TABLE 6-4

INTERSECTION ANALYSIS FOR EXISTING + AMBIENT GROWTH + CUMULATIVE (2013) 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	13.7	18.6	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	9.6	A	A
• Calle Estado (North) (EW)	CSS	0	1	0	0	1	0	0	0	0	0	1	0	9.7	9.9	A	A
• Driveway 3 (EW)	CSS	1	1	0	0	1	0	0	1	0	0	0	0	9.0	9.8	A	A
• Calle Estado (South) (EW)	CSS	0	1	0	1	1	0	0	0	0	0	0	0	9.8	10.8	A	B
• Calle Sinaloa/52nd Avenue (EW)	TS	0	1	1>	1	1	d	1	2	d	2	2	d	60.5	33.2	E	C
Washington Street (NS) at:																	
• Eisenhower Drive (EW)	TS	1	3	1	1	3	1>	2	1	0	0	1	1	51.3	51.8	D	D
• Calle Tampico (EW)	TS	1	3	d	1	2	1>	2	1	1	1	1	0	32.8	33.1	C	C
• 52nd Avenue (EW)	TS	0	1	0	1	1	2>	2	2	d	1	2	1>	81.7	33.1	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.

EXHIBIT 6-C

EXISTING PLUS AMBIENT GROWTH PLUS CUMULATIVE (2013) AM PEAK HOUR INTERSECTION VOLUMES

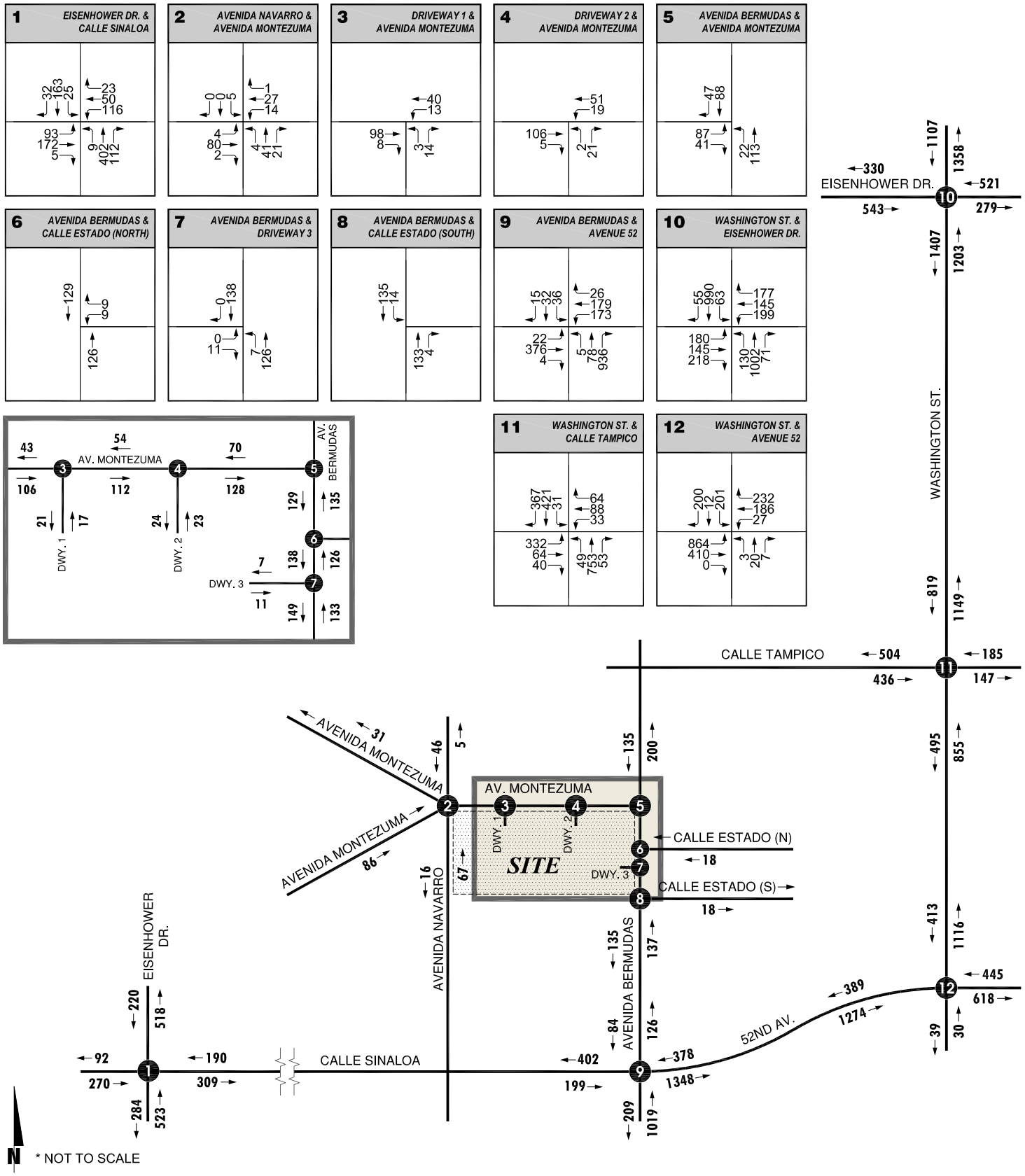
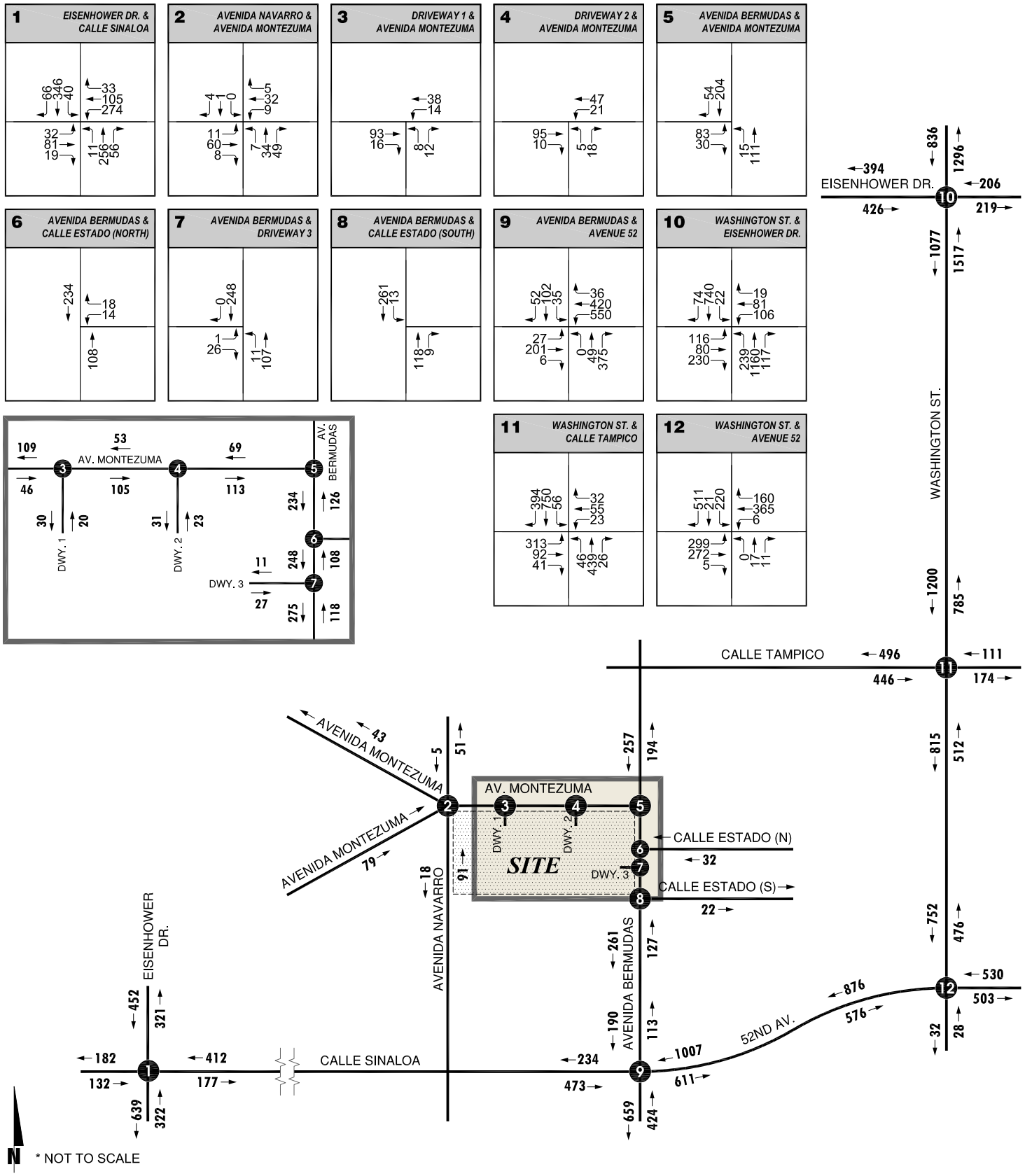


EXHIBIT 6-D

EXISTING PLUS AMBIENT GROWTH PLUS CUMULATIVE (2013) PM PEAK HOUR INTERSECTION VOLUMES



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 "F" 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+A+C (2013) intersection operations analysis worksheets are provided in Appendix "G".

2. Road Segment Analysis for Existing + Ambient + Cumulative (2013) Conditions

For E+A+C (2013) conditions, projected roadway segment daily volumes have been utilized to calculate the volume to capacity ratios. Table 6-5 indicates that the study area roadway segments are anticipated to operate with acceptable levels of service with existing geometry.

3. Traffic Signal Warrant Analysis for Existing + Ambient + Cumulative (2013) Conditions

For E+A+C (2013) traffic conditions, there are no study area intersections anticipated to warrant a traffic signal. Traffic signal warrant analysis worksheets have been provided in Appendix "D".

C. Level of Service for Existing Plus Ambient Plus Cumulative Plus Project (2013)

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

E+A+C+P (2013) (Opening Year with Project) intersection levels of service are shown in Table 6-6. Table 6-6 shows HCM calculations based on the existing lane geometry and recommended improvements at the study area intersections. E+A+C+P (2013) AM and PM peak hour intersection turning movement volumes are shown on Exhibits 6-E and 6-F, respectively. The analysis calculation worksheets for E+A+C+P (2013) are provided in Appendix "H".

