

Appendix K Traffic Study

Appendices

This page intentionally left blank.



Traffic Impact Study

Prepared by

FEHR & PEERS

600 Wilshire Blvd., Suite 1050
Los Angeles, CA 90017
213.261.3050

Sarah Brandenburg
s.brandenberg@fehrandpeers.com

Antelope Valley Area Plan Update

August 2014

INTRODUCTION

This traffic impact report evaluates the potential for implementation of the Proposed Antelope Valley Area Plan Update (Proposed Project) to result in transportation and traffic impacts in the County’s unincorporated Antelope Valley (Project Area). The Project Area consists of unincorporated land outside incorporated city planning areas, such as City of Palmdale and City of Lancaster. Information on existing and proposed traffic conditions was prepared by Fehr & Peers; technical calculations are included in the appendices of this report.

Environmental Setting

TRANSPORTATION SYSTEM

A large portion of the Antelope Valley is unincorporated, and includes the City of Lancaster and the City of Palmdale. The Antelope Valley, including the Project Area is served by the state highway system and a network of roadways ranging from local and collector streets to expressways and major highways. The transportation system, including the roadway network, transit, and active modes of travel, is described below.

State Highway Network

The Project Area is served by portions of the Interstate 5 (I-5) freeway as well as State Routes 14 and 138 (SR-14 and SR-138). I-5 is generally an 8-lane facility within the Project Area and serves north-south regional travel between Los Angeles and Kern Counties in the project vicinity as well as regional travel throughout the state. SR-14 is a 4-lane facility in the northern portion of the Antelope Valley and widens to six lanes with high occupancy vehicle (HOV) lanes in the southern area. SR-138 is a key east-west connection between I-5 and SR-14 and is currently a 2-lane undivided highway.

County Roadway Network

The key roadways that serve the Project Area along with the County’s functional classification are contained in Table 5.16-1 below.

Table 5.16-1 Project Area Roadway Network

North-South Corridors	Functional Classification
100 th St E	Limited Secondary Highway ¹
100 th St W (Avenue J to Lancaster Blvd)	Major Highway ¹
100 th St W (Avenue F to Avenue D)	Limited Secondary Highway ¹
10 th St W	Secondary Highway ¹
110 th St W	Local / Collector ¹
120 th St E	Expressway ¹
170 th Street E	Secondary Highway
200 th Street E	Secondary Highway
25 th St W	Secondary Highway ¹
35 th St W	Local / Collector ¹
40 th St W	Local / Collector ¹
50 th St E	Expressway ¹

Table 5.16-1 Project Area Roadway Network

70 th St E	Major Highway ¹
80 th St W	Major Highway ¹
87 th St W	Local / Collector ¹
Bouquet Canyon Rd	Secondary Highway ¹
East-West Corridors	Functional Classification
Aqua Dulce Canyon Road	Limited Secondary Highway ¹
Amargosa Creek Rd	Local / Collector ¹
Avenue E (Lancaster City Line to 110 th St W)	Major Highway ¹
Avenue E (70 th St W to 100 th St W)	Limited Secondary Highway ¹
Avenue F (95 th St W to 110 th St W)	Major Highway ¹
Avenue F (70 th St W to 95 th St W)	Limited Secondary Highway ¹
Avenue G	Expressway ¹
Avenue H (70 th St W to 110 th St W)	Major Highway ¹
Avenue H (40 th St E to Division St)	Expressway ¹
Avenue K-8	Secondary Highway ¹
Avenue L	Expressway ¹
Avenue L-8	Secondary Highway ¹
Avenue M	Local / Collector ¹
Avenue N-8	Local / Collector ¹
Avenue O-8	Secondary Highway ¹
Avenue Q (90 th St E to 60 th St E)	Major Highway ¹
Avenue Q (120 th St E to 90 th St E)	Secondary Highway ¹
City Ranch Rd	Secondary Highway ¹
Davenport Road	Limited Secondary Highway ¹
E Avenue O (180 th Street E to 145 th Street E)	Major Highway
E Avenue O (240 th Street E to 180 th Street E)	Secondary Highway
E Avenue P	Major Highway
E Palmdale Boulevard	Major Highway
Elizabeth Lake Rd	Major Highway ¹
Escondido Canyon Road	Limited Secondary Highway ¹
Fort Tejon Road	Secondary Highway
High Desert Corridor	Expressway ¹
Johnson Rd	Major Highway ¹
Lancaster Road	Expressway
Pearblossom Highway (SR-138)	Major Highway
Portal Pass Rd	Local / Collector ¹
Ritter Ranch Rd	Local / Collector ¹
San Fransisquito Canyon Rd	Secondary Highway ¹
W Avenue G	Expressway

Table 5.16-1 Project Area Roadway Network

W Avenue J	Major Highway
W Avenue L	Expressway
Note: Roadway was reclassified in the 2014 Los Angeles County General Plan Update.	

Transit Network

The Project Area is served primarily by Antelope Valley Transit Authority (AVTA) for bus service. AVTA provides 11 local routes and one express route in the Antelope Valley. In addition, AVTA operates supplemental and deviated routes to accommodate increased student ridership on routes that serve Eastside High School, and Antelope Valley High School in Lancaster, and Pete Knight High School in Palmdale. The AVTA also provides three commuter bus services:

- AVTA Line 785 – Line 785 connects Antelope Valley with Downtown Los Angeles and has an average headway of 10-20 minutes during weekday peak periods.
- AVTA Line 786 – Line 786 connects Antelope Valley with Century City/West Los Angeles and has an average headway of 60 minutes during weekday peak periods.
- AVTA Line 787 – Line 787 connects Antelope Valley with West San Fernando Valley and has an average headway of 20-30 minutes during weekday peak periods.

AVTA also provides a dial-a-ride (DAR) service to seniors over the age of 65 and disabled residents of the Antelope Valley.

In addition to the bus network, Antelope Valley is also served by two stations on the Antelope Valley Metrolink rail line, Lancaster Station and Palmdale Station. This line provides commuter service between Antelope Valley and Union Station in Downtown Los Angeles. From the Palmdale Station, 10 commuter trains run daily in each direction Monday through Friday to/from Union Station.

Antelope Valley is serviced by two regional transportation centers: the Lancaster City Park and the Palmdale Transportation Center. These centers offer free parking, and connect the Project Area with AVTA service, Santa Clarita Transit, AMTRAK throughway bus service, Greyhound, Metrolink, and the County of LA Beach Bus.

Bicycle & Pedestrian Network

The Project Area is primarily a rural environment. Due to the nature of the built environment and surrounding land uses, many of the roadways in the area do not have sidewalks, and bicycle facilities are limited. However, most of the major roadways in the developed areas, including the Cities of Lancaster and Palmdale, have sidewalks along with several bicycle facilities. In addition, a Trails Plan was adopted into the Antelope Valley General Plan by the Board of Supervisors in 2007. The Project Area includes a trail network that is used by hikers, bicyclists, and equestrians. This network is comprised of the Adopted County Backbone Trail System, Pacific Crest National Trail, Federal/National Forest Trails, and Incorporated City Trails.

Bicycle facilities are generally categorized into three types of facilities: Class I – bicycle paths, Class II – bicycle lanes, and Class III – bicycle routes. A description of the facility types along with existing facilities in the Project Area are described below.

- Class I bike paths, also called shared-use paths or multi-use paths, are paved right-of-way for exclusive use by bicyclists, pedestrians, and other non-motorized modes of travel. They are physically separated from vehicular traffic and can be constructed in roadway right-of-way or exclusive right-of-way. The Sierra Highway Bike path is a Class I facility that connects cities of Lancaster and Palmdale along the Metrolink tracks and Sierra Highway. The path helps commuters access the Metrolink stations and provides a recreational use for residents and visitors. In addition, the Lake Los Angeles path is a Class I facility that runs along 170th Street East for approximately 2.7 miles between Avenue M-8 and Avenue P.
- Class II bicycle lanes are defined by pavement striping and signage used to allocate a portion of a roadway for exclusive bicycle travel. Bike lanes are one-way facilities on either side of a roadway. The Project Area does not currently have Class II bicycle lanes. The County of Los Angeles Bicycle Master Plan (2012) (Bicycle Plan) has proposed Class II facilities near Lake Elizabeth along Elizabeth Lake Road.
- Class III bike routes provide shared use with motor vehicle traffic within the same travel lane. Designated by signs and roadway markings, bike routes provide continuity to other bike facilities or designated preferred routes through corridors with high demand. The Project Area does not currently have Class III bicycle routes. The County Bicycle Plan has proposed Class III facilities along Pine Canyon Road, as well as Lake Hughes Road, San Francisquito Canyon Road, and Bouquet Canyon Road, which would provide the connection to the Santa Clarita Valley area.

The County Bicycle Plan has proposed additional Class II and III bicycle facilities located primarily northwest of City of Lancaster. The Cities of Lancaster and Palmdale also have planned bicycle facilities that would connect with the County bicycle network.

Airports

The Los Angeles International Airport (LAX) is approximately 70 miles from the Project Area and provides commercial air travel to the Project Area. The Bob Hope Airport also provides commercial air travel service and is located in the City of Burbank approximately 50 miles from the Project Area.

Commercial passenger services ended at the Palmdale Regional Airport in 2008. At the same time, Los Angeles World Airport (LAWA) gave control of the airport to City of Palmdale. The Palmdale Regional Airport is currently being studied for passenger service as an alternative to the LAX airport.

The General William J. Fox Airfield (Fox Airfield) is a general aviation airport located in the Project Area three miles northwest of City of Lancaster and is operated by the County. The airport is home to a state-of-the-art Federal Aviation Administration (FAA) air traffic control tower, a U. S. Department of Forestry Base, an Aircraft Museum, and several other aviation-related businesses.

PERFORMANCE METRICS

Level of Service

The efficiency of traffic operations is measured in terms of Level of Service (LOS). LOS is a description of traffic performance at a particular facility, such as an intersection, roadway segment, or freeway segment. The LOS concept is a measure of average operating conditions during a specified time period is based on a volume-to-capacity (V/C) ratio. Levels range from 'A' to 'F', with 'A' representing excellent (free-flow) conditions and 'F' representing extreme congestion. The LOS definitions ranging from 'A' to 'F' are contained below in Table 5.16-2.

Table 5.16-2 Level of Service Definitions

LOS	Description
A	Excellent operation. All approaches to the intersection appear quite open, turning movements are easy and nearly all drivers find freedom of operation.
B	Very good operation. Many drivers begin to feel somewhat restricted within platoons of vehicles. This represents stable flow. An approach to an intersection may occasionally be fully utilized and traffic queues start to form.
C	Good operation. Occasionally backups may develop behind turning vehicles. Most drivers feel somewhat restricted.
D	Fair operation. There are no long-standing traffic queues. This level is typically associated with design practice for peak periods.
E	Poor operation. Some long-standing vehicular queues develop on critical approaches.
F	Forced flow. Represents jammed conditions. Backups from locations downstream or on the cross street may restrict or prevent movements of vehicles out of the intersection approach lanes therefore, volumes carried are no predictable. Potential for stop-and-go type traffic flow.

Source: Highway Capacity Manual, 2010.

Roadway Operations

The County has established daily capacity thresholds for roadways within the Project Area based on the roadways' functional classification and number of travel lanes. Table 5.16-3 presents the County's roadway classifications, allowable number of travel lanes, and the maximum average daily traffic volume representing LOS E conditions.

Table 5.16-3: Roadway Classification Capacities

Classification	Number of Lanes	Design Maximum 2-Way ADT	Design Maximum ADT Per Lane
Major Highway	4 Lanes	36,000	9,000
	6 Lanes	54,000	
	8 Lanes	72,000	
Secondary Highway	4 Lanes	36,000	9,000
Limited Secondary Highway	2 Lanes	18,000	9,000
	4 Lanes	36,000	
Collector Street	2 Lanes	15,000	7,500
Local Street	2 Lanes	2,500	1,250

Table 5.16-3: Roadway Classification Capacities

Classification	Number of Lanes	Design Maximum 2-Way ADT	Design Maximum ADT Per Lane
Expressway	4 Lanes	44,000	11,000
	6 Lanes	66,000	
	8 Lanes	88,000	

The study roadway segments were analyzed by comparing the existing average daily traffic volumes to the roadway capacity. The existing traffic volumes reflect available traffic counts collected by the County through prior studies and an estimate of current traffic levels from the North County Sub-Area Travel Demand Forecasting Model (Sub-Area Model). The Sub-Area Model contains the northern portion of LA County, including the Cities of Lancaster, Palmdale and Santa Clarita. The sub-area model also includes the southern portion of Kern County. Additional information on the Sub-Area Model is in the Model Methodology section of this report. The existing roadway operations are contained in Table 5.16-4 below.

