersection may satisfy a signal warrant condition and operate at or above LOS "C" or operate below LOS "C" and not meet a signal warrant. As such, it is recommended that the intersection be monitored and a traffic signal installed at the City Traffic Engineer's discretion.

Traffic signal warrant analysis worksheets are provided in Appendix "D".

K. Transit Service

The study area is currently served by Sun Line Transit Route 70. Route 70 is a north-south transit route serving the general area along Washington Street, Calle Tampico, and Avenida Bermudas.

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4.0 PROJECTED TRAFFIC

A. Site Traffic

1. Trip Generation

Trip generation represents the amount of traffic which is attracted and produced by a development. The traffic generation for the project is based upon the specific land uses which have been planned for the development. The existing site currently consists of a gas station (8 vehicle fueling positions) with a 2,000 square foot convenience market and a 1,000 square foot high-turnover sit-down restaurant. The proposed Project consists of redeveloping the site to include a gas station (8 vehicle fueling positions) with a 3,890 square foot convenience market. A high-turnover sit-down restaurant is not proposed as part of the redevelopment.

Trip generation rates for this project are shown in Table 4-1. The trip generation rates are based upon data collected by the Institute of Transportation Engineers (ITE). In accordance with the City of La Quinta's *Engineering Bulletin #06-13,* if the ITE Trip Generation Report provides an equation for calculating trip generation that has a good regression curve fit to the data points (R^2> 0.7), the equation should be utilized in place of the peak hour average rates. In addition, the ITE rate of the peak hour of the generator should be utilized as opposed to the peak hour of the adjacent street traffic. For the Project AM and PM peak hour trip generation rates, the peak hour of the generator average rates have been utilized since the R^2 for the project land uses are not provided in the ITE Trip Generation Manual.

Both daily and peak hour trip generation for the proposed Project are shown in Table 4-2. The proposed Project is projected to generate a net total of approximately 673 trip-ends per day with 31 trips per hour during the AM peak hour and 39 trips per hour during the PM peak hour.

2. Trip Distribution

Trip distribution represents the directional orientation of traffic to and from the Project site. Trip distribution is heavily influenced by the geographical location of the site, the location of commercial and recreational opportunities and the proximity to the regional freeway system. The directional orientation of traffic has been determined by evaluating existing and proposed land uses and highways within the community and existing traffic volumes.

TABLE 4-1

PROJECT TRIP GENERATION RATES[1]

LAND USE	ITE CODE	UNITS[2]	AM PEAK HOUR			PM PEAK HOUR			DAILY
			IN	OUT	TOTAL	IN	OUT	TOTAL	
Convenience Market with Gasoline Pumps	853	TSF	22.62	22.61	45.23	31.28	31.29	62.57	845.60
High-Turnover Sit-Down Restaurant	932	TSF	7.04	6.49	13.53	9.99	8.50	18.49	127.15

[1] Source: ITE (Institute of Transportation Engineers) Trip Generation Manual, 8th Edition, 2008.
Per the City of La Quinta Traffic Study Guidelines, the trip generation rates have been based on the peak hour of the generator for each use rather than the peak hour of the adjacent street traffic.

[2] TSF = Thousand Square Feet

TABLE 4-2

PROJECT TRIP GENERATION SUMMARY

LAND USE	QUANTITY	UNITS[1]	AM PEAK HOUR			PM PEAK HOUR			DAILY
			IN	OUT	TOTAL	IN	OUT	TOTAL	
PROPOSED									
Convenience Market with Gasoline Pumps	3.890	TSF	88	88	176	122	122	243	3,289
Pass-By Reduction (50%)			*-44*	*-44*	*-88*	*-61*	*-61*	*-122*	*-1,645*
TOTAL			*44*	*44*	*88*	*61*	*61*	*122*	*1,645*
EXISTING									
Convenience Market with Gasoline Pumps	2.000	TSF	45	45	90	63	63	125	1,691
High-Turnover Restaurant	1.000	TSF	7	6	14	10	9	18	127
Pass-By Reduction on Gas Station (50%)			*-23*	*-23*	*-46*	*-31*	*-31*	*-62*	*-846*
TOTAL			*29*	*28*	*57*	*42*	*41*	*83*	*972*
VARIANCE (Proposed-Existing)			**15**	**16**	**31**	**19**	**20**	**39**	**673**

[1] TSF = Thousand Square Feet

The trip distribution for this study has been based upon near-term conditions, including those highway facilities which are either in place or are planned in the future, representing the opening occupancy time-frame for the project. The trip distribution patterns for the Project are depicted on Exhibit 4-A, respectively.

3. Modal Split

This traffic study does not assume that project trips will be reduced by transit service within the study area. Therefore, the results in this report represent a conservative condition with respect to vehicular traffic generation.

4. Trip Assignment

The assignment of traffic from the site to the adjoining roadway system has been based upon the site's trip generation, trip distribution and proposed arterial highway and local street systems. Based on the identified project traffic generation and distributions, project related ADT volumes are shown on Exhibit 4-B, respectively. Project AM and PM peak hour intersection turning movement volumes for are shown on Exhibits 4-C through 4-D.

B. Cumulative Development Traffic

1. Method of Projection

To assess existing plus ambient growth plus cumulative traffic conditions, other development traffic is combined with existing traffic and area-wide growth. Information about other developments which are being processed concurrently in the study area has been provided by City staff.

2. Non-Site Traffic for Study Area

Cumulative projects within one mile of the study area were included in the traffic analysis. Cumulative project information has been provided by the City of La Quinta. Cumulative project trip generation is based on the anticipated completion of each individual project in relation to the proposed Project by the City's Horizon Year (2025). These land use quantities by specific year were applied to generate cumulative traffic. Appendix "E" provides the locations of these cumulative developments.

Appendix "E" presents the other development land uses and trip generation rates. It should be noted that the trip generation rates utilized in the traffic impact analysis are based on the

PROJECT TRIP DISTRIBUTION

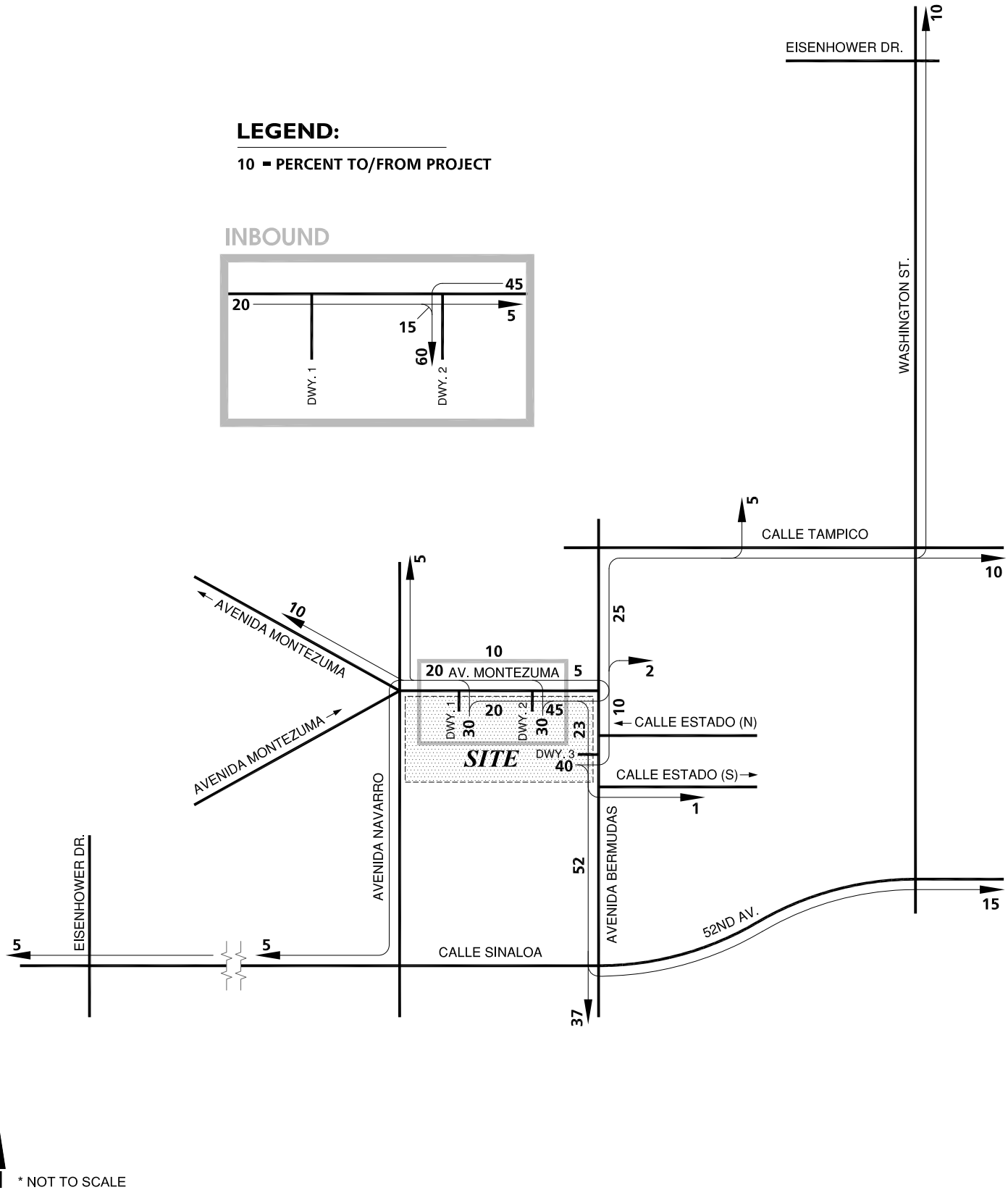


EXHIBIT 4-B

PROJECT (2013) AVERAGE DAILY TRAFFIC (ADT)