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

TABLE 6-5 (Page 1 of 2)

ROADWAY SEGMENT LEVEL OF SERVICE ANALYSIS FOR EXISTING + AMBIENT GROWTH + CUMULATIVE (2013) 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+A+C (2013) DAILY SEGMENT VOLUMES	VOLUME TO CAPACITY	LOS [4]
Eisenhower Drive (NS):						
• N of Calle Sinaloa	Primary Arterial (4D)	4	38,000	9,300	0.24	A
• S of Calle Sinaloa	Primary Arterial (4D)	4	38,000	11,500	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	5,400	0.39	A
• Avenida Montezuma to Calle Estado N	Collector (2U)	2	14,000	4,300	0.31	A
• Calle Estado N to Driveay 3	Collector (2U)	2	14,000	4,300	0.31	A
• Driveway 3 to Calle Estado S	Collector (2U)	2	14,000	4,700	0.34	A
• S of Calle Estado	Collector (2U)	2	14,000	4,600	0.33	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	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 (NS):						
• W of Eisenhower Dr.	Local Street (2U)	2	9,000	3,800	0.42	A
• E of Eisenhower Dr.	Primary Arterial (4D)	4	38,000	7,100	0.19	A
• W of Avenida Bermudas	Primary Arterial (4D)	4	38,000	8,500	0.22	A
• E of Avenida Bermudas	Primary Arterial (4D)	4	38,000	19,400	0.51	A
• W of Washington Street	Primary Arterial (4D)	4	38,000	17,400	0.46	A
• E of Washington Street	Primary Arterial (4D)	4	38,000	12,400	0.33	A
Washington Street (NS):						
• N of Eisenhower Drive	Major Roadway (6D)	6	57,000	25,600	0.45	A
• S of Eisenhower Drive	Major Roadway (6D)	6	57,000	31,100	0.55	A
• N of Calle Tampico	Major Roadway (6D)	6	57,000	23,800	0.42	A
• S of Calle Tampico	Major Roadway (6D)	6	57,000	15,900	0.28	A
• N of Avenue 52	Major Roadway (6D)	6	57,000	14,700	0.26	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	9,800	0.26	A
• E of Washington Street	Local Street (3D)	3	13,500	5,100	0.38	A

TABLE 6-5 (Page 2 of 2)

ROADWAY SEGMENT LEVEL OF SERVICE ANALYSIS FOR EXISTING + AMBIENT GROWTH + CUMULATIVE (2013) 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+A+C (2013) DAILY SEGMENT VOLUMES	VOLUME TO CAPACITY	LOS [4]
Calle Tampico (NS):						
• W of Washington Street	Primary Arterial (4D)	4	38,000	11,300	0.30	A
• E of Washington Street	Collector (2U)	2	14,000	3,400	0.24	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

TABLE 6-6

INTERSECTION ANALYSIS FOR EXISTING + AMBIENT GROWTH + CUMULATIVE + PROJECT (2013) 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	13.7	18.6	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	9.0	9.8	A	A
• Calle Estado (North) (EW)	CSS	0	1	0	0	1	0	0	0	0	0	1	0	10.0	10.1	A	B
• Driveway 3 (EW)	CSS	1	1	0	0	1	0	0	1	0	0	0	0	9.4	10.3	A	B
• Calle Estado (South) (EW)	CSS	0	1	0	1	1	0	0	0	0	0	0	0	10.0	11.1	B	B
• Calle Sinaloa/52nd Avenue (EW)	TS	0	1	1>	1	1	d	1	2	d	2	2	d	60.3	33.3	E	C
Washington Street (NS) at:																	
• Eisenhower Drive (EW)	TS	1	3	1	1	3	1>	2	1	0	0	1	1	51.4	51.9	D	D
• Calle Tampico (EW)	TS	1	3	d	1	2	1>	2	1	1	1	1	0	32.4	33.1	C	C
• 52nd Avenue (EW)	TS	0	1	0	1	1	2>	2	2	d	1	2	1>	81.6	32.7	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.

EXHIBIT 6-E

EXISTING PLUS AMBIENT GROWTH PLUS CUMULATIVE PLUS PROJECT (2013) AM PEAK HOUR INTERSECTION VOLUMES

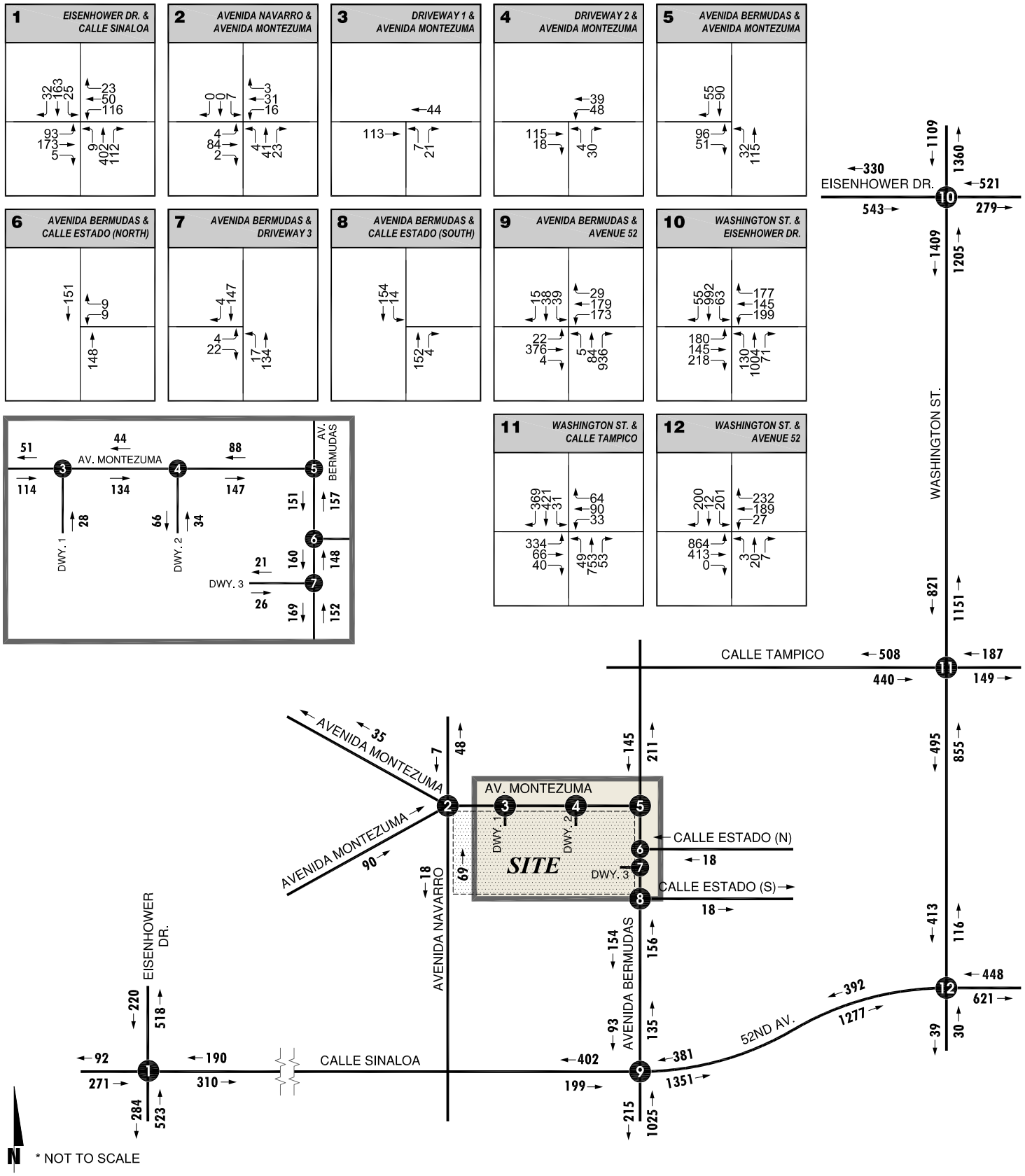
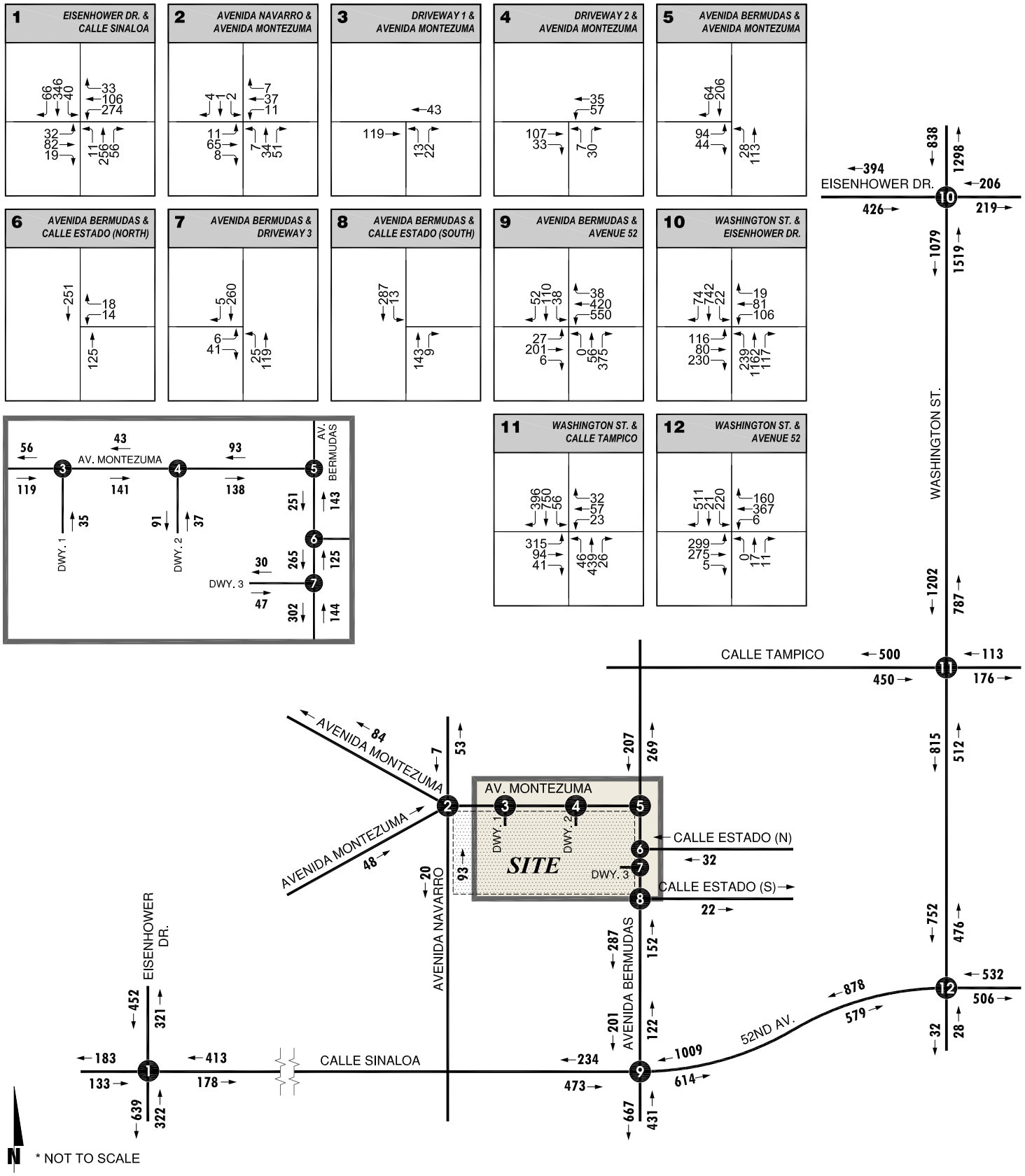


EXHIBIT 6-F

EXISTING PLUS AMBIENT GROWTH PLUS CUMULATIVE PLUS PROJECT (2013) AM PEAK HOUR INTERSECTION VOLUMES



- Washington Street / 52nd Avenue – LOS "F" 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. 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 6-7, 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+A+C+P (2013) conditions and improvements have not been recommended.