Table 5.16-4 Roadway Segment LOS – Existing Conditions

Study Location	Location	To	From	Functional Class	Capacity ¹	Lanes	ADT	V/C
1	100th St E	Avenue J	Avenue J-8	Limited Secondary Highway	18,000	2	500	0.03
2	100th St E	Lancaster City Line	Avenue L	Limited Secondary Highway	18,000	2	500	0.03
3	100th St W	Lancaster Blvd	Avenue J	Major Highway	18,000	2	500	0.03
4	100th St W	Avenue D	Avenue D-8	Limited Secondary Highway	18,000	2	500	0.03
5	100th St W	Avenue E	Avenue F	Limited Secondary Highway	18,000	2	500	0.03
6	10th St W	Palmdale City Line	Avenue O	Secondary Highway	36,000	4	14,500	0.40
7	10th St W	Auto Center Dr	Elizabeth Lake Rd	Secondary Highway	45,000	5	14,500	0.32
8	110th St W	Johnson Rd	Avenue M	Local / Collector	15,000	2	< 10,000	(2)
9	120th St E	Avenue L	Avenue Q	Expressway	22,000	2	5,200	0.24
10	170th Street E	Avenue T	Avenue W	Secondary Highway	18,000	2	3,500	0.19
11	170th Street E	Avenue W	165th Street	Secondary Highway	18,000	2	1,000	0.06
12	200th Street E	Avenue G	Avenue J	Secondary Highway	18,000	2	1,000	0.06
13	25th St W	Avenue O	Palmdale City Line	Secondary Highway	36,000	4	6,100	0.17
14	35th St W	Avenue N	Avenue N-8	Local / Collector	15,000	2	< 10,000	(2)
15	40th St W	Avenue N	Avenue N-8	Local / Collector	15,000	2	< 10,000	(2)
16	50th St E	Avenue K-4	Avenue L	Expressway	22,000	2	2,200	0.10
17	70th St E	Lancaster City Line	Avenue K-8	Major Highway	18,000	2	500	0.03
18	70th St E	Avenue K-12	Avenue L	Major Highway	18,000	2	500	0.03
19	80th St W	Lancaster City Line	Lancaster City Line	Major Highway	18,000	2	1,700	0.09
20	87th St W	Ritter Ranch Rd	Elizabeth Lake Rd	Local / Collector	15,000	2	< 10,000	(2)
21	Agua Dulce Canyon Road	Soledad Canyon Road	Sierra Highway	Limited Secondary Highway	18,000	2	7,800	0.43
22	Amargosa Creek Rd	Portal Pass Rd	Johnson Rd	Local / Collector	15,000	2	< 10,000	(2)
23	Avenue E	110th St W	Lancaster City Line	Major Highway	18,000	2	500	0.03
24	Avenue E	100th St W	70th St W	Limited Secondary Highway	18,000	2	1,800	0.10
25	Avenue F	110th St W	Lancaster City Line	Major Highway	18,000	2	500	0.03
26	Avenue F	Lancaster City Line	95th St W	Major Highway	18,000	2	600	0.03
27	Avenue F	95th St W	70th St W	Limited Secondary Highway	18,000	2	1,800	0.10
28	Avenue G	25th St W	Division St	Expressway	22,000	2	5,200	0.24
29	Avenue G	SR-14 Antelope Valley Freeway	15th Street W	Expressway	22,000	2	4,400	0.20
30	Avenue G	15th Street W	10th Street W	Expressway	22,000	2	4,500	0.20

Table 5.16-4 Roadway Segment LOS – Existing Conditions

Study Location	Location	To	From	Functional Class	Capacity ¹	Lanes	ADT	V/C
31	Avenue G	10th Street W	Sierra Highway	Expressway	22,000	2	5,200	0.24
32	Avenue G	Sierra Highway	Division Street	Expressway	22,000	2	4,700	0.21
33	Avenue H	110th St W	70th St W	Major Highway	18,000	2	500	0.03
34	Avenue H	Division St	40th St E	Expressway	22,000	2	9,000	0.41
35	Avenue J	90th Street E	100th Street E	Major Highway	18,000	2	500	0.03
36	Avenue J	100th Street E	110th Street E	Major Highway	18,000	2	500	0.03
37	Avenue J	110th Street E	140th Street E	Major Highway	18,000	2	500	0.03
38	Avenue J	140th Street E	150th Street E	Major Highway	18,000	2	500	0.03
39	Avenue J	150th Street E	170th Street E	Major Highway	18,000	2	500	0.03
40	Avenue J	170th Street E	200th Street E	Major Highway	18,000	2	500	0.03
41	Avenue K-8	52nd St W	50th St W	Secondary Highway	18,000	2	600	0.03
42	Avenue L	40th St E	45th St E	Expressway	22,000	2	500	0.02
43	Avenue L	50th St E	80th St E	Expressway	22,000	2	500	0.02
44	Avenue L	90th St E	120th St E	Expressway	N/A ³	N/A ³	N/A ³	N/A ³
45	Avenue L	55th St W	40th St W	Expressway	22,000	2	19,000	0.86
46	Avenue L-8	10th St W	SR 14	Secondary Highway	36,000	4	4,300	0.12
47	Avenue L-8	SR 14	30th St W	Secondary Highway	18,000	2	600	0.03
48	Avenue L-8	60th St W	80th St W	Secondary Highway	36,000	4	3,900	0.11
49	Avenue M	Elizabeth Lake Rd	80th St W	Local / Collector	15,000	2	< 10,000	(²)
50	Avenue N-8	45th St W	30th St W	Local / Collector	15,000	2	< 10,000	(²)
51	Avenue N-8	20th St W	Palmdale City Line	Local / Collector	15,000	2	< 10,000	(²)
52	Avenue O	145th Street E	150th Street E	Major Highway	18,000	2	6,600	0.37
53	Avenue O	150th Street E	170th Street E	Major Highway	18,000	2	2,000	0.11
54	Avenue O	170th Street E	175th Street E	Major Highway	18,000	2	2,400	0.13
55	Avenue O	175th Street E	180th Street E	Major Highway	18,000	2	2,500	0.14
56	Avenue O	180th Street E	200th Street E	Secondary Highway	18,000	2	2,500	0.14
57	Avenue O	200th Street E	210 Street E	Secondary Highway	18,000	2	2,300	0.13
58	Avenue O	210 Street E	240th Street E	Secondary Highway	18,000	2	2,000	0.11
59	Avenue O-8	30th St W	20th St W	Secondary Highway	N/A ³	N/A ³	N/A ³	N/A ³
60	Avenue P	15th Street E	20th Street E	Major Highway	36,000	4	18,000	0.50

Table 5.16-4 Roadway Segment LOS – Existing Conditions

Study Location	Location	To	From	Functional Class	Capacity ¹	Lanes	ADT	V/C
61	Avenue P	20th Street E	25th Street E	Major Highway	36,000	4	17,800	0.49
62	Avenue P	25th Street E	30th Street E	Major Highway	36,000	4	6,400	0.18
63	Avenue P	30th Street E	40th Street E	Major Highway	18,000	2	2,200	0.12
64	Avenue P	40th Street E	70th Street E	Major Highway	18,000	2	500	0.03
65	Avenue Q	60th St E	90th St E	Major Highway	18,000	2	8,800	0.49
66	Avenue Q	90th St E	120th St E	Secondary Highway	18,000	2	1,000	0.06
67	Bouquet Canyon Rd	Elizabeth Lake Rd	Palmdale City Line	Secondary Highway	18,000	2	1,800	0.10
68	Davenport Road	Sierra Highway	Agua Dulce Canyon Road	Limited Secondary Highway	18,000	2	1,800	0.10
69	Elizabeth Lake Road	Johnson Road	Portal Pass Rd	Major Highway	18,000	2	2,700	0.15
70	Elizabeth Lake Road	Johnson Road	San Francisquito Canyon Road	Major Highway	18,000	2	3,400	0.19
71	Elizabeth Lake Road	San Francisquito Canyon Road	Bouquet Canyon Road	Major Highway	18,000	2	3,400	0.19
72	Elizabeth Lake Road	Bouquet Canyon Road	Godde Hill Road	Major Highway	18,000	2	3,400	0.19
73	Escondido Canyon Road	Agua Dulce Canyon Road	SCV Planning Boundary	Limited Secondary Highway	18,000	2	2,000	0.11
74	Fort Tejon Road	87th Street E	Mount Emma Road	Secondary Highway	18,000	2	4,500	0.25
75	Fort Tejon Road	Mount Emma Road	96th Street	Secondary Highway	18,000	2	9,000	0.50
76	Fort Tejon Road	96th Street	106th Street	Secondary Highway	18,000	2	9,000	0.50
77	Fort Tejon Road	106th Street	131 Street E	Secondary Highway	18,000	2	7,900	0.44
78	Johnson Rd	Elizabeth Lake Rd	110th St W	Major Highway	18,000	2	2,400	0.13
79	Lancaster Road	Pine Canyon Road	Avenue I	Expressway	22,000	2	500	0.02
80	Lancaster Road	Avenue I	190th Street W	Expressway	22,000	2	500	0.02
81	Lancaster Road	190th Street W	170th Street W	Expressway	22,000	2	500	0.02
82	Lancaster Road	170th Street W	110th Street W	Expressway	22,000	2	700	0.03
83	Lancaster Road	110th Street W	90th Street W	Expressway	22,000	2	600	0.03
84	Lancaster Road	90th Street W	70th Street W	Expressway	22,000	2	800	0.04
85	Lancaster Road	70th Street W	60th Street W	Expressway	22,000	2	800	0.04
86	Palmdale Boulevard	90th Street E	95th Street E	Major Highway	18,000	2	11,700	0.65
87	Palmdale Boulevard	95th Street E	100th Street E	Major Highway	18,000	2	11,900	0.66
88	Palmdale Boulevard	100th Street E	105th Street E	Major Highway	18,000	2	11,300	0.63
89	Palmdale Boulevard	105th Street E	110 Street E	Major Highway	18,000	2	11,000	0.61
90	Pearblossom Highway (SR-138)	70th Street E	Avenue T 8	Major Highway	36,000	4	18,400	0.51
91	Pearblossom Highway (SR-138)	Avenue T 8	82nd Street E	Major Highway	18,000	2	17,600	0.98

Table 5.16-4 Roadway Segment LOS – Existing Conditions

Study Location	Location	To	From	Functional Class	Capacity ¹	Lanes	ADT	V/C
92	Pearblossom Highway (SR-138)	82nd Street E	87th Street E	Major Highway	18,000	2	13,500	0.75
93	Pearblossom Highway (SR-138)	87th Street E	96th Street E	Major Highway	18,000	2	16,000	0.89
94	Pearblossom Highway (SR-138)	96th Street E	106th Street E	Major Highway	36,000	4	17,900	0.50
95	Pearblossom Highway (SR-138)	106th Street E	116th Street E	Major Highway	36,000	4	17,800	0.49
96	Pearblossom Highway (SR-138)	116th Street E	126th Street E	Major Highway	18,000	2	17,700	0.98
97	Pearblossom Highway (SR-138)	126th Street E	131st Street E	Major Highway	18,000	2	18,600	1.03
98	Pearblossom Highway (SR-138)	131 Street E	170th Street E	Major Highway	36,000	4	17,700	0.49
99	Portal Pass Rd	Elizabeth Lake Rd	Ritter Ranch Rd	Local / Collector	15,000	2	< 10,000	⁽²⁾
100	Ritter Ranch Rd	Portal Pass Rd	Bouquet Canyon Rd	Local / Collector	15,000	2	< 10,000	⁽²⁾
101	San Fransisquito Canyon Rd	Angeles National Forest Boundary	Elizabeth Lake Rd	Secondary Highway	18,000	2	1,600	0.09

Notes

1. Capacity based on County thresholds as defined in Table 5.16-3.
2. Local and collector streets are typically not reflected in travel demand models; based on the roadway classification, volumes are expected to be well below the County's ADT thresholds.
3. Roadway segment does not exist or is discontinuous under existing conditions; segment only analyzed under future conditions with planned improvements in place.

Under Existing Conditions, three locations currently exceed the LOS E threshold:

- 91. Pearblossom Highway (SR-138) between Avenue T and 82nd Street
- 96. Pearblossom Highway (SR-138) between 116th Street East and 126th Street East
- 97. Pearblossom Highway (SR-138) between 126th Street East and 131st Street East

Congestion Management Plan

The traffic study incorporates analyses at the intersection level for the County-designated Congestion Management Program (CMP) intersections. The CMP was created following the passage of Proposition 111 and is intended to link transportation, land use and air quality decisions for urban areas in California. The CMP assesses transportation operating conditions at key locations for the County, and it is implemented by the Los Angeles County Metropolitan Transportation Authority (Metro). The CMP requires monitoring of the CMP roadway system, including designated intersections and freeway segments. In the Project Area, there are a total of five CMP monitoring intersections:

- 1. Lancaster Road & 300th Street West (SR-138)
- 2. Avenue D & 60th Street West (SR-138)
- 3. Sierra Highway & Red Rover Mine Road
- 4. Pearblossom Highway & 82nd Street East
- 5. Pearblossom Highway & Antelope Highway

While I-5, SR-138 and SR-14 are considered part of the CMP freeway network, no CMP monitoring stations are located within the Project Area. Therefore, the following nine freeway segments were selected based on locations that could be impacted by the Proposed Project:

- 1. I-5 Freeway – North of SR-138
- 2. I-5 Freeway – South of SR-138
- 3. SR-138 – Between I-5 freeway and 300th Street
- 4. SR-138 – Between 300th Street and 190th Street
- 5. Avenue D/SR-138 – Between 190th Street and SR-14
- 6. SR-14 – North of Avenue D/SR-138
- 7. SR-14 – South of Avenue D/SR-138
- 8. SR-14 – South of SR-138/High Desert Corridor
- 9. High Desert Corridor – East of 125th Street East (Future Conditions Only)

The five CMP intersection locations and nine study freeway segment locations are included in this study and evaluated for both existing and future conditions with and without the Proposed Project.

Intersection CMP Analysis

The CMP study intersections were analyzed using the Intersection Capacity Utilization (ICU) methodology. The ICU methodology is the preferred method to calculate the existing and future levels of service at intersections per the County guidelines. Some of the inputs that are used in this analysis are vehicle turning movements, number of travel lanes and intersection controls. Table 5.16-5 below shows the LOS and V/C thresholds for signalized intersections. Technical calculations are contained in Appendix A.

Table 5.16-5 Level of Service description for Signalized Intersections

LOS	Signalized Intersection Volume/Capacity
A	0.000 - 0.600
B	>0.600 - 0.700
C	>0.700 - 0.800
D	>0.800 - 0.900
E	>0.900 - 1.000
F	> 1.000

Source: Highway Capacity Manual, 2010.

Table 5.16-6 presents the existing traffic operations at the five CMP study intersections. As shown, the CMP intersections in the Project Area operate at LOS B or better during both AM and PM peak hours under Existing Conditions.

Table 5.16-6 Intersection CMP Analysis – Existing (2014) Level of Service

No.	CMP Route	Cross Street	AM Peak Hour		PM Peak Hour	
			V/C Ratio	Level of Service	V/C Ratio	Level of Service
1	Lancaster Road	300 th Street West ¹	0.18	A	0.21	A
2	Avenue D	60 th Street West ¹	0.23	A	0.28	A
3	Sierra Highway	Red Rover Mine Road ¹	0.14	A	0.14	A
4	Pearblossom Highway	82 nd Street East	0.58	A	0.70	B
5	Pearblossom Highway	Antelope Highway ¹	0.54	A	0.63	B

Note: ¹ Unsignalized CMP intersections were assumed to be signalized for planning purposes.