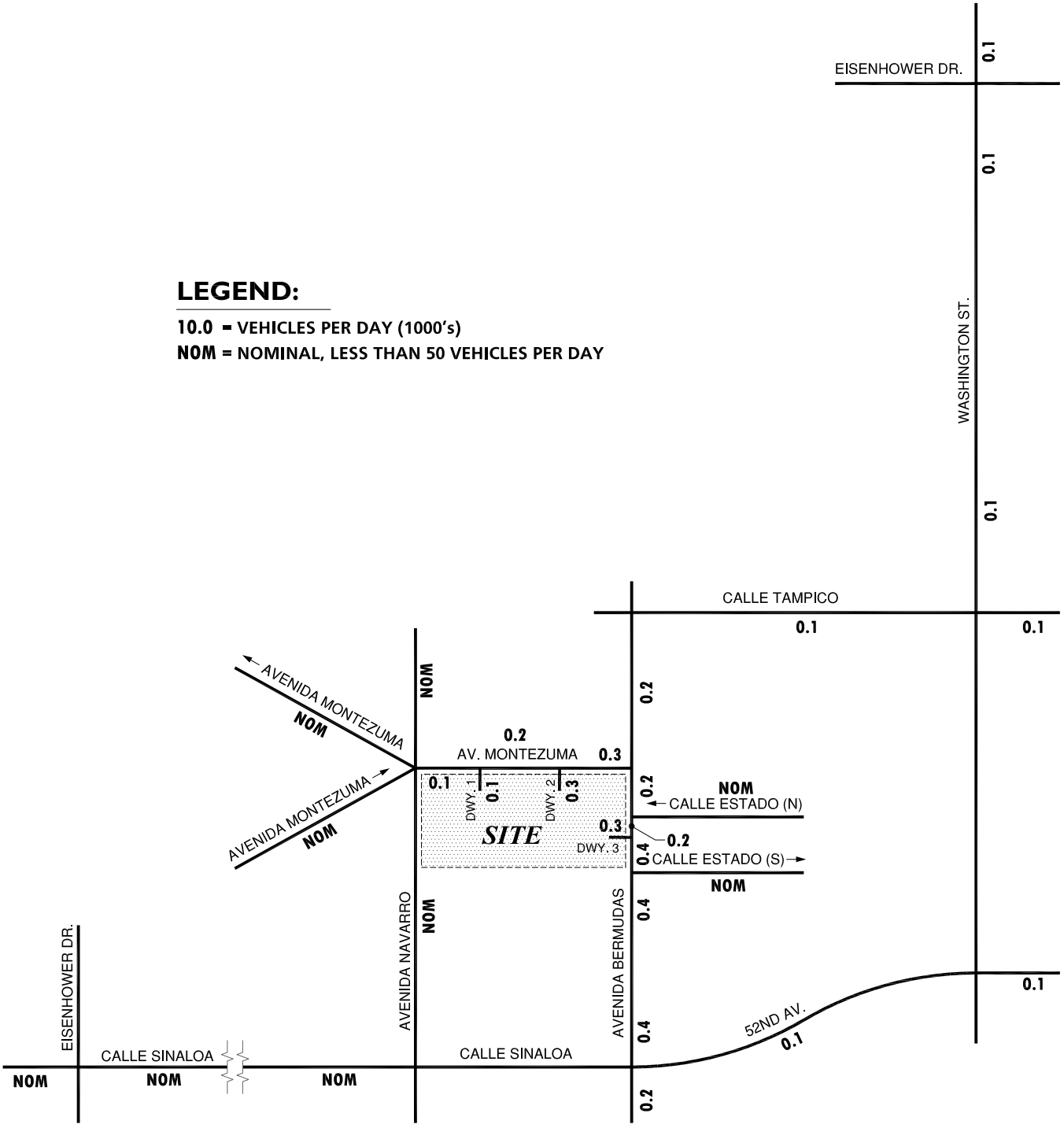


EXHIBIT 4-C

PROJECT (2013)
AM PEAK HOUR INTERSECTION VOLUMES

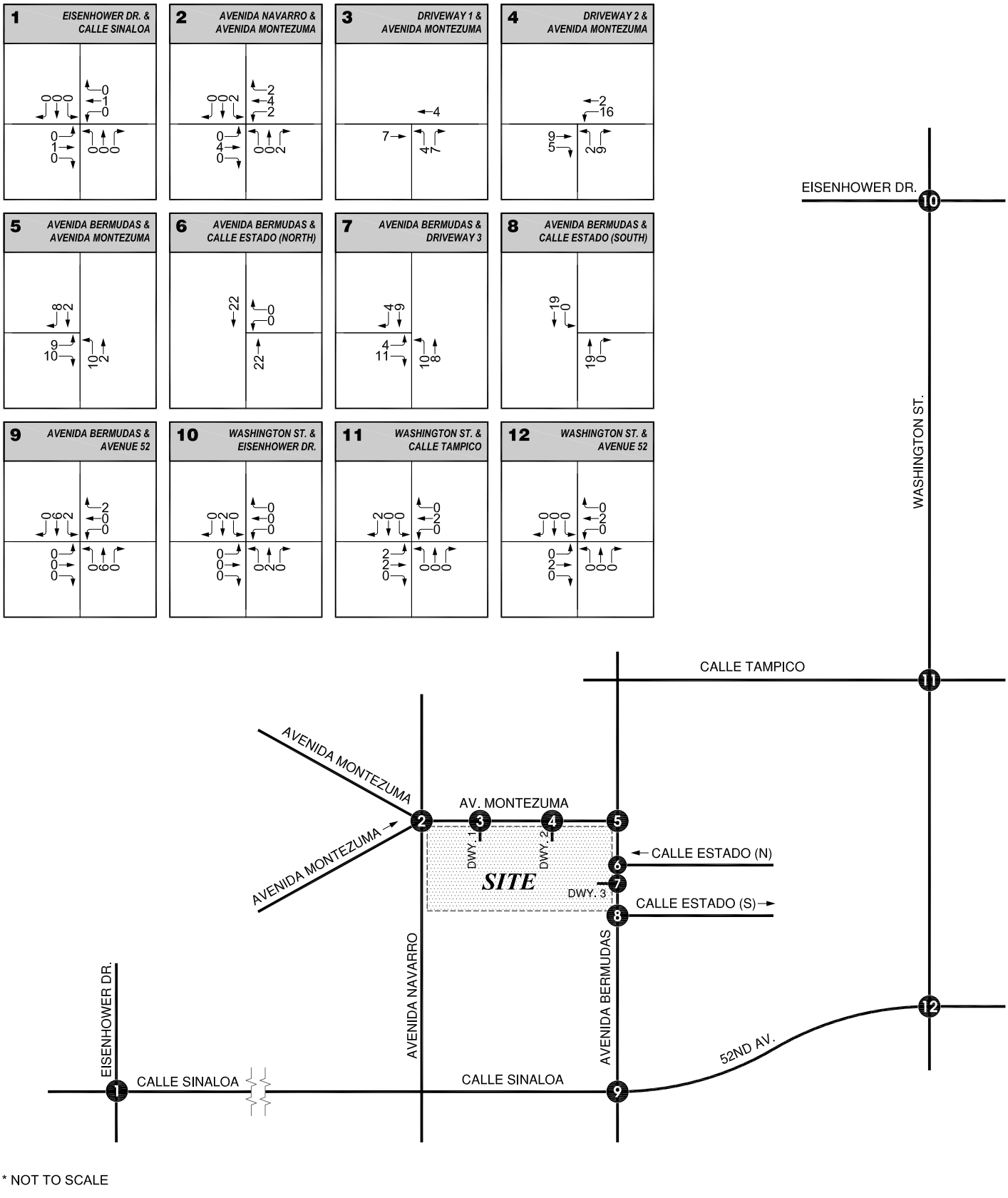
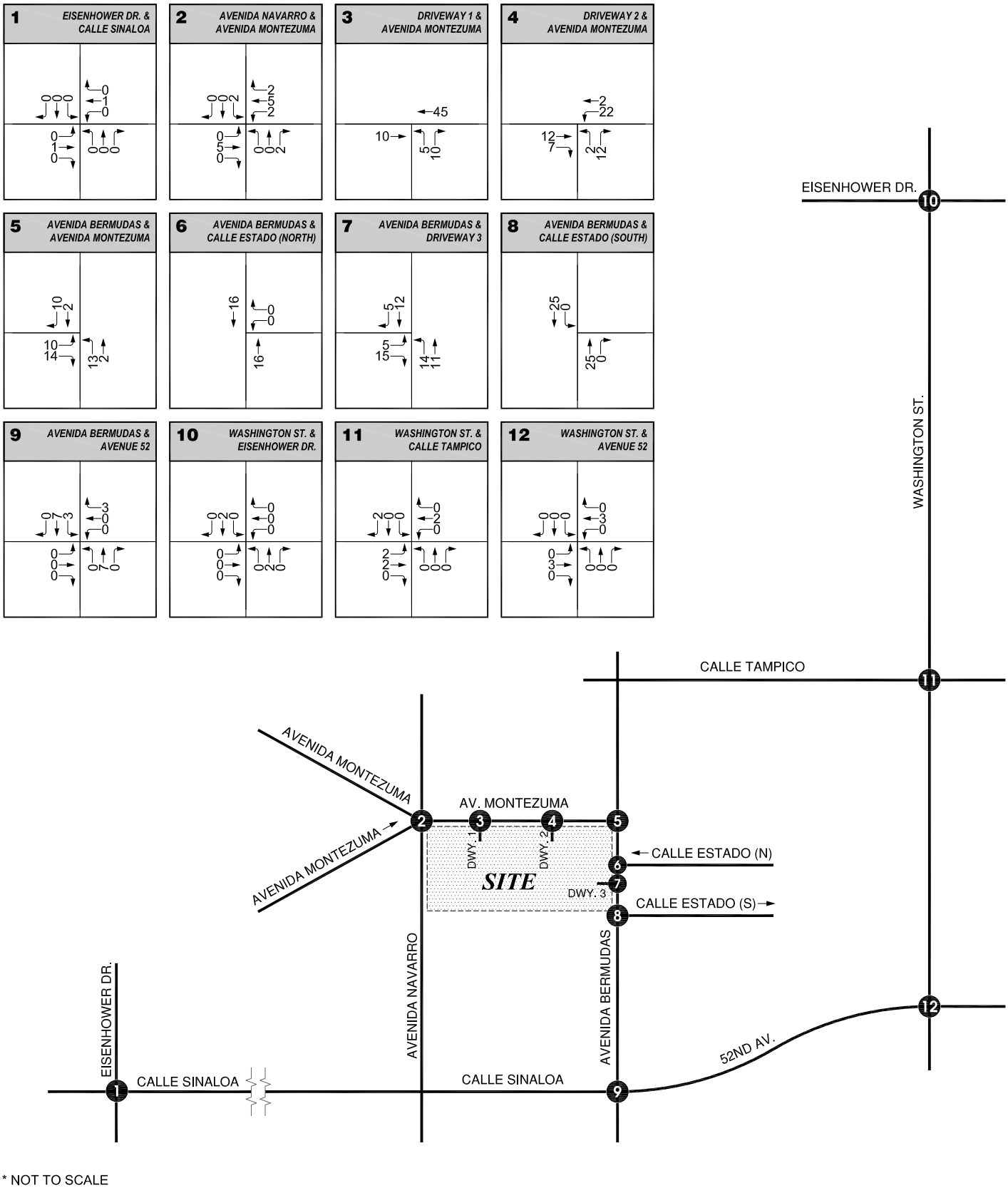


EXHIBIT 4-D

PROJECT (2013)
PM PEAK HOUR INTERSECTION VOLUMES



assumptions described in the City of La Quinta *Engineering Bulletin #06-13* in determining the appropriate assignment of trip generation. For land uses with a trip generation that has a good regression curve fit to the data points (R^2> 0.7), the equation is utilized in place of the peak hour trip generation average rates. In addition, the ITE rate of the peak hour of the generator should be utilized as opposed to the peak hour of the adjacent street traffic. If the R^2 is not provided in the ITE Trip Generation Manual and/or the trip generation does not have good regression curve fit and the peak hour of the generator rates are not available, the peak hour of the adjacent street traffic rates are utilized.

