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DIAMOND SPECIFIC PLAN
TRAFFIC IMPACT ANALYSIS
LAKE ELSINORE, CALIFORNIA

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DIAMOND SPECIFIC PLAN
TRAFFIC IMPACT ANALYSIS
CITY OF LAKE ELSINORE, CALIFORNIA

1.0 EXECUTIVE SUMMARY

1.1 Purpose of Report and Study Objectives

The purpose of this traffic impact analysis is to evaluate the proposed Diamond Specific Plan from a traffic circulation standpoint. The project site is located in the City of Lake Elsinore south of Lakeshore Drive and west of Diamond Drive within the Ballpark District as designated by the City General Plan. The Ballpark District is intended to be an area characterized by vibrant mixed-use entertainment, commercial, and residential uses that capitalize on the areas association with Diamond Stadium.

The study objectives include (1) documentation of existing (2009) conditions in the vicinity of the project site; (2) evaluation of existing plus ambient growth plus project (EAP) (2012, 2014 & 2016), existing plus ambient growth plus project plus cumulative developments (EAPC) (2012, 2014 & 2016) and General Plan buildout with project conditions; (3) determination of intersection improvements for EAP (2012, 2014 & 2016), EAPC (2012, 2014 & 2016) and General Plan buildout with project conditions to mitigate significant project impacts to achieve City of Lake Elsinore level of service requirements; (4) evaluation of PM peak hour operations assuming buildout of the proposed project in conjunction with event traffic generated by Diamond Stadium.

1.2 Executive Summary

1.2.1 Site Location and Study Area

The proposed project is located within the City of Lake Elsinore.

City of Lake Elsinore has approved this traffic study's scope and methodology (see Appendix 1.1). Pursuant to the direction provided by the City, the study area includes the following intersections:

Main Street (NS) at:

- Lakeshore Drive (EW)

Auto Center Drive (NS) at:

- Franklin Street/Avenue 6 (EW) – Future Intersection
- Old Franklin Street (EW) – Future Analysis Location

I-15 Southbound Ramps (NS) at:

- Franklin Street (EW) – Future Intersection

I-15 Northbound Ramps (NS) at:

- Franklin Street (EW) – Future Intersection

Avenue 6 (NS) at:

- Lakeshore Drive (EW)

Diamond Circle (Loop Road) (NS) at:

- Driveway 1 (EW) – Future Intersection
- Sylvester Street (EW)

Driveway 2 (NS) at:

- Lakeshore Drive (EW) – Future Intersection

Driveway 3 (NS) at:

- Diamond Circle (Loop Road) (EW) – Future Intersection

Driveway 4 (NS) at:

- Sylvester Street (EW) – Future Intersection

Summerhill Drive/Grape Street (NS) at:

- Railroad Canyon Road (EW)

I-15 Northbound Ramps (NS) at:

- Railroad Canyon Road (EW)

I-15 Southbound Ramps (NS) at:

- Railroad Canyon Road (EW)

Auto Center Drive (NS) at:

- Diamond Drive (EW)

Diamond Drive (NS) at:

- Lakeshore Drive/Mission Trail (EW)
- Driveway 5 (EW) – Future Intersection
- Campbell Street (EW)
- Pete Lehr Drive/Driveway 6 (EW)
- Driveway 7 (EW) – Future Intersection
- Sylvester Street (EW)

Driveway 8 (NS) at:

- Sylvester Street (EW) – Future Intersection

Mission Trail (NS) at:

- Campbell Street (EW)
- Sylvester Street/Malaga Road (EW)
- Hidden Trail/Elberta Road (EW)
- Olive Street (EW)
- Lemon Street (EW)
- Bundy Canyon Road (EW)

I-15 Southbound Ramps (NS) at:

- Bundy Canyon Road (EW)

I-15 Northbound Ramps (NS) at:

- Bundy Canyon Road (EW)

Exhibit 1-1 illustrates the proposed study area (to scale) on a vicinity map. The analysis locations are graphically depicted on Exhibit 1-2. The study area, as shown on Exhibit 1-

EXHIBIT 1-1

VICINITY MAP

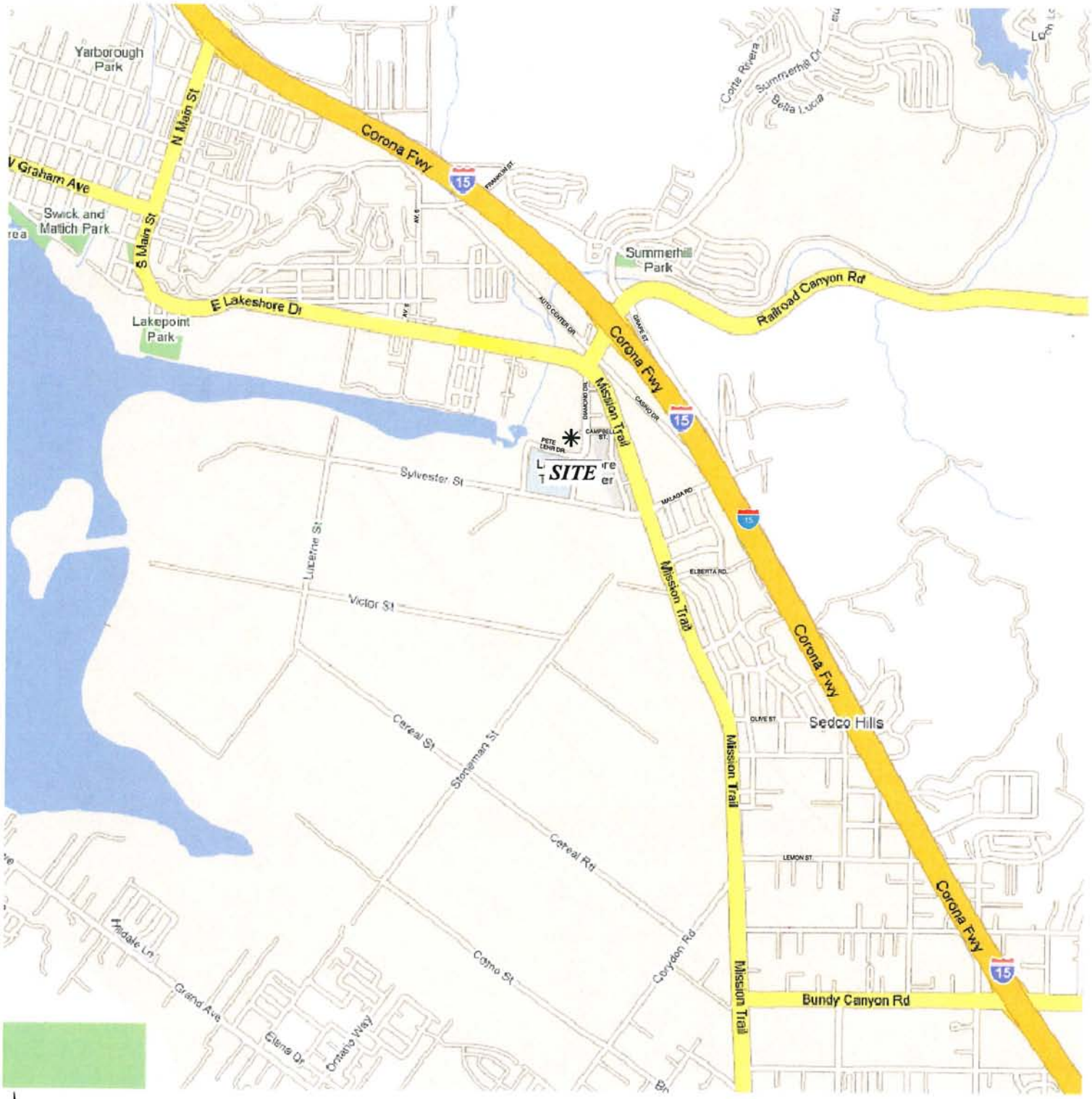
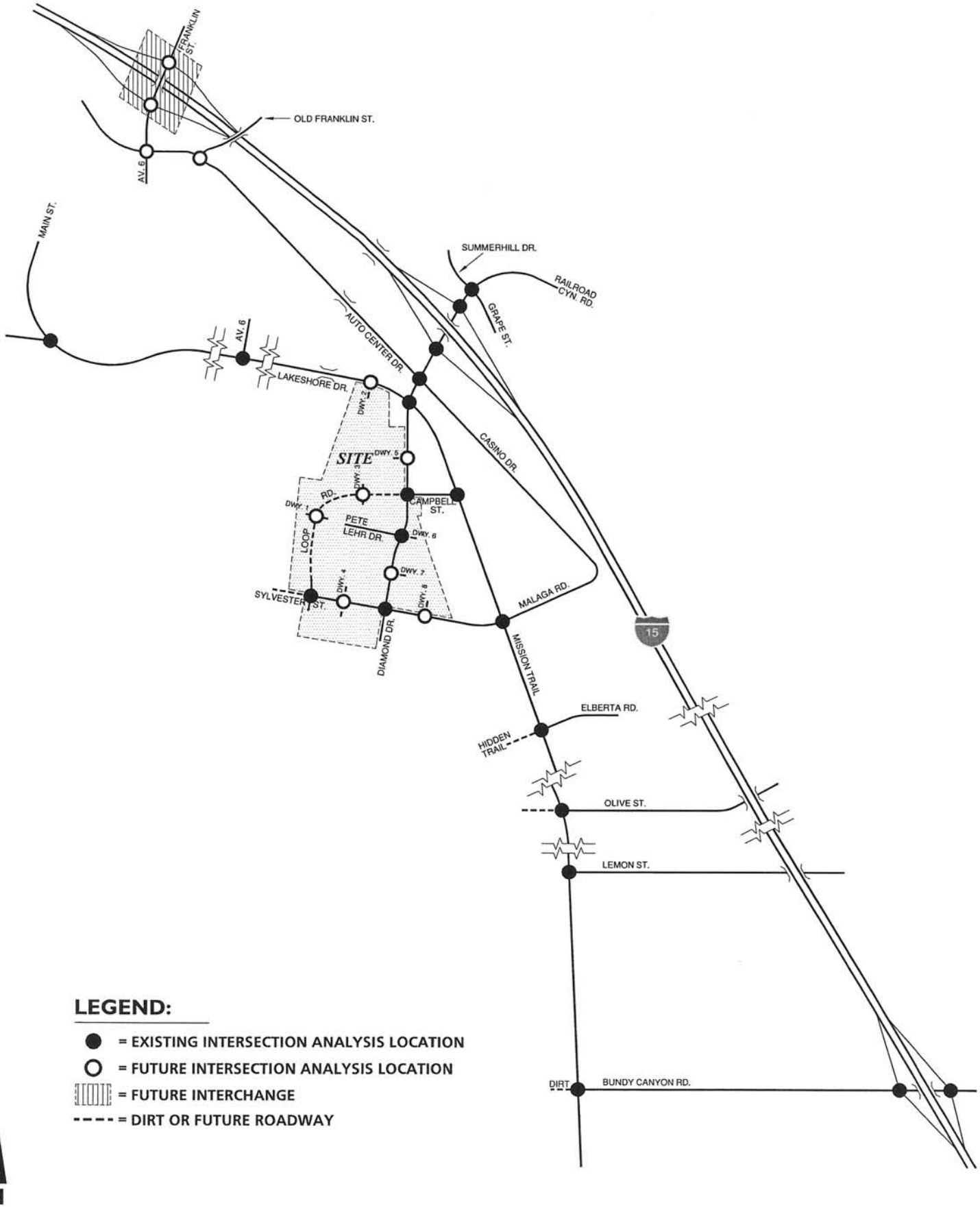


EXHIBIT 1-2

LOCATION MAP



2, is generally bounded by Franklin Street to the north, Bundy Canyon Road to the south, Main Street to the west and the I-15 Freeway to the east. The intersection analysis locations have also been identified on Exhibit 1-2. It should be noted that the location map is not to scale.

1.2.2 Development Description

The project site is generally located south of Lakeshore Drive and west of Diamond Drive within the City of Lake Elsinore. A majority of the site is currently undeveloped and vacant with the exception of the existing Lake Elsinore Diamond Stadium and the existing retail uses along Lakeshore Drive (Lake Elsinore Valley Center). The existing Lake Elsinore Diamond Stadium lies on the northwest corner of Diamond Drive and Sylvester Street with overflow parking to the south of Sylvester Street. The proposed Diamond Specific Plan is the northeastern portion of the East Lake Specific Plan and the City of Lake Elsinore's Ballpark District. The project is proposed as a mixed-use master planned development that is intended to implement the goals and objectives of the Ballpark District. The project is proposed to consist of a mix of commercial, office, entertainment and residential uses. It has been assumed for the purposes of this analysis that the Diamond Specific Plan will be developed over three phases.

Phase 1 (2012) consists of 100 townhomes/condominiums, 75,000 square feet of commercial retail and 100,000 square feet of general office uses within a mixed-use neighborhood. Phase 2 (2014) consists of an additional 400 townhomes/condominiums, 315,000 square feet of commercial retail, 215,000 square feet of general office uses and a 150-room hotel. Phase 3 (2016) (project buildout) will consist of an additional 100 townhomes/condominiums, 82,000 square feet of commercial retail and 110,000 square feet of general office use. Exhibit 2-1 (presented subsequently in Section 2) illustrates the preliminary project phasing plan.

The project site will have external access at the following locations (see Exhibit 1-2):

- One (1) full access driveway on Lakeshore Drive (Driveway 2). Currently there are two (2) full access driveways on Lakeshore Drive into the Lake Elsinore Valley Center. Pursuant to discussions with City staff, full access will only be permitted

from the driveway furthest west from the intersection of Diamond Drive and Lakeshore Drive/Mission Trail.

- Two (2) full access driveways on the future Diamond Circle (Loop Road) (Driveways 1 and 3) which provides access to Sylvester Street and Diamond Drive.
- One (1) full access driveway on Sylvester Street (Driveway 4).
- Two (2) full access driveways on Diamond Drive (Driveways 5 and 6).
- One (1) right-in/right-out only driveway on Diamond Drive (Driveway 7).
- One (1) right-in/right-out only driveway on Sylvester Street (Driveway 8).

1.2.3 Cumulative Developments

The list of cumulative developments used for this analysis has been reviewed and approved by City staff. In total, there are approximately 26 projects aggregated into 18 traffic analysis zones (TAZs).

In total, the cumulative developments are projected to generate approximately 108,151 net trip-ends per day with 7,158 and 10,788 net vehicles per hour during the AM and PM peak hours under 2016 traffic conditions, respectively and consist of the following uses:

No.	TRACT NO./ PROJECT NAME	DESCRIPTION
1	TT 25473 (Tuscany West)	164 Detached Single Family Residential Dwelling Units
2	John Laing Homes Phase 2	506 Detached Single Family Residential Dwelling Units 1,141 Condo/Townhouse Units 117,000 Square Feet of Commercial Retail 308 Multi-Family Attached Residential Dwelling Units
3	TR 29513	98 Detached Single Family Residential Dwelling Units
	TR 28658	141 Detached Single Family Residential Dwelling Units
4	TR 31593 (South Shore I)	521 Detached Single Family Residential Dwelling Units
	TR 32013 (South Shore II)	400 Detached Single Family Residential Dwelling Units
5	City Center Condos	144 Condo/Townhouse Units
6	TT 31345; KB Homes; TT 32785; PP 18773	50 Detached Single Family Residential Dwelling Units 71 Detached Single Family Residential Dwelling Units 96 Multi-Family Attached Residential Dwelling Units
7	PP 18751	6,959 Square Foot High-Turnover Restaurant
8	TAG Property	50,000 Square Foot Car Dealership
9	Tessera	90 Detached Single Family Residential Dwelling Units
10	Back Basin Specific Plan & East Lake Specific Plan	2,407 Detached Single Family Residential Dwelling Units 324 Multi-Family Attached Residential Dwelling Units
11	Lake View Villas	155 Condo/Townhouse Units
12	Watersedge	170 Detached Single Family Residential Dwelling Units 250 Condo/Townhouse Units 110 Multi-Family Attached Residential Dwelling Units 54,600 Square Feet of General Office 150 Room Hotel 50,000 Square Feet of Boat/Watercraft Dealers and Service 76,000 Square Feet of Boat and Watercraft Storage 89,600 Square Feet of Commercial Retail
	Cottages by the Lake	169 Condo/Townhouse Units
13	TTM 32077 (La Strada)	134 Detached Single Family Residential Dwelling Units
14	TM 34249 (Canyon Hills Estates)	302 Detached Single Family Residential Dwelling Units
	Canyon Hills (Multiple TMs)	2,700 Detached Single Family Residential Dwelling Units 1,575 Multi-Family Attached Residential Dwelling Units
15	Spyglass Ranch	171 Condo/Townhouse Units 523 Detached Single Family Residential Dwelling Units 145,000 Square Feet of Commercial Retail
16	Marina Village Condos (TM 33820)	94 Multi-Family Attached Residential Dwelling Units
17	The Colony	211 Multi-Family Attached Residential Dwelling Units
18	PP 20240	250,000 Square Feet of Commercial Retail

A cumulative development project location map is provided in Section 5 on Exhibit 5-22. Per City of Lake Elsinore requirements, cumulative development and area-wide growth calculations were added to existing (2009) traffic volumes in the vicinity of the site for 2012, 2014 and 2016 traffic conditions. This means that both (i) traffic volumes expected from ambient growth in the region and in the vicinity of the proposed project, and (ii) traffic

volumes forecast from a highly inclusive and conservative cumulative projects list were added to existing traffic volumes for EAPC 2012, 2014 and 2016 traffic conditions.

Based on discussions with City of Lake Elsinore staff, the traffic generated by the assumed cumulative developments is proposed to be phased due to the comprehensive number of future projects included and current economic conditions. As such, for 2012 traffic conditions the report will assume approximately 30 percent of the total cumulative traffic, 2014 conditions will assume approximately 50 percent of the total cumulative traffic, and 2016 will assume approximately 75 percent of the total cumulative traffic.

1.3 Principal Findings

1.3.1 City-Required Level of Service and Significant Impacts Criteria

The definition of an intersection deficiency has been obtained from the City of Lake Elsinore General Plan Circulation Element. The City of Lake Elsinore General Plan states that peak hour intersection operations of LOS "D" or better is generally acceptable. Therefore, any intersection within the City of Lake Elsinore operating at LOS "E" and "F" are considered deficient.

1.3.2 Level of Service, Existing (2009) Conditions

For Existing (2009) conditions, the study area intersections currently operate at Level of Service "D" or better during the peak hours (as shown in Table 1-1), with the exception of the following intersections:

Mission Trail (NS) at:

- Campbell Street (EW)
- Lemon Street (EW)

Traffic signals are currently warranted at the following study area intersections under existing (2009) conditions:

SUMMARY OF INTERSECTION IMPROVEMENTS

INTERSECTION	TRAFFIC CONTROL[3]	INTERSECTION APPROACH LANES[1]												DELAY[2] (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
Main St. (NS) at:																	
• Lakeshore Dr. (EW)																	
- Existing (2009)	AWS	0	0	0	1	0	1	0	1	0	0	1	1>>	9.9	11.8	A	B
- EAP (2012)	AWS	0	0	0	1	0	1	0	1	0	0	1	1>>	10.7	13.3	B	B
- EAPC (2012)	AWS	0	0	0	1	0	1	0	1	0	0	1	1>>	12.0	24.0	B	C
- EAP (2014)	AWS	0	0	0	1	0	1	0	1	0	0	1	1>>	12.7	20.1	B	C
- EAPC (2014)	**TS**	0	0	0	1	0	1	0	1	0	0	1	1>>	5.0	8.3	A	A
- EAP (2016)	AWS	0	0	0	1	0	1	0	1	0	0	1	1>>	14.3	26.7	B	D
- EAPC (2016)	**TS**	0	0	0	1	0	1	0	1	0	0	1	1>>	5.8	12.3	A	B
- GP Buildout With Project	**TS**	0	0	0	**2**	0	1	0	**2**	0	0	**2**	1>>	7.0	14.0	A	B
Auto Center Dr. (NS) at:																	
• Franklin Street (EW)																	
- GP Buildout With Project	**TS**	**1**	**2**	**1>**	**1**	**2**	0	**1**	**2**	**1**	**2**	**2**	**1>**	28.1	46.4	C	D
• Old Franklin Street (EW)																	
- GP Buildout With Project	**CSS**	0	**2**	0	**1**	**2**	0	0	0	0	0	1	0	12.1	34.5	B	D
I-15 SB Ramps (NS) at:																	
• Franklin Street (EW)																	
- GP Buildout With Project	**TS**	0	0	0	0	**1**	**1**	0	**2**	**1**	**1**	**2**	0	26.5	33.8	C	C
I-15 NB Ramps (NS) at:																	
• Franklin Street (EW)																	
- GP Buildout With Project	**TS**	0	**1**	**1**	0	0	0	**1**	**2**	0	0	**2**	0	30.5	28.6	C	C
Avenue 6 (NS) at:																	
• Lakeshore Dr. (EW)																	
- Existing (2009)	CSS	0	0	0	0	1	0	1	1	0	0	1	0	15.2	22.0	C	C
- EAP (2012)	CSS	0	0	0	0	1	0	1	1	0	0	1	0	16.8	26.7	C	D
- EAPC (2012)	**TS**	0	0	0	0	1	0	1	1	0	0	1	0	13.5	10.6	B	B
- EAP (2014)	**TS**	0	0	0	0	1	0	1	1	0	0	1	0	13.0	9.1	B	A
- EAPC (2014)	**TS**	0	0	0	0	1	0	1	1	0	0	1	0	10.3	13.5	B	B
- EAP (2016)	**TS**	0	0	0	0	1	0	1	1	0	0	1	0	14.6	12.6	B	B
- EAPC (2016)	**TS**	0	0	0	0	1	0	1	1	0	0	1	0	10.3	16.9	B	B
- GP Buildout With Project	**TS**	0	0	0	**1**	**0**	**1**	1	**3**	0	0	**3**	**1**	9.4	29.1	A	C
Diamond Circle/Loop Road (NS) at:																	
• Driveway 1 (EW)																	
- EAP (2014)	**CSS**	**1**	**1**	0	**1**	**1**	0	0	**1**	0	0	**1**	0	10.2	16.6	B	C
- EAPC (2014)	**CSS**	**1**	**1**	0	**1**	**1**	0	**1**	**1**	0	**1**	**1**	0	10.2	16.6	B	C
- EAP (2016)	**CSS**	**1**	**1**	0	**1**	**1**	0	0	**1**	0	0	**1**	0	10.3	16.7	B	C
- EAPC (2016)	**CSS**	**1**	**1**	0	**1**	**1**	0	0	**1**	0	0	**1**	0	10.3	16.7	B	C
- GP Buildout With Project	**CSS**	**1**	**1**	0	**1**	**1**	0	0	**1**	0	0	**1**	0	10.3	16.7	B	C

SUMMARY OF INTERSECTION IMPROVEMENTS

INTERSECTION	TRAFFIC CONTROL[3]	INTERSECTION APPROACH LANES[1]												DELAY[2] (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
Diamond Circle/Loop Road (NS) at:																	
• Sylvester St. (EW)																	
- Existing (2009)	CSS	0	1	0	0	1	0	0	1	0	0	1	1	8.7	8.7	A	A
- EAP (2012)	CSS	0	1	0	0	1	0	0	1	0	0	1	1	8.7	8.7	A	A
- EAPC (2012)	CSS	0	1	0	0	1	0	0	1	0	0	1	1	8.7	8.7	A	A
- EAP (2014)	CSS	0	1	0	0	1	0	0	1	0	0	1	1	9.9	12.1	A	B
- EAPC (2014)	CSS	0	1	0	0	1	0	0	1	0	0	1	1	9.4	10.2	A	B
- EAP (2016)	CSS	0	1	0	0	1	0	0	1	0	0	1	1	10.0	12.1	A	B
- EAPC (2016)	CSS	0	1	0	0	1	0	0	1	0	0	1	1	9.4	10.1	A	B
- GP Buildout With Project	CSS	0	1	0	0	1	0	0	1	0	0	1	1	9.4	10.1	A	B
Driveway 2 (NS) at:																	
• Lakeshore Drive (EW)																	
- EAP (2016)	**TS**	1	1	0	1	1	0	1	2	1	1	2	1	31.0	15.6	C	B
- EAPC (2016)	**TS**	1	1	0	1	1	0	1	2	1	1	2	1	10.7	17.3	B	B
- GP Buildout With Project	**TS**	0	1	1	1	1	0	1	**3**	1	**2**	**3**	1	10.5	21.6	B	C
Driveway 3 (NS) at:																	
• Loop Road (EW)																	
- EAP (2012)	**CSS**	0	0	0	**1**	0	0	0	0	0	0	0	**1**	8.7	9.1	A	A
- EAPC (2012)	**CSS**	0	0	0	**1**	0	0	0	0	0	0	0	**1**	8.7	9.1	A	A
- EAP (2014)	**TS**	**1**	**1**	0	**1**	**1**	0	**1**	**1**	0	**1**	**1**	0	6.0	13.2	A	B
- EAPC (2014)	**TS**	**1**	**1**	0	**1**	**1**	0	**1**	**1**	0	**1**	**1**	0	6.0	13.2	A	B
- EAP (2016)	**TS**	**1**	**1**	0	**1**	**1**	0	**1**	**1**	0	**1**	**1**	0	6.1	13.3	A	B
- EAPC (2016)	**TS**	**1**	**1**	0	**1**	**1**	0	**1**	**1**	0	**1**	**1**	0	9.1	12.2	A	B
- GP Buildout With Project	**TS**	**1**	**1**	0	**1**	**1**	0	**1**	**1**	0	**1**	**1**	0	10.3	12.2	B	B
Driveway 4 (NS) at:																	
• Sylvester Street (EW)																	
- EAP (2014)	**CSS**	0	**1**	0	0	0	0	0	1	0	**1**	1	0	8.8	9.6	A	A
- EAPC (2014)	**CSS**	0	**1**	0	0	0	0	0	1	0	**1**	1	0	8.8	9.6	A	A
- EAP (2016)	**CSS**	0	**1**	0	0	0	0	0	1	0	**1**	1	0	8.8	9.6	A	A
- EAPC (2016)	**CSS**	0	**1**	0	0	0	0	0	1	0	**1**	1	0	8.8	9.6	A	A
- GP Buildout With Project	**CSS**	0	**1**	0	0	0	0	0	1	0	**1**	1	0	8.8	9.6	A	A
Summerhill Dr./Grape St. (NS) at:																	
• Railroad Canyon Rd. (EW)																	
- Existing (2009)	TS	2	2	1	1	1	1>	2	2	1	1	3	0	31.0	46.2	C	D
- EAP (2012)	TS	2	2	1	1	1	1>	2	2	1	1	3	0	33.8	54.9	C	D
- EAPC (2012)	TS	2	2	1	1	1	1>	2	**3**	**1>**	1	3	0	35.2	44.8	D	D
- EAP (2014)	TS	2	2	1	1	1	1>	2	2	**1>**	1	3	0	32.9	50.8	C	D
- EAPC (2014)	TS	2	2	1	**2**	**2**	1>	2	**3**	**1>**	1	3	0	38.7	42.4	D	D
- EAP (2016)	TS	2	2	1	**2**	**2**	1>	2	2	**1>**	1	3	0	33.6	39.4	C	D
- EAPC (2016)	TS	2	2	1	**2**	**2**	1>	2	**3**	**1>**	**2**	3	0	55.0	51.6	D	D
- GP Buildout With Project	TS	2	2	**2>**	**2**	**2**	1>	2	**3**	**1>**	**2**	3	**2>**	33.7	51.4	C	D

SUMMARY OF INTERSECTION IMPROVEMENTS

INTERSECTION	TRAFFIC CONTROL[3]	INTERSECTION APPROACH LANES[1]												DELAY[2] (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
I-15 NB Ramps (NS) at:																	
• Railroad Canyon Rd. (EW)																	
- Existing (2009)	TS	0	1	2	0	0	0	2	3	0	0	2	1	22.9	24.7	C	C
- EAP (2012)	TS	0	1	2	0	0	0	2	3	0	0	2	1	25.5	26.1	C	C
- EAPC (2012)	TS	0	1	2	0	0	0	2	3	0	0	2	1	31.3	34.2	C	C
- EAP (2014)	TS	0	1	2	0	0	0	2	3	0	0	2	1	29.6	27.8	C	C
- EAPC (2014)	TS	**1**	1	**1>>**	0	0	0	2	3	0	0	**3**	1	17.9	16.6	B	B
- EAP (2016)	TS	0	1	2	0	0	0	2	3	0	0	2	1	33.2	28.9	C	C
- EAPC (2016)	TS	**1**	1	**1>>**	0	0	0	2	3	0	0	**3**	1	24.4	24.0	C	C
- GP Buildout With Project[5]	**TS**	**2**	2	0	0	2	**1>>**	**2**	0	**1**	0	0	0	23.8	17.4	C	B
I-15 SB Ramps (NS) at:																	
• Railroad Canyon Rd. (EW)																	
- Existing (2009)	TS	0	0	0	2	1	1	0	2	1	1	2	0	27.8	32.6	C	C
- EAP (2012)	TS	0	0	0	2	1	1	0	2	1	1	2	0	24.7	36.6	C	D
- EAPC (2012)	TS	0	0	0	2	1	1	0	2	1	**2**	2	0	26.8	33.2	C	C
- EAP (2014)	TS	0	0	0	2	1	1	0	2	1	**2**	2	0	22.0	30.4	C	C
- EAPC (2014)	TS	0	0	0	2	1	**2**	0	**3**	1	**2**	2	0	24.2	30.4	C	C
- EAP (2016)	TS	0	0	0	2	1	1	0	2	1	**2**	2	0	20.3	30.7	C	C
- EAPC (2016)	TS	0	0	0	2	1	**2**	0	**3**	1	**2**	2	0	33.0	43.3	C	D
- GP Buildout With Project[5]	**TS**	0	2	**1**	**1**	2	0	0	0	0	**2**	0	**2>**	13.0	13.8	B	B
Auto Center Dr./Casino Dr. (NS) at:																	
• Diamond Dr. (EW)																	
- Existing (2009)	TS	1	2	0	1	2	0	1	3	0	2	2	0	26.0	25.8	C	C
- EAP (2012)	TS	1	2	0	1	2	0	1	3	0	2	2	0	26.4	23.4	C	C
- EAPC (2012)	TS	1	2	0	1	2	0	1	3	0	2	2	0	27.0	24.8	C	C
- EAP (2014)	TS	1	2	0	1	2	0	1	3	0	2	2	0	26.3	25.2	C	C
- EAPC (2014)	TS	1	2	0	1	2	0	1	3	0	2	**3**	0	25.5	31.2	C	C
- EAP (2016)	TS	1	2	0	1	2	0	1	3	0	2	2	0	28.4	26.4	C	C
- EAPC (2016)	TS	1	2	0	1	2	0	**2**	3	0	2	**3**	0	14.7	34.7	B	C
- GP Buildout With Project	TS	**2**	2	0	**2**	2	**1**	**2**	3	**1**	2	**3**	**1**	38.7	34.7	D	C
Diamond Dr. (NS) at:																	
• Lakeshore Dr./Mission Trail (EW)																	
- Existing (2009)	TS	1	2	0	2	2	0	1	2	1	1	2	1	27.2	52.3	C	D
- EAP (2012)	TS	1	2	0	2	2	0	1	2	1	1	2	1	37.5	35.9	D	D
- EAPC (2012)	TS	1	2	0	2	2	0	1	2	1	1	2	1	35.7	34.7	D	C
- EAP (2014)	TS	1	2	0	2	2	0	1	2	1	1	2	1	35.6	36.6	D	D
- EAPC (2014)	TS	**2**	2	0	2	2	0	**2**	2	1	1	2	**1>**	30.7	51.0	C	D
- EAP (2016)	TS	1	2	0	2	2	0	1	2	1	1	2	1	35.6	46.0	D	D
- EAPC (2016)	TS	**2**	2	0	2	2	**1>**	**2**	2	1	1	2	**1>**	37.1	53.7	D	D
- GP Buildout With Project	TS	**2**	**3**	**1**	2	**3**	**2>**	**2**	**3**	1	1	**3**	**1>**	31.0	45.7	C	D

SUMMARY OF INTERSECTION IMPROVEMENTS

INTERSECTION	TRAFFIC CONTROL[3]	INTERSECTION APPROACH LANES[1]												DELAY[2] (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
Diamond Dr. (NS) at:																	
• Driveway 5 (EW)																	
- EAP (2012)	**CSS**	**1**	2	0	0	2	0	0	**1**	0	0	0	0	9.8	10.6	A	B
- EAPC (2012)	**CSS**	**1**	2	0	0	2	0	0	**1**	0	0	0	0	11.0	14.8	B	B
- EAP (2014)	**CSS**	**1**	2	0	0	2	0	0	**1**	0	0	0	0	12.6	28.7	B	D
- EAPC (2014)	**TS**	**1**	2	0	0	2	0	**1**	0	**1**	0	0	0	6.1	14.0	A	B
- EAP (2016)	**TS**	**1**	2	0	0	2	0	**1**	0	**1**	0	0	0	9.0	20.0	A	C
- EAPC (2016)	**TS**	**1**	2	0	0	2	0	**1**	0	**1**	0	0	0	5.8	14.1	A	B
- GP Buildout With Project	**TS**	**1**	2	0	0	2	**1**	**1**	0	**1**	0	0	0	4.8	14.7	A	B
• Campbell St. (EW)																	
- Existing (2009)	CSS	0	2	0	1	2	0	0	0	0	1	0	1	8.9	9.0	A	A
- EAP (2012)	CSS	1	2	0	1	2	0	0	1	0	1	1	0	11.6	13.7	B	B
- EAPC (2012)	CSS	0	2	0	1	2	0	0	0	0	1	0	1	13.5	27.5	B	D
- EAP (2014)	**TS**	1	2	0	1	2	0	**1**	1	0	1	1	0	23.9	34.8	C	C
- EAPC (2014)	**TS**	1	2	0	1	2	0	**1**	1	0	1	1	0	22.1	34.0	C	C
- EAP (2016)	**TS**	1	2	0	1	2	0	**1**	1	0	1	1	0	31.1	30.0	C	C
- EAPC (2016)	**TS**	1	2	0	1	2	0	**1**	1	0	1	1	0	17.3	27.1	B	C
- GP Buildout With Project	**TS**	**1**	2	0	1	2	**1**	**1**	**1**	0	1	**1**	**1>**	15.0	27.6	B	C
• Pete Lehr Dr./Driveway 6 (EW)																	
- Existing (2009)	CSS	1	2	0	0	2	1	1	0	1	0	0	0	9.2	9.0	A	A
- EAP (2012)	CSS	1	2	0	0	2	1	0	1	0	0	0	0	9.0	9.3	A	A
- EAPC (2012)	CSS	1	2	0	0	2	1	1	0	1	0	0	0	10.0	12.0	A	B
- EAP (2014)	CSS	1	2	0	0	2	1	0	1	0	0	0	0	9.0	10.2	A	B
- EAPC (2014)	CSS	1	2	0	0	2	1	0	1	0	0	0	0	9.9	14.7	A	B
- EAP (2016)	CSS	1	2	0	1	2	1	0	1	0	0	1	0	9.8	13.0	A	B
- EAPC (2016)	CSS	1	2	0	1	2	1	0	1	0	0	1	0	12.0	32.8	B	D
- GP Buildout With Project	**TS**	**1**	2	0	**1**	2	0	0	**1**	0	0	**1**	0	19.0	17.7	B	B
• Driveway 7 (EW)																	
- EAP (2016)	**CSS**	0	2	0	0	2	0	0	0	0	0	0	**1**	8.7	9.1	A	A
- EAPC (2016)	**CSS**	0	2	0	0	2	0	0	0	0	0	0	**1**	10.6	10.8	B	B
- GP Buildout With Project	**CSS**	0	2	0	0	2	0	0	0	0	0	0	**1**	12.9	12.1	B	B
• Sylvester St. (EW)																	
- Existing (2009)	AWS	1	2	0	1	2	1	1	2	0	1	2	0	7.6	7.6	A	A
- EAP (2012)	AWS	1	2	0	1	2	1	1	2	0	1	2	0	7.6	7.7	A	A
- EAPC (2012)	AWS	1	2	0	1	2	1	1	2	0	1	2	0	8.7	10.0	A	A
- EAP (2014)	AWS	1	2	0	1	2	1	1	2	0	1	2	0	8.6	9.6	A	A
- EAPC (2014)	AWS	1	2	0	1	2	1	1	2	0	1	2	0	11.4	17.5	B	C
- EAP (2016)	AWS	1	2	0	1	2	1	1	2	0	1	2	0	8.8	10.4	A	B
- EAPC (2016)	**TS**	1	2	0	1	2	1	1	2	0	1	2	0	20.8	23.0	C	C
- GP Buildout With Project	**TS**	1	2	0	1	2	1	1	2	0	1	2	0	19.8	30.7	B	C

SUMMARY OF INTERSECTION IMPROVEMENTS

INTERSECTION	TRAFFIC CONTROL[3]	INTERSECTION APPROACH LANES[1]												DELAY[2] (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
Driveway 8 (NS) at:																	
• Sylvester Street (EW)																	
- EAP (2016)	**CSS**	0	0	0	0	0	**1**	0	2	0	0	2	0	8.9	9.3	A	A
- EAPC (2016)	**CSS**	0	0	0	0	0	**1**	0	2	0	0	2	0	9.0	9.8	A	A
- GP Buildout With Project	**CSS**	0	0	0	0	0	**1**	0	2	0	0	2	0	9.3	10.0	A	B
Mission Trail (NS) at:																	
• Campbell St. (EW)																	
- Existing (2009)	CSS	1	2	0	1	2	1	0	1	1	0	1	0	21.7	84.4	C	F
- EAP (2012)	**TS**	1	2	0	1	2	1	**1**	1	**0**	**1**	1	0	17.0	24.2	B	C
- EAPC (2012)	**TS**	1	2	0	1	2	1	**1**	1	**0**	**1**	1	0	17.7	25.8	B	C
- EAP (2014)	**TS**	1	2	0	1	2	1	**1**	1	**0**	**1**	1	0	21.3	36.5	C	D
- EAPC (2014)	**TS**	1	2	0	1	2	1	**1**	1	**0**	**1**	1	0	24.7	42.2	C	D
- EAP (2016)	**TS**	1	2	0	1	2	1	**1**	1	**0**	**1**	1	0	18.9	35.0	B	D
- EAPC (2016)	**TS**	1	2	0	1	2	1	**1**	1	**0**	**1**	1	0	20.7	41.4	C	D
- GP Buildout With Project	**TS**	**2**	**3**	0	**2**	**3**	1	**2**	1	**1>**	**1**	1	0	20.2	35.9	C	D
• Sylvester St./Malaga Rd. (EW)																	
- Existing (2009)	TS	1	2	0	1	2	0	1	1	1	1	2	1	14.8	14.3	B	B
- EAP (2012)	TS	1	2	0	1	2	0	1	1	1	1	2	1	14.8	16.2	B	B
- EAPC (2012)	TS	1	2	0	1	2	0	1	1	1	1	2	1	13.7	20.0	B	C
- EAP (2014)	TS	1	2	0	1	2	0	1	1	1	1	2	1	16.6	26.2	B	C
- EAPC (2014)	TS	1	2	0	1	2	0	1	1	1	1	2	1	17.8	33.0	B	C
- EAP (2016)	TS	1	2	0	1	2	0	1	1	1	1	2	1	19.0	28.6	B	C
- EAPC (2016)	TS	1	2	0	1	2	0	1	1	1	1	2	1	20.5	37.1	C	D
- GP Buildout With Project	TS	**2**	**3**	**1**	**2**	**3**	0	1	1	1	1	2	1	18.8	42.6	B	D
• Elberta Rd. (EW)																	
- Existing (2009)	CSS	0	2	0	1	2	0	0	0	0	1	0	1	20.5	23.9	C	C
- EAP (2012)	CSS	0	2	0	1	2	0	1	1	0	1	1	0	28.1	38.0	D	E
- EAPC (2012)	**TS**	1	2	0	1	2	0	1	1	0	1	1	0	9.4	11.0	A	B
- EAP (2014)	CSS	1	2	0	1	2	0	1	1	0	1	1	0	38.9	93.0	E	F
- EAPC (2014)	**TS**	1	2	0	1	2	0	1	1	0	1	1	0	11.9	14.6	B	B
- EAP (2016)	CSS	1	2	0	1	2	0	0	1	0	0	1	0	46.4	--[4]	E	F
- EAPC (2016)	**TS**	1	2	0	1	2	0	1	1	0	1	1	0	11.5	20.5	B	C
- GP Buildout With Project	**TS**	**1**	**3**	0	1	**3**	0	**1**	**1**	0	1	**1**	**0**	11.6	19.5	B	B

SUMMARY OF INTERSECTION IMPROVEMENTS

INTERSECTION	TRAFFIC CONTROL[3]	INTERSECTION APPROACH LANES[1]												DELAY[2] (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
Mission Trail (NS) at:																	
• Olive St. (EW)																	
- Existing (2009)	CSS	0	2	0	1	2	0	0	0	0	0	1	0	22.7	27.0	C	D
- EAP (2012)	**TS**	0	2	0	1	2	0	0	0	0	0	1	0	9.3	11.3	A	B
- EAPC (2012)	**TS**	1	2	0	1	2	0	**1**	1	0	**1**	1	0	15.6	12.3	B	B
- EAP (2014)	**TS**	0	2	0	1	2	0	0	0	0	0	1	0	10.1	10.5	B	B
- EAPC (2014)	**TS**	1	2	0	1	2	0	**1**	1	0	**1**	1	0	13.8	20.4	B	C
- EAP (2016)	**TS**	0	2	0	1	2	0	0	0	0	0	1	0	9.8	11.2	A	B
- EAPC (2016)	**TS**	1	2	0	1	2	0	**1**	1	0	**1**	1	0	14.2	20.4	B	C
- GP Buildout With Project	**TS**	**1**	2	0	1	2	0	**1**	**1**	0	**1**	1	0	15.3	21.3	B	C
• Lemon St. (EW)																	
- Existing (2009)	CSS	0	2	1	0	2	0	0	0	0	0	1	0	18.5	63.2	C	F
- EAP (2012)	**TS**	0	2	1	**1**	2	0	0	0	0	0	1	0	11.9	10.2	B	B
- EAPC (2012)	**TS**	0	2	1	**1**	2	0	0	0	0	0	1	0	10.7	12.8	B	B
- EAP (2014)	**TS**	0	2	1	**1**	2	0	0	0	0	0	1	0	8.0	10.8	A	B
- EAPC (2014)	**TS**	0	2	1	**1**	2	0	0	0	0	0	1	0	10.6	15.6	B	B
- EAP (2016)	**TS**	0	2	1	**1**	2	0	0	0	0	0	1	0	8.6	13.4	A	B
- EAPC (2016)	**TS**	0	2	1	**1**	2	0	0	0	0	**1**	**0**	**1**	9.4	14.6	A	B
- GP Buildout With Project	**TS**	0	2	1	**1**	2	0	0	0	0	**1**	**0**	**1**	16.6	42.2	B	D
• Bundy Canyon Road (EW)																	
- Existing (2009)	TS	1	2	0	1	2	0	0	1	0	0	1	1	18.8	21.4	B	C
- EAP (2012)	TS	1	2	0	1	2	0	0	1	0	0	1	1	20.3	49.2	C	D
- EAPC (2012)	TS	1	2	0	1	2	0	0	1	0	0	1	1	35.4	40.5	D	D
- EAP (2014)	TS	1	2	0	1	2	0	0	1	0	0	1	1	35.3	41.6	D	D
- EAPC (2014)	TS	1	2	0	**2**	2	0	**1**	1	0	**1**	1	**1>**	33.2	36.6	C	D
- EAP (2016)	TS	1	2	0	1	2	0	0	1	0	0	1	1	36.1	44.9	D	D
- EAPC (2016)	TS	1	2	0	**2**	2	0	**1**	1	0	**1**	1	**1>**	36.4	42.6	D	D
- GP Buildout With Project	TS	**2**	2	0	**2**	2	0	**1**	**2**	**1**	**2**	**2**	**1>**	32.6	41.7	C	D
I-15 SB Ramps (NS) at:																	
• Bundy Canyon Road (EW)																	
- Existing (2009)	TS	0	0	0	1	1	0	0	2	0	1	2	0	25.8	25.7	C	C
- EAP (2012)	TS	0	0	0	1	1	0	0	2	0	1	2	0	27.2	26.2	C	C
- EAPC (2012)	TS	0	0	0	1	1	0	0	2	0	1	2	0	21.2	21.4	C	C
- EAP (2014)	TS	0	0	0	1	1	0	0	2	0	1	2	0	24.4	19.9	C	B
- EAPC (2014)	TS	0	0	0	1	1	0	0	2	0	1	2	0	21.8	23.8	C	C
- EAP (2016)	TS	0	0	0	1	1	0	0	2	0	1	2	0	25.3	19.5	C	B
- EAPC (2016)	TS	0	0	0	1	1	0	0	2	0	1	2	0	26.8	22.9	C	C
- GP Buildout With Project	TS	0	0	0	**2**	1	0	0	**3**	**1**	**2**	**3**	0	27.4	27.1	C	C

SUMMARY OF INTERSECTION IMPROVEMENTS

INTERSECTION	TRAFFIC CONTROL[3]	INTERSECTION APPROACH LANES[1] NORTH-BOUND L	T	R	SOUTH-BOUND L	T	R	EAST-BOUND L	T	R	WEST-BOUND L	T	R	DELAY[2] (SECS.) AM	PM	LEVEL OF SERVICE AM	PM
I-15 NB Ramps (NS) at:																	
• Bundy Canyon Road (EW)																	
- Existing (2009)	TS	1	1	0	0	0	0	1	2	0	0	2	0	31.1	29.7	C	C
- EAP (2012)	TS	1	1	0	0	0	0	1	2	0	0	2	0	32.7	31.1	C	C
- EAPC (2012)	TS	1	1	0	0	0	0	1	2	0	0	2	0	32.3	34.2	C	C
- EAP (2014)	TS	1	1	0	0	0	0	1	2	0	0	2	0	34.8	32.0	C	C
- EAPC (2014)	TS	1	1	0	0	0	0	1	2	0	0	2	0	36.3	40.7	D	D
- EAP (2016)	TS	1	1	0	0	0	0	1	2	0	0	2	0	37.6	33.7	D	C
- EAPC (2016)	TS	1	1	**1**	0	0	0	1	2	0	0	2	0	39.2	47.7	D	D
- GP Buildout With Project	TS	**2**	1	**1**	0	0	0	**2**	**3**	0	0	**3**	**1**	21.6	28.0	C	C

[1] 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; 1>> = Free-Right Turn Lane; 1> = Right-Turn Overlap Phasing; **1** = Improvement

[2] Delay and level of service calculated using the following analysis software:
HCS+ Version 5.21 (2005) for unsignalized intersections and SYNCHRO Version 7 Build 763 (2007) for signalized intersections.
Per the 2000 Highway Capacity Manual, overall average intersection delay and level of service are shown for intersections with a traffic signal or all way stop control. For intersections with cross street stop control, the delay and level of service for the worst individual movement (or movements sharing a single lane) are shown. (The intersection of Diamond Dr. at Sylvester St. has been analyzed using Traffix Version 8.0 R1 since the intersection could not be analyzed with the HCS+ software.)

[3] TS = Traffic Signal; CSS = Cross Street Stop; AWS = All Way Stop

[4] -- = Delay High, Intersection Unstable; Level of Service "F".

[5] It should be noted that the I-15 interchange at Railroad Canyon Road has been assumed to be re-configured.

NOTE: Any leg implementing a right-turn overlap phasing requires the elimination of U-turn movements from the leg immediately counter-clockwise.

Mission Trail (NS) at:

- Campbell Street (EW)
- Olive Street (EW)
- Lemon Street (EW)

1.3.3 Level of Service, Existing Plus Ambient Growth Plus Project (2012) Conditions

For existing plus ambient growth plus project (EAP) (2012) conditions, the recommended intersection improvements are shown on the summary of intersection improvements (Table 1-1). The two locations currently operating at unacceptable levels of service, as mentioned in the previous section, are also anticipated to operate at unacceptable levels of service under EAP (2012) traffic conditions in addition to the intersections of Mission Trail at Elberta Road and Mission Trail at Olive Street. However, with the improvements identified on Table 1-1, the study area intersections are anticipated to operate at acceptable levels of service, with the exception of the intersection of Mission Trail at Elberta Road. It should be noted that this intersection is anticipated to meet the daily volume based (planning level) warrant for a traffic signal with future cumulative growth. Side street volumes on Elberta Road are projected to be nominal without future cumulative development. The recommended improvements are further discussed in Sections 6 and 8. There are no additional intersections anticipated to warrant a traffic signal as compared to EAP (2012) conditions.

1.3.4 Level of Service, Existing Plus Ambient Growth Plus Project Plus Cumulative (2012) Conditions

For existing plus ambient growth plus project plus cumulative (EAPC) (2012) conditions, the recommended intersection improvements are shown on the summary of intersection improvements (Table 1-1). The intersections of Avenue 6 at Lakeshore Drive, Summerhill Drive/Grape Street at Railroad Canyon Road, I-15 Southbound Ramps at Railroad Canyon Road, Mission Trail at Elberta Road and Mission Trail at Olive Street are anticipated to operate at unacceptable levels of service with existing geometrics during the peak hours, in addition to the previously identified intersections under existing (2009) conditions. However, with the improvements identified on Table 1-1, the study area intersections are anticipated to operate at acceptable levels of service. The recommended

improvements are further discussed in Sections 6 and 8. The intersections of Main Street at Lakeshore Drive, Avenue 6 at Lakeshore Drive, Diamond Drive at Campbell Street and Mission Trail at Elberta Road are anticipated to warrant traffic signals in addition to those currently warranted under existing (2009) traffic conditions.

1.3.5 Level of Service, Existing Plus Ambient Growth Plus Project (2014) Conditions

For existing plus ambient growth plus project (EAP) (2014) conditions, the recommended intersection improvements are shown on the summary of intersection improvements (Table 1-1). The intersections of Avenue 6 at Lakeshore Drive, Summerhill Drive/Grape Street at Railroad Canyon Road, I-15 Southbound Ramps at Railroad Canyon Road and Diamond Drive at Campbell Street are anticipated to operate at unacceptable levels of service with existing geometrics during the peak hours, in addition to the previously identified intersections under EAP (2012) conditions. However, with the improvements identified on Table 1-1, the study area intersections are anticipated to operate at acceptable levels of service, with the exception of the intersection of Mission Trail at Elberta Road. As discussed previously, this intersection is anticipated to meet the daily volume based (planning level) warrant for a traffic signal with future cumulative growth. Side street volumes on Elberta Road are projected to be nominal without future cumulative development. The recommended improvements are further discussed in Sections 6 and 8. The intersections of Main Street at Lakeshore Drive, Avenue 6 at Lakeshore Drive, Driveway 3 at Diamond Circle (Loop Road), Diamond Drive at Driveway 5 and Diamond Drive at Campbell Street are anticipated to warrant traffic signals in addition to those previously warranted under EAP (2012) traffic conditions.

1.3.6 Level of Service, Existing Plus Ambient Growth Plus Project Plus Cumulative (2014) Conditions

For existing plus ambient growth plus project plus cumulative (EAPC) (2014) conditions, the recommended intersection improvements are shown on the summary of intersection improvements (Table 1-1). The majority of the study area intersections are anticipated to operate at unacceptable levels of service with existing geometrics during the peak hours, with the exception of the intersections of Diamond Circle (Loop Road) at Sylvester Street, Diamond Drive at Sylvester Street, Mission Trail at Sylvester Street/Malaga Road, I-15

Southbound Ramps at Bundy Canyon Road and I-15 Northbound Ramps at Bundy Canyon Road. However, with the improvements identified on Table 1-1, the study area intersections are anticipated to operate at acceptable levels of service. The recommended improvements are further discussed in Sections 6 and 8. The intersections of Driveway 3 at Diamond Circle (Loop Road), Diamond Drive at Driveway 5 and Diamond Drive at Sylvester Street are anticipated to warrant traffic signals in addition to those previously warranted under EAPC (2012) traffic conditions.

1.3.7 Level of Service, Existing Plus Ambient Growth Plus Project (2016) Conditions

For existing plus ambient growth plus project (EAP) (2016) conditions, the recommended intersection improvements are shown on the summary of intersection improvements (Table 1-1). There are no study area intersections that are anticipated to operate at unacceptable levels of service during the peak hours, in addition to the previously identified intersections under EAP (2014) conditions. However, with the improvements identified on Table 1-1, the study area intersections are anticipated to operate at acceptable levels of service, with the exception of the intersection of Mission Trail at Elberta Road. As discussed previously, this intersection is anticipated to meet the daily volume based (planning level) warrant for a traffic signal with future cumulative growth. Side street volumes on Elberta Road are projected to be nominal without future cumulative development. The recommended improvements are further discussed in Sections 6 and 8. The intersection of Driveway 2 at Lakeshore Drive is anticipated to warrant a traffic signal in addition to those previously warranted under EAP (2014) traffic conditions.

1.3.8 Level of Service, Existing Plus Ambient Growth Plus Project Plus Cumulative (2016) Conditions

For existing plus ambient growth plus project plus cumulative (EAPC) (2016) conditions, the recommended intersection improvements are shown on the summary of intersection improvements (Table 1-1). The majority of the study area intersections are anticipated to operate at unacceptable levels of service with existing geometrics during the peak hours, with the exception of the intersections of Diamond Circle (Loop Road) at Sylvester Street, Diamond Drive at Sylvester Street, Mission Trail at Sylvester Street/Malaga Road and I-15 Southbound Ramps at Bundy Canyon Road. However, with the improvements

identified on Table 1-1, the study area intersections are anticipated to operate at acceptable levels of service. The recommended improvements are further discussed in Sections 6 and 8. The intersection of Driveway 2 at Lakeshore Drive is anticipated to warrant a traffic signal in addition to those previously warranted under EAPC (2014) traffic conditions.

1.3.9 Level of Service, Existing Plus Ambient Growth Plus Project Plus Cumulative (2016) Conditions With Lake Elsinore Diamond Stadium Traffic

Pursuant to a request by City staff, consideration and analysis has also been included that evaluates the operational performance of the study area intersections under future project buildout of the proposed Diamond Specific Plan in conjunction with a special event being held at Diamond Stadium. For purposes of this analysis, it has been assumed that the start time for most weekday events (i.e., baseball games) held at Diamond Stadium have the potential to overlap with some portion of the PM peak hour. As such, inbound special event traffic was added to project buildout with cumulative PM peak hour traffic volumes to assess operational performance of the study area intersections.

For existing plus ambient growth plus project plus cumulative (EAPC) (2016) conditions with the Lake Elsinore Diamond Stadium traffic, it is anticipated that the following study area intersections would perform at Level of Service "E" or "F" during the PM peak hour as compared to the EAPC (2016) with mitigation traffic scenario:

Summerhill Drive/Grape Street (NS) at:

- Railroad Canyon Road (EW)

Diamond Drive (NS) at:

- Lakeshore Drive/Mission Trail (EW)

Mission Trail (NS) at:

- Bundy Canyon Road (EW)

I-15 Northbound Ramps (NS) at:

- Bundy Canyon Road (EW)

It is important to note that several of these locations were projected to operate with average delays of less than 55.0 seconds or Level of Service "D", but also exhibited volume to capacity values slightly over 1.0, which by definition equates to Level of Service "F". In general, the short-term impacts projected to occur during the overlap of the PM peak period and that of the inbound special event trips did not seem unusual as compared to those observed at other sporting venues. Additional discussion on this analysis is provided in Section 6.0. Anticipated changes in delay at each study area location can be found in Table 6-7.

1.3.10 Level of Service, General Plan Buildout With Project Conditions

For General Plan buildout with project conditions, the recommended intersection improvements are shown on the summary of intersection improvements (Table 1-1). The majority of the study area intersections are anticipated to operate at unacceptable levels of service with existing geometrics during the peak hours, with the exception of the intersection of Diamond Circle (Loop Road) at Sylvester Street. However, with the improvements identified on Table 1-1, the study area intersections are anticipated to operate at acceptable levels of service. The recommended improvements are further discussed in Sections 6 and 8. The intersections of Diamond Drive at Driveway 6, I-15 Northbound Ramps at Franklin Street, I-15 Southbound Ramps at Franklin Street, Auto Center Drive at Franklin Street/Avenue 6, Grape Street at I-15 Northbound Ramps and Casino Drive At I-15 Southbound Ramps are anticipated to warrant traffic signals in addition to those previously warranted under EAPC (2016) traffic conditions.

It should be noted that at the time the I-15 Northbound Ramps are constructed on Grape Street and signalized, the proximity of nearby driveways should be taken into consideration to properly coordinate signals along Grape Street. Similarly, the proximity of nearby driveways on Casino Drive to the I-15 Southbound Ramps should also be assessed. The implementation of coordination between closely spaced signals along Grape Street and Casino Drive would mitigate potential queuing and access issues.

Although the intersection of Diamond Drive and Driveway 6 is anticipated to meet a traffic signal warrant under long-range conditions due to the potentially high volumes on Diamond Drive, it is important to note that the driveway is not anticipated to meet a traffic

signal warrants under EAPC (2016) conditions (project buildout). As such, it is recommended that this location be monitored, and the City Traffic Engineer should implement engineering judgment and his/her discretion on the installation of a traffic signal.

1.4 Design Features of the Project

The recommended on-site design features and circulation recommendations for the proposed project are discussed below.

1.4.1 On-Site Circulation Recommendations

The on-site circulation improvements recommended to accommodate project access and circulation needs for Phase 1 (2012) of the project include the following (illustrated subsequently on Exhibit 8-1):

- Construct Diamond Drive from the northerly project boundary to Campbell Street at its ultimate half-section width as a major roadway (100-foot right-of-way and 80-foot curb-to-curb width) in conjunction with the development.

- Construct Diamond Circle (Loop Road) (the extension of Campbell Street within the project) from Diamond Drive to Driveway 3 at its ultimate full-section width as a divided collector (78-foot right-of-way and 56-foot curb-to-curb width) in conjunction with the development. It should be noted that the 10-foot shoulders will be utilized for parallel on-street parking. The 12-foot painted median can be utilized as a two-way left turn lane (TWLTL) under normal operating conditions, or as additional inbound or outbound capacity for special events held at Diamond Stadium. See Exhibit 4-5 for further details on the proposed cross-section.

- Construct the intersection of Driveway 3 and Diamond Circle (Loop Road) as a cross-street stop controlled intersection with full access.

- Construct the intersection of Diamond Drive and Driveway 5 as a cross-street stop controlled intersection with full-access. A minimum 150-foot northbound left

turn lane should be constructed at the time a raised median is constructed on Diamond Drive, thus eliminating the existing TWLTL.

The on-site circulation improvements recommended to accommodate project access and circulation needs for Phase 2 (2014) of the project include the following (illustrated subsequently on Exhibit 8-2):

- Construct Diamond Drive from Campbell Street to Sylvester Street at its ultimate full-section width as a major roadway (100-foot right-of-way and 80-foot curb-to-curb width) in conjunction with the development.

- Construct Diamond Circle (Loop Road) from Driveway 3 to Sylvester Street at its ultimate full-section width as a divided collector (78-foot right-of-way and 56-foot curb-to-curb width) in conjunction with the development. It should be noted that the 10-foot shoulders are anticipated to be utilized for parallel on-street parking. See Exhibit 4-5 for further details on the proposed cross-section.

- Construct Sylvester Street from Diamond Circle (Loop Road) to Diamond Drive at its ultimate full-section width as a major roadway (100-foot right-of-way and 80-foot curb-to-curb width) in conjunction with the development.

- Construct the intersection of Driveway 1 on Diamond Circle (Loop Road) as a cross-street stop controlled intersection with full access.

- Construct the southern leg of Diamond Circle (Loop Road) at Sylvester Street with full access. A stop control should be installed for the northbound direction of travel at this intersection.

- Install a traffic signal at the intersection of Driveway 3 on Diamond Circle (Loop Road).

- Construct the intersection of Driveway 4 on Sylvester Street as a cross-street stop controlled intersection with full access. Construct a 150-foot westbound left turn pocket on Sylvester Street.

- Install a traffic signal at the intersection of Diamond Drive and Campbell Street.

- Vacate the existing Pete Lehr Drive and construct Driveway 6. Construct the intersection of Driveway 6 on Diamond Drive as a cross-street stop controlled intersection with full access.

The on-site circulation improvements recommended to accommodate project access and circulation needs for Phase 3 (2016) of the project include the following (illustrated subsequently on Exhibit 8-3):

- Construct Lakeshore Drive from the westerly project boundary to the easterly project boundary at its ultimate half-section width as an urban arterial (120-foot right-of-way and 106-foot curb-to-curb width) in conjunction with the development.

- Construct Sylvester Street from Diamond Drive to the easterly project boundary at its ultimate half-section width as a major (100-foot right-of-way and 80-foot curb-to-curb width) in conjunction with the development.

- Pursuant to direction from City staff, provide full access into the commercial developments to the north and south of Lakeshore Drive via a single driveway. Install a traffic signal at Driveway 2 on Lakeshore Drive with a 100-foot westbound left turn pocket.

- Install a traffic signal at the intersection of Diamond Drive and Driveway 5.

- Construct the eastern leg of Driveway 6 on Diamond Drive. Install a stop control for the westbound direction of travel. The intersection should be constructed to allow for full access.

- Construct Driveway 7 on Diamond Drive as a cross-street stop controlled intersection with right-in/right-out access only.

- Construct Driveway 8 on Sylvester Street as a cross-street stop controlled intersection with right-in/right-out access only.

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

Sight distance at each project access driveway should be reviewed with respect to standard Caltrans and City of Lake Elsinore sight distance standards at the time of preparation of final grading, landscape and street improvement plans.

1.4.2 On-Site Pedestrian Circulation Recommendations

Pedestrian activity is affected by elements such as distance to desired destination, ease of access or convenience, adequate protection from vehicular traffic, perceived safety, weather and quality of the walking environment. Although a detailed plan of the Diamond Specific Plan is not available at this time, measures to reduce potential pedestrian-vehicle conflict points and other elements to promote walkability should be considered as the site plan is further developed. Recommendations on community design elements can be found in Section 7 of this report. It should be noted that these recommendations focus on encouraging walking and advocating a multi-modal transit network within the community.

1.4.3 On-Site Parking Recommendations

For mixed-use developments, such as the Diamond Specific Plan, it is often appropriate to employ "shared" parking methodologies in determining the number of parking spaces to be provided on-site. Developments that include a unique mixture of office, commercial and residential uses have opportunities to "share" parking since the proposed land uses would have parking demands that peak during different times of the day, thus resulting in the need for less parking overall. Parking for any other land uses, not applicable to the shared parking methodology, should be determined in accordance with the guidelines set forth in Chapter 17.148 of the Lake Elsinore Municipal Code.

The shared parking methodology is discussed in further detail in Section 7 of this report.

1.4.4 Off-Site Improvement Recommendations

Intersection improvements identified on Table 1-1 represent project and cumulative impact needs from existing (2009) conditions through Long-Range General Plan buildout conditions.

Intersection improvements that were identified in the analysis as necessary to maintain or improve the operational level of service of the street system in the vicinity of the project site are shown in Table 8-1. The table lists the incremental improvements that are required by 2012, 2014, 2016 (project buildout) and the total improvements required by General Plan Buildout. It is anticipated that the improvements required to maintain or improve the level of service operations of transportation facilities in the vicinity of the project will be constructed through the City's local transportation impact fee and regional transportation improvement programs, such as the Transportation Uniform Mitigation Fee (TUMF). In addition, the table identifies which of the total General Plan buildout improvements are not included in the TIF or TUMF programs, but instead will be satisfied through either a fair-share contribution or as determined by the City.

2.0 PROJECT DESCRIPTION

2.1 Site Location

The proposed Diamond Specific Plan development is located south of Lakeshore Drive and west of Diamond Drive within the City of Lake Elsinore. The site is currently undeveloped and vacant with the exception of the existing Lake Elsinore Diamond Stadium and shopping center on the south side of Lakeshore Drive (Lake Elsinore Valley Center).

2.2 Site Land Use

The proposed Diamond Specific Plan is the northeastern portion of the East Lake Specific Plan and the City of Lake Elsinore's Ballpark District. The project is proposed as a mixed-use master planned development that is intended to implement the goals and objectives of the Ballpark District. The project is proposed to consist of a mix of commercial, office, entertainment and residential uses. It has been assumed for the purposes of this analysis that the Diamond Specific Plan would be developed over three phases.

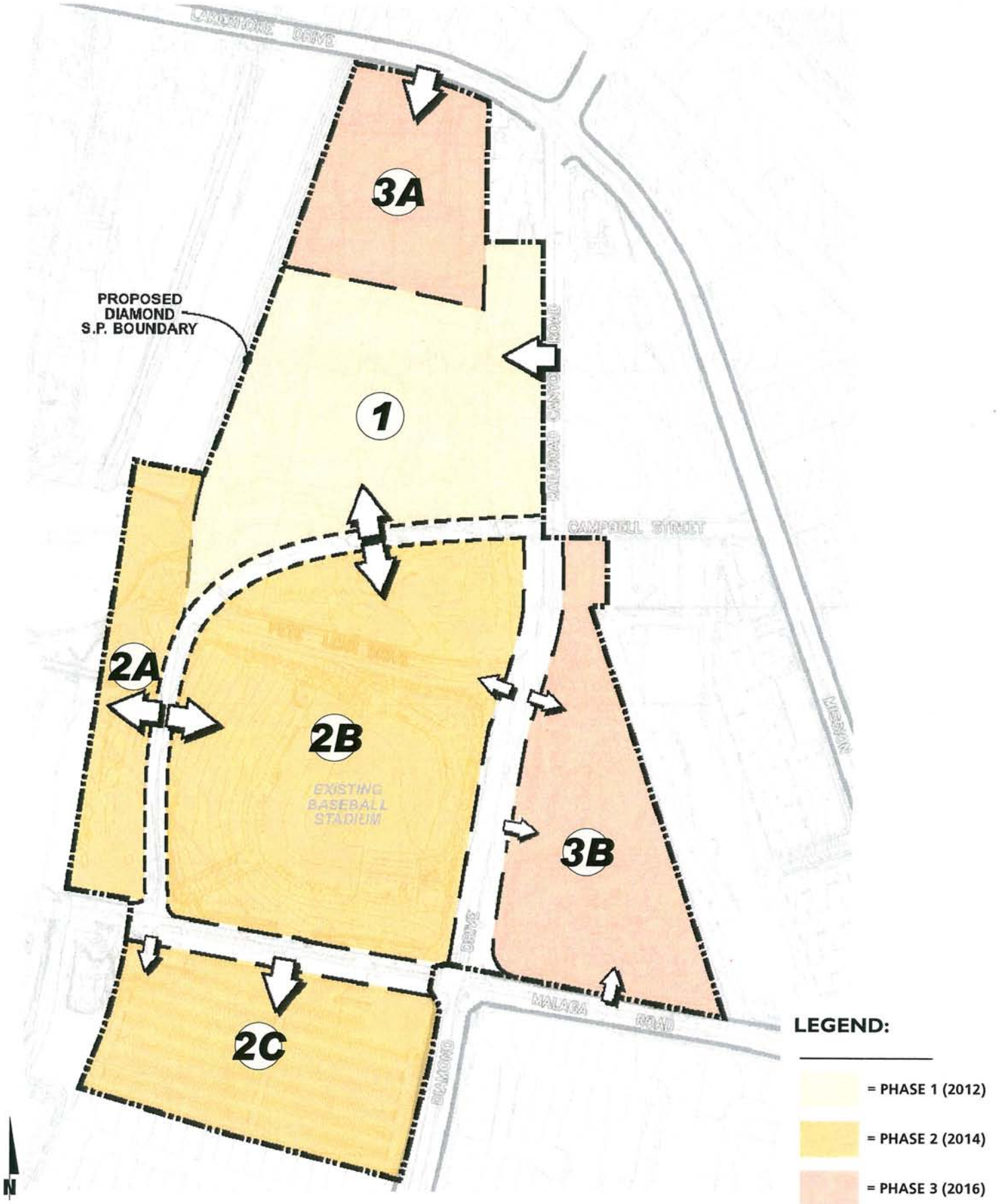
Phase 1 (2012) consists of 100 townhomes/condominiums, 75,000 square feet of commercial retail and 100,000 square feet of general office uses within a mixed-use neighborhood. Phase 2 (2014) consists of an additional 400 townhomes/condominiums, 315,000 square feet of commercial retail, 215,000 square feet of general office uses and a 150-room hotel. Phase 3 (2016) (project buildout) will consist of an additional 100 townhomes/condominiums, 82,000 square feet of commercial retail and 110,000 square feet of general office use. Exhibit 2-1 (presented subsequently in Section 2) illustrates the preliminary project phasing plan.