Freeway CMP Analysis

For the purposes of showing changes in travel demand on the state highway system within the Project Area, the CMP analysis was conducted for the major freeway segments in the study area. While I-5, SR-138 and SR-14 are considered part of the CMP freeway network, no CMP monitoring stations are located within the Project Area. Therefore, nine freeway segments were selected based on locations that could be impacted by the Proposed Project.

In accordance with the CMP guidelines, freeway (mainline) operating conditions during peak periods were evaluated using the general procedures established by the CMP. Freeway mainline LOS is estimated with calculation of the demand-to-capacity (D/C) ratio. Calculation of LOS based on D/C ratios is a surrogate

for the speed-based LOS used by the State Department of Transportation (Caltrans) for traffic operational analysis. The LOS criteria for freeway segments using D/C ratios as the performance measure are shown in Table 5.16-7. Capacity is determined based on the existing number of lanes and a single-lane capacity of 2,000 vehicles per hour per lane. Highways and roadways designated in the CMP network are required to operate at LOS E, except where Future No Project LOS is worse than LOS E. In such cases, the Future No Project LOS is the standard.

Table 5.16-7 Level of Service Definitions for CMP Freeway Mainline Segments

Level of Service	Demand-to-Capacity Ratio
A	0.00-0.35
B	>0.35-0.54
C	>0.54-0.77
D	>0.77-0.93
E	>0.93-1.00
F(0)	>1.00-1.25
F(1)	>1.25-1.35
F(2)	>1.35-1.45
F(3)	>1.45

Source: Congestion Management Program, Metro, 2010.

Table 5.16-8 presents the existing operations of the freeway facilities in the study area. Under Existing Conditions, all freeway segments operate with an LOS of C or better for both AM and PM peak hours.

Table 5.16-8 Freeway CMP Segments – Existing (2014) Level of Service

Study Location	Roadway	Segment	Direction	Peak Hour Capacity	Lanes	Peak Hour Volume	D/C	LOS
AM Peak Hour								
1	I-5 Freeway	North of SR-138	NB	8,000	4	2,920	0.37	B
	I-5 Freeway	North of SR-138	SB	8,000	4	2,990	0.37	B
2	I-5 Freeway	South of SR-138	NB	8,000	4	2,770	0.35	A
	I-5 Freeway	South of SR-138	SB	8,000	4	2,900	0.36	B
3	SR-138	Between I-5 and 300th Street W	WB	2,000	1	230	0.12	A
	SR-138	Between I-5 and 300th Street W	EB	2,000	1	170	0.09	A
4	SR-138	Between 300th St W and 190th St W	WB	2,000	1	160	0.08	A
	SR-138	Between 300th St W and 190th St W	EB	2,000	1	150	0.08	A
5	Avenue D/SR-138	Between 190th Street W and SR-14	WB	2,000	1	150	0.08	A
	Avenue D/SR-138	Between 190th Street W and SR-14	EB	2,000	1	180	0.09	A
6	SR-14	North of Avenue D/SR-138	NB	4,000	2	1,380	0.35	A
	SR-14	North of Avenue D/SR-138	SB	4,000	2	1,930	0.48	B
7	SR-14	South of Avenue D/SR-138	NB	4,000	2	1,480	0.37	B
	SR-14	South of Avenue D/SR-138	SB	4,000	2	2,040	0.51	B
8	SR-14	South of SR-138/High Desert Cor.	NB	6,000	3	3,320	0.55	C
	SR-14	South of SR-138/High Desert Cor.	SB	6,000	3	3,540	0.59	C
9	High Desert Corridor	East of 125th Street E	WB	N/A	N/A	N/A	N/A	N/A
	High Desert Corridor	East of 125th Street E	EB	N/A	N/A	N/A	N/A	N/A

Table 5.16-8 Freeway CMP Segments – Existing (2014) Level of Service

Study Location	Roadway	Segment	Direction	Peak Hour Capacity	Lanes	Peak Hour Volume	D/C	LOS
PM Peak Hour								
1	I-5 Freeway	North of SR-138	NB	8,000	4	3,050	0.38	B
	I-5 Freeway	North of SR-138	SB	8,000	4	2,970	0.37	B
2	I-5 Freeway	South of SR-138	NB	8,000	4	2,910	0.36	B
	I-5 Freeway	South of SR-138	SB	8,000	4	2,850	0.36	B
3	SR-138	Between I-5 and 300th Street W	WB	2,000	1	240	0.12	A
	SR-138	Between I-5 and 300th Street W	EB	2,000	1	230	0.12	A
4	SR-138	Between 300th St W and 190th St W	WB	2,000	1	200	0.10	A
	SR-138	Between 300th St W and 190th St W	EB	2,000	1	170	0.09	A
5	Avenue D/SR-138	Between 190th Street W and SR-14	WB	2,000	1	230	0.12	A
	Avenue D/SR-138	Between 190th Street W and SR-14	EB	2,000	1	180	0.09	A
6	SR-14	North of Avenue D/SR-138	NB	4,000	2	2,280	0.57	C
	SR-14	North of Avenue D/SR-138	SB	4,000	2	1,830	0.46	B
7	SR-14	South of Avenue D/SR-138	NB	4,000	2	2,420	0.61	C
	SR-14	South of Avenue D/SR-138	SB	4,000	2	1,890	0.47	B
8	SR-14	South of SR-138/High Desert Cor.	NB	6,000	3	4,270	0.71	C
	SR-14	South of SR-138/High Desert Cor.	SB	6,000	3	3,400	0.57	C
9	High Desert Corridor	East of 125th Street E	WB	N/A	N/A	N/A	N/A	N/A
	High Desert Corridor	East of 125th Street E	EB	N/A	N/A	N/A	N/A	N/A

Thresholds of Significance

According to Appendix G of the CEQA Guidelines, a project would normally have a significant effect on the environment if the project could:

- T-1 Conflict with an applicable plan, ordinance or policy establishing measures of effectiveness for the performance of the circulation system, taking into account all modes of transportation including mass transit and non-motorized travel and relevant components of the circulation system, including but not limited to intersections, streets, highways and freeways, pedestrian and bicycle paths, and mass transit.
- T-2 Conflict with an applicable congestion management program, including, but not limited to level of service standards and travel demand measures, or other standards established by the county congestion management agency for designated roads or highways.
- T-3 Result in a change in air traffic patterns, including either an increase in traffic levels or a change in location that results in substantial safety risks.
- T-4 Substantially increase hazards due to a design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment).
- T-5 Result in inadequate emergency access.

T-6 Conflict with adopted policies, plans, or programs regarding public transit, bicycle, or pedestrian facilities, or otherwise decrease the performance or safety of such facilities.

These potential impact areas are discussed in this chapter. In addition, this chapter includes a program-level analysis of the potential impacts to the County's highways themselves based on potential growth due to the Proposed Project, including the Highway Plan amendments in the Project Area as described in the Draft 2014 Los Angeles County General Plan Update. The County does not specify an acceptable LOS for the purpose of long-range planning. However, in conformance with the County CMP, the maximum acceptable level of service on arterial roads (i.e., major, secondary, and limited secondary highways) is LOS E, except where base year LOS is worse than LOS E. In such cases, the base year LOS is the standard. Thus, for this analysis, LOS E is considered to be the measuring point for significant impacts. Any action that causes an LOS F condition to worsen by 0.02 or greater is considered a significant impact for purposes of this analysis.

The transportation analysis applied to the Proposed Project reflects the existing policy and legal context. The State Office of Planning and Research (OPR) is currently developing revisions to the CEQA Guidelines under Senate Bill (SB) 743. The revised CEQA Guidelines will establish new criteria for determining the significance of transportation impacts and define alternative metrics for level of service. The legislation does not preclude the application of local general plan policies, zoning codes, conditions of approval, thresholds, or any other planning requirements. On August 7, 2014, OPR released the SB 743 guidelines in a document entitled *Updating Transportation Impacts Analysis in the CEQA Guidelines*. Vehicle miles of travel (VMT) is the proposed transportation metric for CEQA and the use of LOS as a sole basis for impact significance will be prohibited in Transit Priority Areas immediately upon filing the guidelines with the Secretary of State, which is likely to occur in early 2015. Outside of the Transit Priority Areas, lead agencies may elect to be governed by the new guidelines until they become mandatory after January 1, 2016.

Individual development projects are reviewed in accordance with the County's Traffic Impact Analysis Report Guidelines. However, the Proposed Project is a policy-level document that must be evaluated differently than a single development project. This is because it is only possible to make generalized estimates of development activity at this time. The specific location or intensity of development throughout the Project Area is unknown. The Proposed Project guides where growth will occur and to what level, but actual development patterns will likely differ somewhat from the Proposed Project. In addition, the specific timing and other details such as driveway locations, mix of land uses and intensity are not known at this time. Therefore, a different and broader standard for measuring impacts is appropriate for this program-level impact analysis.

Relevant Area Plan Goals and Policies

The following is a list of applicable goals and policies of the Proposed Area Plan that are intended to reduce potentially significant adverse effects concerning transportation and traffic. The policies below cover Travel Demand Management, Highways and Streets, Truck Traffic, Regional Transportation, Local Transit, Bikeways and Bicycle Routes, Trails, and Pedestrian Access.

Mobility Element

Travel Demand Management

Goal M 1: Land use patterns that promote alternatives to automobile travel.

- **Policy M 1.1:** Direct the majority of Antelope Valley's future growth to rural town center areas, rural town areas and where appropriate to economic opportunity areas, to minimize travel time and reduce the number of vehicle trips.
- **Policy M 1.2:** Encourage the continued development of rural town center areas that provide for the daily needs of local residents, reducing the number of vehicle trips and providing local employment opportunities.
- **Policy M 1.3:** Encourage new parks, recreation areas, and public facilities to locate in rural town center areas, rural town areas, and, where appropriate, economic opportunity areas.
- **Policy M 1.4:** Ensure that new developments have a balanced mix of residential uses and employment opportunities as well as park, recreation areas and public facilities within close proximity of each other.
- **Policy M 1.5:** Promote alternatives to automobile travel in rural town center areas and rural town areas by linking these areas through pedestrian walkways, trails, and bicycle routes.

Goal M 2: Reduction of vehicle trips and emissions through effective management of travel demand, transportation systems, and parking.

- **Policy M 2.1:** Encourage the reduction of home-to-work trips through the promotion of home-based businesses, live-work units, and telecommuting.
- **Policy M 2.2:** Encourage trip reduction through promotion of carpools, vanpools, shuttles, and public transit.
- **Policy M 2.3:** In evaluating new development proposals, require trip reduction measures to relieve congestion and reduce air pollution from vehicle emissions.
- **Policy M 2.4:** Develop multi-modal transportation systems that offer alternatives to automobile travel by implementing the policies regarding regional transportation, local transit, bicycle routes, trails, and pedestrian access contained in this Mobility Element.
- **Policy M 2.5:** As residential development occurs in communities; require transportation routes, including alternatives to automotive transit, to link to important local destination points such as shopping, services, employment, and recreation.
- **Policy M 2.6:** Within rural town center areas, explore flexible parking regulations such as allowing residential and commercial development to meet parking requirements through a combination of on-site and off-site parking, where appropriate, or encouraging the provision of different types of parking spaces.

Highways and Streets

Goal M 3: An efficient network of major, secondary and limited secondary highways to serve the Antelope Valley.

- **Policy M 3.1:** Implement the adopted Highway Plan for the Antelope Valley, in cooperation with the cities of Lancaster and Palmdale. Ensure adequate funding on an ongoing basis through financing programs, such as grants, congestion pricing, bonding, fair share cost assignments, etc.
- **Policy M 3.2:** In rural areas, require rural highway standards that minimize the width of paving and placement of curbs, gutters, sidewalks, street lighting, and traffic signals, as adopted by the Department of Public Works.
- **Policy M 3.3:** Implement highway improvements only when necessitated by increasing traffic or new development or for safety reasons.
- **Policy M 3.4:** Maintain existing highways to ensure safety, and require adequate street and house signage for emergency response vehicles.
- **Policy M 3.5:** As future land use changes occur, periodically review traffic counts and traffic projections and revise the Highway Plan accordingly.
- **Policy M 3.6:** Engage local communities and agencies in the planning and implementation of transportation improvements.

Goal M 4: A network of local streets that support the rural character of the unincorporated Antelope Valley without compromising public safety.

- **Policy M 4.1:** Require rural local street standards that minimize the width of paving and placement of curbs, gutters, sidewalks, street lighting, and traffic signals, as adopted by the Department of Public Works.
- **Policy M 4.2:** Maintain existing local streets to ensure safety, and require adequate signage for emergency response vehicles.
- **Policy M 4.3:** Encourage ongoing maintenance of private local streets to ensure public safety.

Truck Traffic

Goal M 5: Long-haul truck traffic is separated from local traffic reducing the impacts of truck traffic on local streets and residential areas.

- **Policy M 5.1:** Support development of the High Desert Corridor and the Northwest 138 Corridor Improvement Project, to provide a route for truck traffic between Interstate 5, State Route 14, and Interstate 15.
- **Policy M 5.2:** Direct truck traffic to designated truck routes, such as major and secondary highways, and prohibit truck traffic on designated scenic routes, to the greatest extent feasible.
- **Policy M 5.3:** Require that designated truck routes are designed and paved to accommodate truck traffic, preventing excessive pavement and deterioration from truck use.

- **Policy M 5.4:** Add rest stops along designated truck routes to provide stopping locations away from residential areas.
- **Policy M 5.5:** Adopt regulations for truck parking on local streets to avoid impacts to residential areas.

Regional Transportation

Goal M 6: A range of transportation options to connect the Antelope Valley to other regions.