Cumulative developments are projected to generate a total of approximately 2,227 trip-ends per day with 70 trips per hour during the AM peak hour and 203 trips per hour during the PM peak hour. Appendix "E" contains the directional distribution patterns of the cumulative development traffic and cumulative development land use quantities.

Cumulative development ADT volumes for are shown on Exhibit 4-E. Cumulative development AM and PM peak hour intersection turning movement volumes are shown on Exhibits 4-F through 4-G.

3. Ambient Growth Rate

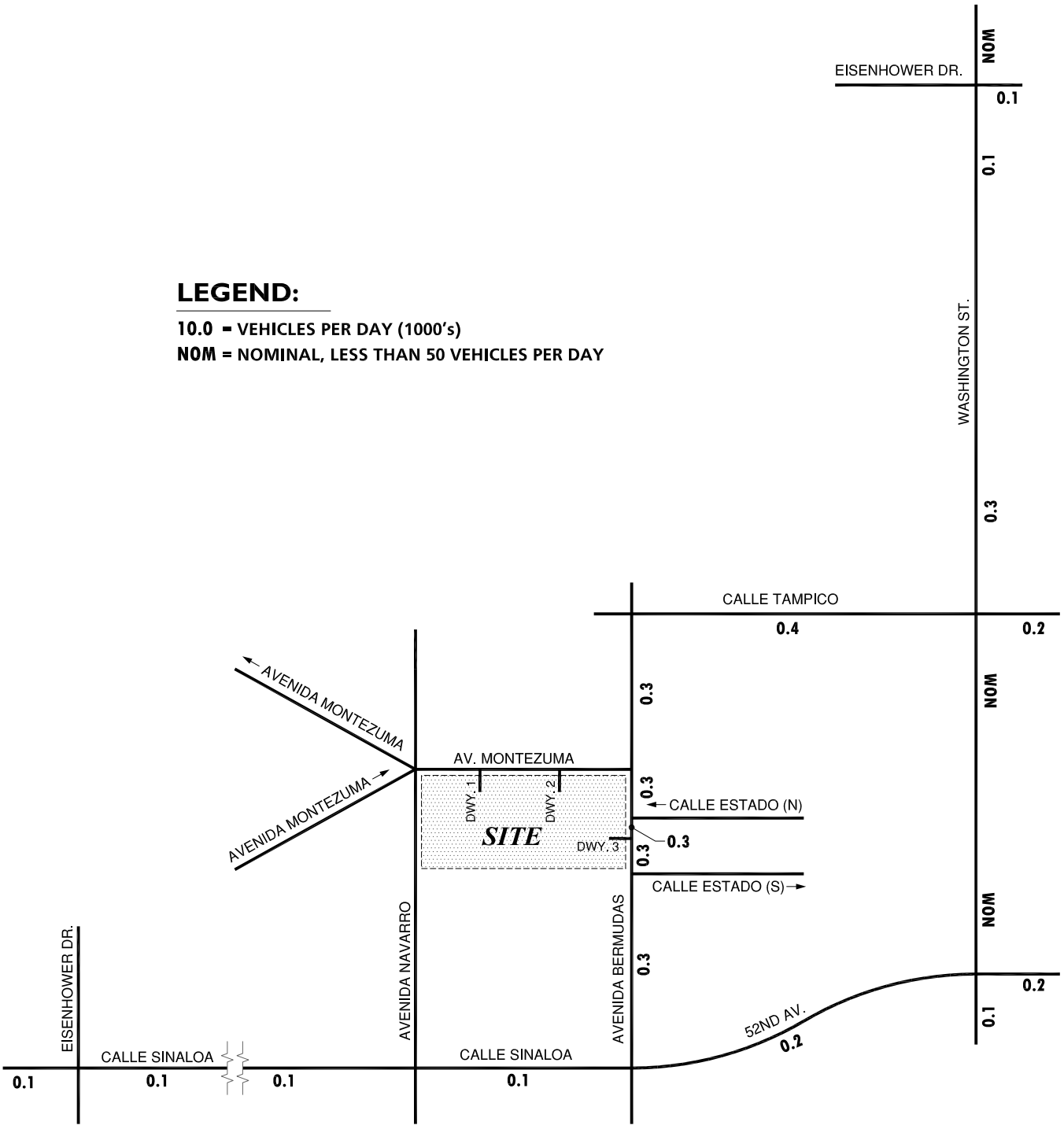
To account for area-wide growth on roadways, future traffic volumes have been calculated based on a 1% annual growth rate of existing traffic volumes. The ambient growth rate is applied over a one (1) year period. A total growth rate of 1% for Project opening year (2013) conditions and 13% for Horizon Year (2025) has been applied to existing traffic volumes. The area-wide growth was approved by City of La Quinta staff.

C. Total Future Traffic

Existing plus Project (E+P) ADT volumes are shown on Exhibit 4-H, Existing plus Ambient plus Cumulative (E+A+C) (2013) (Opening Year without Project) ADT volumes are shown on Exhibit 4-I. Existing plus Ambient plus Cumulative plus Project (E+A+C+P) (2013) (Opening Year with Project) ADT volumes are shown on Exhibit 4-J. Horizon Year (2025) with project ADT volumes are shown on Exhibit 4-K. Lastly, Horizon Year (2025) with project ADT volumes are shown on Exhibit 4-L.

EXHIBIT 4-E

CUMULATIVE DEVELOPMENT AVERAGE DAILY TRAFFIC (ADT)