2.3 Preliminary Project Phasing Plan

Exhibit 2-1 illustrates the preliminary project phasing plan. Each phase of the proposed Diamond Specific Plan is illustrated on Exhibit 2-1. It should be noted that this plan is subject to refinement and revision, based on planning, engineering and environmental considerations.

EXHIBIT 2-1

PHASING PLAN



2.4 Project Vehicular Access

As shown on Exhibit 2-1, the project is proposed to have access at the following locations:

- One (1) full access driveway on Lakeshore Drive (Driveway 2). Currently there are two (2) full access driveways on Lakeshore Drive into the Lake Elsinore Valley Center. Pursuant to discussions with City staff, full access will only be permitted from the driveway furthest west from the intersection of Diamond Drive and Lakeshore Drive/Mission Trail.
- Two (2) full access driveways on the future Diamond Circle (Loop Road) (Driveways 1 and 3) which provides access to Sylvester Street and Diamond Drive.
- One (1) full access driveway on Sylvester Street (Driveway 4).
- Two (2) full access driveways on Diamond Drive (Driveways 5 and 6).
- One (1) right-in/right-out only driveway on Diamond Drive (Driveway 7).
- One (1) right-in/right-out only driveway on Sylvester Street (Driveway 8).

2.5 Phasing and Timing

For the purposes of this analysis, it has been assumed that the project will be built in three phases; Phase 1 (2012), Phase 2 (2014) and project buildout in Phase 3 (2016). At the direction of City of Lake Elsinore staff, the background traffic growth has been analyzed at two (2) percent per year. 2012 traffic conditions analyses are based upon three years of background traffic growth, for a total of six (6) percent. 2014 traffic conditions analyses are based upon five years of background traffic growth, for a total of ten (10) percent. Lastly, 2016 traffic conditions analyses are based upon seven years of background traffic growth, for a total of fifteen (15) percent.

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3.0 TRAFFIC ANALYSIS METHODOLOGIES

Traffic operations are quantified through the determination of "Level of Service" (LOS). Level of Service is a qualitative measure of traffic operating conditions, whereby a letter grade "A" through "F" is assigned to an infrastructure facility (intersection) representing progressively worsening traffic conditions. This section presents the LOS definition, LOS criteria and methodologies for the Intersection Operations Analysis and Traffic Signal Warrant Analysis.

3.1 Level of Service Definition

The definitions of Level of Service for uninterrupted flow (flow unrestrained by the existence of traffic control devices) are:

- LOS "A": Completely free-flow conditions. The operation of vehicles is virtually unaffected by the presence of other vehicles, and operations are constrained only by the geometric features of the highway and by driver preferences. Maneuverability within the traffic stream is good. Minor disruptions to flow are easily absorbed without a change in travel speed.

- LOS "B": Free flow conditions, although the presence of other vehicles becomes noticeable. Average travel speeds are the same as in LOS "A", but drivers have slightly less freedom to maneuver. Minor disruptions are still easily absorbed, although local deterioration in LOS will be more obvious.

- LOS "C": The influence of traffic density on operations becomes marked. The ability to maneuver within the traffic stream is clearly affected by other vehicles. Minor disruptions can cause serious local deterioration in service, and queues will form behind any significant traffic disruption.

- LOS "D": The ability to maneuver is severely restricted due to traffic congestion. Travel speed is reduced by the increasing volume. Only minor disruptions can be absorbed without extensive queues forming and the service deteriorating.

- LOS "E": Operations at or near capacity, an unstable level. Vehicles are operating with the minimum spacing for maintaining uniform flow. Disruptions cannot be dissipated readily, often causing queues to form and service to deteriorate to LOS "F".

- LOS "F": Forced or breakdown flow. It occurs either when vehicles arrive at a rate greater than the rate at which they are discharged or when the forecast demand exceeds the computed capacity of a planned facility. Although operations at these points – and on sections immediately downstream – appear to be at capacity, queues form behind these breakdowns. Operations within queues are highly unstable, with vehicles experiencing brief periods of movement followed by stoppages.

3.2 City of Lake Elsinore Required Level of Service Criteria

The definition of an intersection deficiency has been obtained from the City of Lake Elsinore General Plan Circulation Element. The City of Lake Elsinore General Plan states that peak hour intersection operation of LOS "D" or better is generally acceptable. Therefore, any intersection within the City of Lake Elsinore operating at LOS "E" and "F" are considered deficient.

3.3 Intersection Operations Analysis Methodology

Both the County of Riverside and the City of Lake Elsinore requires the 2000 Highway Capacity Manual (HCM) methodology be utilized to evaluate operations for both signalized and unsignalized, stop-controlled intersections (Transportation Research Board Special Report 209). The HCM defines level of service as a qualitative measure, which describes operational conditions within a traffic stream, generally in terms of such factors as speed and travel time, freedom to maneuver, traffic interruptions, comfort and convenience, and safety. The criteria used to evaluate Level of Service (LOS) conditions vary based on the type of roadway and whether the traffic flow is considered interrupted or uninterrupted. The HCM methodology expresses the level of service at an intersection in terms of delay time for the various intersection approaches. The HCM uses different procedures depending on the type of intersection control.

SYNCHRO (Version 7 Build 763, 2007) and HCS+ (Version 5.21, 2005) have been utilized to analyze signalized and unsignalized intersections. The delay and level of service for all-way stop controlled intersections with more than two through lanes in each direction on the major roadway

have been calculated using the Traffix application (Version 8.0 R1, 2008) as the HCS+ application does not report delay and level of service at these intersections. Any applicable locations have been identified in the footnote of each intersection analysis table.

The existing conditions intersection operations analysis is presented in the subsequent Section 4.3.3 of this report. The future conditions intersection operations analysis is presented in subsequent Section 6.3 of this report.

3.3.1 Highway Capacity Manual (HCM) Method – Signalized Intersections

For signalized intersections, average total delay per vehicle for the overall intersection is used to determine level of service. Level of service at the signalized study area intersection has been evaluated using an HCM intersection analysis program.

The average total delay per vehicle for the overall intersection is usually expressed as in terms of seconds. The following thresholds are used in assigning a letter value to the resulting LOS:

LEVEL OF SERVICE	AVERAGE TOTAL DELAY PER VEHICLE (SECONDS)
A	0 to 10.00
B	10.01 to 20.00
C	20.01 to 35.00
D	35.01 to 55.00
E	55.01 to 80.00
F	80.01 and up

A number of assumptions are required regarding specific input values to the HCM methodology. The LOS analysis for signalized intersections has been performed using optimized signal timing. This analysis has included an assumed lost time of four (4) seconds per phase in accordance with HCM recommended default values. Initial

saturation flow rates of 1,900 vehicles per hour of green (vphg) have been assumed for all capacity analysis. Also, a "de facto" right turn lane is assumed to exist when the outermost through lane is 19 feet or greater in width and parking is prohibited. Lastly, minimum green time has been applied to the service level calculations based on the County's traffic study guidelines for movements with pedestrian crosswalks. The minimum green times are based on the following formula:

[(curb-to-curb width) / 4] + 5

3.3.2 Highway Capacity Manual (HCM) Method – Unsignalized Intersections

For unsignalized intersections, the current technical guide to the evaluation of traffic operations is the 2000 Highway Capacity Manual (HCM) (Transportation Research Board *Special Report 209*). The criteria used to evaluate Level of Service conditions vary based on the type of roadway and whether the traffic flow is considered interrupted or uninterrupted.

The definitions of level of service for interrupted traffic flow (flow restrained by the existence of traffic signals and other traffic control devices) differ slightly depending on the type of traffic control. The level of service is typically dependent on the quality of traffic flow at the intersections along a roadway. The HCM methodology expresses the level of service at an intersection in terms of delay time for the various intersection approaches. The HCM uses different procedures depending on the type of intersection control.

The study area intersections which are currently stop-controlled with stop controls on the minor street only have been analyzed using the unsignalized intersection methodology of the HCM. For these intersections, the calculation of level of service is dependent on the frequency and size of gaps occurring in the traffic flow of the main street. The level of service has been calculated using data collected describing the intersection configuration and traffic volumes at the study area locations. The level of service criteria for this type of intersection analysis is based on measured or computed control delay per vehicle and the level of service is defined/computed for each minor movement. The level of service criteria for this type of intersection analysis is based on average total delay per vehicle for the worst minor street movement(s) be reported.

For all-way stop (AWS) controlled intersections, the ability of vehicles to enter the intersection is not controlled by the occurrence of gaps in the flow of the main street. The AWS controlled intersections have been evaluated using the HCM methodology for this type of multi-way stop controlled intersection configuration. The level of service criteria for this type of intersection analysis is also based on average total delay per vehicle for the overall intersection.

The levels of service are defined for the HCM unsignalized analysis methodology as follows:

LEVEL OF SERVICE	AVERAGE TOTAL DELAY PER VEHICLE (SECONDS)
A	0 to 10.00
B	10.01 to 15.00
C	15.01 to 25.00
D	25.01 to 35.00
E	35.01 to 50.00

3.4 Traffic Signal Warrant Analysis Methodology

To determine whether "significance" should be associated with unsignalized intersection operations, a supplemental traffic signal warrant analysis has been prepared. The term "signal warrants" refers to the list of established criteria used by Caltrans and other public agencies to quantitatively justify or ascertain the need for installation of a traffic signal at an otherwise unsignalized intersection. This study uses the signal warrant criteria presented in the latest edition of the Federal Highway Administration's (FHWA) *Manual on Uniform Traffic Control Devices (MUTCD)*, as amended by *the MUTCD 2003 California Supplement*, for all study area intersections.

The signal warrant criteria for existing (2008) conditions are based upon several factors, including volume of vehicular and pedestrian traffic, frequency of accidents, and location of

school areas. Both the FHWA's *MUTCD* and the *MUTCD 2003 California Supplement* indicate that the installation of a traffic signal should be considered if one or more of the signal warrants are met. Specifically, the study utilizes the Peak Hour Volume-based Warrant 3 as the appropriate representative traffic signal warrant analysis for existing traffic conditions. Warrant 3 criteria are basically identical for both the FHWA's *MUTCD* and the *MUTCD 2003 California Supplement*. Since Warrant 3 provides specialized warrant criteria for intersections with rural characteristics (e.g. located in communities with populations of less that 10,000 persons or with adjacent major streets operating at or above 40 miles per hour), study intersections using this specialized criteria have been clearly identified. For the purposes of this study, the speed limit was the basis for determining whether Urban or Rural warrants were used for a given intersection.

For future traffic conditions, unsignalized intersections and new intersections have been assessed regarding the need for new traffic signals based on future average daily traffic (ADT) volumes, using the planning level ADT-based signal warrant analysis worksheets.

Traffic signal warrant analyses were performed for the following stop-controlled and new intersections in the study area:

Main Street (NS) at:

- Lakeshore Drive (EW)

I-15 Northbound Ramps (NS) at:

- Franklin Street (EW) – Future Intersection

I-15 Southbound Ramps (NS) at:

- Franklin Street (EW) – Future Intersection

Auto Center Drive (NS) at:

- Franklin Street (EW) – Future Intersection
- Old Franklin Street (EW) – Future Analysis Location

Avenue 6 (NS) at:

- Lakeshore Drive (EW)

Diamond Circle (Loop Road) (NS) at:

- Driveway 1 (EW) – Future Intersection
- Sylvester Street (EW)

Driveway 2 (NS) at:

- Lakeshore Drive (EW) – Future Intersection

Driveway 3 (NS) at:

- Diamond Circle (Loop Road) (EW) – Future Intersection

Driveway 4 (NS) at:

- Sylvester Street (EW) – Future Intersection

Grape Street (NS) at:

- I-15 Northbound Ramps (EW) – Future Intersection

Casino Drive (NS) at:

- I-15 Southbound Ramps (EW) – Future Intersection

Diamond Drive (NS) at:

- Driveway 5 (EW) – Future Intersection
- Campbell Street (EW)
- Pete Lehr Drive/Driveway 6 (EW)
- Driveway 7 (EW) – Future Intersection
- Sylvester Street (EW)

Driveway 8 (NS) at:

- Sylvester Street (EW) – Future Intersection

Mission Trail (NS) at:

- Campbell Street (EW)
- Hidden Trail/Elberta Road (EW)

- Olive Street (EW)
- Lemon Street (EW)

The existing conditions traffic signal warrant analysis is presented in the subsequent Section 4.3.4 of this report. The future conditions traffic signal warrant analysis is presented in subsequent Section 6.2 of this report.

It is important to note that a signal warrant defines the 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 necessary 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 signal warrant.

3.5 Project Fair Share Calculation Methodology

A project's fair share contribution at an off-site study area intersection is determined based on the following equation, which is the ratio of project traffic to new traffic, and new traffic is total future traffic subtracts existing traffic:

Project Fair Share % = Project Traffic / (Total Traffic – Existing Traffic)

The project fair share contribution calculations are presented in Chapter 8.0 of this report.

4.0 AREA CONDITIONS

4.1 Study Area Intersections

Pursuant to discussions with City of Lake Elsinore staff, the study area includes the following existing intersections which may potentially be impacted by the proposed project (see Appendix 1.1):

Main Street (NS) at:

- Lakeshore Drive (EW)

Avenue 6 (NS) at:

- Lakeshore Drive (EW)

Diamond Circle (Loop Road) (NS) at:

- Sylvester Street (EW)

Summerhill Drive/Grape Street (NS) at:

- Railroad Canyon Road (EW)

I-15 Northbound Ramps (NS) at:

- Railroad Canyon Road (EW)

I-15 Southbound Ramps (NS) at:

- Railroad Canyon Road (EW)

Auto Center Drive (NS) at:

- Diamond Drive (EW)

Diamond Drive (NS) at:

- Lakeshore Drive/Mission Trail (EW)
- Campbell Street (EW)
- Pete Lehr Drive (EW)
- Sylvester Street (EW)

Mission Trail (NS) at:

- Campbell Street (EW)
- Sylvester Street/Malaga Road (EW)
- Hidden Trail/Elberta Road (EW)
- Olive Street (EW)
- Lemon Street (EW)
- Bundy Canyon Road (EW)

I-15 Southbound Ramps (NS) at:

- Bundy Canyon Road (EW)

I-15 Northbound Ramps (NS) at:

- Bundy Canyon Road (EW)

Existing (2009) intersection analysis locations are illustrated on Exhibit 1-2 (shown previously). The City of Lake Elsinore has approved the study area based on the 50 peak hour trip methodological approach.

4.2 Study Area Land Use

4.2.1 Existing Surrounding Land Uses

The proposed project is located within southern portion of the City of Lake Elsinore which includes some vacant land with sparse residential and commercial uses. Residential areas currently exist to the northern, southern, eastern and western study area boundaries. Commercial retail development exists along Lakeshore Drive/Mission Trail, Auto Center Drive/Casino Drive, Railroad Canyon and Grape Street/Summerhill Drive. There are also existing auto dealership uses within the study area, primarily along Auto Center Drive/Casino Drive.

The proposed site for the Diamond Specific Plan is currently partially vacant with the exception of the Lake Elsinore Valley Center (in the northern portion of the site) and the Lake Elsinore Diamond Stadium which occupies approximately 19 acres on the northwest

corner of Diamond Drive and Sylvester Street. For purposes of this analysis, the traffic currently being generated by both the Lake Elsinore Valley Center and Diamond Stadium (off-peak) were not taken into account for the purposes of determining the project's trip generation in an effort to conduct the most conservative analysis. Existing (2009) traffic counts were taken at the two Lake Elsinore Valley Center driveways on Lakeshore Drive in an effort to capture the existing traffic currently generated by the retail development to the north of Lakeshore Drive. Future development of the Diamond Specific Plan along Lakeshore Drive and the associated driveway volumes for the adjacent retail development north of Lakeshore Drive have been incorporated into the analysis under Phase 3 (2016) traffic conditions.

4.3 Site Accessibility

4.3.1 Area Roadway System

Exhibit 4-1 identifies the existing roadway conditions for study area roadways, including the number of through travel lanes for existing roadways and the existing intersection controls.

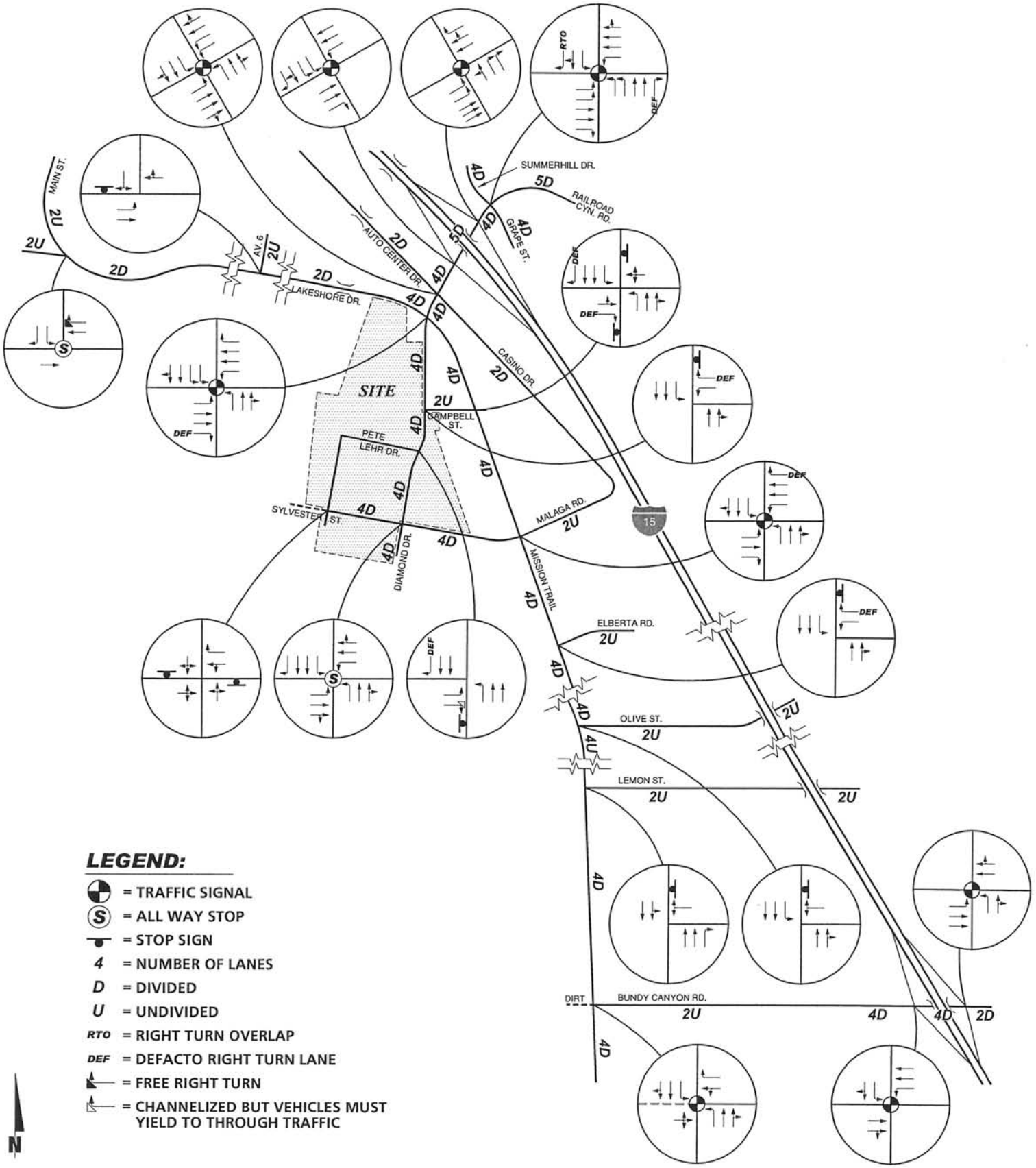
Exhibit 4-2 shows the City of Lake Elsinore Currently Adopted General Plan Circulation Element and Exhibit 4-3 illustrates the City of Lake Elsinore Currently Adopted General Plan Roadway Cross-sections.

Exhibit 4-4 shows the City of Lake Elsinore Proposed General Plan Circulation Element. Exhibit 4-5 illustrates the City of Lake Elsinore Proposed General Plan Roadway Cross-sections. It should be noted that in the proposed General Plan Circulation Element both Lakeshore Drive and Railroad Canyon Road/Diamond Drive are identified as Urban Arterials. However, Diamond Drive south of Lakeshore Drive transitions to a major four-lane divided highway (100-foot right-of-way).

Exhibit 4-6 illustrates the County Riverside General Plan Circulation Element and Exhibit 4-7 shows the County of Riverside General Plan Roadway Cross-Sections for the Elsinore Area.

EXHIBIT 4-1

EXISTING NUMBER OF THROUGH LANES AND INTERSECTION CONTROLS



LEGEND:

- = TRAFFIC SIGNAL
- (S) = ALL WAY STOP
- = STOP SIGN
- 4 = NUMBER OF LANES
- D = DIVIDED
- U = UNDIVIDED
- RTO = RIGHT TURN OVERLAP
- DEF = DEFACTO RIGHT TURN LANE
- = FREE RIGHT TURN
- = CHANNELIZED BUT VEHICLES MUST YIELD TO THROUGH TRAFFIC

N

EXHIBIT 4-2

CURRENTLY ADOPTED CITY OF LAKE ELSINORE GENERAL PLAN CIRCULATION ELEMENT

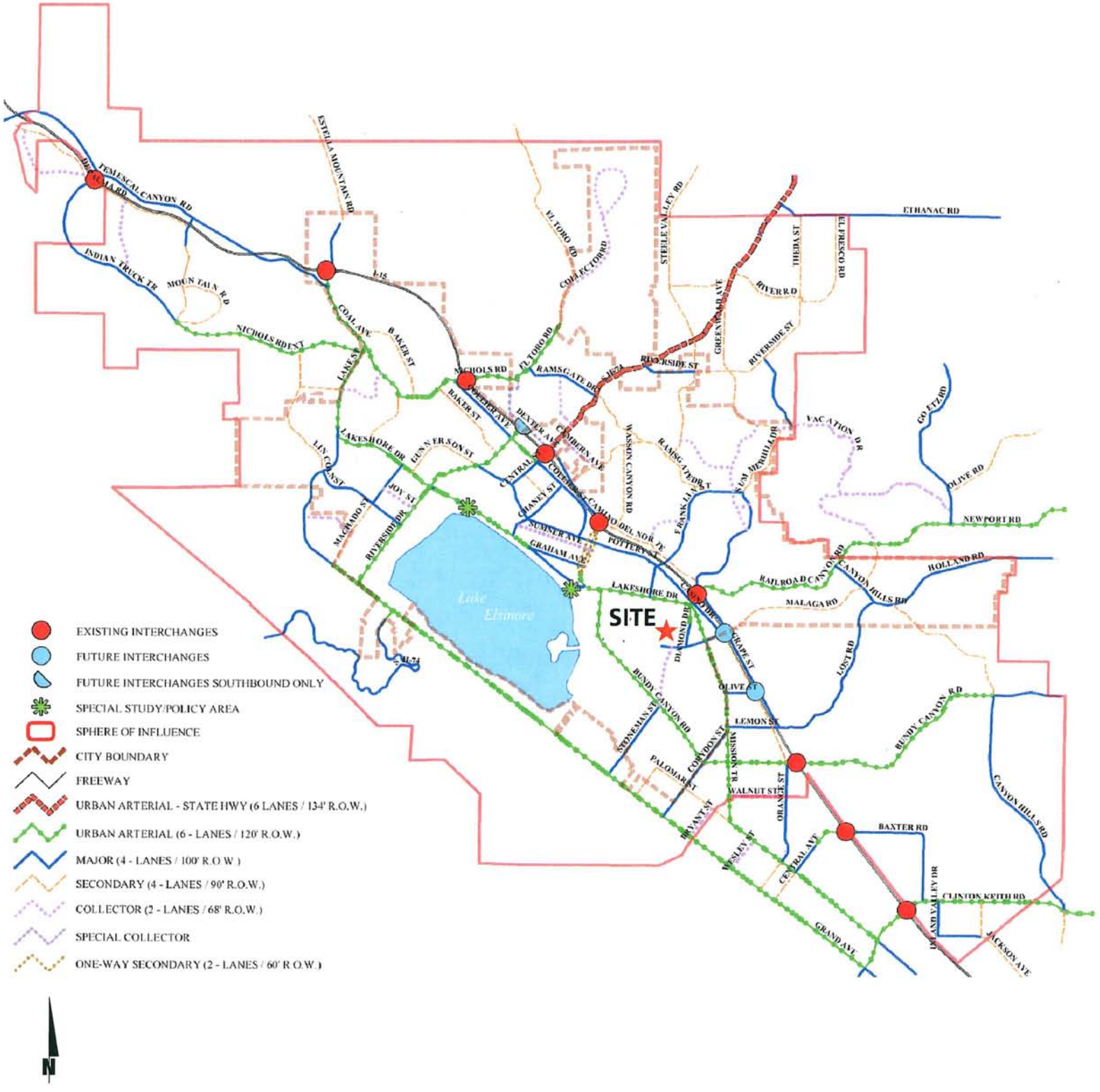
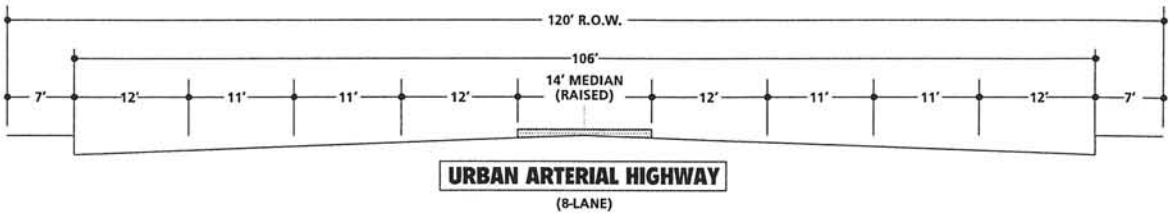
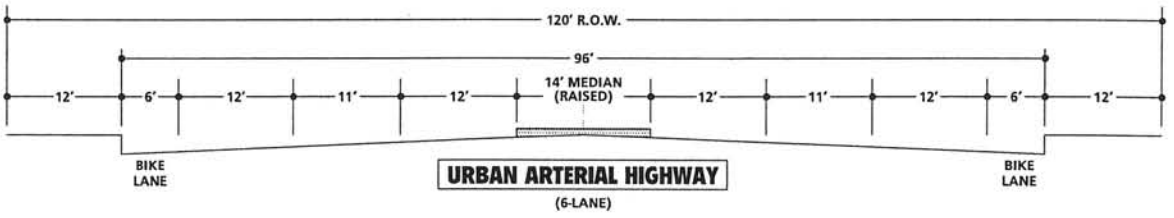


EXHIBIT 4-3

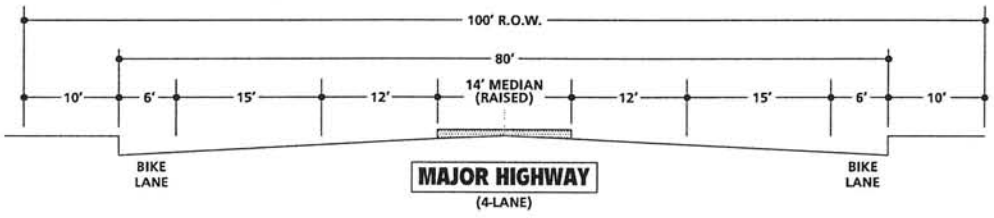
CURRENTLY ADOPTED CITY OF LAKE ELSINORE GENERAL PLAN ROADWAY CROSS-SECTIONS



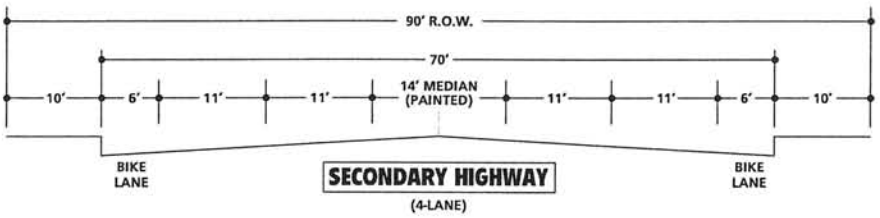
URBAN ARTERIAL HIGHWAY
(8-LANE)



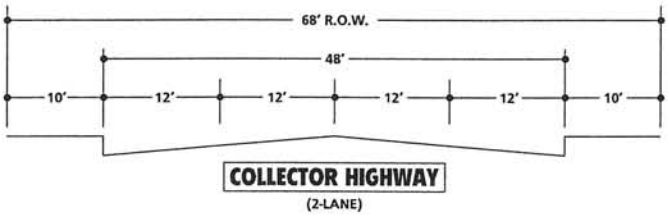
URBAN ARTERIAL HIGHWAY
(6-LANE)



MAJOR HIGHWAY
(4-LANE)



SECONDARY HIGHWAY
(4-LANE)



COLLECTOR HIGHWAY
(2-LANE)

SOURCE: CITY OF LAKE ELSINORE

EXHIBIT 4-4

PROPOSED CITY OF LAKE ELSINORE GENERAL PLAN CIRCULATION ELEMENT

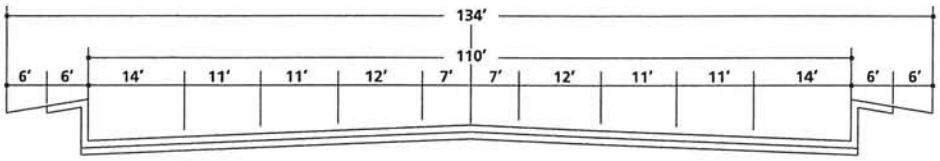
LEGEND:

- AUGMENTED URBAN ARTERIAL (8-LANES)
- URBAN ARTERIAL (6-LANES / 120' R.O.W.)
- MAJOR (4-LANES / 100' R.O.W.)
- SECONDARY (4-LANES / 90' R.O.W.)
- COLLECTOR (2-LANES / 68' R.O.W.)
- DIVIDED COLLECTOR (2-LANES WITH POTENTIAL AUGMENTED INTERSECTIONS)
- SPHERE OF INFLUENCE
- SPECIAL STUDY NEEDED

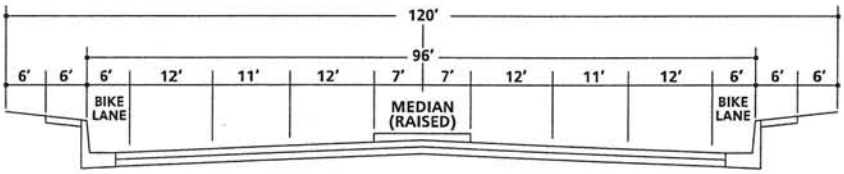
N

EXHIBIT 4-5

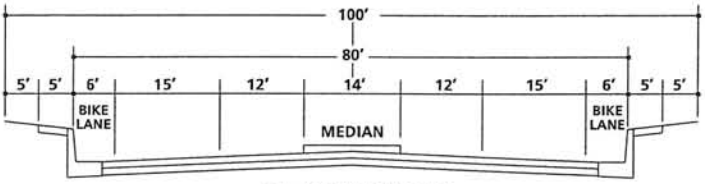
PROPOSED CITY OF LAKE ELSINORE GENERAL PLAN ROADWAY CROSS-SECTIONS



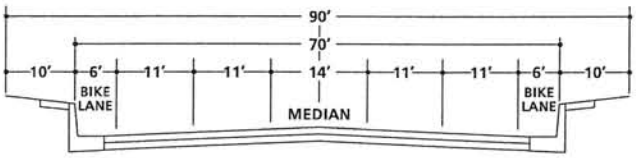
AUGMENTED URBAN ARTERIAL - STATE HIGHWAY
(8-LANE)



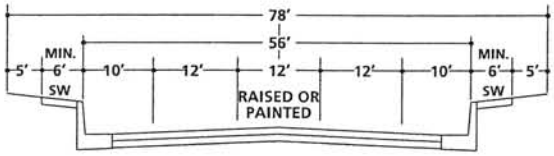
URBAN ARTERIAL HIGHWAY
(6-LANE)



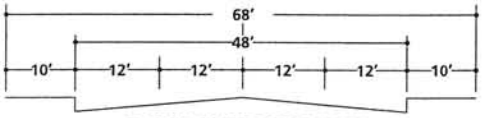
MAJOR HIGHWAY
(4-LANE)



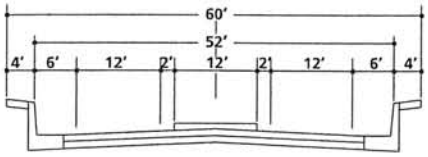
SECONDARY HIGHWAY
(4-LANE)



DIVIDED COLLECTOR
(2-LANE)



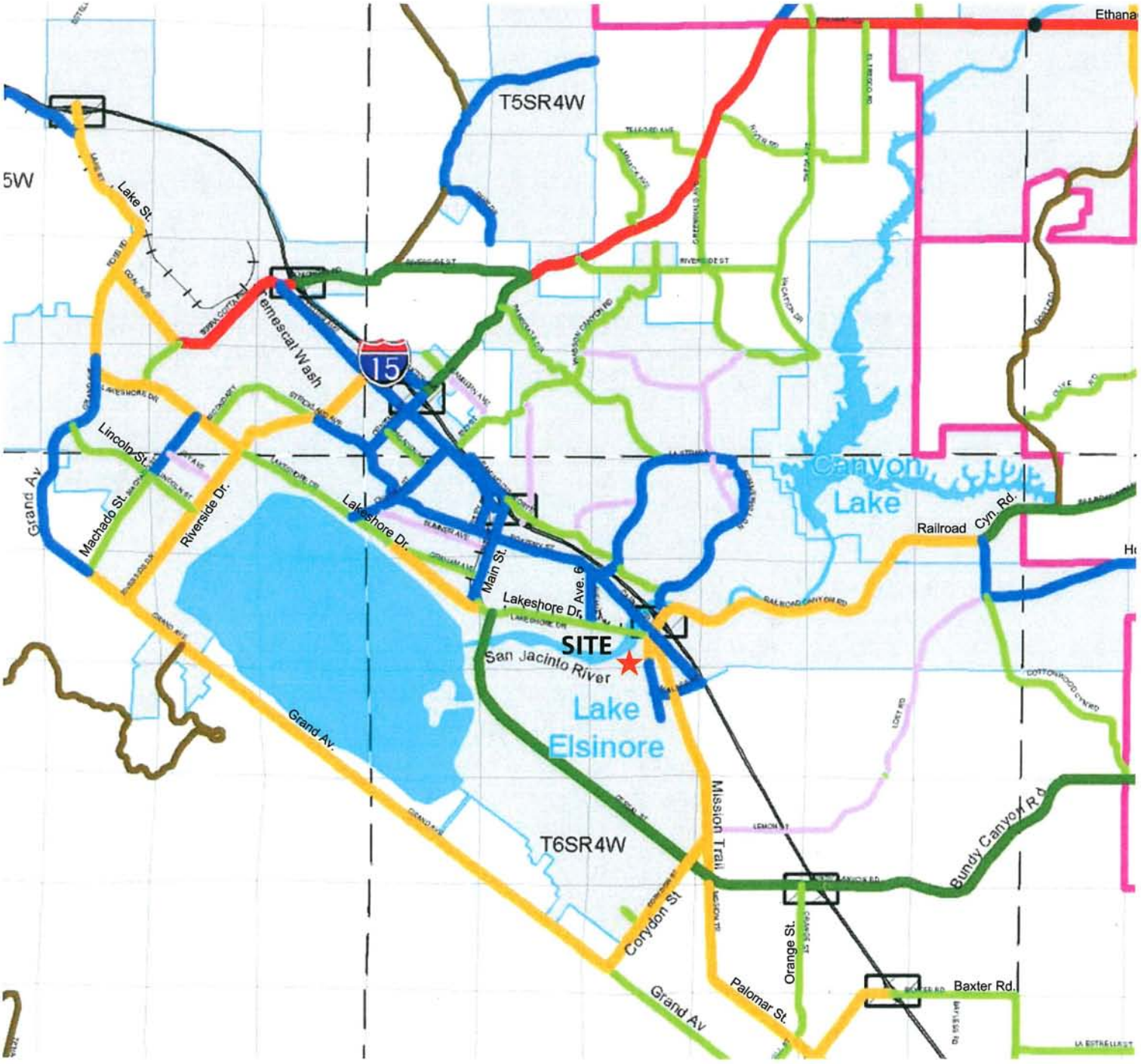
COLLECTOR HIGHWAY
(2-LANE)



NEW SPECIAL ROADWAY
(2-LANE)
(PROPOSED FOR LAKESHORE DRIVE IN THE COUNTRY CLUB HEIGHT DISTRICT)

EXHIBIT 4-6

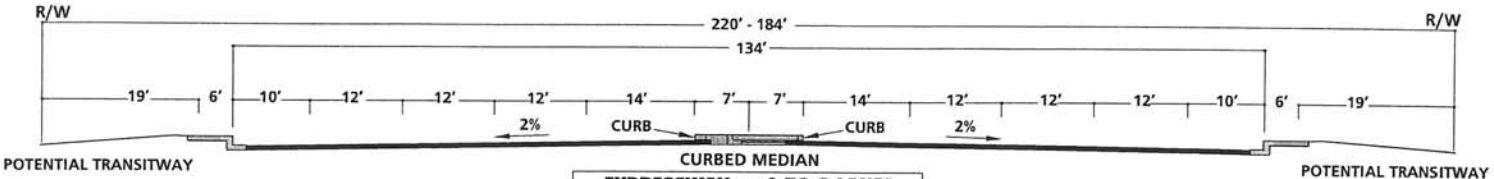
RIVERSIDE COUNTY GENERAL PLAN CIRCULATION ELEMENT



SOURCE: RIVERSIDE COUNTY INTEGRATED PROJECT (RCIP) (OCTOBER 7, 2003)

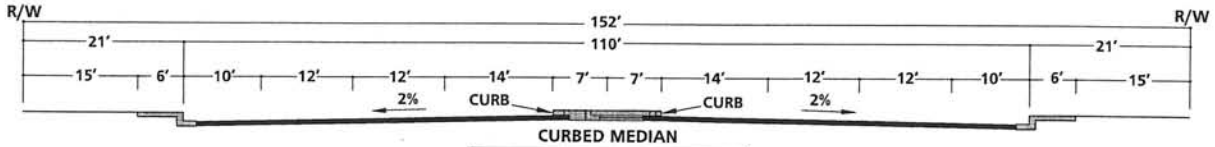
EXHIBIT 4-7

RIVERSIDE COUNTY GENERAL PLAN ROADWAY CROSS-SECTIONS

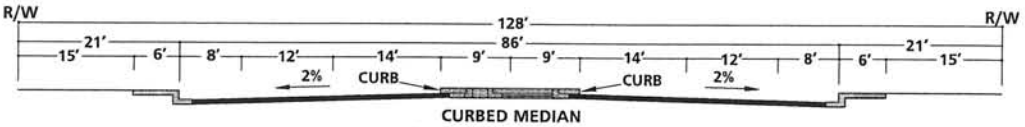


EXPRESSWAY - 6 TO 8 LANES

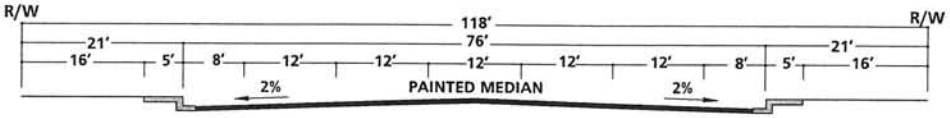
MEDIAN WIDTH MAY VARY FROM 14' TO 62'



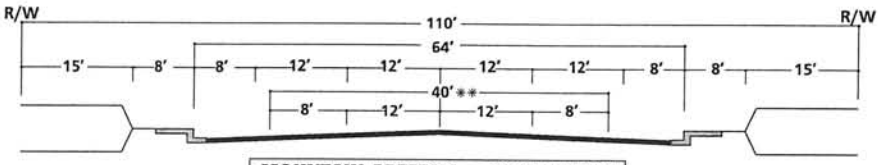
URBAN ARTERIAL HIGHWAY *



ARTERIAL HIGHWAY *

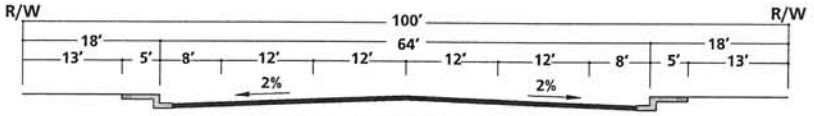


MAJOR HIGHWAY - 4 LANES

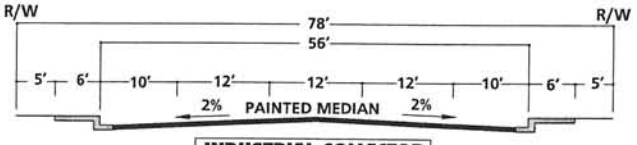


MOUNTAIN ARTERIAL - 2 TO 4 LANES

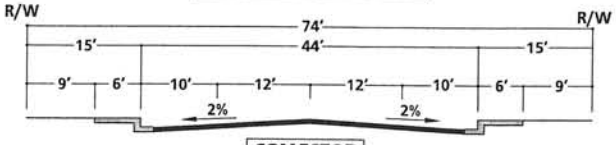
** 2 LANE SECTION



SECONDARY HIGHWAY



INDUSTRIAL COLLECTOR



COLLECTOR

* *IMPROVEMENTS MAY BE RECONFIGURED TO ACCOMMODATE EXCLUSIVE TRANSIT LANES OR ALTERNATIVE LANE ARRANGEMENTS ADDITIONAL RIGHT OF WAY MAY BE REQUIRED AT INTERSECTIONS TO ACCOMMODATE ULTIMATE IMPROVEMENTS FOR STATE HIGHWAYS SHALL CONFORM TO CALTRANS DESIGN STANDARDS.*

SOURCE: COUNTY OF RIVERSIDE

The existing conditions and the proposed future improvements (as identified on the City of Lake Elsinore General Plan Circulation Element) of the major roadways within the study area are described below:

a. Lakeshore Drive is currently a two-lane undivided roadway between Main Street and Diamond Drive with very few curb and gutter improvements and poorly conditioned pavement and striping. Lakeshore Drive widens to a four-lane divided roadway as it approaches Diamond Drive where commercial retail development exists to the north and south. Lakeshore Drive is a major north/south route along the east side of the lake and provides access to Main Street (downtown Lake Elsinore). Lakeshore Drive is designated as an urban arterial roadway (6-lanes divided, 120-foot right-of-way). Lakeshore Drive crosses over the San Jacinto River immediately west of the Diamond Specific Plan is currently striped as a four-lane bridge. As Lakeshore Drive is widened to accommodate its ultimate width, the bridge over the San Jacinto River may need to be widened, or a reduced cross-section developed for this section of roadway to work within the existing bridge width.

b. Mission Trail from Diamond Drive to south of Bundy Canyon Road, is mostly a four-lane divided roadway and is an important route southerly from the commercial area at the Railroad Canyon Road interchange with the I-15 Freeway. Most of Mission Trail currently does not have a raised median, but rather is divided by a striped two-way left turn lane. A few segments on Mission Trail, between Diamond Drive and Campbell Street, have raised medians. Mission Trail from Diamond Drive to south of Bundy Canyon Road is designated as an urban arterial roadway (120-foot right-of-way).

c. Railroad Canyon Road from north of Summerhill Drive/Grape Street to Lakeshore Drive/Mission Trail is mostly a four-lane divided roadway with the exception of a few segments that are five-lanes. Railroad Canyon Road north of the I-15 Freeway is a major link between the I-15 and I-215 Freeways, east of the City of Lake Elsinore. Significant residential development is taking place along Railroad Canyon Road north of Grape Street/Summerhill Drive and currently is developed with commercial retail uses to the north and south of the roadway

through the I-15 Freeway interchange area to Lakeshore Drive/Mission Trail. Railroad Canyon Road is designated as an urban arterial roadway (120-foot right-of-way). The interchange at the I-15 Freeway and Railroad Canyon Road has recently undergone improvements to both Railroad Canyon and the northbound and southbound off-ramps to improve traffic flow during peak hour conditions.

d. Diamond Drive from Lakeshore Drive/Mission Trail to south of Sylvester Street is currently a four-lane divided roadway. Diamond drive is striped with a two-way left turn lane from Lakeshore Drive/Mission Trail to Sylvester Street and has a raised median south of Sylvester Street. Diamond Drive from Lakeshore Drive/Mission Trail to Campbell Street is designated as an urban arterial roadway (120-foot right-of-way) and as a major roadway (100-foot right-of-way) from Campbell Street to south of Sylvester Street.

e. Bundy Canyon Road is currently a two-lane undivided roadway near Mission Trail and widens to a four-lane divided roadway in the I-15 Freeway interchange area. Curb and gutter improvements currently exist through the interchange area and to the east. Bundy Canyon Road is proposed to be extended to the west into a future development. Bundy Canyon Road is designated as an urban arterial roadway (120-foot right-of-way).

f. Grape Street/Summerhill Drive both north and south of Railroad Canyon Road is currently a four-lane divided roadway. Summerhill Drive to the north provides access to some commercial retail uses immediately to the north of Railroad Canyon Road and residential uses further to the north. Grape Street to the south has commercial retail uses immediately south of Railroad Canyon Road and residential uses further to the south. It should be noted that Grape Street to the south provides alternative access to Mission Trail via I-15 Freeway under-crossings at Olive Street and Lemon Street. Grape Street/Summerhill Drive is designated as a major roadway (100-foot right-of-way). It appears that Grape Street/Summerhill Drive is consistent with the current General Plan designation. It should be noted that Summerhill Drive crosses over the San Jacinto River and is currently a four-lane bridge (approximately 60-feet in width).

g. Auto Center Drive/Casino Drive is currently a two-lane roadway with the exception of a four-lane divided roadway segment immediately to the north and south of Diamond Drive. Auto dealerships exist to the north in conjunction with commercial retail uses both to the north and south of Diamond Drive. Casino Drive to the south loops to the west and joins with Malaga Road further to the south and provides alternative access to Mission Trail. Auto Center/Casino Drive is designated as a major roadway (100-foot right-of-way). It should be noted that Auto Center Drive crosses over the San Jacinto River and is currently a two-lane bridge (approximately 35-feet in width). As Auto Center Drive is widened, the bridge over the San Jacinto River will also need to ultimately be widened to four-lanes.

h. Olive Street and Lemon Street are currently two-lane undivided roadways with sparse residential development. It should be noted that both Olive Street and Lemon Street provide east-west access between Grape Street and Mission Trail via under-crossings with the I-15 Freeway. Both Olive Street and Lemon Street are designated as major roadways (100-foot right-of-way).

i. Sylvester Street/Malaga Road is currently a four-lane divided roadway to the west of Mission Trail and a two-lane undivided roadway to the east. Sylvester Street/Malaga Road is designated as a major roadway (100-foot right-of-way). Sylvester Street currently has a raised median constructed to its western terminus as Diamond Circle/Pete Lehr Drive. It appears that Sylvester Street is consistent with the current General Plan designation however Malaga Road will need to be widened to four-lanes in the future.

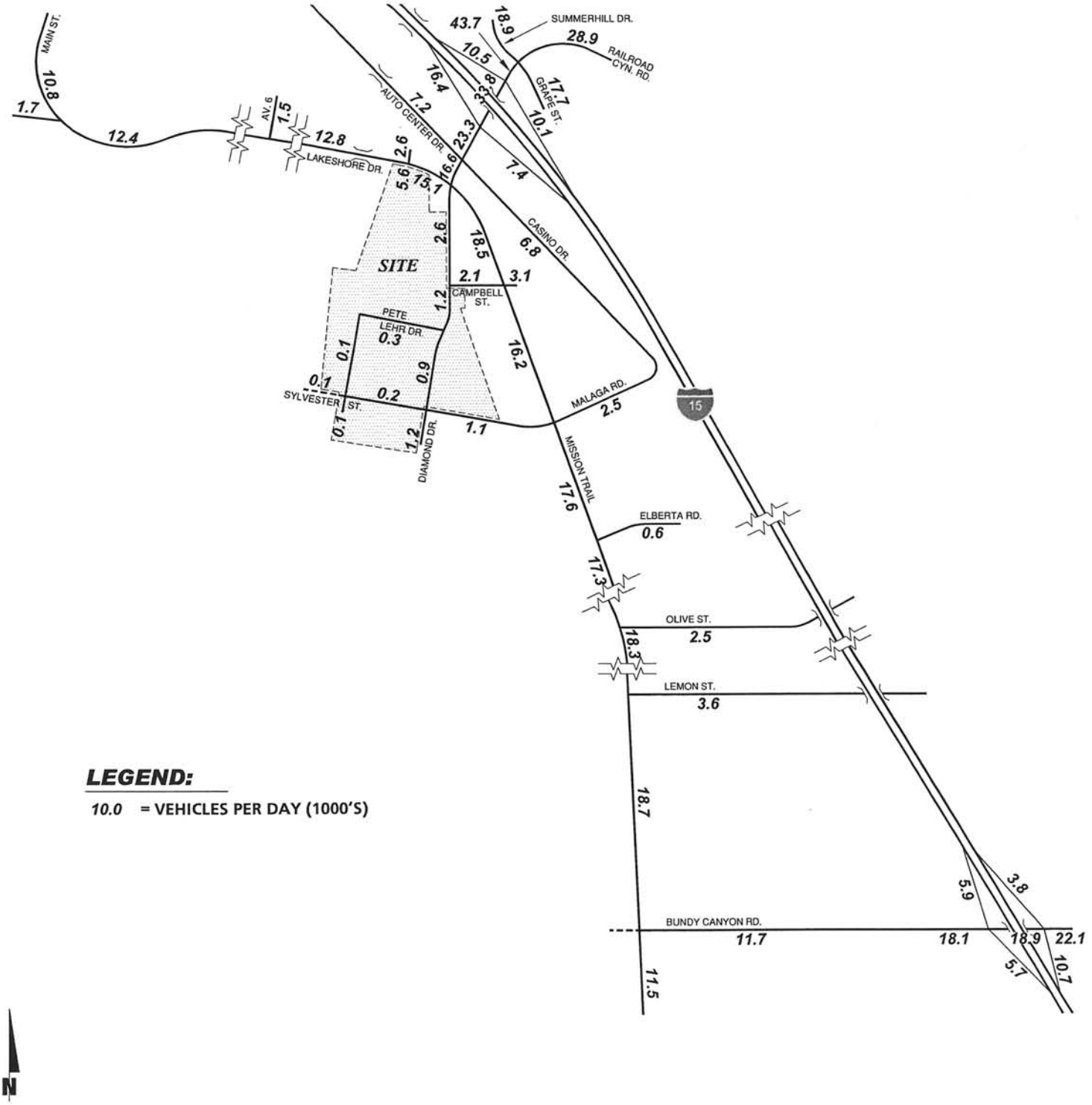
4.3.2 Existing Traffic Volumes and Conditions

Exhibit 4-8 depicts the existing average daily traffic (ADT) volumes in the study area. Existing (2009) ADT volumes are based on counts that have been factored from peak hour counts using the following formula for each intersection leg:

PM Peak Hour (Approach Volume + Exit Volume) x 12 = Leg Volume

EXHIBIT 4-8

EXISTING (2009) AVERAGE DAILY TRAFFIC (ADT)



The daily-to-peak hour ratio of approximately 8% is based on the typical relationship seen between the daily and PM peak hour traffic flows. As such, it is common practice in instances where 24-hour traffic counts are not available to estimate daily traffic volumes based upon PM peak hour traffic counts.

Existing (2009) AM and PM peak hour intersection turning movement volumes are shown on Exhibits 4-9 and 4-10, respectively. These volumes are based on manual AM and PM peak hour turning movement counts made for Urban Crossroads in February 2009. According to the City of Lake Elsinore, there is not a substantial difference in traffic volumes during the different seasons of the year. During the non-summer months, increased commuter and school traffic acts as a counterbalance to any increase in traffic occurring during peak recreational months in the summer. Therefore, no significant change to traffic volumes would be anticipated as a result of fluctuations due to seasonality of the traffic counts. Existing (2009) traffic count data sheets are included in Appendix 4.1 of this report.

4.3.3 Existing (2009) Intersection Level of Service

The current technical guide to the evaluation of traffic operations, used by City of Lake Elsinore, is known as the Highway Capacity Manual (HCM) methodology for both signalized and un-signalized intersections. A detailed description of the intersection operations analysis methodology was presented previously in Section 3.3 of this report.

Existing (2009) peak hour traffic operations have been evaluated for the existing study area intersections. The results of this analysis are summarized in Table 4-1, based on the existing intersection geometrics and traffic control devices at each analysis location. As shown in Table 4-1, the study area intersections are currently operating at acceptable levels of service during the peak hours with the exception of the intersections of Mission Trail at Campbell Street and Mission Trail at Lemon Street. These intersections operate at Level of Service "F" during the PM peak hour, which occurs due to high delays experienced by vehicles on the minor leg of each of these intersections. The addition of a traffic signal to each of these locations would provide sufficient gaps in traffic on the major street to reduce the average delay to level of service "D" or better.

EXHIBIT 4-9

EXISTING (2009) AM PEAK HOUR INTERSECTION VOLUMES

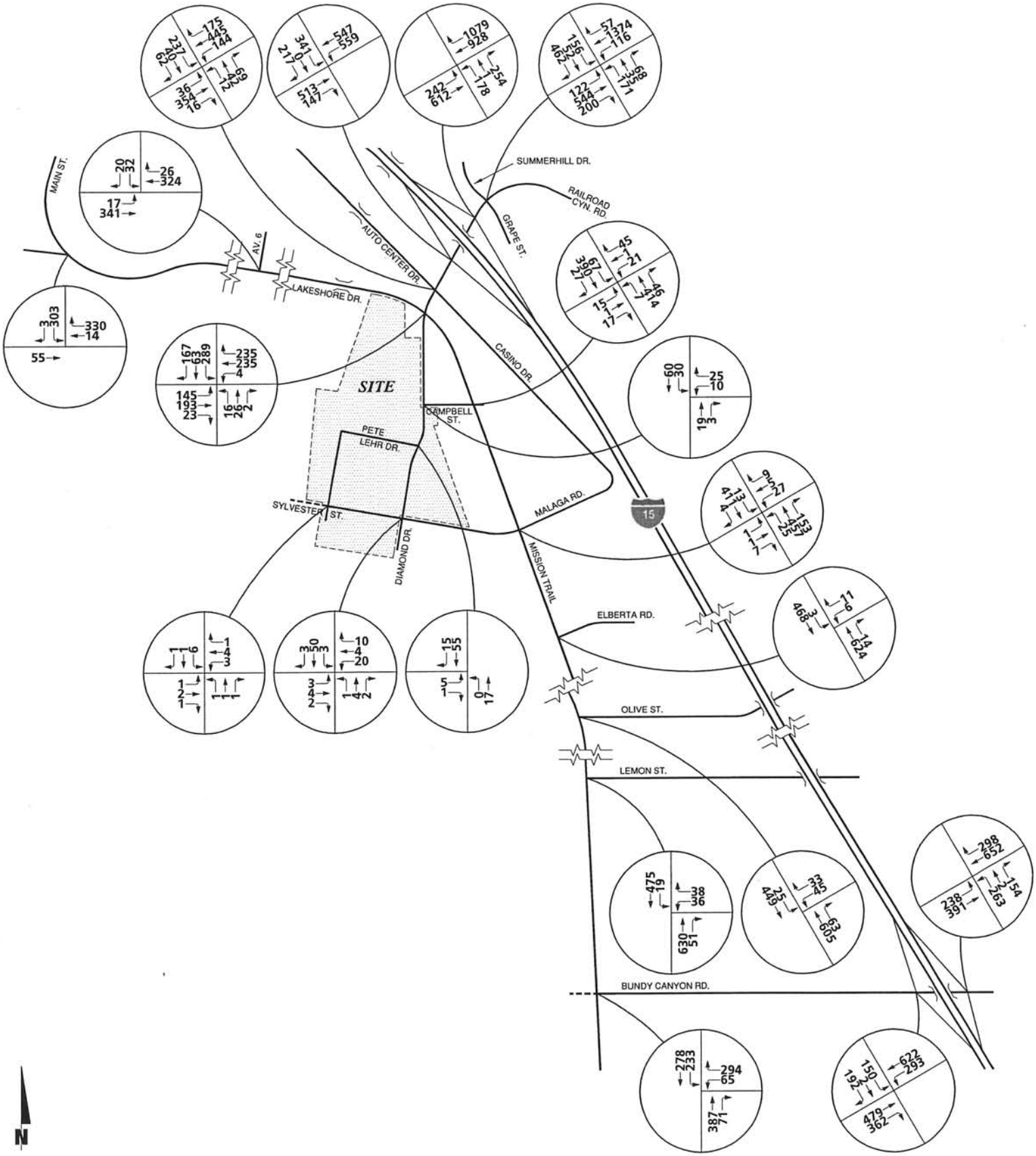


EXHIBIT 4-10

EXISTING (2009) PM PEAK HOUR INTERSECTION VOLUMES

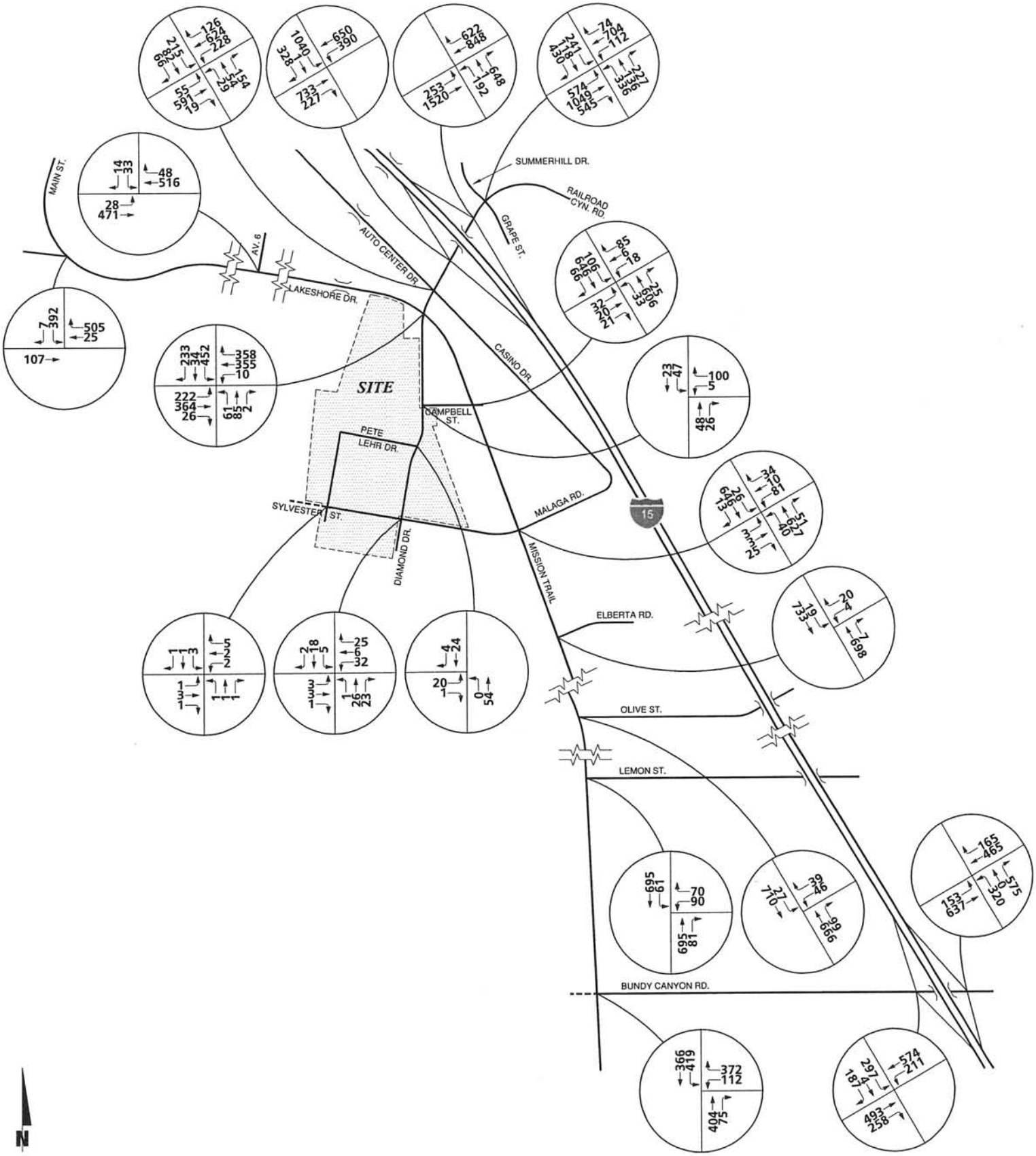


TABLE 4-1 (Page 1 of 2)

INTERSECTION ANALYSIS FOR EXISTING (2009) CONDITIONS

INTERSECTION	TRAFFIC CONTROL[3]	INTERSECTION APPROACH LANES[1]												DELAY[2] (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
Main St. (NS) at:																	
• Lakeshore Dr. (EW)	AWS	0	0	0	1	0	1	0	1	0	0	1	1>>	9.9	11.8	A	B
Avenue 6 (NS) at:																	
• Lakeshore Dr. (EW)	CSS	0	0	0	0	1	0	1	1	0	0	1	0	15.2	22.0	C	C
Diamond Circle (NS) at:																	
• Sylvester St. (EW)	CSS	0	1	0	0	1	0	0	1	0	0	1	1	8.7	8.7	A	A
Summerhill Dr./Grape St. (NS) at:																	
• Railroad Canyon Rd. (EW)	TS	2	2	1	1	1	1>	2	2	1	1	3	0	31.0	46.2	C	D
I-15 NB Ramps (NS) at:																	
• Railroad Canyon Rd. (EW)	TS	0	1	2	0	0	0	2	3	0	0	2	1	22.9	24.7	C	C
I-15 SB Ramps (NS) at:																	
• Railroad Canyon Rd. (EW)	TS	0	0	0	2	1	1	0	2	1	1	2	0	27.8	32.6	C	C
Auto Center Dr./Casino Dr. (NS) at:																	
• Diamond Dr. (EW)	TS	1	2	0	1	2	0	1	3	0	2	2	0	26.0	25.8	C	C
Diamond Dr. (NS) at:																	
• Lakeshore Dr./Mission Trail (EW)	TS	1	2	0	2	2	0	1	2	1	1	2	1	27.2	52.3	C	D
• Campbell St. (EW)	CSS	0	2	0	1	2	0	0	0	0	1	0	1	8.9	9.0	A	A
• Pete Lehr Dr. (EW)	CSS	1	2	0	0	2	1	1	0	1	0	0	0	9.2	9.0	A	A
• Sylvester St. (EW)	AWS	1	2	0	1	2	1	1	2	0	1	2	0	7.6	7.6	A	A
Mission Trail (NS) at:																	
• Campbell St. (EW)	CSS	1	2	0	1	2	1	0	1	1	0	1	0	21.7	84.4	C	F
• Sylvester St./Malaga Rd. (EW)	TS	1	2	0	1	2	0	1	1	1	1	2	1	14.8	14.3	B	B
• Elberta Rd. (EW)	CSS	0	2	0	1	2	0	0	0	0	1	0	1	20.5	23.9	C	C
• Olive St. (EW)	CSS	0	2	0	1	2	0	0	0	0	0	1	0	22.7	27.0	C	D
• Lemon St. (EW)	CSS	0	2	1	0	2	0	0	0	0	0	1	0	18.5	63.2	C	F
• Bundy Canyon Dr. (EW)	TS	1	2	0	1	2	0	0	1	0	0	1	1	18.8	21.4	B	C

TABLE 4-1 (Page 2 of 2)

INTERSECTION ANALYSIS FOR EXISTING (2009) CONDITIONS

INTERSECTION	TRAFFIC CONTROL[3]	INTERSECTION APPROACH LANES[1]												DELAY[2] (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
I-15 SB Ramps (NS) at:																	
• Bundy Canyon Rd. (EW)	TS	0	0	0	1	1	0	0	2	0	1	2	0	25.8	25.7	C	C
I-15 NB Ramps (NS) at:																	
• Bundy Canyon Rd. (EW)	TS	1	1	0	0	0	0	1	2	0	0	2	0	31.1	29.7	C	C

[1] 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; 1>> = Free-Right Turn Lane; 1> = Right-Turn Overlap Phasing

[2] Delay and level of service calculated using the following analysis software:
HCS+ Version 5.21 (2005) for unsignalized intersections and SYNCHRO Version 7 Build 763 (2007) for signalized intersections.
Per the 2000 Highway Capacity Manual, overall average intersection delay and level of service are shown for intersections with a traffic signal or all way stop control. For intersections with cross street stop control, the delay and level of service for the worst individual movement (or movements sharing a single lane) are shown. (The intersection of Diamond Dr. at Sylvester St. has been analyzed using Traffix Version 8.0 R1 since the intersection could not be analyzed with the HCS+ software.)