- **Policy M 6.1:** Support the development of Palmdale Regional Airport and encourage a range of commercial air travel options.
- **Policy M 6.2:** Support the development of William J. Fox Airfield as a facility for general aviation, air cargo operations, and commuter air travel.
- **Policy M 6.3:** Support the development of the High Desert Corridor and the Northwest 138 Corridor Improvement Project between Interstate 5, State Route 14, and Interstate 15, and encourage the participation of private enterprise and capital.
- **Policy M 6.4:** Support increases in Metrolink commuter rail service, and support the expansion of commuter rail service on underutilized rail lines where appropriate.
- **Policy M 6.5:** Support the development of the California High Speed Rail system, with a station in Palmdale to provide links to Northern California and other portions of Southern California, and encourage the participation of private enterprise and capital.
- **Policy M 6.6:** Support the development of a high-speed rail system linking Palmdale to Victorville and Las Vegas, and encourage the participation of private enterprise and capital.
- **Policy M 6.7:** Establish a regional transportation hub in Palmdale with feeder transit service to the rural areas of the unincorporated Antelope Valley.
- **Policy M 6.8:** In planning for all regional transportation systems, consider and mitigate potential impacts to existing communities, and minimize land use conflicts.
- **Policy M 6.9:** Engage regional agencies, such as Caltrans, SCAG, and Metro, in the implementation of an effective and efficient integrated multi-modal regional transportation network. Ensure adequate funding on an ongoing basis through financing programs, such as grants, congestion pricing, bonding, fair share cost assignments, etc.

Local Transit

Goal M 7: Bus service is maintained and enhanced throughout the Antelope Valley.

- **Policy M 7.1:** Maintain and increase funding to the Antelope Valley Transit Authority for bus service.

- **Policy M 7.2:** Support increases in bus service to heavily traveled areas and public facilities, such as parks and libraries.
- **Policy M 7.3:** Support increases in bus service to rural communities, linking them to a regional transportation hub in Palmdale and shopping and employment centers in Lancaster and Palmdale.
- **Policy M 7.4:** Improve access for all people, including seniors, youth, and the disabled, by maintaining off-peak service and equipping transit vehicles for wheelchairs and bicycles.
- **Policy M 7.5:** Encourage the use of advanced technologies in the planning and operation of the transit system.

Goal M 8: Alternative transit options in areas not reached by bus service.

- **Policy M 8.1:** Support the expansion of dial-a-ride services to rural communities, linking them to a regional transportation hub in Palmdale and shopping and employment centers in Lancaster and Palmdale.
- **Policy M 8.2:** Evaluate the feasibility of alternative transit options, such as community shuttle services and privately operated transit, to increase accessibility.

Bikeways and Bicycle Routes

Goal M 9: A unified and well-maintained bicycle transportation system throughout the Antelope Valley with safe and convenient routes for commuting, recreation, and daily travel.

- **Policy M 9.1:** Implement the adopted Bikeway Plan for the Antelope Valley in cooperation with the cities of Lancaster and Palmdale. Ensure adequate funding on an ongoing basis.
- **Policy M 9.2:** Along streets and highway in rural areas, add safe bicycle routes that link to public facilities, a regional transportation hub in Palmdale, and shopping and employment centers in Lancaster and Palmdale.
- **Policy M 9.3:** Ensure that bicycle ways and bicycle routes connect communities and offer alternative travel modes within communities.
- **Policy M 9.4:** Encourage provision of bicycle racks and other equipment and facilities to support the use of bicycles as an alternative means of travel.

Trails

Goal M 10: A unified and well-maintained multi-use (equestrian, hiking, and mountain bicycling) system that links destinations such as rural town centers and recreation areas throughout Antelope Valley.

- **Policy M 10.1:** Implement the adopted Trails Plan for the Antelope Valley in cooperation with the cities of Lancaster and Palmdale. Ensure adequate funding on an ongoing basis.

- **Policy M 10.2:** Connect new developments to existing population centers with trails requiring trail dedication and construction through the development review and permitting process.
- **Policy M 10.3:** Maximize fair and reasonable opportunities to secure additional trail routes (dedicated multi-use trail easements) from willing property owners.
- **Policy M 10.4:** Ensure trail access by establishing trailheads with adequate parking and access to public transit, where appropriate and feasible.
- **Policy M 10.5:** Locate and design trail routes to minimize impacts to sensitive environmental resources and ecosystems.
- **Policy M 10.6:** Where trail connections are not fully implemented, collaboratively work to establish safe interim connections.
- **Policy M 10.7:** Ensure that existing trails and trailheads are properly maintained by the relevant agencies.
- **Policy M 10.8:** Solicit community input to ensure that trails are compatible with local needs and character.

Pedestrian Access

Goal M 11: A continuous, integrated system of safe and attractive pedestrian routes linking residents to rural town center areas, schools, services, transit, parks, and open space areas.

- **Policy M 11.1:** Improve existing pedestrian routes and create new pedestrian routes, where appropriate and feasible. If paving is deemed necessary, require permeable paving consistent with rural community character instead of concrete sidewalks.
- **Policy M 11.2:** Within rural town center areas, require that highways and streets provide pleasant pedestrian environments and implement traffic calming methods to increase public safety for pedestrians, bicyclists, and equestrian riders.
- **Policy M 11.3:** Within rural town center areas, promote pedestrian-oriented scale and design features, including public plazas, directional signage, and community bulletin boards.
- **Policy M 11.4:** Within rural town center areas, encourage parking to be located behind or beside structures, with primary building entries facing the street. Encourage also the provision of direct and clearly delineated pedestrian walkways from transit stops and parking areas to building entries.
- **Policy M 11.5:** Implement traffic calming methods in areas with high pedestrian usage, such as school zones.

Environmental Impacts

The following impact analysis addresses thresholds according to Appendix G of the CEQA Guidelines of significance. The applicable thresholds are identified in brackets after the impact statement.

COUNTY HIGHWAY PLAN NETWORK SUMMARY

The County Department of Public Works (DPW) is generally responsible for the design, construction, operation, maintenance and repair of roads in the Project Area, as well as in a number of jurisdictions that contract with the County for these services. The primary transportation focus of the County is on the portions of the highway system that fall within the unincorporated areas. Primary responsibility for transportation planning in Los Angeles County is Metro. As a result, the County is not directly responsible for overall transportation planning or service provision in the County. The County's Highway Plan designates the functional classifications of the County's highway system. For the purposes of the Proposed Project, the Project Area's highway system reflects the highway system documented in the County's originally adopted plan plus proposed updates as reflected in the Draft 2014 Los Angeles County General Plan. The Highway Plan illustrates existing and proposed locations of major arterial highways throughout the County. It is intended to provide a highway system consistent with the distribution of land uses and growth envisioned by the Proposed Project by providing adequate highways to serve future needs.

The County's Transportation Element includes the roadway classifications described below.

Major Highway

This classification includes urban highways that are of countywide significance and are, or are projected to be, the most highly traveled routes. These roads generally require four or more lanes of moving traffic, channelized medians and, to the extent possible, access control and limits on intersecting streets.

The normal right-of-way width for these highways is 100 feet. This width may vary to meet extraordinary circumstances. Also classified as major highways are key (inter-urban) connectors, non-urban access ways and recreational roads. The bulk of these routes are not planned for urban type improvement. However, the full major highway right-of-way width of 100 feet or more is generally required to maintain adequate safety and noise standards. Portions of these rights-of-way are needed for recreational uses such as equestrian and bike trails, and for other transportation uses such as turnouts.

Secondary Highway

This classification includes urban routes that serve or are planned to serve an areawide or countywide function, but are less heavily traveled than major highways. In a few cases, routes which carry major highway levels of traffic are classified as secondary highways because it is impractical to widen them to major highway standards. In addition to the countywide function, secondary highways also frequently act as oversized collector roads that feed the countywide system. In this capacity, the routes serve to remove heavy traffic from local streets, especially in residential areas. In urban areas, secondary highways generally have four lanes of vehicular traffic on 80 feet of right-of-way. However, configuration and width may vary with traffic demand and existing conditions. Access control, especially to residential property and minor streets, is desirable along these roads.

In rural areas, certain connector highways to and between rural communities are also classified as secondary highways. In the flat lands of the Antelope Valley, acquisition or retention of 80 feet of right-of-way for many of the non-urban access routes is required for traffic safety and/or to allow for multiple use of the right-of-way. In rural areas, secondary highways are ordinarily improved with only two lanes of moving

traffic. Additional traffic lanes, left-turn pockets and other facilities may be provided where conditions or the nature of development on adjacent property warrant traffic.

Limited Secondary Highway

Limited secondary routes are located in remote foothill, mountain and canyon areas. Their primary function is to provide access to low-density settlements, ranches and recreational areas. The standard improvement for limited secondary routes is two traffic lanes on 64 feet of right-of-way. Typically, such improvements consist of 28-30 feet of pavement with graded shoulders. Left-turn pockets and passing lanes may be provided when required for traffic safety. The right-of-way may be increased to 80 feet for additional improvements where traffic or drainage conditions warrant.

A uniform building setback shall be established 40 feet from the centerline of all limited secondary highways in order to preserve proper sight distances and to help maintain a rural appearance adjacent to the roadway. This setback shall be in addition to any yard requirement contained in the Zoning Ordinance.

Parkway

This classification includes urban and rural routes that have park-like features either within or adjacent to the roadway. The right-of-way width required varies as necessary to incorporate these features, typically with a minimum of 80 feet. Roadway improvements vary depending on the composition and volume of traffic carried.

Table 5.16-9 summarizes the highway plan classifications, functional classifications, typical right-of-way widths, and design maximum average daily traffic (ADT) for the roadways.

Table 5.16-9: Roadway Classifications

Highway Plan Classification	Functional Classification	Definition	Typical ROW Width (Curb-to-Curb)	Design Maximum 2-Way ADT
Major Highway	4 to 8 Lane Roadway	Arterials with at least 6 travel lanes for high mobility, designed with limited vehicular access to driveways and cross streets. The typical road section includes a raised landscaped median with left turn pockets at intersections. Street sections may include striped, on-street bikeways or separated bike paths.	100' or More)	36,000 (4L) 54,000 (6L) 72,000 (8L)
Secondary Highway	4 Lane Roadway	Arterials with an ultimate design section of 4 travel lanes, designed for high mobility and with limited vehicular access from driveways and cross streets. The typical road section includes a median with left turn pockets provided at intersections. Secondary highways are designed to service both through traffic, and to collect traffic from collector and local streets.	80'	36,000
Limited Secondary Highway	2 to 4 Lane Roadway	Arterials with an ultimate roadway design section of 2 to 4 travel lanes and less restrictive access control. The typical road section does not include a median. These streets are designed to accommodate moderate volumes of traffic and are typically located in remote foothill, mountainous and canyon areas.	64' - 84' (28' - 64')	18,000 (2L) 36,000 (4L)
Parkway	2+ Lane Roadway	Arterials having park-like features either within or adjacent to the roadway. Specific features vary depending on the composition and volume of traffic to be carried.	80' or More (varies)	Varies
Collector Street	2 Lane Roadway	Streets which have an ultimate roadway design section of 2 travel lanes with limited vehicular access to the roadway from driveways and cross streets. The roadway is usually undivided and does not always accommodate left turn pockets at	64' (40')	15,000

Table 5.16-9: Roadway Classifications

Highway Plan Classification	Functional Classification	Definition	Typical ROW Width (Curb-to-Curb)	Design Maximum 2-Way ADT
		intersections. Collector streets are designed to provide both access and limited mobility, servicing local traffic from residential, commercial, and industrial uses and providing access to the arterial roadway system. Collector streets are not depicted on the adopted Highway Plan.		
Local Street	2 Lane Roadway	Streets which have an ultimate roadway design section of 2 travel lanes designed for full access and limited mobility. Local streets are not included on the adopted Highway Plan.	58' - 60' (34' - 36')	2,500
Expressway	4 to 8 Lane Roadway	Highways which have an ultimate roadway design section of 4 or more lanes that are part of the State Highway system. Expressways have restrictive access control consisting of grade-separated interchanges or at-grade signalized intersections with a minimum spacing of 1 mile.	200' (varies)	44,000 (4L) 88,000 (8L)

MODEL METHODOLOGY

This section discusses the land use and model development for the Proposed Area Plan. Similar to the Draft 2014 County General Plan, each recommended Highway Plan amendment will be evaluated for validity and potential impacts based on the roadway’s planned number of lanes and projected roadway average daily traffic volumes.

Model Development and Approach

The North County Sub-Area Travel Demand Forecasting Model was used for the Proposed Project analysis. The sub-area model was originally developed for use in the Northwest 138 Corridor Improvement Project in conjunction with Metro and Caltrans. The North County Sub-Area Model reflects the socioeconomic projections and transportation network improvements contained in the Southern California Association of Governments (SCAG) 2012 Regional Transportation Plan (RTP) and Kern Council of Governments (COG) RTP models. It also reflects local land use and roadway network details from the Enhanced Antelope Valley Transportation Analysis Model (EAVTAM).

The sub-area model includes the northern portion of the County, including the Cities of Lancaster, Palmdale and Santa Clarita. The sub-area model also includes the southern portion of Kern County as contained in the latest version of the Kern COG model. The model contains the existing and planned highway system within the Project Area.

The following steps were taken to develop the North County Sub-Area Model:

1. Applied the SCAG regional model version 6.1 to generate a sub-area model platform; extracted the trip tables and roadway network for both base year and future year
2. Added detailed traffic analysis zone (TAZ) and network structure from EAVTAM for Palmdale and Lancaster
3. Joined Kern COG TAZ and network structure
4. Refined TAZ and network structure within LA County

Plots of the Sub-Area Model base and future year networks are contained in Appendix B.

The sub-area model was validated to the standards presented in the 2010 California Regional Transportation Plan Guidelines, produced by the California Transportation Commission. In addition to these criteria, the subarea model volume-to-count ratio was checked against a desired maximum threshold of no more than a 10 percent deviation. The model was validation to Year 2013 travel conditions. The table below shows the results of the model validation.

Table 5.16-10 - Sub-Area Model Validation

Statistical Measure	Criterion of Acceptance	Model Results		
		Daily	AM Peak Hour	PM Peak Hour
Model Deviation	Within \pm 10%	-5%	-3%	2%
Percent of Links with Volume-to-Count Ratios Within Caltrans Deviation Allowance	At Least 75%	87%	78%	78%
Correlation Coefficient	At Least 88%	98%	94%	95%
Percent Root Mean Square Error	40% or less	26%	36%	32%

Source: Fehr & Peers, 2014

Analysis Scenarios

The general plan roadway segments and CMP intersection and highway locations are analyzed under the following scenarios:

- Existing Conditions (2014): Current conditions are based on available traffic counts and existing model volumes, where existing counts were not available.
- Existing plus Project (with Area Plan Buildout) Conditions: Traffic forecasts are prepared for the Proposed Project using the base year sub-area model. Increases in traffic volumes resulting from the Proposed Project are compared to the existing roadway network capacity. No changes to land uses or the roadway network outside of the Project Area are included in this scenario.
- Future Baseline (2035) Conditions: Future traffic forecasts include background traffic growth and anticipated cumulative developments outside of the Project Area as projected in the SCAG 2012 RTP model along with planned RTP roadway improvements. Within the Project Area, existing land uses are assumed to remain in place.
- Future plus Project (2035 with Area Plan Buildout) Conditions: Future traffic forecasts reflect anticipated growth resulting from the Proposed Project. Outside of the Project Area, land use and roadway network assumptions are consistent with Future Baseline Conditions.