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* NOT TO SCALE

EXHIBIT 4-F

CUMULATIVE DEVELOPMENT AM PEAK HOUR INTERSECTION VOLUMES

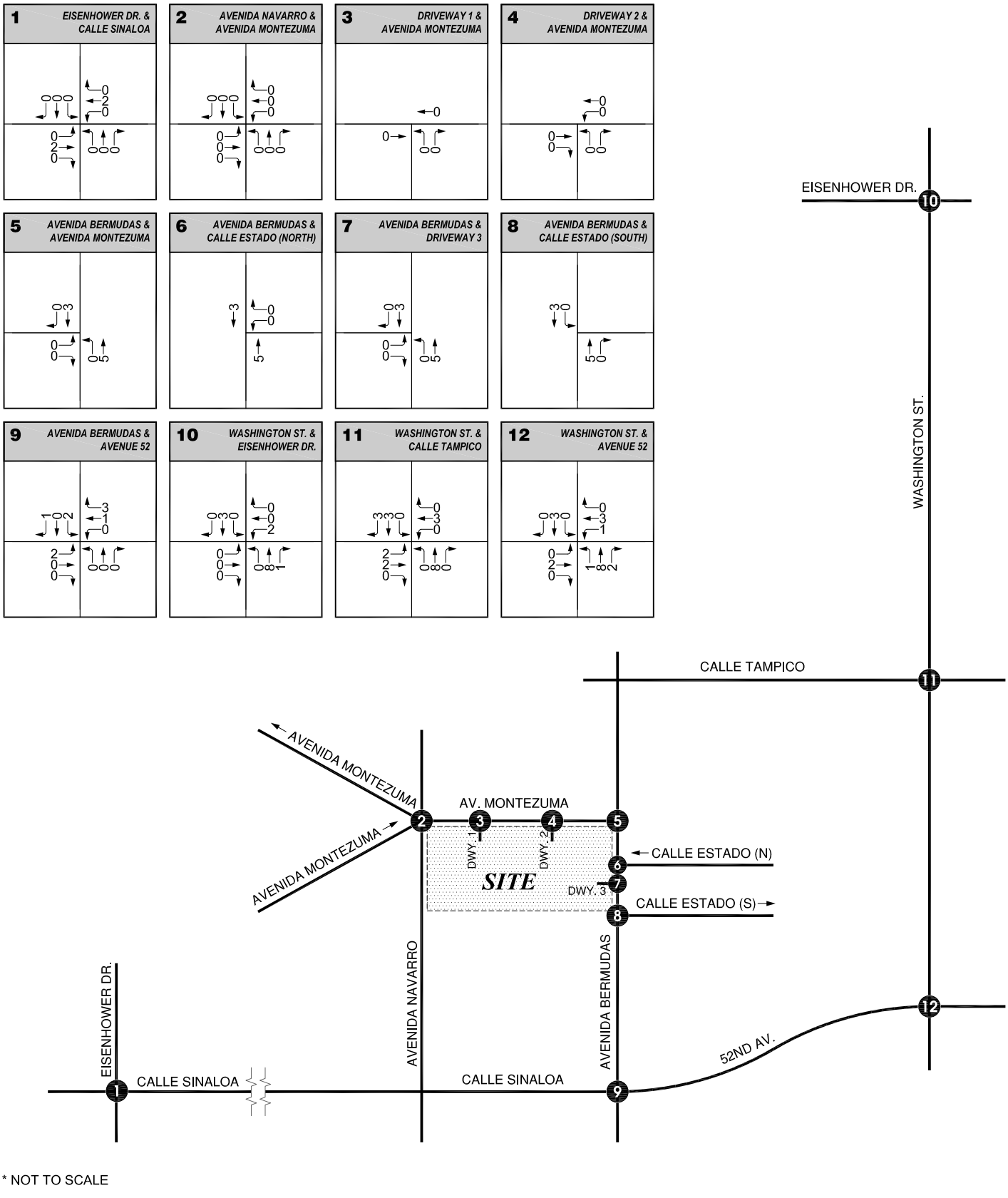

EXHIBIT 4-G

CUMULATIVE DEVELOPMENT
PM PEAK HOUR INTERSECTION VOLUMES

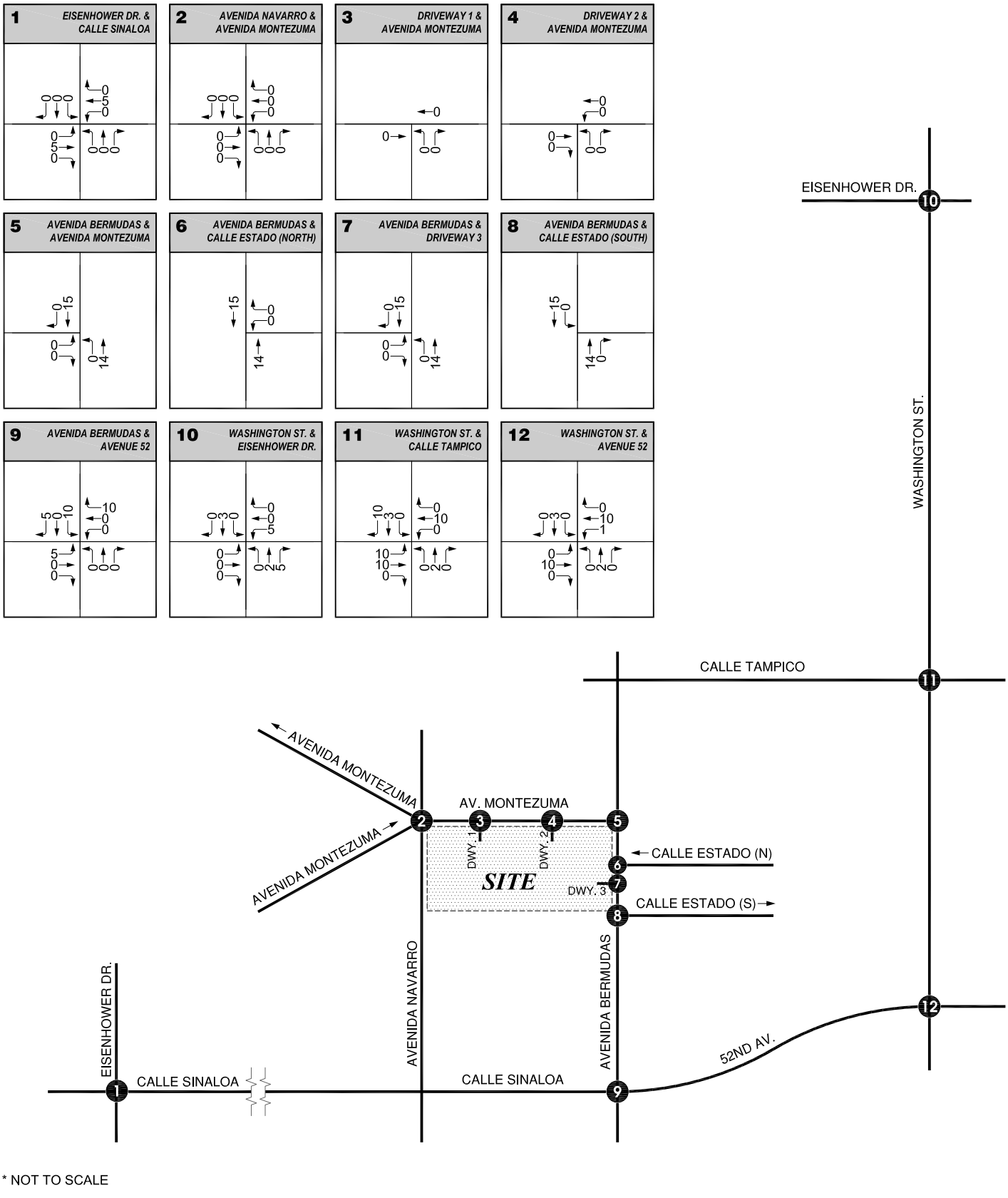

EXHIBIT 4-H

EXISTING PLUS PROJECT AVERAGE DAILY TRAFFIC (ADT)

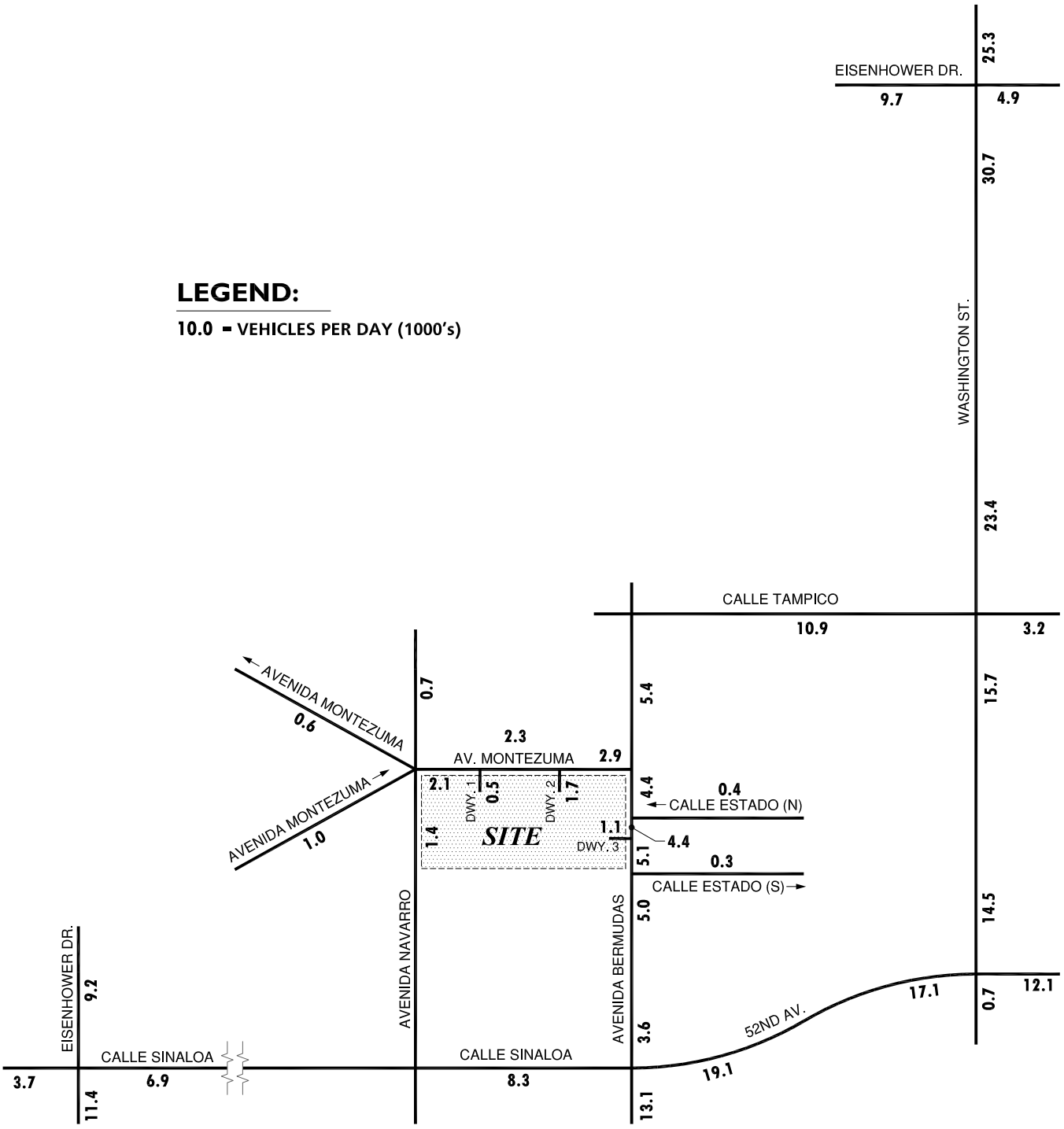

EXHIBIT 4-I

EXISTING PLUS AMBIENT GROWTH PLUS CUMULATIVE (2013) AVERAGE DAILY TRAFFIC (ADT)

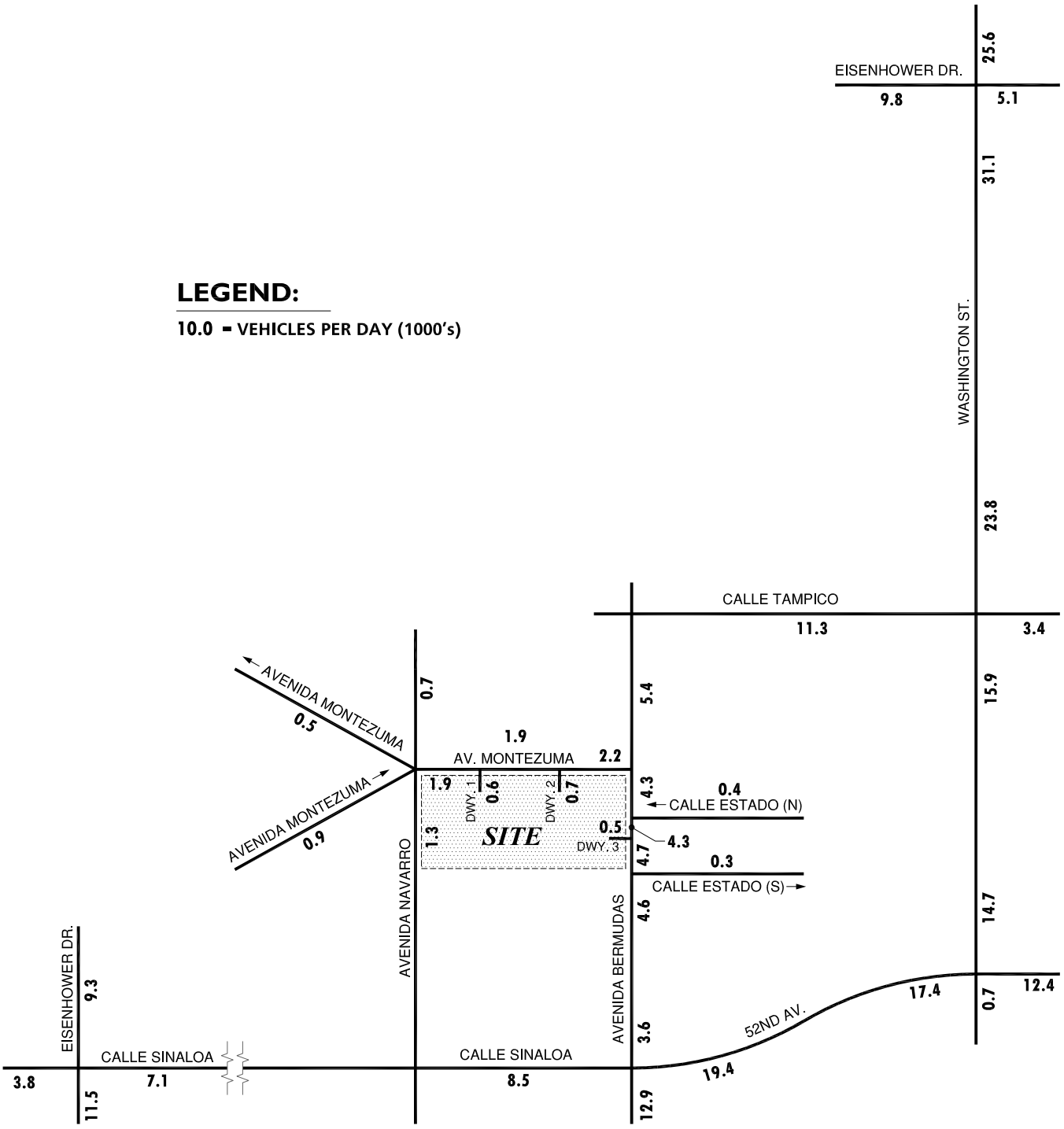

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EXHIBIT 4-J

EXISTING PLUS AMBIENT GROWTH PLUS CUMULATIVE PLUS PROJECT (2013) AVERAGE DAILY TRAFFIC (ADT)