[3] TS = Traffic Signal
CSS = Cross Street Stop
AWS = All Way Stop

NOTE: Any leg implementing a right-turn overlap phasing requires the elimination of U-turn movements from the leg immediately counter-clockwise.

Intersection operations analysis worksheets for Existing (2009) conditions are included in Appendix 4.2 of this report.

4.3.4 Existing (2009) Conditions Traffic Signal Warrants

A detailed description of the traffic signal warrants analyses methodologies were previously discussed in Section 3.4 of this report. Based on existing (2009) traffic data, traffic signals are currently warranted at the intersections of Mission Trail at Campbell Street, Mission Trail at Olive Street, and Mission Trail at Lemon Street.

It should be noted that satisfying a traffic signal warrant in and of itself does not necessarily require that a traffic signal should automatically be installed. The following intersection, which currently warrants a traffic signal under existing (2009) conditions, is anticipated to operate at acceptable levels of service and does not present a safety issue as cross-street stop controlled intersections:

Mission Trail (NS) at:

- Olive Street (EW)

As such, it is recommended that this location be monitored, and the City Traffic Engineer should implement engineering judgment and his/her discretion on the installation of a traffic signal.

Existing (2009) conditions traffic signal warrant analysis worksheets are included in Appendix 4.3 of this report.

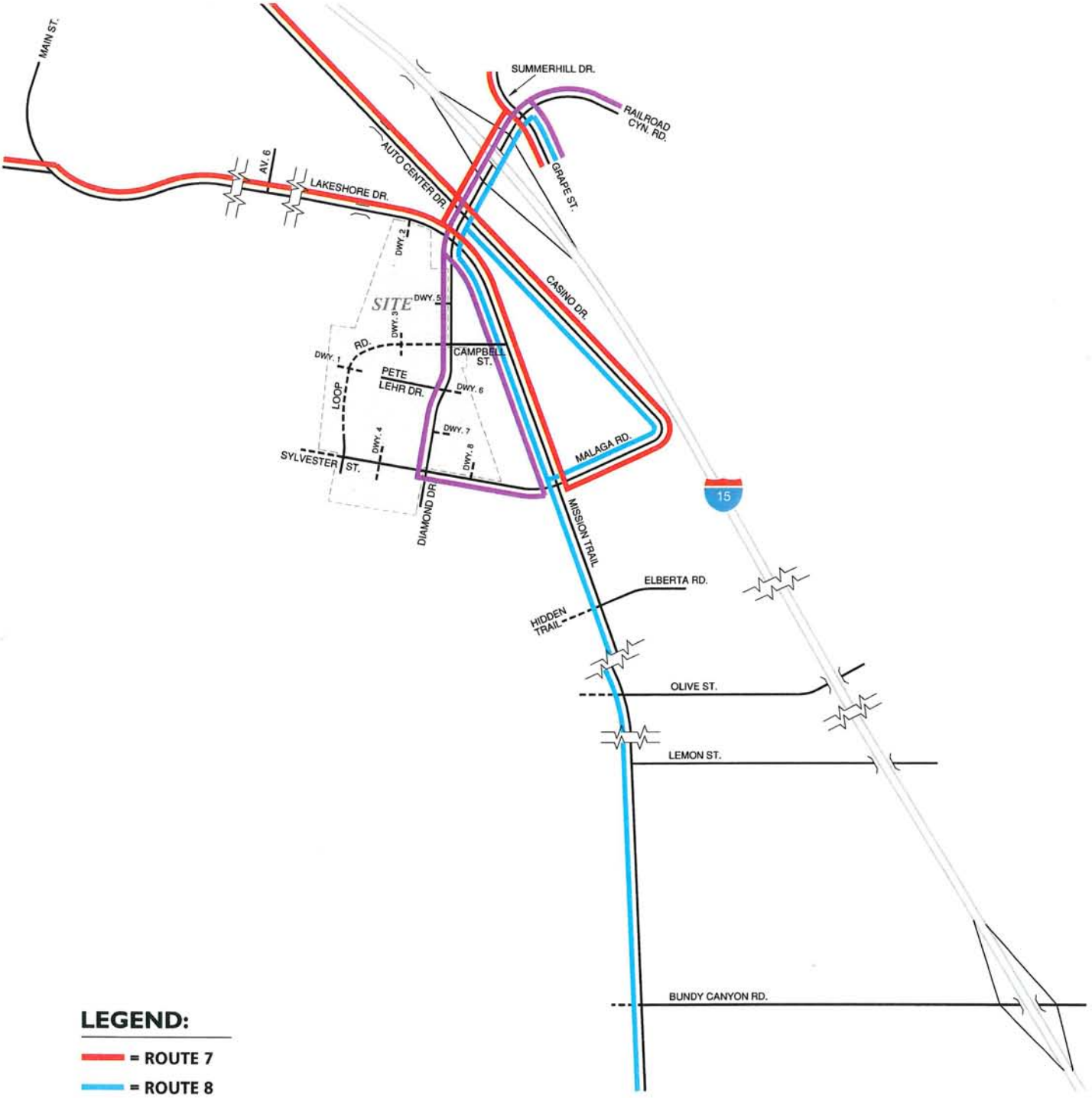
4.3.5 Existing Transit Service

As illustrated on Exhibit 4-11, the Riverside Transit Authority (RTA) currently serves the project study area along the following roadways:

- Main Street, Lakeshore Drive/Mission Trail, Malaga Road, Auto Center Drive/Casino Drive, Franklin Street, Summerhill Drive and Railroad Canyon Road/Diamond Drive (via alternate Route 7-Lake Elsinore Wal-Mart to Outlet Center)

EXHIBIT 4-11

RIVERSIDE TRANSIT AUTHORITY (RTA) BUS ROUTES



LEGEND:

- = ROUTE 7
- = ROUTE 8
- = ROUTE 40

N

SOURCE: WWW.RIVERSIDETRANSIT.COM

- Mission Trail, Malaga Road, Casino Drive and Railroad Canyon Road/Diamond Drive (via alternate Route 8-Lake Elsinore Outlet Center, Inland Valley Hospital and Wal-Mart)

- Railroad Canyon Road/Diamond Drive, Grape Street, Sylvester Street and Mission Trail (via alternate Route 40-Lake Elsinore, Quail Valley, Canyon Lake, Sun City and Mt. San Jacinto College/Menifee).

Route 40 appears to be the most likely route to provide future transit service to the Diamond Specific Plan.

5.0 PROJECTED FUTURE TRAFFIC

To assess future traffic conditions, project traffic is combined with existing traffic, ambient growth, and cumulative traffic generated by other known developments that are approved or being processed concurrently within or in close proximity to the study area.

5.1 Project Site Traffic

5.1.1 Project Trip Generation

Trip generation represents the amount of traffic which is attracted to and produced by a development. The traffic generation for the proposed project is based upon the specific land uses planned for this development. The Diamond Specific Plan is proposed as a mixed-use development to consist of 600 townhomes/condominiums, 425,000 square feet of general office use, 472,000 square feet of commercial retail use and a 150 room hotel. For the purposes of this analysis, it has been assumed that the project would be developed over three phases with anticipated opening years for each phase being 2012, 2014 and 2016, for phases one, two and three, respectively.

Project traffic has been estimated based on the Institute of Transportation Engineers (ITE) trip generation rates (ITE Trip Generation Manual, 8th Edition), which are listed on Table 5-1. Both daily and peak-hour trip generation for the project site are shown in Table 5-2. The proposed project is projected to generate a net total of approximately 25,689 daily trip-ends with 1,298 AM peak hour trips and 2,584 PM peak hour trips. Trip generation for the project has been adjusted to account internal interaction. A key characteristic of a mixed-use development such as the proposed Diamond Specific Plan is that trips among the various land uses (i.e., residential, commercial retail, office, etc.) can be made on-site without the need to travel on the major street system. For example, someone living in the residential component of the project may work, shop or eat at the nearby office and retail uses located within the project. These internal trips help to reduce peak period traffic congestion on the nearby street system as they can be made by walking or biking and would likely never enter the arterial street system. Rates of internal capture were derived

TABLE 5-1

PROJECT TRIP GENERATION RATES[1]

LAND USE	ITE CODE	UNITS[2]	PEAK HOUR						DAILY
			AM			PM			
			IN	OUT	TOTAL	IN	OUT	TOTAL	
Condominium/Townhouse	230	DU	0.07	0.37	0.44	0.35	0.17	0.52	5.81
General Office (425.0 TSF)	710	TSF	1.24	0.17	1.41	0.22	1.08	1.30	9.56
Shopping Center (472.0 TSF)	820	TSF	0.50	0.32	0.82	1.87	1.94	3.81	39.45
Hotel	310	RM	0.34	0.22	0.56	0.31	0.28	0.59	8.17

[1] Source: Institute of Transportation Engineers (ITE), Trip Generation, Eighth Edition, 2008.

[2] DU = Dwelling Units; TSF = Thousand Square Feet; RM = Rooms

TABLE 5-2 (Page 1 of 2)

PROJECT TRIP GENERATION SUMMARY

LAND USE	QUANTITY	UNITS[1]	PEAK HOUR						DAILY
			AM			PM			
			IN	OUT	TOTAL	IN	OUT	TOTAL	
PHASE 1 (2012)									
1A-Condominium/Townhouse	100	DU	7	37	44	35	17	52	581
1A-General Office	100.000	TSF	124	17	141	22	108	130	956
Internal Capture (Office-Residential)			*0*	*0*	*0*	*0*	*-1*	*-1*	*-9*
Internal Capture (Office-Commercial)			*-1*	*-2*	*-3*	*-4*	*-3*	*-7*	*-131*
Office Subtotal			123	15	138	18	104	122	816
1A-Shopping Center	75.000	TSF	38	24	62	140	146	286	2,959
Internal Capture (Commercial-Residential)			*-2*	*-2*	*-4*	*-9*	*-11*	*-20*	*-206*
Commercial Subtotal			36	22	58	131	135	266	2,753
PHASE 1 (2012) TOTAL			**166**	**74**	**240**	**184**	**256**	**440**	**4,150**
PHASE 2 (2014)									
2B-Condominium/Townhouse	150	DU	11	56	66	53	26	78	872
2C-Condominium/Townhouse	250	DU	18	93	110	88	43	130	1,453
Residential Subtotal			29	149	176	141	69	208	2,325
1A-General Office	115.000	TSF	143	20	162	25	124	150	1,099
2B-General Office	50.000	TSF	62	9	71	11	54	65	478
2C-General Office	50.000	TSF	62	9	71	11	54	65	478
Internal Capture (Office-Residential)			*0*	*0*	*0*	*0*	*-3*	*-3*	*-11*
Internal Capture (Office-Commercial)			*-3*	*-6*	*-9*	*-15*	*-12*	*-27*	*-195*
Office Subtotal			264	32	295	32	217	250	1,849
1A-Shopping Center	200.000	TSF	100	64	164	374	388	762	7,890
2A-Shopping Center	30.000	TSF	15	10	25	56	58	114	1,184
2B-Shopping Center	85.000	TSF	43	27	70	159	165	324	3,353
Internal Capture (Commercial-Residential)			*-8*	*-7*	*-15*	*-37*	*-44*	*-81*	*-826*
Commercial Subtotal			150	94	244	552	567	1,119	11,601
2A-Hotel	150	RM	51	33	84	47	42	89	1,226
PHASE 2 (2014) SUBTOTAL			**494**	**308**	**799**	**772**	**895**	**1,666**	**17,001**
PHASES 1 & 2 (2014) TOTAL			**660**	**382**	**1,039**	**956**	**1,151**	**2,106**	**21,151**

TABLE 5-2 (Page 2 of 2)

PROJECT TRIP GENERATION SUMMARY

LAND USE	QUANTITY	UNITS[1]	PEAK HOUR						DAILY
			AM			PM			
			IN	OUT	TOTAL	IN	OUT	TOTAL	
PHASE 3 (2016)									
3B-Condominium/Townhouse	100	DU	7	37	44	35	17	52	581
3A-General Office	20.000	TSF	25	3	28	4	22	26	191
3B-General Office	90.000	TSF	112	15	127	20	97	117	860
Internal Capture (Office-Residential)			*0*	*0*	*0*	*0*	*-1*	*-1*	*-9*
Internal Capture (Office-Commercial)			*-1*	*-2*	*-3*	*-5*	*-3*	*-8*	*-114*
Office Subtotal			136	16	152	19	115	134	928
3A-Shopping Center	62.000	TSF	31	20	51	116	120	236	2,446
3B-Shopping Center	20.000	TSF	10	6	16	37	39	76	789
Internal Capture (Commercial-Residential)			*-2*	*-2*	*-4*	*-9*	*-11*	*-20*	*-206*
Commercial Subtotal			39	24	63	144	148	292	3,029
PHASE 3 (2016) SUBTOTAL			**182**	**77**	**259**	**198**	**280**	**478**	**4,538**
PROJECT TOTAL (PHASES 1, 2 & 3)			**842**	**459**	**1,298**	**1,154**	**1,431**	**2,584**	**25,689**

[1] DU = Dwelling Units; TSF = Thousand Square Feet; RM = Rooms

Note: Internal capture calculations have been determined based upon ITE methodology outlined in the ITE Trip Generation Handbook (2nd Edition).

based on the ITE Trip Generation Handbook, 2nd Edition, and were approved by City of Lake Elsinore staff as part of the traffic study scoping process.

5.1.2 Project Trip Distribution

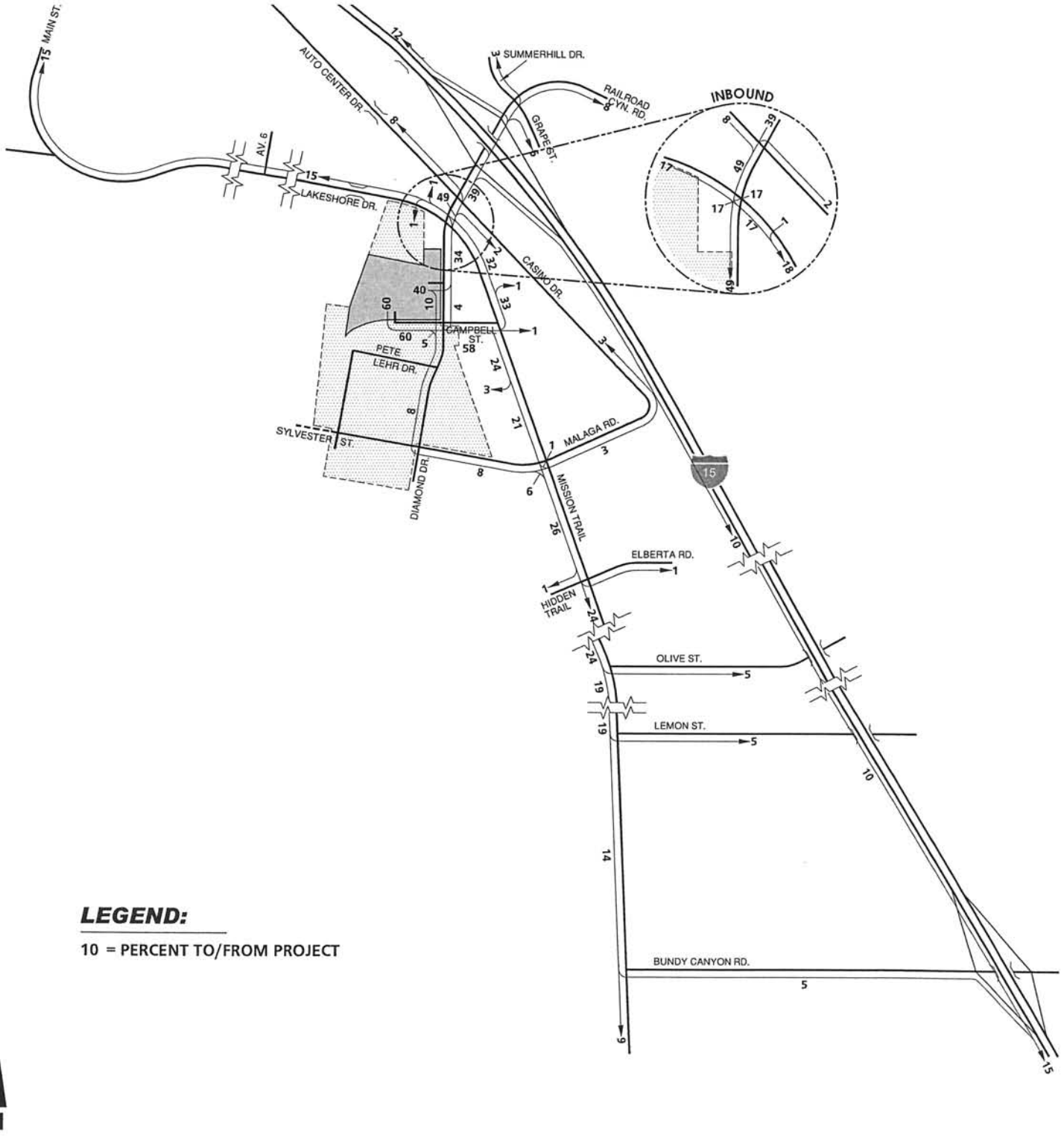
Trip distribution represents the directional orientation of traffic to and from the project site. Trip distribution is heavily influenced by the geographical location of the site, surrounding land uses, local circulation patterns and the regional freeway system.

The directional orientation of traffic was determined by evaluating existing and proposed land uses and highways within the community, and existing traffic volumes. The project traffic is distributed via primary access locations to identify impacts to these project access points and to nearby intersections. Future focused map level traffic studies will help to more accurately define the specific geometric improvements at the project driveways and more accurately assign the improvements required off-site for each component of development.

Trip distributions for this study have been based upon near-term conditions. These conditions include highway facilities which are either in place or will be completed in conjunction with other future developments. The project trip distribution patterns for Phase 1 (2012), Phase 2 (2014) and Phase 3 (2016) are graphically depicted on Exhibits 5-1 through 5-10. It should be noted that the distribution of project traffic varies between land uses. As such, a trip distribution has been shown for each of the four proposed land uses for each of the three (3) phases of development. Internal project trip distribution patterns are also provided and illustrated on Exhibits 5-11 and 5-12 for Phase 2 (2014) and Phase 3 (2016), respectively. An illustration of the internal project trip distribution for Phase 1 (2012) has not been provided as these internal project trips are not anticipated to access any of the nearby study area intersections. Consequently, the internal project trip reductions have been taken at the trip generation level as shown on Table 5-2.

EXHIBIT 5-1

PHASE 1 (2012) RESIDENTIAL TRIP DISTRIBUTION



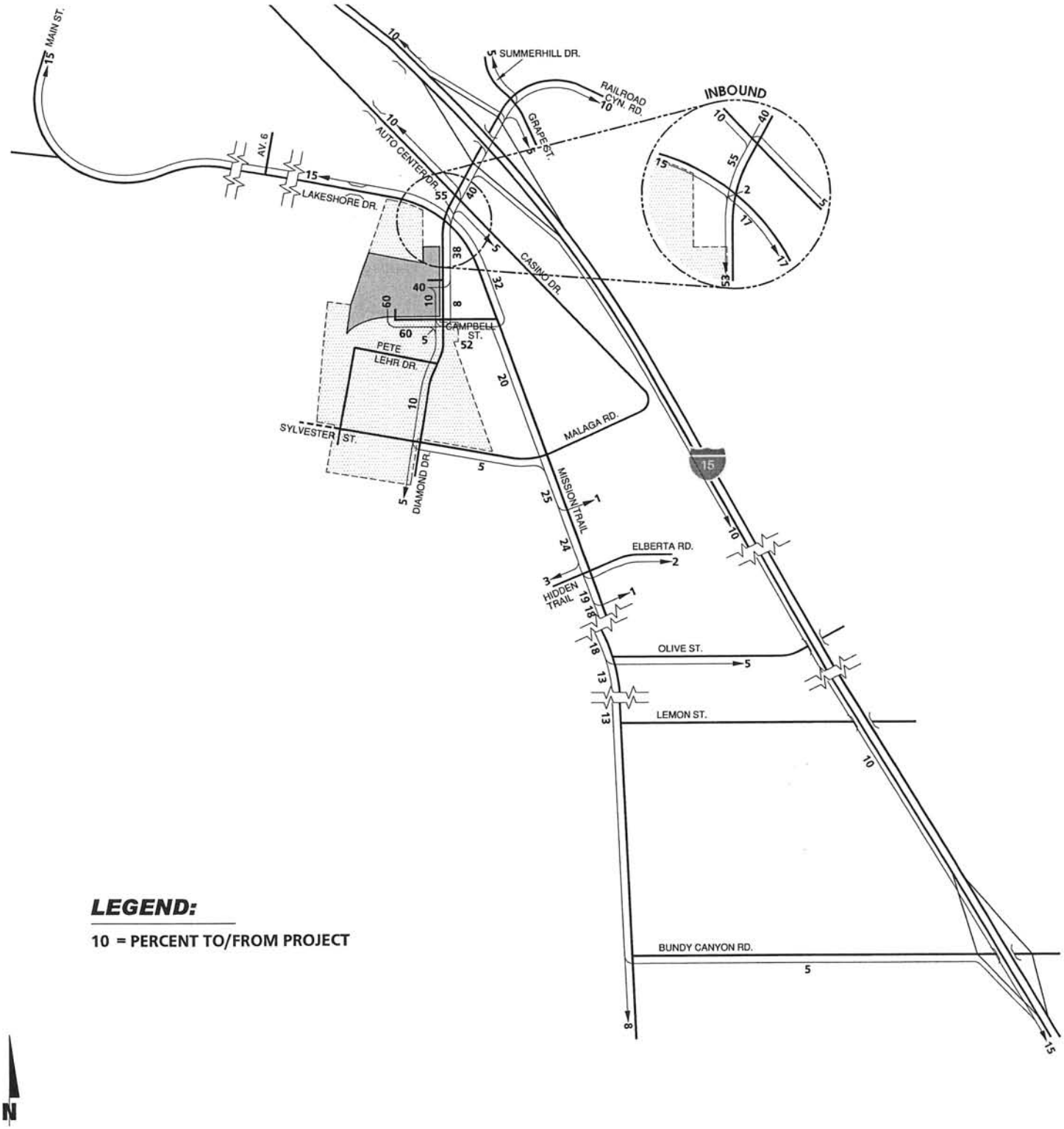
LEGEND:

10 = PERCENT TO/FROM PROJECT

N

EXHIBIT 5-2

PHASE 1 (2012) SHOPPING CENTER TRIP DISTRIBUTION



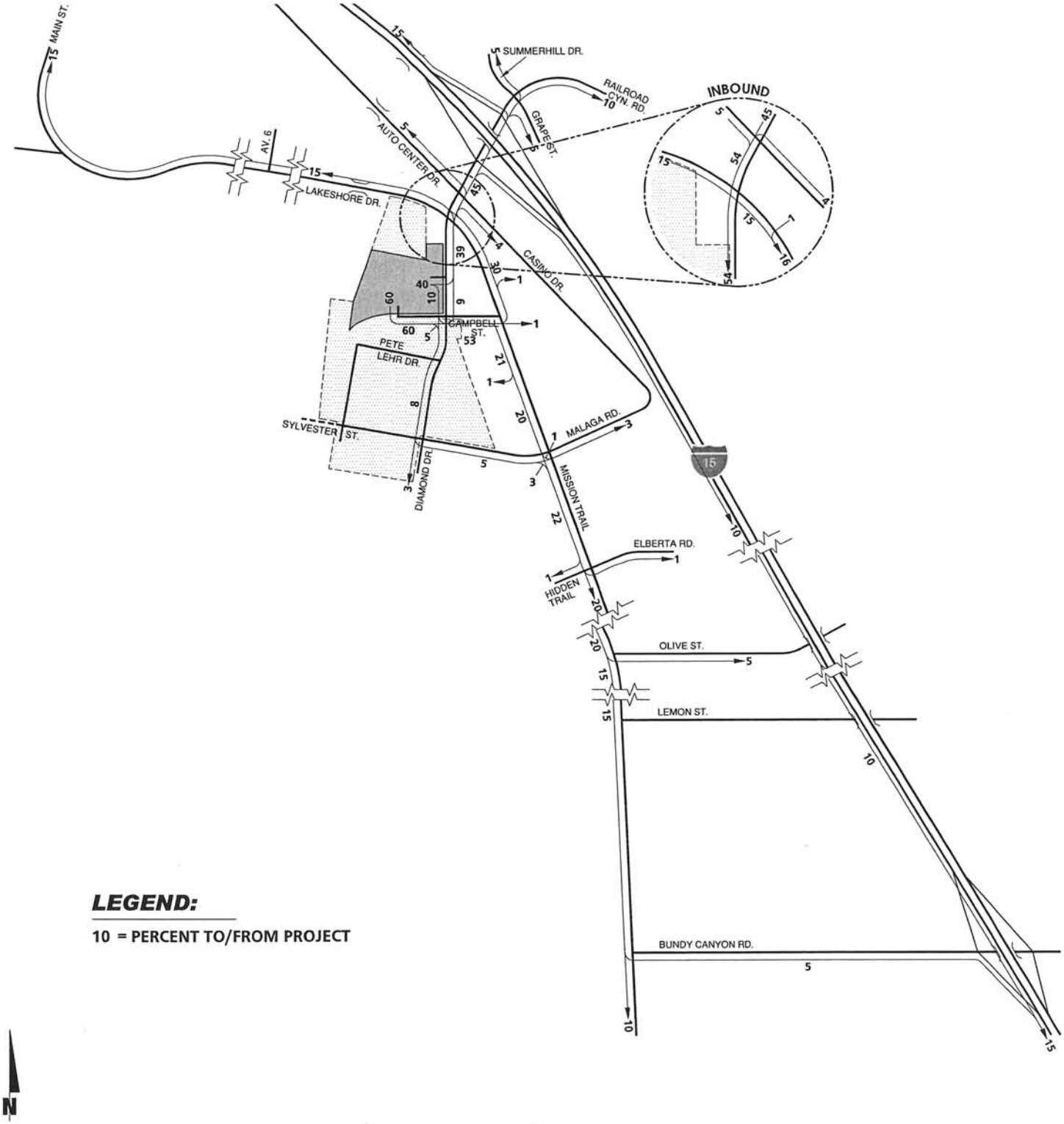
LEGEND:

10 = PERCENT TO/FROM PROJECT

N

EXHIBIT 5-3

PHASE 1 (2012) GENERAL OFFICE TRIP DISTRIBUTION



LEGEND:

10 = PERCENT TO/FROM PROJECT

N

EXHIBIT 5-4

PHASE 2 (2014) RESIDENTIAL TRIP DISTRIBUTION

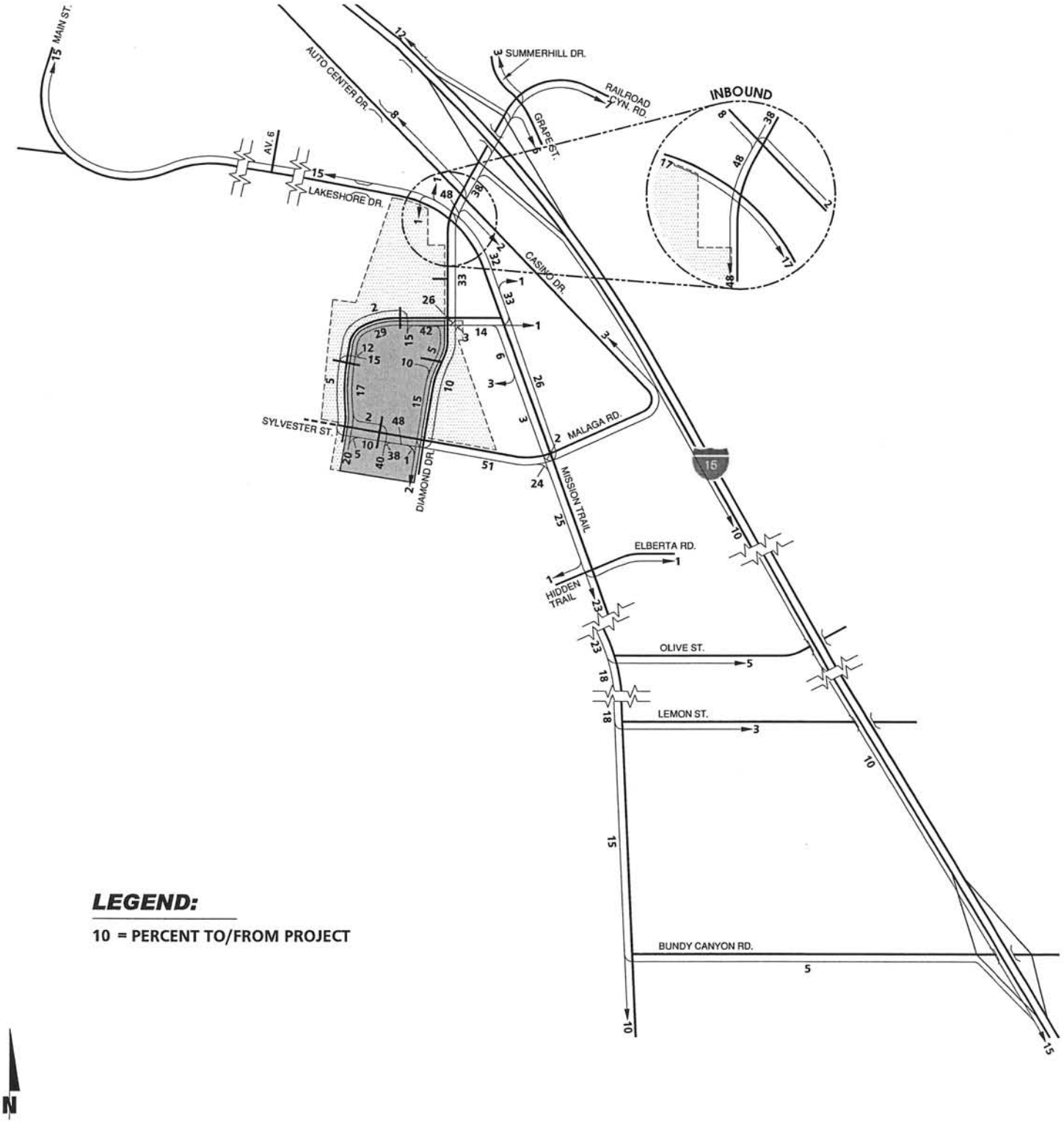
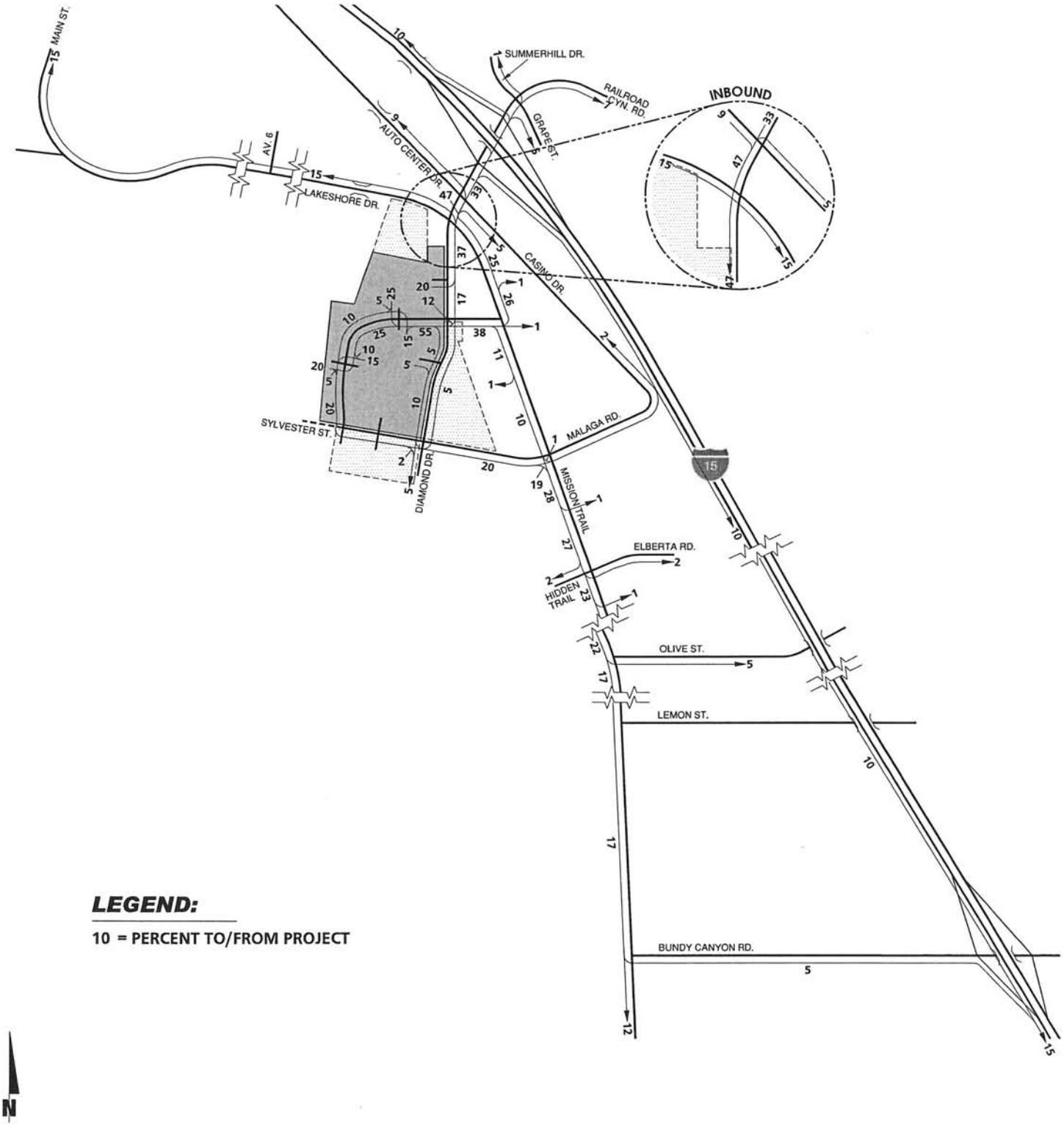


EXHIBIT 5-5

PHASE 2 (2014) SHOPPING CENTER TRIP DISTRIBUTION

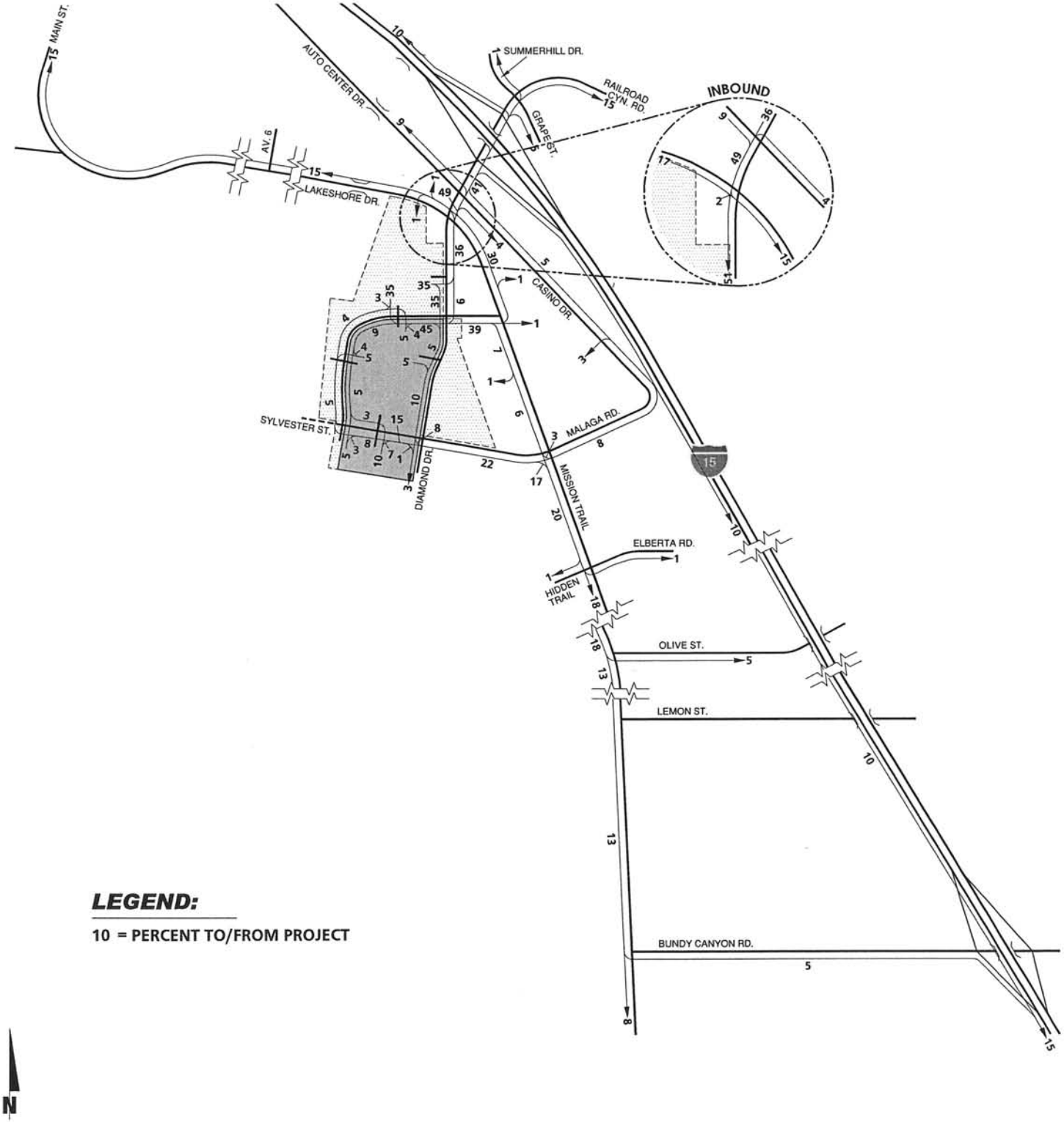


LEGEND:

10 = PERCENT TO/FROM PROJECT

EXHIBIT 5-6

PHASE 2 (2014) GENERAL OFFICE TRIP DISTRIBUTION



LEGEND:

10 = PERCENT TO/FROM PROJECT

EXHIBIT 5-7

PHASE 2 (2014) HOTEL TRIP DISTRIBUTION

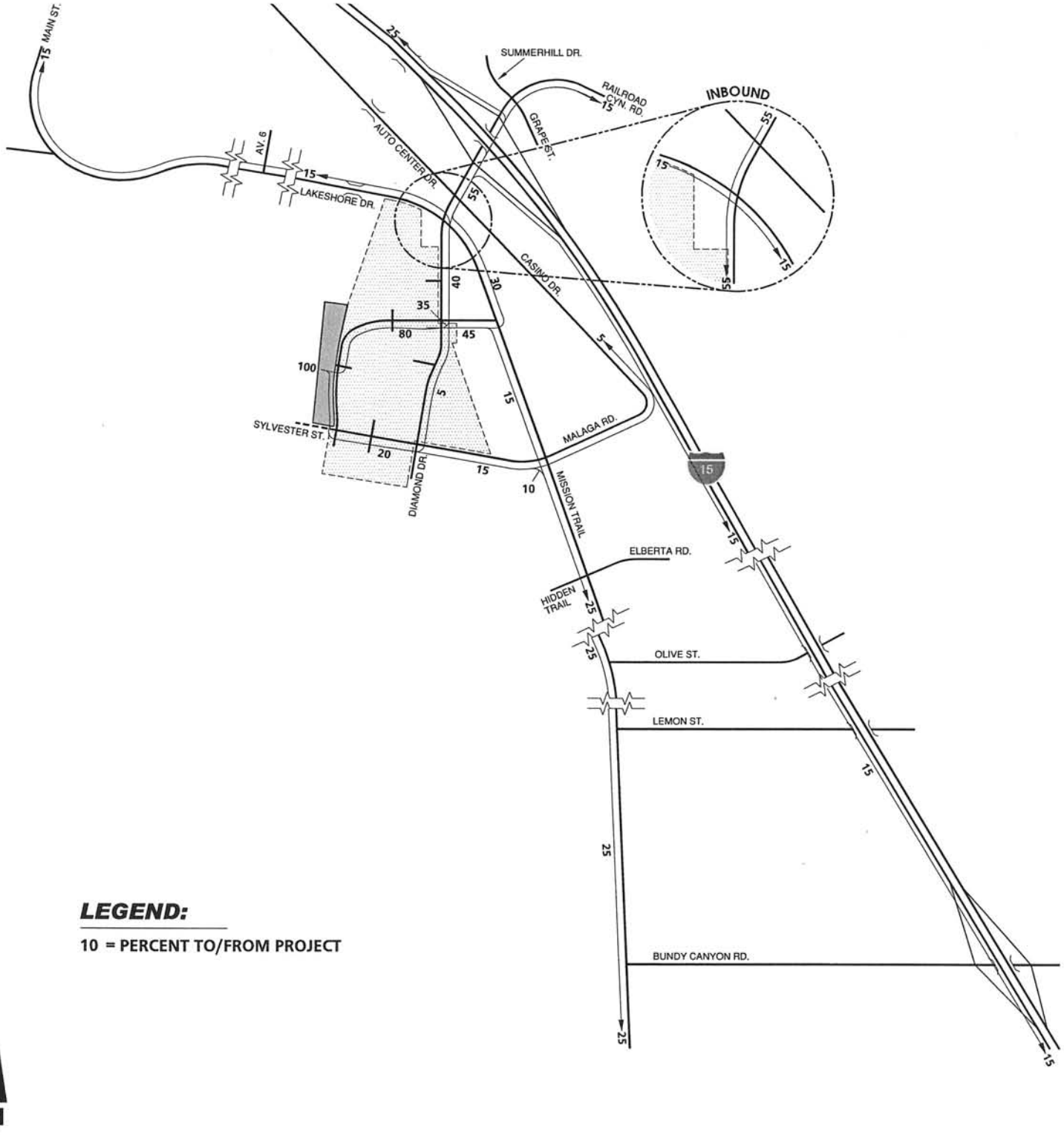


EXHIBIT 5-8

PHASE 3 (2016) RESIDENTIAL TRIP DISTRIBUTION

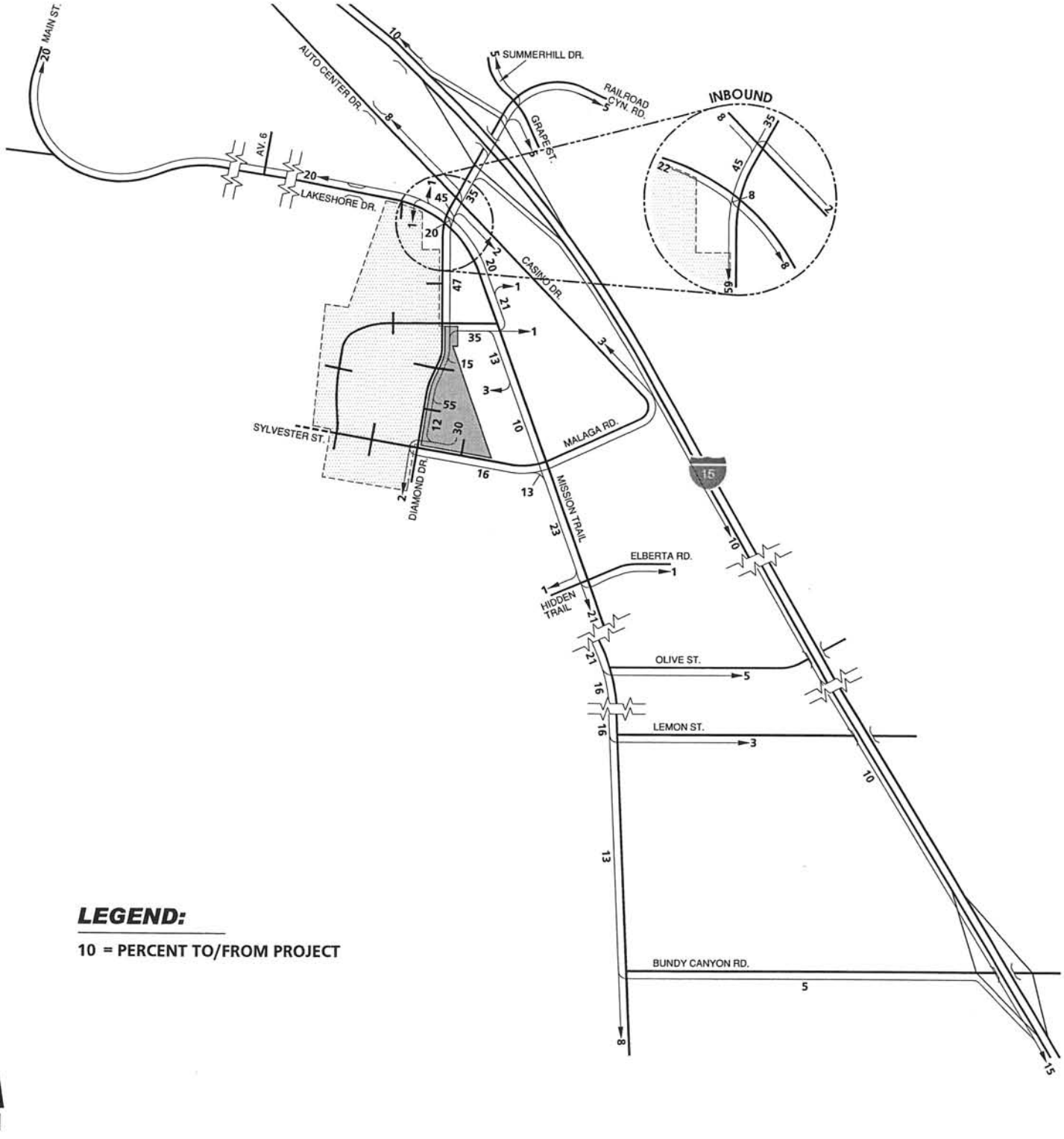


EXHIBIT 5-9

PHASE 3 (2016) SHOPPING CENTER TRIP DISTRIBUTION

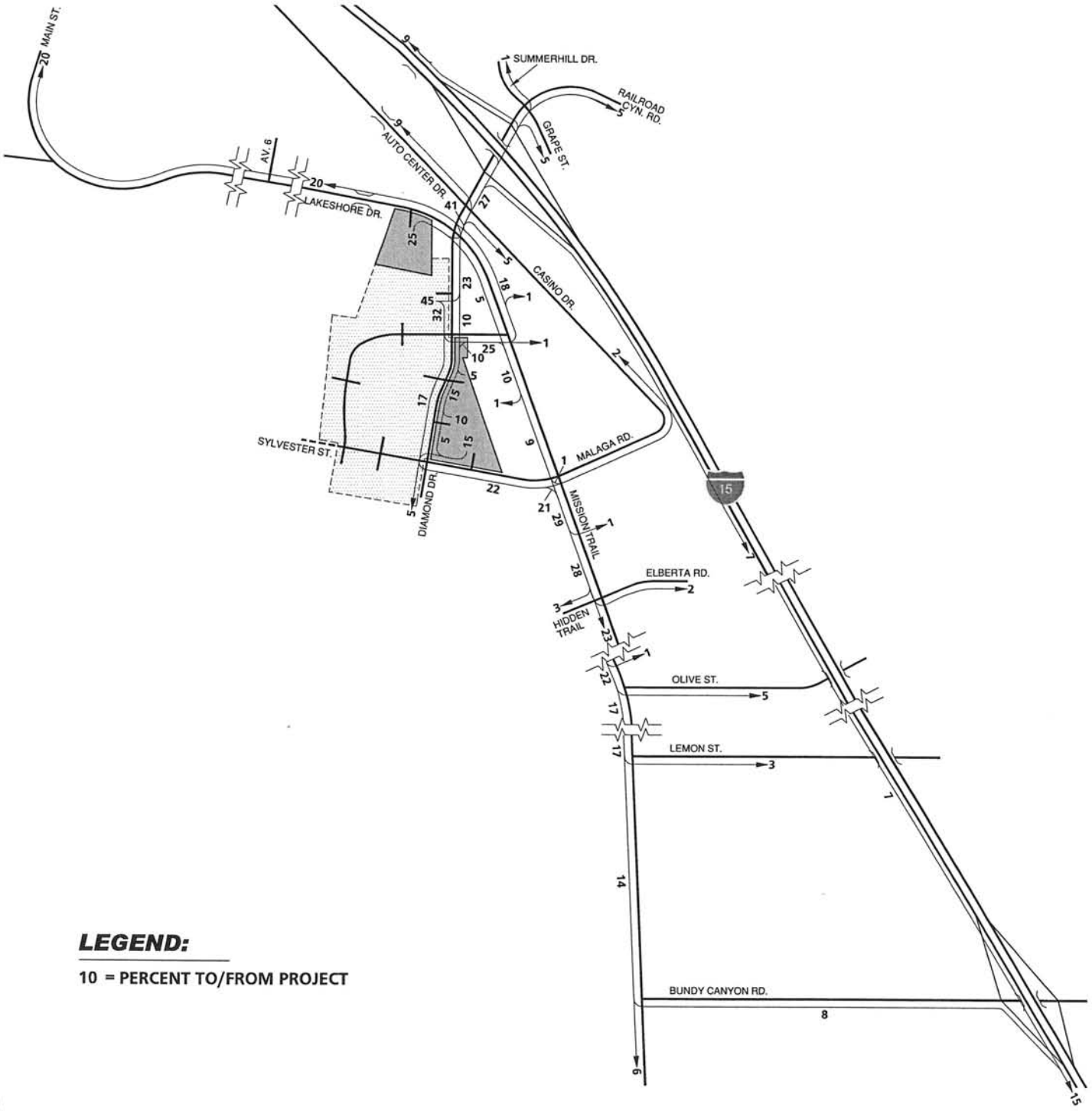


EXHIBIT 5-10

PHASE 3 (2016) GENERAL OFFICE TRIP DISTRIBUTION

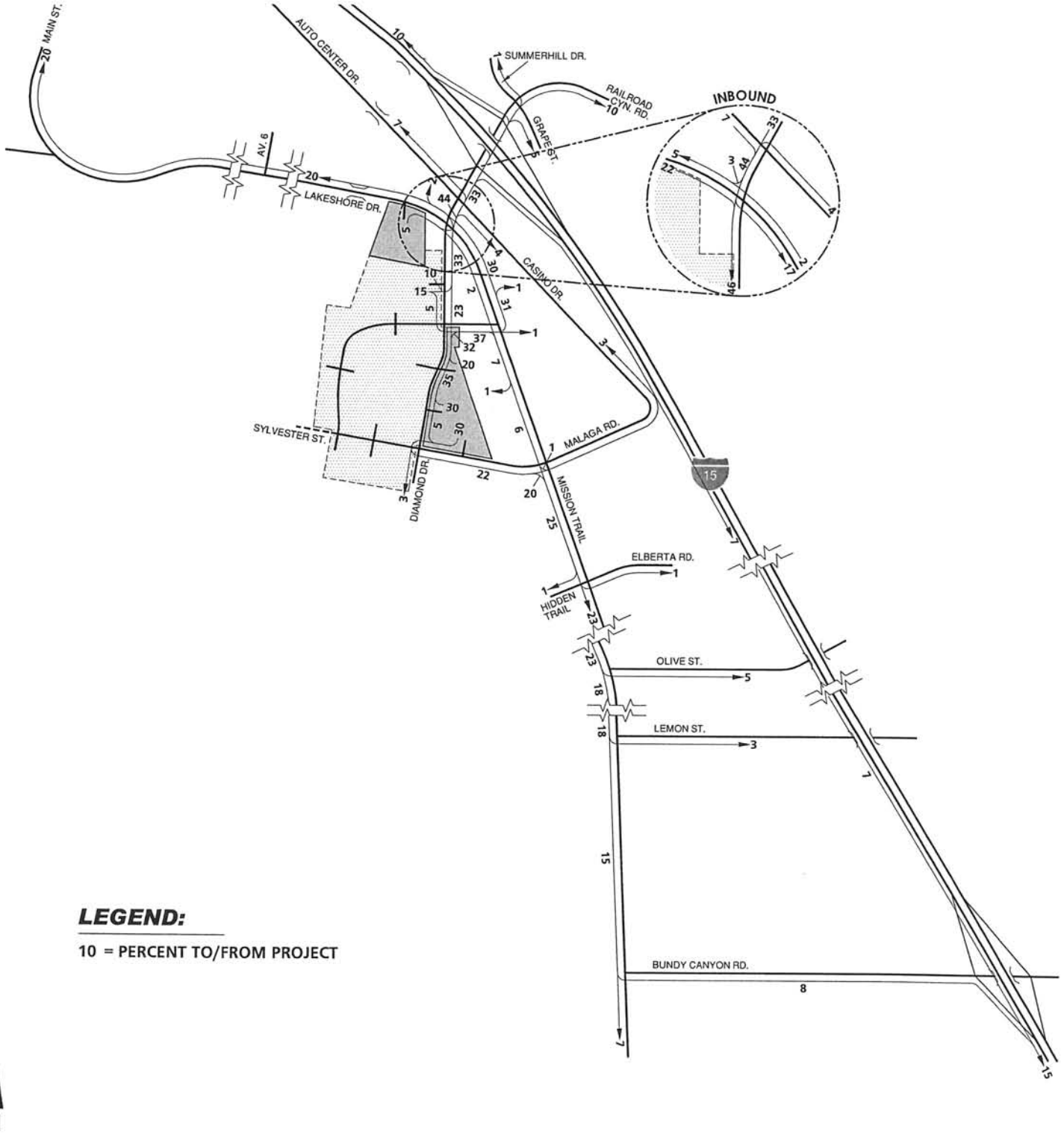
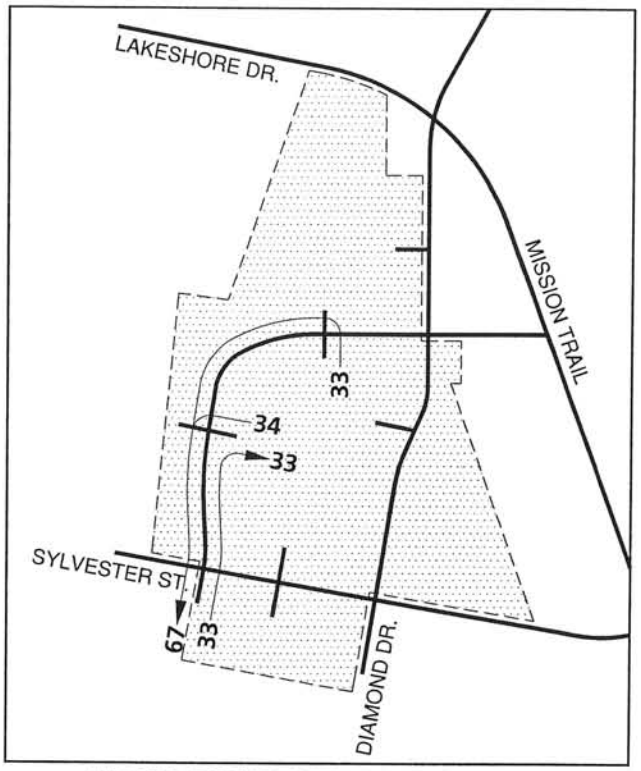


EXHIBIT 5-11

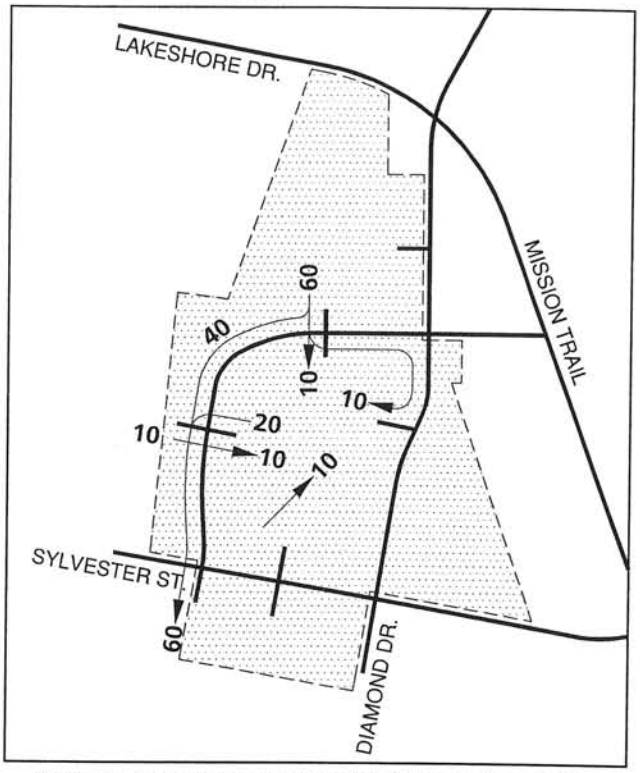
PHASE 2 (2014) INTERNAL CAPTURE

RESIDENTIAL:



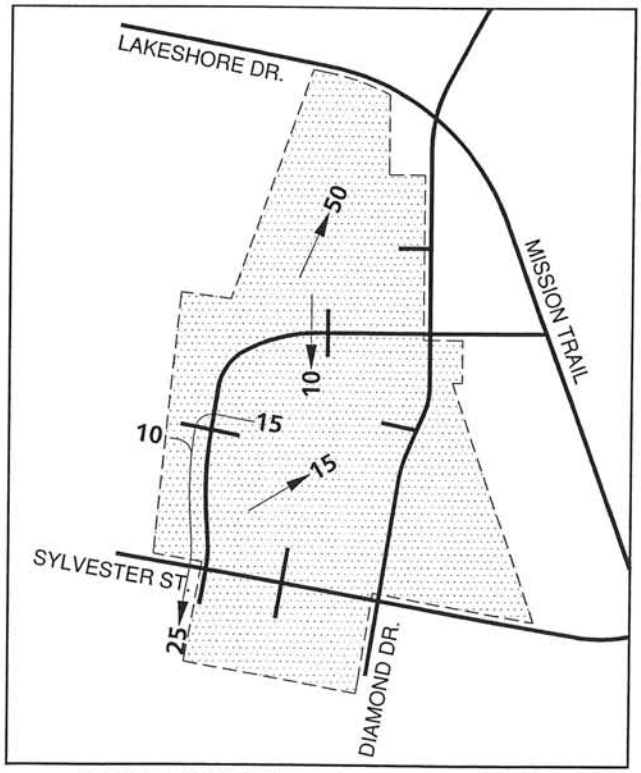
FROM RESIDENTIAL TO OFFICE

RESIDENTIAL:



FROM RESIDENTIAL TO COMMERCIAL

COMMERCIAL:



FROM COMMERCIAL TO OFFICE

LEGEND:

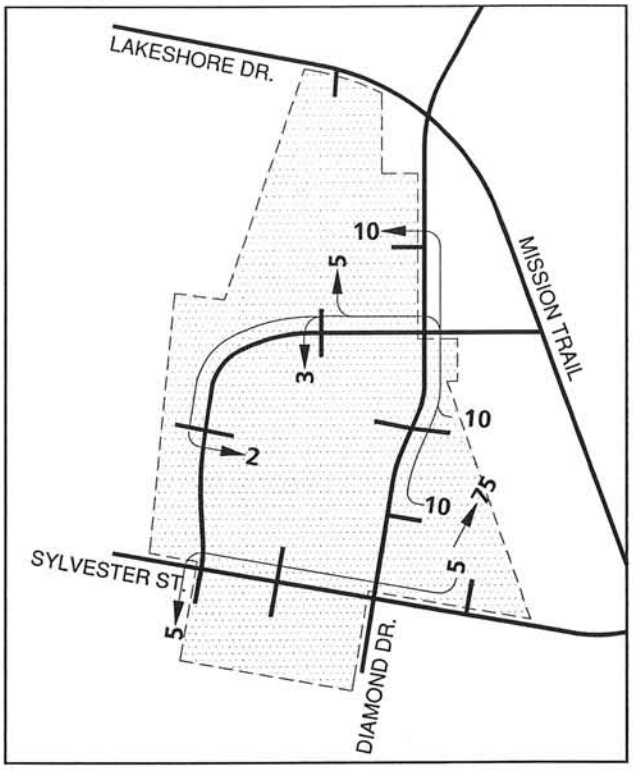
10 = PERCENT

N

EXHIBIT 5-12

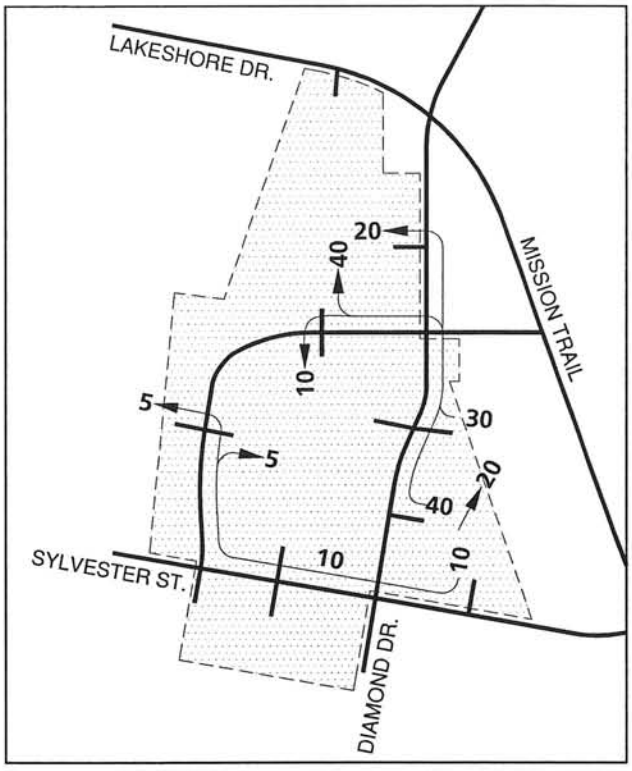
PHASE 3 (2016) INTERNAL CAPTURE

RESIDENTIAL:



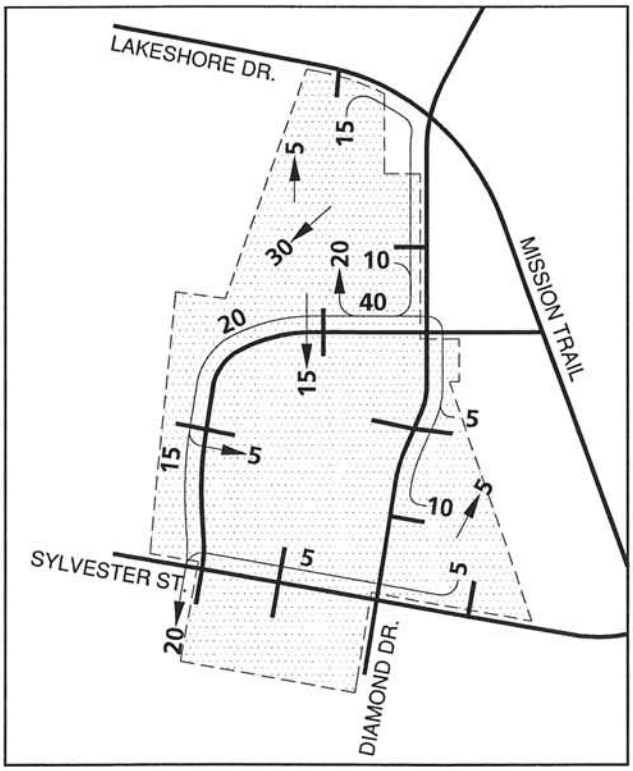
FROM RESIDENTIAL TO OFFICE

RESIDENTIAL:



FROM RESIDENTIAL TO COMMERCIAL

COMMERCIAL:



FROM COMMERCIAL TO OFFICE

LEGEND:

10 = PERCENT

N

5.1.3 Modal Split

The trip generation rates used in this report have been obtained from the ITE Trip Generation Manual, 8th Edition and are generally consistent with / based on data collected in suburban areas with typical suburban transit service.

The traffic reducing potential of more extensive public transit has not been considered in this report. Essentially the traffic projections may be "conservative" in that more intensive public transit might be able to reduce the traffic volumes.

5.1.4 Project Trip Assignment

The assignment of traffic from the site to the adjoining roadway system has been based upon the site's trip generation, trip distributions, and proposed arterial highway and local street systems, which would be in place by the time of initial occupancy of the site. Based on the identified project traffic generation and trip distribution, project average daily traffic (ADT) volumes are shown on Exhibit 5-13 for Phase 1 (2012) conditions. Phase 1 (2012) AM and PM peak hour intersection traffic volumes are shown on Exhibits 5-14 and 5-15, respectively. Exhibit 5-16 illustrates the Phase 2 (2014) project ADT volumes. Phase 2 (2014) AM and PM peak hour intersection traffic volumes are shown on Exhibits 5-17 and 5-18, respectively. During development of Phase 2 (2014), Pete Lehr Drive will be vacated and the extension of Campbell Street to the west (i.e., Diamond Drive) will connect Diamond Drive to Sylvester Street. Access to Diamond Stadium will be provided from Sylvester Street/Malaga Road and Diamond Circle (Loop Road). A future project driveway may be provided near the current Pete Lehr alignment. Lastly, Exhibit 5-19 illustrates the Phase 3 (2016) project ADT volumes. Phase 3 (2016) AM and PM peak hour intersection traffic volumes are shown on Exhibits 5-20 and 5-21, respectively.