In addition to the above scenarios, anticipated development levels under the currently adopted Area Plan were compared to the Proposed Project based on expected trip generation and VMT. Table 5.16-11 displays the study scenarios and level of analysis performed.

Table 5.16-11: Analysis Scenarios

Scenario	County Roadway Analysis	CMP Analysis	VMT Comparison
Existing	√	√	√
Existing + Proposed Project	√	√	√
Future Baseline (2035)	√	√	√

Table 5.16-11: Analysis Scenarios

Scenario	County Roadway Analysis	CMP Analysis	VMT Comparison
Future + Proposed Project	√	√	√
Future + Adopted Area Plan			√

The two elements to the transportation impact analysis, Land Use/Socioeconomic Growth and Highway Plan Amendments, are further discussed below.

Land Use/Socioeconomic Growth

The Project Area is projected to increase development, population as well as employment, both of which generate added person trips and vehicle trips. The changes in forecast growth in the Project Area are shown in Table 5.16-12.

Table 5.16-12: Project Area Land Use & Socioeconomic Data

Year	Source	POP	SFDU	MFDU	EMP
Existing/Future Baseline Conditions	County General Plan	93,490	24,739		31,838
Potential Future (Year 2035) Conditions	AV Adopted Area Plan	1,070,571	277,486	671	51,219
	AV Proposed Area Plan	405,410	102,260	3,921	134,351

Note: POP = population; SFDU = single family dwelling units; MFDU = multi-family dwelling units; EMP = employment

Compared to existing conditions, both the proposed and previously adopted area plans forecast increases in population, single family dwelling units, multi-family dwelling units, and employment beyond 2012 Existing Conditions. As shown in Table 5.16-12, as of 2012, the Project Area had a population of 93,490 and an employment base of 31,838 jobs. With the previously Adopted Area Plan, the Project Area would have a population of 1,070,571 and an employment base of 51,219. With the proposed area plan, the Project Area would have a population of 405,410 and an employment base of 134,351.

Planned Transportation Network

The North County Sub-Area model contains the 2035 planning network identified in the 2012 SCAG RTP. The RTP's planning network includes all financially constrained projects within the SCAG region that are expected to be constructed by 2035. The following major projects are contained in the sub-area model under future conditions:

- High Speed Rail – The 2035 Planning network reflects Phase I of the High Speed Rail project, with extents from the City of Anaheim into Kern County. In the model area, the High Speed Rail travels north-south between SR-14 and I-15. The High Speed Rail also travels south on SR-14 into the City of Santa Clarita with a station in the City of Palmdale.
- High Desert Corridor – New expressway route with limited access beginning at SR-14 and extending east into San Bernardino County. The High Desert Corridor would be a divided highway with three to four travel lanes in each direction.

- SR-138 between I-5 and SR-14 – Planned widening from a 2-lane full-access expressway route with at-grade crossings to a 4- to 6-lane limited-access divided highway/expressway route.
- Sierra Highway between SR-138 and Avenue E – Planned widening from a 2-lane full-access arterial to a 4-lane limited access expressway route (SR-138 extension/High Desert Corridor).
- Avenue E between Sierra Highway and 90th Street – Planned widening from a 2-lane full-access collector to a 4-lane limited access expressway route (SR-138 extension).
- 90th Street between Avenue E and Avenue L – Planned widening from a 2-lane full-access collector to a 4-lane limited access expressway route (SR-138 extension).
- I-5 between Ridge Route Road and SR-14 – Construction of an HOV lane in each direction.
- SR-14 between Avenue M and I-5 – Addition of an HOV lane in each direction.

Within the Proposed Plan, the Highway Plan designates the functional classifications of the County’s highway system and illustrates the existing and proposed location of Arterial Highways throughout the County. It is intended to provide a highway system consistent with the distribution of land uses, by providing adequate highways to serve residential and commercial needs. Additional roadway widening planned within the study area is reflected in the roadway impact analysis results, and travel lanes under existing and future conditions are reported.

Trips Generated & Vehicle Miles Traveled

The North County Sub-Area model provides peak period and daily forecasts for the Antelope Valley Area roadway system. The number of trips generated by a certain type of land use is estimated by applying a representative trip generation rate to the quantity of land use in the area under consideration. The North County Sub-Area model relies on the trip generation rates and resulting origin-destination trip matrices in SCAG RTP model, calibrated specifically to local conditions to calculate both peak period and daily trips.

Table 5.16-13 provides a comparison between the analysis scenarios for AM and PM peak period vehicle trips as well as daily trips. The AM peak period reflects the 3-hour morning commute period and the PM peak period reflects the evening commute hours (typically 7:00 to 10:00 AM and 3:00 to 7:00 PM). The Existing and 2035 Baseline show similar results as only the SCAG regional growth is included, not growth in the Project Area. Existing plus Project and 2035 Baseline plus Project reflect the projected land use and socioeconomic growth within the Project Area, and these scenarios show similar trip generation characteristics. In comparison to the 2035 Baseline plus Approved Plan forecast, the 2035 Baseline plus Project scenario trip generation is reduced by 43 percent in the AM peak period, 49 percent in the PM peak period, and 45 percent for daily trips.

Table 5.16-13: Vehicle Trips within Project Area by Scenario

Scenario	AM Peak Period	PM Peak Period	Daily
Existing	60,852	86,250	274,769
Existing + Project	203,332	300,167	988,167
2035 Baseline	64,516	91,918	297,783
2035 Baseline + Project	196,511	292,913	967,187
2035 Baseline + Adopted Area Plan	343,289	569,725	1,767,403

The traffic forecasting process used by the North County Sub-Area model also calculates vehicle miles travelled (VMT) based on the geographical placement of land uses within an area and the number of trips they generate. Internal trips reflect VMT within the Project Area and external trips reflect VMT outside of the Project Area.

Table 5.16-14 provides a comparison internal, external, and total VMT for each analysis scenario. Existing and 2035 Baseline show similar results as only the SCAG regional growth is included, not growth in the Project Area. Existing plus Project and 2035 Baseline plus Project show similar VMT characteristics as well. From the 2035 Baseline plus Approved Plan forecast, the 2035 Baseline plus Project scenario VMT is reduced by 53 percent in the AM peak period, 42 percent in the PM peak period, and 45 percent for daily VMT.

The reduction in vehicle trips and VMT is primarily attributed to decreased development levels under the Proposed Project. However, the projected diversification in land uses and socioeconomics in the area through increased employment land uses and multi-family housing in the Project Area compared to the adopted area plan also creates a job to housing balance that limits the regional demand for travel to and from the Project area.

Table 5.16-14: Vehicle Miles Traveled Summary by Scenario

Scenario	VMT Internal Trips	VMT External Trips	Total VMT
Existing	28,258	223,117	251,375
Existing + Project	239,225	524,734	763,959
2035 Baseline	24,827	250,738	275,566
2035 Baseline + Project	202,093	563,668	765,760
2035 Baseline + Adopted Area Plan	431,977	969,484	1,401,461

Traffic Operations

Roadway Segment Level of Service

The North County Sub-Area modeling results were then used to assess the potential project impacts due to the “Existing plus Project” and “2035 with Project” scenarios. Table 5.16-15 presents the results of the sub-area regional modeling analysis of Proposed Project growth for Existing plus Project, and Table 5.16-16 presents the results of the North County Sub-Area modeling analysis for 2035 conditions with and without the Proposed Project.

For the Project Area, the Secondary Highways, Limited Secondary Highways, Major Highways, and Expressways have been reviewed to determine the model volumes under existing conditions, Existing plus Project, 2035 Baseline, and 2035 plus Project conditions. The Existing plus Project volumes were compared to the existing roadway capacity and 2035 plus Project daily traffic volumes were compared to the County’s designated LOS E capacity for each facility type based on planned improvements. If the Existing plus Project or 2035 plus Project daily volume falls under the County’s designated LOS E capacity, it was determined that there would be no significant impact because this roadway would continue to operate at acceptable conditions. For those roadways operating with a V/C ratio of less than 0.90 (i.e., better than LOS E), it was determined that the planned roadway capacity is adequate to handle the future volumes within acceptable operating conditions.

Tables 5.16-15 and 5.16-16 display the detailed information that was used to develop the roadway impact findings below for the Existing plus Project and Year 2035 plus Project scenarios. Technical calculations are also included in Appendix C. These tables include the following for each segment on the Highway Plan in the Antelope Valley Planning Area:

- Functional Classification
- Limits of the segment
- Existing/Future Baseline ADT (from the model)
- Plus project ADT (from the model)
- Number of lanes
- Existing/Future Baseline V/C
- Plus Project V/C
- Whether the change in V/C exceeds the significant impact threshold (where the segment has a volume greater than LOS E capacity AND the change in V/C is 0.02 or greater).

The results of the analysis show that 13 roadway segments in the unincorporated areas are expected to exceed the designated LOS E threshold under the Existing plus Project scenario. Three of these segments exceed the designated V/C ratio under Existing Conditions. None of the segments exceed the LOS E threshold under 2035 plus Project Conditions with the planned County highway improvements in place. The Existing plus Project segments that are projected to exceed the maximum LOS E threshold and experience a significant change in V/C due to the project are listed below:

Avenue L from 40th Street West to 55th Street West – Exceeds existing roadway LOS E capacity by approximately 1,500 daily vehicles, 0.10 change in V/C (Existing plus Project V/C = 0.97) due to the Proposed Project growth.

Fort Tejon Road from 96th Street to Mount Emma Road – Exceeds existing roadway LOS E capacity by approximately 1,200 daily vehicles, 0.47 change in V/C (Existing plus Project V/C = 0.97) due to the Proposed Project growth.

Fort Tejon Road from 106th Street to 96th Street – Exceeds existing roadway LOS E capacity by approximately 1,300 daily vehicles, 0.47 change in V/C (Existing plus Project V/C = 0.97) due to the Proposed Project growth.

Fort Tejon Road from 131st Street East to 106th Street – Exceeds existing roadway LOS E capacity by approximately 700 daily vehicles, 0.5 change in V/C (Existing plus Project V/C = 0.94) due to the Proposed Project growth.

Palmdale Boulevard from 95th Street East to 90th Street East – Exceeds existing roadway LOS E capacity by approximately 1,300 daily vehicles, 0.32 change in V/C (Existing plus Project V/C = 0.97) due to the Proposed Project growth.

Palmdale Boulevard from 100th Street East to 95th Street East – Exceeds existing roadway LOS E capacity by approximately 1,800 daily vehicles, 0.34 change in V/C (Existing plus Project V/C = 1.00) due to the Proposed Project growth.

Palmdale Boulevard from 105th Street East to 100th Street East – Exceeds existing roadway LOS E capacity by approximately 700 daily vehicles, 0.31 change in V/C (Existing plus Project V/C = .94) due to the Proposed Project growth.

Palmdale Boulevard from 110th Street East to 105th Street East – Exceeds existing roadway LOS E capacity by approximately 700 daily vehicles, 0.33 change in V/C (Existing plus Project V/C = 0.94) due to the Proposed Project growth.

Pearblossom Highway (SR-138) from 82nd Street East to Avenue T-8 – Exceeds existing roadway LOS E capacity by approximately 7,600 daily vehicles, 0.34 change in V/C (Existing plus Project V/C = 1.32) due to the Proposed Project growth.

Pearblossom Highway (SR-138) from 87th Street East to 82nd Street East – Exceeds existing roadway LOS E capacity by approximately 3,400 daily vehicles, 0.34 change in V/C (Existing plus Project V/C = 1.09) due to the Proposed Project growth.

Pearblossom Highway (SR-138) from 96th Street East to 87th Street East – Exceeds existing roadway LOS E capacity by approximately 5,600 daily vehicles, 0.32 change in V/C (Existing plus Project V/C = 1.21) due to the Proposed Project growth.

Pearblossom Highway (SR-138) from 126th Street East to 116th Street East – Exceeds existing roadway LOS E capacity by approximately 6,700 daily vehicles, 0.29 change in V/C (Existing plus Project V/C = 1.27) due to the Proposed Project growth.

Pearblossom Highway (SR-138) from 131st Street East to 126th Street East – Exceeds existing roadway LOS E capacity by approximately 11,200 daily vehicles, 0.49 change in V/C (Existing plus Project V/C = 1.52) due to the Proposed Project growth.

This page intentionally left blank.