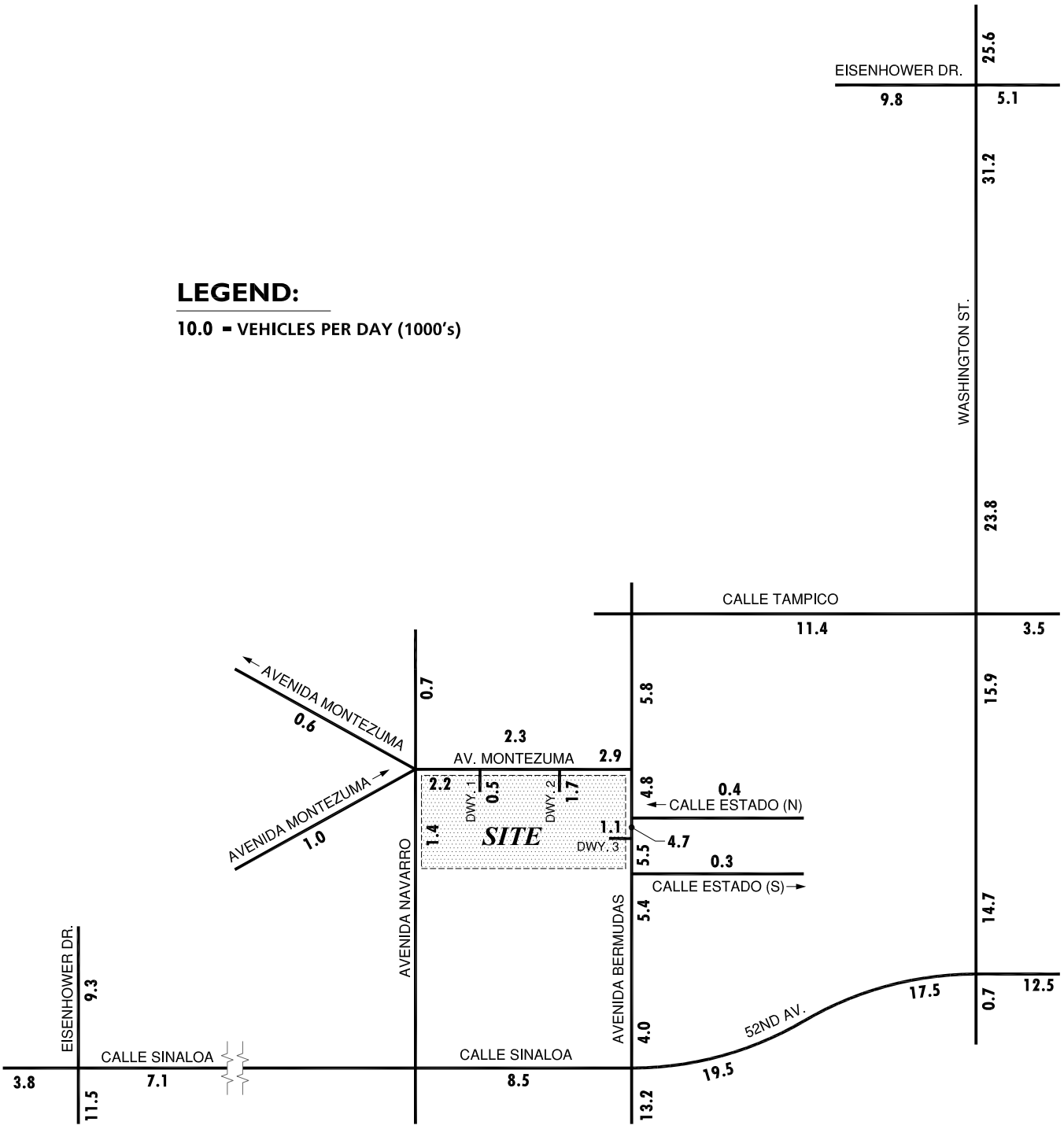

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EXHIBIT 4-K

HORIZON YEAR (2025) WITHOUT PROJECT AVERAGE DAILY TRAFFIC (ADT)

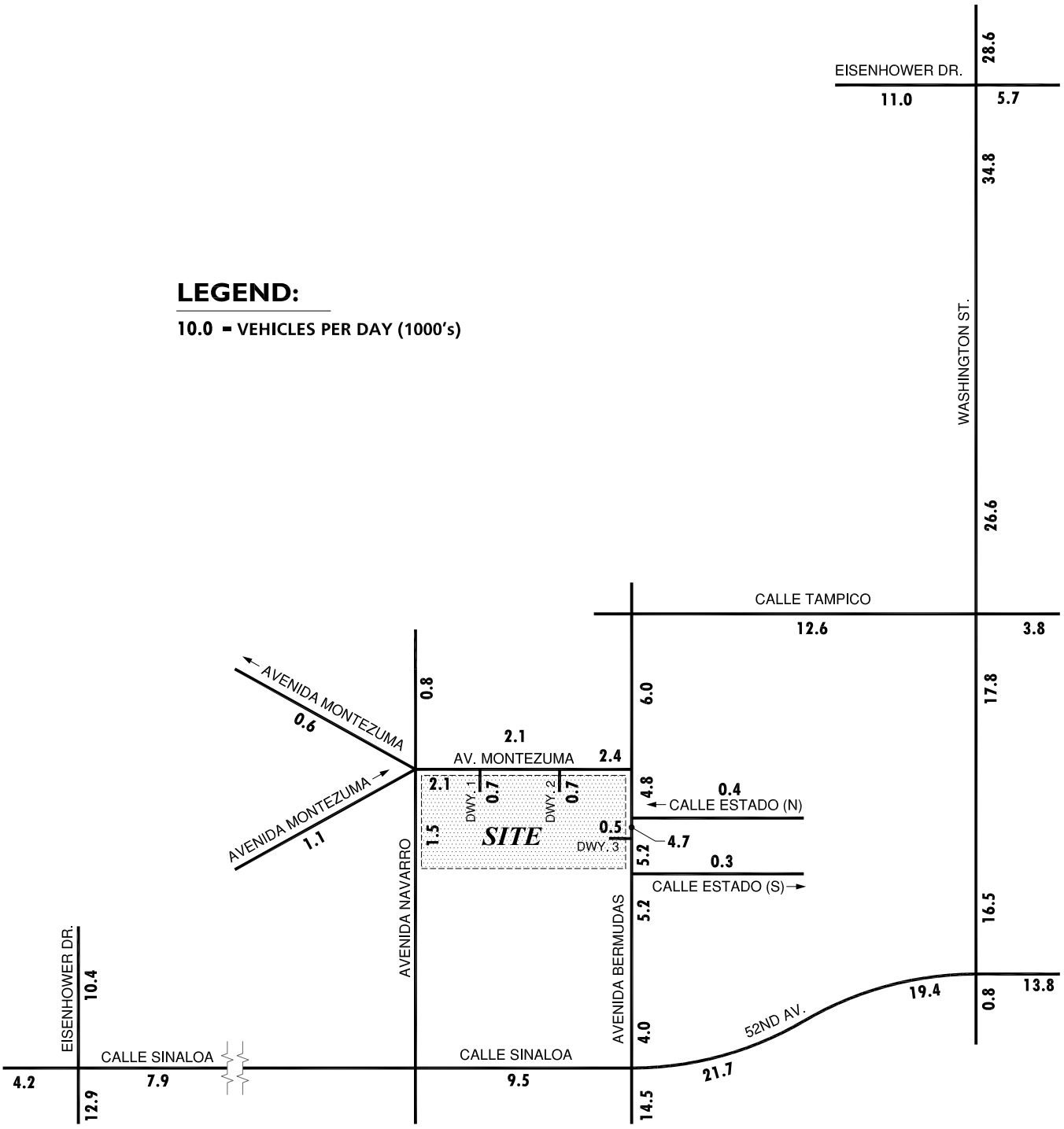
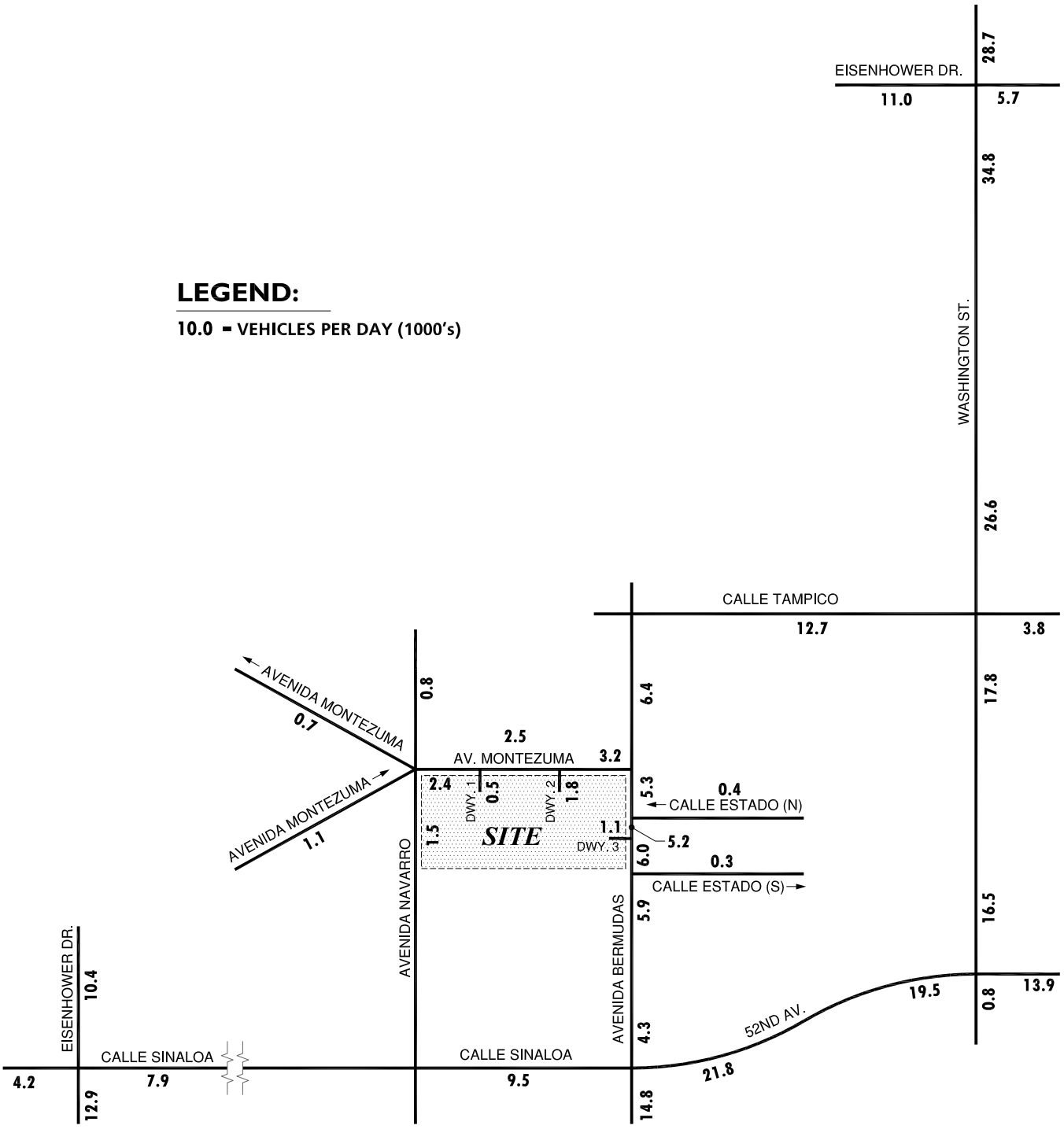


EXHIBIT 4-L

HORIZON YEAR (2025) WITH PROJECT AVERAGE DAILY TRAFFIC (ADT)



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5.0 TRAFFIC IMPACT ASSESSMENT METHODOLOGY

This section of the report describes the criteria used to determine project-related impacts. The traffic scenarios identified below are compared to each other to determine a potentially significant project-specific traffic impact.