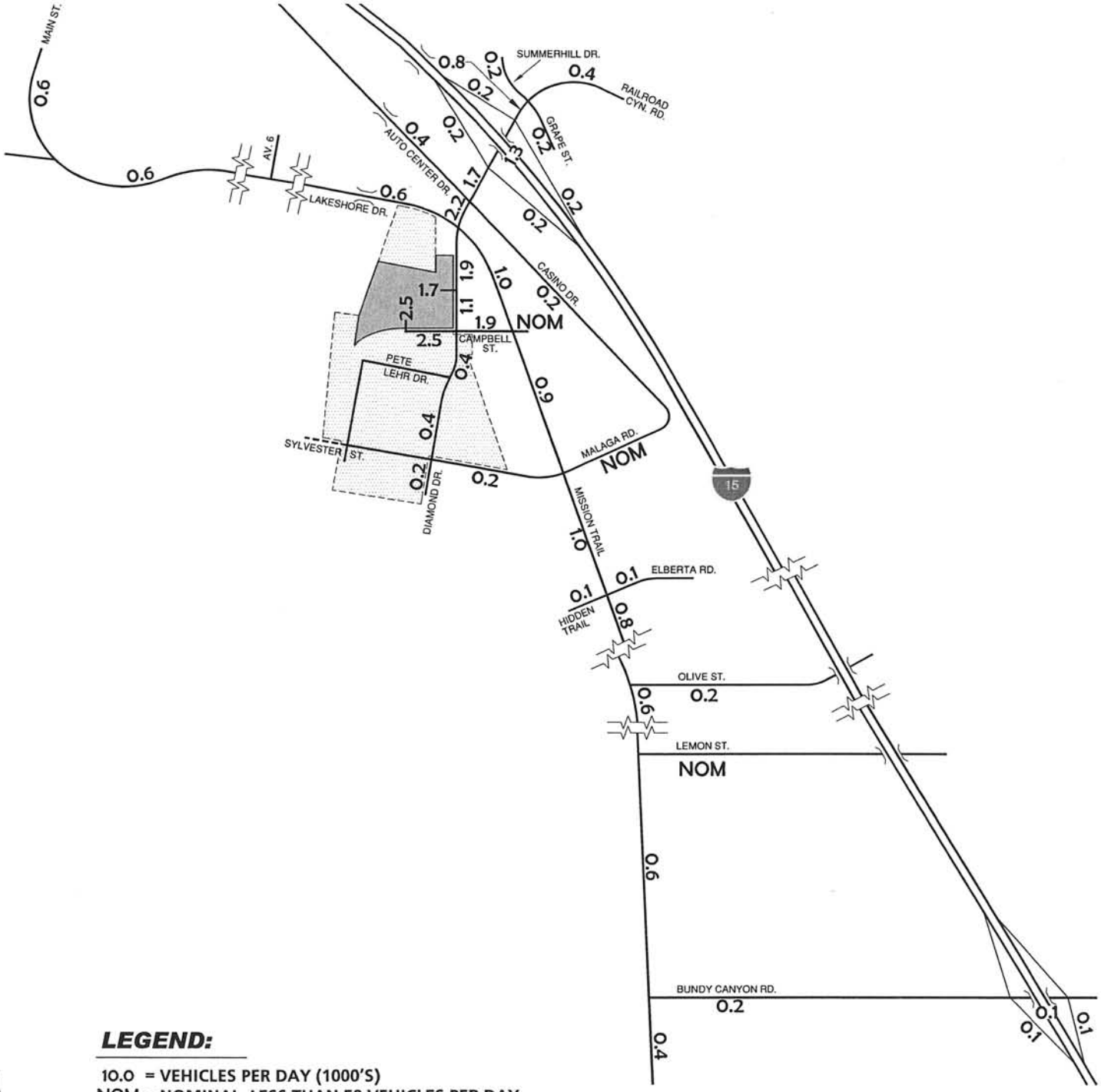
5.2 Non-Site Traffic for Study Area

5.2.1 Ambient Growth

To account for area-wide growth on study area roadways, 2012, 2014 and 2016 background traffic volumes have been calculated based on a 2.0 percent annual ambient

EXHIBIT 5-13

PHASE 1 (2012) PROJECT ONLY AVERAGE DAILY TRAFFIC (ADT)



LEGEND:

10.0 = VEHICLES PER DAY (1000'S)
NOM = NOMINAL, LESS THAN 50 VEHICLES PER DAY

N

EXHIBIT 5-14

PHASE 1 (2012) PROJECT ONLY AM PEAK HOUR INTERSECTION VOLUMES

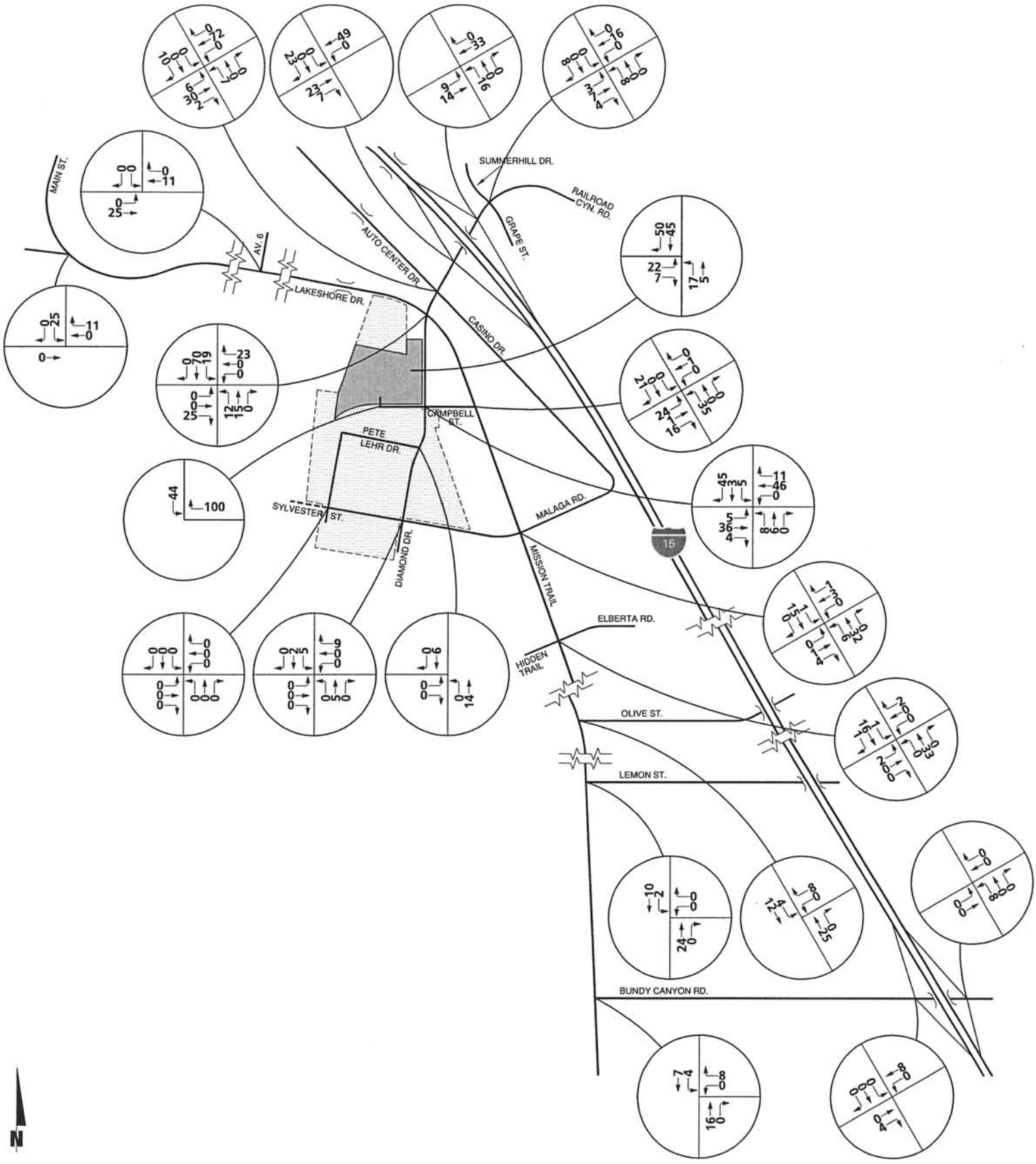


EXHIBIT 5-15

PHASE 1 (2012) PROJECT ONLY
PM PEAK HOUR INTERSECTION VOLUMES

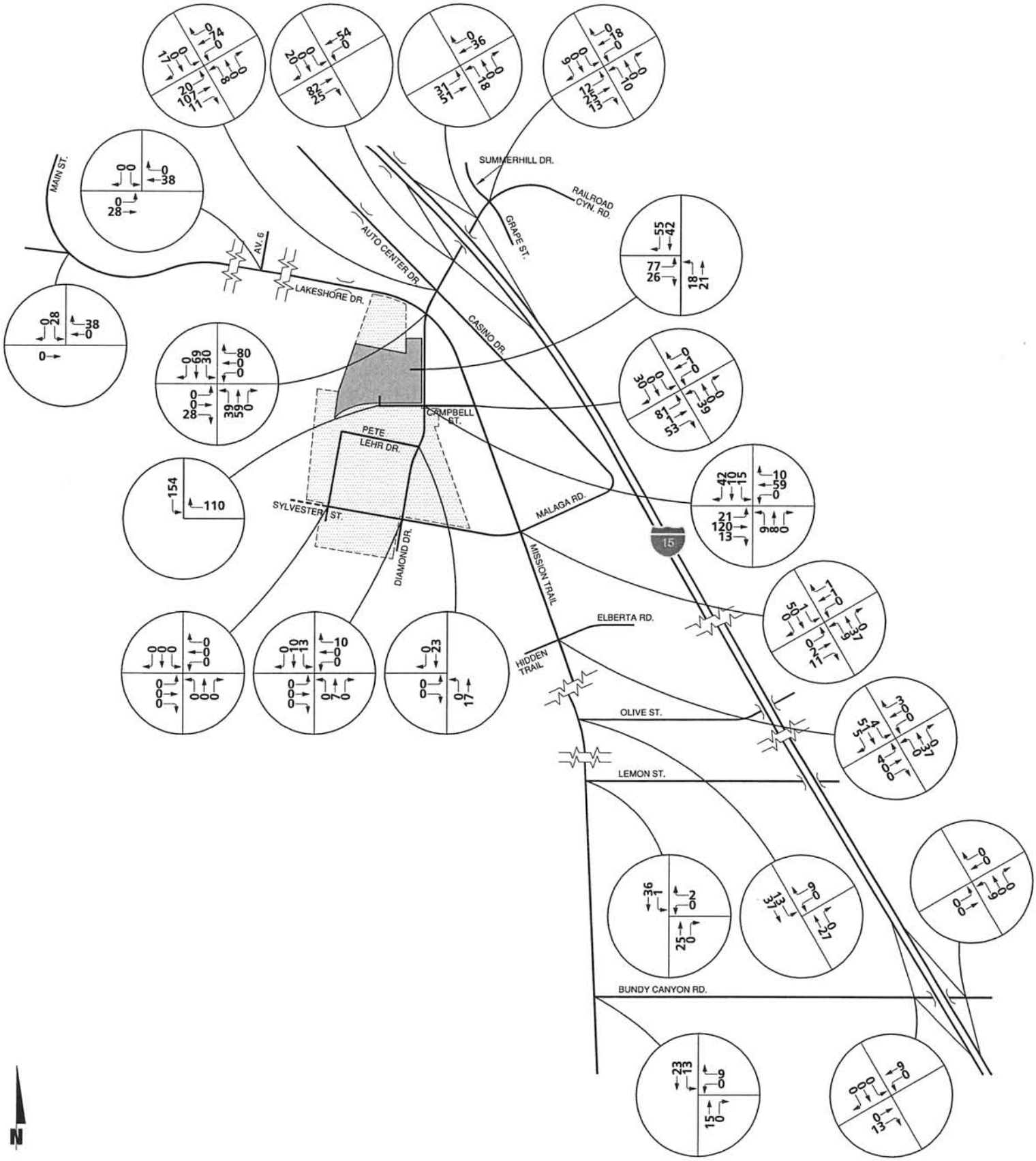


EXHIBIT 5-16

PHASE 2 (2014) PROJECT ONLY AVERAGE DAILY TRAFFIC (ADT)

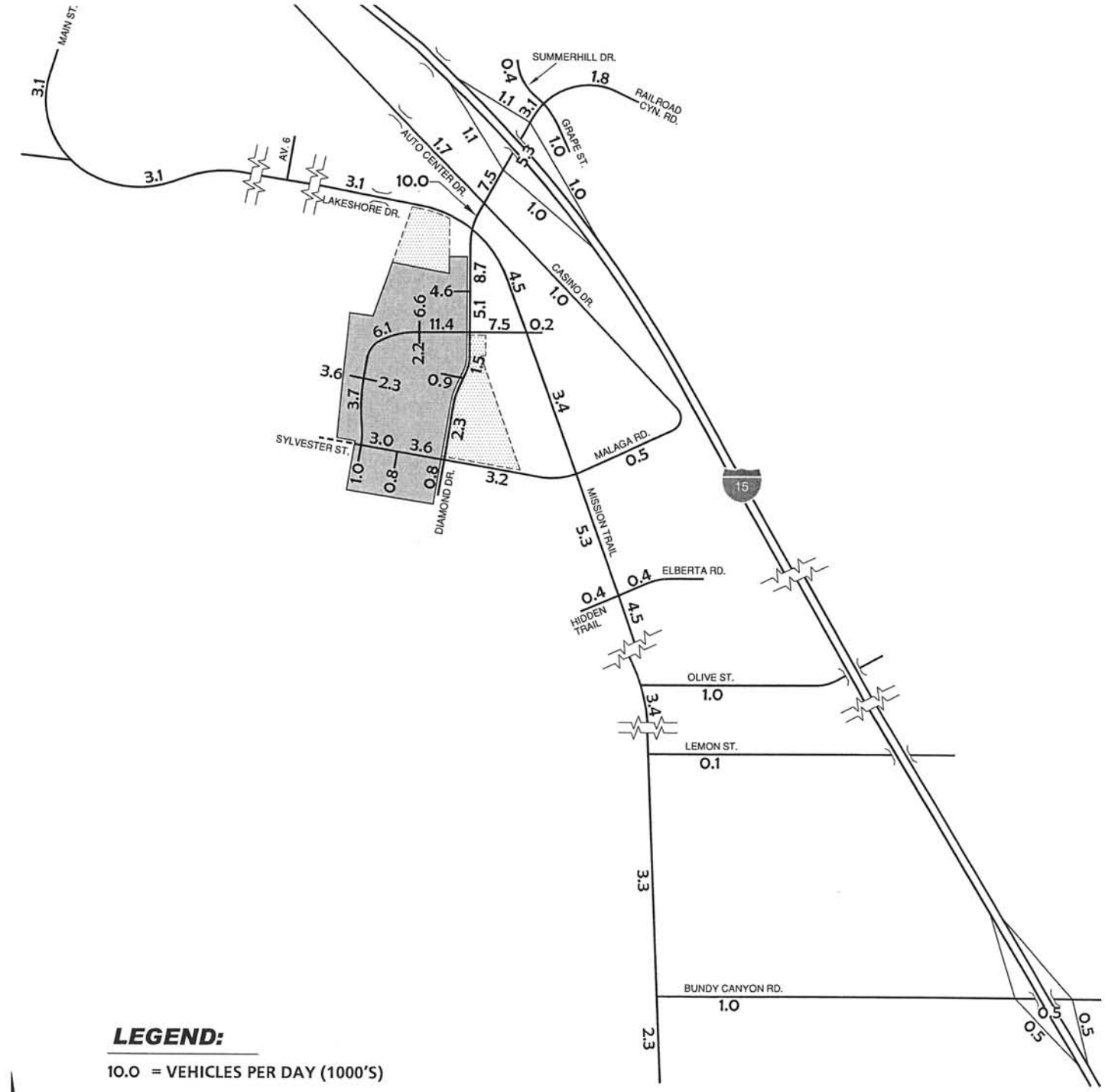


EXHIBIT 5-17

PHASE 2 (2014) PROJECT ONLY AM PEAK HOUR INTERSECTION VOLUMES

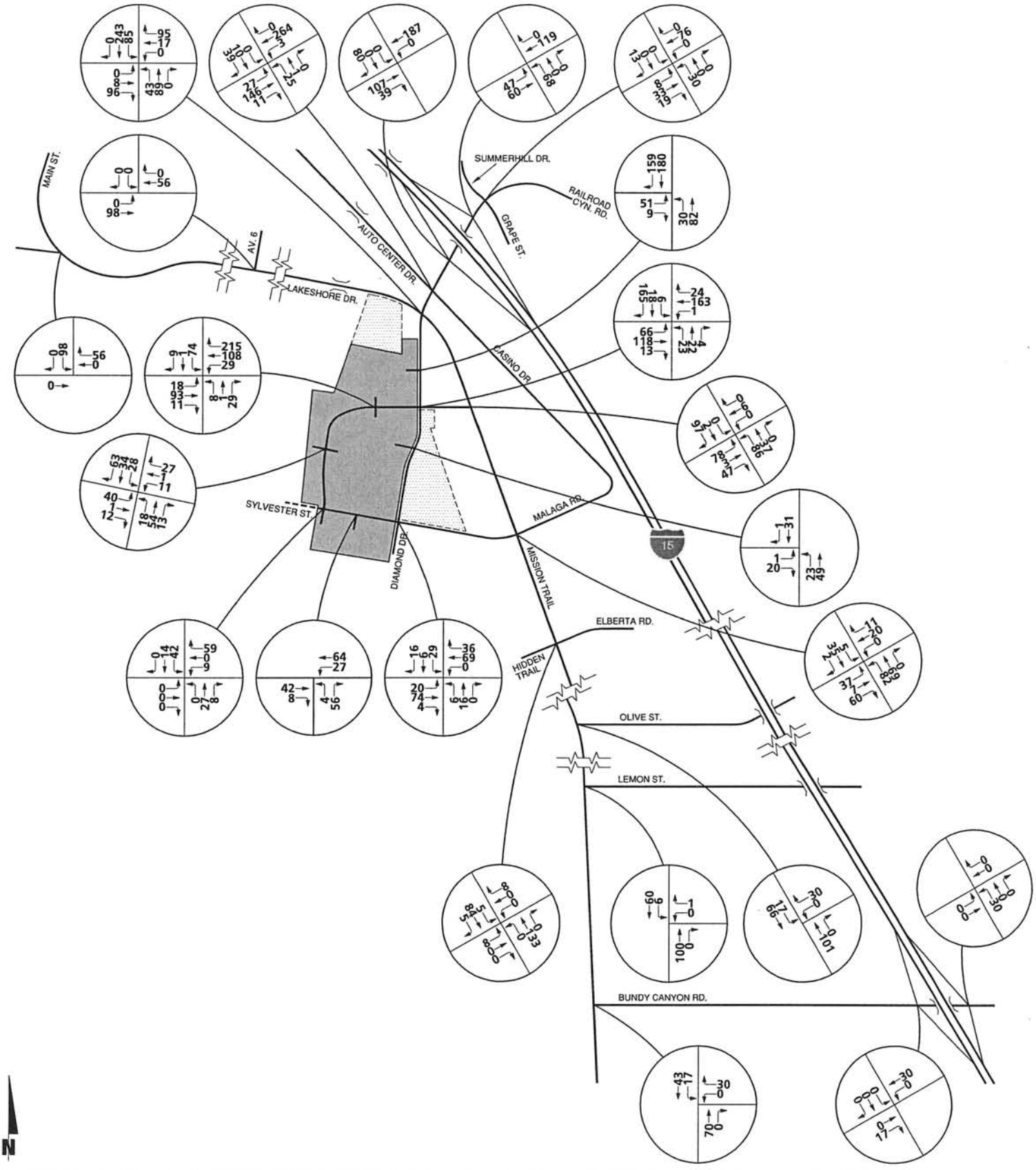


EXHIBIT 5-18

PHASE 2 (2014) PROJECT ONLY
PM PEAK HOUR INTERSECTION VOLUMES

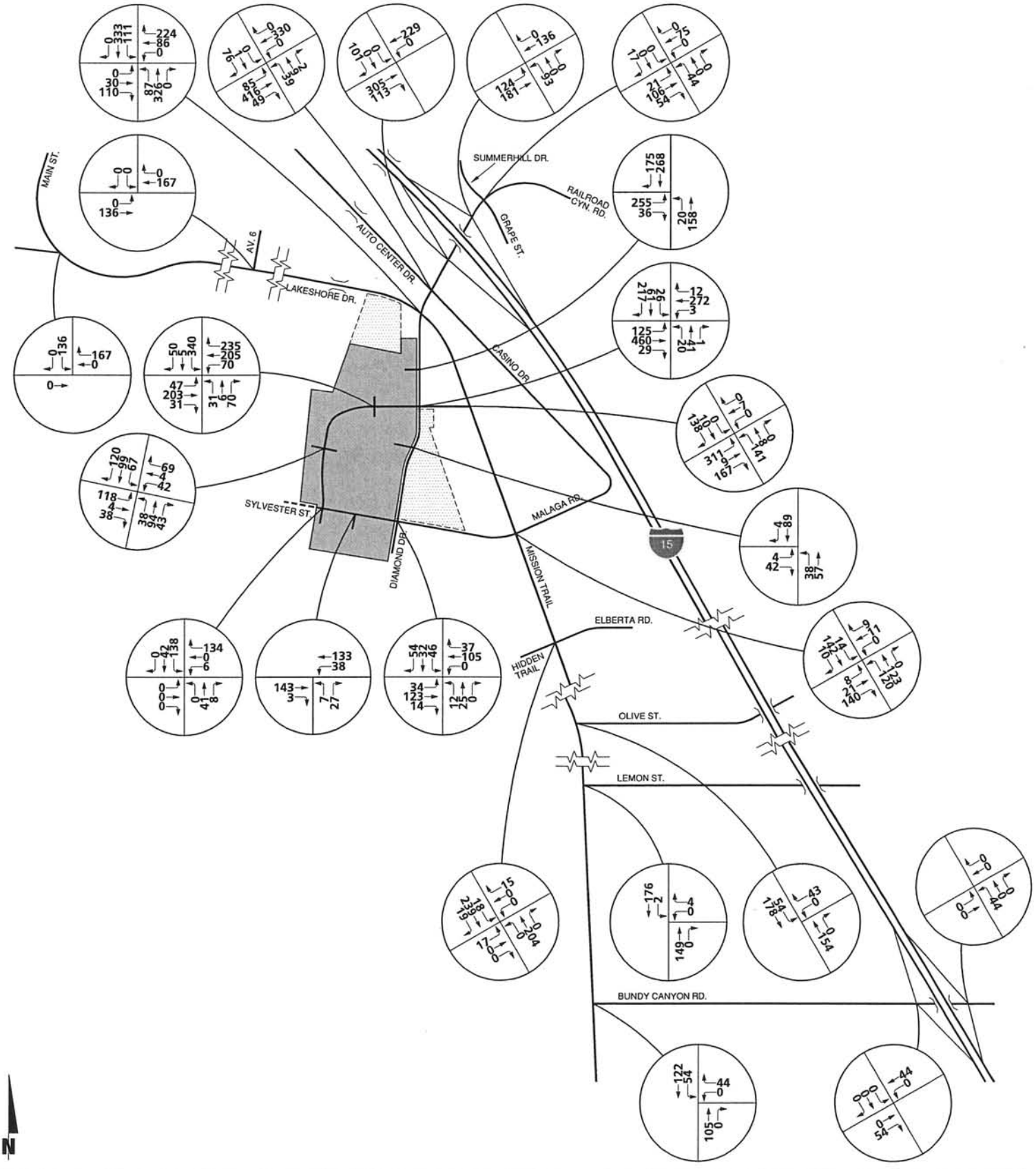


EXHIBIT 5-19

PHASE 3 (2016) PROJECT ONLY AVERAGE DAILY TRAFFIC (ADT)

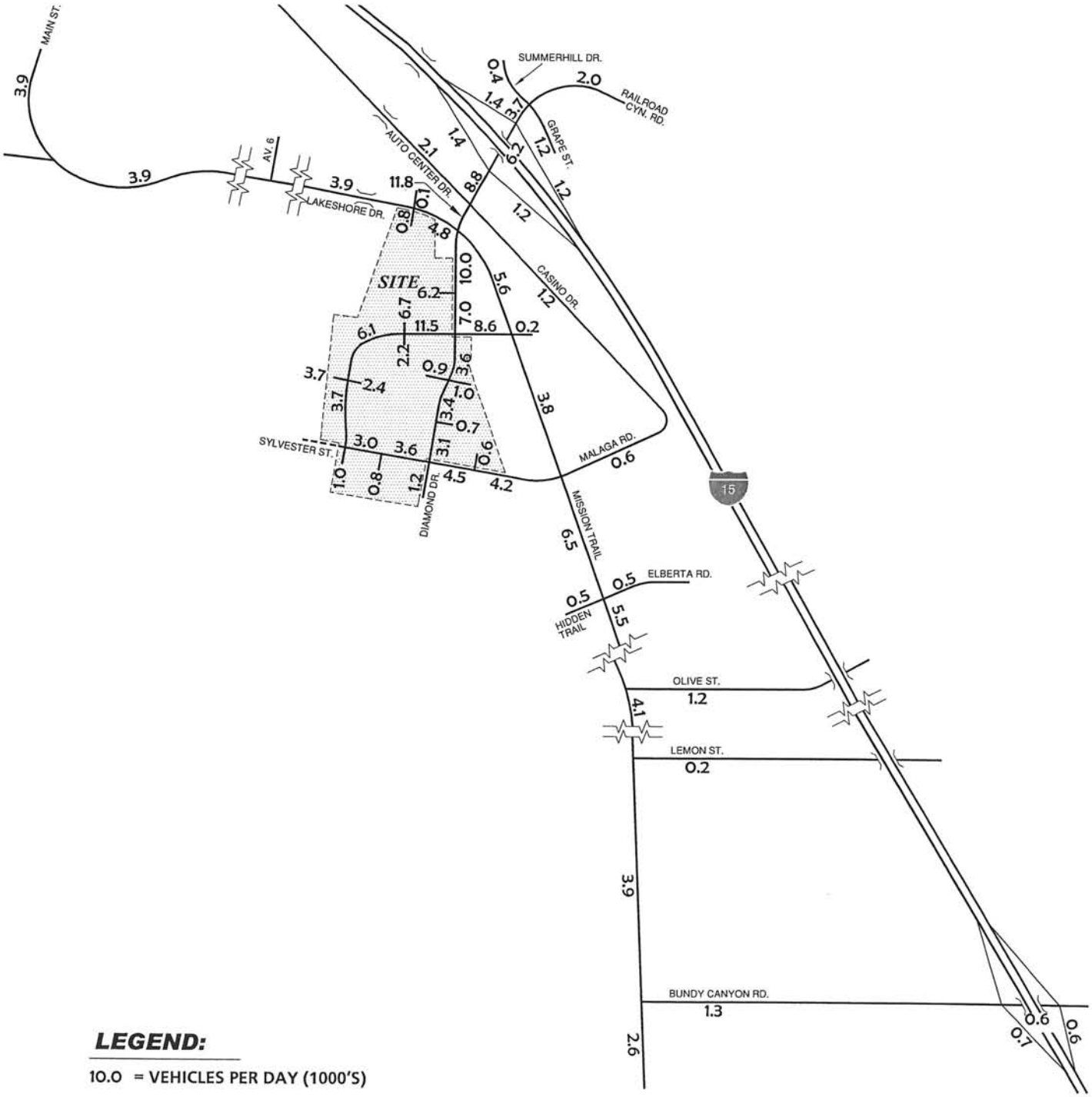


EXHIBIT 5-20

PHASE 3 (2016) PROJECT ONLY AM PEAK HOUR INTERSECTION VOLUMES

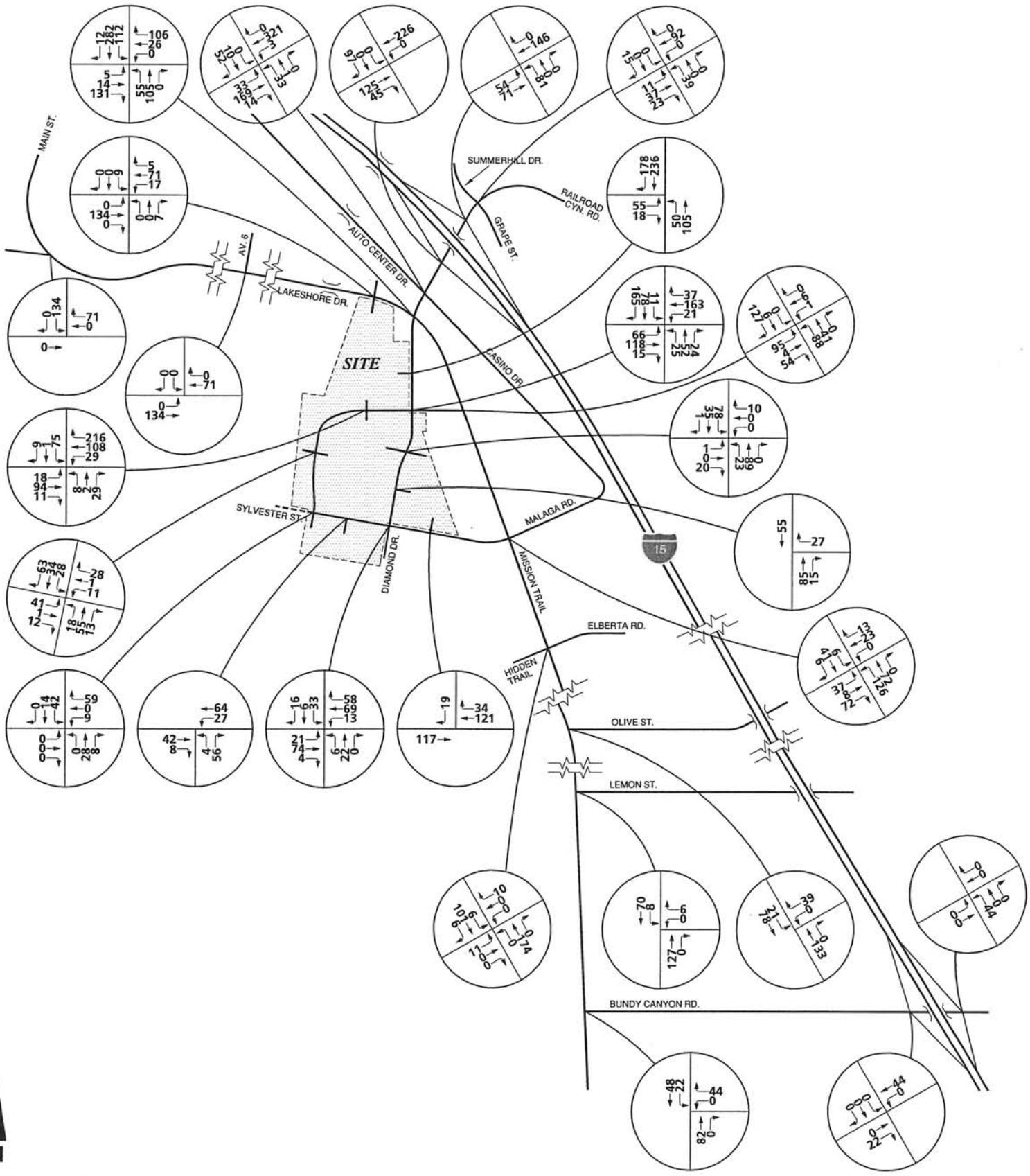
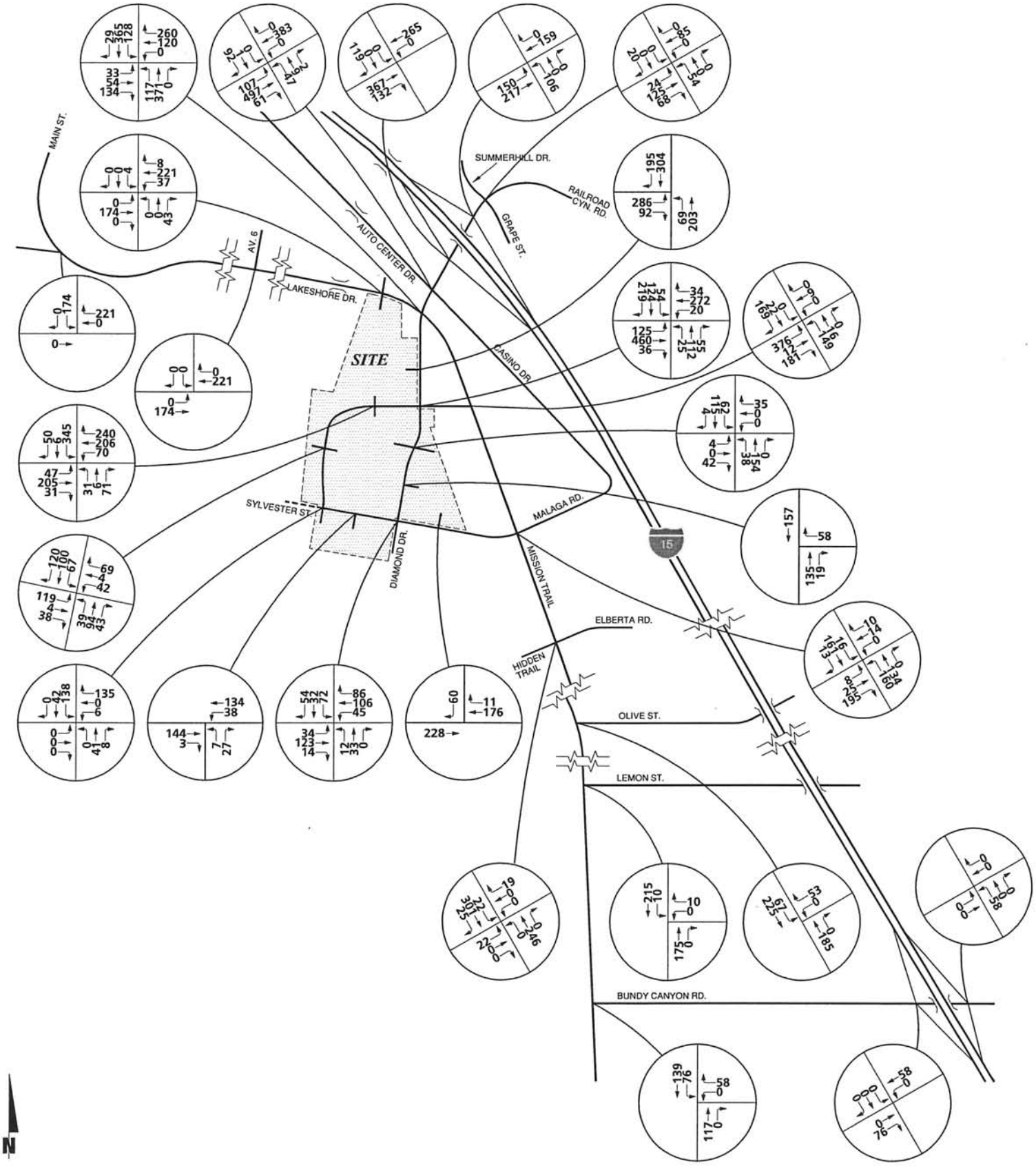


EXHIBIT 5-21

PHASE 3 (2016) PROJECT ONLY
PM PEAK HOUR INTERSECTION VOLUMES



growth rate applied to existing traffic volumes. 2012 traffic conditions analyses are based upon three (3) years of background traffic growth, for a total of six (6) percent. 2014 traffic conditions analyses are based upon five (5) years of background traffic growth, for a total of ten (10) percent. Lastly, 2016 traffic conditions analyses are based upon seven (7) years of background traffic growth, for a total of fifteen (15) percent.

To assess EAP (2012), EAP (2014) and EAP (2016) traffic conditions, project traffic is combined with existing traffic and area-wide growth. The City also requires an additional scenario that includes other future developments which are approved or being processed concurrently in the study area. Developments which are being processed concurrently in the study area have been provided by City of Lake Elsinore staff and have been reviewed and approved through the scoping process.

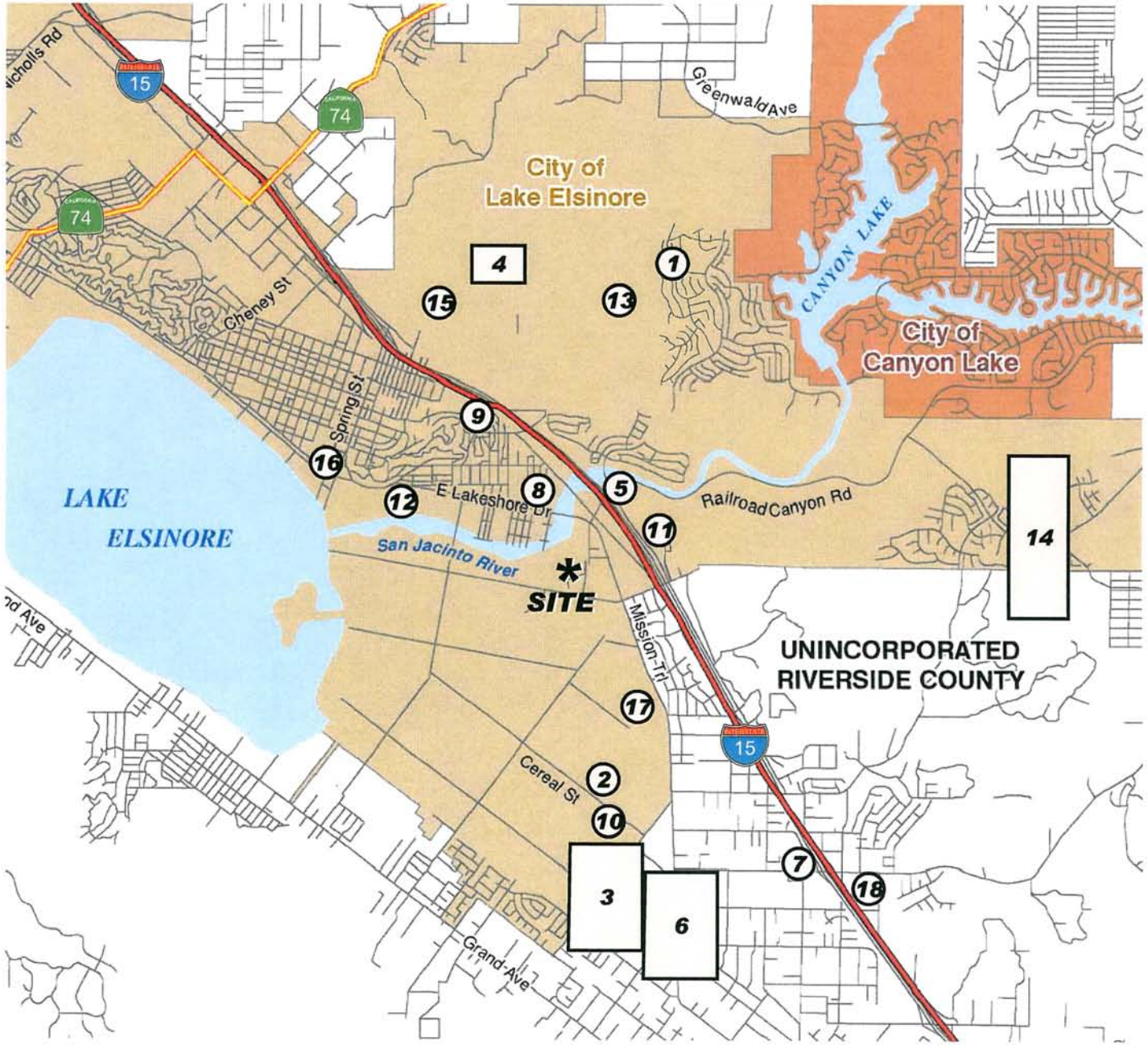
5.2.2 Other Development Project Traffic

Cumulative development projects that have been approved or are being processed concurrently in the study area, as provided to Urban Crossroads, Inc. by the City of Lake Elsinore at the time of this analysis, includes over 26 projects within 18 traffic analysis zones (TAZs) as shown on Exhibit 5-22. Based on discussions with City of Lake Elsinore staff, the traffic generated by the assumed cumulative developments are proposed to be phased due to the comprehensive number of future projects included and current economic conditions. As such, for 2012 traffic conditions the report will assume approximately 30 percent of the total cumulative traffic, 2014 conditions will assume approximately 50 percent of the total cumulative traffic, and 2016 will assume approximately 75 percent of the total cumulative traffic. For long-range General Plan Buildout conditions, all projects included in the City of Lake Elsinore's General Plan land use are assumed to be built and occupied.

Cumulative development traffic has been estimated based on the ITE trip generation rates, which are listed on Table 5-3. Table 5-4 identifies the estimated trip generation for cumulative developments. As shown in Table 5-4, the cumulative developments are anticipated to generate 108,151 daily trips with 7,158 AM peak hour trips and 10,788 PM peak hour trips under 2016 conditions.

EXHIBIT 5-22

CUMULATIVE DEVELOPMENT LOCATION MAP



LEGEND:

1. = TT 25473
2. = JOHN LAING HOMES PHASE 2
3. = TR 29513 & TR 28658
4. = SOUTH SHORE I & II
5. = CITY CENTER CONDOS
6. = TT 31345, TT 32785, KB HOMES & PP 18773
7. = PP 18751
8. = TAG PROPERTY
9. = TESSERA
10. = BACK BASIN SP & EAST LAKE SP
11. = LAKE VIEW VILLAS
12. = WATERSEDGE & COTTAGES BY THE LAKE
13. = LA STRADA
14. = CANYON HILLS & CANYON HILLS ESTATES (TM 32429)
15. = SPY GLASS RANCH
16. = MARINA VILLAGE CONDOS (TM 33820)
17. = THE COLONY
18. = PP 20240

TABLE 5-3

CUMULATIVE DEVELOPMENT TRIP GENERATION RATES[1]

LAND USE	ITE CODE	UNITS[2]	PEAK HOUR						DAILY
			AM			PM			
			IN	OUT	TOTAL	IN	OUT	TOTAL	
Mini-warehouse	151	TSF	0.24	0.06	0.30	0.08	0.24	0.32	3.56
Single Family Detached Residential	210	DU	0.19	0.56	0.75	0.64	0.37	1.01	9.57
Multi-Family Attached Residential	220	DU	0.10	0.41	0.51	0.40	0.22	0.62	6.65
Condo/Townhomes	230	DU	0.07	0.37	0.44	0.35	0.17	0.52	5.81
Hotel	310	RM	0.34	0.22	0.56	0.31	0.28	0.59	8.17
Office									
• 54.600 TSF	710	TSF	1.86	0.25	2.11	0.44	2.13	2.57	15.33
Commercial Retail									
• 89.600 TSF	820	TSF	0.98	0.63	1.61	3.23	3.36	6.59	70.57
• 117.000 TSF	820	TSF	0.88	0.56	1.44	2.96	3.08	6.04	64.28
• 145.000 TSF	820	TSF	0.81	0.52	1.33	2.76	2.87	5.63	59.63
• 250.000 TSF	820	TSF	0.65	0.41	1.06	2.30	2.40	4.70	49.28
New Car Sales	841	TSF	1.52	0.53	2.05	1.03	1.61	2.64	33.34

[1] Source: ITE (Institute of Transportation Engineers) Trip Generation Manual, 8th Edition, 2008.

[2] DU = Dwelling Units; TSF = Thousand Square Feet; AC = Acres; RM= Rooms; STU = Students

TABLE 5-4 (Page 1 of 3)

CUMULATIVE DEVELOPMENT LAND USE AND TRIP GENERATION[1]

No.	TRACT NO./ PROJECT NAME	LAND USE[3]	QUANTITY	UNITS[2]	PEAK HOUR AM IN	AM OUT	AM TOTAL	PM IN	PM OUT	PM TOTAL	DAILY
1	TT 25473 (Tuscany West)[4]	SFDR	164	DU	31	92	123	105	61	166	1,569
		2012 SUBTOTAL			**9**	**28**	**37**	**32**	**18**	**50**	**471**
		2014 SUBTOTAL			**16**	**46**	**62**	**53**	**31**	**83**	**785**
		2016 SUBTOTAL			**23**	**69**	**92**	**79**	**46**	**125**	**1,177**
2	John Laing Homes Phase 2[5]	SFDR	506	DU	96	283	380	324	187	511	4,842
		Condo/Townhouse	1,141	DU	80	422	502	399	194	593	6,629
		Commercial	117.000	TSF	103	66	168	346	360	707	7,521
		MFAR	308	DU	31	126	157	123	68	191	2,048
		2012 SUBTOTAL			**93**	**269**	**362**	**358**	**243**	**601**	**6,312**
		2014 SUBTOTAL			**155**	**449**	**604**	**596**	**405**	**1,001**	**10,520**
		2016 SUBTOTAL			**233**	**673**	**905**	**894**	**607**	**1,502**	**15,780**
3	TR 29513	SFDR	98	DU	19	55	74	63	36	99	938
	TR 28658	SFDR	141	DU	27	79	106	90	52	142	1,349
		2012 SUBTOTAL			**14**	**40**	**54**	**46**	**26**	**72**	**686**
		2014 SUBTOTAL			**23**	**67**	**90**	**77**	**44**	**121**	**1,144**
		2016 SUBTOTAL[8]			**35**	**101**	**135**	**115**	**66**	**181**	**1,715**
4	TR 31593 (South Shore I)[4]	SFDR (TR 31593)	521	DU	99	292	391	333	193	526	4,986
	TR 32013 (South Shore II)[4]	SFDR (TR 32013)	400	DU	76	224	300	256	148	404	3,828
		2012 SUBTOTAL			**53**	**155**	**207**	**177**	**102**	**279**	**2,644**
		2014 SUBTOTAL			**88**	**258**	**346**	**295**	**171**	**465**	**4,407**
		2016 SUBTOTAL			**131**	**387**	**518**	**442**	**256**	**698**	**6,611**
5	City Center Condos[7]	Condo/Townhouse	144	DU	10	53	63	50	24	75	837
		2012 SUBTOTAL			**3**	**16**	**19**	**15**	**7**	**23**	**251**
		2014 SUBTOTAL			**5**	**27**	**32**	**25**	**12**	**38**	**419**
		2016 SUBTOTAL			**8**	**40**	**47**	**38**	**18**	**56**	**628**
6	TT 31345; KB Homes; TT 32785; PP 18773[8]	SFDR	50	DU	10	28	38	32	19	51	479
		SFDR	71	DU	13	40	53	45	26	72	679
		MFAR	96	DU	10	39	49	38	21	60	638
		2012 SUBTOTAL			**10**	**32**	**42**	**35**	**20**	**55**	**539**
		2014 SUBTOTAL			**17**	**54**	**70**	**58**	**33**	**92**	**898**
		2016 SUBTOTAL			**25**	**80**	**105**	**86**	**50**	**137**	**1,347**
7	PP 18751[8]	High Turnover Restaurant	6.959	TSF	42	38	80	46	30	76	885
		2012 SUBTOTAL			**13**	**11**	**24**	**14**	**9**	**23**	**266**
		2014 SUBTOTAL			**21**	**19**	**40**	**23**	**15**	**38**	**443**
		2016 SUBTOTAL			**32**	**29**	**60**	**35**	**23**	**57**	**664**
8	TAG Property[9]	New Car Sales	50.0	TSF	76	27	103	52	81	132	1,667
		2012 SUBTOTAL			**23**	**8**	**31**	**15**	**24**	**40**	**500**
		2014 SUBTOTAL			**38**	**13**	**51**	**26**	**40**	**66**	**834**
		2016 SUBTOTAL			**57**	**20**	**77**	**39**	**60**	**99**	**1,250**

TABLE 5-4 (Page 2 of 3)

CUMULATIVE DEVELOPMENT LAND USE AND TRIP GENERATION[1]

No.	TRACT NO./ PROJECT NAME	LAND USE[3]	QUANTITY	UNITS[2]	PEAK HOUR AM IN	AM OUT	AM TOTAL	PM IN	PM OUT	PM TOTAL	DAILY
9	Tessera[4]	SFDR	90	DU	17	50	68	58	33	91	861
		2012 SUBTOTAL			**5**	**15**	**20**	**17**	**10**	**27**	**258**
		2014 SUBTOTAL			**9**	**25**	**34**	**29**	**17**	**46**	**431**
		2016 SUBTOTAL			**13**	**38**	**51**	**44**	**25**	**68**	**646**
10	Back Basin Specific Plan & East Lake Specific Plan[8]	SFDR	2,407	DU	457	1,348	1,805	1,540	891	2,431	23,035
		MFAR	324	DU	32	133	165	130	71	201	2,155
		2012 SUBTOTAL			**147**	**444**	**591**	**501**	**289**	**790**	**7,557**
		2014 SUBTOTAL			**245**	**741**	**985**	**835**	**481**	**1,316**	**12,595**
		2016 SUBTOTAL			**367**	**1,111**	**1,478**	**1,253**	**722**	**1,974**	**18,893**
11	Lake View Villas	Condo/Townhouse	155	DU	11	57	68	54	26	81	901
		2012 SUBTOTAL			**3**	**17**	**20**	**16**	**8**	**24**	**270**
		2014 SUBTOTAL			**5**	**29**	**34**	**27**	**13**	**40**	**450**
		2016 SUBTOTAL			**8**	**43**	**51**	**41**	**20**	**60**	**675**
12	Watersedge[4]	SFDR	170	DU	32	95	128	109	63	172	1,627
		Condo/Townhouse	250	DU	18	93	110	88	43	130	1,453
		MFAR	110	DU	11	45	56	44	24	68	732
		Office	54.6	TSF	102	14	115	24	116	140	837
		Hotel	150	RM	51	33	84	47	42	89	1,226
		Boat/Watercraft Dealers and Service	50.000	TSF	76	27	103	52	81	132	1,667
		Mini-warehouse (Boat and Watercraft Storage)	76.000	TSF	18	5	23	6	18	24	271
		Commercial	89.600	TSF	88	56	144	289	301	590	6,323
	LESS INTERNAL CAPTURE (12%)				-48	-44	-92	-79	-83	-161	-1,696
	Cottages by the Lake	Condo/Townhouse	169	DU	12	63	74	59	29	88	982
		2012 SUBTOTAL			**108**	**116**	**224**	**192**	**190**	**381**	**4,026**
		2014 SUBTOTAL			**180**	**193**	**373**	**320**	**317**	**636**	**6,711**
		2016 SUBTOTAL			**270**	**290**	**559**	**479**	**476**	**954**	**10,066**
13	TTM 32077 (La Strada)[10]	SFDR	134	DU	25	75	101	86	50	135	1,282
		2012 SUBTOTAL			**8**	**23**	**30**	**26**	**15**	**41**	**385**
		2014 SUBTOTAL			**13**	**38**	**51**	**43**	**25**	**68**	**641**
		2016 SUBTOTAL			**19**	**56**	**76**	**65**	**38**	**101**	**962**
14	TM 34249 (Canyon Hills Estates)	SFDR	302	DU	57	169	227	193	112	305	2,890
	Canyon Hills (Multiple TMs)	SFDR	2,700	DU	513	1,512	2,025	1,728	999	2,727	25,839
		MFAR	1,575	DU	158	646	803	630	347	977	10,474
		2012 SUBTOTAL			**218**	**698**	**917**	**765**	**437**	**1,203**	**11,761**
		2014 SUBTOTAL			**364**	**1,164**	**1,528**	**1,276**	**729**	**2,005**	**19,602**
		2016 SUBTOTAL[11]			**546**	**1,745**	**2,291**	**1,913**	**1,094**	**3,007**	**29,402**

TABLE 5-4 (Page 3 of 3)

CUMULATIVE DEVELOPMENT LAND USE AND TRIP GENERATION[1]

No.	TRACT NO./ PROJECT NAME	LAND USE[3]	QUANTITY	UNITS[2]	PEAK HOUR AM IN	AM OUT	AM TOTAL	PM IN	PM OUT	PM TOTAL	DAILY
15	Spyglass Ranch[6]	Condo/Townhouse	96	DU	7	36	42	34	16	50	558
		SFDR	233	DU	44	130	175	149	86	235	2,230
		Commercial	145.0	TSF	117	75	193	400	416	816	8,646
		SFDR	290	DU	55	162	218	186	107	293	2,775
		Condo/Townhouse	75	DU	5	28	33	26	13	39	436
	LESS INTERNAL CAPTURE (10%)				-23	-43	-66	-80	-64	-143	-1,465
				2012 SUBTOTAL	**62**	**116**	**178**	**215**	**172**	**387**	**3,954**
				2014 SUBTOTAL	**103**	**194**	**297**	**358**	**287**	**645**	**6,590**
				2016 SUBTOTAL	**154**	**291**	**446**	**537**	**431**	**967**	**9,885**
16	Marina Village Condos (TM 33820)[9]	MFAR	94	DU	9	39	48	38	21	58	625
				2012 SUBTOTAL	**3**	**12**	**14**	**11**	**6**	**17**	**188**
				2014 SUBTOTAL	**5**	**20**	**24**	**19**	**11**	**29**	**313**
				2016 SUBTOTAL	**7**	**29**	**36**	**29**	**16**	**44**	**469**
17	The Colony	MFAR	211	DU	21	87	108	84	46	131	1,403
				2012 SUBTOTAL	**6**	**26**	**32**	**25**	**14**	**39**	**421**
				2014 SUBTOTAL	**11**	**44**	**54**	**42**	**23**	**66**	**702**
				2016 SUBTOTAL	**16**	**65**	**81**	**63**	**35**	**98**	**1,052**
18	PP 20240[8]	Commercial	250.0	TSF	163	103	265	575	600	1,175	12,320
				LESS PASS-BY (25%)	-41	-26	-66	-144	-150	-294	-3,080
				SUBTOTAL	122	77	199	431	450	881	9,240
				2012 SUBTOTAL	**37**	**23**	**60**	**129**	**135**	**264**	**2,772**
				2014 SUBTOTAL	**61**	**38**	**99**	**216**	**225**	**441**	**4,620**
				2016 SUBTOTAL	**91**	**58**	**149**	**323**	**338**	**661**	**6,930**
2012 TOTAL (30%)					**813**	**2,049**	**2,863**	**2,589**	**1,726**	**4,315**	**43,260**
2014 TOTAL (50%)					**1,355**	**3,415**	**4,772**	**4,314**	**2,877**	**7,192**	**72,101**
2016 TOTAL (75%)					**2,033**	**5,123**	**7,158**	**6,471**	**4,316**	**10,788**	**108,151**

[1] Source: ITE (Institute of Transportation Engineers) Trip Generation Manual, 8th Edition, 2008. 2012=30%; 2014=50%; 2016=75%.

[2] DU = Dwelling Units; TSF = Thousand Square Feet; RM = Rooms; AC = Acres; STU = Students

[3] SFDR = Single Family Detached Residential; MFAR = Multi-Family Attached Residential

[4] Land use data was obtained from Porto Romano SP Traffic Impact Analysis, prepared by Urban Crossroads, Inc., dated May 2, 2007 (Revised).

[5] Land use data was obtained from Southerly (TT 31920) Traffic Phasing Analysis, prepared by Urban Crossroads, Inc., dated February 6, 2004.

[6] Land use data was obtained from Spyglass Ranch Traffic Impact Analysis (Revised), prepared by Kunzman Associates, dated February 8, 2007.

[7] Land use data was obtained from Elsinore Lake View Villas Residential Traffic Impact Analysis, prepared by Urban Crossroads, Inc., dated October 7, 2004.

[8] Land use data was obtained from Lake Elsinore Back Basin SP Traffic Impact Analysis, prepared by Urban Crossroads, Inc., dated July 25, 2005.

[9] Land use data was obtained from Lake Elsinore TAG Property Traffic Impact Analysis (Revised), prepared by Urban Crossroads, Inc., dated August 13, 2008.

[10] Land use data was obtained from Tentative Tract Map 32077 Traffic Impact Analysis, prepared by Urban Crossroads, Inc., dated February 7,

[11] Land use data was obtained from Canyon Hills Estates Traffic Impact Analysis, prepared by Urban Crossroads, Inc., dated September 14, 2006.

The trip distribution patterns for cumulative developments are graphically depicted on exhibits included in Appendix 5.1 of this report.

Based on the identified traffic generation and distribution, cumulative development (2012) ADT volumes are shown on Exhibit 5-23. Cumulative development (2012) AM and PM peak hour intersection turning movement volumes are shown on Exhibits 5-24 and 5-25, respectively. Cumulative development (2014) ADT volumes are shown on Exhibit 5-26. Cumulative development (2014) AM and PM peak hour intersection turning movement volumes are shown on Exhibits 5-27 and 5-28, respectively. Cumulative development (2016) ADT volumes are shown on Exhibit 5-29. Cumulative development (2016) AM and PM peak hour intersection turning movement volumes are shown on Exhibits 5-30 and 5-31, respectively.

5.3. Long-Range General Plan Buildout With Project Traffic Volumes

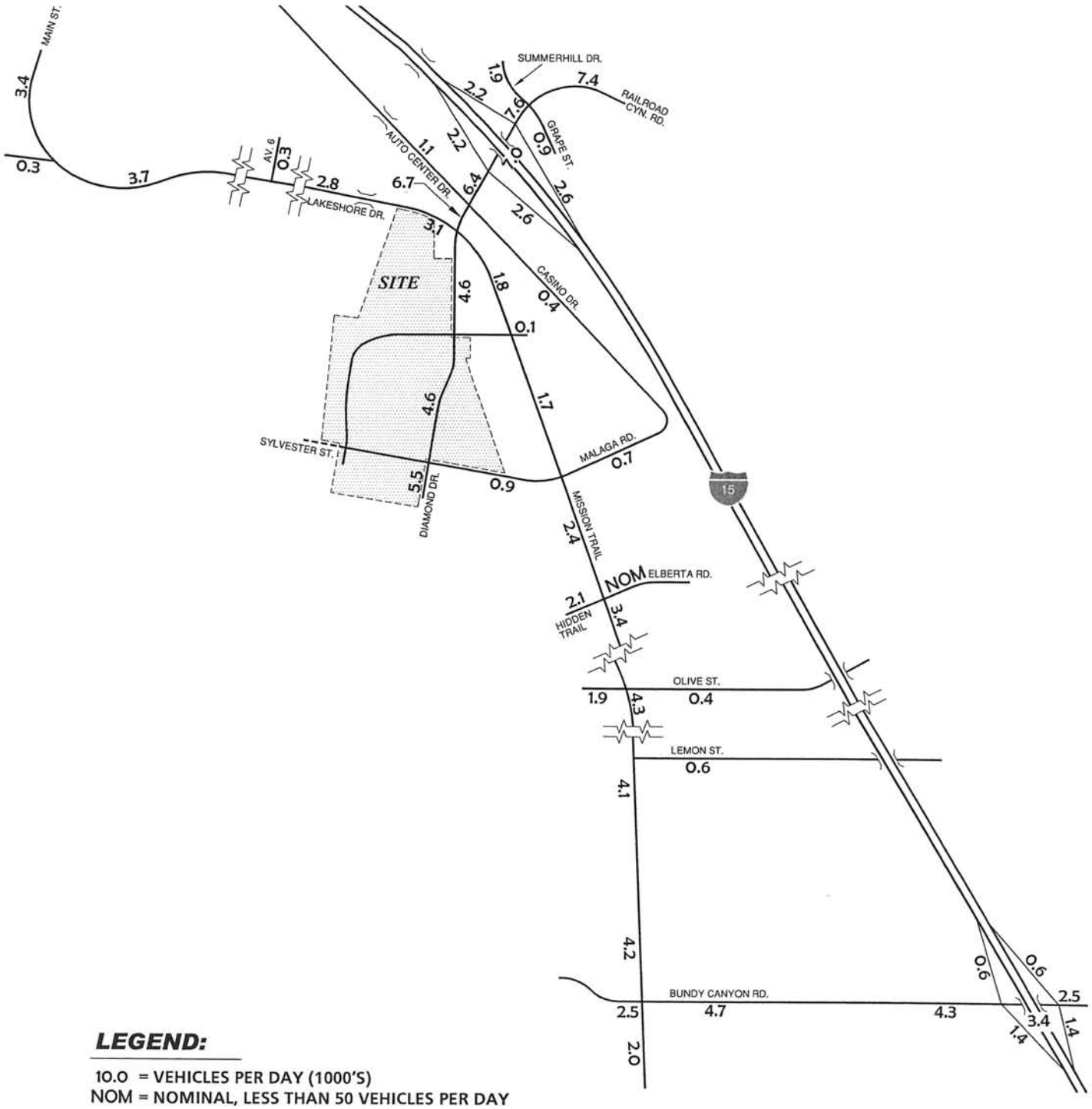
5.3.1 Travel Forecast Procedures

The Western Riverside Sub-area Applications Traffic Model (WRSATM), a focused RCIP model application, has been utilized to generate the future traffic volumes for this project. WRSATM is a sub-regional traffic model which is currently maintained by Urban Crossroads, Inc. and has been used for long-range planning for the current update to the City of Lake Elsinore General Plan, as well as other areas in the region such as the Eagle Valley study area in Corona, the Hemet/San Jacinto study area, the Ramona Mobility Group study area near the City of Perris, and the Toscana Study area within the Temescal Canyon area of Riverside County.