Table 5.16-15 Roadway Segment LOS – Existing vs. Existing plus Project

Study Location	Location	To	From	Functional Class	Capacity ¹	Lanes	Existing Conditions		Existing Plus Project Conditions		Exceeds Capacity Threshold?
							ADT	V/C	ADT	V/C	
1	100th St E	Avenue J	Avenue J-8	Limited Secondary Highway	18,000	2	500	0.03	800	0.04	NO
2	100th St E	Lancaster City Line	Avenue L	Limited Secondary Highway	18,000	2	500	0.03	500	0.03	NO
3	100th St W	Lancaster Blvd	Avenue J	Major Highway	18,000	2	500	0.03	500	0.03	NO
4	100th St W	Avenue D	Avenue D-8	Limited Secondary Highway	18,000	2	500	0.03	4,000	0.22	NO
5	100th St W	Avenue E	Avenue F	Limited Secondary Highway	18,000	2	500	0.03	1,800	0.10	NO
6	10th St W	Palmdale City Line	Avenue O	Secondary Highway	36,000	4	14,500	0.40	19,000	0.53	NO
7	10th St W	Auto Center Dr	Elizabeth Lake Rd	Secondary Highway	45,000	5	14,500	0.32	17,400	0.39	NO
8	110th St W	Johnson Rd	Avenue M	Local / Collector	15,000	2	< 10,000	(2)	< 10,000	(2)	NO
9	120th St E	Avenue L	Avenue Q	Expressway	22,000	2	5,200	0.24	18,000	0.82	NO
10	170th Street E	Avenue T	Avenue W	Secondary Highway	18,000	2	3,500	0.19	15,200	0.84	NO
11	170th Street E	Avenue W	165th Street	Secondary Highway	18,000	2	1,000	0.06	8,900	0.49	NO
12	200th Street E	Avenue G	Avenue J	Secondary Highway	18,000	2	1,000	0.06	6,700	0.37	NO
13	25th St W	Avenue O	Palmdale City Line	Secondary Highway	36,000	4	6,100	0.17	6,100	0.17	NO
14	35th St W	Avenue N	Avenue N-8	Local / Collector	15,000	2	< 10,000	(2)	< 10,000	(2)	NO
15	40th St W	Avenue N	Avenue N-8	Local / Collector	15,000	2	< 10,000	(2)	< 10,000	(2)	NO
16	50th St E	Avenue K-4	Avenue L	Expressway	22,000	2	2,200	0.10	7,400	0.34	NO
17	70th St E	Lancaster City Line	Avenue K-8	Major Highway	18,000	2	500	0.03	2,200	0.12	NO
18	70th St E	Avenue K-12	Avenue L	Major Highway	18,000	2	500	0.03	2,200	0.12	NO
19	80th St W	Lancaster City Line	Lancaster City Line	Major Highway	18,000	2	1,700	0.09	7,300	0.41	NO
20	87th St W	Ritter Ranch Rd	Elizabeth Lake Rd	Local / Collector	15,000	2	< 10,000	(2)	< 10,000	(2)	NO
21	Agua Dulce Canyon Road	Soledad Canyon Road	Sierra Highway	Limited Secondary Highway	18,000	2	7,800	0.43	8,400	0.47	NO
22	Amargosa Creek Rd	Portal Pass Rd	Johnson Rd	Local / Collector	15,000	2	< 10,000	(2)	< 10,000	(2)	NO
23	Avenue E	110th St W	Lancaster City Line	Major Highway	18,000	2	500	0.03	600	0.03	NO
24	Avenue E	100th St W	70th St W	Limited Secondary Highway	18,000	2	1,800	0.10	11,800	0.66	NO
25	Avenue F	110th St W	Lancaster City Line	Major Highway	18,000	2	500	0.03	600	0.03	NO
26	Avenue F	Lancaster City Line	95th St W	Major Highway	18,000	2	600	0.03	3,000	0.17	NO
27	Avenue F	95th St W	70th St W	Limited Secondary Highway	18,000	2	1,800	0.10	11,800	0.66	NO
28	Avenue G	25th St W	Division St	Expressway	22,000	2	5,200	0.24	19,000	0.86	NO
29	Avenue G	SR-14 Antelope Valley Freeway	15th Street W	Expressway	22,000	2	4,400	0.20	14,900	0.68	NO
30	Avenue G	15th Street W	10th Street W	Expressway	22,000	2	4,500	0.20	15,500	0.70	NO
31	Avenue G	10th Street W	Sierra Highway	Expressway	22,000	2	5,200	0.24	19,000	0.86	NO
32	Avenue G	Sierra Highway	Division Street	Expressway	22,000	2	4,700	0.21	11,900	0.54	NO
33	Avenue H	110th St W	70th St W	Major Highway	18,000	2	500	0.03	4,900	0.27	NO
34	Avenue H	Division St	40th St E	Expressway	22,000	2	9,000	0.41	17,000	0.77	NO
35	Avenue J	90th Street E	100th Street E	Major Highway	18,000	2	500	0.03	3,200	0.18	NO
36	Avenue J	100th Street E	110th Street E	Major Highway	18,000	2	500	0.03	3,600	0.20	NO
37	Avenue J	110th Street E	140th Street E	Major Highway	18,000	2	500	0.03	3,700	0.21	NO
38	Avenue J	140th Street E	150th Street E	Major Highway	18,000	2	500	0.03	5,400	0.30	NO
39	Avenue J	150th Street E	170th Street E	Major Highway	18,000	2	500	0.03	4,800	0.27	NO
40	Avenue J	170th Street E	200th Street E	Major Highway	18,000	2	500	0.03	5,300	0.29	NO
41	Avenue K-8	52nd St W	50th St W	Secondary Highway	18,000	2	600	0.03	900	0.05	NO
42	Avenue L	40th St E	45th St E	Expressway	22,000	2	500	0.02	500	0.02	NO
43	Avenue L	50th St E	80th St E	Expressway	22,000	2	500	0.02	500	0.02	NO
44	Avenue L	90th St E	120th St E	Expressway	N/A ³	N/A ³	N/A ³	N/A ³	N/A ³	N/A ³	NO

Table 5.16-15 Roadway Segment LOS – Existing vs. Existing plus Project

Study Location	Location	To	From	Functional Class	Capacity ¹	Lanes	Existing Conditions		Existing Plus Project Conditions		Exceeds Capacity Threshold?
							ADT	V/C	ADT	V/C	
45	Avenue L	55th St W	40th St W	Expressway	22,000	2	19,000	0.86	21,300	0.97	YES
46	Avenue L-8	10th St W	SR 14	Secondary Highway	36,000	4	4,300	0.12	4,300	0.12	NO
47	Avenue L-8	SR 14	30th St W	Secondary Highway	18,000	2	600	0.03	600	0.03	NO
48	Avenue L-8	60th St W	80th St W	Secondary Highway	36,000	4	3,900	0.11	4,000	0.11	NO
49	Avenue M	Elizabeth Lake Rd	80th St W	Local / Collector	15,000	2	< 10,000	(2)	< 10,000	(2)	NO
50	Avenue N-8	45th St W	30th St W	Local / Collector	15,000	2	< 10,000	(2)	< 10,000	(2)	NO
51	Avenue N-8	20th St W	Palmdale City Line	Local / Collector	15,000	2	< 10,000	(2)	< 10,000	(2)	NO
52	Avenue O	145th Street E	150th Street E	Major Highway	18,000	2	6,600	0.37	13,200	0.73	NO
53	Avenue O	150th Street E	170th Street E	Major Highway	18,000	2	2,000	0.11	9,200	0.51	NO
54	Avenue O	170th Street E	175th Street E	Major Highway	18,000	2	2,400	0.13	9,500	0.53	NO
55	Avenue O	175th Street E	180th Street E	Major Highway	18,000	2	2,500	0.14	11,100	0.62	NO
56	Avenue O	180th Street E	200th Street E	Secondary Highway	18,000	2	2,500	0.14	11,600	0.64	NO
57	Avenue O	200th Street E	210 Street E	Secondary Highway	18,000	2	2,300	0.13	8,900	0.49	NO
58	Avenue O	210 Street E	240th Street E	Secondary Highway	18,000	2	2,000	0.11	7,500	0.42	NO
59	Avenue O-8	30th St W	20th St W	Secondary Highway	N/A ³	N/A ³	N/A ³	N/A ³	N/A ³	N/A ³	NO
60	Avenue P	15th Street E	20th Street E	Major Highway	36,000	4	18,000	0.50	23,500	0.65	NO
61	Avenue P	20th Street E	25th Street E	Major Highway	36,000	4	17,800	0.49	23,300	0.65	NO
62	Avenue P	25th Street E	30th Street E	Major Highway	36,000	4	6,400	0.18	12,000	0.33	NO
63	Avenue P	30th Street E	40th Street E	Major Highway	18,000	2	2,200	0.12	6,000	0.33	NO
64	Avenue P	40th Street E	70th Street E	Major Highway	18,000	2	500	0.03	500	0.03	NO
65	Avenue Q	60th St E	90th St E	Major Highway	18,000	2	8,800	0.49	10,300	0.57	NO
66	Avenue Q	90th St E	120th St E	Secondary Highway	18,000	2	1,000	0.06	8,000	0.44	NO
67	Bouquet Canyon Rd	Elizabeth Lake Rd	Palmdale City Line	Secondary Highway	18,000	2	1,800	0.10	3,800	0.21	NO
68	Davenport Road	Sierra Highway	Agua Dulce Canyon Road	Limited Secondary Highway	18,000	2	1,800	0.10	3,000	0.17	NO
69	Elizabeth Lake Road	Johnson Road	Portal Pass Rd	Major Highway	18,000	2	2,700	0.15	12,500	0.69	NO
70	Elizabeth Lake Road	Johnson Road	San Francisquito Canyon Road	Major Highway	18,000	2	3,400	0.19	6,300	0.35	NO
71	Elizabeth Lake Road	San Francisquito Canyon Road	Bouquet Canyon Road	Major Highway	18,000	2	3,400	0.19	10,800	0.60	NO
72	Elizabeth Lake Road	Bouquet Canyon Road	Godde Hill Road	Major Highway	18,000	2	3,400	0.19	9,900	0.55	NO
73	Escondido Canyon Road	Agua Dulce Canyon Road	SCV Planning Boundary	Limited Secondary Highway	18,000	2	2,000	0.11	3,600	0.20	NO
74	Fort Tejon Road	87th Street E	Mount Emma Road	Secondary Highway	18,000	2	4,500	0.25	6,300	0.35	NO
75	Fort Tejon Road	Mount Emma Road	96th Street	Secondary Highway	18,000	2	9,000	0.50	17,400	0.97	YES
76	Fort Tejon Road	96th Street	106th Street	Secondary Highway	18,000	2	9,000	0.50	17,500	0.97	YES
77	Fort Tejon Road	106th Street	131 Street E	Secondary Highway	18,000	2	7,900	0.44	16,900	0.94	YES
78	Johnson Rd	Elizabeth Lake Rd	110th St W	Major Highway	18,000	2	2,400	0.13	8,800	0.49	NO
79	Lancaster Road	Pine Canyon Road	Avenue I	Expressway	22,000	2	500	0.02	5,500	0.25	NO
80	Lancaster Road	Avenue I	190th Street W	Expressway	22,000	2	500	0.02	5,000	0.23	NO
81	Lancaster Road	190th Street W	170th Street W	Expressway	22,000	2	500	0.02	4,100	0.19	NO
82	Lancaster Road	170th Street W	110th Street W	Expressway	22,000	2	700	0.03	13,500	0.61	NO
83	Lancaster Road	110th Street W	90th Street W	Expressway	22,000	2	600	0.03	9,400	0.43	NO
84	Lancaster Road	90th Street W	70th Street W	Expressway	22,000	2	800	0.04	9,300	0.42	NO
85	Lancaster Road	70th Street W	60th Street W	Expressway	22,000	2	800	0.04	7,000	0.32	NO
86	Palmdale Boulevard	90th Street E	95th Street E	Major Highway	18,000	2	11,700	0.65	17,500	0.97	YES
87	Palmdale Boulevard	95th Street E	100th Street E	Major Highway	18,000	2	11,900	0.66	18,000	1.00	YES
88	Palmdale Boulevard	100th Street E	105th Street E	Major Highway	18,000	2	11,300	0.63	16,900	0.94	YES

Table 5.16-15 Roadway Segment LOS – Existing vs. Existing plus Project

Study Location	Location	To	From	Functional Class	Capacity ¹	Lanes	Existing Conditions		Existing Plus Project Conditions		Exceeds Capacity Threshold?
							ADT	V/C	ADT	V/C	
89	Palmdale Boulevard	105th Street E	110 Street E	Major Highway	18,000	2	11,000	0.61	16,900	0.94	YES
90	Pearblossom Highway (SR-138)	70th Street E	Avenue T 8	Major Highway	36,000	4	18,400	0.51	25,900	0.72	NO
91	Pearblossom Highway (SR-138)	Avenue T 8	82nd Street E	Major Highway	18,000	2	17,600	0.98	23,800	1.32	YES
92	Pearblossom Highway (SR-138)	82nd Street E	87th Street E	Major Highway	18,000	2	13,500	0.75	19,600	1.09	YES
93	Pearblossom Highway (SR-138)	87th Street E	96th Street E	Major Highway	18,000	2	16,000	0.89	21,800	1.21	YES
94	Pearblossom Highway (SR-138)	96th Street E	106th Street E	Major Highway	36,000	4	17,900	0.50	31,800	0.88	NO
95	Pearblossom Highway (SR-138)	106th Street E	116th Street E	Major Highway	36,000	4	17,800	0.49	23,100	0.64	NO
96	Pearblossom Highway (SR-138)	116th Street E	126th Street E	Major Highway	18,000	2	17,700	0.98	22,900	1.27	YES
97	Pearblossom Highway (SR-138)	126th Street E	131st Street E	Major Highway	18,000	2	18,600	1.03	27,400	1.52	YES
98	Pearblossom Highway (SR-138)	131 Street E	170th Street E	Major Highway	36,000	4	17,700	0.49	21,300	0.59	NO
99	Portal Pass Rd	Elizabeth Lake Rd	Ritter Ranch Rd	Local / Collector	15,000	2	< 10,000	(2)	< 10,000	(2)	NO
100	Ritter Ranch Rd	Portal Pass Rd	Bouquet Canyon Rd	Local / Collector	15,000	2	< 10,000	(2)	< 10,000	(2)	NO
101	San Fransisquito Canyon Rd	Angeles National Forest Boundary	Elizabeth Lake Rd	Secondary Highway	18,000	2	1,600	0.09	7,700	0.43	NO

Notes

1. Capacity based on County thresholds as defined in Table 5.16-3.
2. Local and collector streets are typically not reflected in travel demand models; based on the roadway classification, volumes are expected to be well below the County's ADT thresholds.
3. Roadway segment does not exist or is discontinuous under existing conditions; segment only analyzed under future conditions with planned improvements in place.