Table 6-7 shows a reduction in the average delay for select study area intersections with the addition of project traffic. This phenomenon was previously discussed in detail within Section 6.A.1. *Intersection Analysis for Existing Plus Project Conditions*.

2. Road Segment Analysis for Existing + Ambient + Cumulative + Project (2013) Conditions

For E+A+C+P (2013), peak hour road segment volumes at the peak direction are utilized to calculate the volume to capacity ratios. Table 6-8 indicates that the study area roadway segments are anticipated to operate with acceptable levels of service with existing geometry.

3. Traffic Signal Warrant Analysis for Existing + Ambient + Cumulative + Project (2013) Conditions

For E+A+C+P traffic conditions, there are no study area intersections anticipated to warrant a traffic signal. Traffic signal warrant analysis worksheets have been provided in Appendix "D".

D. Level of Service for Horizon Year (2025) Without Project Conditions

1. Intersection Analysis for Horizon Year (2025) Without Project Conditions

Horizon year (2025) without project intersection levels of service are shown in Table 6-9. Table 6-9 shows HCM calculations based on existing lane geometry. Horizon year (2025)

TABLE 6-7

DETERMINATION OF CUMULATIVE IMPACTS FOR EXISTING + AMBIENT GROWTH + CUMULATIVE + PROJECT (2013) CONDITIONS

INTERSECTION	TRAFFIC CONTROL [1]	EAC (2013) DELAY (SECS.) AM	EAC (2013) DELAY (SECS.) PM	EAC (2013) LEVEL OF SERVICE AM	EAC (2013) LEVEL OF SERVICE PM	EAPC (2013) DELAY (SECS.) AM	EAPC (2013) DELAY (SECS.) PM	EAPC (2013) LEVEL OF SERVICE AM	EAPC (2013) LEVEL OF SERVICE PM	CHANGE IN DELAY [2] (SECS.) AM	CHANGE IN DELAY [2] (SECS.) PM	CUMULATIVE IMPACT? [3]
Eisenhower Drive (NS) at:												
• Calle Sinaloa (EW)	AWS	13.7	18.6	B	C	13.7	18.6	B	C	0.0	0.0	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	9.6	A	A	9.0	9.8	A	A	0.2	0.2	N/A[4]
• Calle Estado (North) (EW)	CSS	9.7	9.9	A	A	10.2	10.3	B	B	0.5	0.4	N/A[4]
• Driveway 3 (EW)	CSS	9.0	9.8	A	A	9.4	10.3	A	B	0.4	0.5	N/A[4]
• Calle Estado (South) (EW)	CSS	9.8	10.8	A	B	10.0	11.1	B	B	0.2	0.3	N/A[4]
• Calle Sinaloa/52nd Avenue (EW)	TS	60.5	33.2	E	C	60.3	33.3	E	C	-0.2	0.1	NO
Washington Street (NS) at:												
• Eisenhower Drive (EW)	TS	51.3	51.8	D	D	51.4	51.9	D	D	0.1	0.1	N/A[4]
• Calle Tampico (EW)	TS	81.7	33.1	F	C	81.6	32.7	F	C	-0.1	-0.4	N/A[4]
• 52nd Avenue (EW)	TS	39.8	28.0	D	C	39.8	28.0	D	C	0.0	0.0	NO

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

[2] Change in Delay = EAPC (2013) - EAC (2013)

[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.

TABLE 6-8 (Page 1 of 2)

ROADWAY SEGMENT LEVEL OF SERVICE ANALYSIS FOR EXISTING + AMBIENT GROWTH + CUMULATIVE + PROJECT (2013) 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+A+C+P (2013) DAILY SEGMENT VOLUMES	VOLUME TO CAPACITY	LOS [4]
Eisenhower Drive (NS):						
• N of Calle Sinaloa	Primary Arterial (4D)	4	38,000	9,300	0.24	A
• S of Calle Sinaloa	Primary Arterial (4D)	4	38,000	11,500	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	5,800	0.41	A
• Avenida Montezuma to Calle Estado N	Collector (2U)	2	14,000	4,800	0.34	A
• Calle Estado N to Driveay 3	Collector (2U)	2	14,000	4,700	0.34	A
• Driveway 3 to Calle Estado S	Collector (2U)	2	14,000	5,500	0.39	A
• S of Calle Estado	Collector (2U)	2	14,000	5,400	0.39	A
• N of Avenue 52	Collector (2U)	2	14,000	4,000	0.29	A
• S of Avenue 52	Secondary Arterial (4U)	4	28,000	13,200	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	2,200	0.24	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	3,800	0.42	A
• E of Eisenhower Dr.	Primary Arterial (4D)	4	38,000	7,100	0.19	A
• W of Avenida Bermudas	Primary Arterial (4D)	4	38,000	8,500	0.22	A
• E of Avenida Bermudas	Primary Arterial (4D)	4	38,000	19,500	0.51	A
• W of Washington Street	Primary Arterial (4D)	4	38,000	17,500	0.46	A
• E of Washington Street	Primary Arterial (4D)	4	38,000	12,500	0.33	A
Washington Street (NS):						
• N of Eisenhower Drive	Major Roadway (6D)	6	57,000	25,600	0.45	A
• S of Eisenhower Drive	Major Roadway (6D)	6	57,000	31,200	0.55	A
• N of Calle Tampico	Major Roadway (6D)	6	57,000	23,800	0.42	A
• S of Calle Tampico	Major Roadway (6D)	6	57,000	15,900	0.28	A
• N of Avenue 52	Major Roadway (6D)	6	57,000	14,700	0.26	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	9,800	0.26	A
• E of Washington Street	Local Street (3D)	3	13,500	5,100	0.38	A

TABLE 6-8 (Page 2 of 2)

ROADWAY SEGMENT LEVEL OF SERVICE ANALYSIS FOR
EXISTING + AMBIENT GROWTH + CUMULATIVE + PROJECT (2013) 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+A+C+P (2013) DAILY SEGMENT VOLUMES	VOLUME TO CAPACITY	LOS [4]
Calle Tampico (NS):						
• W of Washington Street	Primary Arterial (4D)	4	38,000	11,400	0.30	A
• E of Washington Street	Collector (2U)	2	14,000	3,500	0.25	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

TABLE 6-9

INTERSECTION ANALYSIS FOR HORIZON YEAR (2025) WITHOUT 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	15.8	24.9	C	C
Avenida Navarro (NS) at:																	
• Avenida Montezuma (EW)	YIELD	0	1	0	0	1	0	0	1	0	0	1	0	3.4	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	9.1	9.2	A	A
Avenida Bermudas (NS) at:																	
• Avenida Montezuma (EW)	AWS	1	1	0	0	1	0	1	0	1	0	0	0	9.1	10.1	A	B
• Calle Estado (North) (EW)	CSS	0	1	0	0	1	0	0	0	0	0	1	0	9.9	10.1	B	B
• Driveway 3 (EW)	CSS	1	1	0	0	1	0	0	1	0	0	0	0	9.1	10.1	A	B
• Calle Estado (South) (EW)	CSS	0	1	0	1	1	0	0	0	0	0	0	0	10.0	11.1	A	B
• Calle Sinaloa/52nd Avenue (EW)	TS	0	1	1>	1	1	d	1	2	d	2	2	d	84.7	33.9	F	C
Washington Street (NS) at:																	
• Eisenhower Drive (EW)	TS	1	3	1	1	3	1>	2	1	0	0	1	1	62.8	61.3	E	E
• Calle Tampico (EW)	TS	1	3	d	1	2	1>	2	1	1	1	1	0	33.4	34.2	C	C
• 52nd Avenue (EW)	TS	0	1	0	1	1	2>	2	2	d	1	2	1>	106.6	33.7	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.