A. Scenarios

In accordance with the City of La Quinta *Engineering Bulletin #06-13* and discussions with City staff, this study has analyzed the following scenarios:

1. Documentation of existing traffic conditions in the vicinity of the site,
2. Evaluation of Existing + Project traffic conditions,
3. Evaluation of Existing + Ambient + Cumulative (2013) (Opening Year without Project) traffic conditions,
4. Evaluation of Existing + Ambient + Cumulative + Project (2013) (Opening Year with Project) traffic conditions,
5. Evaluation of Existing + Project (2013) traffic conditions using one statistical standard deviation trip generation increase,
6. Evaluation of Existing + Ambient + Cumulative + Project (2013) traffic conditions using one statistical standard deviation trip generation increase analysis,
7. Evaluation of Horizon Year (2025) without project traffic conditions,
8. Evaluation of Horizon Year (2025) with project traffic conditions,
9. Determination of on-site and off-site improvements and system management actions needed to achieve City of La Quinta level of service requirements.

In looking at future year traffic volumes, three sources of traffic are considered in addition to the existing traffic volumes described above:

- Ambient Growth traffic ("A") – To account for area-wide growth on roadways, future traffic volumes have been calculated based on a one percent annual growth rate of existing traffic volumes. The ambient growth rate applied for Opening Year (2013) (E+A+C and E+A+C+P) conditions is 1% and the ambient growth rate applied for Horizon Year (2025) conditions is 13%. The area-wide growth was approved by City of La Quinta staff.
- Cumulative traffic ("C") - Traffic from particular projects that will be completed (or partially completed) and generating traffic by 2013 and 2025.
- Project Traffic ("P") – Traffic generated by the Project itself.

Existing Traffic Conditions

The existing conditions refer to the conditions which take into account the existing traffic counts taken in May 2010 (includes an increase of two percent for 2012 traffic conditions and a 15% seasonal adjustment) and existing lane configurations at study area intersections and roadway segments. Results of the analysis are discussed in Section 3.0 of the report.

Existing Plus Project Traffic Conditions

Existing + Project traffic conditions includes the addition of the Project which is added to the existing volumes. Existing geometry and intersection controls are analyzed. The analysis will identify any potentially significant project-specific traffic impacts.

Existing Plus Ambient Growth Plus Cumulative (2013) Traffic Conditions

Existing + Ambient Growth + Cumulative (2013) (Opening Year without Project) traffic conditions includes the cumulative development project traffic, which is added to the existing volumes with an ambient growth rate (1% total). Existing geometry and intersection controls are analyzed.

Existing Plus Ambient Growth Plus Cumulative Plus Project (2013) Traffic Conditions

Existing + Ambient Growth + Cumulative + Project (2013) (Opening Year with Project) traffic conditions includes the addition of the Project and cumulative development projects proposed within the study area to the existing volumes with a total 1% ambient growth rate. Existing geometry and intersection controls are analyzed. A comparison of the E+A+C (2013) and E+A+C+P (2013) traffic conditions analysis results will identify any cumulative impacts.

Horizon Year (2025) Without Project Traffic Conditions

Horizon Year (2025) without project traffic conditions includes the cumulative development project traffic, which is added to the existing volumes with an ambient growth rate (13% total). Existing geometry and intersection controls are analyzed.

Horizon Year (2025) With Project Traffic Conditions

Horizon Year (2025) with project traffic conditions includes the addition of the Project and cumulative development projects proposed within the study area to the existing volumes with a total 13% ambient growth rate. Existing geometry and intersection controls are analyzed. A comparison of the Horizon Year (2025) without project and Horizon Year (2025) with Project traffic conditions analysis results will identify any cumulative impacts.

B. With Improvement Scenarios

Per City of La Quinta's traffic study guidelines (*Engineering Bulletin #06-13*), the traffic impact analysis scenarios discussed in this section consist of calculations are based on two lane geometric scenarios: existing lane geometrics and additional improvements required to satisfy City of La Quinta's level of service requirements. Consistent with the City's traffic study guidelines, intersection improvements have only been recommended at deficient intersections that may have a potentially significant project-specific traffic impact.

It should be noted that the study area intersections do not have planned improvements identified in the City of La Quinta's Capital Improvement Program (CIP). Therefore, it has been assumed that the improvements recommended within this traffic impact analysis are not funded and are subject to fair share contributions from the project.

C. Potentially Significant Project-Specific Traffic Impact Criteria

Potentially significant project-specific traffic impacts are divided into two divisions: intersection and road segment impacts. Intersections and road segments are evaluated for both potentially significant project-specific and cumulative traffic impacts.

The potentially significant project-specific traffic impact criteria indicated below for both intersection and road segments are derived from the City of La Quinta traffic guidelines (*Engineering Bulletin #06-13*).

1. Potentially Significant Project-Specific Traffic Impacts to Intersections

Potentially Significant Project-Specific Traffic Impacts at Existing Plus Project

A potentially significant project-specific traffic impact is defined to occur at any signalized intersection if the project trips will result in the LOS for that intersection exceeding the criteria established in Table 5-1 for existing plus project conditions. For this analysis scenario, improvements fully funded by the City's Capital Improvement Program (CIP) are assumed to be in place. HCM input parameters are consistent with Attachment 2 of the *Engineering Bulletin #06-13* and are summarized in Appendix "B".

TABLE 5-1

IMPACT CRITERIA FOR EXISTING INTERSECTION ALREADY OPERATING AT LOS "E" OR LOS "F"	
SIGNIFICANT CHANGES IN LOS	
LOS E	An increase in delay of 2 seconds or more (HCM)
LOS F	An increase in delay of 1 second or more (HCM)

A potentially significant project-specific traffic impact at an unsignalized study intersection is defined to occur when, with project traffic included, an intersection has a projected LOS "F" on a side street for two-way stop control or LOS "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.

Cumulative Impacts

A potentially significant project-specific traffic impact is defined to occur at any signalized intersection if the project trips will result in the LOS for that intersection exceeding the criteria established in Table 5-1 above for either Opening Year (2013) or Horizon Year (2025) conditions. HCM input parameters are consistent with Attachment 2 of the *Engineering Bulletin #06-13* and are summarized in Appendix "B". For this analysis scenario, there are no improvements anticipated to be fully funded by the City's Capital Improvement Program (CIP).

A potentially significant project-specific traffic impact at an unsignalized study intersection is defined to occur when, with the addition of project traffic included, an intersection has a projected LOS "F" on a side street for two-way stop control or LOS "E" or worse for the intersection at an all-way stop control by the for either Opening Year (2013) or Horizon Year (2025), and the addition of project traffic results in an addition of 3 seconds or more of delay for any movement.

2. Potentially Significant Project-Specific Traffic Impacts to Roadway Segments

Potentially Significant Project-Specific Traffic Impacts at Existing Plus Project

A potentially significant project-specific traffic impact is defined to occur on any roadway segment if the segment is projected to be operating at LOS "E" or LOS "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 conditions. For this analysis scenario, there are no improvements anticipated to be fully funded by the City's Capital Improvement Program (CIP).

Cumulative Impacts

A potentially significant project-specific traffic impact is defined to occur on any studied road segment if the project would cause the existing LOS to fall to worse than LOS "D" for either Opening Year (2013) or Horizon Year (2025) traffic conditions. A potentially significant project-specific traffic impact is also defined to occur on any studied road segment that is already operating at LOS "E" or LOS "F", if the project traffic will increase the peak hour V/C in the peak direction by more than 0.02 with cumulative traffic volumes. For this analysis scenario, there are no improvements anticipated to be fully funded by the City's Capital Improvement Program (CIP).

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6.0 NEAR TERM CONDITIONS TRAFFIC ANALYSIS

This section of the report includes the results of the near-term HCM intersection analysis and roadway segment capacity analyses. Furthermore, this section identifies any potentially significant project-specific traffic impact to the study area intersections and roadway segments.

A. Level of Service for Existing Plus Project Conditions

1. Intersection Analysis for Existing + Project Conditions

E+P intersection levels of service are shown in Table 6-1. Table 6-1 shows HCM calculations based on existing lane geometry at the study area intersections. E+P AM and PM peak hour intersection turning movement volumes are shown on Exhibits 6-A and 6-B, respectively.

For E+P traffic conditions, the study area intersections are projected to operate at acceptable levels of service during the peak hours with existing geometry, except for the following two (2) intersections:

- Avenida Bermudas / Calle Sinaloa/52nd Avenue – LOS "E" AM Peak Hour Only
- Washington Street / 52nd Avenue – LOS "E" AM Peak Hour Only

It should be noted that these same two (2) intersections do not operate at acceptable levels of service under existing (2012) conditions. E+P intersection operation analysis worksheets are provided in Appendix "F".

Based on the City of La Quinta intersection impact criteria (see Table 5-1), an impact assessment is required if the intersection is operating at LOS "E" of "F". A potentially significant project-specific traffic impact is identified if an intersection is operating with LOS "E" and the project causes an increase in delay of two (2) seconds or more. For LOS "F", a potentially significant project-specific traffic impact is also defined if the Project causes an increase in delay of one (1) second or more. As shown on Table 6-2, the changes in delay at the intersections listed above do not meet the City of La Quinta's potentially significant impact criteria. Therefore, a potentially significant project-specific traffic impact has not been identified for E+P conditions.