Table 5.16-16 Roadway Segment LOS – 2035 Baseline vs. 2035 plus Project

Study Location	Location	To	From	Functional Class	Potential Number of Lanes ¹	Potential Roadway Capacity ²	2035 Baseline Conditions			2035 Plus Project Conditions			Exceeds Capacity Threshold?
							Model Lanes	ADT	V/C	Model Lanes	ADT	V/C	
1	100th St E	Avenue J	Avenue J-8	Limited Secondary Highway	2	18,000	2	500	0.03	2	600	0.03	NO
2	100th St E	Lancaster City Line	Avenue L	Limited Secondary Highway	2	18,000	2	500	0.03	2	2,300	0.13	NO
3	100th St W	Lancaster Blvd	Avenue J	Major Highway	6	54,000	2	500	0.03	2	500	0.03	NO
4	100th St W	Avenue D	Avenue D-8	Limited Secondary Highway	2	18,000	2	1,300	0.07	2	7,700	0.43	NO
5	100th St W	Avenue E	Avenue F	Limited Secondary Highway	2	18,000	2	1,800	0.10	2	8,400	0.47	NO
6	10th St W	Palmdale City Line	Avenue O	Secondary Highway	4	36,000	4	14,000	0.39	4	22,100	0.61	NO
7	10th St W	Auto Center Dr	Elizabeth Lake Rd	Secondary Highway	4	36,000	5	16,500	0.37	5	19,500	0.43	NO
8	110th St W	Johnson Rd	Avenue M	Local / Collector	2	15,000	2	< 10,000	(3)	2	< 10,000	(3)	NO
9	120th St E	Avenue L	Avenue Q	Expressway	4	44,000	4	3,200	0.07	4	10,600	0.24	NO
10	170th Street E	Avenue T	Avenue W	Secondary Highway	4	36,000	2	3,700	0.21	2	9,800	0.54	NO
11	170th Street E	Avenue W	165th Street	Secondary Highway	4	36,000	2	700	0.04	2	5,300	0.29	NO
12	200th Street E	Avenue G	Avenue J	Secondary Highway	4	36,000	2	700	0.04	2	5,100	0.28	NO
13	25th St W	Avenue O	Palmdale City Line	Secondary Highway	4	36,000	4	9,600	0.27	4	10,300	0.29	NO
14	35th St W	Avenue N	Avenue N-8	Local / Collector	2	15,000	2	< 10,000	(3)	2	< 10,000	(3)	NO
15	40th St W	Avenue N	Avenue N-8	Local / Collector	2	15,000	2	< 10,000	(3)	2	< 10,000	(3)	NO
16	50th St E	Avenue K-4	Avenue L	Expressway	4	44,000	2	1,700	0.08	2	7,100	0.32	NO
17	70th St E	Lancaster City Line	Avenue K-8	Major Highway	6	54,000	2	500	0.03	2	1,200	0.07	NO
18	70th St E	Avenue K-12	Avenue L	Major Highway	6	54,000	2	500	0.03	2	1,400	0.08	NO
19	80th St W	Lancaster City Line	Lancaster City Line	Major Highway	6	54,000	2	2,100	0.12	2	5,800	0.32	NO
20	87th St W	Ritter Ranch Rd	Elizabeth Lake Rd	Local / Collector	2	15,000	2	< 10,000	(3)	2	< 10,000	(3)	NO
21	Agua Dulce Canyon Road	Soledad Canyon Road	Sierra Highway	Limited Secondary Highway	2	18,000	2	7,600	0.42	2	8,300	0.46	NO
22	Amargosa Creek Rd	Portal Pass Rd	Johnson Rd	Local / Collector	2	15,000	2	< 10,000	(3)	2	< 10,000	(3)	NO
23	Avenue E	110th St W	Lancaster City Line	Major Highway	6	54,000	2	500	0.03	2	1,600	0.09	NO
24	Avenue E	100th St W	70th St W	Limited Secondary Highway	2	18,000	2	2,900	0.16	2	14,300	0.79	NO
25	Avenue F	110th St W	Lancaster City Line	Major Highway	6	54,000	2	500	0.03	2	1,600	0.09	NO
26	Avenue F	Lancaster City Line	95th St W	Major Highway	6	54,000	2	700	0.04	2	3,700	0.21	NO
27	Avenue F	95th St W	70th St W	Limited Secondary Highway	2	18,000	2	2,900	0.16	2	14,300	0.79	NO
28	Avenue G	25th St W	Division St	Expressway	4	44,000	2	5,300	0.24	2	18,700	0.85	NO
29	Avenue G	SR-14 Antelope Valley Freeway	15th Street W	Expressway	4	44,000	2	2,600	0.12	2	15,200	0.69	NO
30	Avenue G	15th Street W	10th Street W	Expressway	4	44,000	2	2,600	0.12	2	15,600	0.71	NO
31	Avenue G	10th Street W	Sierra Highway	Expressway	4	44,000	2	3,200	0.15	2	18,700	0.85	NO
32	Avenue G	Sierra Highway	Division Street	Expressway	4	44,000	2	5,300	0.24	2	13,500	0.61	NO
33	Avenue H	110th St W	70th St W	Major Highway	6	54,000	2	500	0.03	2	4,400	0.24	NO
34	Avenue H	Division St	40th St E	Expressway	4	44,000	2	7,900	0.36	2	16,400	0.75	NO
35	Avenue J	90th Street E	100th Street E	Major Highway	6	54,000	2	600	0.03	2	2,000	0.11	NO
36	Avenue J	100th Street E	110th Street E	Major Highway	6	54,000	2	500	0.03	2	1,300	0.07	NO
37	Avenue J	110th Street E	140th Street E	Major Highway	6	54,000	2	500	0.03	2	1,000	0.06	NO
38	Avenue J	140th Street E	150th Street E	Major Highway	6	54,000	2	500	0.03	2	1,500	0.08	NO
39	Avenue J	150th Street E	170th Street E	Major Highway	6	54,000	2	500	0.03	2	1,800	0.10	NO
40	Avenue J	170th Street E	200th Street E	Major Highway	6	54,000	2	500	0.03	2	3,300	0.18	NO
41	Avenue K-8	52nd St W	50th St W	Secondary Highway	2	18,000	2	600	0.03	2	800	0.04	NO
42	Avenue L	40th St E	45th St E	Expressway	4	44,000	4	8,200	0.19	4	12,000	0.27	NO
43	Avenue L	50th St E	80th St E	Expressway	4	44,000	4	8,700	0.20	4	16,900	0.38	NO

Table 5.16-16 Roadway Segment LOS – 2035 Baseline vs. 2035 plus Project

Study Location	Location	To	From	Functional Class	Potential Number of Lanes ¹	Potential Roadway Capacity ²	2035 Baseline Conditions			2035 Plus Project Conditions			Exceeds Capacity Threshold?
							Model Lanes	ADT	V/C	Model Lanes	ADT	V/C	
44	Avenue L	90th St E	120th St E	Expressway	4	44,000	4	500	0.01	4	2,400	0.05	NO
45	Avenue L	55th St W	40th St W	Expressway	4	44,000	4	20,100	0.46	4	23,000	0.52	NO
46	Avenue L-8	10th St W	SR 14	Secondary Highway	4	36,000	4	4,700	0.13	4	4,800	0.13	NO
47	Avenue L-8	SR 14	30th St W	Secondary Highway	4	36,000	2	500	0.03	2	500	0.03	NO
48	Avenue L-8	60th St W	80th St W	Secondary Highway	4	36,000	4	4,000	0.11	4	4,300	0.12	NO
49	Avenue M	Elizabeth Lake Rd	80th St W	Local / Collector	2	15,000	2	< 10,000	(3)	2	< 10,000	(3)	NO
50	Avenue N-8	45th St W	30th St W	Local / Collector	2	15,000	2	< 10,000	(3)	2	< 10,000	(3)	NO
51	Avenue N-8	20th St W	Palmdale City Line	Local / Collector	2	15,000	2	< 10,000	(3)	2	< 10,000	(3)	NO
52	Avenue O	145th Street E	150th Street E	Major Highway	6	54,000	2	5,200	0.29	2	11,700	0.65	NO
53	Avenue O	150th Street E	170th Street E	Major Highway	6	54,000	2	900	0.05	2	5,200	0.29	NO
54	Avenue O	170th Street E	175th Street E	Major Highway	6	54,000	2	600	0.03	2	3,800	0.21	NO
55	Avenue O	175th Street E	180th Street E	Major Highway	6	54,000	2	800	0.04	2	5,700	0.32	NO
56	Avenue O	180th Street E	200th Street E	Secondary Highway	4	36,000	2	800	0.04	2	6,200	0.34	NO
57	Avenue O	200th Street E	210 Street E	Secondary Highway	4	36,000	2	500	0.03	2	2,100	0.12	NO
58	Avenue O	210 Street E	240th Street E	Secondary Highway	4	36,000	2	500	0.03	2	700	0.04	NO
59	Avenue O-8	30th St W	20th St W	Secondary Highway	4	36,000	4	1,300	0.04	4	1,800	0.05	NO
60	Avenue P	15th Street E	20th Street E	Major Highway	6	54,000	6	16,700	0.31	6	20,900	0.39	NO
61	Avenue P	20th Street E	25th Street E	Major Highway	6	54,000	6	16,600	0.31	6	20,800	0.39	NO
62	Avenue P	25th Street E	30th Street E	Major Highway	6	54,000	6	4,400	0.08	6	7,400	0.14	NO
63	Avenue P	30th Street E	40th Street E	Major Highway	6	54,000	6	3,000	0.06	6	4,900	0.09	NO
64	Avenue P	40th Street E	70th Street E	Major Highway	6	54,000	2	2,900	0.16	2	4,700	0.26	NO
65	Avenue Q	60th St E	90th St E	Major Highway	6	54,000	2	7,200	0.40	2	8,700	0.48	NO
66	Avenue Q	90th St E	120th St E	Secondary Highway	4	36,000	2	1,100	0.06	2	6,500	0.36	NO
67	Bouquet Canyon Rd	Elizabeth Lake Rd	Palmdale City Line	Secondary Highway	4	36,000	2	1,800	0.10	2	3,900	0.22	NO
68	Davenport Road	Sierra Highway	Agua Dulce Canyon Road	Limited Secondary Highway	2	18,000	2	2,500	0.14	2	3,700	0.21	NO
69	Elizabeth Lake Road	Johnson Road	Portal Pass Rd	Major Highway	6	54,000	2	2,800	0.16	2	10,400	0.58	NO
70	Elizabeth Lake Road	Johnson Road	San Francisquito Canyon Road	Major Highway	6	54,000	2	3,300	0.18	2	5,500	0.31	NO
71	Elizabeth Lake Road	San Francisquito Canyon Road	Bouquet Canyon Road	Major Highway	6	54,000	2	3,500	0.19	2	8,000	0.44	NO
72	Elizabeth Lake Road	Bouquet Canyon Road	Godde Hill Road	Major Highway	6	54,000	2	1,700	0.09	2	6,600	0.37	NO
73	Escondido Canyon Road	Agua Dulce Canyon Road	SCV Planning Boundary	Limited Secondary Highway	2	18,000	2	2,800	0.16	2	4,100	0.23	NO
74	Fort Tejon Road	87th Street E	Mount Emma Road	Secondary Highway	4	36,000	2	2,400	0.13	2	10,200	0.57	NO
75	Fort Tejon Road	Mount Emma Road	96th Street	Secondary Highway	4	36,000	2	2,800	0.16	2	12,200	0.68	NO
76	Fort Tejon Road	96th Street	106th Street	Secondary Highway	4	36,000	2	2,800	0.16	2	12,500	0.69	NO
77	Fort Tejon Road	106th Street	131 Street E	Secondary Highway	4	36,000	2	1,500	0.08	2	7,200	0.40	NO
78	Johnson Rd	Elizabeth Lake Rd	110th St W	Major Highway	6	54,000	2	2,600	0.14	2	7,600	0.42	NO
79	Lancaster Road	Pine Canyon Road	Avenue I	Expressway	4	44,000	2	1,300	0.06	2	9,400	0.43	NO
80	Lancaster Road	Avenue I	190th Street W	Expressway	4	44,000	2	500	0.02	2	2,400	0.11	NO
81	Lancaster Road	190th Street W	170th Street W	Expressway	4	44,000	2	500	0.02	2	3,300	0.15	NO
82	Lancaster Road	170th Street W	110th Street W	Expressway	4	44,000	2	500	0.02	2	6,200	0.28	NO
83	Lancaster Road	110th Street W	90th Street W	Expressway	4	44,000	2	500	0.02	2	3,700	0.17	NO
84	Lancaster Road	90th Street W	70th Street W	Expressway	4	44,000	2	1,200	0.05	2	5,500	0.25	NO
85	Lancaster Road	70th Street W	60th Street W	Expressway	4	44,000	2	1,100	0.05	2	4,100	0.19	NO
86	Palmdale Boulevard	90th Street E	95th Street E	Major Highway	6	54,000	2	7,400	0.41	2	13,400	0.74	NO

Table 5.16-16 Roadway Segment LOS – 2035 Baseline vs. 2035 plus Project

Study Location	Location	To	From	Functional Class	Potential Number of Lanes ¹	Potential Roadway Capacity ²	2035 Baseline Conditions			2035 Plus Project Conditions			Exceeds Capacity Threshold?
							Model Lanes	ADT	V/C	Model Lanes	ADT	V/C	
87	Palmdale Boulevard	95th Street E	100th Street E	Major Highway	6	54,000	2	7,600	0.42	2	15,300	0.85	NO
88	Palmdale Boulevard	100th Street E	105th Street E	Major Highway	6	54,000	2	7,200	0.40	2	14,400	0.80	NO
89	Palmdale Boulevard	105th Street E	110 Street E	Major Highway	6	54,000	2	6,700	0.37	2	14,300	0.79	NO
90	Pearblossom Highway (SR-138)	70th Street E	Avenue T 8	Major Highway	6	54,000	6	15,200	0.28	6	33,900	0.63	NO
91	Pearblossom Highway (SR-138)	Avenue T 8	82nd Street E	Major Highway	6	54,000	6	14,000	0.26	6	33,900	0.63	NO
92	Pearblossom Highway (SR-138)	82nd Street E	87th Street E	Major Highway	6	54,000	6	11,700	0.22	6	24,800	0.46	NO
93	Pearblossom Highway (SR-138)	87th Street E	96th Street E	Major Highway	6	54,000	6	11,800	0.22	6	26,700	0.49	NO
94	Pearblossom Highway (SR-138)	96th Street E	106th Street E	Major Highway	6	54,000	6	12,300	0.23	6	30,600	0.57	NO
95	Pearblossom Highway (SR-138)	106th Street E	116th Street E	Major Highway	6	54,000	6	12,500	0.23	6	27,000	0.50	NO
96	Pearblossom Highway (SR-138)	116th Street E	126th Street E	Major Highway	6	54,000	4	12,500	0.35	4	26,800	0.74	NO
97	Pearblossom Highway (SR-138)	126th Street E	131st Street E	Major Highway	6	54,000	4	13,000	0.36	4	31,400	0.87	NO
98	Pearblossom Highway (SR-138)	131 Street E	170th Street E	Major Highway	6	54,000	4	11,600	0.32	4	21,100	0.59	NO
99	Portal Pass Rd	Elizabeth Lake Rd	Ritter Ranch Rd	Local / Collector	2	15,000	2	< 10,000	(3)	2	< 10,000	(3)	NO
100	Ritter Ranch Rd	Portal Pass Rd	Bouquet Canyon Rd	Local / Collector	2	15,000	2	< 10,000	(3)	2	< 10,000	(3)	NO
101	San Fransisquito Canyon Rd	Angeles National Forest Boundary	Elizabeth Lake Rd	Secondary Highway	4	36,000	2	1,700	0.09	2	4,200	0.23	NO

Notes

1. Potential number of lanes is based on County's roadway classification definition per the 2014 Draft Los Angeles County General Plan.
2. Capacity based on County thresholds as defined in Table 5.16-3; For V/C analysis, modeled lanes were used to report future baseline operations.
3. Local and collector streets are typically not reflected in travel demand models; based on the roadway classification, volumes are expected to be well below the County's ADT thresholds.