EXHIBIT 6-G

HORIZON YEAR (2025) WITHOUT PROJECT AM PEAK HOUR INTERSECTION VOLUMES

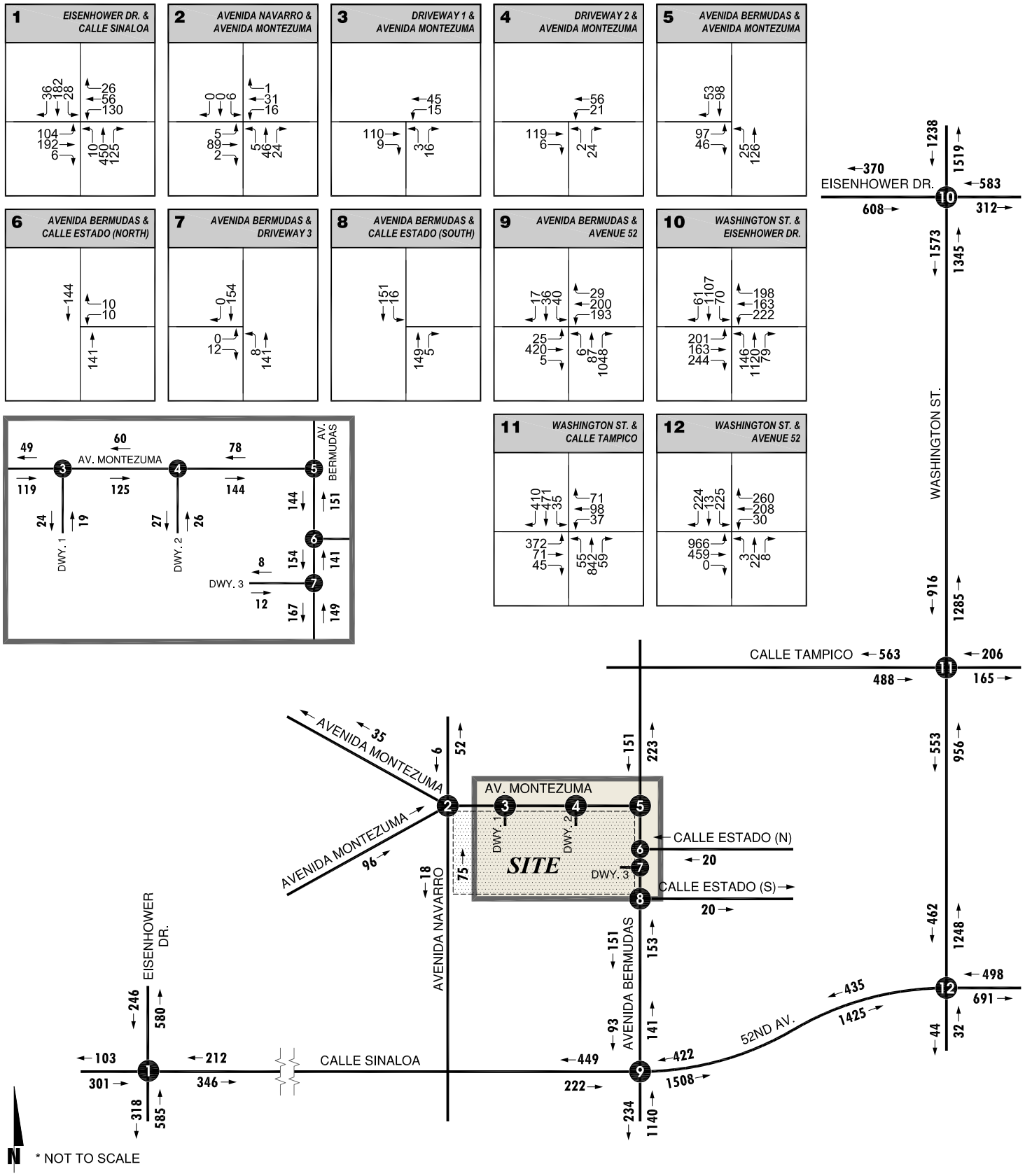
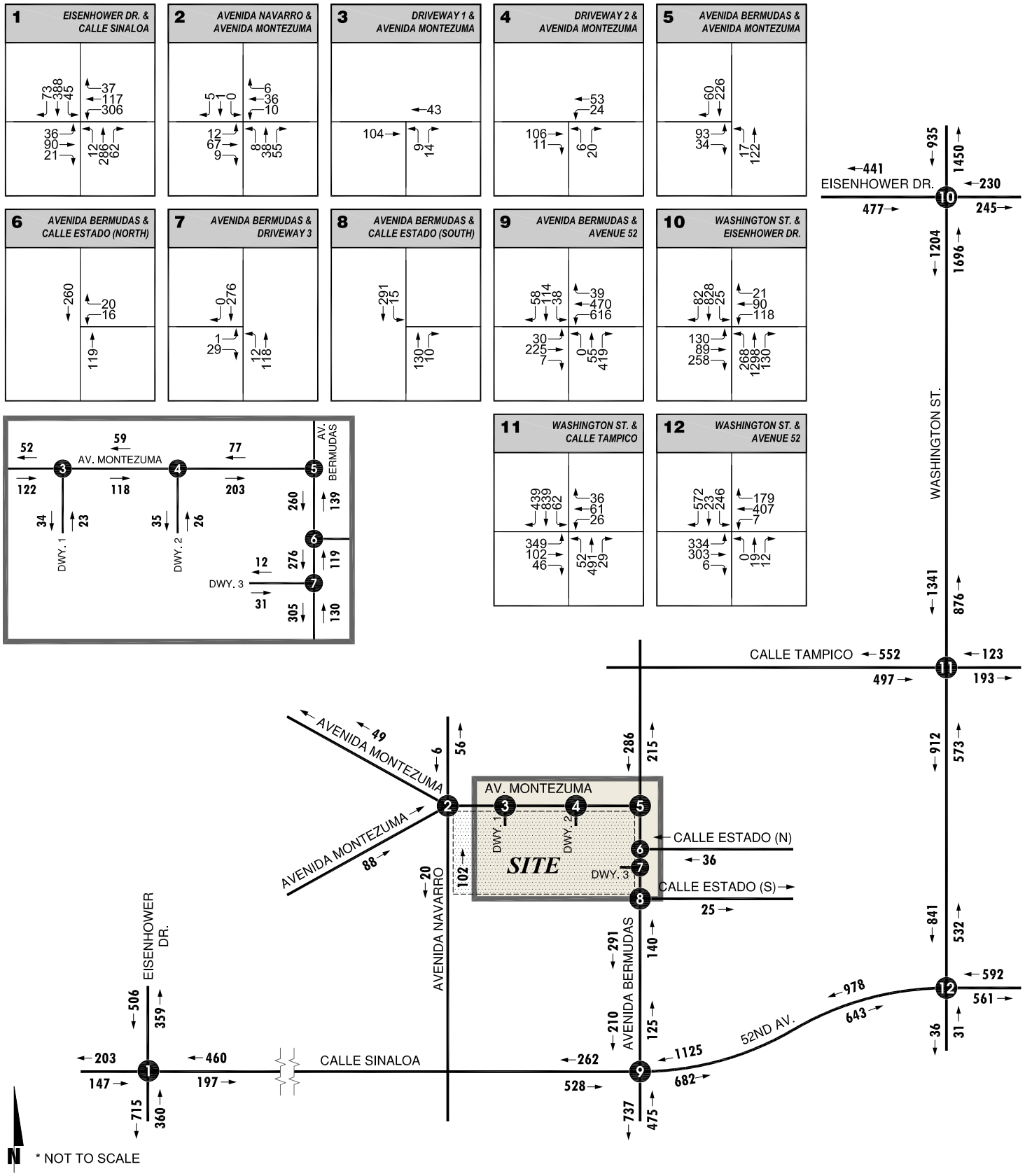


EXHIBIT 6-H

HORIZON YEAR (2025) WITHOUT PROJECT PM PEAK HOUR INTERSECTION VOLUMES



without project AM and PM peak hour intersection turning movement volumes are shown on Exhibits 6-G and 6-H, respectively.

For horizon year (2025) without project 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 three (3) intersections:

- Avenida Bermudas / Calle Sinaloa/52nd Avenue – LOS "F" AM Peak Hour Only
- Washington Street / Eisenhower Drive – LOS "E" AM and PM Peak Hours
- Washington Street / 52nd Avenue – LOS "F" AM Peak Hour Only

It should be noted that two (2) of these intersections do not operate at acceptable levels of service under existing (2012) conditions. Horizon year (2025) without project intersection operations analysis worksheets are provided in Appendix "I".

2. Road Segment Analysis for Horizon Year (2025) Without Project Conditions

For horizon year (2025) without project conditions, projected roadway segment daily volumes have been utilized to calculate the volume to capacity ratios. Table 6-10 indicates that the study area roadway segments are anticipated to operate with acceptable levels of service with existing geometry.

3. Traffic Signal Warrant Analysis for Horizon Year (2025) Without Project Conditions

For horizon year (2025) without project traffic conditions, there are no study area intersections anticipated to warrant a traffic signal. Traffic signal warrant analysis worksheets have been provided in Appendix "D".

E. Level of Service for Horizon Year (2025) With Project Conditions

1. Intersection Analysis for Horizon Year (2025) With Project Conditions

Horizon year (2025) with project intersection levels of service are shown in Table 6-11. Table 6-11 shows HCM calculations based on the existing lane geometry and recommended improvements at the study area intersections. Horizon year (2025) with project AM and PM peak hour intersection turning movement volumes are shown on Exhibits 6-I and 6-J, respectively. The analysis calculation worksheets for horizon year (2025) with project conditions are provided in Appendix "J".

TABLE 6-10 (Page 1 of 2)

ROADWAY SEGMENT LEVEL OF SERVICE ANALYSIS FOR HORIZON YEAR (2025) WITHOUT 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)	2025 NP DAILY SEGMENT VOLUMES	VOLUME TO CAPACITY	LOS [4]
Eisenhower Drive (NS):						
• N of Calle Sinaloa	Primary Arterial (4D)	4	38,000	10,400	0.27	A
• S of Calle Sinaloa	Primary Arterial (4D)	4	38,000	12,900	0.34	A
Avenida Navarro (NS):						
• North of Avenida Montezuma	Local Street (2U)	2	9,000	800	0.09	A
• South of Avenida Montezuma	Local Street (2U)	2	9,000	1,500	0.17	A
Avenida Bermudas (NS):						
• North of Avenida Montezuma	Collector (2U)	2	14,000	6,000	0.43	A
• Avenida Montezuma to Calle Estado N	Collector (2U)	2	14,000	4,800	0.34	A
• Calle Estado N to Driveay 3	Collector (2U)	2	14,000	4,700	0.34	A
• Driveway 3 to Calle Estado S	Collector (2U)	2	14,000	5,200	0.37	A
• S of Calle Estado	Collector (2U)	2	14,000	5,200	0.37	A
• N of Avenue 52	Collector (2U)	2	14,000	4,000	0.29	A
• S of Avenue 52	Secondary Arterial (4U)	4	28,000	14,500	0.52	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	1,100	0.12	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	2,100	0.23	A
• Driveway 2 to Avenida Bermudas	Local Street (2U)	2	9,000	2,400	0.27	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	4,200	0.47	A
• E of Eisenhower Dr.	Primary Arterial (4D)	4	38,000	7,900	0.21	A
• W of Avenida Bermudas	Primary Arterial (4D)	4	38,000	9,500	0.25	A
• E of Avenida Bermudas	Primary Arterial (4D)	4	38,000	21,700	0.57	A
• W of Washington Street	Primary Arterial (4D)	4	38,000	19,400	0.51	A
• E of Washington Street	Primary Arterial (4D)	4	38,000	13,800	0.36	A
Washington Street (NS):						
• N of Eisenhower Drive	Major Roadway (6D)	6	57,000	28,600	0.50	A
• S of Eisenhower Drive	Major Roadway (6D)	6	57,000	34,800	0.61	B
• N of Calle Tampico	Major Roadway (6D)	6	57,000	26,600	0.47	A
• S of Calle Tampico	Major Roadway (6D)	6	57,000	17,800	0.31	A
• N of Avenue 52	Major Roadway (6D)	6	57,000	16,500	0.29	A
• S of Avenue 52	Local Street (2U)	2	9,000	800	0.09	A
Eisenhower Drive (NS):						
• W of Washington Street	Primary Arterial (4D)	4	38,000	11,000	0.29	A
• E of Washington Street	Local Street (3D)	3	13,500	5,700	0.42	A