Although counterintuitive, the phenomenon occurring on Table 6-2 (i.e., decrease in delay with the addition of project traffic) can occur with the HCM methodology. It is important to

TABLE 6-1

INTERSECTION ANALYSIS FOR EXISTING + PROJECT CONDITIONS

INTERSECTION	TRAFFIC CONTROL [1]	INTERSECTION APPROACH LANES [2]												DELAY [3] (SECS.)		LEVEL OF SERVICE	
		NORTH-BOUND			SOUTH-BOUND			EAST-BOUND			WEST-BOUND						
		L	T	R	L	T	R	L	T	R	L	T	R	AM	PM	AM	PM
Eisenhower Drive (NS) at:																	
• Calle Sinaloa (EW)	AWS	1	2	d	1	2	d	0	1	d	1	1	1	13.5	18.1	B	C
Avenida Navarro (NS) at:																	
• Avenida Montezuma (EW)	YIELD	0	1	0	0	1	0	0	1	0	0	1	0	3.3	3.4	A	A
Driveway 1 (NS) at:																	
• Avenida Montezuma (EW)	CSS	0	1	0	0	0	0	0	1	0	0	1	0	9.1	9.2	A	A
Driveway 2 (NS) at:																	
• Avenida Montezuma (EW)	CSS	0	1	0	0	0	0	0	1	0	0	1	0	9.2	9.3	A	A
Avenida Bermudas (NS) at:																	
• Avenida Montezuma (EW)	AWS	1	1	0	0	1	0	1	0	1	0	0	0	8.9	9.6	A	A
• Calle Estado (North) (EW)	CSS	0	1	0	0	1	0	0	0	0	0	1	0	9.9	9.9	A	A
• Driveway 3 (EW)	CSS	1	1	0	0	1	0	0	1	0	0	0	0	9.4	10.1	A	B
• Calle Estado (South) (EW)	CSS	0	1	0	1	1	0	0	0	0	0	0	0	10.0	10.9	A	B
• Calle Sinaloa/52nd Avenue (EW)	TS	0	1	1>	1	1	d	1	2	d	2	2	d	58.7	33.2	E	C
Washington Street (NS) at:																	
• Eisenhower Drive (EW)	TS	1	3	1	1	3	1>	2	1	0	0	1	1	50.0	51.3	D	D
• Calle Tampico (EW)	TS	1	3	d	1	2	1>	2	1	1	1	1	0	32.3	33.0	C	C
• 52nd Avenue (EW)	TS	0	1	0	1	1	2>	2	2	d	1	2	1>	80.0	32.6	E	C

[1] TS = Traffic Signal
CSS = Cross Street Stop
AWS = All Way Stop
YIELD = Roundabout

[2] When a right turn 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 Phase; d = Defacto Right-Turn Lane

[3] For signalized and unsignalized intersections, the intersection delay has been calculated using the HCM methodology. Delay and level of service calculated using the following analysis software: Traffix, Version 8.0 (2008). For intersections with cross street stop control, the delay and level of service for worst individual movement (or movements sharing a single lane) are shown.

TABLE 6-2

DETERMINATION OF POTENTIALLY SIGNIFICANT PROJECT-SPECIFIC TRAFFIC IMPACTS

INTERSECTION	TRAFFIC CONTROL [1]	EXISTING				EXISTING + PROJECT				CHANGE IN DELAY [2] (SECS.)		PROJECT IMPACT? [3]
		DELAY (SECS.)		LEVEL OF SERVICE		DELAY (SECS.)		LEVEL OF SERVICE				
		AM	PM	AM	PM	AM	PM	AM	PM	AM	PM	
Eisenhower Drive (NS) at:												
• Calle Sinaloa (EW)	AWS	13.5	18.0	B	C	13.5	18.1	B	C	0.0	0.1	N/A[4]
Avenida Navarro (NS) at:												
• Avenida Montezuma (EW)	YIELD	3.3	3.3	A	A	3.3	3.4	A	A	0.0	0.1	N/A[4]
Driveway 1 (NS) at:												
• Avenida Montezuma (EW)	CSS	9.0	9.1	A	A	9.1	9.2	A	A	0.1	0.1	N/A[4]
Driveway 2 (NS) at:												
• Avenida Montezuma (EW)	CSS	9.0	9.1	A	A	9.2	9.3	A	A	0.2	0.2	N/A[4]
Avenida Bermudas (NS) at:												
• Avenida Montezuma (EW)	AWS	8.8	9.4	A	A	8.9	9.6	A	A	0.1	0.2	N/A[4]
• Calle Estado (North) (EW)	CSS	9.6	9.7	A	A	9.9	9.9	A	A	0.3	0.2	N/A[4]
• Driveway 3 (EW)	CSS	9.0	9.7	A	A	9.4	10.1	A	B	0.4	0.4	N/A[4]
• Calle Estado (South) (EW)	CSS	9.8	10.7	A	A	10.0	10.9	A	B	0.2	0.2	N/A[4]
• Calle Sinaloa/52nd Avenue (EW)	TS	58.9	33.1	E	C	58.7	33.2	E	C	-0.2	0.1	NO
Washington Street (NS) at:												
• Eisenhower Drive (EW)	TS	50.6	51.2	D	D	50.0	51.3	D	D	-0.6	0.1	N/A[4]
• Calle Tampico (EW)	TS	32.3	33.0	C	C	32.3	33.0	C	C	0.0	0.0	N/A[4]
• 52nd Avenue (EW)	TS	80.1	32.6	F	C	80.0	32.6	E	C	-0.1	0.0	NO

[1] TS = Traffic Signal
CSS = Cross Street Stop
AWS = All Way Stop
YIELD = Roundabout

[2] Change in Delay = Existing plus Project - Existing

[3] A potentially significant project specific traffic impact is defined if the signalized intersection is operating with a LOS" E" and the project causes the delay to increase by 2 seconds or more or for LOS "F, if the project increases the delay by 1 second or more. For unsignalized intersections, if the intersection has a projected LOS "F" on a side street for two-way stop control or LOS "E" or worse for an all-way stop controlled intersection and the addition of project traffic results in an increase of 3 seconds or more of delay for any movement

[4] Not Applicable. Potentially significant project-specific traffic impact is not anticipated. Therefore, an impact assessment is not needed.

EXHIBIT 6-A

EXISTING PLUS PROJECT AM PEAK HOUR INTERSECTION VOLUMES

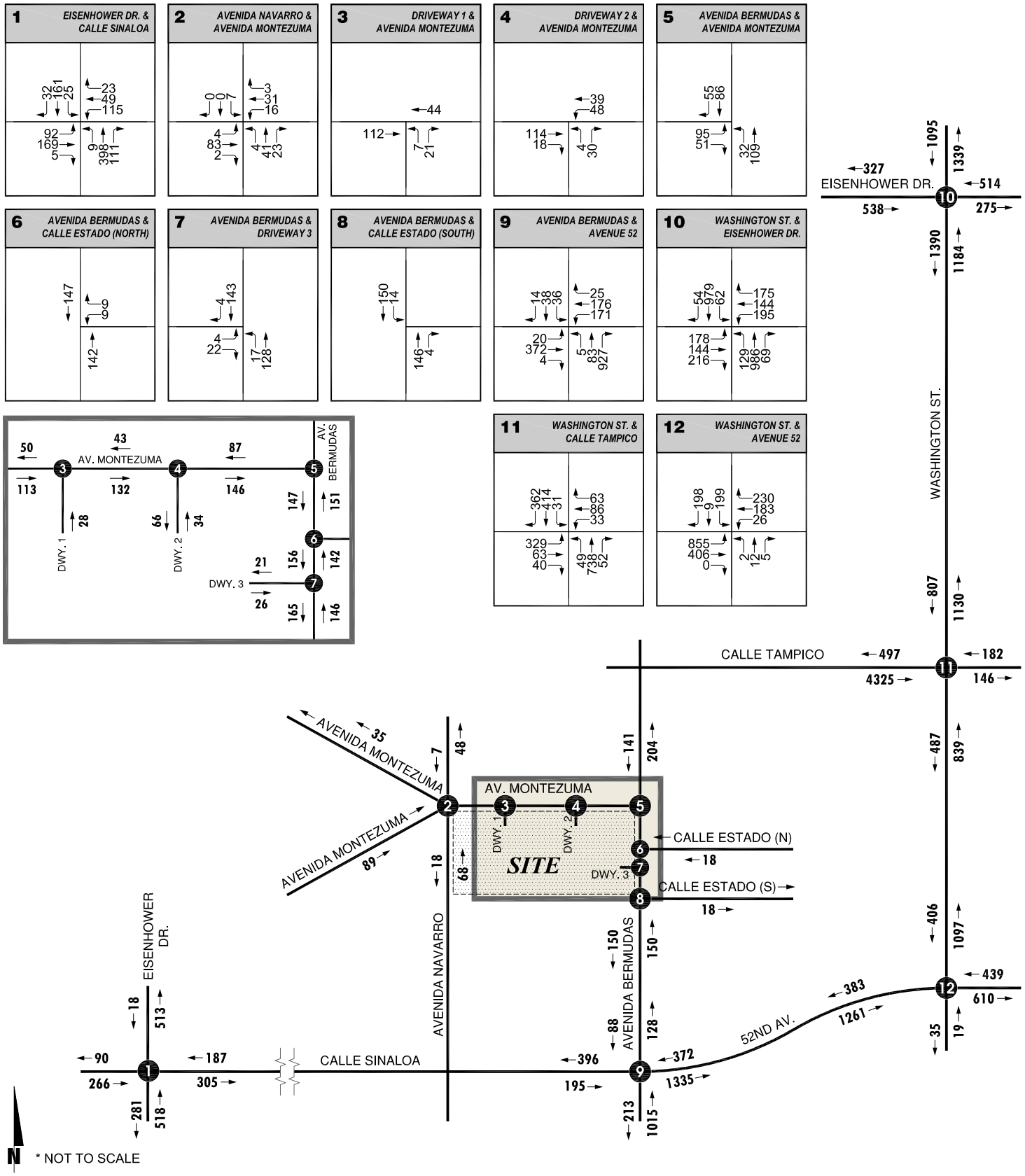
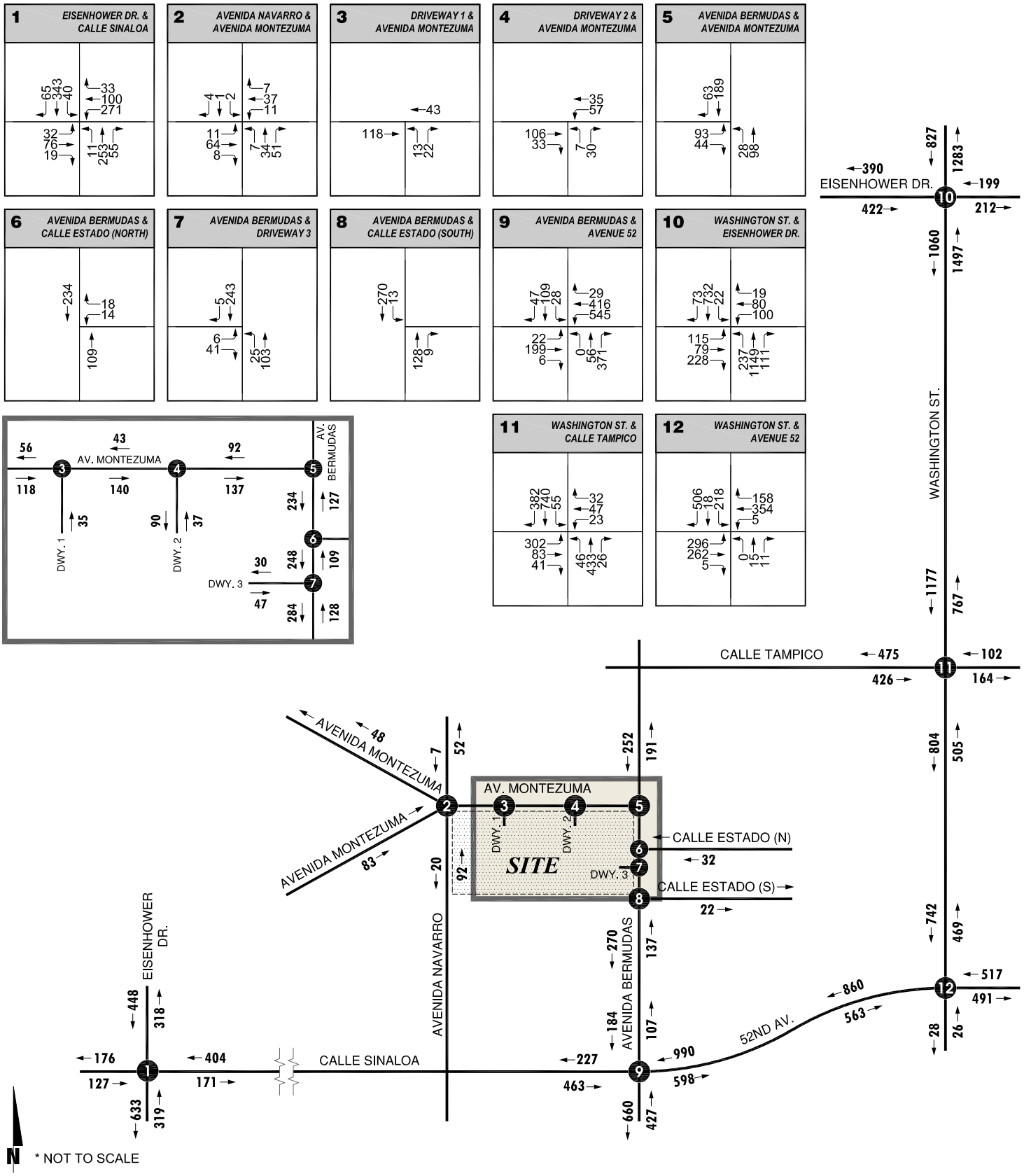