Land use for the Diamond Specific Plan has been incorporated into the General Plan buildout with project scenario. The "with project" land use for the Diamond Specific Plan and surrounding area is very similar to the "without project" conditions. The zone containing the project land use experiences a minor reduction in total commercial and residential mixed-use land uses, and there is a corresponding increase in office and high density residential uses. These minor changes are not expected to result in substantial changes to the travel patterns. The variance between traffic forecasts for General Plan buildout "without project" as compared to General Plan buildout "with project" was

EXHIBIT 5-23

CUMULATIVE DEVELOPMENT (2012) AVERAGE DAILY TRAFFIC (ADT)



LEGEND:

10.0 = VEHICLES PER DAY (1000'S)
NOM = NOMINAL, LESS THAN 50 VEHICLES PER DAY

N

EXHIBIT 5-24

CUMULATIVE DEVELOPMENT (2012) AM PEAK HOUR INTERSECTION VOLUMES

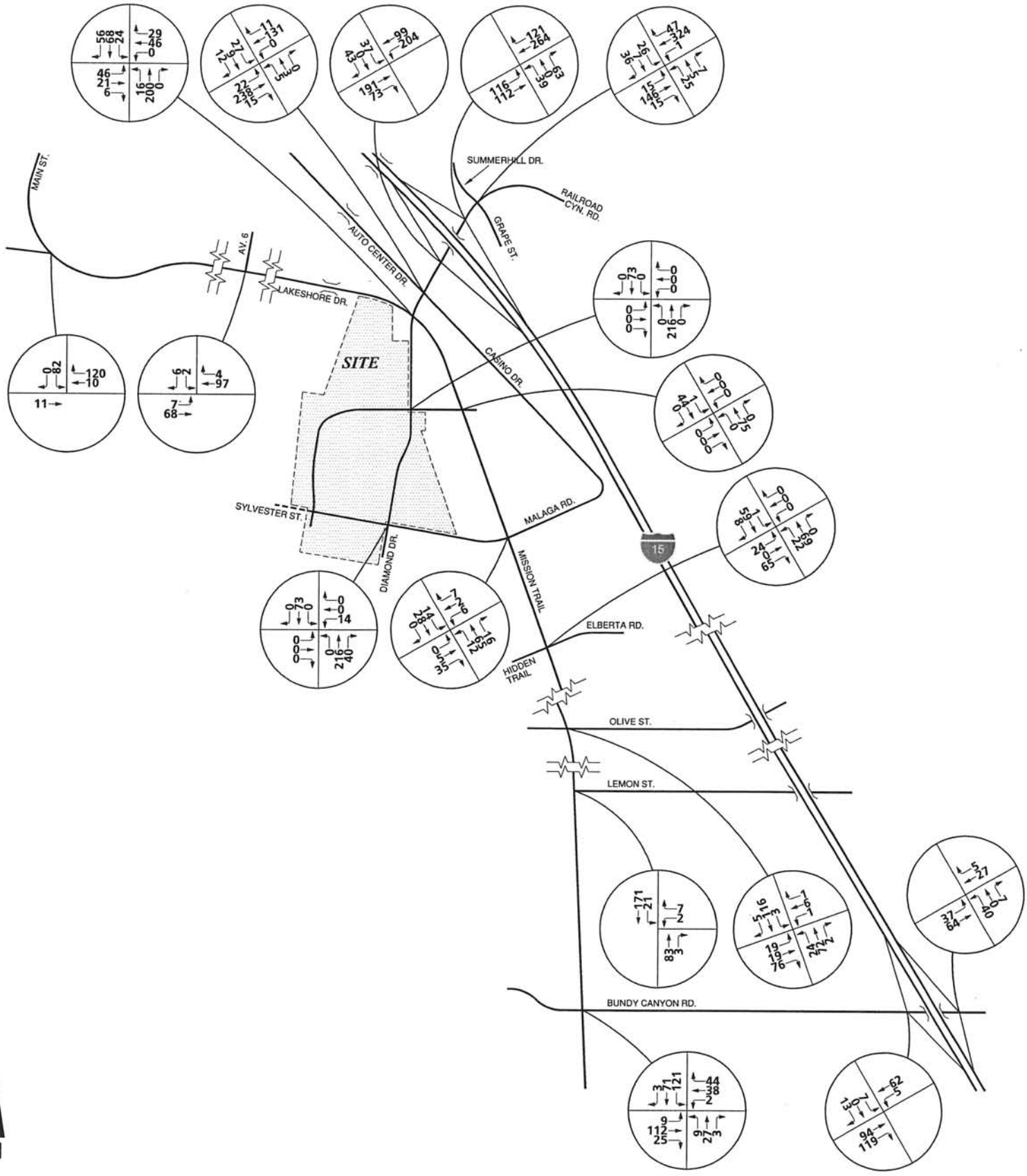


EXHIBIT 5-25

CUMULATIVE DEVELOPMENT (2012) PM PEAK HOUR INTERSECTION VOLUMES

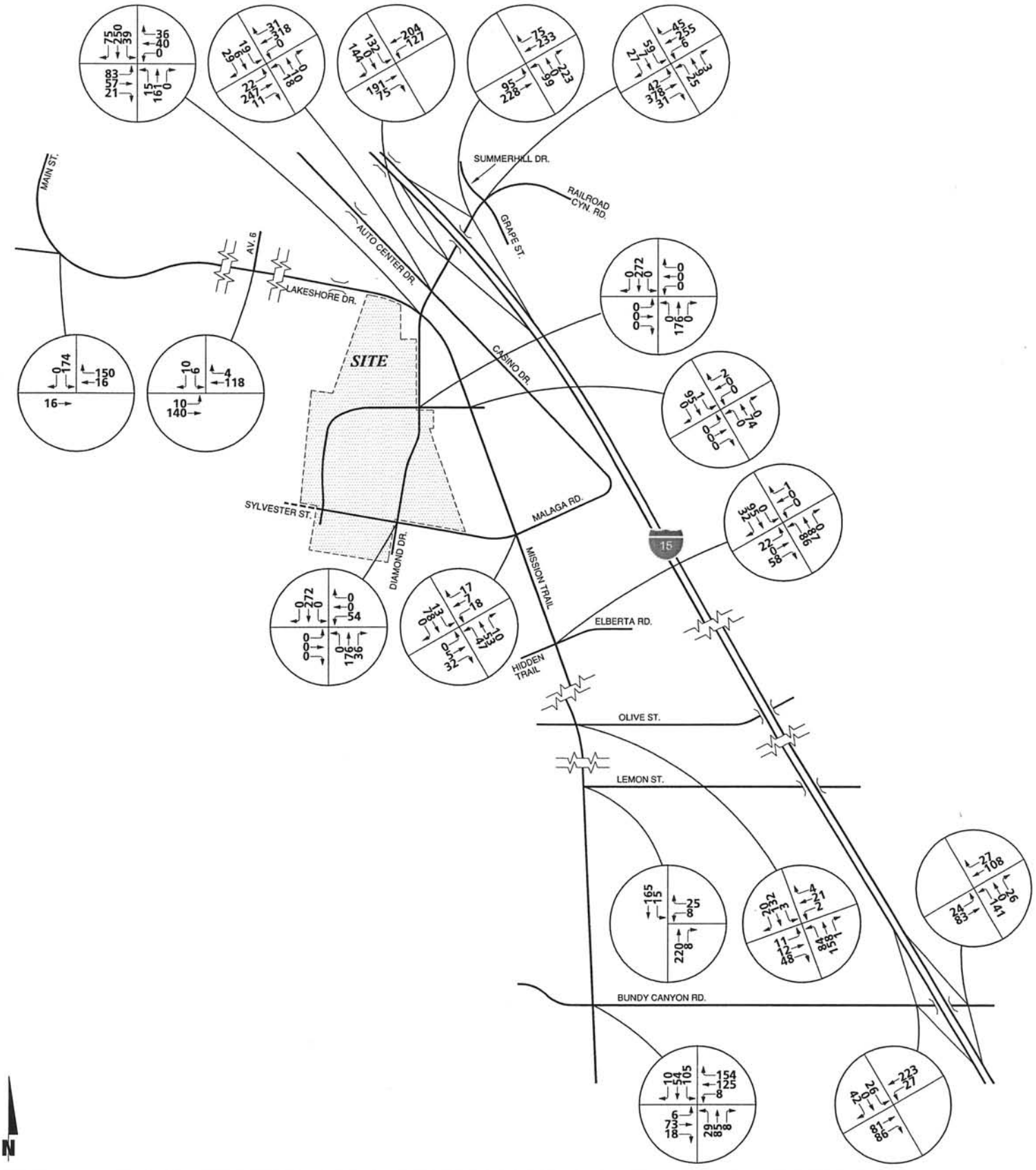
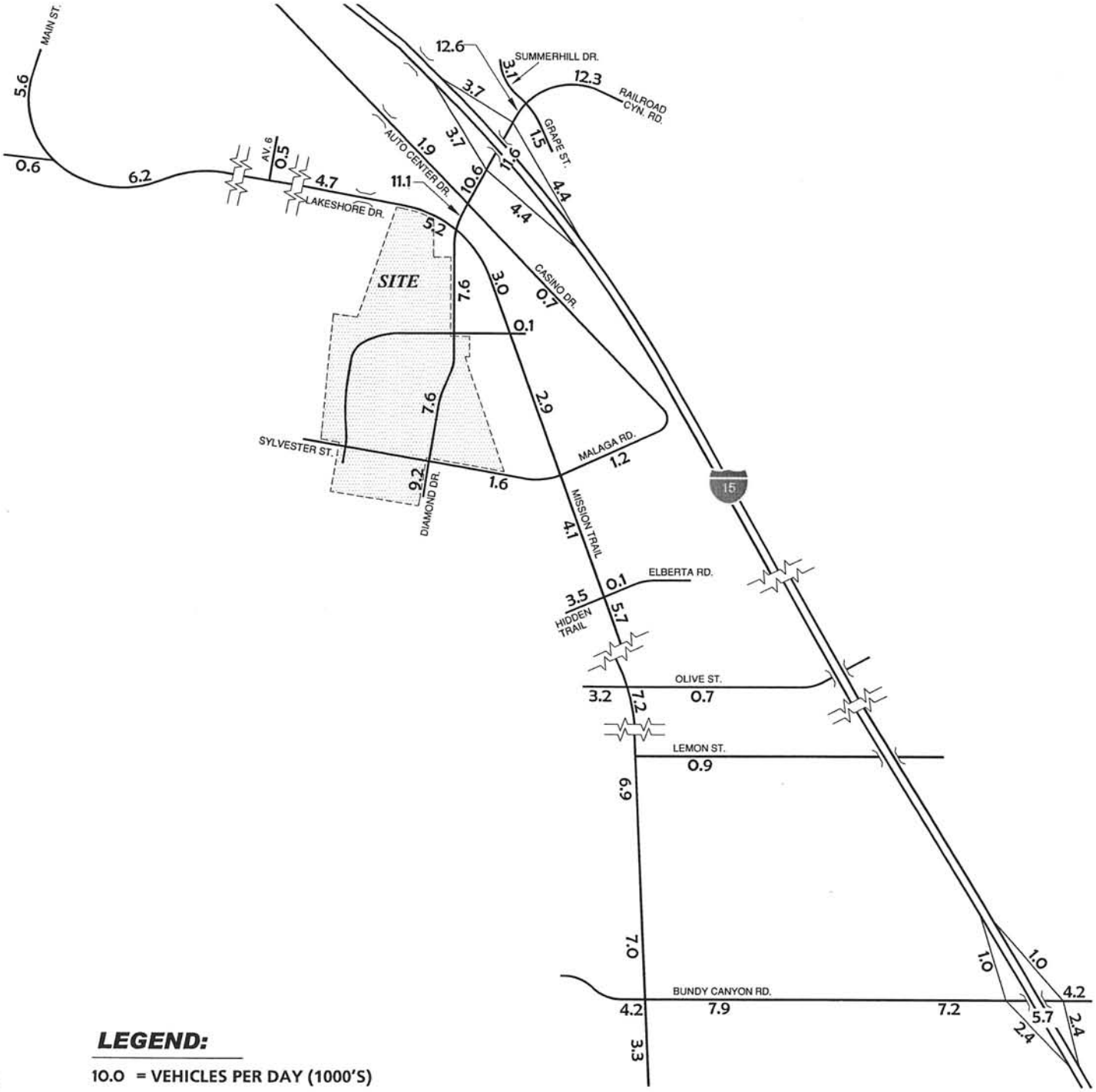


EXHIBIT 5-26

CUMULATIVE DEVELOPMENT (2014) AVERAGE DAILY TRAFFIC (ADT)



LEGEND:

10.0 = VEHICLES PER DAY (1000'S)

N

EXHIBIT 5-27

CUMULATIVE DEVELOPMENT (2014) AM PEAK HOUR INTERSECTION VOLUMES

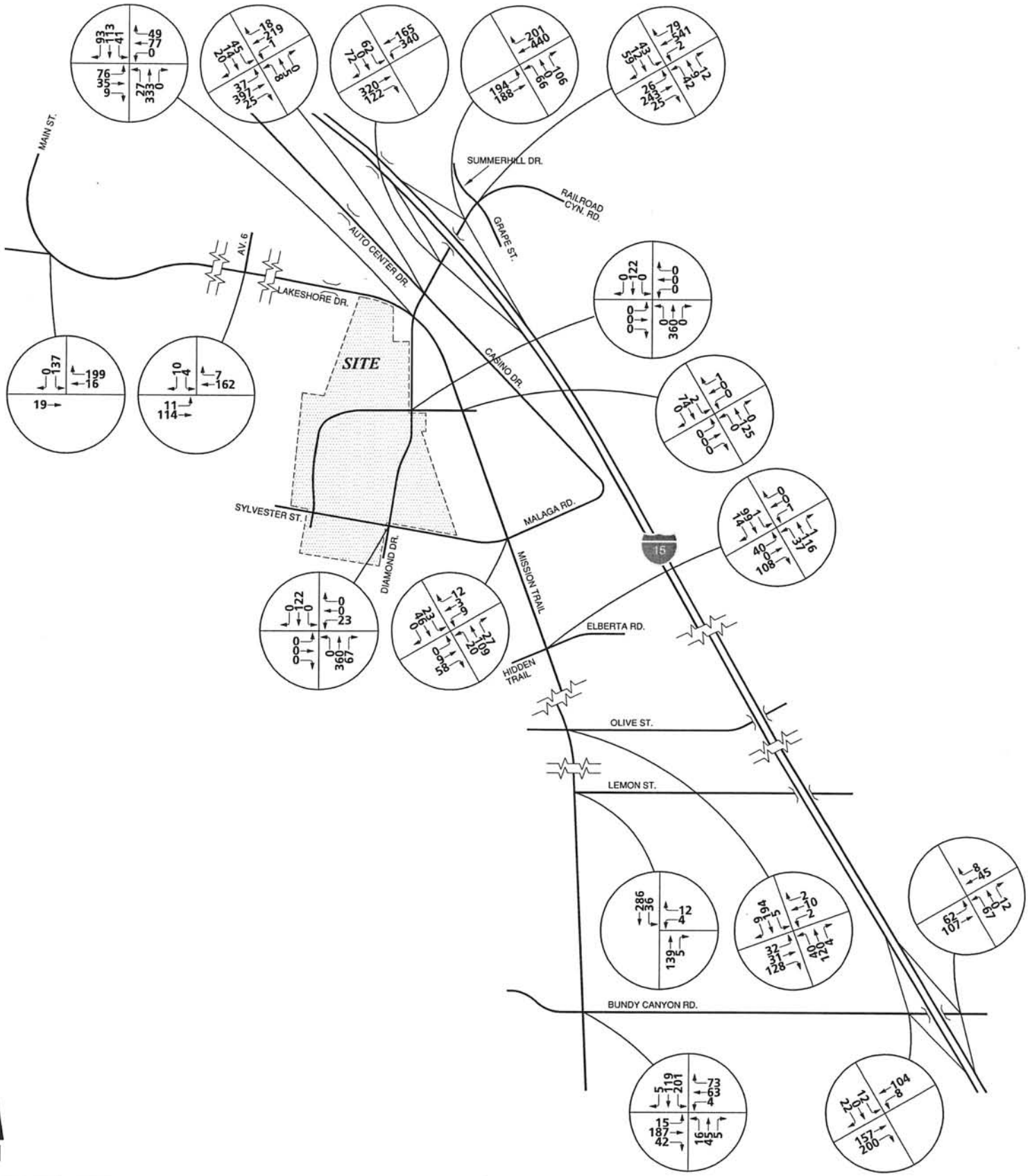


EXHIBIT 5-28

CUMULATIVE DEVELOPMENT (2014) PM PEAK HOUR INTERSECTION VOLUMES

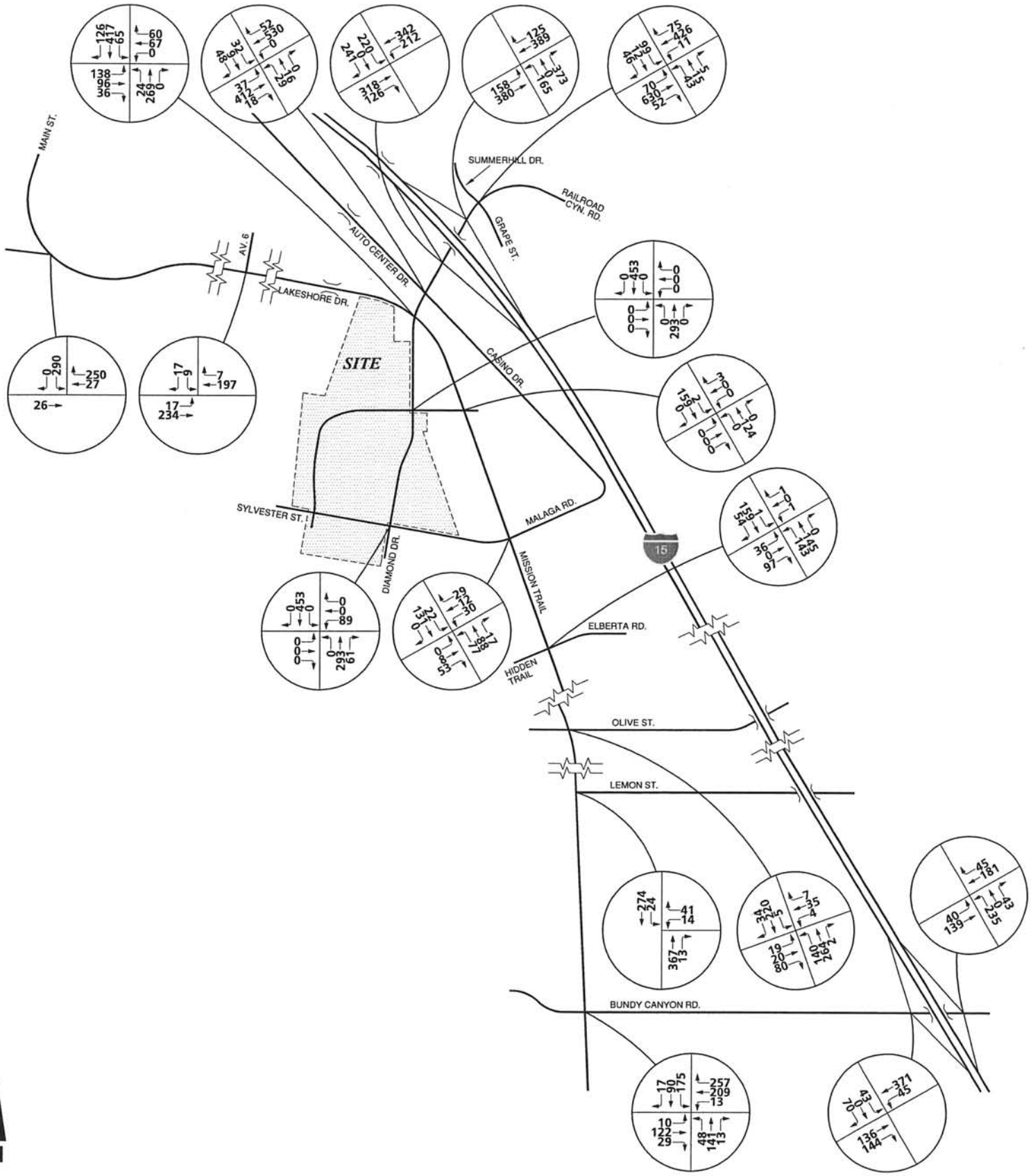
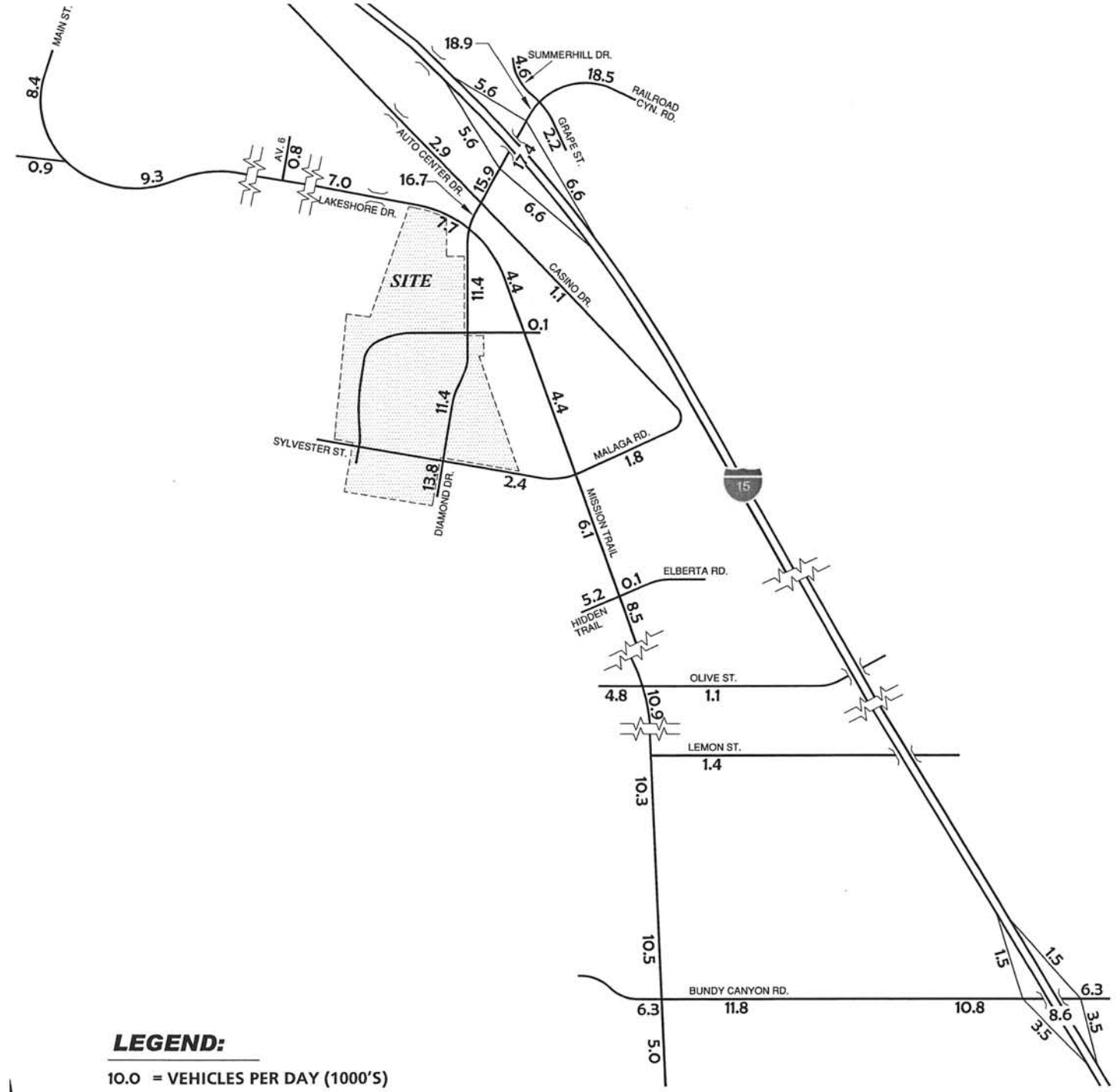


EXHIBIT 5-29

CUMULATIVE DEVELOPMENT (2016) AVERAGE DAILY TRAFFIC (ADT)



LEGEND:

10.0 = VEHICLES PER DAY (1000'S)

N

EXHIBIT 5-30

CUMULATIVE DEVELOPMENT (2016) AM PEAK HOUR INTERSECTION VOLUMES

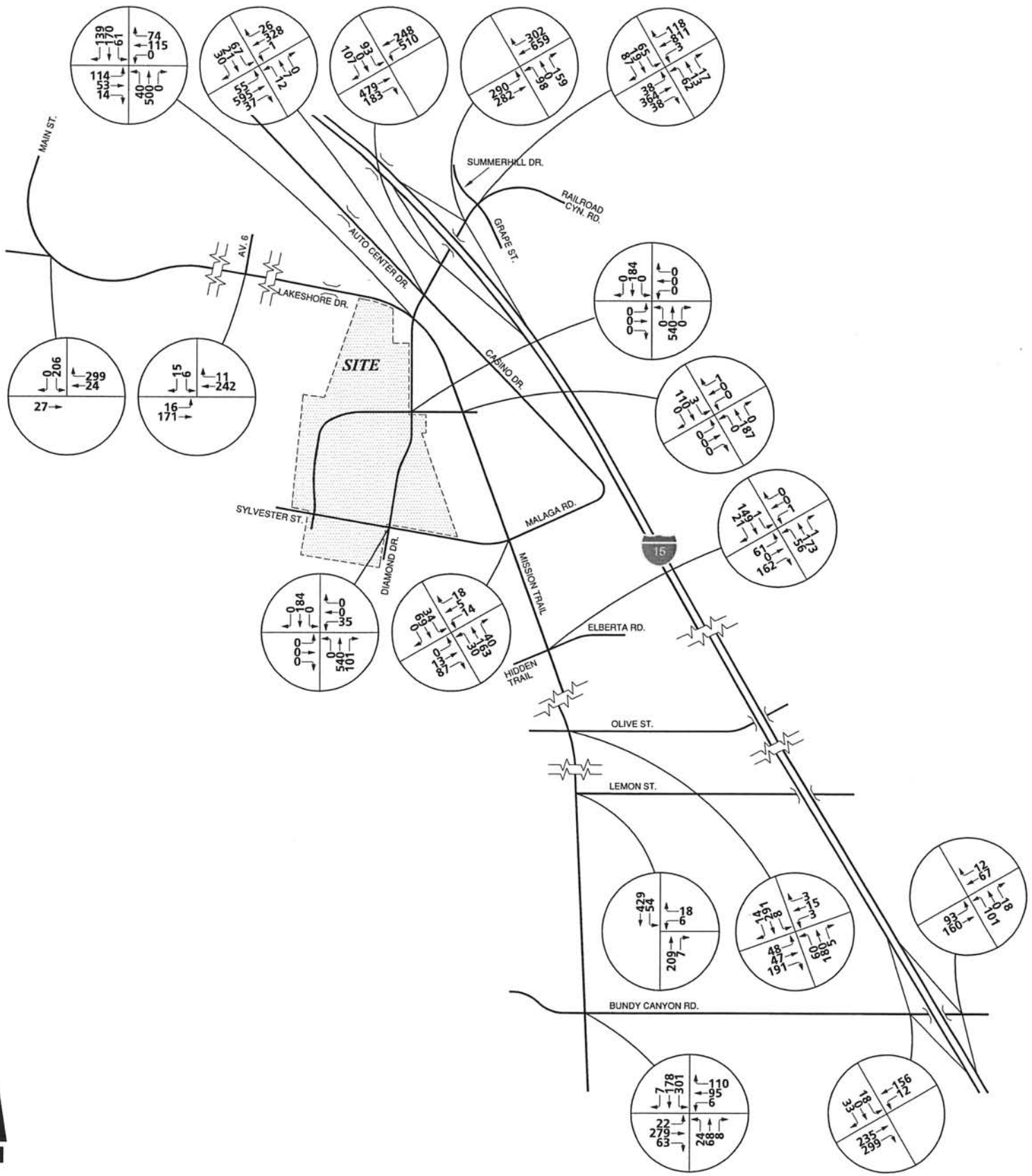
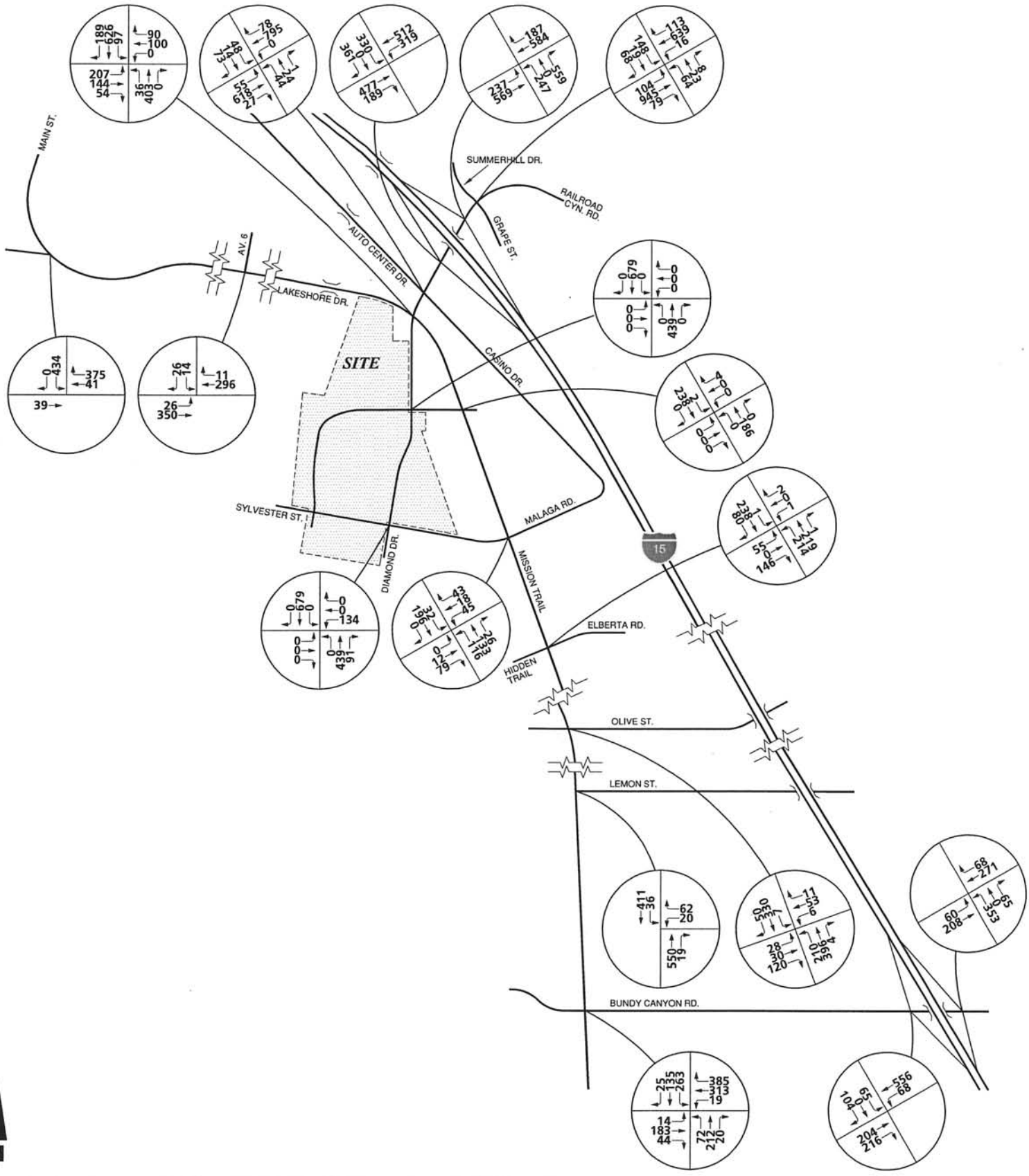


EXHIBIT 5-31

CUMULATIVE DEVELOPMENT (2016) PM PEAK HOUR INTERSECTION VOLUMES



nominal. Therefore, intersection operations analysis has been presented for the "with project" scenario only, as the difference in analysis results between the "without project" and "with project" scenarios would be negligible.

Additional Traffic Analysis Zone (TAZ) Structure detail has also been provided, to separate the project traffic from adjacent uses. In the previous scenarios, this lack of detail resulted in traffic from the adopted uses along Diamond Drive accessing the roadway system via Lakeshore Drive. The "with project" scenario has been configured to more accurately provide access for the project land uses to Diamond Drive, consistent with the current project site plan.

Highway networks such as functional classification and lane configurations for the existing and the future conditions have been thoroughly reviewed by the project team and updated for the current model run. The TAZ loading points and centroid connector locations have been modified based on the actual local road structure.

The WRSATM is not intended to deal with issues related to mode choice and as such includes no explicit mode choice step in the forecasting process. Trip generation may be conservative in areas where above average transit service is provided, or where the mix of urban land uses has been developed in conjunction with pedestrian facilities to reduce dependence on the automobile. The WRSATM implicitly relies on the regional travel demand tool and the data obtained from this tool and included in the WRSATM to account for regional mode choice characteristics.

5.3.2 Travel Forecast Refinement Methodology

The long-range General Plan buildout with project traffic volumes have been derived from the WRSATM model, which has been modified for the City of Lake Elsinore to support the General Plan update process.

The future peak hour approach and departure volumes obtained from the traffic model are then entered into a spreadsheet program consistent with the National Cooperative Highway Research Program (NCHRP Report 255), along with initial estimates of turning movement proportions (where applicable). A linear programming algorithm is used to calculate

individual turning movements that match the known directional roadway segment forecast volumes computed in the previous step. This program computes a likely set of intersection turning movements from intersection approach counts and the initial turning proportions from each approach leg. The EAPC (2016) traffic volumes served as the starting point for the refinement process, and also provided important insight into the travel patterns and the relationship between peak hour and daily traffic conditions. The initial turning movement proportions are estimated based upon the relationship of each approach leg's forecast traffic volume to the other legs forecast volumes at the intersection. Where applicable, the final forecasted traffic volumes were further examined against the EAPC (2016) traffic volumes to ensure there is no negative growth from 2016 to General Plan buildout conditions. Finally, traffic volume flow conservation checks and possible manual adjustments have been conducted to ensure the reasonableness of traffic flow, particularly at the interchange areas.

Appendix 6.1 includes the post-processing worksheets for General Plan buildout conditions.

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6.0 FUTURE CONDITIONS TRAFFIC ANALYSIS

This section of the study assesses the potential impacts to traffic circulation resulting from development of the proposed project for future traffic conditions, based on the following analyses:

- Traffic Signal Warrant Analysis
- Intersection Operations Analysis

6.1 Total Future Traffic

This analysis assesses the following future traffic conditions:

- Existing Plus Ambient Growth Plus Project (2012) Conditions
- Existing Plus Ambient Growth Plus Project Plus Cumulative (2012) Conditions
- Existing Plus Ambient Growth Plus Project (2014) Conditions
- Existing Plus Ambient Growth Plus Project Plus Cumulative (2014) Conditions
- Existing Plus Ambient Growth Plus Project (2016) Conditions
- Existing Plus Ambient Growth Plus Project Plus Cumulative (2016) Conditions
- General Plan Buildout With Project Conditions

6.1.1 Existing Plus Ambient Growth Plus Project Traffic

Field observations indicate that Hidden Trail (western extension of Elberta Road) on Mission Trail is paved and exists, however, there is no vehicular traffic at this time as the development to the west of Mission Trail has not been completed at this time. For the purposes of this analysis, Hidden Trail is assumed to be in place by EAP (2012) conditions. It should be noted that the existing Pete Lehr Drive has been assumed to be vacated by Phase 2.

Exhibit 6-1 shows the ADT volumes which can be expected for existing plus ambient growth plus project (EAP) (2012) conditions. EAP (2012) AM and PM peak hour intersection turning movement volumes are shown on Exhibits 6-2 and 6-3, respectively. Exhibit 6-4 shows the ADT volumes which can be expected for EAP (2014) conditions.

EXHIBIT 6-1

EXISTING PLUS AMBIENT GROWTH PLUS PROJECT (2012) CONDITIONS AVERAGE DAILY TRAFFIC (ADT)

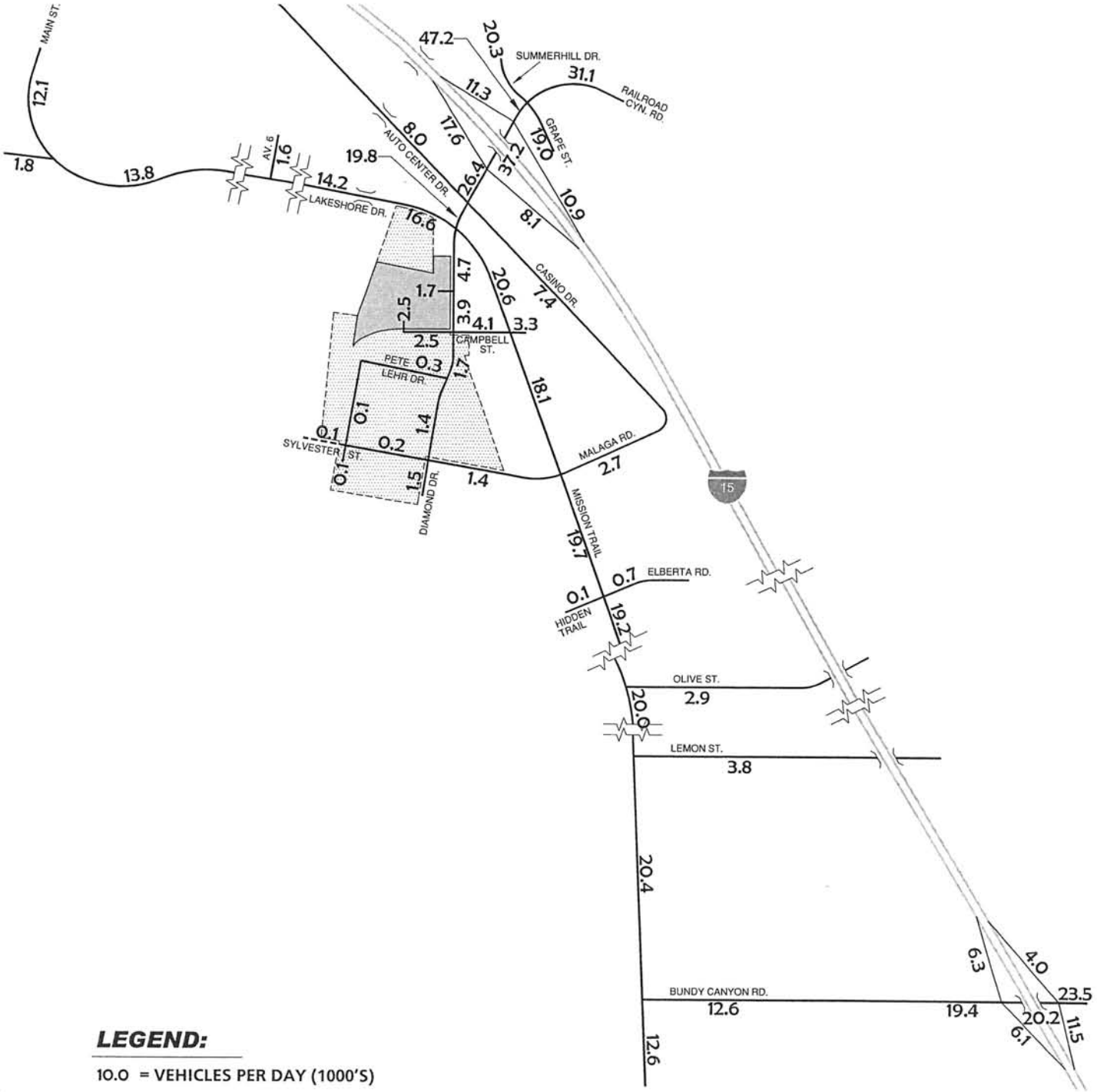


EXHIBIT 6-2

EXISTING PLUS AMBIENT GROWTH PLUS PROJECT (2012) CONDITIONS AM PEAK HOUR INTERSECTION VOLUMES

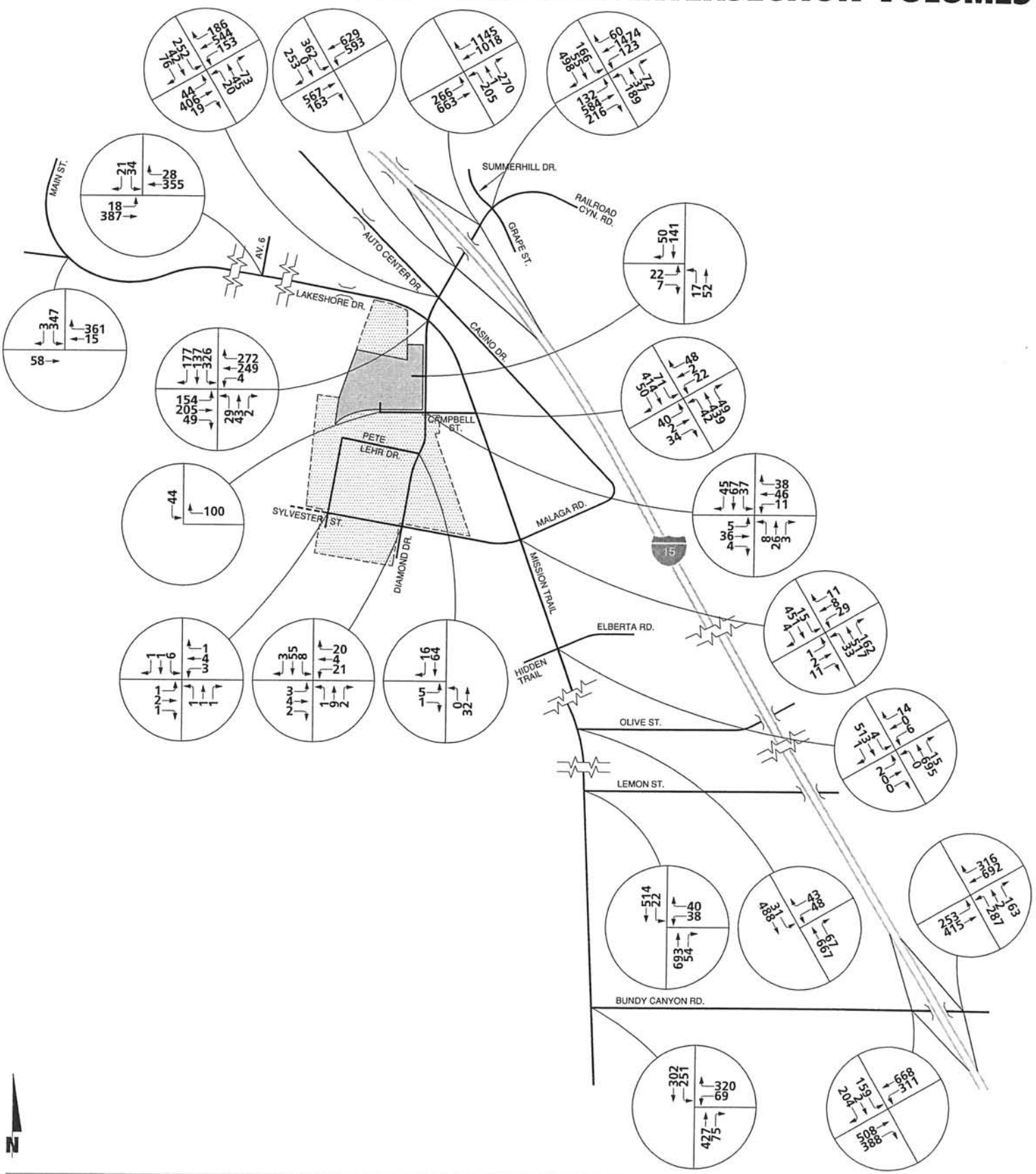


EXHIBIT 6-3

EXISTING PLUS AMBIENT GROWTH PLUS PROJECT (2012) CONDITIONS PM PEAK HOUR INTERSECTION VOLUMES

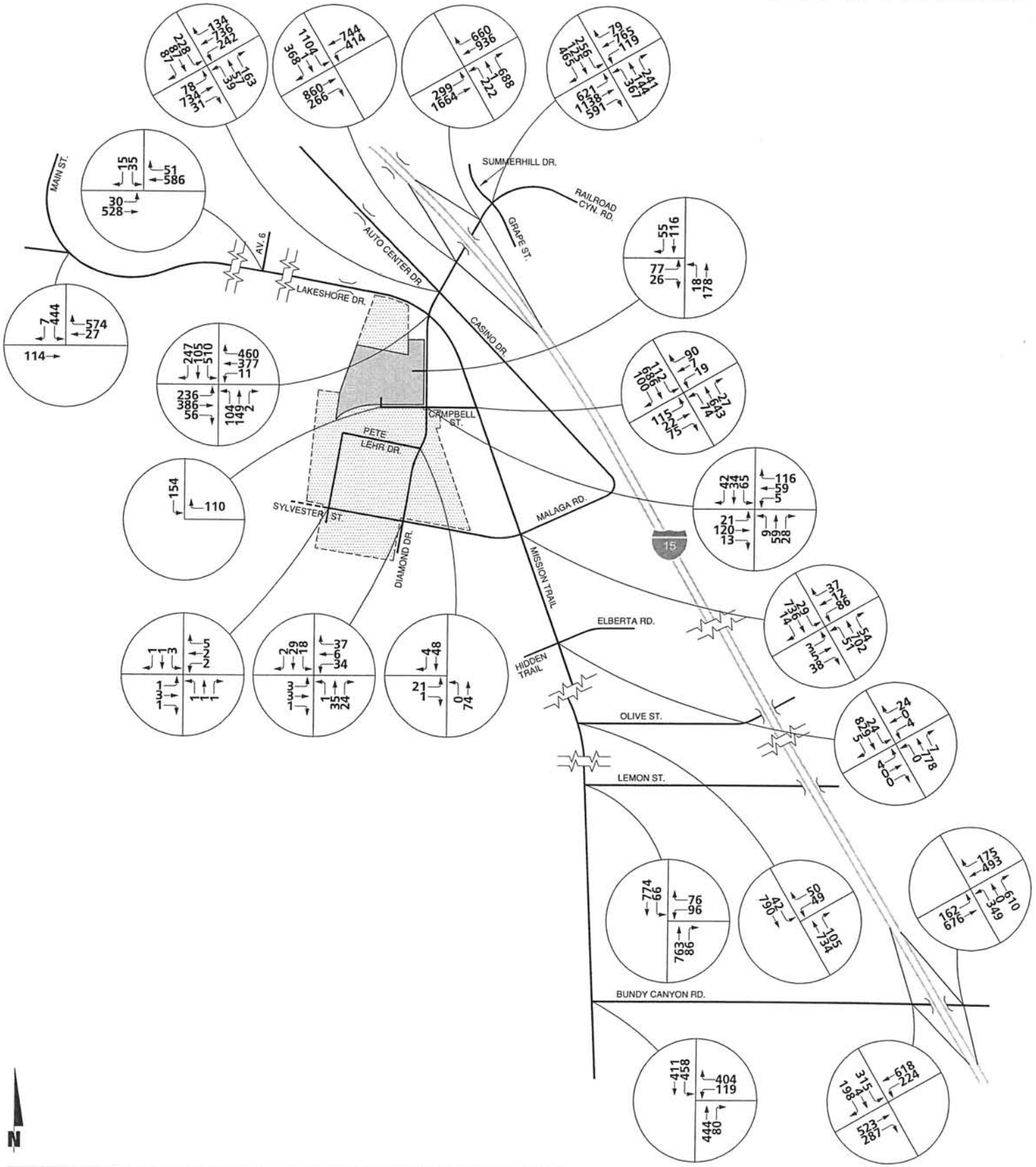
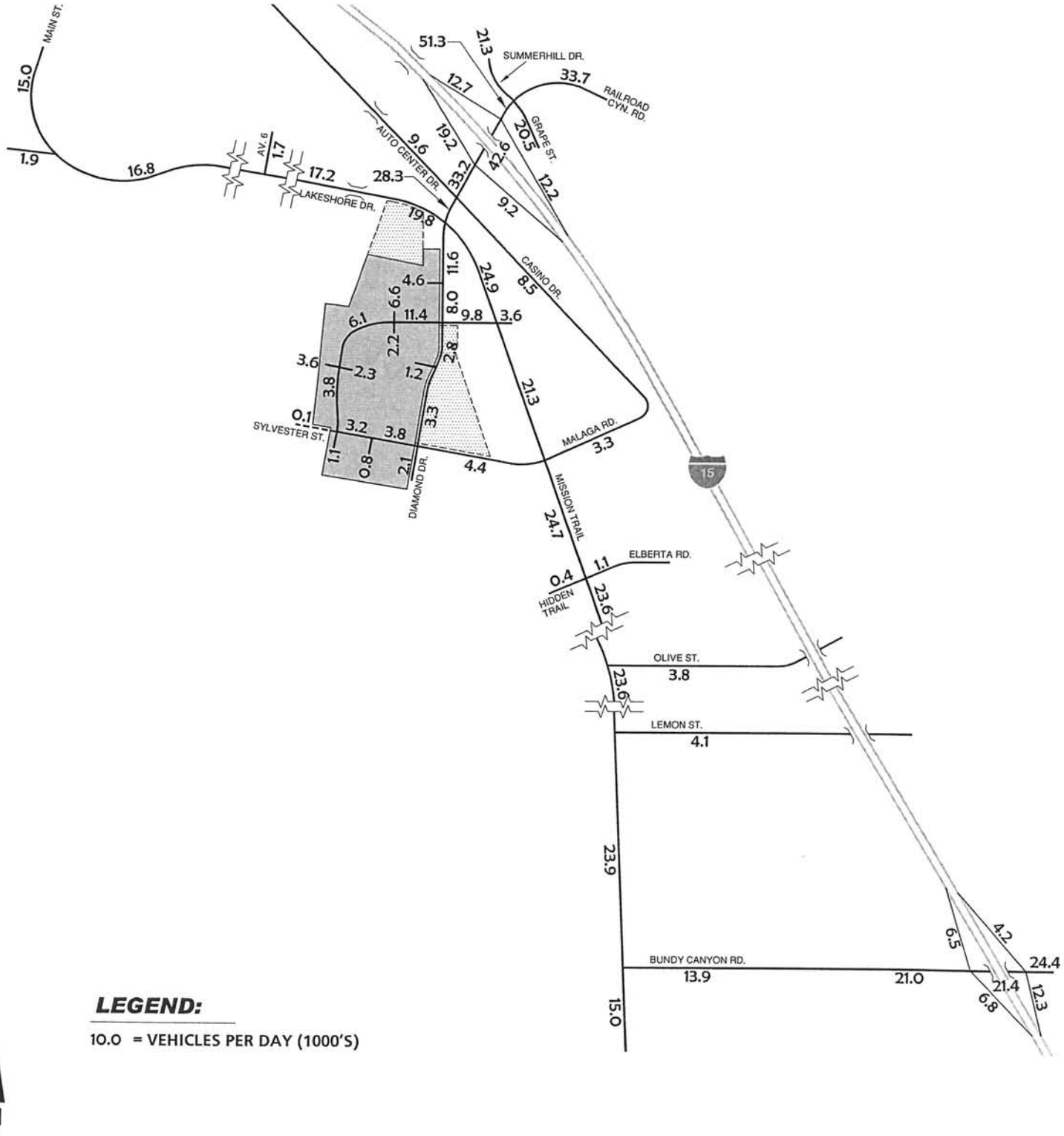


EXHIBIT 6-4

EXISTING PLUS AMBIENT GROWTH PLUS PROJECT (2014) CONDITIONS AVERAGE DAILY TRAFFIC (ADT)



LEGEND:

10.0 = VEHICLES PER DAY (1000'S)

N

EAP (2014) AM and PM peak hour intersection turning movement volumes are shown on Exhibits 6-5 and 6-6, respectively. Exhibit 6-7 shows the ADT volumes which can be expected for EAP (2016) conditions. EAP (2016) AM and PM peak hour intersection turning movement volumes are shown on Exhibits 6-8 and 6-9, respectively.

6.1.2 Existing Plus Ambient Growth Plus Project Plus Cumulative Traffic

For the purposes of this study, the cumulative conditions analyses for years 2012, 2014 and 2016 assume Hidden Trail, Olive Street and Bundy Canyon Road are constructed and in place to the west of Mission Trail. It should be noted that planned future development is assumed to utilize these roadways to gain access to Mission Trail.

Exhibit 6-10 shows the ADT volumes which can be expected for existing plus ambient growth plus project plus cumulative (EAPC) (2012) conditions. EAPC (2012) AM and PM peak hour intersection turning movement volumes are shown on Exhibits 6-11 and 6-12, respectively. Exhibit 6-13 shows the ADT volumes which can be expected for EAPC (2014) conditions. EAPC (2014) AM and PM peak hour intersection turning movement volumes are shown on Exhibits 6-14 and 6-15, respectively. Exhibit 6-16 shows the ADT volumes which can be expected for EAPC (2016) conditions. EAPC (2016) AM and PM peak hour intersection turning movement volumes are shown on Exhibits 6-17 and 6-18, respectively.

6.1.3 General Plan Buildout With Project Traffic

General Plan buildout with project traffic conditions assumes the proposed interchange at Franklin Street as well as the re-configured interchange at Railroad Canyon Road. Exhibits 6-19 and 6-20 illustrate the proposed interchange designs assumed at the I-15 Freeway at Franklin Street and the I-15 Freeway at Railroad Canyon Road, respectively. The proposed interchange designs utilized are consistent with the draft geometric approval drawings for the respective interchanges. It should also be noted that volumes for long-range General Plan buildout with project conditions assumes a circulation network consistent with the City of Lake Elsinore General Plan Circulation Element. As such, volumes along Railroad Canyon Road, Mission Trail and Lakeshore Drive may have decreased from EAPC (2016) traffic conditions since additional parallel routes are utilized.

EXHIBIT 6-5

EXISTING PLUS AMBIENT GROWTH PLUS PROJECT (2014) CONDITIONS AM PEAK HOUR INTERSECTION VOLUMES

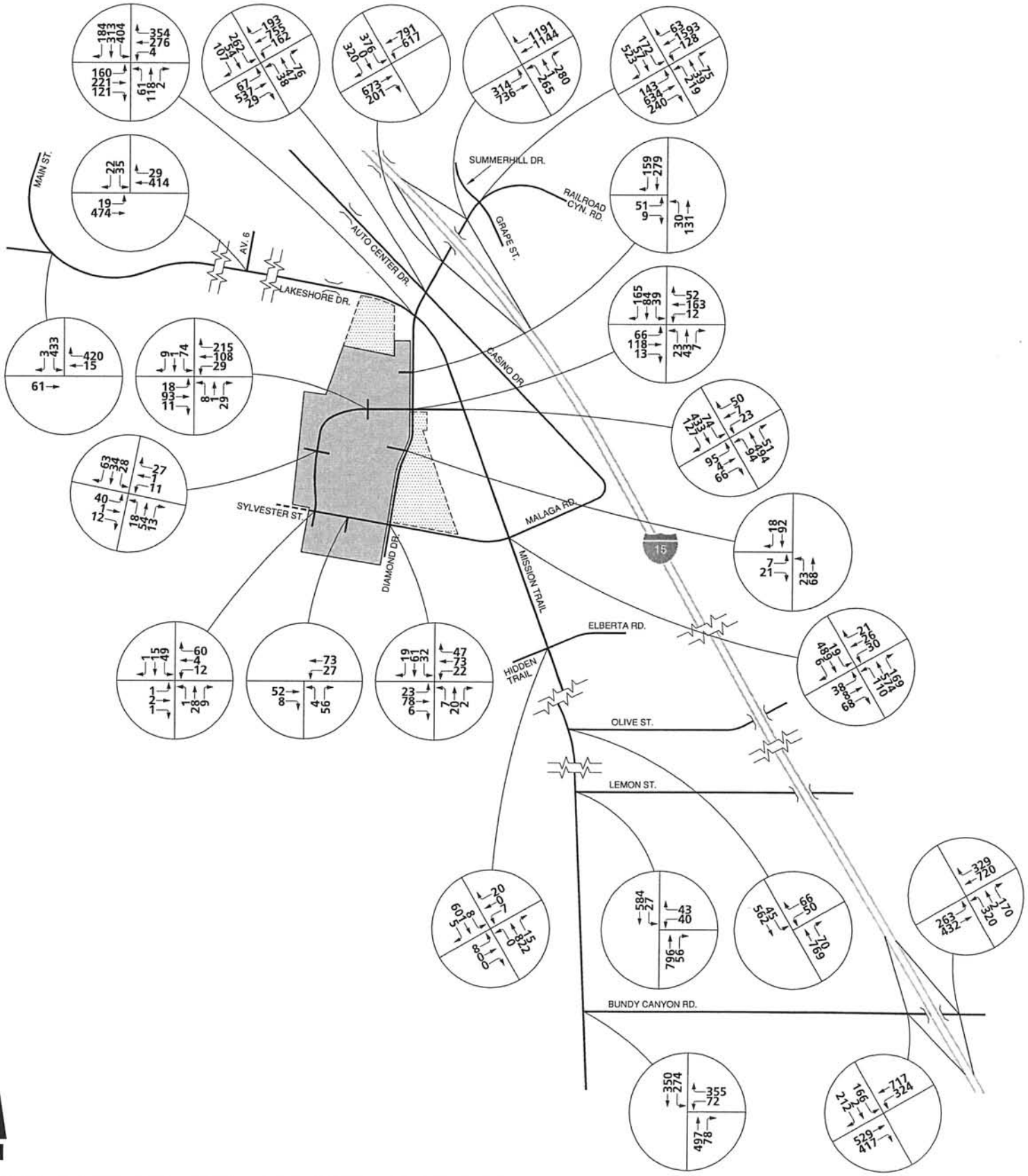


EXHIBIT 6-6

EXISTING PLUS AMBIENT GROWTH PLUS PROJECT (2014) CONDITIONS PM PEAK HOUR INTERSECTION VOLUMES

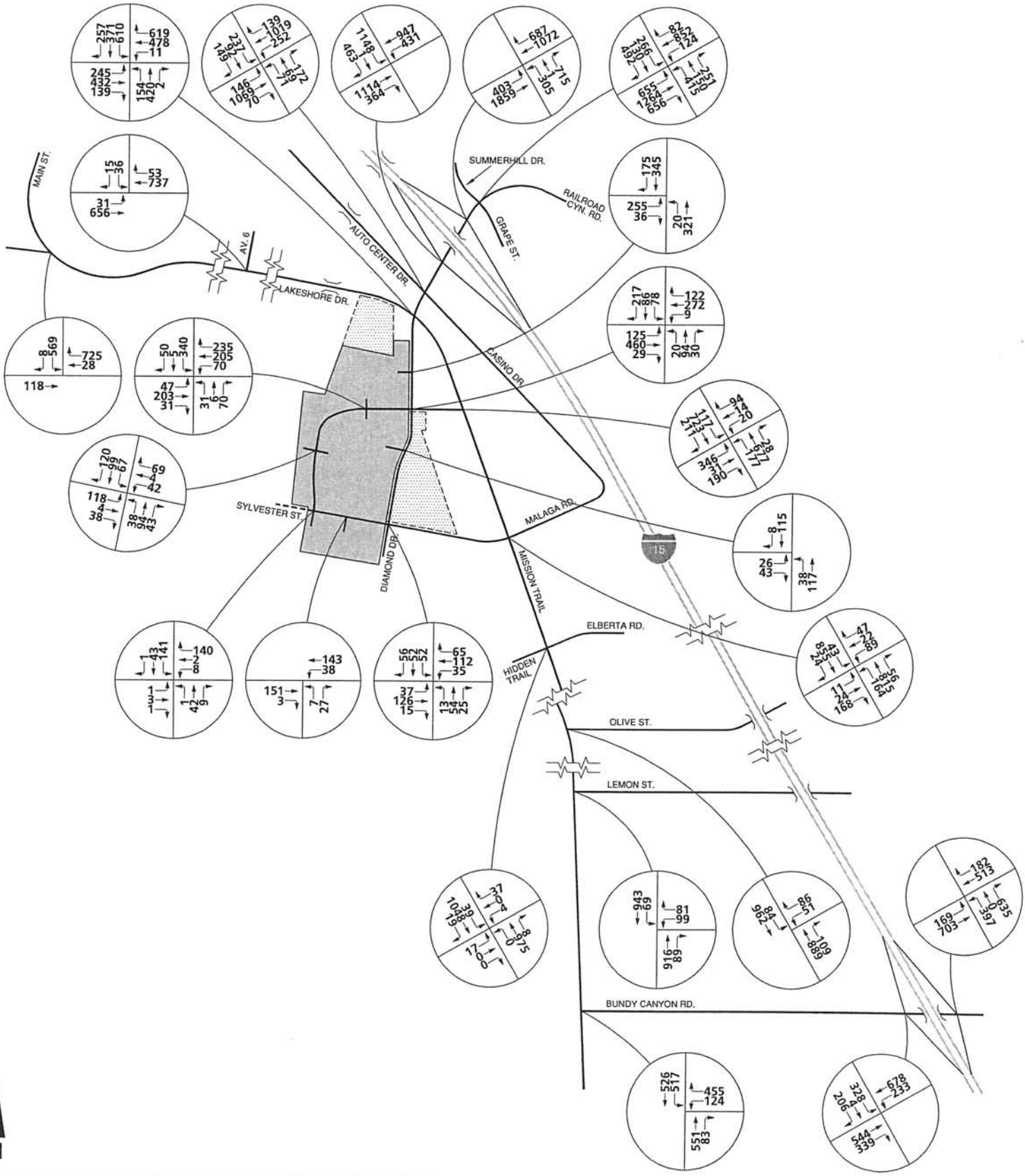


EXHIBIT 6-7

EXISTING PLUS AMBIENT GROWTH PLUS PROJECT (2016) CONDITIONS AVERAGE DAILY TRAFFIC (ADT)

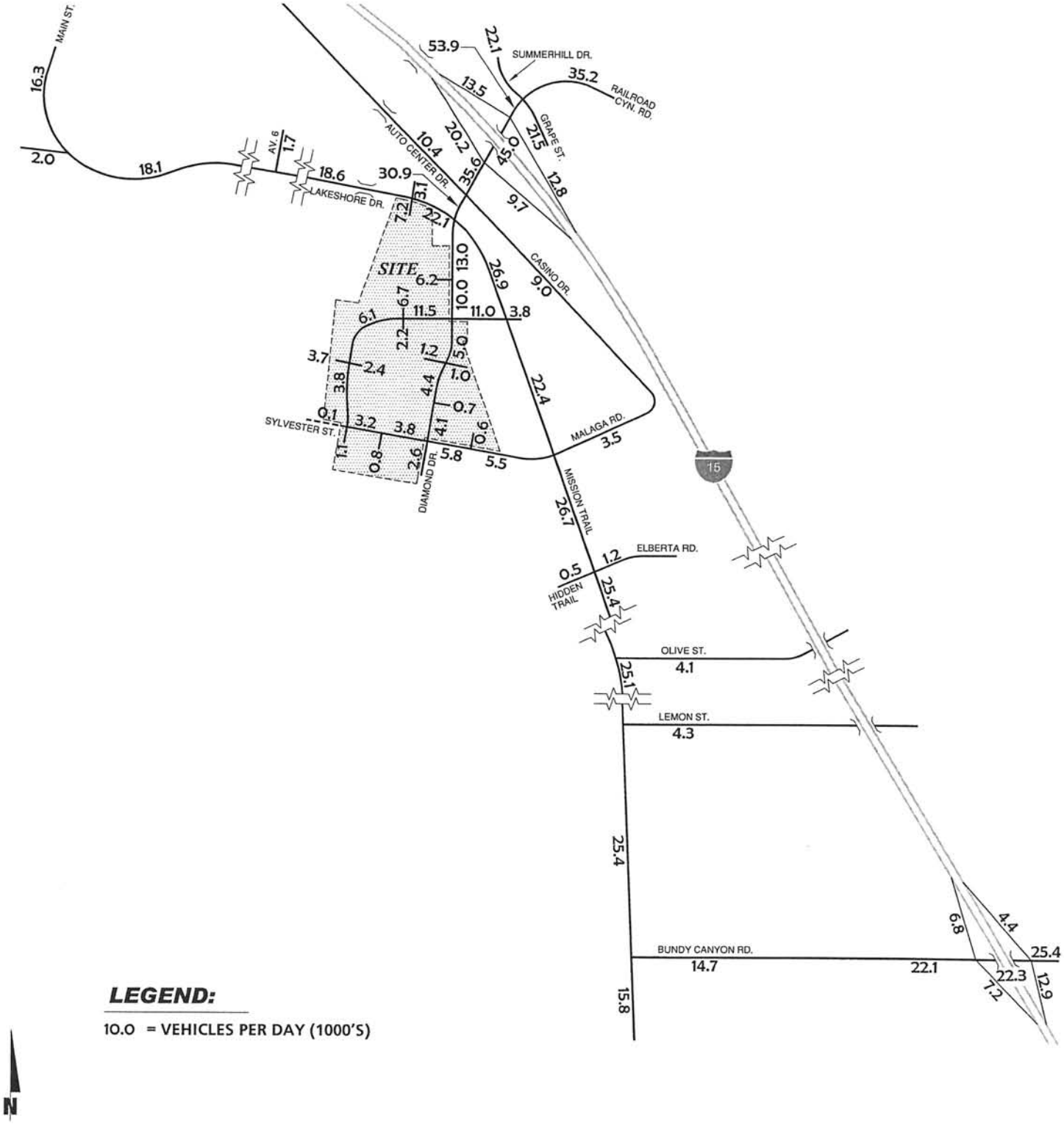


EXHIBIT 6-8

EXISTING PLUS AMBIENT GROWTH PLUS PROJECT (2016) CONDITIONS AM PEAK HOUR INTERSECTION VOLUMES

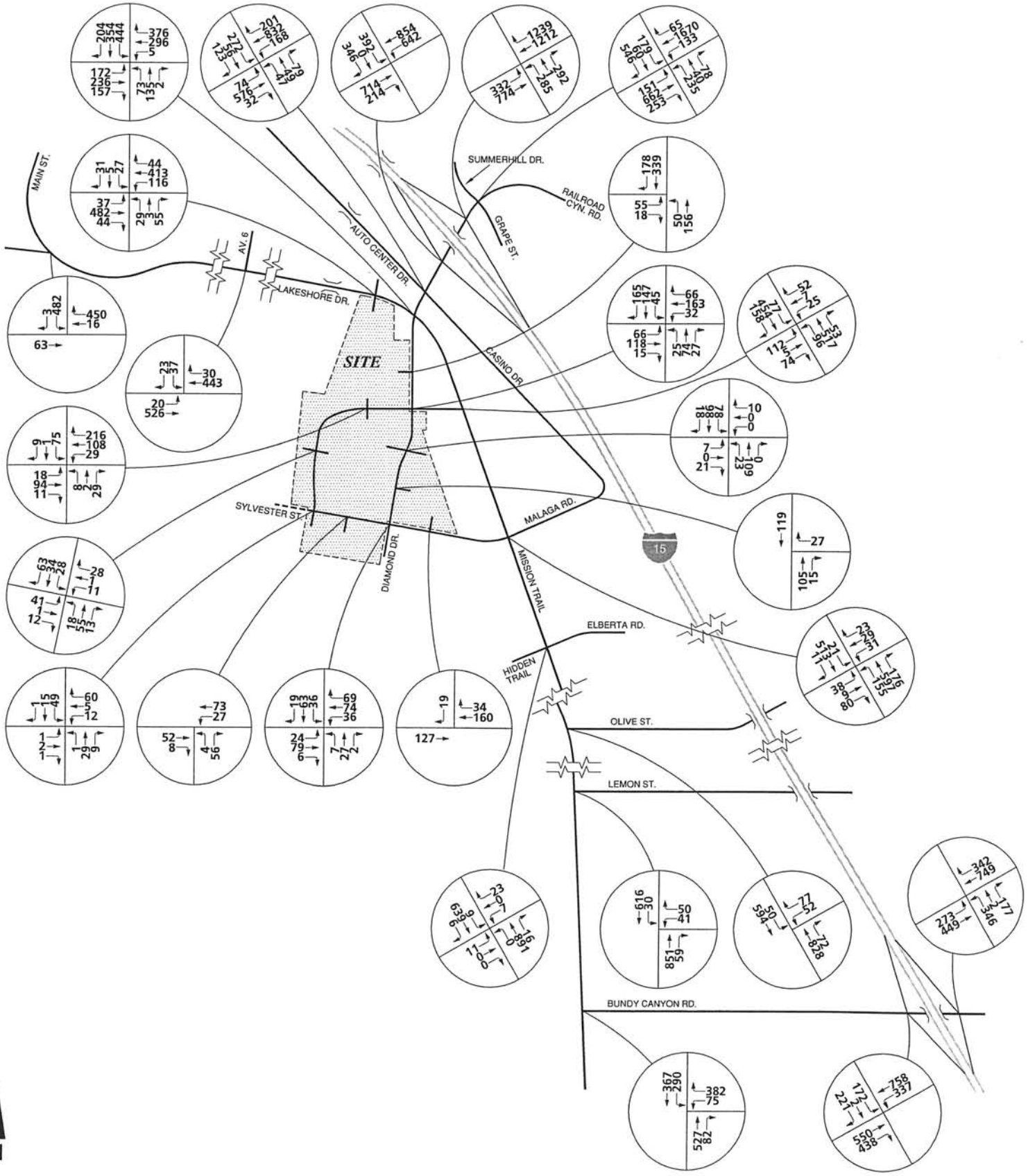


EXHIBIT 6-9

EXISTING PLUS AMBIENT GROWTH PLUS PROJECT (2016) CONDITIONS PM PEAK HOUR INTERSECTION VOLUMES

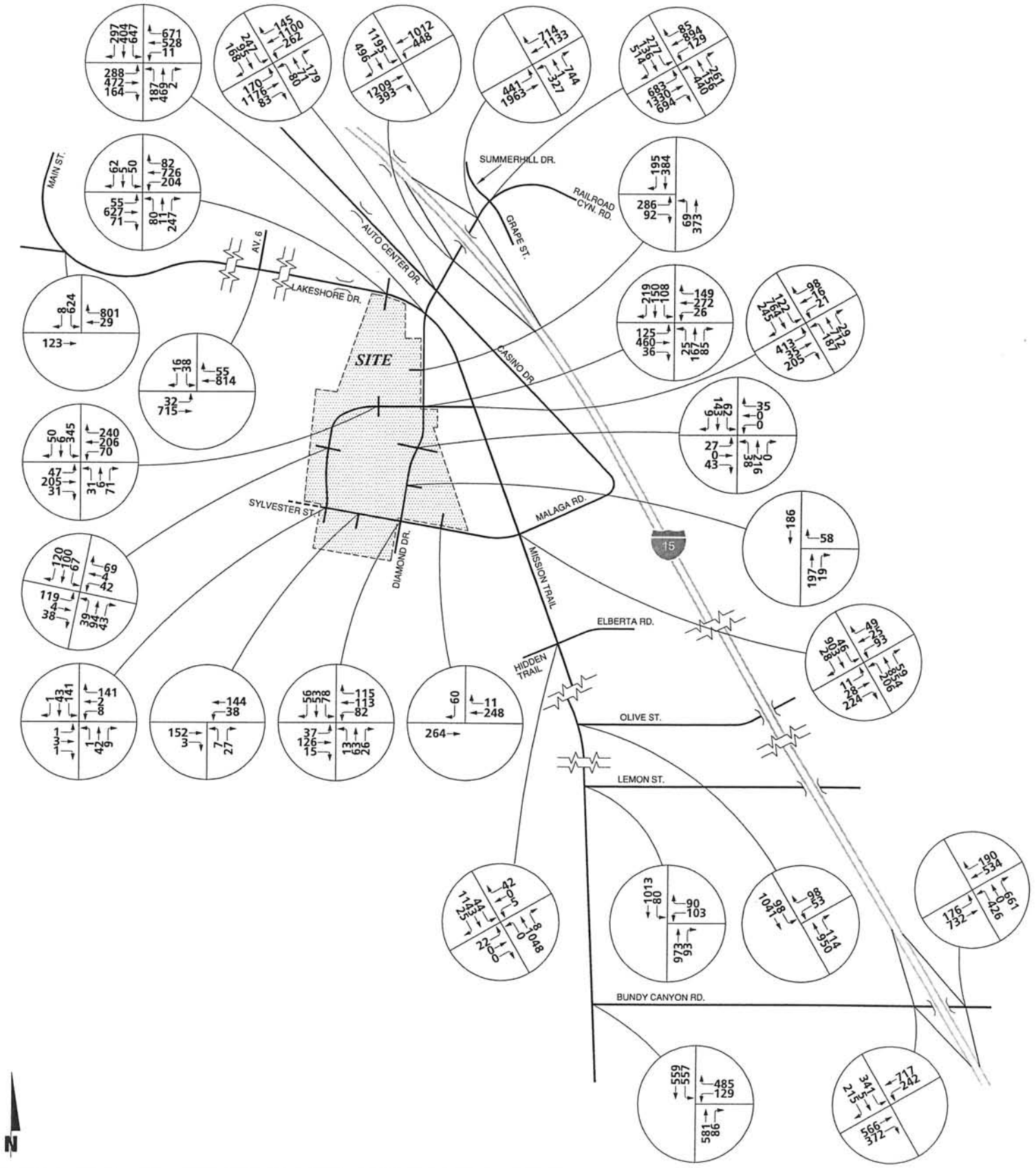
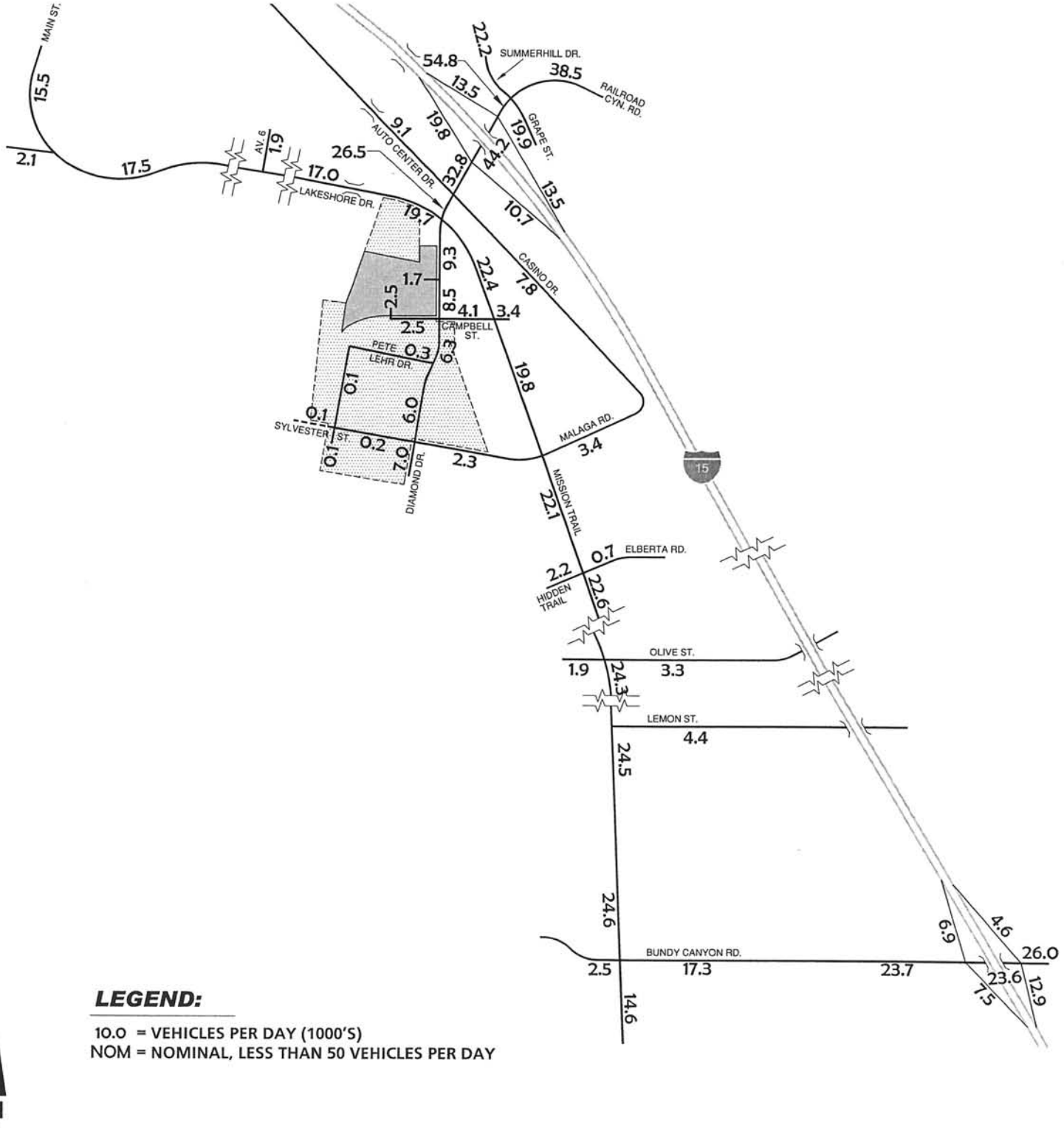