TABLE 6-10 (Page 2 of 2)

ROADWAY SEGMENT LEVEL OF SERVICE ANALYSIS FOR HORIZON YEAR (2025) WITHOUT 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)	2025 NP DAILY SEGMENT VOLUMES	VOLUME TO CAPACITY	LOS [4]
Calle Tampico (NS):						
• W of Washington Street	Primary Arterial (4D)	4	38,000	12,600	0.33	A
• E of Washington Street	Collector (2U)	2	14,000	3,800	0.27	A
Driveway 1 (NS):						
• S of Avenida Montezuma	Local Street (2U)	2	9,000	700	0.08	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

TABLE 6-11

INTERSECTION ANALYSIS FOR HORIZON YEAR (2025) WITH 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	15.8	25.0	C	C
Avenida Navarro (NS) at:																	
• Avenida Montezuma (EW)	YIELD	0	1	0	0	1	0	0	1	0	0	1	0	3.4	3.4	A	A
Driveway 1 (NS) at:																	
• Avenida Montezuma (EW)	CSS	0	1	0	0	0	0	0	1	0	0	1	0	9.2	9.3	A	A
Driveway 2 (NS) at:																	
• Avenida Montezuma (EW)	CSS	0	1	0	0	0	0	0	1	0	0	1	0	9.3	9.5	A	A
Avenida Bermudas (NS) at:																	
• Avenida Montezuma (EW)	AWS	1	1	0	0	1	0	1	0	1	0	0	0	9.3	10.3	A	B
• Calle Estado (North) (EW)	CSS	0	1	0	0	1	0	0	0	0	0	1	0	10.2	10.3	B	B
• Driveway 3 (EW)	CSS	1	1	0	0	1	0	0	1	0	0	0	0	9.5	10.5	A	B
• Calle Estado (South) (EW)	CSS	0	1	0	1	1	0	0	0	0	0	0	0	10.1	11.4	B	B
• Calle Sinaloa/52nd Avenue (EW)	TS	0	1	1>	1	1	d	1	2	d	2	2	d	84.3	34.0	F	C
Washington Street (NS) at:																	
• Eisenhower Drive (EW)	TS	1	3	1	1	3	1>	2	1	0	0	1	1	62.9	61.5	E	E
• Calle Tampico (EW)	TS	1	3	d	1	2	1>	2	1	1	1	1	0	33.2	34.2	C	C
• 52nd Avenue (EW)	TS	0	1	0	1	1	2>	2	2	d	1	2	1>	106.5	33.3	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.

EXHIBIT 6-I

HORIZON YEAR (2025) WITH PROJECT AM PEAK HOUR INTERSECTION VOLUMES

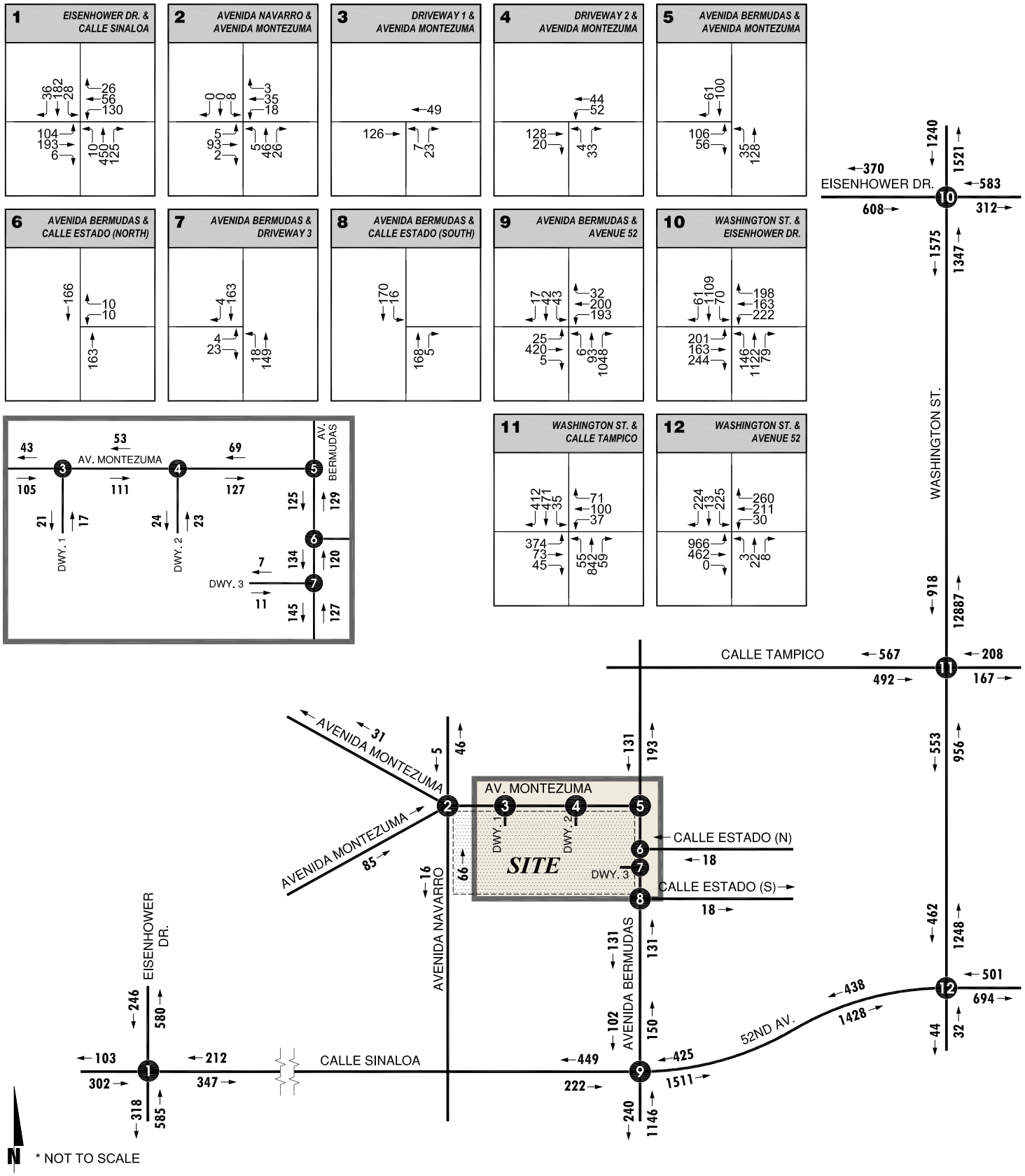
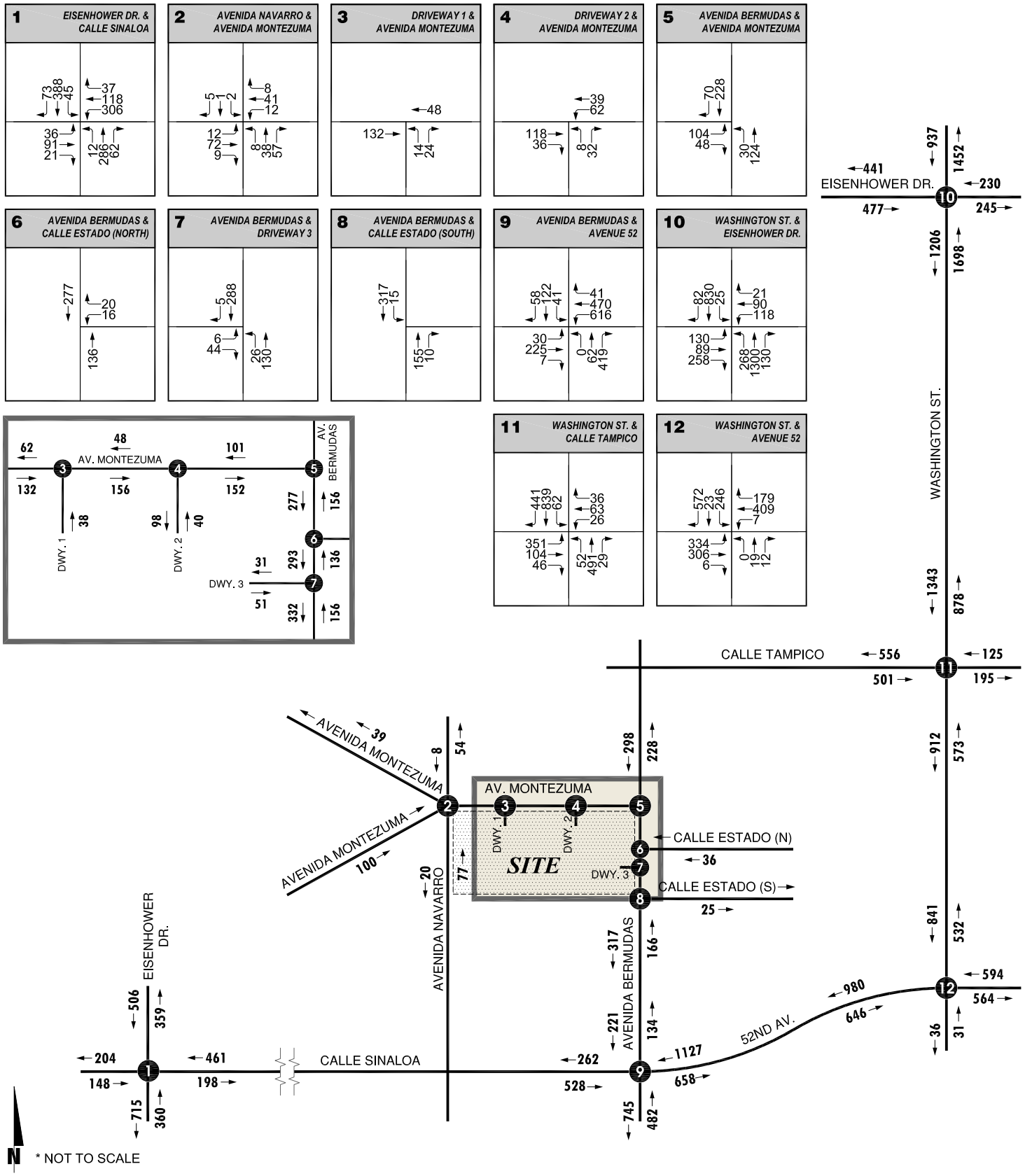


EXHIBIT 6-J

HORIZON YEAR (2025) WITH PROJECT PM PEAK HOUR INTERSECTION VOLUMES



For horizon year (2025) with project traffic conditions, the following study area intersections are projected to operate at unacceptable levels of service during the peak hours with existing geometry except for the following three (3) intersections:

- Avenida Bermudas / Calle Sinaloa/52nd Avenue – LOS "F" AM Peak Hour Only
- Washington Street / Eisenhower Drive – LOS "E" AM and PM Peak Hours
- Washington Street / 52nd Avenue – LOS "F" AM Peak Hour Only

Based on the City of La Quinta intersection impact criteria, 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 6-12, 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 Horizon Year (2035) with project conditions and improvements have not been recommended.