EXHIBIT 6-B

EXISTING PLUS PROJECT PM PEAK HOUR INTERSECTION VOLUMES



note that input parameters consistent with Attachment 2 of *Engineering Bulletin #06-10* have been utilized for the purposes of this analysis. The HCM recognizes that it is possible for this phenomenon to occur, if the volume increases occur in movements with less than the average delay. A detailed discussion on this phenomenon can be found in Chapter 16 of the 2000 *Highway Capacity Manual* on page 16-35. In other words, even with increases in volume to more than one movement on an approach, the net effect can still be a decrease in average delay if the movements with less than the average delay increase sufficiently.

2. Road Segment Analysis for Existing + Project Conditions

The City of La Quinta has established Level of Service capacities for the various types of roadway classifications. For purposes of this analysis, the Level of Service "D" capacity has been established as the acceptable capacity threshold for roadway segments. The daily roadway capacities utilized for this analysis were previously noted in Section 3.0 of this report. For E+P conditions, projected roadway segment daily volumes have been utilized to calculate the volume to capacity ratios.

Table 6-3 indicates that the study area roadway segments are anticipated to operate with acceptable levels of service with existing geometry. Therefore, potentially significant project-specific traffic impacts to road segments are not anticipated for E+P conditions.

3. Traffic Signal Warrant Analysis for Existing + Project Conditions

For E+P traffic conditions, there are no study area intersections anticipated to warrant a traffic signal in addition to the location previously identified under existing conditions. Traffic signal warrant analysis worksheets have been provided in Appendix "D".

B. Level of Service for Existing Plus Ambient Plus Cumulative (2013) Conditions

1. Intersection Analysis for Existing + Ambient + Cumulative (2013) Conditions

E+A+C (2013) (Opening Year without Project) intersection level of service are shown in Table 6-4. Table 6-4 shows HCM calculations based on existing lane geometry. E+A+C (2013) AM and PM peak hour intersection turning movement volumes are shown on Exhibits 6-C and 6-D, respectively.

For E+A+C (2013) traffic conditions, the study area intersections are projected to operate at

TABLE 6-3 (Page 1 of 2)

ROADWAY SEGMENT LEVEL OF SERVICE ANALYSIS FOR EXISTING + PROJECT TRAFFIC CONDITIONS [1]

ROADWAY SEGMENT	GENERAL PLAN ROADWAY CLASSIFICATION [2]	EXISTING NUMBER OF LANES	PEAK HOUR DIRECTIONAL LOS "E" CAPACITY [3] (VEHICLES PER DAY)	E+P DAILY SEGMENT VOLUMES	VOLUME TO CAPACITY	LOS[4]
Eisenhower Drive (NS):						
• N of Calle Sinaloa	Primary Arterial (4D)	4	38,000	9,200	0.24	A
• S of Calle Sinaloa	Primary Arterial (4D)	4	38,000	11,400	0.30	A
Avenida Navarro (NS):						
• North of Avenida Montezuma	Local Street (2U)	2	9,000	700	0.08	A
• South of Avenida Montezuma	Local Street (2U)	2	9,000	1,400	0.16	A
Avenida Bermudas (NS):						
• North of Avenida Montezuma	Collector (2U)	2	14,000	5,400	0.39	A
• Avenida Montezuma to Calle Estado N	Collector (2U)	2	14,000	4,400	0.31	A
• Calle Estado N to Driveay 3	Collector (2U)	2	14,000	4,400	0.31	A
• Driveway 3 to Calle Estado S	Collector (2U)	2	14,000	5,100	0.36	A
• S of Calle Estado	Collector (2U)	2	14,000	5,000	0.36	A
• N of Avenue 52	Collector (2U)	2	14,000	3,600	0.26	A
• S of Avenue 52	Secondary Arterial (4U)	4	28,000	13,100	0.47	A
Avenida Montezuma (NS):						
• NW of Avenida Navarro	Local Street (2U)	2	9,000	600	0.07	A
• SW of Avenida Navarro	Local Street (2U)	2	9,000	1,000	0.11	A
• Avenida Navarro to Driveway 1	Local Street (2U)	2	9,000	2,100	0.23	A
• Driveway 1 to Driveway 2	Local Street (2U)	2	9,000	2,300	0.26	A
• Driveway 2 to Avenida Bermudas	Local Street (2U)	2	9,000	2,900	0.32	A
Calle Estado N (NS):						
• E of Avenida Bermudas	Local Street (2U)	2	9,000	400	0.04	A
Calle Estado S (NS):						
• E of Avenida Bermudas	Local Street (2U)	2	9,000	300	0.03	A
Avenue 52 (NS):						
• W of Eisenhower Dr.	Local Street (2U)	2	9,000	3,700	0.41	A
• E of Eisenhower Dr.	Primary Arterial (4D)	4	38,000	6,900	0.18	A
• W of Avenida Bermudas	Primary Arterial (4D)	4	38,000	8,300	0.22	A
• E of Avenida Bermudas	Primary Arterial (4D)	4	38,000	19,100	0.50	A
• W of Washington Street	Primary Arterial (4D)	4	38,000	17,100	0.45	A
• E of Washington Street	Primary Arterial (4D)	4	38,000	12,100	0.32	A
Washington Street (NS):						
• N of Eisenhower Drive	Major Roadway (6D)	6	57,000	25,300	0.44	A
• S of Eisenhower Drive	Major Roadway (6D)	6	57,000	30,700	0.54	A
• N of Calle Tampico	Major Roadway (6D)	6	57,000	23,400	0.41	A
• S of Calle Tampico	Major Roadway (6D)	6	57,000	15,700	0.28	A
• N of Avenue 52	Major Roadway (6D)	6	57,000	14,500	0.25	A
• S of Avenue 52	Local Street (2U)	2	9,000	700	0.08	A
Eisenhower Drive (NS):						
• W of Washington Street	Primary Arterial (4D)	4	38,000	9,700	0.26	A
• E of Washington Street	Local Street (3D)	3	13,500	4,900	0.36	A

TABLE 6-3 (Page 2 of 2)

ROADWAY SEGMENT LEVEL OF SERVICE ANALYSIS FOR EXISTING + PROJECT TRAFFIC CONDITIONS [1]

ROADWAY SEGMENT	GENERAL PLAN ROADWAY CLASSIFICATION [2]	EXISTING NUMBER OF LANES	PEAK HOUR DIRECTIONAL LOS "E" CAPACITY [3] (VEHICLES PER DAY)	E+P DAILY SEGMENT VOLUMES	VOLUME TO CAPACITY	LOS[4]
Calle Tampico (NS):						
• W of Washington Street	Primary Arterial (4D)	4	38,000	10,900	0.29	A
• E of Washington Street	Collector (2U)	2	14,000	3,200	0.23	A
Driveway 1 (NS):						
• S of Avenida Montezuma	Local Street (2U)	2	9,000	500	0.06	A
Driveway 2 (NS):						
• S of Avenida Montezuma	Local Street (2U)	2	9,000	1,700	0.19	A
Driveway 3 (NS):						
• S of Avenida Montezuma	Local Street (2U)	2	9,000	1,100	0.12	A

[1] As indicated by City of La Quinta staff, impact criteria will utilize peak hour segments in the peak direction.

[2] General Plan Roadway Classification based on the adopted City of La Quinta Circulation Element.

[3] For the purpose of this analysis, the Level of service "D" capacity has been established as the acceptable capacity threshold for roadway segments. Therefore, volume to capacity ratios greater than 0.9 (LOS "E") is considered unacceptable. The capacity utilized for this analysis are consistent with the thresholds provided in EB 06-13.

[4] Level of Service:
A = 0.00 - 0.60
B = 0.61 - 0.70
C = 0.71 - 0.80
D = 0.81 - 0.90
E = 0.91 - 1.00
F = > 1.00