EXHIBIT 6-10

EXISTING PLUS AMBIENT GROWTH PLUS PROJECT PLUS CUMULATIVE DEVELOPMENT (2012) CONDITIONS AVERAGE DAILY TRAFFIC (ADT)



LEGEND:

10.0 = VEHICLES PER DAY (1000'S)
NOM = NOMINAL, LESS THAN 50 VEHICLES PER DAY

N

EXHIBIT 6-11

EXISTING PLUS AMBIENT GROWTH PLUS PROJECT PLUS CUMULATIVE DEVELOPMENT (2012) CONDITIONS AM PEAK HOUR INTERSECTION VOLUMES

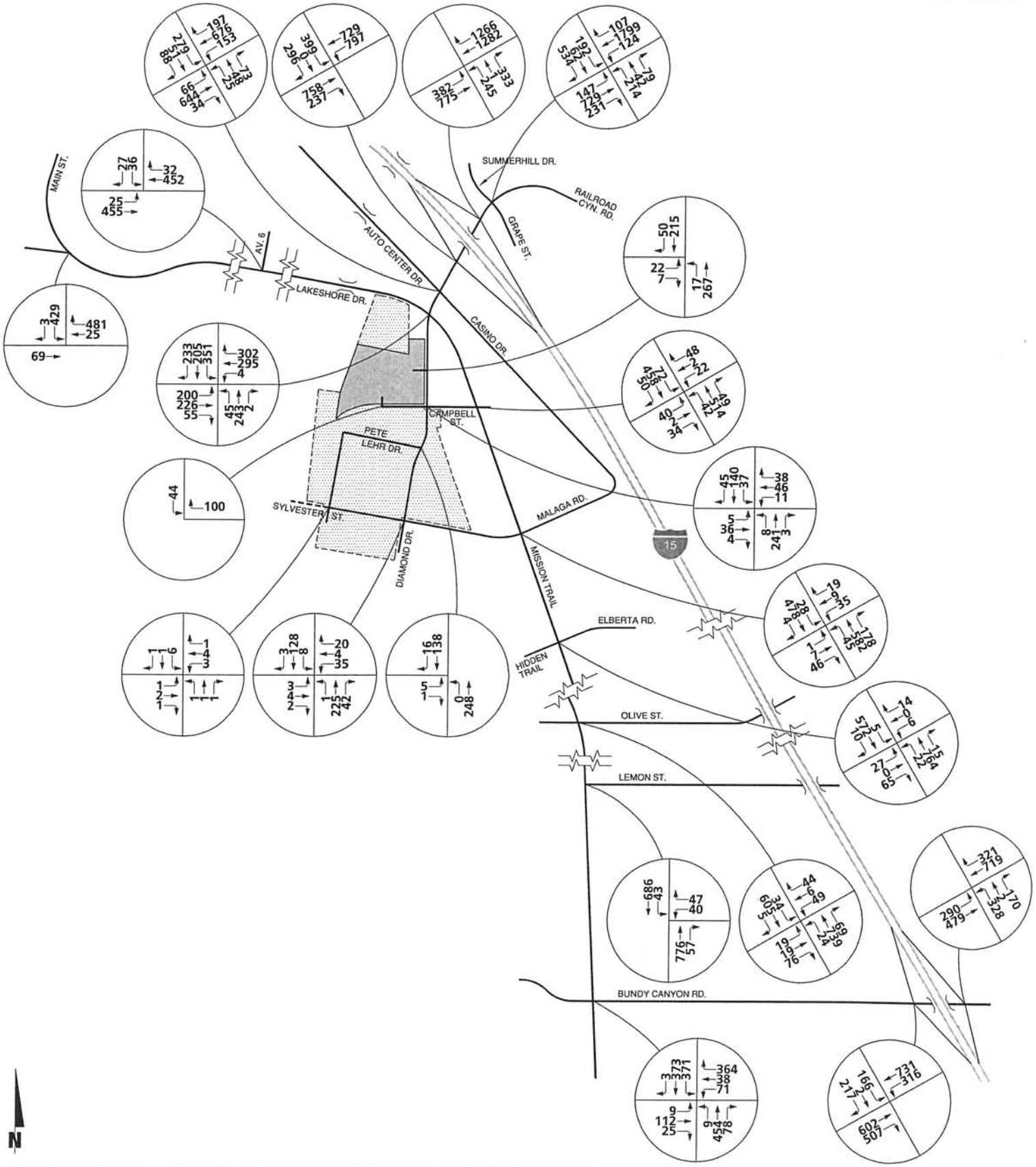


EXHIBIT 6-12

EXISTING PLUS AMBIENT GROWTH PLUS PROJECT PLUS CUMULATIVE DEVELOPMENT (2012) CONDITIONS PM PEAK HOUR INTERSECTION VOLUMES

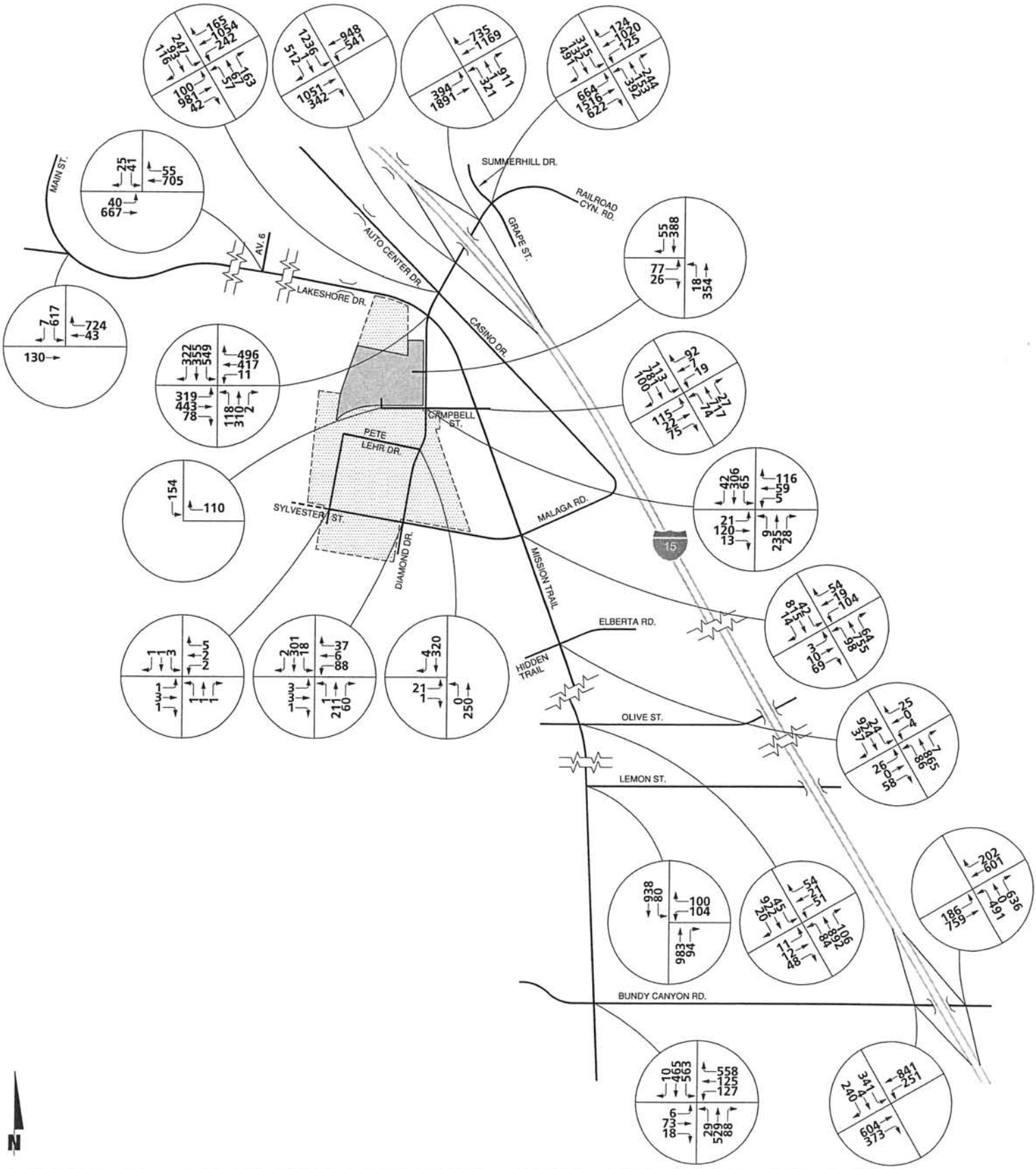
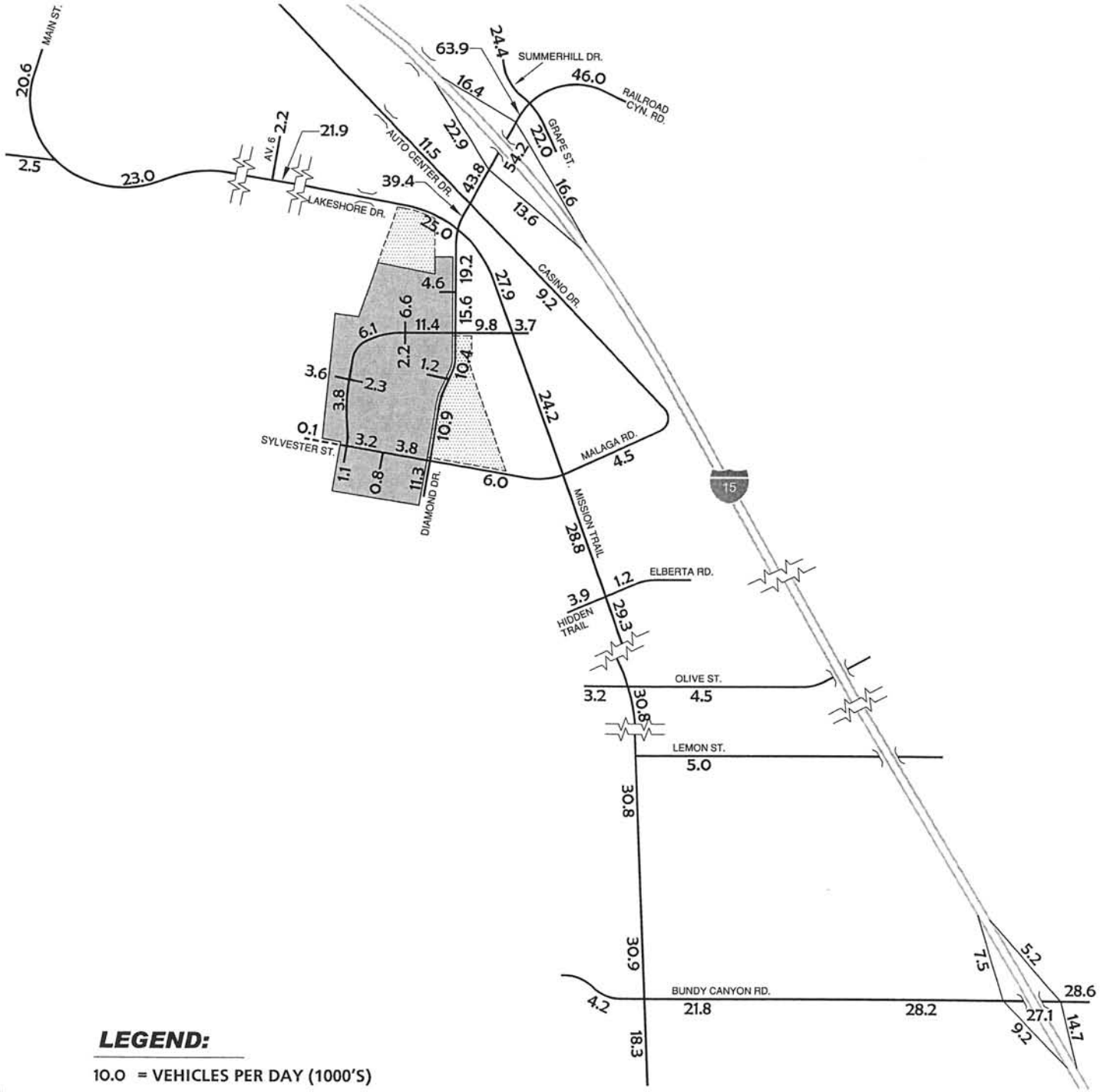


EXHIBIT 6-13

EXISTING PLUS AMBIENT GROWTH PLUS PROJECT PLUS CUMULATIVE DEVELOPMENT (2014) CONDITIONS AVERAGE DAILY TRAFFIC (ADT)



LEGEND:

10.0 = VEHICLES PER DAY (1000'S)

N

EXHIBIT 6-14

EXISTING PLUS AMBIENT GROWTH PLUS PROJECT PLUS CUMULATIVE (2014) CONDITIONS AM PEAK HOUR INTERSECTION VOLUMES

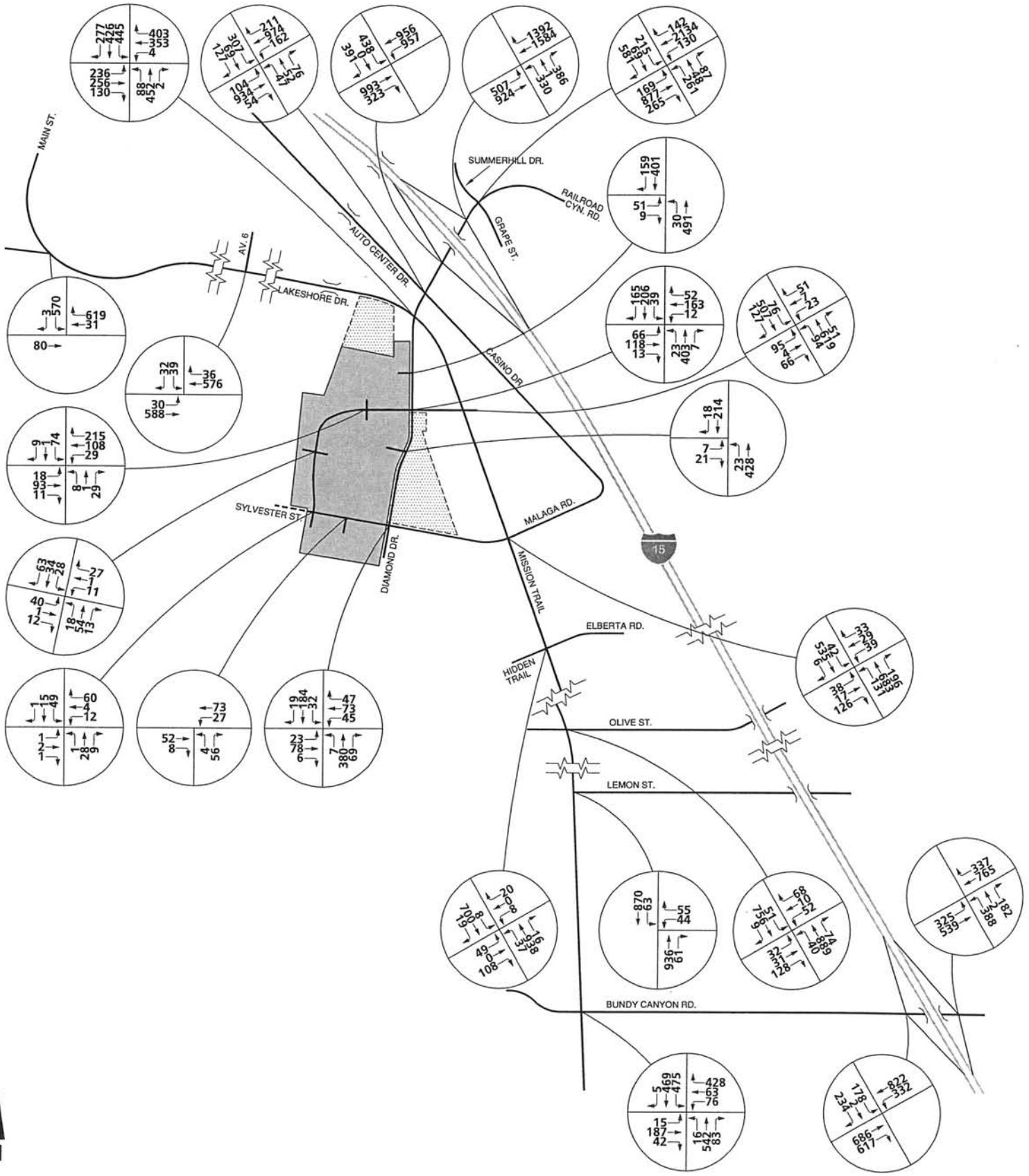


EXHIBIT 6-15

EXISTING PLUS AMBIENT GROWTH PLUS PROJECT PLUS CUMULATIVE (2014) CONDITIONS PM PEAK HOUR INTERSECTION VOLUMES

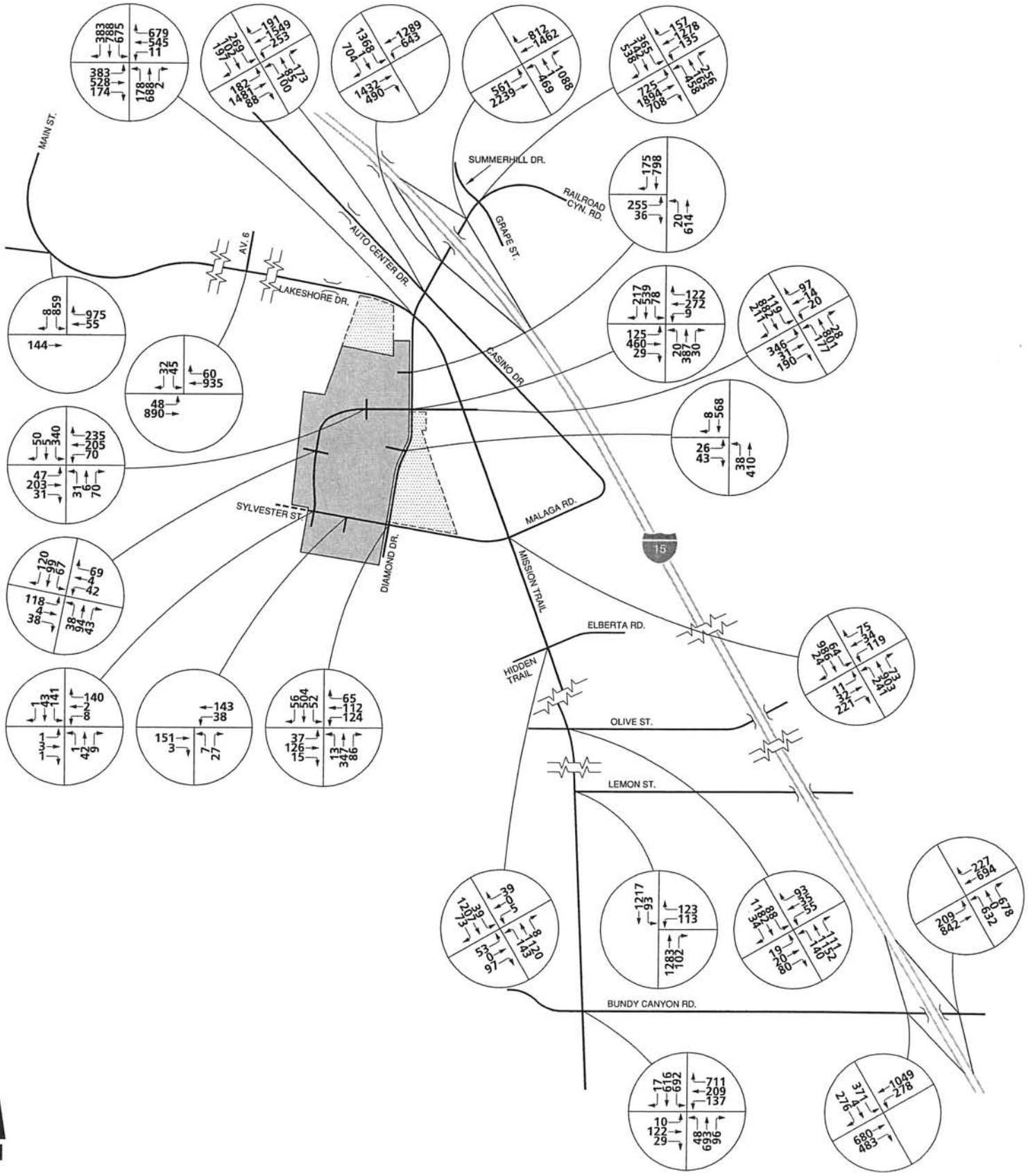


EXHIBIT 6-16

EXISTING PLUS AMBIENT GROWTH PLUS PROJECT PLUS CUMULATIVE DEVELOPMENT (2016) CONDITIONS AVERAGE DAILY TRAFFIC (ADT)

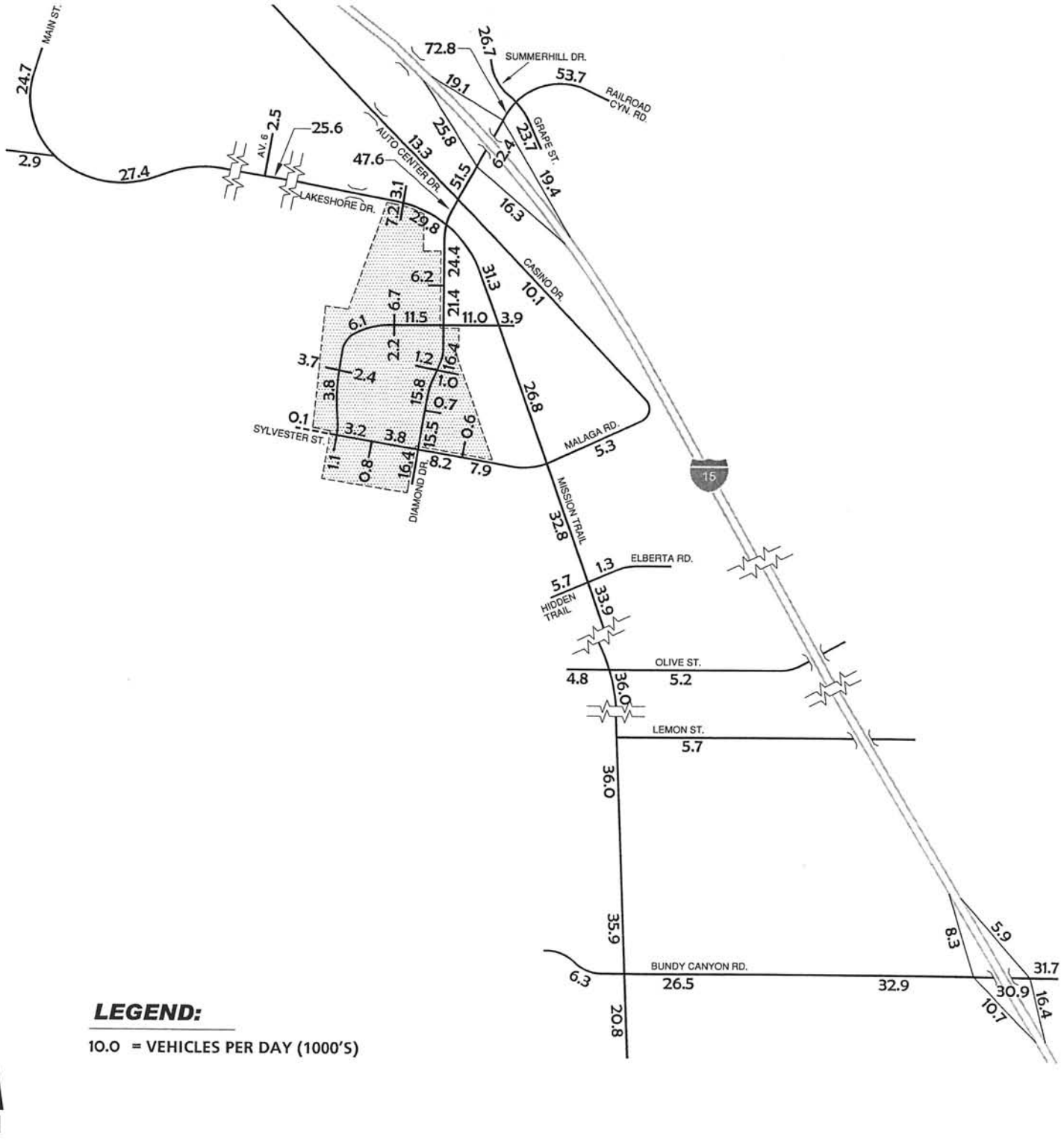


EXHIBIT 6-17

EXISTING PLUS AMBIENT GROWTH PLUS PROJECT PLUS CUMULATIVE (2016) CONDITIONS AM PEAK HOUR INTERSECTION VOLUMES

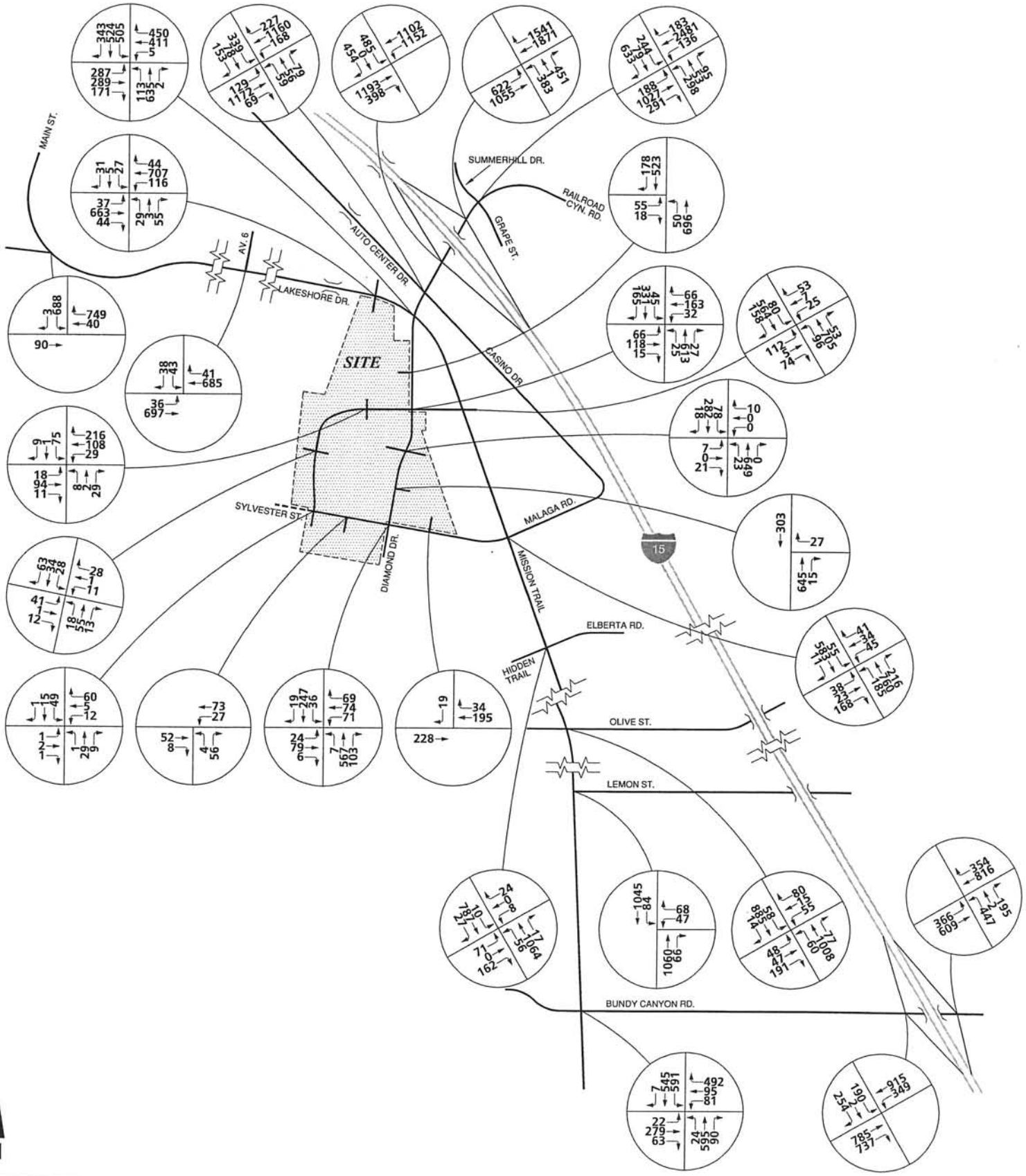


EXHIBIT 6-18

EXISTING PLUS AMBIENT GROWTH PLUS PROJECT PLUS CUMULATIVE (2016) CONDITIONS PM PEAK HOUR INTERSECTION VOLUMES

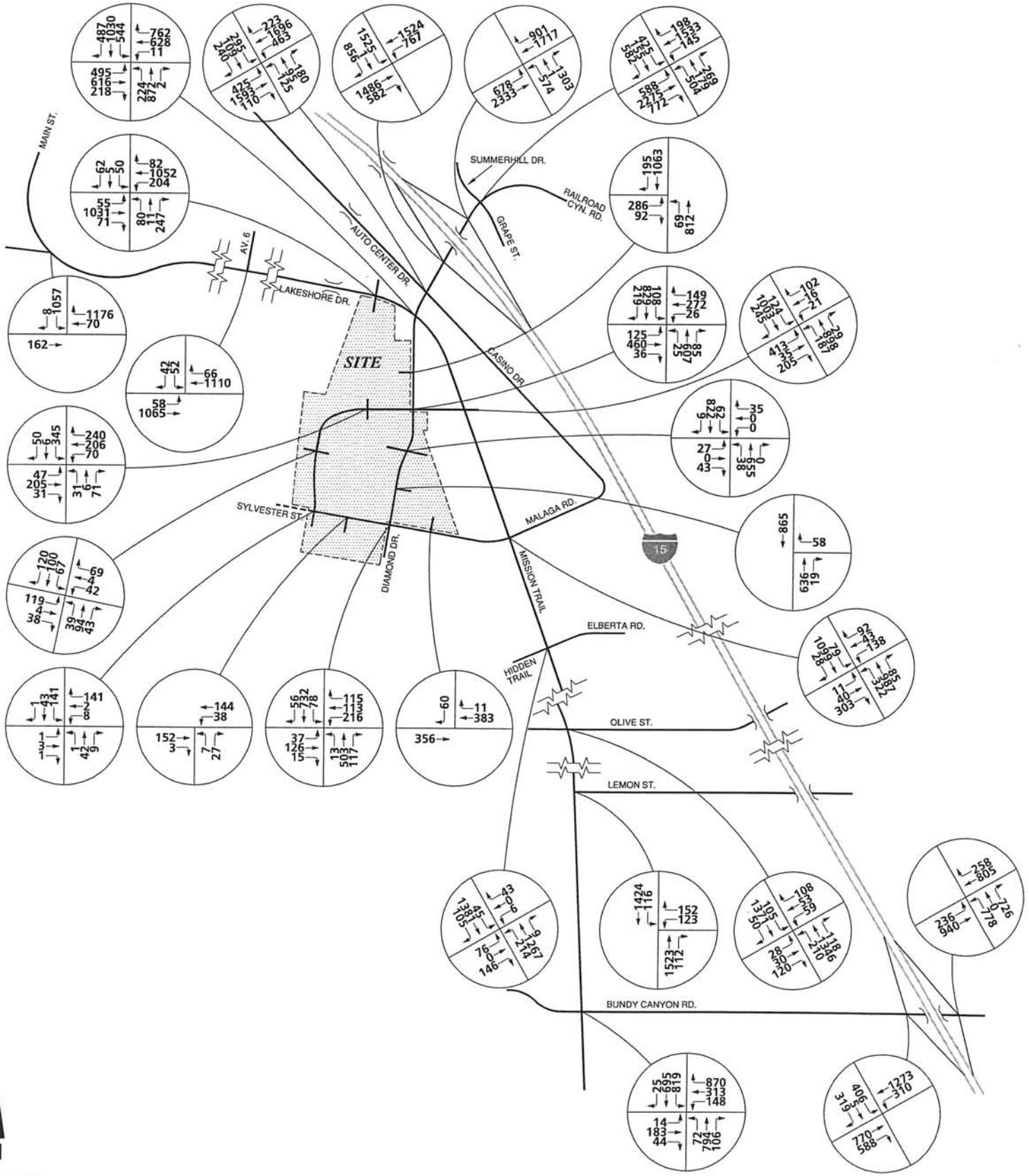
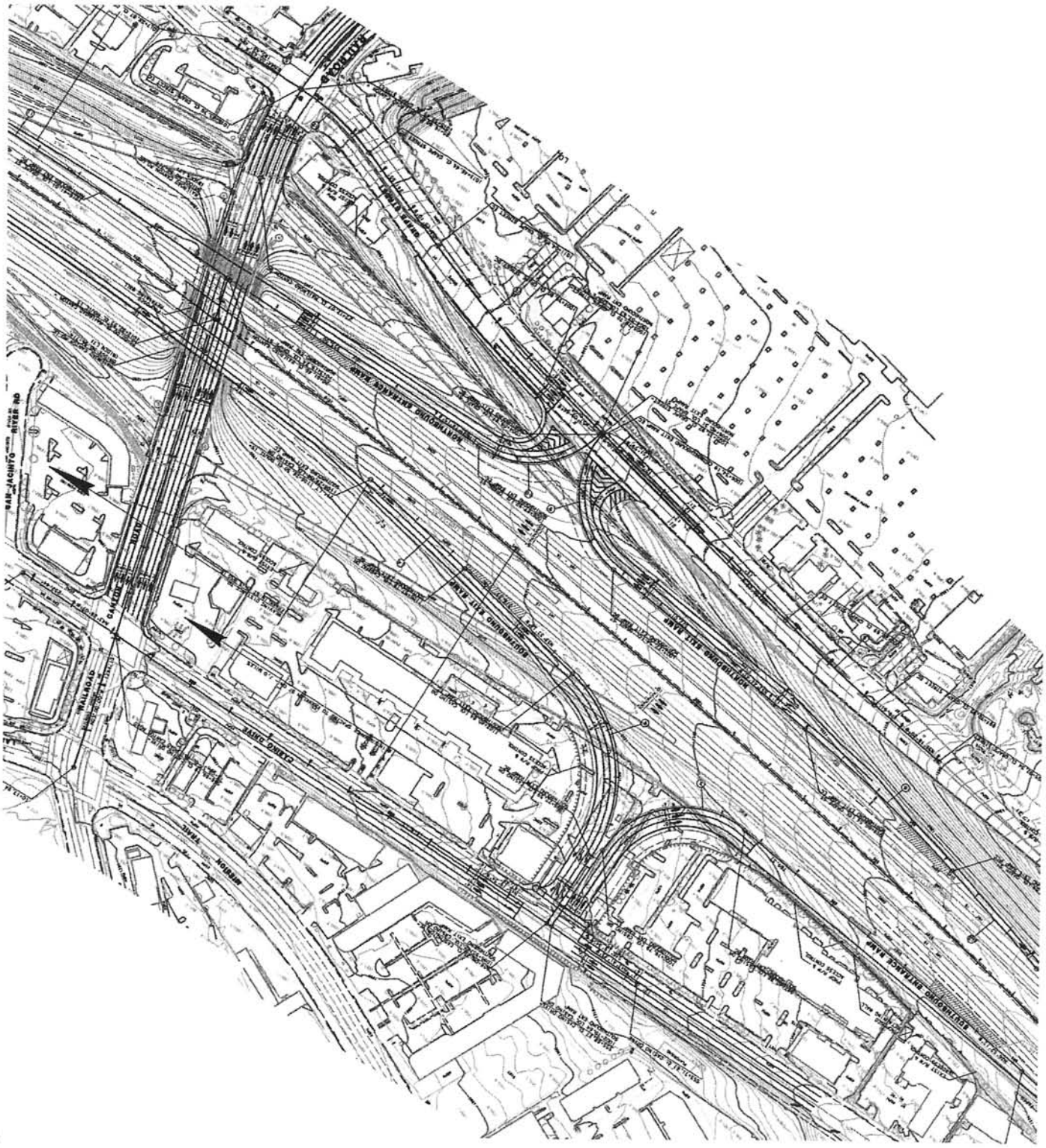


EXHIBIT 6-19

PROPOSED INTERCHANGE DESIGN AT I-15 FREEWAY AND NEW FRANKLIN STREET

EXHIBIT 6-20

PROPOSED INTERCHANGE DESIGN AT I-15 FREEWAY AND RAILROAD CANYON ROAD



N

Exhibit 6-21 shows the ADT volumes which can be expected for General Plan buildout with project conditions. General Plan buildout with project AM and PM peak hour intersection turning movement volumes are shown on Exhibits 6-22 and 6-23, respectively.

6.2 Future Conditions Traffic Signal Warrant Analysis

A traffic signal warrant analysis has been conducted for each of the following future conditions based on the respective average daily traffic (ADT) volumes:

- EAP (2012) and EAPC (2012)
- EAP (2014) and EAPC (2014)
- EAP (2016) and EAPC (2016)
- General Plan Buildout With Project

A detailed discussion of the methodologies behind the traffic signal warrant analysis was previously presented in Section 3.4 of this report. The traffic signal warrant analysis worksheets for all future conditions are included in Appendix 6.2 of this report.

6.2.1 Traffic Signal Warrant Analysis, EAP (2012) Conditions

Traffic signals do not appear to be warranted at the study area intersections under existing plus ambient growth plus project (2012) traffic conditions in addition to the locations that currently meet warrants under existing (2009) traffic conditions.

6.2.2 Traffic Signal Warrant Analysis, EAP (2014) Conditions

Traffic signals are projected to be warranted at the following study area intersections under existing plus ambient growth plus project (2014) conditions, in addition to the locations currently warranted under existing (2009) traffic conditions:

Main Street (NS) at:

- Lakeshore Drive (EW)

EXHIBIT 6-21

GENERAL PLAN BUILDOUT WITH PROJECT CONDITIONS AVERAGE DAILY TRAFFIC (ADT)

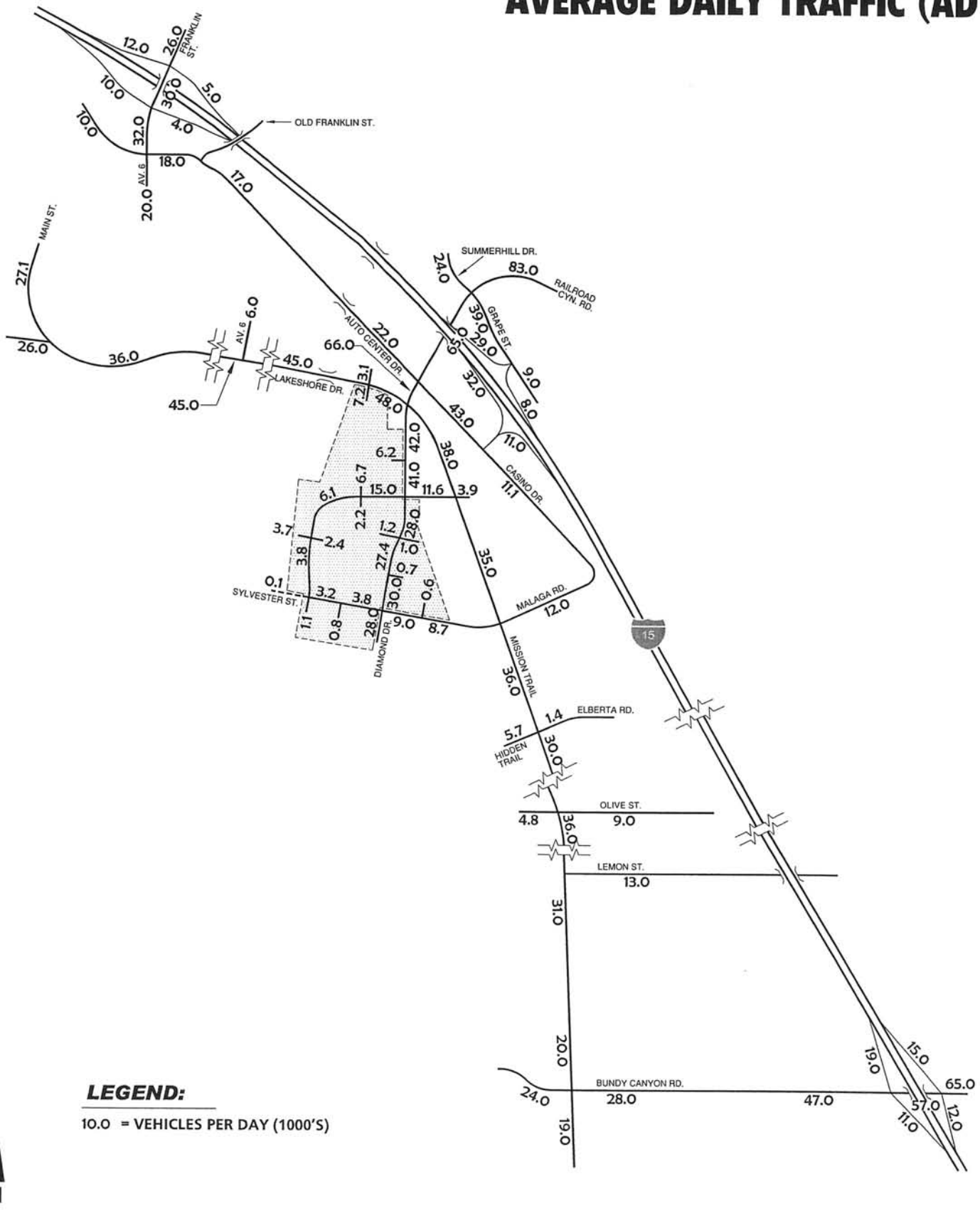


EXHIBIT 6-22

GENERAL PLAN BUILDOUT WITH PROJECT CONDITIONS AM PEAK HOUR INTERSECTION VOLUMES

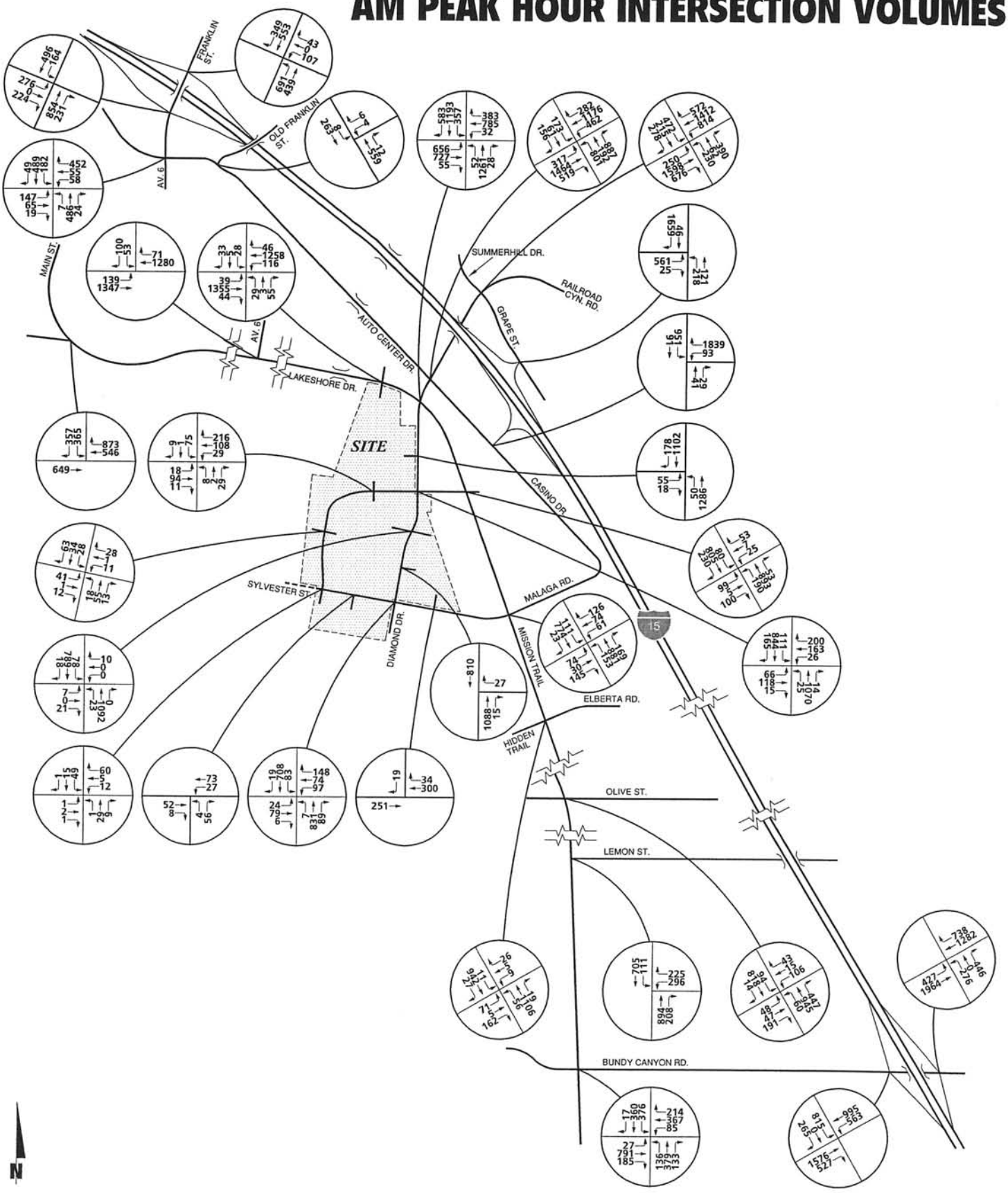
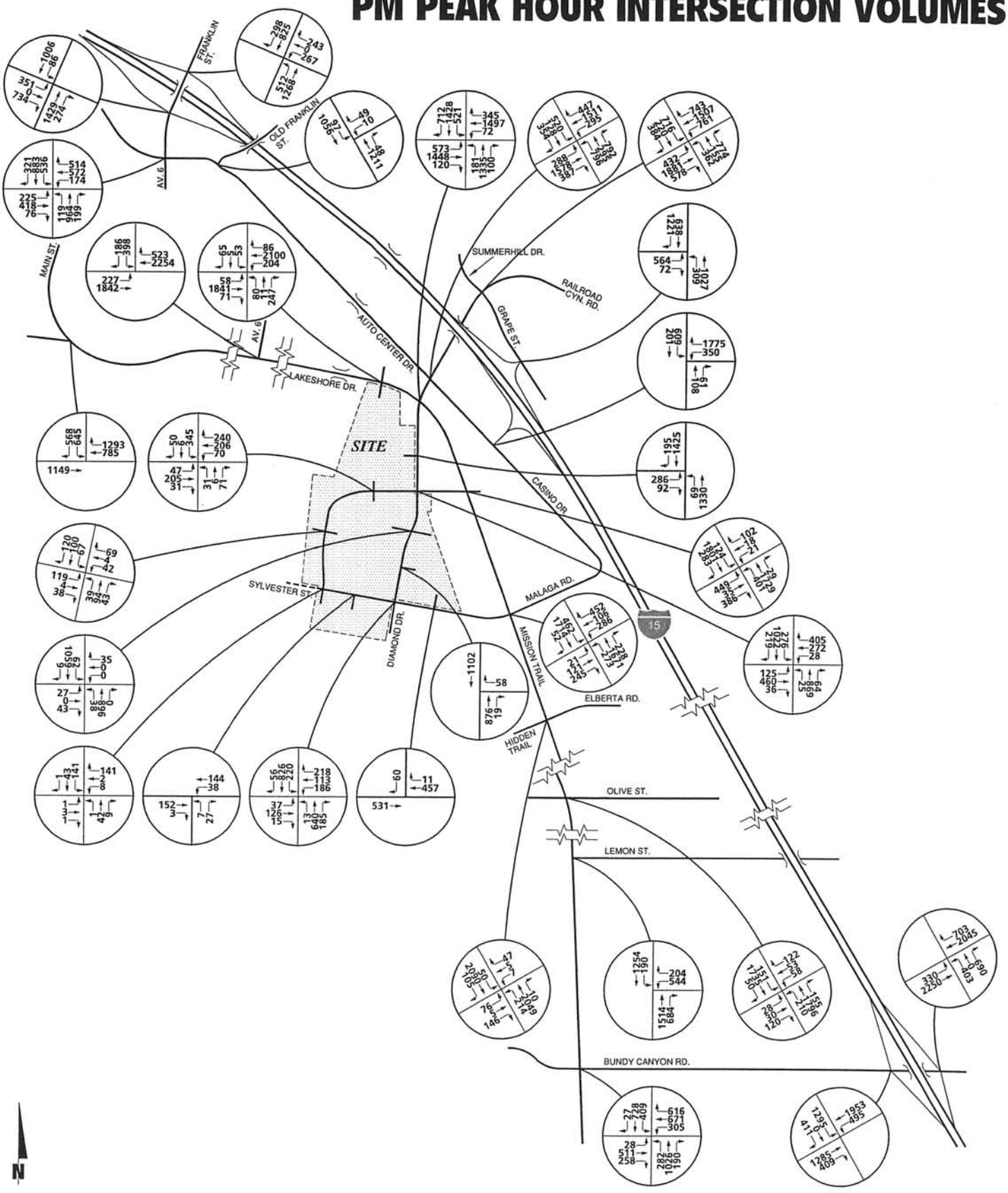


EXHIBIT 6-23

GENERAL PLAN BUILDOUT WITH PROJECT CONDITIONS PM PEAK HOUR INTERSECTION VOLUMES



Avenue 6 (NS) at:

- Lakeshore Drive (EW)

Driveway 3 (NS) at:

- Diamond Circle (Loop Road) (EW)

Diamond Drive (NS) at:

- Driveway 5 (EW)
- Campbell Street/Diamond Circle (Loop Road) (EW)

As stated earlier, satisfying a peak hour or daily volume-based warrant in and of itself does not necessarily require that a traffic signal should automatically be installed. The following intersections, which warrant traffic signals under EAP (2014) conditions, are anticipated to operate at acceptable levels of service and do not present safety issues as cross-street stop or all-way stop controlled intersections:

Main Street (NS) at:

- Lakeshore Drive (EW)

Diamond Drive (NS) at:

- Driveway 5 (EW)

As such, it is recommended that these locations be monitored, and the City Traffic Engineer should implement engineering judgment and his/her discretion on the installation of a traffic signal. It should be noted that the traffic signal at Diamond Drive and Driveway 5 is needed under EAP (2016) traffic conditions.

6.2.3 Traffic Signal Warrant Analysis, EAP (2016) Conditions

A traffic signal is projected to be warranted at the following study area intersection under existing plus ambient growth plus project (2016) conditions, in addition to the locations previously warranted under EAP (2014) traffic conditions:

Driveway 2 (NS) at:

- Lakeshore Drive (EW)

6.2.4 Traffic Signal Warrant Analysis, EAPC (2012) Conditions

Traffic signals are projected to be warranted at the following study area intersections under existing plus ambient growth plus project plus cumulative (2012) conditions, in addition to the locations currently warranted under existing (2009) traffic conditions:

Main Street (NS) at:

- Lakeshore Drive (EW)

Avenue 6 (NS) at:

- Lakeshore Drive (EW)

Diamond Drive (NS) at:

- Campbell Street (EW)

Mission Trail (NS) at:

- Elberta Road (EW)

The following intersections, which warrant traffic signals under EAPC (2012) conditions, are anticipated to operate at acceptable levels of service and do not present safety issues as cross-street stop or all-way stop controlled intersections:

Main Street (NS) at:

- Lakeshore Drive (EW)

Diamond Drive (NS) at:

- Sylvester Street (EW)

As such, it is recommended that these locations be monitored, and the City Traffic Engineer should implement engineering judgment and his/her discretion on the installation of a traffic signal. It should be noted that both traffic signals are needed under EAPC (2014) traffic conditions.

6.2.5 Traffic Signal Warrant Analysis, EAPC (2014) Conditions

Traffic signals are projected to be warranted at the following study area intersections under existing plus ambient growth plus project plus cumulative (2014) conditions, in addition to the locations previously warranted under EAPC (2012) traffic conditions:

Driveway 3 (NS) at:

- Diamond Circle (Loop Road) (EW)

Diamond Drive (NS) at:

- Driveway 5 (EW)
- Sylvester Street (EW)

The following intersection, which warrants a traffic signal under EAPC (2014) conditions, is anticipated to operate at acceptable levels of service and does not present a safety issue as an all-way stop controlled intersection:

Diamond Drive (NS) at:

- Sylvester Street (EW)

As such, it is recommended that this location be monitored, and the City Traffic Engineer should implement engineering judgment and his/her discretion on the installation of a traffic signal. It should be noted that the traffic signal at Diamond Drive and Sylvester Street is needed under EAPC (2016) traffic conditions.

6.2.6 Traffic Signal Warrant Analysis, EAPC (2016) Conditions

A traffic signal is projected to be warranted at the following study area intersection under existing plus ambient growth plus project plus cumulative (2016) conditions, in addition to the locations previously warranted under EAPC (2014) traffic conditions:

Driveway 2 (NS) at:

- Lakeshore Drive (EW)

6.2.7 Traffic Signal Warrant Analysis, General Plan Buildout With Project Conditions

Traffic signals are projected to be warranted at the following study area intersections under General Plan buildout with project conditions, in addition to the locations previously warranted under EAPC (2016) traffic conditions:

Diamond Drive (NS) at:

- Driveway 6 (EW)

I-15 Northbound Ramps (NS) at:

- Franklin Street (EW)

I-15 Southbound Ramps (NS) at:

- Franklin Street (EW)

Auto Center Drive (NS) at:

- Franklin Street/Avenue 6 (EW)

Grape Street (NS) at:

- I-15 Northbound Ramps (EW)

Casino Drive (NS) at:

- I-15 Southbound Ramps (EW)

It should be noted that at the time the I-15 Northbound Ramps are constructed on Grape Street and signalized, the proximity of nearby driveways should be taken into consideration to properly coordinate signals along Grape Street. Similarly, the proximity of nearby driveways on Casino Drive to the I-15 Southbound Ramps should also be assessed. The implementation of coordination between closely spaced signals along Grape Street and Casino Drive would mitigate potential queuing and access issues.

Although the intersection of Diamond Drive and Driveway 6 is anticipated to meet a traffic signal warrant under long-range conditions due to the potentially high volumes on Diamond Drive, it is important to note that the driveway is not anticipated to meet a traffic

signal warrants under EAPC (2016) conditions (project buildout). As such, it is recommended that this location be monitored, and the City Traffic Engineer should implement engineering judgment and his/her discretion on the installation of a traffic signal.

6.3 Future Conditions Intersection Operations Analysis

An intersection operations analysis has been performed for each of the following future conditions:

- EAP (2012) and EAPC (2012)
- EAP (2014) and EAPC (2014)
- EAP (2016), EAPC (2016) and EAPC (2016) With Diamond Stadium
- General Plan Buildout With Project

The intersection operations analyses have been evaluated based on the 2000 Highway Capacity Manual (HCM) methodology for both signalized and unsignalized intersections. The discussion of the intersection operations analyses methodology is presented in the previous Section 3.3.

6.3.1 Intersection Operations Analysis, EAP (2012) Conditions

Table 6-1 summarizes the intersection operations analysis results for the study area intersections for EAP (2012) conditions, based on the respective existing geometrics at the intersections. As shown in Table 6-1, it is anticipated that all study area intersections would operate at acceptable levels of service (LOS "D" or better) during the peak hours, with existing geometrics, with the exception of the following intersections:

Mission Trail (NS) at:

- Campbell Street (EW)
- Elberta Road (EW)
- Olive Street
- Lemon Street

TABLE 6-1 (Page 1 of 3)

INTERSECTION ANALYSIS FOR EXISTING PLUS AMBIENT GROWTH PLUS PROJECT (2012) CONDITIONS

INTERSECTION	TRAFFIC CONTROL[3]	INTERSECTION APPROACH LANES[1]												DELAY[2] (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
Main St. (NS) at:																	
• Lakeshore Dr. (EW)																	
- Without Improvements	AWS	0	0	0	1	0	1	0	1	0	0	1	1>>	10.7	13.3	B	B
Avenue 6 (NS) at:																	
• Lakeshore Dr. (EW)																	
- Without Improvements	CSS	0	0	0	0	1	0	1	1	0	0	1	0	16.8	26.7	C	D
Diamond Circle (NS) at:																	
• Sylvester St. (EW)																	
- Without Improvements	CSS	0	1	0	0	1	0	0	1	0	0	1	1	8.7	8.7	A	A
Driveway 3 (NS) at:																	
• Loop Road (EW)																	
- Without Improvements		INTERSECTION DOES NOT EXIST															
- With Improvements	**CSS**	0	0	0	**1**	0	0	0	0	0	0	0	**1**	8.7	9.1	A	A
Summerhill Dr./Grape St. (NS) at:																	
• Railroad Canyon Rd. (EW)																	
- Without Improvements	TS	2	2	1	1	1	1>	2	2	1	1	3	0	33.8	54.9	C	D
I-15 NB Ramps (NS) at:																	
• Railroad Canyon Rd. (EW)																	
- Without Improvements	TS	0	1	2	0	0	0	2	3	0	0	2	1	25.5	26.1	C	C
I-15 SB Ramps (NS) at:																	
• Railroad Canyon Rd. (EW)																	
- Without Improvements	TS	0	0	0	2	1	1	0	2	1	1	2	0	24.7	36.6	C	D
Auto Center Dr./Casino Dr. (NS) at:																	
• Diamond Dr. (EW)																	
- Without Improvements	TS	1	2	0	1	2	0	1	3	0	2	2	0	26.4	23.4	C	C
Diamond Dr. (NS) at:																	
• Lakeshore Dr./Mission Trail (EW)																	
- Without Improvements	TS	1	2	0	2	2	0	1	2	1	1	2	1	37.5	35.9	D	D

INTERSECTION ANALYSIS FOR EXISTING PLUS AMBIENT GROWTH PLUS PROJECT (2012) CONDITIONS

INTERSECTION	TRAFFIC CONTROL[3]	INTERSECTION APPROACH LANES[1]												DELAY[2] (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
Diamond Dr. (NS) at:																	
• Driveway 5 (EW)																	
- Without Improvements		INTERSECTION DOES NOT EXIST															
- With Improvements	**CSS**	**1**	2	0	0	2	0	0	**1**	0	0	0	0	9.8	10.6	A	B
• Campbell St. (EW)																	
- Without Improvements	CSS	1	2	0	1	2	0	0	1	0	1	1	0	11.6	13.7	B	B
• Pete Lehr Dr. (EW)																	
- Without Improvements	CSS	1	2	0	0	2	1	0	1	0	0	0	0	9.0	9.3	A	A
• Sylvester St. (EW)																	
- Without Improvements	AWS	1	2	0	1	2	1	1	2	0	1	2	0	7.6	7.7	A	A
Mission Trail (NS) at:																	
• Campbell St. (EW)																	
- Without Improvements	CSS	1	2	0	1	2	1	0	1	1	0	1	0	31.5	--[4]	D	F
- With Improvements	**TS**	1	2	0	1	2	1	**1**	1	**0**	**1**	1	0	17.0	24.2	B	C
• Sylvester St./Malaga Rd. (EW)																	
- Without Improvements	TS	1	2	0	1	2	0	1	1	1	1	2	1	14.8	16.2	B	B
• Elberta Rd. (EW)																	
- Without Improvements	CSS	0	2	0	1	2	0	1	1	0	1	1	0	28.1	38.0	D	E
• Olive St. (EW)																	
- Without Improvements	CSS	0	2	0	1	2	0	0	0	0	0	1	0	27.5	37.8	D	E
- With Improvements	**TS**	0	2	0	1	2	0	0	0	0	0	1	0	9.3	11.3	A	B
• Lemon St. (EW)																	
- Without Improvements	CSS	0	2	1	0	2	0	0	0	0	0	1	0	21.1	--[4]	C	F
- With Improvements	**TS**	0	2	1	**1**	2	0	0	0	0	0	1	0	11.9	10.2	B	B
• Bundy Canyon Road (EW)																	
- Without Improvements	TS	1	2	0	1	2	0	0	1	0	0	1	1	20.3	49.2	C	D

INTERSECTION ANALYSIS FOR EXISTING PLUS AMBIENT GROWTH PLUS PROJECT (2012) CONDITIONS

INTERSECTION	TRAFFIC CONTROL[3]	INTERSECTION APPROACH LANES[1]												DELAY[2] (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
I-15 SB Ramps (NS) at:																	
• Bundy Canyon Road (EW)																	
- Without Improvements	TS	0	0	0	1	1	0	0	2	0	1	2	0	27.2	26.2	C	C
I-15 NB Ramps (NS) at:																	
• Bundy Canyon Road (EW)																	
- Without Improvements	TS	1	1	0	0	0	0	1	2	0	0	2	0	32.7	31.1	C	C

[1] 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; 1>> = Free-Right Turn Lane; 1> = Right-Turn Overlap Phasing; 1 = Improvement

[2] Delay and level of service calculated using the following analysis software:
HCS+ Version 5.21 (2005) for unsignalized intersections and SYNCHRO Version 7 Build 763 (2007) for signalized intersections.
Per the 2000 Highway Capacity Manual, overall average intersection delay and level of service are shown for intersections with a traffic signal or all way stop control. For intersections with cross street stop control, the delay and level of service for the worst individual movement (or movements sharing a single lane) are shown. (The intersection of Diamond Dr. at Sylvester St. has been analyzed using Traffix Version 8.0 R1 since the intersection could not be analyzed with the HCS+ software.)

[3] TS = Traffic Signal; CSS = Cross Street Stop; AWS = All Way Stop

[4] -- = Delay High, Intersection Unstable; Level of Service "F".

NOTE: Any leg implementing a right-turn overlap phasing requires the elimination of U-turn movements from the leg immediately counter-clockwise.

As previously noted, the intersections of Mission Trail at Campbell Street and Mission Trail at Lemon Street operate at Level of Service "F" under existing (2009) conditions. These intersections experience high delays for the vehicles on the minor legs due to insufficient gaps in the through traffic along Mission Trail. The unacceptable peak hour operations of these locations are not a result of the addition of project traffic.

The study area intersections are anticipated to operate at acceptable levels of service with the improvements identified on Table 6-1, with the exception of the intersection of Mission Trail at Elberta Road. The intersection of Elberta Road on Mission Trail is anticipated to operate at Level of Service "E" during the PM peak hour only, due to projected high delays for left turning vehicles from the minor leg. The implementation of a traffic signal (at a future time when warranted) would be sufficient mitigation to address the Level of Service deficiency.

EAP (2012) conditions intersection operations analysis worksheets are included in Appendix 6.3 of this report.