Table 6-12 shows a reduction in the average delay for select study area intersections with the addition of project traffic. This phenomenon was previously discussed in detail within Section 6.A.1. *Intersection Analysis for Existing Plus Project Conditions*.

2. Road Segment Analysis for Horizon Year (2025) With 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 horizon year (2025) with project conditions, projected roadway segment daily volumes have been utilized to calculate the volume to capacity ratios.

Table 6-13 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 impact to road segments are not anticipated for horizon year (2025) with project conditions.

TABLE 6-12

DETERMINATION OF CUMULATIVE IMPACTS FOR HORIZON YEAR (2025) WITH PROJECT CONDITIONS

INTERSECTION	TRAFFIC CONTROL [1]	2025 WITHOUT PROJECT				2025 WITH PROJECT				CHANGE IN DELAY [2] (SECS.)		CUMULATIVE 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	15.8	24.9	C	C	15.8	25.0	C	C	0.0	0.1	N/A[4]
Avenida Navarro (NS) at:												
• Avenida Montezuma (EW)	YIELD	3.4	3.4	A	A	3.4	3.4	A	A	0.0	0.0	N/A[4]
Driveway 1 (NS) at:												
• Avenida Montezuma (EW)	CSS	9.1	9.2	A	A	9.2	9.3	A	A	0.1	0.1	N/A[4]
Driveway 2 (NS) at:												
• Avenida Montezuma (EW)	CSS	9.1	9.2	A	A	9.3	9.5	A	A	0.2	0.3	N/A[4]
Avenida Bermudas (NS) at:												
• Avenida Montezuma (EW)	AWS	9.1	10.1	A	B	9.3	10.3	A	B	0.2	0.2	N/A[4]
• Calle Estado (North) (EW)	CSS	9.9	10.1	B	B	10.2	10.3	B	B	0.3	0.2	N/A[4]
• Driveway 3 (EW)	CSS	9.1	10.1	A	B	9.5	10.5	A	B	0.4	0.4	N/A[4]
• Calle Estado (South) (EW)	CSS	10.0	11.1	A	B	10.1	11.4	B	B	0.1	0.3	N/A[4]
• Calle Sinaloa/52nd Avenue (EW)	TS	84.7	33.9	F	C	84.3	34.0	F	C	-0.4	0.1	NO
Washington Street (NS) at:												
• Eisenhower Drive (EW)	TS	62.8	61.3	E	E	62.9	61.5	E	E	0.1	0.2	NO
• Calle Tampico (EW)	TS	33.4	34.2	C	C	33.2	34.2	C	C	-0.2	0.0	N/A[4]
• 52nd Avenue (EW)	TS	106.6	33.7	F	C	106.5	33.3	F	C	-0.1	-0.4	NO

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

[2] Change in Delay = 2025 With Project - 2025 Without Project

[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 atraffic impact is not anticipated. Therefore, an impact assessment is not needed.

TABLE 6-13 (Page 1 of 2)

ROADWAY SEGMENT LEVEL OF SERVICE ANALYSIS FOR HORIZON YEAR (2025) WITH 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)	2025 WP DAILY SEGMENT VOLUMES	VOLUME TO CAPACITY	LOS [4]
Eisenhower Drive (NS):						
• N of Calle Sinaloa	Primary Arterial (4D)	4	38,000	10,400	0.27	A
• S of Calle Sinaloa	Primary Arterial (4D)	4	38,000	12,900	0.34	A
Avenida Navarro (NS):						
• North of Avenida Montezuma	Local Street (2U)	2	9,000	800	0.09	A
• South of Avenida Montezuma	Local Street (2U)	2	9,000	1,500	0.17	A
Avenida Bermudas (NS):						
• North of Avenida Montezuma	Collector (2U)	2	14,000	6,400	0.46	A
• Avenida Montezuma to Calle Estado N	Collector (2U)	2	14,000	5,300	0.38	A
• Calle Estado N to Driveay 3	Collector (2U)	2	14,000	5,200	0.37	A
• Driveway 3 to Calle Estado S	Collector (2U)	2	14,000	6,000	0.43	A
• S of Calle Estado	Collector (2U)	2	14,000	5,900	0.42	A
• N of Avenue 52	Collector (2U)	2	14,000	4,300	0.31	A
• S of Avenue 52	Secondary Arterial (4U)	4	28,000	14,800	0.53	A
Avenida Montezuma (NS):						
• NW of Avenida Navarro	Local Street (2U)	2	9,000	700	0.08	A
• SW of Avenida Navarro	Local Street (2U)	2	9,000	1,100	0.12	A
• Avenida Navarro to Driveway 1	Local Street (2U)	2	9,000	2,400	0.27	A
• Driveway 1 to Driveway 2	Local Street (2U)	2	9,000	2,500	0.28	A
• Driveway 2 to Avenida Bermudas	Local Street (2U)	2	9,000	3,200	0.36	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	4,200	0.47	A
• E of Eisenhower Dr.	Primary Arterial (4D)	4	38,000	7,900	0.21	A
• W of Avenida Bermudas	Primary Arterial (4D)	4	38,000	9,500	0.25	A
• E of Avenida Bermudas	Primary Arterial (4D)	4	38,000	21,800	0.57	A
• W of Washington Street	Primary Arterial (4D)	4	38,000	19,500	0.51	A
• E of Washington Street	Primary Arterial (4D)	4	38,000	13,900	0.37	A
Washington Street (NS):						
• N of Eisenhower Drive	Major Roadway (6D)	6	57,000	29,700	0.52	A
• S of Eisenhower Drive	Major Roadway (6D)	6	57,000	34,800	0.61	B
• N of Calle Tampico	Major Roadway (6D)	6	57,000	26,600	0.47	A
• S of Calle Tampico	Major Roadway (6D)	6	57,000	17,800	0.31	A
• N of Avenue 52	Major Roadway (6D)	6	57,000	16,500	0.29	A
• S of Avenue 52	Local Street (2U)	2	9,000	800	0.09	A
Eisenhower Drive (NS):						
• W of Washington Street	Primary Arterial (4D)	4	38,000	11,000	0.29	A
• E of Washington Street	Local Street (3D)	3	13,500	5,700	0.42	A

TABLE 6-13 (Page 2 of 2)

ROADWAY SEGMENT LEVEL OF SERVICE ANALYSIS FOR HORIZON YEAR (2025) WITH 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)	2025 WP DAILY SEGMENT VOLUMES	VOLUME TO CAPACITY	LOS [4]
Calle Tampico (NS):						
• W of Washington Street	Primary Arterial (4D)	4	38,000	12,700	0.33	A
• E of Washington Street	Collector (2U)	2	14,000	3,800	0.27	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	1,800	0.20	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

3. Traffic Signal Warrant Analysis for Horizon Year (2025) With Project Conditions

For horizon year (2025) with project traffic conditions, there are no study area intersections anticipated to warrant a traffic signal. Traffic signal warrant analysis worksheets have been provided in Appendix "D".

F. Statistical Standard Deviation Trip Generation Analysis

The City of La Quinta's *Engineering Bulletin #06-13* requires that, in addition to average peak hour rates, increases in average rates to incorporate one (1) statistical standard deviation (1 sigma) for commercial projects such as gasoline service stations, should be reviewed for worst case sensitivity analysis. Trip generation rates for this project with one statistical standard deviation trip generation increase are shown in Table 6-14. Peak hour trip generation for the proposed Project with one statistical standard deviation trip generation increase is shown in Table 6-15. With the statistical standard deviation, the proposed Project is projected to generate a net total of approximately 144 trips per hour during the AM peak hour and 241 trips per hour during the PM peak hour.

An analysis has been performed at all site access intersections and site adjacent intersections only (i.e., does not included extended study area per City's *Engineering Bulletin #06-13*) for E+P and E+A+C+P (2013) with the statistical standard deviation trip generation increase. This supplemental analysis is not intended to define standard mitigation measures, but to provide sensitivity review for possible traffic impacts adjacent to the development, given the inexact nature of traffic study assumptions and results. Based on the sensitivity analysis, the study area intersections are anticipated to operate with acceptable levels of service (i.e., LOS "D" or better) during the peak hours with existing geometry. The AM and PM peak hour intersection turning movement volumes, analysis results by scenario and HCM calculation worksheets are included in Appendix "K".

TABLE 6-14

TRIP GENERATION RATES FOR 1 STATISTICAL STANDARD DEVIATION (WORST CASE SENSITIVITY ANALYSIS)[1]

LAND USE	ITE CODE	AM PEAK HOUR			PM PEAK HOUR		
		IN	OUT	TOTAL	IN	OUT	TOTAL
Convenience Market with Gasoline Pumps	853	31.88	31.87	63.75	49.44	49.45	98.89
High-Turnover Sit-Down Restaurant	932	7.04	6.49	13.53	9.99	8.50	18.49

[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 6-15

TRIP GENERATION SUMMARY FOR 1 STATISTICAL STANDARD DEVIATION
(WORST CASE SENSITIVITY ANALYSIS)

LAND USE	QUANTITY	UNITS[1]	AM PEAK HOUR			PM PEAK HOUR		
			IN	OUT	TOTAL	IN	OUT	TOTAL
PROPOSED								
Convenience Market with Gasoline Pumps	3.890	TSF	124	124	248	192	192	385
EXISTING								
Convenience Market with Gasoline Pumps	2.000	TSF	45	45	90	63	63	125
High-Turnover Restaurant	1.000	TSF	7	6	14	10	9	18
TOTAL			*52*	*52*	*104*	*73*	*71*	*144*
VARIANCE (Proposed-Existing)			**72**	**72**	**144**	**120**	**121**	**241**

[1] TSF = Thousand Square Feet

This Page Intentionally Left Blank

7.0 SUMMARY AND RECOMMENDATIONS

A. Project Access

The Project site is currently operating with one driveway on Avenida Navarro, three full-access driveways located along Avenida Montezuma, and one full-access driveway on Avenida Bermudas. The project is proposing to remove the driveway on Avenida Navarro and reduce the number of driveways on Avenida Montezuma from 3 to 2, which based on the parking configuration and drive aisle width adjacent to Avenida Montezuma the most westerly driveway should be signed for outbound trips only and the easterly driveway on Avenida Montezuma will remain full access. A full access driveway will also remain on Avenida Bermudas.

B. Project Traffic

The existing project 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 is to consist of a gas station with 8 vehicle fueling positions (consistent with the existing condition) and an expanded convenience market totaling approximately 3,890 square feet. The high-turnover sit-down restaurant will be removed in order to accommodate the expanded convenience market.

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.

C. Potentially Significant Project-Specific Traffic Impact Assessment Results

The City of La Quinta's *Engineering Bulletin #06-13* stipulates that both potentially significant project-specific traffic impacts and cumulative impacts must be identified in the report. The results of the potentially significant project-specific traffic impact and cumulative impact assessment are summarized on Table 7-1. As shown in Table 7-1, the proposed Project is not anticipated to contribute additional traffic resulting in either a potentially significant project-specific traffic impact or a cumulatively considerable traffic impact. As such, improvements have not been recommended as part of this traffic impact analysis.

D. On-Site Circulation Recommendations

Site-specific circulation and access recommendations are depicted on Exhibit 7-A and are described below:

TABLE 7-1

SUMMARY OF POTENTIALLY SIGNIFICANT PROJECT-SPECIFIC TRAFFIC IMPACTS AND CUMULATIVE TRAFFIC IMPACTS ASSESSMENT AT INTERSECTIONS[1]

INTERSECTION	E+P CONDITIONS			OPENING YEAR (2013) CONDITIONS			2025 CONDITIONS		
	POTENTIALLY SIGNIFICANT PROJECT-SPECIFIC IMPACT [2]	IMPACT ASSESSMENT	E+P PROJECT-RELATED INTERSECTION IMPROVEMENTS	CUMULATIVE IMPACT [2]	IMPACT ASSESSMENT	OPENING YEAR (2013) PROJECT-RELATED INTERSECTION IMPROVEMENTS	CUMULATIVE IMPACT [2]	IMPACT ASSESSMENT	2025 PROJECT RELATED INTERSECTION IMPROVEMENTS
Eisenhower Drive (NS) at:									
• Calle Sinaloa (EW)	NO	N/A [3]	N/A [3]	NO	N/A [3]	N/A [5]	NO	N/A [3]	N/A [3]
Avenida Navarro (NS) at:									
• Avenida Montezuma (EW)	NO	N/A [3]	N/A [3]	NO	N/A [3]	N/A [5]	NO	N/A [3]	N/A [3]
Avenida Bermudas (NS) at:									
• Avenida Montezuma (EW)	NO	N/A [3]	N/A [3]	NO	N/A [3]	N/A [5]	NO	N/A [3]	N/A [3]
• Calle Estado (North) (EW)	NO	N/A [3]	N/A [3]	NO	N/A [3]	N/A [5]	NO	N/A [3]	N/A [3]
• Calle Estado (South) (EW)	NO	N/A [3]	N/A [3]	NO	N/A [3]	N/A [5]	NO	N/A [3]	N/A [3]
• Calle Sinaloa/52nd Avenue (EW)	NO	N/A [3]	N/A [3]	NO	N/A [3]	N/A [5]	NO	N/A [3]	N/A [3]
Washington Street (NS) at:									
• Eisenhower Drive (EW)	NO	N/A [3]	N/A [3]	NO	N/A [3]	N/A [5]	NO	N/A [3]	N/A [3]
• Calle Tampico (EW)	NO	N/A [3]	N/A [3]	NO	N/A [3]	N/A [5]	NO	N/A [3]	N/A [3]
• 52nd Avenue (EW)	NO	N/A [3]	N/A [3]	NO	N/A [3]	N/A [5]	NO	N/A [3]	N/A [3]

[1] Per City of La Quinta Engineering Bulletin #06-13, potential project-specific significant impacts and project-specific cumulative impacts must be evaluated. Project is required to mitigate their impacts by mitigation measures.

[2] 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.

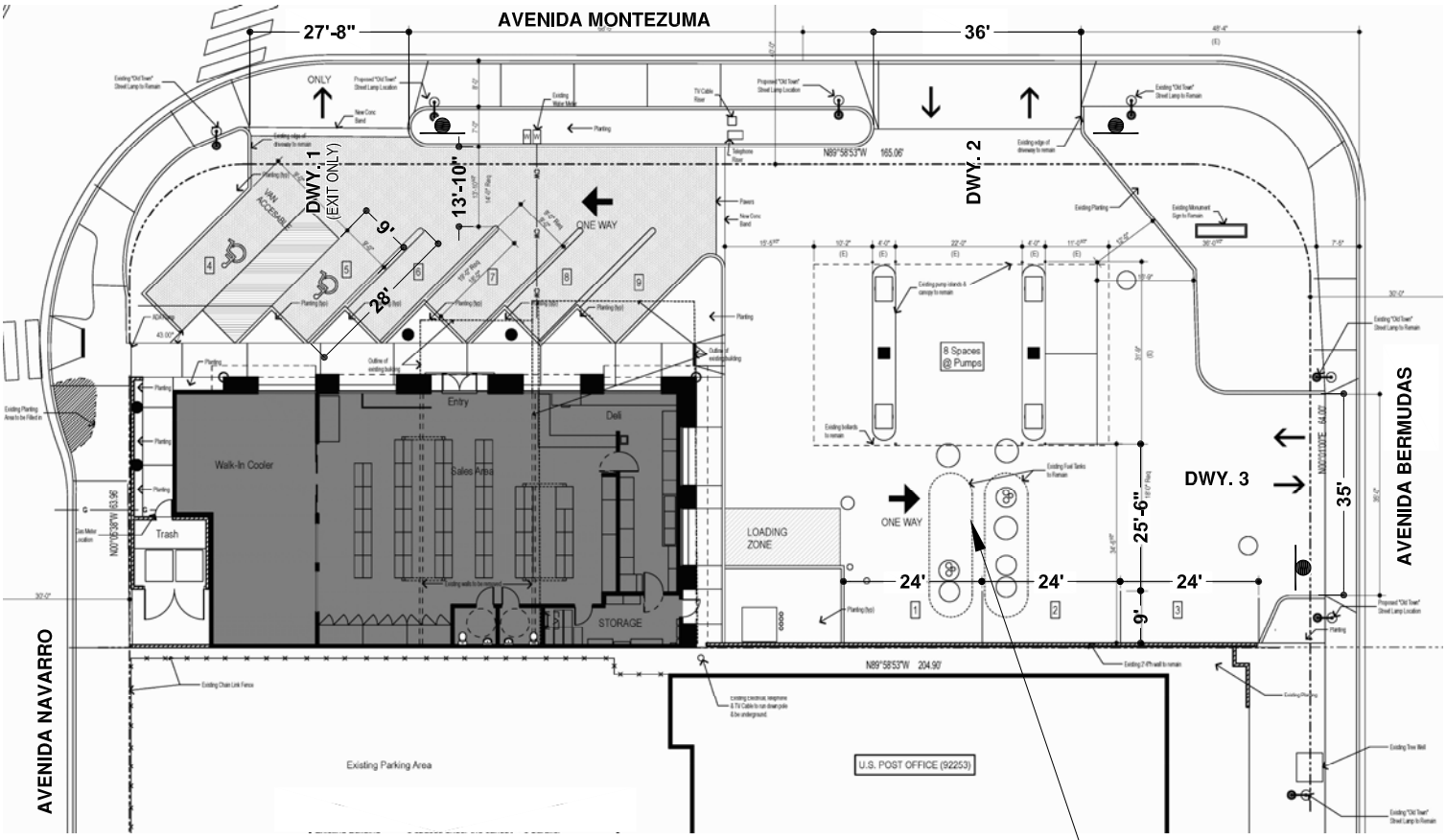
[3] Not Applicable. Potentially significant project-specific traffic impact is not anticipated. Therefore, an impact assessment is not needed.

EXHIBIT 7-A

CIRCULATION RECOMMENDATIONS

DIRECT VEHICULAR ACCESS FROM AVENIDA NAVARRO WILL BE ELIMINATED AND THE ACCESS TO AVENIDA MONTEZUMA WILL BE REDUCED FROM 3 TO 2 DRIVEWAYS, WHICH BASED ON PARKING CONFIGURATION AND DRIVE AISLE WIDTH ADJACENT TO AVENIDA MONTEZUMA THE MOST WESTERLY DRIVEWAY SHOULD BE SIGNED FOR OUTBOUND TRIPS ONLY AND THE EASTERLY DRIVEWAY ON AVENIDA MONTEZUMA IS PROPOSED TO REMAIN FULL ACCESS. A FULL ACCESS DRIVEWAY IS ALSO PROPOSED TO REMAIN ON AVENIDA BERMUDAS.

DUE TO THE SITE'S PHYSICAL CONSTRAINTS, THE APPLICANT PROPOSES THE USE OF ANGLED PARKING STALLS WITH ONE-WAY DRIVE AISLES, APPROPRIATE ONE-WAY SIGNAGE AND STRIPING INDICATING DESIGNATED VEHICLE PATHS SHOULD BE IMPLEMENTED IN CONJUNCTION WITH DETAILED CONSTRUCTION PLANS.



THE PLANNED ANGLED PARKING STALLS LOCATED ALONG THE CONVENIENCE STORE FRONTAGE APPEAR TO CORRECTLY ADHERE TO CITY STANDARDS IN THAT THE HIGH-TURNOVER PARKING STALLS ARE SHOWN TO BE 9'0" WIDE AND 19'0" LONG. THE ONE-WAY DRIVE AISLE WIDTH OF 13'-10" DOES NOT SATISFY CITY STANDARDS FOR ONE-WAY DRIVE AISLE WIDTHS ADJACENT TO ANGLED PARKING BETWEEN 0-44 DEGREES (CITY CODE IS 14'0"). THE ONE-WAY DRIVE AISLE SHOULD BE STRIPED AS SUCH.