6.3.2 Intersection Operations Analysis, EAPC (2012) Conditions

Table 6-2 summarizes the intersection operations analysis results for the study area intersections for EAPC (2012) conditions, based on the respective existing geometrics at the intersections. As shown in Table 6-2, it is anticipated that all study area intersections would operate at acceptable levels of service (LOS "D" or better) during the peak hours, with existing geometrics, with the exception of the following intersections:

Avenue 6 (NS) at:

- Lakeshore Drive (EW)

Summerhill Drive/Grape Street (NS) at:

- Railroad Canyon Road (EW)

I-15 Southbound Ramps (NS) at:

- Railroad Canyon Road (EW)

TABLE 6-2 (Page 1 of 3)

INTERSECTION ANALYSIS FOR
EXISTING PLUS AMBIENT GROWTH PLUS PROJECT PLUS CUMULATIVE DEVELOPMENT (2012) CONDITIONS

INTERSECTION	TRAFFIC CONTROL[3]	INTERSECTION APPROACH LANES[1]												DELAY[2] (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
Main St. (NS) at:																	
• Lakeshore Dr. (EW)																	
- Without Improvements	AWS	0	0	0	1	0	1	0	1	0	0	1	1>>	12.0	24.0	B	C
Avenue 6 (NS) at:																	
• Lakeshore Dr. (EW)																	
- Without Improvements	CSS	0	0	0	0	1	0	1	1	0	0	1	0	18.1	42.4	C	E
- With Improvements	**TS**	0	0	0	0	1	0	1	1	0	0	1	0	13.5	10.6	B	B
Diamond Circle (NS) at:																	
• Sylvester St. (EW)																	
- Without Improvements	CSS	0	1	0	0	1	0	0	1	0	0	1	1	8.7	8.7	A	A
Driveway 3 (NS) at:																	
• Loop Road (EW)																	
- Without Improvements		INTERSECTION DOES NOT EXIST															
- With Improvements	**CSS**	0	0	0	**1**	0	0	0	0	0	0	0	**1**	8.7	9.1	A	A
Summerhill Dr./Grape St. (NS) at:																	
• Railroad Canyon Rd. (EW)																	
- Without Improvements	TS	2	2	1	1	1	1>	2	2	1	1	3	0	40.5	--[4]	D	F
- With Improvements	TS	2	2	1	1	1	1>	2	**3**	**1>**	1	3	0	35.2	44.8	D	D
I-15 NB Ramps (NS) at:																	
• Railroad Canyon Rd. (EW)																	
- Without Improvements	TS	0	1	2	0	0	0	2	3	0	0	2	1	31.3	34.2	C	C
I-15 SB Ramps (NS) at:																	
• Railroad Canyon Rd. (EW)																	
- Without Improvements	TS	0	0	0	2	1	1	0	2	1	1	2	0	31.5	66.7	C	F[5]
- With Improvements	TS	0	0	0	2	1	1	0	2	1	**2**	2	0	26.8	33.2	C	C
Auto Center Dr./Casino Dr. (NS) at:																	
• Diamond Dr. (EW)																	
- Without Improvements	TS	1	2	0	1	2	0	1	3	0	2	2	0	27.0	24.8	C	C

INTERSECTION ANALYSIS FOR
EXISTING PLUS AMBIENT GROWTH PLUS PROJECT PLUS CUMULATIVE DEVELOPMENT (2012) CONDITIONS

INTERSECTION	TRAFFIC CONTROL[3]	INTERSECTION APPROACH LANES[1]												DELAY[2] (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
Diamond Dr. (NS) at:																	
• Lakeshore Dr./Mission Trail (EW)																	
- Without Improvements	TS	1	2	0	2	2	0	1	2	1	1	2	1	35.7	34.7	D	C
• Driveway 5 (EW)																	
- Without Improvements		INTERSECTION DOES NOT EXIST															
- With Improvements	**CSS**	**1**	2	0	0	2	0	0	**1**	0	0	0	0	11.0	14.8	B	B
• Campbell St. (EW)																	
- Without Improvements	CSS	0	2	0	1	2	0	0	0	0	1	0	1	13.5	27.5	B	D
• Pete Lehr Dr. (EW)																	
- Without Improvements	CSS	1	2	0	0	2	1	1	0	1	0	0	0	10.0	12.0	A	B
• Sylvester St. (EW)																	
- Without Improvements	AWS	1	2	0	1	2	1	1	2	0	1	2	0	8.7	10.0	A	A
Mission Trail (NS) at:																	
• Campbell St. (EW)																	
- Without Improvements	CSS	1	2	0	1	2	1	0	1	1	0	1	0	33.9	--[4]	D	F
- With Improvements	**TS**	1	2	0	1	2	1	**1**	1	**0**	**1**	1	0	17.7	25.8	B	C
• Sylvester St./Malaga Rd. (EW)																	
- Without Improvements	TS	1	2	0	1	2	0	1	1	1	1	2	1	13.7	20.0	B	C
• Elberta Rd. (EW)																	
- Without Improvements	CSS	1	2	0	1	2	0	1	1	0	1	1	0	33.3	--[4]	D	F
- With Improvements	**TS**	1	2	0	1	2	0	1	1	0	1	1	0	9.4	11.0	A	B
• Olive St. (EW)																	
- Without Improvements	CSS	1	2	0	1	2	0	0	1	0	0	1	0	71.8	--[4]	F	F
- With Improvements	**TS**	1	2	0	1	2	0	**1**	1	0	**1**	1	0	15.6	12.3	B	B
• Lemon St. (EW)																	
- Without Improvements	CSS	0	2	1	0	2	0	0	0	0	0	1	0	26.5	--[4]	D	F
- With Improvements	**TS**	0	2	1	**1**	2	0	0	0	0	0	1	0	10.7	12.8	B	B
• Bundy Canyon Road (EW)																	
- Without Improvements	TS	1	2	0	1	2	0	0	1	0	0	1	1	35.4	40.5	D	D

INTERSECTION ANALYSIS FOR
EXISTING PLUS AMBIENT GROWTH PLUS PROJECT PLUS CUMULATIVE DEVELOPMENT (2012) CONDITIONS

INTERSECTION	TRAFFIC CONTROL[3]	INTERSECTION APPROACH LANES[1]												DELAY[2] (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
I-15 SB Ramps (NS) at:																	
• Bundy Canyon Road (EW)																	
- Without Improvements	TS	0	0	0	1	1	0	0	2	0	1	2	0	21.2	21.4	C	C
I-15 NB Ramps (NS) at:																	
• Bundy Canyon Road (EW)																	
- Without Improvements	TS	1	1	0	0	0	0	1	2	0	0	2	0	32.3	34.2	C	C

[1] 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; 1>> = Free-Right Turn Lane; 1> = Right-Turn Overlap Phasing; **1** = Improvement

[2] Delay and level of service calculated using the following analysis software:
HCS+ Version 5.21 (2005) for unsignalized intersections and SYNCHRO Version 7 Build 763 (2007) for signalized intersections.
Per the 2000 Highway Capacity Manual, overall average intersection delay and level of service are shown for intersections with a traffic signal or all way stop control. For intersections with cross street stop control, the delay and level of service for the worst individual movement (or movements sharing a single lane) are shown. (The intersection of Diamond Dr. at Sylvester St. has been analyzed using Traffix Version 8.0 R1 since the intersection could not be analyzed with the HCS+ software.)

[3] TS = Traffic Signal; CSS = Cross Street Stop; AWS = All Way Stop

[4] -- = Delay High, Intersection Unstable; Level of Service "F".

[5] Volume to capacity ratio is greater than 1.00; Level of Service "F".

NOTE: Any leg implementing a right-turn overlap phasing requires the elimination of U-turn movements from the leg immediately counter-clockwise.

Mission Trail (NS) at:

- Campbell Street (EW)
- Elberta Road (EW)
- Olive Street
- Lemon Street

As discussed previously, the intersections of Campbell Street and Lemon Street on Mission Trail operate at Level of Service "F" under existing (2009) conditions and continue to operate at unacceptable levels of service with existing lane geometrics as volumes increase. It is important to note that the unacceptable intersection operations are not due to the addition of project traffic.

All intersections are anticipated to operate at acceptable levels of service with the recommended improvements shown on Table 6-2. EAPC (2012) conditions intersection operations analysis worksheets are included in Appendix 6.4 of this report.

6.3.3 Intersection Operations Analysis, EAP (2014) Conditions

Table 6-3 summarizes the intersection operations analysis results for the study area intersections for EAP (2014) conditions, based on the respective existing geometrics at the intersections. As shown in Table 6-3, it is anticipated that all study area intersections would operate at acceptable levels of service (LOS "D" or better) during the peak hours, with existing geometrics, with the exception of the following intersections:

Avenue 6 (NS) at:

- Lakeshore Drive (EW)

Summerhill Drive/Grape Street (NS) at:

- Railroad Canyon Road (EW)

I-15 Southbound Ramps (NS) at:

- Railroad Canyon Road (EW)

TABLE 6-3 (Page 1 of 3)

INTERSECTION ANALYSIS FOR EXISTING PLUS AMBIENT GROWTH PLUS PROJECT (2014) CONDITIONS

INTERSECTION	TRAFFIC CONTROL[3]	INTERSECTION APPROACH LANES[1]												DELAY[2] (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
Main St. (NS) at:																	
• Lakeshore Dr. (EW)																	
- Without Improvements	AWS	0	0	0	1	0	1	0	1	0	0	1	1>>	12.7	20.1	B	C
Avenue 6 (NS) at:																	
• Lakeshore Dr. (EW)																	
- Without Improvements	CSS	0	0	0	0	1	0	1	1	0	0	1	0	20.6	44.3	C	E
- With Improvements	**TS**	0	0	0	0	1	0	1	1	0	0	1	0	13.0	9.1	B	A
Diamond Circle/Loop Road (NS) at:																	
• Driveway 1 (EW)																	
- Without Improvements		INTERSECTION DOES NOT EXIST															
- With Improvements	**CSS**	**1**	**1**	0	**1**	**1**	0	0	**1**	0	0	**1**	0	10.2	16.6	B	C
• Sylvester St. (EW)																	
- Without Improvements	CSS	0	1	0	0	1	0	0	1	0	0	1	1	9.9	12.1	A	B
Driveway 3 (NS) at:																	
• Loop Road (EW)																	
- Without Improvements		INTERSECTION DOES NOT EXIST															
- With Improvements	**TS**	**1**	**1**	0	**1**	**1**	0	**1**	**1**	0	**1**	**1**	0	6.0	13.2	A	B
Driveway 4 (NS) at:																	
• Sylvester Street (EW)																	
- Without Improvements		INTERSECTION DOES NOT EXIST															
- With Improvements	**CSS**	0	**1**	0	0	0	0	0	1	0	**1**	1	0	8.8	9.6	A	A
Summerhill Dr./Grape St. (NS) at:																	
• Railroad Canyon Rd. (EW)																	
- Without Improvements	TS	2	2	1	1	1	1>	2	2	1	1	3	0	35.5	87.8	D	F
- With Improvements	TS	2	2	1	1	1	1>	2	2	**1>**	1	3	0	32.9	50.8	C	D
I-15 NB Ramps (NS) at:																	
• Railroad Canyon Rd. (EW)																	
- Without Improvements	TS	0	1	2	0	0	0	2	3	0	0	2	1	29.6	27.8	C	C

TABLE 6-3 (Page 2 of 3)

INTERSECTION ANALYSIS FOR EXISTING PLUS AMBIENT GROWTH PLUS PROJECT (2014) CONDITIONS

INTERSECTION	TRAFFIC CONTROL[3]	INTERSECTION APPROACH LANES[1]												DELAY[2] (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
I-15 SB Ramps (NS) at:																	
• Railroad Canyon Rd. (EW)																	
- Without Improvements	TS	0	0	0	2	1	1	0	2	1	1	2	0	24.9	45.9	C	F[5]
- With Improvements	TS	0	0	0	2	1	1	0	2	1	**2**	2	0	22.0	30.4	C	C
Auto Center Dr./Casino Dr. (NS) at:																	
• Diamond Dr. (EW)																	
- Without Improvements	TS	1	2	0	1	2	0	1	3	0	2	2	0	26.3	25.2	C	C
Diamond Dr. (NS) at:																	
• Lakeshore Dr./Mission Trail (EW)																	
- Without Improvements	TS	1	2	0	2	2	0	1	2	1	1	2	1	35.6	36.6	D	D
• Driveway 5 (EW)																	
- Without Improvements		INTERSECTION DOES NOT EXIST															
- With Improvements	**CSS**	**1**	2	0	0	2	0	0	**1**	0	0	0	0	12.6	28.7	B	D
• Campbell St. (EW)																	
- Without Improvements	CSS	1	2	0	1	2	0	0	1	0	1	1	0	52.0	--[4]	F	F
- With Improvements	**TS**	1	2	0	1	2	0	**1**	1	0	1	1	0	23.9	34.8	C	C
• Pete Lehr Dr./Driveway 6 (EW)																	
- Without Improvements	CSS	1	2	0	0	2	1	0	1	0	0	0	0	9.0	10.2	A	B
• Sylvester St. (EW)																	
- Without Improvements	AWS	1	2	0	1	2	1	1	2	0	1	2	0	8.6	9.6	A	A
Mission Trail (NS) at:																	
• Campbell St. (EW)																	
- Without Improvements	CSS	1	2	0	1	2	1	0	1	1	0	1	0	--[4]	--[4]	F	F
- With Improvements	**TS**	1	2	0	1	2	1	**1**	1	**0**	**1**	1	0	21.3	36.5	C	D
• Sylvester St./Malaga Rd. (EW)																	
- Without Improvements	TS	1	2	0	1	2	0	1	1	1	1	2	1	16.6	26.2	B	C
• Elberta Rd. (EW)																	
- Without Improvements	CSS	1	2	0	1	2	0	1	1	0	1	1	0	38.9	93.0	E	F

INTERSECTION ANALYSIS FOR EXISTING PLUS AMBIENT GROWTH PLUS PROJECT (2014) CONDITIONS

INTERSECTION	TRAFFIC CONTROL[3]	INTERSECTION APPROACH LANES[1]												DELAY[2] (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
Mission Trail (NS) at:																	
• Olive St. (EW)																	
- Without Improvements	CSS	0	2	0	1	2	0	0	0	0	0	1	0	42.4	--[4]	E	F
- With Improvements	**TS**	0	2	0	1	2	0	0	0	0	0	1	0	10.1	10.5	B	B
• Lemon St. (EW)																	
- Without Improvements	CSS	0	2	1	0	2	0	0	0	0	0	1	0	27.4	--[4]	D	F
- With Improvements	**TS**	0	2	1	**1**	2	0	0	0	0	0	1	0	8.0	10.8	A	B
• Bundy Canyon Road (EW)																	
- Without Improvements	TS	1	2	0	1	2	0	0	1	0	0	1	1	35.3	41.6	D	D
I-15 SB Ramps (NS) at:																	
• Bundy Canyon Road (EW)																	
- Without Improvements	TS	0	0	0	1	1	0	0	2	0	1	2	0	24.4	19.9	C	B
I-15 NB Ramps (NS) at:																	
• Bundy Canyon Road (EW)																	
- Without Improvements	TS	1	1	0	0	0	0	1	2	0	0	2	0	34.8	32.0	C	C

[1] 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; 1>> = Free-Right Turn Lane; 1> = Right-Turn Overlap Phasing; **1** = Improvement

[2] Delay and level of service calculated using the following analysis software:
HCS+ Version 5.21 (2005) for unsignalized intersections and SYNCHRO Version 7 Build 763 (2007) for signalized intersections.
Per the 2000 Highway Capacity Manual, overall average intersection delay and level of service are shown for intersections with a traffic signal or all way stop control. For intersections with cross street stop control, the delay and level of service for the worst individual movement (or movements sharing a single lane) are shown. (The intersection of Diamond Dr. at Sylvester St. has been analyzed using Traffix Version 8.0 R1 since the intersection could not be analyzed with the HCS+ software.)

[3] TS = Traffic Signal; CSS = Cross Street Stop; AWS = All Way Stop

[4] -- = Delay High, Intersection Unstable; Level of Service "F".

[5] Volume to capacity ratio is greater than 1.00; Level of Service "F".

NOTE: Any leg implementing a right-turn overlap phasing requires the elimination of U-turn movements from the leg immediately counter-clockwise.

Diamond Drive (NS) at:

- Campbell Street (EW)

Mission Trail (NS) at:

- Campbell Street (EW)
- Elberta Road (EW)
- Olive Street
- Lemon Street

As discussed previously, the intersections of Campbell Street and Lemon Street on Mission Trail operate at Level of Service "F" under existing (2009) conditions and due not fail due to the addition of project traffic.

The study area intersections are anticipated to operate at acceptable levels of service with the improvements identified on Table 6-3, with the exception of the intersection of Mission Trail at Elberta Road. The intersection of Elberta Road on Mission Trail is anticipated to operate at unacceptable levels of service, due to projected high delays for left turning vehicles from the minor leg. Although a traffic signal at Mission Trail and Elberta Road is not warranted under EAP (2014) traffic conditions, it is anticipated that a traffic signal could potentially be warranted as through volumes on Elberta Road increase.

EAP (2014) conditions intersection operations analysis worksheets are included in Appendix 6.5 of this report.

6.3.4 Intersection Operations Analysis, EAPC (2014) Conditions

Table 6-4 summarizes the intersection operations analysis results for the study area intersections for EAPC (2014) conditions, based on the respective existing geometrics at the intersections. As shown in Table 6-4, it is anticipated that the study area intersections will operate at unacceptable levels of service during the peak hours with existing geometrics, with the exception of the following intersections which are anticipated to operate at Level of Service "D" or better in the peak hours without improvements:

INTERSECTION ANALYSIS FOR EXISTING PLUS AMBIENT GROWTH PLUS PROJECT PLUS CUMULATIVE DEVELOPMENT (2014) CONDITIONS

INTERSECTION	TRAFFIC CONTROL[3]	INTERSECTION APPROACH LANES[1] NORTH-BOUND L	T	R	SOUTH-BOUND L	T	R	EAST-BOUND L	T	R	WEST-BOUND L	T	R	DELAY[2] (SECS.) AM	PM	LEVEL OF SERVICE AM	PM
Main St. (NS) at:																	
* Lakeshore Dr. (EW)																	
- Without Improvements	AWS	0	0	0	1	0	1	0	1	0	0	1	1>>	17.9	--[4]	C	F
- With Improvements	**TS**	0	0	0	1	0	1	0	1	0	0	1	1>>	5.0	8.3	A	A
Avenue 6 (NS) at:																	
* Lakeshore Dr. (EW)																	
- Without Improvements	CSS	0	0	0	0	1	0	1	1	0	0	1	0	26.2	--[4]	D	F
- With Improvements	**TS**	0	0	0	0	1	0	1	1	0	0	1	0	10.3	13.5	B	B
Diamond Circle/Loop Road (NS) at:																	
* Driveway 1 (EW)																	
- Without Improvements		INTERSECTION DOES NOT EXIST															
- With Improvements	**CSS**	**1**	**1**	0	**1**	**1**	0	**1**	**1**	0	**1**	**1**	0	10.2	16.6	B	C
* Sylvester St. (EW)																	
- Without Improvements	CSS	0	1	0	0	1	0	0	1	0	0	1	1	9.4	10.2	A	B
Driveway 3 (NS) at:																	
* Loop Road (EW)																	
- Without Improvements		INTERSECTION DOES NOT EXIST															
- With Improvements	**TS**	**1**	**1**	0	**1**	**1**	0	**1**	**1**	0	**1**	**1**	0	6.0	13.2	A	B
Driveway 4 (NS) at:																	
* Sylvester Street (EW)																	
- Without Improvements		INTERSECTION DOES NOT EXIST															
- With Improvements	**CSS**	0	**1**	0	0	0	0	0	1	0	**1**	1	0	8.8	9.6	A	A
Summerhill Dr./Grape St. (NS) at:																	
* Railroad Canyon Rd. (EW)																	
- Without Improvements	TS	2	2	1	1	1	1>	2	2	1	1	3	0	63.9	--[4]	E	F
- With Improvements	TS	2	2	1	**2**	**2**	1>	2	**3**	**1>**	1	3	0	38.7	42.4	D	D
I-15 NB Ramps (NS) at:																	
* Railroad Canyon Rd. (EW)																	
- Without Improvements	TS	0	1	2	0	0	0	2	3	0	0	2	1	75.5	75.7	F[5]	F[5]
- With Improvements	TS	**1**	1	**1>>**	0	0	0	2	3	0	0	**3**	1	17.9	16.6	B	B

INTERSECTION ANALYSIS FOR
EXISTING PLUS AMBIENT GROWTH PLUS PROJECT PLUS CUMULATIVE DEVELOPMENT (2014) CONDITIONS

INTERSECTION	TRAFFIC CONTROL[3]	INTERSECTION APPROACH LANES[1]												DELAY[2] (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
I-15 SB Ramps (NS) at:																	
* Railroad Canyon Rd. (EW)																	
- Without Improvements	TS	0	0	0	2	1	1	0	2	1	1	2	0	62.7	--[4]	F[5]	F
- With Improvements	TS	0	0	0	2	1	**2**	0	**3**	1	**2**	2	0	24.2	30.4	C	C
Auto Center Dr./Casino Dr. (NS) at:																	
* Diamond Dr. (EW)																	
- Without Improvements	TS	1	2	0	1	2	0	1	3	0	2	2	0	28.9	48.7	C	F[5]
- With Improvements	TS	1	2	0	1	2	0	1	3	0	2	**3**	0	25.5	31.2	C	C
Diamond Dr. (NS) at:																	
* Lakeshore Dr./Mission Trail (EW)																	
- Without Improvements	TS	1	2	0	2	2	0	1	2	1	1	2	1	36.7	--[4]	D	F
- With Improvements	TS	**2**	2	0	2	2	0	**2**	2	1	1	2	**1>**	30.7	51.0	C	D
* Driveway 5 (EW)																	
- Without Improvements		INTERSECTION DOES NOT EXIST															
- With Improvements	**TS**	**1**	2	0	0	2	0	**1**	0	**1**	0	0	0	6.1	14.0	A	B
* Campbell St. (EW)																	
- Without Improvements	CSS	1	2	0	1	2	0	0	1	0	1	1	0	--[4]	--[4]	F	F
- With Improvements	**TS**	1	2	0	1	2	0	**1**	1	0	1	1	0	22.1	34.0	C	C
* Pete Lehr Dr./Driveway 6 (EW)																	
- Without Improvements	CSS	1	2	0	0	2	1	0	1	0	0	0	0	9.9	14.7	A	B
* Sylvester St. (EW)																	
- Without Improvements	AWS	1	2	0	1	2	1	1	2	0	1	2	0	11.4	17.5	B	C
Mission Trail (NS) at:																	
* Campbell St. (EW)																	
- Without Improvements	CSS	1	2	0	1	2	1	0	1	1	0	1	0	--[4]	--[4]	F	F
- With Improvements	**TS**	1	2	0	1	2	1	**1**	1	**0**	**1**	1	0	24.7	42.2	C	D
* Sylvester St./Malaga Rd. (EW)																	
- Without Improvements	TS	1	2	0	1	2	0	1	1	1	1	2	1	17.8	33.0	B	C
* Elberta Rd. (EW)																	
- Without Improvements	CSS	1	2	0	1	2	0	1	1	0	1	1	0	67.1	--[4]	F	F
- With Improvements	**TS**	1	2	0	1	2	0	1	1	0	1	1	0	11.9	14.6	B	B
* Olive St. (EW)																	
- Without Improvements	CSS	1	2	0	1	2	0	0	1	0	0	1	0	--[4]	--[4]	F	F
- With Improvements	**TS**	1	2	0	1	2	0	**1**	1	0	**1**	1	0	13.8	20.4	B	C

INTERSECTION ANALYSIS FOR EXISTING PLUS AMBIENT GROWTH PLUS PROJECT PLUS CUMULATIVE DEVELOPMENT (2014) CONDITIONS

INTERSECTION	TRAFFIC CONTROL[3]	INTERSECTION APPROACH LANES[1]												DELAY[2] (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
Mission Trail (NS) at:																	
• Lemon St. (EW)																	
- Without Improvements	CSS	0	2	1	0	2	0	0	0	0	0	1	0	53.7	--[4]	F	F
- With Improvements	**TS**	0	2	1	**1**	2	0	0	0	0	0	1	0	10.6	15.6	B	B
• Bundy Canyon Road (EW)																	
- Without Improvements	TS	1	2	0	1	2	0	0	1	0	0	1	1	37.5	60.6	D	F[5]
- With Improvements	TS	1	2	0	**2**	2	0	**1**	1	0	**1**	1	**1>**	33.2	36.6	C	D
I-15 SB Ramps (NS) at:																	
• Bundy Canyon Road (EW)																	
- Without Improvements	TS	0	0	0	1	1	0	0	2	0	1	2	0	21.8	23.8	C	C
I-15 NB Ramps (NS) at:																	
• Bundy Canyon Road (EW)																	
- Without Improvements	TS	1	1	0	0	0	0	1	2	0	0	2	0	36.3	40.7	D	D

[1] 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; 1>> = Free-Right Turn Lane; 1> = Right-Turn Overlap Phasing; **1** = Improvement

[2] Delay and level of service calculated using the following analysis software:
HCS+ Version 5.21 (2005) for unsignalized intersections and SYNCHRO Version 7 Build 763 (2007) for signalized intersections.
Per the 2000 Highway Capacity Manual, overall average intersection delay and level of service are shown for intersections with a traffic signal or all way stop control. For intersections with cross street stop control, the delay and level of service for the worst individual movement (or movements sharing a single lane) are shown. (The intersection of Diamond Dr. at Sylvester St. has been analyzed using Traffix Version 8.0 R1 since the intersection could not be analyzed with the HCS+ software.)

[3] TS = Traffic Signal; CSS = Cross Street Stop; AWS = All Way Stop

[4] -- = Delay High, Intersection Unstable; Level of Service "F".

[5] Volume to capacity ratio is greater than 1.00; Level of Service "F".

NOTE: Any leg implementing a right-turn overlap phasing requires the elimination of U-turn movements from the leg immediately counter-clockwise.

Diamond Circle (Loop Road) (NS) at:

- Sylvester Street (EW)

Diamond Drive (NS) at:

- Sylvester Street (EW)

Mission Trail (NS) at:

- Sylvester Street/Malaga Road (EW)

I-15 Southbound Ramps (NS) at:

- Bundy Canyon Road (EW)

I-15 Northbound Ramps (NS) at:

- Bundy Canyon Road (EW)

All intersections are anticipated to operate at acceptable levels of service with the recommended improvements shown on Table 6-4. EAPC (2014) conditions intersection operations analysis worksheets are included in Appendix 6.6 of this report.

6.3.5 Intersection Operations Analysis, EAP (2016) Conditions

Table 6-5 summarizes the intersection operations analysis results for the study area intersections for EAP (2016) conditions, based on the respective existing geometrics at the intersections. As shown in Table 6-5, it is anticipated that all study area intersections would operate at acceptable levels of service (LOS "D" or better) during the peak hours, with existing geometrics, with the exception of the following intersections:

Avenue 6 (NS) at:

- Lakeshore Drive (EW)

Summerhill Drive/Grape Street (NS) at:

- Railroad Canyon Road (EW)

INTERSECTION ANALYSIS FOR EXISTING PLUS AMBIENT GROWTH PLUS PROJECT (2016) CONDITIONS

INTERSECTION	TRAFFIC CONTROL[3]	INTERSECTION APPROACH LANES[1] NORTH-BOUND L	T	R	SOUTH-BOUND L	T	R	EAST-BOUND L	T	R	WEST-BOUND L	T	R	DELAY[2] (SECS.) AM	PM	LEVEL OF SERVICE AM	PM
Main St. (NS) at:																	
• Lakeshore Dr. (EW)																	
- Without Improvements	AWS	0	0	0	1	0	1	0	1	0	0	1	1>>	14.3	26.7	B	D
Avenue 6 (NS) at:																	
• Lakeshore Dr. (EW)																	
- Without Improvements	CSS	0	0	0	0	1	0	1	1	0	0	1	0	23.3	60.4	C	F
- With Improvements	**TS**	0	0	0	0	1	0	1	1	0	0	1	0	14.6	12.6	B	B
Diamond Circle/Loop Road (NS) at:																	
• Driveway 1 (EW)																	
- Without Improvements		INTERSECTION DOES NOT EXIST															
- With Improvements	**CSS**	**1**	**1**	0	**1**	**1**	0	0	**1**	0	0	**1**	0	10.3	16.7	B	C
• Sylvester St. (EW)																	
- Without Improvements	CSS	0	1	0	0	1	0	0	1	0	0	1	1	10.0	12.1	A	B
Driveway 2 (NS) at:																	
• Lakeshore Drive (EW)																	
- Without Improvements		INTERSECTION DOES NOT EXIST															
- With Improvements	**TS**	1	1	0	1	1	0	1	2	1	1	2	1	31.0	15.6	C	B
Driveway 3 (NS) at:																	
• Loop Road (EW)																	
- Without Improvements		INTERSECTION DOES NOT EXIST															
- With Improvements	**TS**	**1**	**1**	0	**1**	**1**	0	**1**	**1**	0	**1**	**1**	0	6.1	13.3	A	B
Driveway 4 (NS) at:																	
• Sylvester Street (EW)																	
- Without Improvements		INTERSECTION DOES NOT EXIST															
- With Improvements	**CSS**	0	**1**	0	0	0	0	0	1	0	**1**	1	0	8.8	9.6	A	A
Summerhill Dr./Grape St. (NS) at:																	
• Railroad Canyon Rd. (EW)																	
- Without Improvements	TS	2	2	1	1	1	1>	2	2	1	1	3	0	38.0	--[4]	D	F
- With Improvements	TS	2	2	1	**2**	**2**	1>	2	2	**1>**	1	3	0	33.6	39.4	C	D

INTERSECTION ANALYSIS FOR EXISTING PLUS AMBIENT GROWTH PLUS PROJECT (2016) CONDITIONS

INTERSECTION	TRAFFIC CONTROL[3]	INTERSECTION APPROACH LANES[1]												DELAY[2] (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
I-15 NB Ramps (NS) at:																	
• Railroad Canyon Rd. (EW)																	
- Without Improvements	TS	0	1	2	0	0	0	2	3	0	0	2	1	33.2	28.9	C	C
I-15 SB Ramps (NS) at:																	
• Railroad Canyon Rd. (EW)																	
- Without Improvements	TS	0	0	0	2	1	1	0	2	1	1	2	0	24.6	58.1	C	F[5]
- With Improvements	TS	0	0	0	2	1	1	0	2	1	**2**	2	0	20.3	30.7	C	C
Auto Center Dr./Casino Dr. (NS) at:																	
• Diamond Dr. (EW)																	
- Without Improvements	TS	1	2	0	1	2	0	1	3	0	2	2	0	28.4	26.4	C	C
Diamond Dr. (NS) at:																	
• Lakeshore Dr./Mission Trail (EW)																	
- Without Improvements	TS	1	2	0	2	2	0	1	2	1	1	2	1	35.6	46.0	D	D
• Driveway 5 (EW)																	
- Without Improvements		INTERSECTION DOES NOT EXIST															
- With Improvements	**TS**	**1**	2	0	0	2	0	**1**	0	**1**	0	0	0	9.0	20.0	A	C
• Campbell St. (EW)																	
- Without Improvements	CSS	1	2	0	1	2	0	0	1	0	1	1	0	--[4]	--[4]	F	F
- With Improvements	**TS**	1	2	0	1	2	0	**1**	1	0	1	1	0	31.1	30.0	C	C
• Pete Lehr Dr./Driveway 6 (EW)																	
- Without Improvements	CSS	1	2	0	1	2	1	0	1	0	0	1	0	9.8	13.0	A	B
• Driveway 7 (EW)																	
- Without Improvements		INTERSECTION DOES NOT EXIST															
- With Improvements	**CSS**	0	2	0	0	2	0	0	0	0	0	0	**1**	8.7	9.1	A	A
• Sylvester St. (EW)																	
- Without Improvements	AWS	1	2	0	1	2	1	1	2	0	1	2	0	8.8	10.4	A	B
Driveway 8 (NS) at:																	
• Sylvester Street (EW)																	
- Without Improvements		INTERSECTION DOES NOT EXIST															
- With Improvements	**CSS**	0	0	0	0	0	**1**	0	2	0	0	2	0	8.9	9.3	A	A

INTERSECTION ANALYSIS FOR EXISTING PLUS AMBIENT GROWTH PLUS PROJECT (2016) CONDITIONS

INTERSECTION	TRAFFIC CONTROL[3]	INTERSECTION APPROACH LANES[1]												DELAY[2] (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
Mission Trail (NS) at:																	
• Campbell St. (EW)																	
- Without Improvements	CSS	1	2	0	1	2	1	0	1	1	0	1	0	--[4]	--[4]	F	F
- With Improvements	**TS**	1	2	0	1	2	1	**1**	1	**0**	**1**	1	0	18.9	35.0	B	D
• Sylvester St./Malaga Rd. (EW)																	
- Without Improvements	TS	1	2	0	1	2	0	1	1	1	1	2	1	19.0	28.6	B	C
• Elberta Rd. (EW)																	
- Without Improvements	CSS	1	2	0	1	2	0	0	1	0	0	1	0	46.4	--[4]	E	F
• Olive St. (EW)																	
- Without Improvements	CSS	0	2	0	1	2	0	0	0	0	0	1	0	61.3	--[4]	F	F
- With Improvements	**TS**	0	2	0	1	2	0	0	0	0	0	1	0	9.8	11.2	A	B
• Lemon St. (EW)																	
- Without Improvements	CSS	0	2	1	0	2	0	0	0	0	0	1	0	31.6	--[4]	D	F
- With Improvements	**TS**	0	2	1	**1**	2	0	0	0	0	0	1	0	8.6	13.4	A	B
• Bundy Canyon Road (EW)																	
- Without Improvements	TS	1	2	0	1	2	0	0	1	0	0	1	1	36.1	44.9	D	D
I-15 SB Ramps (NS) at:																	
• Bundy Canyon Road (EW)																	
- Without Improvements	TS	0	0	0	1	1	0	0	2	0	1	2	0	25.3	19.5	C	B
I-15 NB Ramps (NS) at:																	
• Bundy Canyon Road (EW)																	
- Without Improvements	TS	1	1	0	0	0	0	1	2	0	0	2	0	37.6	33.7	D	C

[1] 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; 1>> = Free-Right Turn Lane; 1> = Right-Turn Overlap Phasing; **1** = Improvement

[2] Delay and level of service calculated using the following analysis software:
HCS+ Version 5.21 (2005) for unsignalized intersections and SYNCHRO Version 7 Build 763 (2007) for signalized intersections.
Per the 2000 Highway Capacity Manual, overall average intersection delay and level of service are shown for intersections with a traffic signal or all way stop control. For intersections with cross street stop control, the delay and level of service for the worst individual movement (or movements sharing a single lane) are shown. (The intersection of Diamond Dr. at Sylvester St. has been analyzed using Traffix Version 8.0 R1 since the intersection could not be analyzed with the HCS+ software.)

[3] TS = Traffic Signal; CSS = Cross Street Stop; AWS = All Way Stop

[4] -- = Delay High, Intersection Unstable; Level of Service "F".

[5] Volume to capacity ratio is greater than 1.00; Level of Service "F".

NOTE: Any leg implementing a right-turn overlap phasing requires the elimination of U-turn movements from the leg immediately counter-clockwise.

I-15 Southbound Ramps (NS) at:

- Railroad Canyon Road (EW)

Diamond Drive (NS) at:

- Campbell Street (EW)

Mission Trail (NS) at:

- Campbell Street (EW)
- Elberta Road (EW)
- Olive Street
- Lemon Street

As discussed previously, the intersections of Campbell Street and Lemon Street on Mission Trail operate at Level of Service "F" under existing (2009) conditions and due not fail due to the addition of project traffic.

The study area intersections are anticipated to operate at acceptable levels of service with the improvements identified on Table 6-5, with the exception of the intersection of Mission Trail at Elberta Road. The intersection of Elberta Road on Mission Trail is anticipated to operate at unacceptable levels of service, due to projected high delays for left turning vehicles from the minor leg. Although a traffic signal at Mission Trail and Elberta Road is not warranted under EAP (2016) traffic conditions, it is anticipated that a traffic signal could potentially be warranted as through volumes on Elberta Road increase.

EAP (2016) conditions intersection operations analysis worksheets are included in Appendix 6.7 of this report.

6.3.6 Intersection Operations Analysis, EAPC (2016) Conditions

Table 6-6 summarizes the intersection operations analysis results for the study area intersections for EAPC (2016) conditions, based on the respective existing geometrics at the intersections. As shown in Table 6-6, it is anticipated that the study area intersections will operate at unacceptable levels of service during the peak hours with existing geometrics, with the exception of the following intersections which are anticipated to operate at Level of Service "D" or better in the peak hours without improvements:

INTERSECTION ANALYSIS FOR EXISTING PLUS AMBIENT GROWTH PLUS PROJECT PLUS CUMULATIVE DEVELOPMENT (2016) CONDITIONS

INTERSECTION	TRAFFIC CONTROL[3]	INTERSECTION APPROACH LANES[1] NORTH-BOUND L	T	R	SOUTH-BOUND L	T	R	EAST-BOUND L	T	R	WEST-BOUND L	T	R	DELAY[2] (SECS.) AM	PM	LEVEL OF SERVICE AM	PM
Main St. (NS) at:																	
* Lakeshore Dr. (EW)																	
- Without Improvements	AWS	0	0	0	1	0	1	0	1	0	0	1	1>>	26.3	--[4]	D	F
- With Improvements	**TS**	0	0	0	1	0	1	0	1	0	0	1	1>>	5.8	12.3	A	B
Avenue 6 (NS) at:																	
* Lakeshore Dr. (EW)																	
- Without Improvements	CSS	0	0	0	0	1	0	1	1	0	0	1	0	34.7	--[4]	D	F
- With Improvements	**TS**	0	0	0	0	1	0	1	1	0	0	1	0	10.3	16.9	B	B
Diamond Circle/Loop Road (NS) at:																	
* Driveway 1 (EW)																	
- Without Improvements		INTERSECTION DOES NOT EXIST															
- With Improvements	**CSS**	**1**	**1**	0	**1**	**1**	0	0	**1**	0	0	**1**	0	10.3	16.7	B	C
* Sylvester St. (EW)																	
- Without Improvements	CSS	0	1	0	0	1	0	0	1	0	0	1	1	9.4	10.1	A	B
Driveway 2 (NS) at:																	
* Lakeshore Drive (EW)																	
- Without Improvements		INTERSECTION NOT ANALYZED															
- With Improvements	**TS**	1	1	0	1	1	0	1	2	1	1	2	1	10.7	17.3	B	B
Driveway 3 (NS) at:																	
* Loop Road (EW)																	
- Without Improvements		INTERSECTION DOES NOT EXIST															
- With Improvements	**TS**	**1**	**1**	0	**1**	**1**	0	**1**	**1**	0	**1**	**1**	0	9.1	12.2	A	B
Driveway 4 (NS) at:																	
* Sylvester Street (EW)																	
- Without Improvements		INTERSECTION DOES NOT EXIST															
- With Improvements	**CSS**	0	**1**	0	0	0	0	0	1	0	**1**	1	0	8.8	9.6	A	A
Summerhill Dr./Grape St. (NS) at:																	
* Railroad Canyon Rd. (EW)																	
- Without Improvements	TS	2	2	1	1	1	1>	2	2	1	1	3	0	88.0	--[4]	F	F
- With Improvements	TS	2	2	1	**2**	**2**	1>	2	**3**	**1>**	**2**	3	0	55.0	51.6	D	D
I-15 NB Ramps (NS) at:																	
* Railroad Canyon Rd. (EW)																	
- Without Improvements	TS	0	1	2	0	0	0	2	3	0	0	2	1	--[4]	--[4]	F	F
- With Improvements	TS	**1**	1	**1>>**	0	0	0	2	3	0	0	**3**	1	24.4	24.0	C	C

INTERSECTION ANALYSIS FOR EXISTING PLUS AMBIENT GROWTH PLUS PROJECT PLUS CUMULATIVE DEVELOPMENT (2016) CONDITIONS

INTERSECTION	TRAFFIC CONTROL[3]	INTERSECTION APPROACH LANES[1]												DELAY[2] (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
I-15 SB Ramps (NS) at:																	
• Railroad Canyon Rd. (EW)																	
- Without Improvements	TS	0	0	0	2	1	1	0	2	1	1	2	0	--[4]	--[4]	F	F
- With Improvements	TS	0	0	0	2	1	**2**	0	**3**	1	**2**	2	0	33.0	43.3	C	D
Auto Center Dr./Casino Dr. (NS) at:																	
• Diamond Dr. (EW)																	
- Without Improvements	TS	1	2	0	1	2	0	1	3	0	2	2	0	34.4	94.2	C	F
- With Improvements	TS	1	2	0	1	2	0	**2**	3	0	2	**3**	0	14.7	34.7	B	C
Diamond Dr. (NS) at:																	
• Lakeshore Dr./Mission Trail (EW)																	
- Without Improvements	TS	1	2	0	2	2	0	1	2	1	1	2	1	39.3	--[4]	D	F
- With Improvements	TS	**2**	2	0	2	2	**1>**	**2**	2	1	1	2	**1>**	37.1	53.7	D	D
• Driveway 5 (EW)																	
- Without Improvements		INTERSECTION DOES NOT EXIST															
- With Improvements	**TS**	**1**	2	0	0	2	0	**1**	0	**1**	0	0	0	5.8	14.1	A	B
• Campbell St. (EW)																	
- Without Improvements	CSS	1	2	0	1	2	0	0	1	0	1	1	0	--[4]	--[4]	F	F
- With Improvements	**TS**	1	2	0	1	2	0	**1**	1	0	1	1	0	17.3	27.1	B	C
• Pete Lehr Dr./Driveway 6 (EW)																	
- Without Improvements	CSS	1	2	0	1	2	1	0	1	0	0	1	0	12.0	32.8	B	D
• Driveway 7 (EW)																	
- Without Improvements		INTERSECTION DOES NOT EXIST															
- With Improvements	**CSS**	0	2	0	0	2	0	0	0	0	0	0	**1**	10.6	10.8	B	B
• Sylvester St. (EW)																	
- Without Improvements	AWS	1	2	0	1	2	1	1	2	0	1	2	0	15.0	44.3	C	E
- With Improvements	**TS**	1	2	0	1	2	1	1	2	0	1	2	0	20.8	23.0	C	C
Driveway 8 (NS) at:																	
• Sylvester Street (EW)																	
- Without Improvements		INTERSECTION DOES NOT EXIST															
- With Improvements	**CSS**	0	0	0	0	0	**1**	0	2	0	0	2	0	9.0	9.8	A	A
Mission Trail (NS) at:																	
• Campbell St. (EW)																	
- Without Improvements	CSS	1	2	0	1	2	1	0	1	1	0	1	0	--[4]	--[4]	F	F
- With Improvements	**TS**	1	2	0	1	2	1	**1**	1	**0**	**1**	1	0	20.7	41.4	C	D

INTERSECTION ANALYSIS FOR EXISTING PLUS AMBIENT GROWTH PLUS PROJECT PLUS CUMULATIVE DEVELOPMENT (2016) CONDITIONS

INTERSECTION	TRAFFIC CONTROL[3]	INTERSECTION APPROACH LANES[1] NORTH-BOUND L	T	R	SOUTH-BOUND L	T	R	EAST-BOUND L	T	R	WEST-BOUND L	T	R	DELAY[2] (SECS.) AM	PM	LEVEL OF SERVICE AM	PM
Mission Trail (NS) at:																	
• Sylvester St./Malaga Rd. (EW)																	
- Without Improvements	TS	1	2	0	1	2	0	1	1	1	1	2	1	20.5	37.1	C	D
• Elberta Rd. (EW)																	
- Without Improvements	CSS	1	2	0	1	2	0	1	1	0	1	1	0	--[4]	--[4]	F	F
- With Improvements	**TS**	1	2	0	1	2	0	1	1	0	1	1	0	11.5	20.5	B	C
• Olive St. (EW)																	
- Without Improvements	CSS	1	2	0	1	2	0	0	1	0	0	1	0	--[4]	--[4]	F	F
- With Improvements	**TS**	1	2	0	1	2	0	**1**	1	0	**1**	1	0	14.2	20.4	B	C
• Lemon St. (EW)																	
- Without Improvements	CSS	0	2	1	0	2	0	0	0	0	0	1	0	97.7	--[4]	F	F
- With Improvements	**TS**	0	2	1	**1**	2	0	0	0	0	**1**	**0**	**1**	9.4	14.6	A	B
• Bundy Canyon Road (EW)																	
- Without Improvements	TS	1	2	0	1	2	0	0	1	0	0	1	1	39.6	--[4]	F	F
- With Improvements	TS	1	2	0	**2**	2	0	**1**	1	0	**1**	1	**1>**	36.4	42.6	D	D
I-15 SB Ramps (NS) at:																	
• Bundy Canyon Road (EW)																	
- Without Improvements	TS	0	0	0	1	1	0	0	2	0	1	2	0	26.8	22.9	C	C
I-15 NB Ramps (NS) at:																	
• Bundy Canyon Road (EW)																	
- Without Improvements	TS	1	1	0	0	0	0	1	2	0	0	2	0	39.7	56.1	D	E
- With Improvements	TS	1	1	**1**	0	0	0	1	2	0	0	2	0	39.2	47.7	D	D

[1] 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; 1>> = Free-Right Turn Lane; 1> = Right-Turn Overlap Phasing; **1** = Improvement

[2] Delay and level of service calculated using the following analysis software:
HCS+ Version 5.21 (2005) for unsignalized intersections and SYNCHRO Version 7 Build 763 (2007) for signalized intersections.
Per the 2000 Highway Capacity Manual, overall average intersection delay and level of service are shown for intersections with a traffic signal or all way stop control. For intersections with cross street stop control, the delay and level of service for the worst individual movement (or movements sharing a single lane) are shown. (The intersection of Diamond Dr. at Sylvester St. has been analyzed using Traffix Version 8.0 R1 since the intersection could not be analyzed with the HCS+ software.)

[3] TS = Traffic Signal; CSS = Cross Street Stop; AWS = All Way Stop

[4] -- = Delay High, Intersection Unstable; Level of Service "F".

NOTE: Any leg implementing a right-turn overlap phasing requires the elimination of U-turn movements from the leg immediately counter-clockwise.

Diamond Circle (Loop Road) (NS) at:

- Sylvester Street (EW)

Mission Trail (NS) at:

- Sylvester Street/Malaga Road (EW)

I-15 Southbound Ramps (NS) at:

- Bundy Canyon Road (EW)

All intersections are anticipated to operate at acceptable levels of service with the recommended improvements shown on Table 6-6. EAPC (2016) conditions intersection operations analysis worksheets are included in Appendix 6.8 of this report.

6.3.7 Intersection Operations Analysis, General Plan Buildout With Project Conditions

Table 6-7 summarizes the intersection operations analysis results for the study area intersections for General Plan buildout with project conditions, based on the respective existing geometrics at the intersections. As shown in Table 6-7, it is anticipated that the study area intersections will operate at unacceptable levels of service during the peak hours with existing geometrics, with the exception of the following intersection which is anticipated to operate at Level of Service "D" or better in the peak hours without improvements:

Diamond Circle (Loop Road) (NS) at:

- Sylvester Street (EW)

All intersections are anticipated to operate at acceptable levels of service with the recommended improvements shown on Table 6-7. General Plan buildout with project conditions intersection operations analysis worksheets are included in Appendix 6.9 of this report.

TABLE 6-7 (Page 1 of 4)

INTERSECTION ANALYSIS FOR GENERAL PLAN BUILDOUT WITH PROJECT CONDITIONS

INTERSECTION	TRAFFIC CONTROL[3]	INTERSECTION APPROACH LANES[1] NORTH-BOUND L	T	R	SOUTH-BOUND L	T	R	EAST-BOUND L	T	R	WEST-BOUND L	T	R	DELAY[2] (SECS.) AM	PM	LEVEL OF SERVICE AM	PM
Main St. (NS) at:																	
• Lakeshore Dr. (EW)																	
- Without Improvements	AWS	0	0	0	1	0	1	0	1	0	0	1	1>>	--[4]	--[4]	F	F
- With Improvements	**TS**	0	0	0	**2**	0	1	0	**2**	0	0	**2**	1>>	7.0	14.0	A	B
Auto Center Dr. (NS) at:																	
• Franklin Street (EW)																	
- Without Improvements		INTERSECTION NOT ANALYZED															
- With Improvements	**TS**	**1**	**2**	**1>**	**1**	**2**	0	**1**	**2**	**1**	**2**	**2**	**1>**	28.1	46.4	C	D
• Old Franklin Street (EW)																	
- Without Improvements		INTERSECTION DOES NOT EXIST															
- With Improvements	**CSS**	0	**2**	0	**1**	**2**	0	0	0	0	0	1	0	12.1	34.5	B	D
I-15 SB Ramps (NS) at:																	
• Franklin Street (EW)																	
- Without Improvements		INTERSECTION DOES NOT EXIST															
- With Improvements	**TS**	0	0	0	0	**1**	**1**	0	**2**	**1**	**1**	**2**	0	26.5	33.8	C	C
I-15 NB Ramps (NS) at:																	
• Franklin Street (EW)																	
- Without Improvements		INTERSECTION DOES NOT EXIST															
- With Improvements	**TS**	0	**1**	**1**	0	0	0	**1**	**2**	0	0	**2**	0	30.5	28.6	C	C
Avenue 6 (NS) at:																	
• Lakeshore Dr. (EW)																	
- Without Improvements	CSS	0	0	0	0	1	0	1	1	0	0	1	0	--[4]	--[4]	F	F
- With Improvements	**TS**	0	0	0	**1**	**0**	**1**	1	**3**	0	0	**3**	**1**	9.4	29.1	A	C
Diamond Circle/Loop Road (NS) at:																	
• Driveway 1 (EW)																	
- Without Improvements		INTERSECTION DOES NOT EXIST															
- With Improvements	**CSS**	**1**	**1**	0	**1**	**1**	0	0	**1**	0	0	**1**	0	10.3	16.7	B	C
• Sylvester St. (EW)																	
- Without Improvements	CSS	0	1	0	0	1	0	0	1	0	0	1	1	9.4	10.1	A	B

INTERSECTION ANALYSIS FOR GENERAL PLAN BUILDOUT WITH PROJECT CONDITIONS

INTERSECTION	TRAFFIC CONTROL[3]	INTERSECTION APPROACH LANES[1] NORTH-BOUND L	T	R	SOUTH-BOUND L	T	R	EAST-BOUND L	T	R	WEST-BOUND L	T	R	DELAY[2] (SECS.) AM	PM	LEVEL OF SERVICE AM	PM
Driveway 2 (NS) at:																	
• Lakeshore Drive (EW)																	
- Without Improvements		INTERSECTION DOES NOT EXIST															
- With Improvements	**TS**	0	1	1	1	1	0	1	**3**	1	**2**	**3**	1	10.5	21.6	B	C
Driveway 3 (NS) at:																	
• Loop Road (EW)																	
- Without Improvements		INTERSECTION DOES NOT EXIST															
- With Improvements	**TS**	**1**	**1**	0	**1**	**1**	0	**1**	**1**	0	**1**	**1**	0	10.3	12.2	B	B
Driveway 4 (NS) at:																	
• Sylvester Street (EW)																	
- Without Improvements		INTERSECTION DOES NOT EXIST															
- With Improvements	**CSS**	0	**1**	0	0	0	0	0	1	0	**1**	1	0	8.8	9.6	A	A
Summerhill Dr./Grape St. (NS) at:																	
• Railroad Canyon Rd. (EW)																	
- Without Improvements	TS	2	2	1	1	1	1>	2	2	1	1	3	0	--[4]	--[4]	F	F
- With Improvements	TS	2	2	**2>**	**2**	**2**	1>	2	**3**	**1>**	**2**	3	**2>**	33.7	51.4	C	D
• I-15 Northbound Ramps (EW)[5]																	
- With Improvements	**TS**	**2**	2	0	0	2	**1>>**	**2**	0	**1**	0	0	0	23.8	17.4	C	B
Auto Center Dr./Casino Dr. (NS) at:																	
• Diamond Dr. (EW)																	
- Without Improvements	TS	1	2	0	1	2	0	1	3	0	2	2	0	--[4]	--[4]	F	F
- With Improvements	TS	**2**	2	0	**2**	2	**1**	**2**	3	**1**	2	**3**	**1**	38.7	34.7	D	C
• I-15 Southbound Ramps (EW)[5]																	
- With Improvements	**TS**	0	2	**1**	**1**	2	0	0	0	0	**2**	0	**2>**	13.0	13.8	B	B
Diamond Dr. (NS) at:																	
• Lakeshore Dr./Mission Trail (EW)																	
- Without Improvements	TS	1	2	0	2	2	0	1	2	1	1	2	1	--[4]	--[4]	F	F
- With Improvements	TS	**2**	**3**	**1**	2	**3**	**2>**	**2**	**3**	1	1	**3**	**1>**	31.0	45.7	C	D

TABLE 6-7 (Page 3 of 4)

INTERSECTION ANALYSIS FOR GENERAL PLAN BUILDOUT WITH PROJECT CONDITIONS

INTERSECTION	TRAFFIC CONTROL[3]	INTERSECTION APPROACH LANES[1]												DELAY[2] (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
Diamond Dr. (NS) at:																	
• Driveway 5 (EW)																	
- Without Improvements		INTERSECTION DOES NOT EXIST															
- With Improvements	**TS**	**1**	2	0	0	2	**1**	**1**	0	**1**	0	0	0	4.8	14.7	A	B
• Campbell St. (EW)																	
- Without Improvements	CSS	0	2	0	1	2	0	0	0	0	1	0	1	--[4]	--[4]	F	F
- With Improvements	**TS**	**1**	2	0	1	2	**1**	**1**	**1**	0	1	**1**	**1>**	15.0	27.6	B	C
• Pete Lehr Dr./Driveway 6 (EW)																	
- Without Improvements		INTERSECTION DOES NOT EXIST															
- With Improvements	**TS**	**1**	2	0	**1**	2	0	0	**1**	0	0	**1**	0	19.0	17.7	B	B
• Driveway 7 (EW)																	
- Without Improvements		INTERSECTION DOES NOT EXIST															
- With Improvements	**CSS**	0	2	0	0	2	0	0	0	0	0	0	**1**	12.9	12.1	B	B
• Sylvester St. (EW)																	
- Without Improvements	AWS	1	2	0	1	2	1	1	2	0	1	2	0	62.8	--[4]	F	F
- With Improvements	**TS**	1	2	0	1	2	1	1	2	0	1	2	0	19.8	30.7	B	C
Driveway 8 (NS) at:																	
• Sylvester Street (EW)																	
- Without Improvements		INTERSECTION DOES NOT EXIST															
- With Improvements	**CSS**	0	0	0	0	0	**1**	0	2	0	0	2	0	9.3	10.0	A	B
Mission Trail (NS) at:																	
• Campbell St. (EW)																	
- Without Improvements	CSS	1	2	0	1	2	1	0	1	1	0	1	0	--[4]	--[4]	F	F
- With Improvements	**TS**	**2**	**3**	0	**2**	**3**	1	**2**	1	**1>**	**1**	1	0	20.2	35.9	C	D
• Sylvester St./Malaga Rd. (EW)																	
- Without Improvements	TS	1	2	0	1	2	0	1	1	1	1	2	1	25.5	--[4]	C	F
- With Improvements	TS	**2**	**3**	**1**	**2**	**3**	0	1	1	1	1	2	1	18.8	42.6	B	D
• Elberta Rd. (EW)																	
- Without Improvements	CSS	0	2	0	1	2	0	0	0	0	1	0	1	--[4]	--[4]	F	F
- With Improvements	**TS**	**1**	**3**	0	1	**3**	0	**1**	**1**	0	1	**1**	**0**	11.6	19.5	B	B

INTERSECTION ANALYSIS FOR GENERAL PLAN BUILDOUT WITH PROJECT CONDITIONS

INTERSECTION	TRAFFIC CONTROL[3]	INTERSECTION APPROACH LANES[1]												DELAY[2] (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
Mission Trail (NS) at:																	
• Olive St. (EW)																	
- Without Improvements	CSS	0	2	0	1	2	0	0	0	0	0	1	0	--[4]	--[4]	F	F
- With Improvements	**TS**	**1**	2	0	1	2	0	**1**	**1**	0	**1**	1	0	15.3	21.3	B	C
• Lemon St. (EW)																	
- Without Improvements	CSS	0	2	1	0	2	0	0	0	0	0	1	0	--[4]	--[4]	F	F
- With Improvements	**TS**	0	2	1	**1**	2	0	0	0	0	**1**	**0**	**1**	16.6	42.2	B	D
• Bundy Canyon Road (EW)																	
- Without Improvements	TS	1	2	0	1	2	0	0	1	0	0	1	1	--[4]	--[4]	F	F
- With Improvements	TS	**2**	2	0	**2**	2	0	**1**	**2**	**1**	**2**	**2**	**1>**	32.6	41.7	C	D
I-15 SB Ramps (NS) at:																	
• Bundy Canyon Road (EW)																	
- Without Improvements	TS	0	0	0	1	1	0	0	2	0	1	2	0	--[4]	--[4]	F	F
- With Improvements	TS	0	0	0	**2**	1	0	0	**3**	**1**	**2**	**3**	0	27.4	27.1	C	C
I-15 NB Ramps (NS) at:																	
• Bundy Canyon Road (EW)																	
- Without Improvements	TS	1	1	0	0	0	0	1	2	0	0	2	0	--[4]	--[4]	F	F
- With Improvements	TS	**2**	1	**1**	0	0	0	**2**	**3**	0	0	**3**	**1**	21.6	28.0	C	C

[1] 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; 1>> = Free-Right Turn Lane; 1> = Right-Turn Overlap Phasing; 1 = Improvement

[2] Delay and level of service calculated using the following analysis software:
HCS+ Version 5.21 (2005) for unsignalized intersections and SYNCHRO Version 7 Build 763 (2007) for signalized intersections.
Per the 2000 Highway Capacity Manual, overall average intersection delay and level of service are shown for intersections with a traffic signal or all way stop control. For intersections with cross street stop control, the delay and level of service for the worst individual movement (or movements sharing a single lane) are shown. (The intersection of Diamond Dr. at Sylvester St. has been analyzed using Traffix Version 8.0 R1 since the intersection could not be analyzed with the HCS+ software.)

[3] TS = Traffic Signal; CSS = Cross Street Stop; AWS = All Way Stop

[4] -- = Delay High, Intersection Unstable; Level of Service "F".

[5] It should be noted that the I-15 interchange at Railroad Canyon Road has been assumed to be re-configured. As such, "without improvement" conditions have not been analyzed.

NOTE: Any leg implementing a right-turn overlap phasing requires the elimination of U-turn movements from the leg immediately counter-clockwise.

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7.0 PROJECT BUILDOUT WITH SPECIAL EVENT TRAFFIC

Pursuant to a request by City of Lake Elsinore staff, an additional scenario has been analyzed which assumes buildout of the proposed Diamond Specific Plan with the addition of special event traffic related to the existing Lake Elsinore Diamond Stadium. The additional traffic is of particular concern during the weekday PM peak hour commute. As such, the potential impacts to study area intersections under project buildout (EAPC 2016) conditions with special event traffic have been assessed. The stadium's special events that have the potential to impact peak hour operations are typically seasonal in nature, and include baseball games, high school graduations, meetings or conferences, etc. It is also important to note that these events usually occur in the evening (after 6pm) and thus do not impact morning peak hours. Lastly, stadium operations are not anticipated to change with the development of the Diamond Specific Plan, so an assessment of typical weekday operations for the stadium would seem most appropriate.

7.1 Diamond Stadium Trip Generation and Trip Distribution

Special events at Diamond Stadium that would likely impact weekday commuters occur during evening hours, and although the start time of some special events may coincide with PM peak hour traffic flows; they typically do not conclude until well after the peak period has ended. Therefore, potential impacts to PM peak hour intersection operations due to planned special events need only assess inbound traffic flows.

Trip generation for any sports venue is dependent upon many factors, such as the size of market being served, stadium capacity, stadium location, team performance, economic conditions, etc. The current edition of the ITE Trip Generation Manual (a standard source for trip generation data recognized nation wide) does not contain trip rates for sporting venues. However, the *(Not So) Brief Guide of Vehicular Traffic Generation Rates for the San Diego Region* (SANDAG, 2002) does contain trip rates for outdoor sports facilities. These rates are based on traffic counts taken for many of the sporting venues located in and around San Diego County. Based on the SANDAG trip rates, it is estimated that Diamond Stadium would generate approximately 50 trips per acre. As the current stadium and parking areas total approximately 19.0 acres, this would result in about 475 inbound trips before events and 475 outbound trips after events for a total of 950 daily trips.

To ensure that the trip generation used for this analysis accurately reflected typical weekday operational characteristics, a representative from Diamond Stadium was contacted to confirm the validity of the derived trip generation. The stadium representative indicated that records for paid parking for weekday games typically ranges between 200 – 500 vehicles per game, with the higher end occurring for "big games" only. The representative also noted that the paid parking rates rise substantially for weekend games, at times approaching 2,000 vehicles per game (which approaches parking capacity). Based upon both the SANDAG trip generation rate and the empirical parking data provided by the Stadium, it was determined that the Diamond Stadium would likely contribute 475 inbound vehicle trips during the typical weekday PM peak hour. A follow-up discussion with the Stadium representative confirmed that 475 inbound PM peak hour trips was indeed a conservative estimate. The trip generation rates and trip generation estimated for the Diamond Stadium have been provided in Appendix 7.1.

The inbound trip distribution has been based upon the anticipated travel patterns of patrons to the Stadium. According to the Stadium representative, most of the traffic coming to and from the venue tends to be from the surrounding communities. This assumption is reflected in the Diamond Stadium inbound trip distribution shown on Exhibit 7-1. The assignment of Stadium traffic from the adjoining roadway system to the site has been based upon the site's trip generation, trip distribution and the arterial highway and local street system assumed to be in place for the requisite time horizon. Anticipated Diamond Stadium traffic has been added to the EAPC (2016) volumes (presented previously in Section 6.1 of this report); the volumes are shown on Exhibit 7-2.