THE PLANNED PARALLEL PARKING SPACES PROVIDED ADJACENT TO THE SITE BOUNDARY ALONG THE SOUTHEASTERN PORTION OF THE SITE APPEAR TO ADHERE TO CITY STANDARDS IN THAT THEY ARE 9'0" WIDE AND 24'0" LONG. THE DRIVE AISLE WIDTH ADJACENT TO THE PARALLEL SPACES DOES NOT MEET CURRENT CITY STANDARD FOR TWO-WAY TRAVEL (i.e., 26 ft.), THEREFORE, THE DRIVE AISLE SHOULD BE STRIPED FOR ONE-WAY TRAVEL. AS A ONE-WAY DRIVE AISLE THERE WOULD APPEAR TO BE SUFFICIENT ROOM FOR VEHICLES TO SAFELY NAVIGATE THE PUMP ISLANDS.

LEGEND:

● = STOP SIGN

N

- Due to the site's physical constraints, the applicant proposes the use of angled parking stalls with one-way drive aisles, appropriate one-way signage and striping indicating designated vehicle travel paths which would be implemented in conjunction with detailed construction plans.

- Direct vehicular access from Avenida Navarro will be eliminated and the access to Avenida Montezuma will be reduced from 3 to 2 driveways. Based on the parking configuration and drive aisle width adjacent to Avenida Montezuma the most westerly driveway should be signed for outbound traffic only and the easterly driveway on Avenida Montezuma is proposed to remain full access. A full access driveway is also proposed to remain on Avenida Bermudas. Both of the proposed full access driveways meet the City's minimum 35-foot driveway width.

- The planned angled parking stalls located along the convenience store frontage appear to correctly adhere to City standards in that the high-turnover parking stalls are shown to be 9'0" wide and 19'0" long. The one-way drive aisle width of 13'-10" does not satisfy City standards for one-way drive aisle widths adjacent to angled parking between 0-44 degrees (City code is 14'0"). The one-way drive aisle should be striped as such.

- The planned parallel parking spaces provided adjacent to the site boundary along the southeastern portion of the site appear to adhere to City standards in that they are 9'0" wide and 24'0" long. The drive aisle width adjacent to the parallel spaces does not meet current City standard for two-way travel (i.e., 26 ft.), therefore, the drive aisle should be striped for one-way travel. As a one-way drive aisle there would appear to be sufficient room for vehicles to safely navigate the pump islands.

E. Sight Distance

At unsignalized intersections, intersection sight distance must provide a substantially clear line of sight between the driver of the vehicle waiting on the minor road (project driveways) and the driver of an approaching vehicle (on Avenida Montezuma and Avenida Bermudas). The City of La Quinta *Engineering Bulletin #10-01* (dated August 9, 2010) requires that a driver of the vehicle on a private driveway approach has sufficient corner sight distance for a safe departure from the stopped position assuming that the approaching vehicle comes into view as the stopped vehicle begins its departure. Similarly, the driver of the vehicle on the major street approaching a private driveway vehicle approach must have sufficient stopping sight distance to come to a stopped position if the

driver of the vehicle on the private driveway approach begins its departure as the vehicle on the major road is approaching the intersection.

Per City of La Quinta guidelines, intersection sight distance calculations assume a driver eye height of 3 ½ feet to the top of an object 4 ¼ feet above the pavement. In determining intersection sight distance, a set-back distance for the waiting vehicle on the minor road must be assumed. Set-back for the driver on the minor road shall be a minimum of 15 feet back from the edge of the traveled way (6 feet from the edge of the traveled way + 1 foot stop bar + 8 feet from front bumper to driver).

Adequate visibility for vehicular and pedestrian traffic can be provided at the project driveways by limiting sight obstructions within the limited use area. Any landscaping within the limited use area should not exceed thirty (30) inches in height.

Based on the City of La Quinta guidelines, the minimum stopping sight distance on a level roadway with a speed limit of 25 miles per hour is 150 feet with a minimum corner sight distance of 275 feet and the minimum stopping sight distance on a level roadway with a speed limit of 20 miles per hour is 125 feet with a minimum corner sight distance of 220 feet. Avenida Montezuma does not have a posted speed limit (with the exception of a posted warning speed of 15 miles per hour for the westbound approach heading into the roundabout), as such, a conservative estimation of 20 miles per hour has been assumed. Avenida Bermudas has a posted speed limit of 25 miles per hour.

Sight distance at the project driveways on Avenida Montezuma and Avenida Bermudas has been determined in both directions of travel, with the exception of Driveway 1 and Driveway 2 on Avenida Montezuma. The corner sight distance has only been determined for the westbound approach at Driveway 2 and not the eastbound approach due to the driveway's proximity to the roundabout with low-speed vehicles. The sight distance has only been determined for the eastbound approach for Driveway 2 and not the westbound approach due to the proximity to the all-way stop controlled intersection of Avenida Bermudas and Avenida Montezuma. It is anticipated that turning vehicles will be travelling at speeds of 10 miles per hour or less. It is also important to note that although the corner sight distance for Driveway 3 has been provided for both directions of travel on Avenida Bermudas assuming a 25 miles per hour speed limit, it is anticipated that southbound and northbound vehicles will be traveling at speeds lower than 25 miles per hour in close proximity to Driveway 3 due to the placement of stop signs on Avenida Bermudas at Avenida Montezuma and at Calle Estado (North).

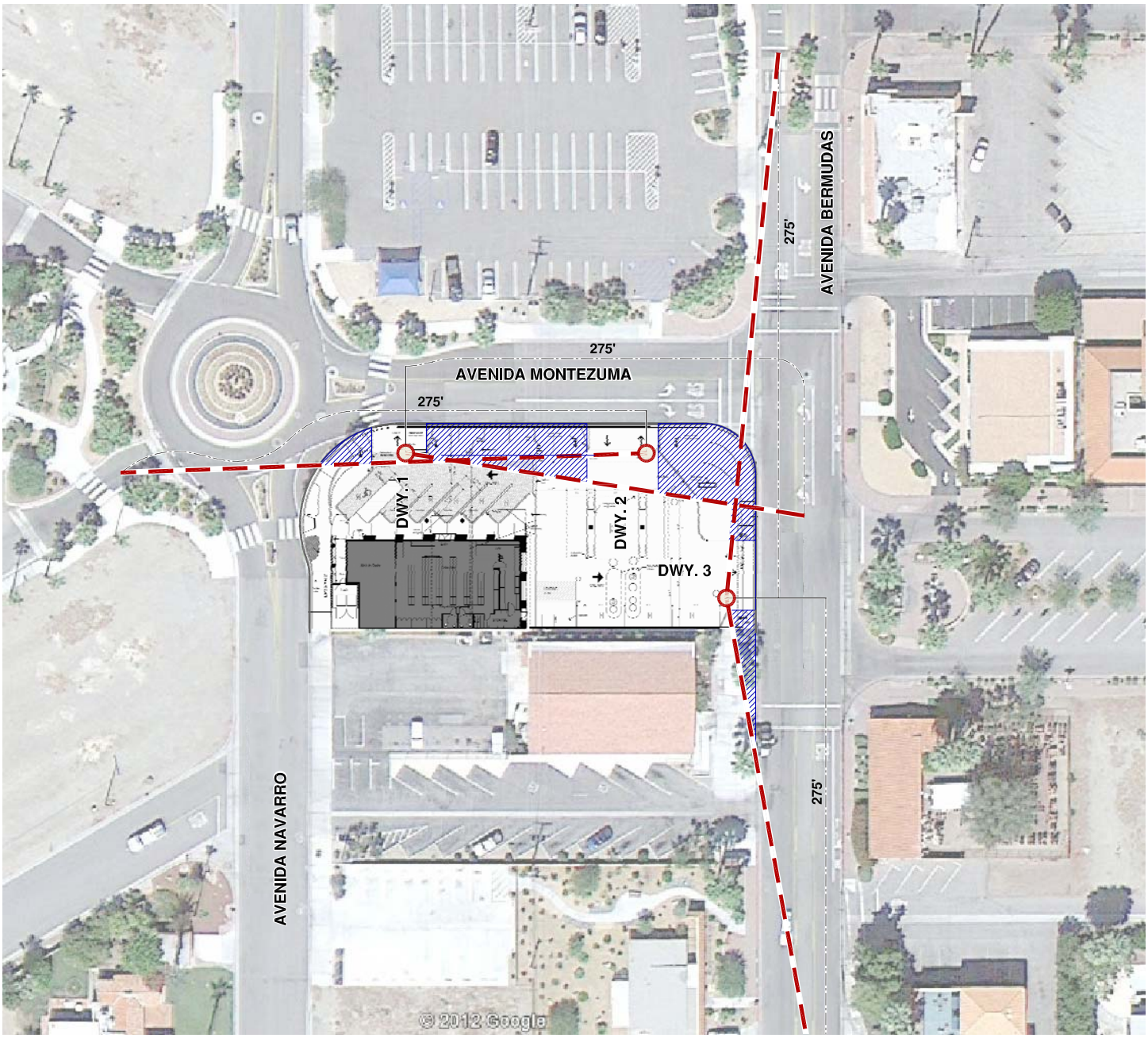
The sight distance lines, limited use area and clear sight triangles are illustrated on Exhibit 7-B. As shown, sight distance deficiencies are not anticipated at the project driveways on Avenida Montezuma and Avenida Bermudas.

F. Parking

Parking will be calculated based on the existing pumps and retail store area as an existing use with eleven (11) existing parking spaces (including pump spaces). Therefore, the retail space must provide eight (8) additional spaces per code for retail square footage (1/250) for a total of nineteen (19) spaces. Any shortage may be made up by the "In-Lieu Fee". The current site plan indicates there are seventeen (17) spaces provided, as such, it is anticipated that the remaining two (2) spaces would be accounted for through payment of the "In-Lieu Fee".

EXHIBIT 7-B

SIGHT DISTANCE



LEGEND:

= SIGHT DISTANCE LINES

= CENTER OF TRAFFIC LANE

= LIMITED USE AREA THAT MUST REMAIN CLEAR OF OBJECTS TALLER THAN 2.5'

N

This Page Intentionally Left Blank