7.2 PM Peak Hour Level of Service Analysis

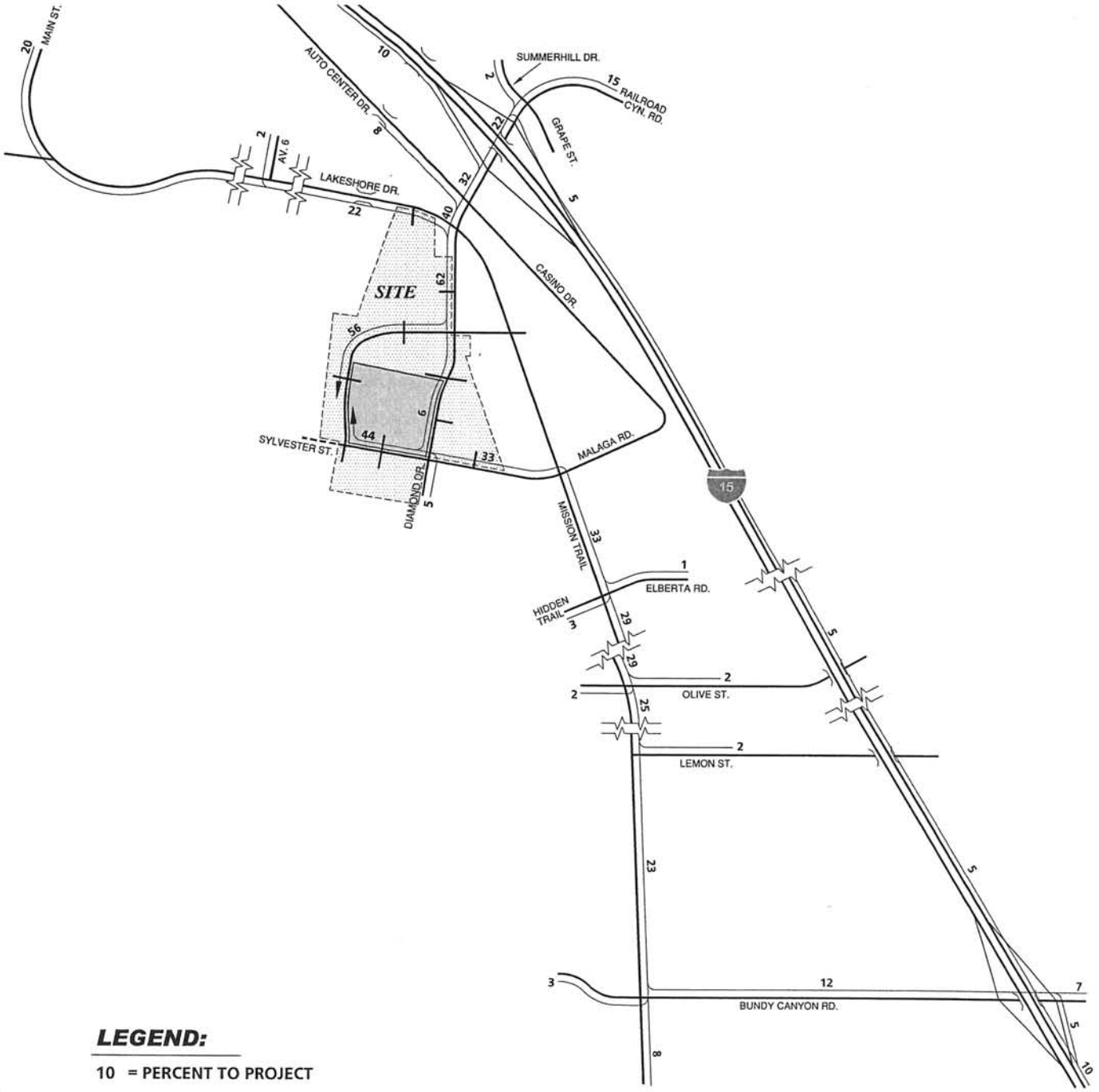
For EAPC (2016) conditions with Lake Elsinore Diamond Stadium traffic, it is anticipated that the following study area intersections would operate at unacceptable levels of service during the PM peak hours with the same lane geometrics improvements recommended under EAPC (2016) traffic conditions which are shown on both Table 6-6 and 7-1:

Summerhill Drive/Grape Street (NS) at:

- Railroad Canyon Road (EW)

EXHIBIT 7-1

DIAMOND STADIUM
INBOUND TRIP DISTRIBUTION



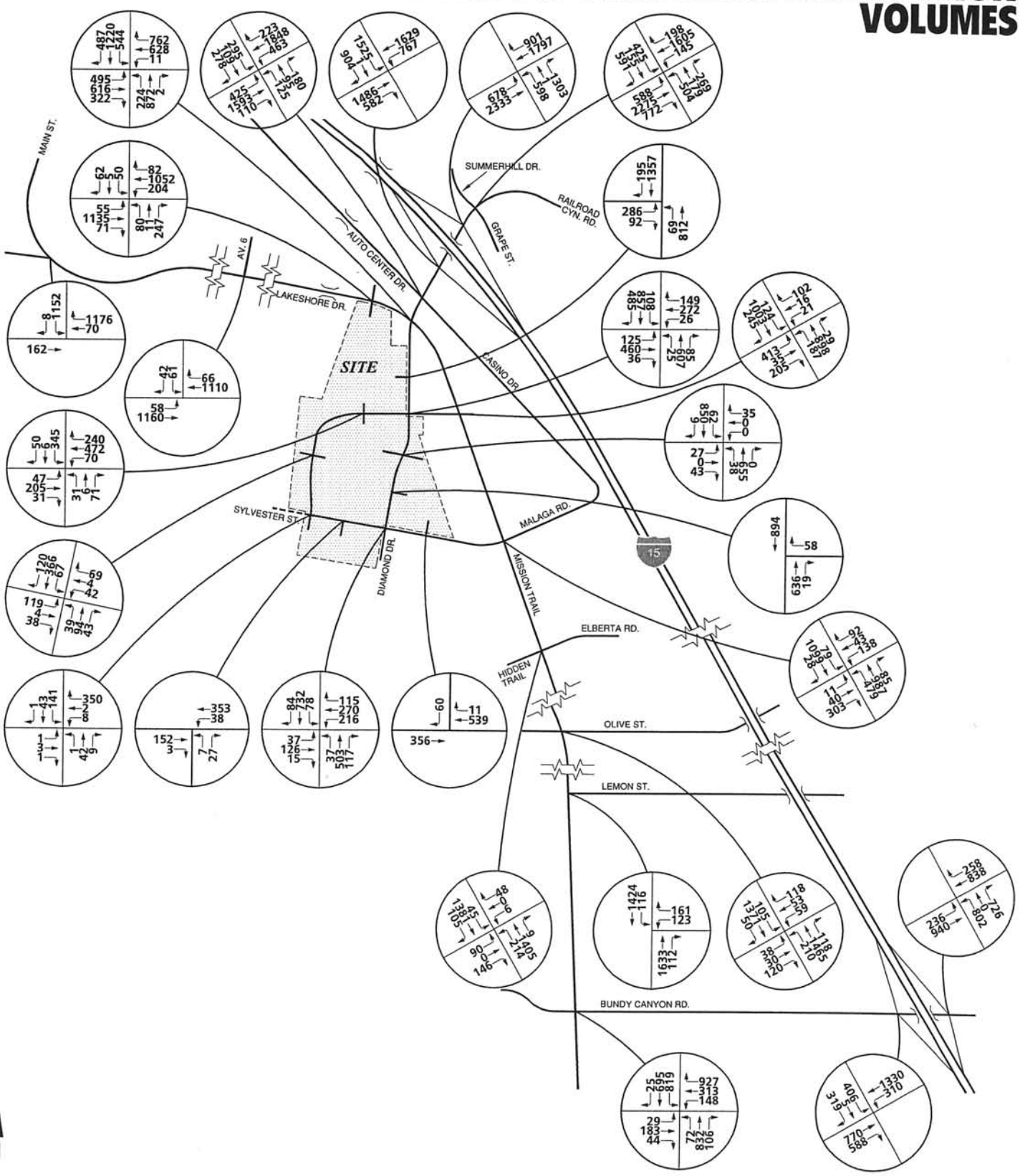
LEGEND:

10 = PERCENT TO PROJECT

N

EXHIBIT 7-2

EXISTING PLUS AMBIENT GROWTH PLUS PROJECT PLUS CUMULATIVE (2016) CONDITIONS WITH LAKE ELSINORE DIAMOND STADIUM TRAFFIC PM PEAK HOUR INTERSECTION VOLUMES



INTERSECTION ANALYSIS FOR EXISTING PLUS AMBIENT GROWTH PLUS PROJECT PLUS CUMULATIVE DEVELOPMENT (2016) CONDITIONS WITH LAKE ELSINORE DIAMOND STADIUM TRAFFIC

INTERSECTION	TRAFFIC CONTROL[3]	INTERSECTION APPROACH LANES[1] NORTH-BOUND L	T	R	SOUTH-BOUND L	T	R	EAST-BOUND L	T	R	WEST-BOUND L	T	R	DELAY[2] (SECS.) PM	CHANGE IN DELAY (SECS.) PM	LEVEL OF SERVICE PM
Main St. (NS) at:																
• Lakeshore Dr. (EW)																
- EAPC (2016)	**TS**	0	0	0	1	0	1	0	1	0	0	1	1>>	12.3		B
- EAPC (2016) with Stadium	**TS**	0	0	0	1	0	1	0	1	0	0	1	1>>	14.1	+1.8	B
Avenue 6 (NS) at:																
• Lakeshore Dr. (EW)																
- EAPC (2016)	**TS**	0	0	0	0	1	0	1	1	0	0	1	0	16.9		B
- EAPC (2016) with Stadium	**TS**	0	0	0	0	1	0	1	1	0	0	1	0	19.3	+2.4	B
Diamond Circle/Loop Road (NS) at:																
• Driveway 1 (EW)																
- EAPC (2016)	**CSS**	**1**	**1**	0	**1**	**1**	0	0	**1**	0	0	**1**	0	16.7		C
- EAPC (2016) with Stadium	**CSS**	**1**	**1**	0	**1**	**1**	0	0	**1**	0	0	**1**	0	28.5	+11.8	D
• Sylvester St. (EW)																
- EAPC (2016)	CSS	0	1	0	0	1	0	0	1	0	0	1	1	10.1		B
- EAPC (2016) with Stadium	CSS	0	1	0	0	1	0	0	1	0	0	1	1	11.4	+1.3	B
Driveway 2 (NS) at:																
• Lakeshore Drive (EW)																
- EAPC (2016)	**TS**	1	1	0	1	1	0	1	2	1	1	2	1	17.3		B
- EAPC (2016) with Stadium	**TS**	1	1	0	1	1	0	1	2	1	1	2	1	17.8	+0.5	B
Driveway 3 (NS) at:																
• Loop Road (EW)																
- EAPC (2016)	**TS**	**1**	**1**	0	**1**	**1**	0	**1**	**1**	0	**1**	**1**	0	12.2		B
- EAPC (2016) with Stadium	**TS**	**1**	**1**	0	**1**	**1**	0	**1**	**1**	0	**1**	**1**	0	18.7	+6.5	B
Driveway 4 (NS) at:																
• Sylvester Street (EW)																
- EAPC (2016)	**CSS**	0	**1**	0	0	0	0	0	1	0	**1**	1	0	9.6		A
- EAPC (2016) with Stadium	**CSS**	0	**1**	0	0	0	0	0	1	0	**1**	1	0	10.0	+0.4	B
Summerhill Dr./Grape St. (NS) at:																
• Railroad Canyon Rd. (EW)																
- EAPC (2016)	TS	2	2	1	**2**	**2**	1>	2	**3**	**1>**	**2**	3	0	51.6		D
- EAPC (2016) with Stadium	TS	2	2	1	**2**	**2**	1>	2	**3**	**1>**	**2**	3	0	55.6	+4.0	E

INTERSECTION ANALYSIS FOR EXISTING PLUS AMBIENT GROWTH PLUS PROJECT PLUS CUMULATIVE DEVELOPMENT (2016) CONDITIONS WITH LAKE ELSINORE DIAMOND STADIUM TRAFFIC

INTERSECTION	TRAFFIC CONTROL[3]	INTERSECTION APPROACH LANES[1]												DELAY[2] (SECS.)	CHANGE IN DELAY (SECS.)	LEVEL OF SERVICE
		NORTH-BOUND			SOUTH-BOUND			EAST-BOUND			WEST-BOUND					
		L	T	R	L	T	R	L	T	R	L	T	R	PM	PM	PM
I-15 NB Ramps (NS) at:																
• Railroad Canyon Rd. (EW)																
- EAPC (2016)	TS	**1**	1	**1>>**	0	0	0	2	3	0	0	**3**	1	24.0		C
- EAPC (2016) with Stadium	TS	**1**	1	**1>>**	0	0	0	2	3	0	0	**3**	1	25.0	+1.0	C
I-15 SB Ramps (NS) at:																
• Railroad Canyon Rd. (EW)																
- EAPC (2016)	TS	0	0	0	2	1	**2**	0	**3**	1	**2**	2	0	43.3		D
- EAPC (2016) with Stadium	TS	0	0	0	2	1	**2**	0	**3**	1	**2**	2	0	45.0	+1.7	D
Auto Center Dr./Casino Dr. (NS) at:																
• Diamond Dr. (EW)																
- EAPC (2016)	TS	1	2	0	1	2	0	**2**	3	0	2	**3**	0	34.7		C
- EAPC (2016) with Stadium	TS	1	2	0	1	2	0	**2**	3	0	2	**3**	0	36.2	+1.5	D
Diamond Dr. (NS) at:																
• Lakeshore Dr./Mission Trail (EW)																
- EAPC (2016)	TS	**2**	2	0	2	2	**1>**	**2**	2	1	1	2	**1>**	53.7		D
- EAPC (2016) with Stadium	TS	**2**	2	0	2	2	**1>**	**2**	2	1	1	2	**1>**	53.9	+0.2	F[4]
• Driveway 5 (EW)																
- EAPC (2016)	**TS**	**1**	2	0	0	2	0	**1**	0	**1**	0	0	0	14.1		B
- EAPC (2016) with Stadium	**TS**	**1**	2	0	0	2	0	**1**	0	**1**	0	0	0	17.1	+3.0	B
• Campbell St. (EW)																
- EAPC (2016)	**TS**	1	2	0	1	2	0	**1**	1	0	1	1	0	27.1		C
- EAPC (2016) with Stadium	**TS**	1	2	0	1	2	0	**1**	1	0	1	1	0	46.7	+19.6	D
• Pete Lehr Dr./Driveway 6 (EW)																
- EAPC (2016)	CSS	1	2	0	1	2	1	0	1	0	0	1	0	32.8		D
- EAPC (2016) with Stadium	CSS	1	2	0	1	2	1	0	1	0	0	1	0	34.4	+1.6	D
• Driveway 7 (EW)																
- EAPC (2016)	**CSS**	0	2	0	0	2	0	0	0	0	0	0	**1**	10.8		B
- EAPC (2016) with Stadium	**CSS**	0	2	0	0	2	0	0	0	0	0	0	**1**	10.8	+0.0	B
• Sylvester St. (EW)																
- EAPC (2016)	**TS**	1	2	0	1	2	1	1	2	0	1	2	0	23.0		C
- EAPC (2016) with Stadium	**TS**	1	2	0	1	2	1	1	2	0	1	2	0	24.4	+1.4	C

INTERSECTION ANALYSIS FOR EXISTING PLUS AMBIENT GROWTH PLUS PROJECT PLUS CUMULATIVE DEVELOPMENT (2016) CONDITIONS WITH LAKE ELSINORE DIAMOND STADIUM TRAFFIC

INTERSECTION	TRAFFIC CONTROL[3]	INTERSECTION APPROACH LANES[1] NORTH-BOUND L	T	R	SOUTH-BOUND L	T	R	EAST-BOUND L	T	R	WEST-BOUND L	T	R	DELAY[2] (SECS.) PM	CHANGE IN DELAY (SECS.) PM	LEVEL OF SERVICE PM
Driveway 8 (NS) at:																
• Sylvester Street (EW)																
- EAPC (2016)	**CSS**	0	0	0	0	0	**1**	0	2	0	0	2	0	9.8		A
- EAPC (2016) with Stadium	**CSS**	0	0	0	0	0	**1**	0	2	0	0	2	0	10.4	+0.6	B
Mission Trail (NS) at:																
• Campbell St. (EW)																
- EAPC (2016)	**TS**	1	2	0	1	2	1	**1**	1	**0**	**1**	1	0	41.4		D
- EAPC (2016) with Stadium	**TS**	1	2	0	1	2	1	**1**	1	**0**	**1**	1	0	41.4	+0.0	D
Mission Trail (NS) at:																
• Sylvester St./Malaga Rd. (EW)																
- EAPC (2016)	TS	1	2	0	1	2	0	1	1	1	1	2	1	37.1		D
- EAPC (2016) with Stadium	TS	1	2	0	1	2	0	1	1	1	1	2	1	52.7	+15.6	D
• Elberta Rd. (EW)																
- EAPC (2016)	**TS**	1	2	0	1	2	0	1	1	0	1	1	0	20.5		C
- EAPC (2016) with Stadium	**TS**	1	2	0	1	2	0	1	1	0	1	1	0	20.9	+0.4	C
• Olive St. (EW)																
- EAPC (2016)	**TS**	1	2	0	1	2	0	**1**	1	0	**1**	1	0	20.4		C
- EAPC (2016) with Stadium	**TS**	1	2	0	1	2	0	**1**	1	0	**1**	1	0	21.1	+0.7	C
• Lemon St. (EW)																
- EAPC (2016)	**TS**	0	2	1	**1**	2	0	0	0	0	**1**	**0**	**1**	14.6		B
- EAPC (2016) with Stadium	**TS**	0	2	1	**1**	2	0	0	0	0	**1**	**0**	**1**	15.3	+0.7	B
• Bundy Canyon Road (EW)																
- EAPC (2016)	TS	1	2	0	**2**	2	0	**1**	1	0	**1**	1	**1>**	42.6		D
- EAPC (2016) with Stadium	TS	1	2	0	**2**	2	0	**1**	1	0	**1**	1	**1>**	50.1	+7.5	F[4]
I-15 SB Ramps (NS) at:																
• Bundy Canyon Road (EW)																
- EAPC (2016)	TS	0	0	0	1	1	0	0	2	0	1	2	0	22.9		C
- EAPC (2016) with Stadium	TS	0	0	0	1	1	0	0	2	0	1	2	0	23.8	+0.9	C

INTERSECTION ANALYSIS FOR EXISTING PLUS AMBIENT GROWTH PLUS PROJECT PLUS CUMULATIVE DEVELOPMENT (2016) CONDITIONS WITH LAKE ELSINORE DIAMOND STADIUM TRAFFIC

INTERSECTION	TRAFFIC CONTROL[3]	INTERSECTION APPROACH LANES[1] NORTH-BOUND L	T	R	SOUTH-BOUND L	T	R	EAST-BOUND L	T	R	WEST-BOUND L	T	R	DELAY[2] (SECS.) PM	CHANGE IN DELAY (SECS.) PM	LEVEL OF SERVICE PM
I-15 NB Ramps (NS) at:																
• Bundy Canyon Road (EW)																
- EAPC (2016)	TS	1	1	1	0	0	0	1	2	0	0	2	0	47.7		D
- EAPC (2016) with Stadium	TS	1	1	1	0	0	0	1	2	0	0	2	0	50.9	+3.2	F[4]

[1] 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; 1>> = Free-Right Turn Lane; 1> = Right-Turn Overlap Phasing; 1 = Improvement

[2] Delay and level of service calculated using the following analysis software:
HCS+ Version 5.21 (2005) for unsignalized intersections and SYNCHRO Version 7 Build 763 (2007) for signalized intersections.
Per the 2000 Highway Capacity Manual, overall average intersection delay and level of service are shown for intersections with a traffic signal or all way stop control. For intersections with cross street stop control, the delay and level of service for the worst individual movement (or movements sharing a single lane) are shown. (The intersection of Diamond Dr. at Sylvester St. has been analyzed using Traffix Version 8.0 R1 since the intersection could not be analyzed with the HCS+ software.)

[3] TS = Traffic Signal; CSS = Cross Street Stop; AWS = All Way Stop

[4] Volume to capacity ratio is greater than 1.00; Level of Service "F".

NOTE: Any leg implementing a right-turn overlap phasing requires the elimination of U-turn movements from the leg immediately counter-clockwise.

Diamond Drive (NS) at:

- Lakeshore Drive/Mission Trail (EW)

Mission Trail (NS) at:

- Bundy Canyon Road (EW)

I-15 Northbound Ramps (NS) at:

- Bundy Canyon Road (EW)

As shown in Table 7-1, most of the study area intersections experience an increase in delay that is in the range of one second to four seconds with an event occurring at the Diamond Stadium during the PM peak hour. However, five locations experience delay increases of more than four seconds with inbound event impacts. Table 7-1 shows the highest increase in delay is experienced at intersections closest to the Stadium. Capacity issues and unacceptable level of service are anticipated near and through the I-15 Freeway/Bundy Canyon Road interchange area and I-15 Freeway/Railroad Canyon Road interchange area.

It should be noted that the four (4) locations that are anticipated to operate at unacceptable levels of service during the PM peak hour would experience an increase in delay of less than ten (10) seconds when weekday evening events are occurring at the Lake Elsinore Diamond Stadium. The I-15 Northbound and Southbound ramps on Bundy Canyon Road are anticipated to operate at LOS "D" but with a volume-to-capacity (V/C) ratio of 1.02. Per the Highway Capacity Manual, an intersection with a V/C ratio greater than 1.00 is considered to be operating at LOS "F". It is important to note that it is not uncommon for a professional sporting venue, such as Diamond Stadium, to impact near-by intersections as a result of the heavy inbound traffic flows that occur in a short time span for special events. The impacts are typically short in duration, do not occur on a daily basis, and may not occur at the same intensity over time. Additional recommendations during weekday evening events are discussed in Section 7.3 in lieu of capacity enhancements (through the addition of lanes) at the study area intersections.

EAPC (2016) conditions with Lake Elsinore Diamond Stadium traffic intersection operations analysis worksheets are included in Appendix 7.1 of this report.

7.3 Recommendations

Event traffic management measures for planned activities at the Lake Elsinore Diamond Stadium could mitigate potential capacity constraints and undesirable delays while accommodating heavy pedestrian flow safely during concentrated travel demands in the PM peak hour. Advance planning for traffic flow routes, site/parking access, pedestrian access and traffic control all facilitate improved system operations during these special events.

Traffic management begins with the scheduling of start times before or after peak commuter traffic periods. Advance information pertaining to best access routes to the venue should be provided to patrons to relieve further congestion in areas that are operating near or at capacity when events are not taking place. Additionally, message signs and signal timing can be altered to help manage traffic associated with special events. Although improving vehicular access to the site is important, pedestrian access and safety should also be taken into consideration. Pedestrian access points should facilitate rapid dispersion while minimizing pedestrian/vehicular conflicts. Traffic control measures implemented near the site will help to facilitate both intersection traffic handling capacity and ensure pedestrian safety. Specific traffic control measures to mitigate special event traffic should be developed as a coordinated effort between the Stadium, the City of Lake Elsinore, local law enforcement, and Caltrans. Urban Crossroads, Inc. would be happy to assist the City and Stadium in the preparation of traffic flow route planning as part of a future planning effort.

8.0 IMPROVEMENTS AND RECOMMENDATIONS

Chapter 8.0 summarizes (i) the proposed project's near term and long-range cumulative impacts; (ii) the existing traffic impact fee mitigation programs that are in place to mitigate the project's impacts; and (iii) the necessary improvements needed to mitigate the project's impacts and to provide acceptable levels of service. As set forth below, the necessary improvements needed to mitigate the project's impacts are covered by a combination of existing traffic impact fee programs already in place and direct project participation.

8.1 Project Impacts

Nearly all the intersections within the study area currently operate at acceptable levels of service. Increases in traffic volumes anticipated with continuing development in southern Lake Elsinore will impact the existing street and freeway systems within the scope of this study. It is anticipated that the improvements required to maintain or improve the operational level of service of transportation facilities in the vicinity of the project will be constructed by both regional and local transportation impact fee and transportation improvement programs.

Transportation facilities within the scope of the study that will experience a significant impact under cumulative "with project" in the years 2012, 2014, 2016 (project buildout), and General Plan buildout conditions are listed below. In other words, the Level of Service (LOS) of the intersections listed below will deteriorate to below the threshold identified by the City as its significance threshold (LOS "D") in the cumulative "with project" condition. Importantly, however, it should be noted that the majority of facilities listed below are also forecast to operate below LOS "D" at the identified time horizon in the "without project" condition. In many jurisdictions in the State, when a facility is forecast to operate below the identified Level of Service utilized by the jurisdiction as its threshold of significance in the without project condition, so long as the proposed project does not further deteriorate the LOS below the pre-existing condition, a significant impact will not be found. If this significance threshold were utilized in the present traffic impact analysis, many if not most of the facilities listed below would be deemed to not be significantly impacted by the proposed project. However, in an effort to overstate (as compared to understate) the proposed project's impacts, and because traffic impacts are inherently cumulative, if City facilities were forecast to operate below LOS "D" in the "without

project" condition at the requisite time horizon, this traffic impact analysis determines that a significant impact occurs in the "with project" condition at the requisite time horizon. As a result of this, mitigation measures will be imposed upon the project to mitigate the project's impacts.

The peak hour time periods during which a study intersection is expected to be significantly impacted (i.e., operate below LOS "D") is shown parenthetically.

8.1.1 Phase 1 (Year 2012)

Unsignalized Intersections:

- Avenue 6 at Lakeshore Drive (PM peak hour)
- Mission Trail at Campbell Street (PM peak hour)
- Mission Trail at Elberta Road (PM peak hour)
- Mission Trail at Olive Street (AM and PM peak hours)
- Mission Trail at Lemon Street (PM peak hour)

Signalized Intersections:

- Summerhill Drive/Grape Street at Railroad Canyon Road (PM peak hour)
- I-15 Southbound Ramps at Railroad Canyon Road (PM peak hour)

8.1.2 Phase 2 (Year 2014)

Unsignalized Intersections:

- Main Street at Lakeshore Drive (PM peak hour)
- Avenue 6 at Lakeshore Drive (PM peak hour)
- Diamond Drive at Campbell Street/Diamond Circle (AM and PM peak hours)
- Mission Trail at Campbell Street (AM and PM peak hours)
- Mission Trail at Elberta Road (AM and PM peak hours)
- Mission Trail at Olive Street (AM and PM peak hours)
- Mission Trail at Lemon Street (AM and PM peak hours)

Signalized Intersections:

- Summerhill Drive/Grape Street at Railroad Canyon Road (AM and PM peak hours)
- I-15 Northbound Ramps at Railroad Canyon Road (AM and PM peak hours)
- I-15 Southbound Ramps at Railroad Canyon Road (AM and PM peak hours)
- Auto Center Drive at Diamond Drive (PM peak hour)
- Diamond Drive at Lakeshore Drive/Mission Trail (PM peak hour)
- Mission Trail at Bundy Canyon Road (PM peak hour)

8.1.3 Phase 3 (Year 2016)

Unsignalized Intersections:

- Main Street at Lakeshore Drive (PM peak hour)
- Avenue 6 at Lakeshore Drive (PM peak hour)
- Diamond Drive at Campbell Street/Diamond Circle (AM and PM peak hours)
- Diamond Drive at Sylvester Street (PM peak hour)
- Mission Trail at Campbell Street (AM and PM peak hours)
- Mission Trail at Elberta Road (AM and PM peak hours)
- Mission Trail at Olive Street (AM and PM peak hours)
- Mission Trail at Lemon Street (AM and PM peak hours)

Signalized Intersections:

- Summerhill Drive/Grape Street at Railroad Canyon Road (AM and PM peak hours)
- I-15 Northbound Ramps at Railroad Canyon Road (AM and PM peak hours)
- I-15 Southbound Ramps at Railroad Canyon Road (AM and PM peak hours)
- Auto Center Drive at Diamond Drive (PM peak hour)
- Diamond Drive at Lakeshore Drive/Mission Trail (PM peak hour)
- Mission Trail at Bundy Canyon Road (AM and PM peak hours)
- I-15 Northbound Ramps at Bundy Canyon Road (PM peak hour)

8.1.4 General Plan Buildout

Unsignalized Intersections:

- Main Street at Lakeshore Drive (AM and PM peak hours)
- Avenue 6 at Lakeshore Drive (AM and PM peak hours)
- Diamond Drive at Campbell Street/Diamond Circle (AM and PM peak hours)
- Diamond Drive at Sylvester Street (AM and PM peak hours)
- Mission Trail at Campbell Street (AM and PM peak hours)
- Mission Trail at Elberta Road (AM and PM peak hours)
- Mission Trail at Olive Street (AM and PM peak hours)
- Mission Trail at Lemon Street (AM and PM peak hours)

Signalized Intersections:

- Summerhill Drive/Grape Street at Railroad Canyon Road (AM and PM peak hours)
- Auto Center Drive at Diamond Drive (AM and PM peak hours)
- Diamond Drive at Lakeshore Drive/Mission Trail (AM and PM peak hours)
- Mission Trail at Sylvester Street/Malaga Road (PM peak hour)
- Mission Trail at Bundy Canyon Road (AM and PM peak hours)
- I-15 Southbound Ramps at Bundy Canyon Road (AM and PM peak hours)
- I-15 Northbound Ramps at Bundy Canyon Road (AM and PM peak hour)

8.2 Mitigation of the Project's Impacts

As previously discussed in this traffic impact analysis, the City of Lake Elsinore General Plan states that the target LOS "D" be maintained at all City intersections.

Intersection improvements that were identified in the analysis as necessary to maintain or improve the operational level of service of the street system in the vicinity of the project sites are shown in Table 8-1. The table lists the incremental improvements that are required by the year 2016 (project buildout) and the total improvements required by General Plan buildout conditions to mitigate the project's impacts. It is anticipated that most of the improvements required to maintain or improve the level of service operations of transportation facilities impacted by the project will be constructed through the City's local transportation impact fee program and the

TABLE 8-2

FUTURE INTERSECTION IMPROVEMENTS AND LOCAL MITIGATION

Intersection	Total Improvements Required by 2012	Total Improvements Required by 2014	Total Improvements Required by 2016	Total Improvements Required by GP Buildout	TUMF Improvements	TIF Improvements	Local Mitigation (Improvements not covered by TUMF/TIF)	Project % for Local Mitigation
Main St. (NS) & Lakeshore Dr. (EW)	None	Install Signal	None	1.SBL, 1.EBT, 1.WBT	N/A	N/A	Install Signal, 1.SBL, 1.EBT, 1.WBT	11.40%
Auto Center Dr. (NS) & Franklin St. (EW)	Intersection Does Not Exist	Intersection Does Not Exist	Intersection Does Not Exist	Signal Installation, 1.NBL, 1.NBT, 1.NBR with Overlap Phasing, 1.SBL, 1.SBT, 1.EBL, 2.EBT, 1.EBR, 2.WBL, 2.WBT, 1.WBR with Overlap Phasing	N/A	Signal Installation, 1.NBL, 1.NBT, 1.NBR with Overlap Phasing, 1.SBL, 1.SBT, 1.EBL, 2.EBT, 1.EBR, 2.WBL, 2.WBT, 1.WBR with Overlap Phasing	None	8.30%
Auto Center Dr. (NS) & Old Franklin St. (EW)	Intersection Does Not Exist	Intersection Does Not Exist	Intersection Does Not Exist	1.NBT, 1.SBL, 1.SBT	N/A	1.NBT, 1.SBL, 1.SBT	None	18.30%
I-15 SB Ramps (NS) & Franklin St. (EW)	Intersection Does Not Exist	Intersection Does Not Exist	Intersection Does Not Exist	1.SBT/L, 1.SBR, 2.EBT, 1.EBR, 1.WBL, 2.WBT	Included in Railroad Canyon Interchange Reconstruction	N/A	None	8.00%
I-15 NB Ramps (NS) & Franklin St. (EW)	Intersection Does Not Exist	Intersection Does Not Exist	Intersection Does Not Exist	1.NBT/L, 1.NBR, 1.EBL, 2.EBT, 2.WBT	Included in Railroad Canyon Interchange Reconstruction	N/A	None	6.40%
Avenue 6 (NS) & Lakeshore Dr. (EW)	Install Signal	None	None	1.SBL, Restripe SBT/R as SBR, 2.EBT, 2.WBT, 1.WBR	N/A	Install Signal, 1.SBL, Restripe SBT/R as SBR, 2.EBT, 2.WBT, 1.WBR	None	10.80%
Summerhill Dr. (NS) & Railroad Canyon Rd. (EW)	1.EBT, Overlap Phasing EBR	1.SBL, 1.SBT	1.WBL	1.NBR with Overlap Phasing, 2.WBR with Overlap Phasing	N/A	1.SBT, 1.SBL, 1.EBT, Overlap Phasing EBR, 1.WBL, 1. WBR with Overlap Phasing	1.NBR with Overlap Phasing, 1.WBR with Overlap Phasing	13.90%
I-15 NB Ramps (NS) & Railroad Canyon Rd. (EW)	None	1.NBL, Free Right for NBR, 1.WBT	None	2.NBL, Free Right for SBR, 2.EBL, 1.EBR	Interchange Reconstruction	TBD	None	6.23%
I-15 SB Ramps (NS) & Railroad Canyon Rd. (EW)	1.WBL	1.SBR, 1.EBT	None	1.NBR, 1.SBL, 2.WBL, 2.WBR with Overlap Phasing	Interchange Reconstruction	TBD	None	3.45%
Auto Center Dr. (NS) & Diamond Dr. (EW)	None	1.WBT	1.EBL	1.NBL, 1.SBL, 1.SBR, 1.EBR, 1.WBR	1.WBT	1.NBL, 1.SBL, 1.SBR, 1.EBL, 1.EBR, 1.WBR	None	16.20%
Diamond Dr. (NS) & Lakeshore Dr. (EW)	None	1.NBL, 1.EBL, Overlap Phasing WBR	1.SBR with Overlap Phasing	1.NBT, 1.NBR, 1.SBT, 1.SBR with Overlap Phasing, 1.EBT, 1.WBT	1.SBT, 1.SBR with Overlap Phasing	1.NBL, 1.NBT, 1.NBR, 1.EBL, 1.EBT, 1.WBT, Overlap Phasing WBR	1.SBR with Overlap Phasing	16.70%
Diamond Dr. (NS) & Campbell St. (EW)	1.NBL, 1.EBL/T/R, Restripe WBR as WBT/R	Install Signal, 1.EBL	None	1.SBR, 1.EBR with Overlap Phasing	N/A	N/A	Install Signal, 1.NBL, 1.SBR, 1.EBL, 1.EBL/T/R, 1.EBR with Overlap Phasing, Restripe WBR as WBT/R	44.20%
Diamond Dr. (NS) & Sylvester St. (EW)	None	None	Install Signal	None	N/A	Install Signal	None	29.80%
Mission Trail (NS) & Campbell St. (EW)	Install Signal, Restripe for 1.EBL and 1.EBT/R, 1.WBL	None	None	1.NBL, 1.NBT, 1.SBL, 1.SBT, 1.EBL, Overlap Phasing on EBR	1.NBT, 1.SBT	N/A	Install Signal, 1.NBL, 1.SBL, 1.EBL, Restripe for 1.EBL and 1.EBT/R, Overlap Phasing on EBR, 1.WBL	7.00%
Mission Trail (NS) & Malaga Rd. (EW)	None	None	None	1.NBL, 1.NBT, 1.NBR, 1.SBL, 1.SBT	1.NBT, 1.SBT	1.NBL, 1.NBR, 1.SBL	None	28.30%
Mission Trail (NS) & Elberta Rd. (EW)	Install Signal	None	None	1.NBL, 1.NBT, 1.SBT, 1.EBL, 1.EBT/R, Restripe WBR as WBT/R	1.NBT, 1.SBT	N/A	Install Signal, 1. NBL, 1.EBL, 1.EBT/R, Restripe WBR as WBT/R	18.90%
Mission Trail (NS) & Olive St. (EW)	Install Signal, 1.EBL, 1.WBL	None	None	1.NBL, 1.EBT	None	Install Signal, 1.NBL, 1.EBL, 1. EBT, 1.WBL	None	15.90%
Mission Trail (NS) & Lemon St. (EW)	Install Signal, 1.SBL	None	1.WBL, Restripe WBL/T/R as WBR	None	None	Install Signal, 1.SBL, 1.WBL, Restripe WBL/T/R as WBR	None	13.10%
Mission Trail (NS) & Bundy Canyon Rd. (EW)	None	1.SBL, 1.EBL, 1.WBL, Overlap Phasing WBR	None	1.NBL, 1.EBT, 1.EBR, 1.WBL, 1.WBT	1.NBL, 1.SBL, 1.EBL, 1.EBT, 1.EBR, 2.WBL, 1.WBT, Overlap Phasing WBR	N/A	None	7.10%
I-15 SB Ramps (NS) & Bundy Canyon Rd. (EW)	None	None	None	1.SBL, 1.EBT, 1.EBR, 1.WBL, 1.WBT	Interchange Reconstruction	N/A	None	2.00%
I-15 NB Ramps (NS) & Bundy Canyon Rd. (EW)	None	None	1.NBR	1.NBL, 1.EBL, 1.EBT, 1.WBT, 1.WBR	Interchange Reconstruction	N/A	None	1.90%

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regional transportation improvement program. More specifically, the proposed project is subject to two off-site roadway improvement fee programs: the regional Transportation Uniform Mitigation Fee (TUMF) and the City of Lake Elsinore's Traffic Impact Fee (TIF). Improvements not covered by these programs will be satisfied through a fair-share contribution or as determined by the City.

The TUMF Program: The TUMF program is administered by Western Riverside Council of Governments (WRCOG) based upon a regional Nexus Study completed in early 2003 and recently updated in 2006 to address major changes in right of way acquisition and improvement cost factors. TUMF identifies a network of backbone and local roadways that are needed to accommodate growth through 2030. This regional program was put into place to ensure that development pays its fair share and that funding is in place for construction of facilities needed to maintain the requisite level of service and critical to mobility in the region. TUMF is a regional mitigation fee program, and is imposed and implemented in every jurisdiction in Western Riverside County.

TUMF fees are imposed on new residential, commercial, office, and industrial development through application of the TUMF fee ordinance and fees are generally collected at the building permit stage. In addition, an annual construction cost index (CCI) adjustment is considered each year in January. In this way, TUMF fees are adjusted upwards on a regular basis to ensure that the development impact fees collected keep pace with construction and labor costs, etc. Current TUMF rates (as of July 1, 2009) are shown in Table 8-2.

After the TUMF fees are collected, they are transmitted to WRCOG and placed in a separate interest bearing account pursuant to the requirements of Government Code sections 66000 *et seq*. The TUMF funds both local area projects and needed projects to improve the region's backbone arterial system. Local area projects receive about 48% of all funds. These local funds are programmed into five localized zones and fund the construction of localized projects that are proposed by the affected local jurisdictions within each zone. As set forth in Table 8-1, a number of the facilities forecast to be impacted by the proposed project are already programmed for improvements through the TUMF program. The project applicant will be subject to the TUMF fee program and will pay the requisite TUMF fees at the rates then in effect pursuant to the TUMF Ordinance.

TABLE 8-2

ESTIMATED FEE OBLIGATION

FEE REFERENCE	SINGLE FAMILY RESIDENTIAL ($ PER DU)	MULTI-FAMILY ($ PER DU)	COMMERCIAL ($ PER SQ FT)	OFFICE ($ PER SQ FT)	INDUSTRIAL ($ PER SQ FT)
Transportation Uniform Mitigation Fee (TUMF)[1]	$9,812	$6,890	$9.99	$5.71	$1.84
City of Lake Elsinore - Traffic Impact Fee (TIF)	$1,369	$959	$3.84	$1.45	$0.81

[1] TUMF rates effective July 1, 2009

Fee Calculation - Phase 1

Program	Category	Unit Cost	Units/Sq.Ft.	Total Cost	Program Totals
City TIF	MFR	$959	100	$95,900	
City TIF	Commercial	$3.84	75,000	$288,000	
City TIF	Office	$1.45	100,000	$145,000	
City TIF Totals					$528,900
TUMF	MFR	$6,890	100	$689,000	
TUMF	Commercial	$9.99	75,000	$749,250	
TUMF	Office	$5.71	100,000	$571,000	
TUMF Totals					$2,009,250
Totals					**$2,538,150**

Fee Calculation - Phase 2

Program	Category	Unit Cost	Units/Sq.Ft.	Total Cost	Program Totals
City TIF	MFR	$959	400	$383,600	
City TIF	Commercial	$3.84	315,000	$1,209,600	
City TIF	Office	$1.45	215,000	$311,750	
City TIF	Hotel	TBD	150 Rooms	TBD	
City TIF Totals					$1,904,950
TUMF	MFR	$6,890	400	$2,756,000	
TUMF	Commercial	$9.99	315,000	$3,146,850	
TUMF	Office	$5.71	215,000	$1,227,650	
TUMF	Hotel	TBD	150 Rooms	TBD	
TUMF Totals					$7,130,500
Totals					**$9,035,450**

Fee Calculation - Phase 3

Program	Category	Unit Cost	Units/Sq.Ft.	Total Cost	Program Totals
City TIF	MFR	$959	100	$95,900	
City TIF	Commercial	$3.84	82,000	$314,880	
City TIF	Office	$1.45	110,000	$159,500	
City TIF Totals					$570,280
TUMF	MFR	$6,890	100	$689,000	
TUMF	Commercial	$9.99	82,000	$819,180	
TUMF	Office	$5.71	110,000	$628,100	
TUMF Totals					$2,136,280
Totals					**$2,706,560**

Fee Calculation - Combined

Program	Category	Unit Cost	Units/Sq.Ft.	Total Cost	Program Totals
City TIF	MFR	$959	600	$575,400	
City TIF	Commercial	$3.84	472000	$1,812,480	
City TIF	Office	$1.45	425000	$616,250	
City TIF	Hotel	TBD	150 Rooms	TBD	
City TIF Totals					$3,004,130
TUMF	MFR	$6,890	600	$4,134,000	
TUMF	Commercial	$9.99	472,000	$4,715,280	
TUMF	Office	$5.71	425,000	$2,426,750	
TUMF	Hotel	TBD	150 Rooms	TBD	
TUMF Totals					$11,276,030
Totals					**$14,280,160**

The facilities planned through the TUMF program are constructed prior to the time at which the identified facility is expected to deteriorate to an inadequate level of service. WRCOG has a successful track record funding and overseeing the construction of improvements funded through the TUMF program. In total, the TUMF program is anticipated to generate nearly $5 billion in transportation projects for Western Riverside County. The project's payment of TUMF fees will mitigate its impacts to TUMF-funded facilities.

The City of Lake Elsinore Traffic Impact Fee Program: The City of Lake Elsinore originally adopted their Traffic Impact Fee Program with its nexus study and fee rates in 2002. Fee rates were updated in 2004 to account for a cost of living increase. A program update study was prepared in 2007 but has been deferred for future consideration. An updated program is anticipated to be adopted in conjunction with an update to the City's general plan. In some instances, the City's TIF program includes facilities that are not part of or which may exceed improvements identified and covered by the TUMF program. As a result, the pairing of the regional and local fee programs provides a more comprehensive funding and implementation plan to ensure an adequate and interconnected transportation system. Under the City's TIF program, the City may grant to developers a credit against the fee when those developers construct certain facilities identified in the list of improvements funded by the TIF program.

As set forth in Table 8-1, a number of the facilities forecast to be impacted by the project are already planned for improvements through the City's TIF Program. The Project applicant will be subject to the City's TIF fee program, and will pay the requisite City TIF fees at the rates then in effect pursuant to the City's ordinance. The project applicant's payment of the requisite TIF fees at the rates then in effect pursuant to the TIF Program will mitigate its impacts to TIF-funded facilities.

8.3 Design Features of the Project

This section of this chapter identifies several on site design features and on-site circulation recommendations. These on-site recommendations will further mitigate the project's traffic impacts.

8.3.1 On-Site Circulation Recommendations

Phase 1 (2012) on-site circulation recommendations are shown on Exhibit 8-1. These on-site circulation improvements recommended to accommodate project access and circulation needs for Phase 1 (2012) of the project include the following:

- Construct Diamond Drive from the northerly project boundary to Campbell Street at its ultimate half-section width as a major roadway (100-foot right-of-way and 80-foot curb-to-curb width) in conjunction with the development.

- Construct Diamond Circle (Loop Road) (the extension of Campbell Street within the project) from Diamond Drive to Driveway 3 at its ultimate full-section width as a divided collector (78-foot right-of-way and 56-foot curb-to-curb width) in conjunction with the development. It should be noted that the 10-foot shoulders will be utilized for parallel on-street parking. The 12-foot painted median can be utilized as a two-way left turn lane (TWLTL) under normal operating conditions, or as additional inbound or outbound capacity for special events held at Diamond Stadium. See Exhibit 4-5 for further details on the proposed cross-section.

- Construct the intersection of Driveway 3 and Diamond Circle (Loop Road) as a cross-street stop controlled intersection with full access.

- Construct the intersection of Diamond Drive and Driveway 5 as a cross-street stop controlled intersection with full-access. A minimum 150-foot northbound left turn lane should be constructed at the time a raised median is constructed on Diamond Drive, thus eliminating the existing TWLTL.

Phase 2 (2014) on-site circulation recommendations are shown on Exhibit 8-2. These on-site circulation improvements recommended to accommodate project access and circulation needs for Phase 2 (2014) of the project include the following:

- Construct Diamond Drive from Campbell Street to Sylvester Street at its ultimate full-section width as a major roadway (100-foot right-of-way and 80-foot curb-to-curb width) in conjunction with the development.

EXHIBIT 8-1

PHASE 1 (2012) ON-SITE CIRCULATION RECOMMENDATIONS

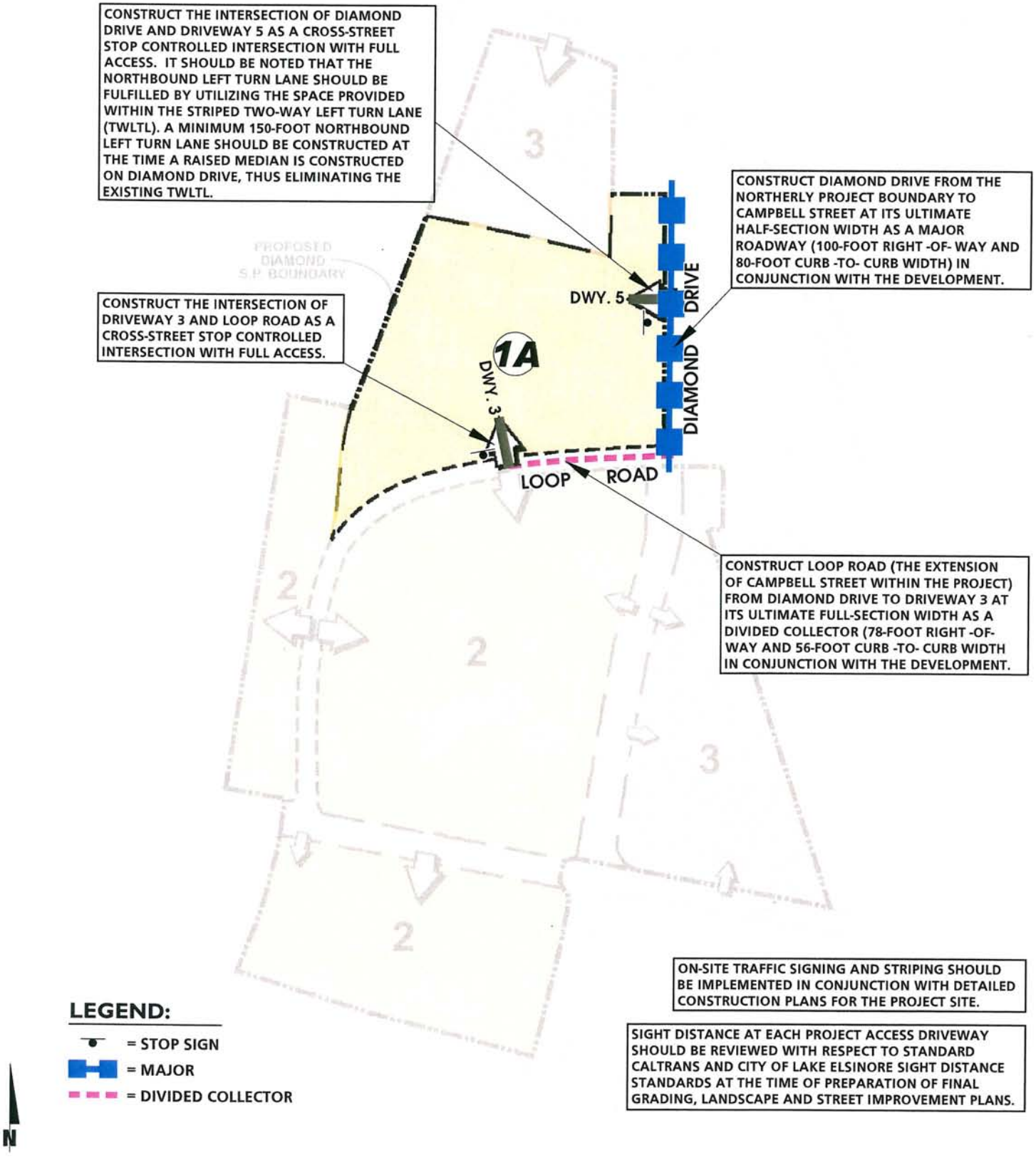
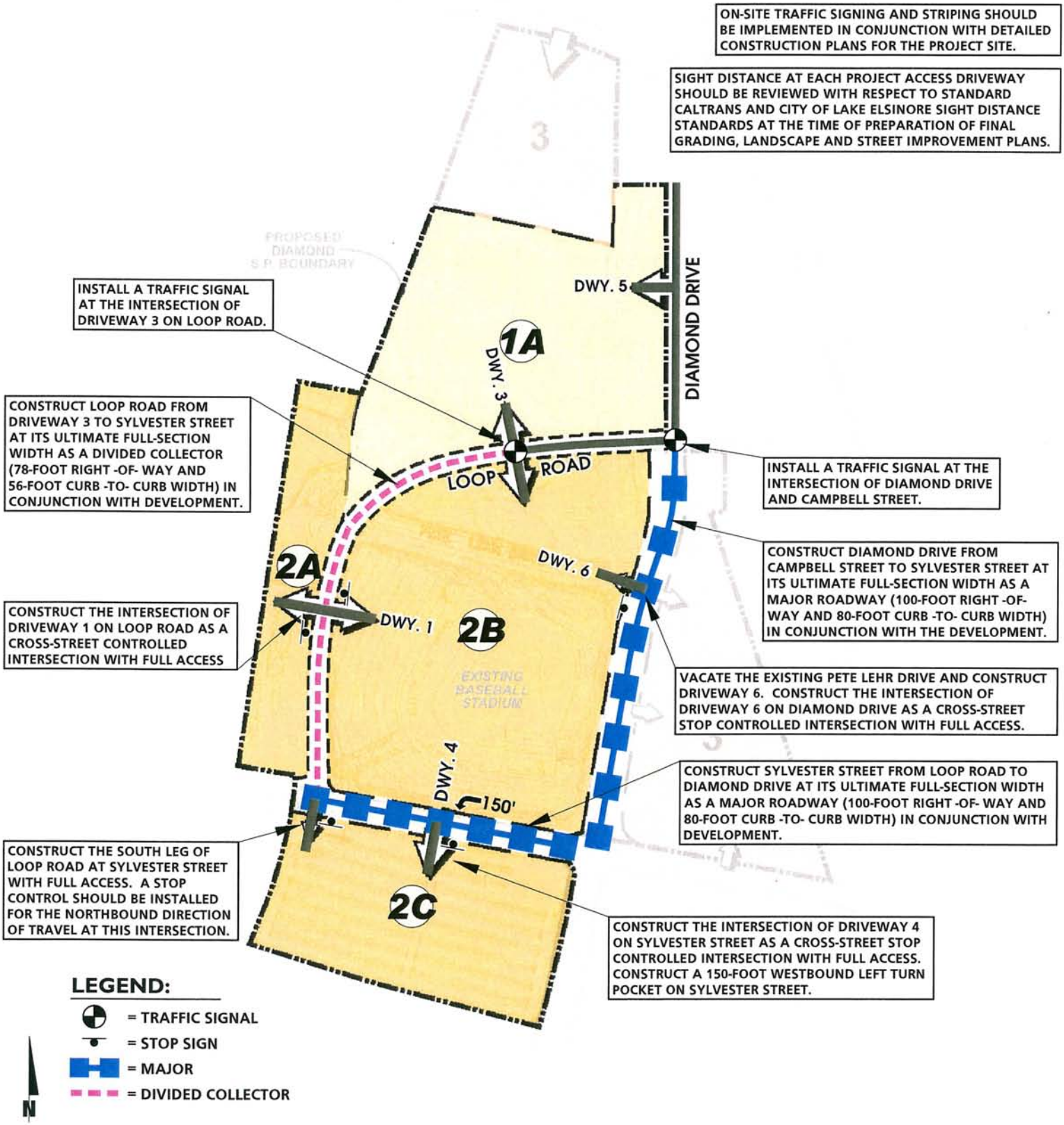


EXHIBIT 8-2

PHASE 2 (2014) ON-SITE CIRCULATION RECOMMENDATIONS



- Construct Diamond Circle (Loop Road) from Driveway 3 to Sylvester Street at its ultimate full-section width as a divided collector (78-foot right-of-way and 56-foot curb-to-curb width) in conjunction with the development. It should be noted that the 10-foot shoulders are anticipated to be utilized for parallel on-street parking. See Exhibit 4-5 for further details on the proposed cross-section.

- Construct Sylvester Street from Diamond Circle (Loop Road) to Diamond Drive at its ultimate full-section width as a major roadway (100-foot right-of-way and 80-foot curb-to-curb width) in conjunction with the development.

- Construct the intersection of Driveway 1 on Diamond Circle (Loop Road) as a cross-street stop controlled intersection with full access.

- Construct the southern leg of Diamond Circle (Loop Road) at Sylvester Street with full access. A stop control should be installed for the northbound direction of travel at this intersection.

- Install a traffic signal at the intersection of Driveway 3 on Diamond Circle (Loop Road).

- Construct the intersection of Driveway 4 on Sylvester Street as a cross-street stop controlled intersection with full access. Construct a 150-foot westbound left turn pocket on Sylvester Street.

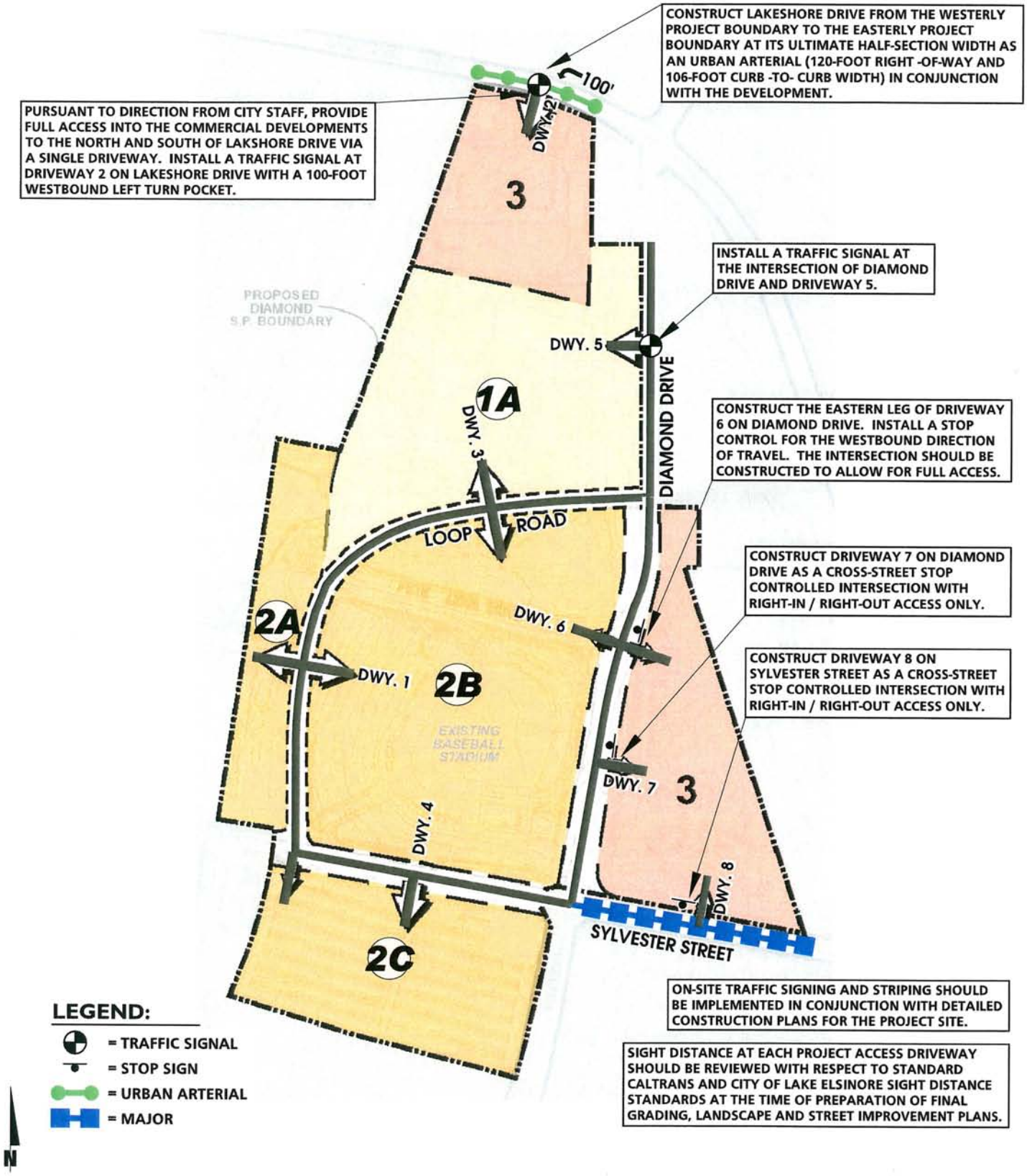
- Install a traffic signal at the intersection of Diamond Drive and Campbell Street.

- Vacate the existing Pete Lehr Drive and construct Driveway 6. Construct the intersection of Driveway 6 on Diamond Drive as a cross-street stop controlled intersection with full access.

Phase 3 (2016) on-site circulation recommendations are shown on Exhibit 8-3. These on-site circulation improvements recommended to accommodate project access and circulation needs for Phase 3 (2016) of the project include the following:

EXHIBIT 8-3

PHASE 3 (2016) ON-SITE CIRCULATION RECOMMENDATIONS



- Construct Lakeshore Drive from the westerly project boundary to the easterly project boundary at its ultimate half-section width as an urban arterial (120-foot right-of-way and 106-foot curb-to-curb width) in conjunction with the development.

- Construct Sylvester Street from Diamond Drive to the easterly project boundary at its ultimate half-section width as a major (100-foot right-of-way and 80-foot curb-to-curb width) in conjunction with the development.

- Pursuant to direction from City staff, provide full access into the commercial developments to the north and south of Lakeshore Drive via a single driveway. Install a traffic signal at Driveway 2 on Lakeshore Drive with a 100-foot westbound left turn pocket.

- Install a traffic signal at the intersection of Diamond Drive and Driveway 5.

- Construct the eastern leg of Driveway 6 on Diamond Drive. Install a stop control for the westbound direction of travel. The intersection should be constructed to allow for full access.

- Construct Driveway 7 on Diamond Drive as a cross-street stop controlled intersection with right-in/right-out access only.

- Construct Driveway 8 on Sylvester Street as a cross-street stop controlled intersection with right-in/right-out access only.

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

Sight distance at each project access driveway should be reviewed with respect to standard Caltrans and City of Lake Elsinore sight distance standards at the time of preparation of final grading, landscape and street improvement plans.

8.3.2 On-Site Pedestrian Circulation Recommendations

With a mix of land uses in close proximity to one another and in conjunction with a multi-modal circulation network, the proposed Diamond Specific Plan has the potential to develop into a walkable community. As the site plan for Diamond Specific Plan is further refined, attention should be paid to elements such as landscaping, architectural designs of buildings, transit, transportation circulation network, etc. in areas that may be affected by higher levels of pedestrian activity. Ease of pedestrian access to various land uses within close proximity to each other would promote a walkable community. Elements of street design may also affect pedestrian activity. The roadway network is recommended to provide adequate sidewalk space, wide crosswalks, slower turning speeds of vehicles, etc. In other words, vehicular traffic should not be the only element considered in the design process as pedestrians are also an important part of the roadway environment and should not be ignored during the design process.

Some examples of design elements that promote walking within the community and use of other modes of transportation include curb extensions, roundabouts, all-way stop controlled intersections, raised intersections, mid-block walkways, pedestrian amenities and bus transit service. A brief discussion on each of these examples is provided below and potential locations for implementation are illustrated on Exhibit 8-4.

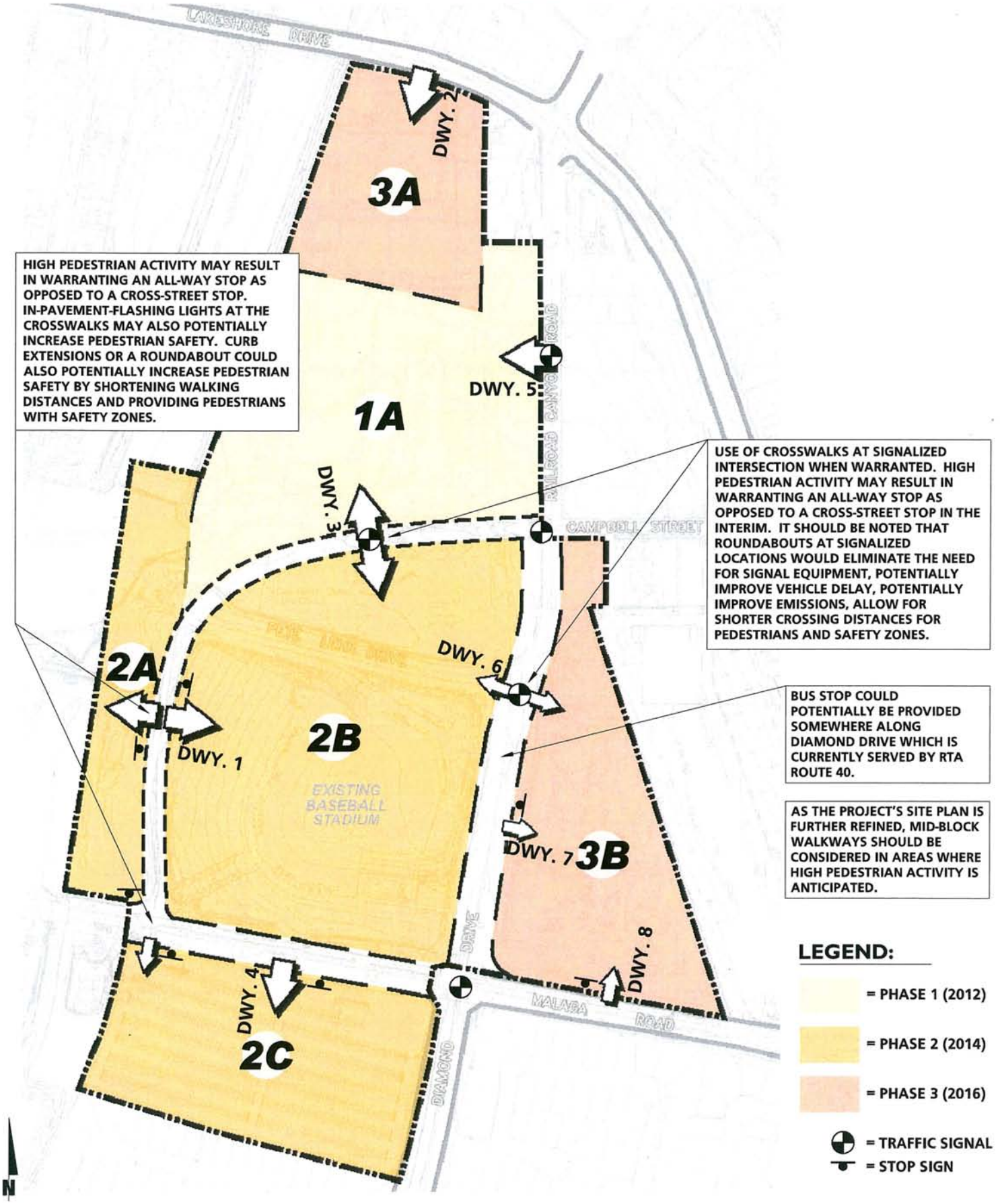
- The installation of curb extensions is often considered as a traffic calming measure to slow vehicular traffic. In addition, the curb extensions allow for a shorter crossing distance for pedestrians.

- Implementation of roundabouts at future signalized locations would eliminate the need for signal equipment, potentially improve vehicle delay, potentially improve emissions, allow for shorter crossing distances for pedestrians and provide pedestrians with safety zones while crossing the intersection.

- All-way stop warrants should be considered at future cross-street stop controlled intersections in areas with high pedestrian activity. All-way stop controlled intersections would allow for pedestrians to safely cross at all legs of the intersection, however, it should only be implemented if the appropriate warrants

EXHIBIT 8-4

ON-SITE PEDESTRIAN CIRCULATION RECOMMENDATIONS



are met. In-pavement flashing lights can also be installed to further provide visibility at pedestrian crossings and potentially improve safety.

- Designing raised intersections with elevated ramps on all approaches and departures at each leg of an intersection would reduce vehicular speeds at the intersection thus improving pedestrian safety.

- Mid-block walkways help to provide intermediate connections between two sides of the street where the street block is long. Mid-block walkways create frequent access points and ease of accessibility of land uses to the pedestrian. In-pavement flashing lights can also be installed to improve visibility at pedestrian crossings and potentially improve safety. Pedestrian amenities along the streets, such as bus shelters, landscaping and seating also should be provided within the street system.

- Bus transit service within the project should be considered to provide access to other areas of the project that are not easily accessible via walking and provide access to other neighborhoods within the City. It is important to provide geometric design features at transit stops to encourage pedestrian use by being easily accessible and safe.

8.3.3 On-Site Parking Recommendations

For mixed-use developments, such as the Diamond Specific Plan, it is often appropriate to employ "shared" parking methodologies in determining the number of parking spaces to be provided on-site. Developments that include a unique mixture of office, retail and residential uses have opportunities to "share" parking since the proposed land uses would have parking demands that peak during different times of the day, thus resulting in the need for less parking overall. The goal of shared parking is maintaining a balance between providing adequate parking for the proposed land uses and minimizing the negative aspects of excessive land area or resources devoted to parking.

The ULI's shared parking methodology is one approach used to determine appropriate parking requirements for mixed-use developments, such as the Diamond Specific Plan.

The ULI shared parking methodology determines the peak parking demand by applying adjustment factors for seasonal, hourly, and weekday/weekend conditions. The parking demand for a site operating autonomously is reflective of the peak-hour during the peak-month in the year, thus resulting in a "worst-case" conservative estimate. The specific ULI parking rates are multiplied by the proposed square footages or dwelling units (by land use) to determine the shared parking for the proposed development. It should be noted that the ULI parking rates are not meant to be applied to the project as a whole, but rather to regions of the project where different land uses are proposed to be developed within a close proximity of each other, which allows for patrons to utilize parking for various uses with ease of access to these uses.

Parking for any other land uses, not applicable to the shared parking methodology, should be determined in accordance with the guidelines set forth in Chapter 17.148 of the Lake Elsinore Municipal Code.

A shared parking analysis has been conducted for the land use assumptions analyzed in this traffic study. As shown in Table 8-3, parking has been determined by planning area using both the City of Lake Elsinore and ULI parking rates. The third column, labeled as "City/Shared Parking" is the number of parking spaces required based upon the City of Lake Elsinore Municipal Code. However, a shared parking reduction (represented as a percentage) consistent with the ULI methodology has been applied to determine a reduced total number of spaces required. As indicated on Table 8-3, the site would require approximately 6,871 parking spaces if the uses operated autonomously based upon the City's code. Shared parking reduction percentages were determined per the ULI methodology, however, the ULI parking rates were not used as they are less than the City's requirements. As such, the shared parking reductions were applied to the parking requirement per the City's Municipal Code. The implementation of shared parking reductions applied to the City code parking requirements would result in the need for 397 fewer parking spaces for a total of 6,474 spaces.

It should be noted that the scenario shown on Table 8-3 is subject to change as the site plan for the project is further refined. It is recommended that the final determination of parking requirements for each phase of the Diamond Specific Plan be revisited at the map level when further refinements to the site plan provide specific land uses and specific locations within the site.

TABLE 8-3

PARKING REQUIREMENTS

PROJECT LAND USE SCENARIO[1]	PROJECT Quantity	PROJECT Units[2]	CITY OF LAKE ELSINORE[3]	ULI[4]	CITY/SHARED PARKING
PLANNING AREA 1A					
Condominium/Townhouse	100	du	133	--	133
General Office	215,000	sf	860	694	860
Shopping Center	275,000	sf	1,100	991	1,100
TOTAL PARKING SPACES REQUIRED WITHOUT SHARED PARKING			2,093	1,685	2,093
SHARED PARKING REDUCTION OF 0%				0	0
TOTAL PARKING SPACES REQUIRED WITH SHARED PARKING				**1,685**	**2,093**
PLANNING AREA 2A					
Hotel	150	rm	150	108	150
Shopping Center	30,000	sf	120	188	120
TOTAL PARKING SPACES REQUIRED WITHOUT SHARED PARKING			270	296	270
SHARED PARKING REDUCTION OF 30.0%				-89	-81
TOTAL PARKING SPACES REQUIRED WITH SHARED PARKING				**207**	**189**
PLANNING AREA 2B					
Condominium/Townhouse	150	du	200	--	200
General Office	50,000	sf	200	183	200
Shopping Center	85,000	sf	340	307	340
Diamond Stadium	7,000	seats	2,333	2,212	2,333
TOTAL PARKING SPACES REQUIRED WITHOUT SHARED PARKING			2,873	2,702	2,873
SHARED PARKING REDUCTION OF 11.0%				-297	-316
TOTAL PARKING SPACES REQUIRED WITH SHARED PARKING				**2,405**	**2,557**
PLANNING AREA 2C					
Condominium/Townhouse	250	du	333	--	333
General Office	50,000	sf	200	--	200
TOTAL PARKING SPACES REQUIRED WITHOUT SHARED PARKING			533	0	533
PLANNING AREA 3A					
General Office	20,000	sf	80	76	80
Shopping Center	62,000	sf	248	223	248
TOTAL PARKING SPACES REQUIRED WITHOUT SHARED PARKING			328	299	328
SHARED PARKING REDUCTION OF 0%				0	0
TOTAL PARKING SPACES REQUIRED WITH SHARED PARKING				**299**	**328**
PLANNING AREA 3B					
Condominium/Townhouse	100	du	133	--	133
General Office	90,000	sf	360	311	360
Shopping Center	20,000	sf	80	72	80
TOTAL PARKING SPACES REQUIRED WITHOUT SHARED PARKING			573	383	573
SHARED PARKING REDUCTION OF 0%				0	0
TOTAL PARKING SPACES REQUIRED WITH SHARED PARKING				**383**	**573**
PROJECT SUMMARY					
TOTAL PARKING SPACES REQUIRED WITHOUT SHARED PARKING			6,871	6,365	6,871
SHARED PARKING REDUCTION				-386	-397
TOTAL PARKING SPACES REQUIRED WITH SHARED PARKING				**5,979**	**6,474**

[1] Data represents the traffic impact analysis assumptions.

[2] du = Dwelling Units; sf = Square Feet; rm = Rooms

[3] Rates are per the City of Lake Elsinore Municipal Code.

[4] Rates are based on the ULI Shared Parking Methodology, 2nd Edition (2005).

8.4 Conclusions

As set forth above, all of the intersections that will experience significant impacts as a result of the implementation of the project will be mitigated to less than significant levels.

It is therefore recommended that the proposed project be subject to mitigation measures that require the payment of the requisite impact fees required by each of the two mitigation fee programs discussed above as well as fair share participation at select locations. The on-site improvements are also recommended to be imposed as mitigation measures.

It should be noted that a select zone run from the model has been performed for the proposed project to determine the project's fair share percentage at the study area intersections under General Plan buildout conditions. The select zone trip distribution for the proposed project under General Plan buildout conditions has been provided in Appendix 8.1.

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