Intersection CMP Analysis

Table 5.16-17 shows the results of the Existing and Existing plus Project level of service analysis at the study area CMP intersection locations. Implementation of the Proposed Project is expected to result in exceeding the County CMP standard level of service (LOS E), to LOS F, along with a significant increase in V/C due to the Project, at the following locations:

1. Lancaster Road & 300th Street West (AM and PM peak hours)
2. Avenue D & 60th Street West (AM and PM peak hours)

Table 5.16-17 Intersection CMP Analysis – Existing vs. Existing plus Project

No.	CMP Route	Cross Street	Existing Conditions				Existing plus Project Conditions				Significant Impact?
			AM Peak Hour		PM Peak Hour		AM Peak Hour		PM Peak Hour		
			V/C Ratio	LOS	V/C Ratio	LOS	V/C Ratio	LOS	V/C Ratio	LOS	
1	Lancaster Road	300th Street West	0.18	A	0.21	A	1.02	F	1.04	F	Yes
2	Avenue D	60th Street West	0.23	A	0.28	A	0.99	E	1.22	F	Yes
3	Sierra Highway	Red Rover Mine Road	0.14	A	0.14	A	0.37	A	0.41	A	No
4	Pearblossom Highway (SR-138)	82nd Street East	0.58	A	0.70	B	0.70	B	0.78	C	No
5	Pearblossom Highway (SR-138)	Antelope Highway	0.54	A	0.63	B	0.73	C	0.86	D	No

Table 5.16-18 shows the results of the 2035 Baseline and 2035 plus Project level of service analysis at the study area CMP intersection locations. Implementation of the Proposed Project is expected to result in exceeding the County CMP standard level of service (LOS E), to LOS F, along with a significant increase in V/C due to the Project, at the following locations:

1. Lancaster Road & 300th Street West (AM and PM peak hours)
2. Avenue D & 60th Street West (AM and PM peak hours)
4. Pearblossom Highway (SR-138) & 82nd Street East (AM and PM peak hours)

Table 5.16-18 Intersection CMP Analysis – 2035 Baseline vs. 2035 plus Project

No.	CMP Route	Cross Street	Existing Conditions				Existing plus Project Conditions				Significant Impact?
			AM Peak Hour		PM Peak Hour		AM Peak Hour		PM Peak Hour		
			V/C Ratio	LOS	V/C Ratio	LOS	V/C Ratio	LOS	V/C Ratio	LOS	
1	Lancaster Road	300th Street West	0.59	A	0.67	B	1.09	F	1.11	F	Yes
2	Avenue D	60th Street West	0.74	C	0.83	D	1.30	F	1.57	F	Yes
3	Sierra Highway	Red Rover Mine Road	0.14	A	0.14	A	0.34	A	0.33	A	No
4	Pearblossom Highway (SR-138)	82nd Street East	0.52	A	0.73	C	1.19	F	1.55	F	Yes
5	Pearblossom Highway (SR-138)	Antelope Highway	0.44	A	0.47	A	0.65	B	0.70	B	No

Freeway CMP Analysis

Based on the established significant impact criteria, the Proposed Project would have a significant impact if it causes a freeway segment at LOS E or F to experience a change in D/C of 0.02 or greater. Table 5.16-19 shows the freeway CMP analysis for all scenarios. Based on the results of the modeling and impact analysis, the following locations are forecast to be significantly impacted:

Freeway Segment Impacts due to Planned Growth – Existing plus Project

SR-14 South of SR-138/Future High Desert Corridor (PM Northbound) – Exceeds the CMP LOS E threshold and would have a D/C ratio of 0.95.

Freeway Segment Impacts due to Future Growth – Future plus Project

SR-14 South of Avenue D/SR-138 (AM Northbound) – Exceeds the CMP LOS E threshold and would have a D/C ratio of 1.04.

SR-14 South of Avenue D/SR-138 (AM Southbound) – Exceeds the CMP LOS E threshold and would have a D/C ratio of 1.09.

SR-14 South of Avenue D/SR-138 (PM Northbound) – Exceeds the CMP LOS E threshold and would have a D/C ratio of 1.32.

SR-14 South of Avenue D/SR-138 (PM Southbound) – Exceeds the CMP LOS E threshold and would have a D/C ratio of 1.10.

SR-14 South of SR-138/High Desert Corridor (PM Northbound) – Exceeds the CMP LOS E threshold and would have a D/C ratio of 0.97.

SR-14 South of SR-138/High Desert Corridor (PM Southbound) – Exceeds the CMP LOS E threshold and would have a D/C ratio of 0.93.

Table 5.16-19 Freeway CMP Segments – All Scenarios

Study Location	Roadway	Segment	Direction	Peak Hour Capacity	Existing Conditions				Existing plus Project Conditions			2035 Baseline Conditions				2035 Plus Project Conditions			Potential Impact?
					Lanes	Peak Hour Volume	D/C	LOS	Peak Hour Volume	D/C	LOS	Lanes	Peak Hour Volume	D/C	LOS	Peak Hour Volume	D/C	LOS	
AM Peak Hour																			
1	I-5 Freeway	North of SR-138	NB	8,000	4	2,920	0.37	B	2,800	0.35	A	4	4,840	0.61	C	5,210	0.65	C	NO
	I-5 Freeway	North of SR-138	SB	8,000	4	2,990	0.37	B	2,950	0.37	B	4	4,820	0.60	C	5,920	0.74	C	NO
2	I-5 Freeway	South of SR-138	NB	8,000	4	2,770	0.35	A	3,300	0.41	B	4	3,520	0.44	B	4,150	0.52	B	NO
	I-5 Freeway	South of SR-138	SB	8,000	4	2,900	0.36	B	3,890	0.49	B	4	3,700	0.46	B	6,240	0.78	D	NO
3	SR-138	Between I-5 and 300th Street W	WB	2,000-6,000	1	230	0.12	A	800	0.40	B	3	1,710	0.29	A	2,560	0.43	B	NO
	SR-138	Between I-5 and 300th Street W	EB	2,000-6,000	1	170	0.09	A	880	0.44	B	3	2,120	0.35	B	4,430	0.74	C	NO
4	SR-138	Between 300th St W and 190th St W	WB	2,000-4,000	1	160	0.08	A	400	0.20	A	2	2,170	0.54	C	2,710	0.68	C	NO
	SR-138	Between 300th St W and 190th St W	EB	2,000-4,000	1	150	0.08	A	560	0.28	A	2	1,290	0.32	A	2,020	0.51	B	NO
5	Avenue D/SR-138	Between 190th Street W and SR-14	WB	2,000-4,000	1	150	0.08	A	700	0.35	A	2	1,770	0.44	B	2,320	0.58	C	NO
	Avenue D/SR-138	Between 190th Street W and SR-14	EB	2,000-4,000	1	180	0.09	A	810	0.41	B	2	1,120	0.28	A	2,700	0.68	C	NO
6	SR-14	North of Avenue D/SR-138	NB	4,000	2	1,380	0.35	A	2,010	0.50	B	2	1,630	0.41	B	2,480	0.62	C	NO
	SR-14	North of Avenue D/SR-138	SB	4,000	2	1,930	0.48	B	2,810	0.70	C	2	1,930	0.48	B	2,740	0.69	C	NO
7	SR-14	South of Avenue D/SR-138	NB	4,000	2	1,480	0.37	B	2,910	0.73	C	2	2,370	0.59	C	4,140	1.04	F(0)	YES
	SR-14	South of Avenue D/SR-138	SB	4,000	2	2,040	0.51	B	3,460	0.87	D	2	2,050	0.51	B	4,340	1.09	F(0)	YES
8	SR-14	South of SR-138/High Desert Cor.	NB	6,000	3	3,320	0.55	C	5,360	0.89	D	3	3,280	0.55	C	5,020	0.84	D	NO
	SR-14	South of SR-138/High Desert Cor.	SB	6,000	3	3,540	0.59	C	4,640	0.77	D	3	4,240	0.71	C	4,990	0.83	D	NO
9	High Desert Corridor	East of 125th Street E	WB	0-6,000	N/A	N/A	N/A	N/A	N/A	N/A	N/A	3	2,500	0.42	B	3,500	0.58	C	NO
	High Desert Corridor	East of 125th Street E	EB	0-6,000	N/A	N/A	N/A	N/A	N/A	N/A	N/A	3	1,740	0.29	A	2,090	0.35	A	NO
PM Peak Hour																			
1	I-5 Freeway	North of SR-138	NB	8,000	4	3,050	0.38	B	2,980	0.37	B	4	5,250	0.66	C	5,910	0.74	C	NO
	I-5 Freeway	North of SR-138	SB	8,000	4	2,970	0.37	B	2,950	0.37	B	4	4,590	0.57	C	4,910	0.61	C	NO
2	I-5 Freeway	South of SR-138	NB	8,000	4	2,910	0.36	B	4,080	0.51	B	4	3,870	0.48	B	6,540	0.82	D	NO
	I-5 Freeway	South of SR-138	SB	8,000	4	2,850	0.36	B	3,750	0.47	B	4	3,340	0.42	B	4,360	0.55	C	NO
3	SR-138	Between I-5 and 300th Street W	WB	2,000-6,000	1	240	0.12	A	930	0.47	B	3	2,080	0.35	A	4,440	0.74	C	NO
	SR-138	Between I-5 and 300th Street W	EB	2,000-6,000	1	230	0.12	A	890	0.45	B	3	2,310	0.39	B	3,380	0.56	C	NO
4	SR-138	Between 300th St W and 190th St W	WB	2,000-4,000	1	200	0.10	A	570	0.29	A	2	2,300	0.58	C	2,730	0.68	C	NO
	SR-138	Between 300th St W and 190th St W	EB	2,000-4,000	1	170	0.09	A	500	0.25	A	2	1,740	0.44	B	2,480	0.62	C	NO
5	Avenue D/SR-138	Between 190th Street W and SR-14	WB	2,000-4,000	1	230	0.12	A	780	0.39	B	2	1,980	0.50	B	3,360	0.84	D	NO
	Avenue D/SR-138	Between 190th Street W and SR-14	EB	2,000-4,000	1	180	0.09	A	910	0.46	B	2	1,430	0.36	B	2,320	0.58	C	NO
6	SR-14	North of Avenue D/SR-138	NB	4,000	2	2,280	0.57	C	3,030	0.76	C	2	2,570	0.64	C	3,300	0.83	D	NO
	SR-14	North of Avenue D/SR-138	SB	4,000	2	1,830	0.46	B	2,450	0.61	C	2	1,990	0.50	B	2,780	0.70	C	NO
7	SR-14	South of Avenue D/SR-138	NB	4,000	2	2,420	0.61	C	3,700	0.93	D	2	3,250	0.81	D	5,270	1.32	F(1)	YES
	SR-14	South of Avenue D/SR-138	SB	4,000	2	1,890	0.47	B	3,510	0.88	D	2	2,260	0.57	C	4,380	1.10	F(0)	YES
8	SR-14	South of SR-138/High Desert Cor.	NB	6,000	3	4,270	0.71	C	5,690	0.95	E	3	4,940	0.82	D	5,840	0.97	E	YES
	SR-14	South of SR-138/High Desert Cor.	SB	6,000	3	3,400	0.57	C	5,510	0.92	D	3	3,720	0.62	C	5,600	0.93	E	YES
9	High Desert Corridor	East of 125th Street E	WB	0-6,000	N/A	N/A	N/A	N/A	N/A	N/A	N/A	3	2,860	0.48	B	3,580	0.60	C	NO
	High Desert Corridor	East of 125th Street E	EB	0-6,000	N/A	N/A	N/A	N/A	N/A	N/A	N/A	3	2,880	0.48	B	3,900	0.65	C	NO

IMPACT ANALYSIS

Impact 5.16-1: Buildout in accordance with the Proposed Project would impact levels of service on the existing roadway system. [Threshold T-1, T-2]

Roadway Segment Analysis

Based on the established significant impact criteria, the Proposed Project would have a significant impact if it causes a roadway segment at LOS E or F to experience a change in V/C of 0.02 or greater. Based on the results of the modeling and impact analysis, the following locations are forecast to be significantly impacted:

Roadway Segment Impacts due to Planned Growth – Existing plus Project

Avenue L from 40th Street West to 55th Street West – Exceeds existing roadway LOS E capacity by approximately 1,500 daily vehicles, 0.10 change in V/C (Existing plus Project V/C = 0.97) due to the Proposed Project growth.

Fort Tejon Road from 96th Street to Mount Emma Road – Exceeds existing roadway LOS E capacity by approximately 1,200 daily vehicles, 0.47 change in V/C (Existing plus Project V/C = 0.97) due to the Proposed Project growth.

Fort Tejon Road from 106th Street to 96th Street – Exceeds existing roadway LOS E capacity by approximately 1,300 daily vehicles, 0.47 change in V/C (Existing plus Project V/C = 0.97) due to the Proposed Project growth.

Fort Tejon Road from 131st Street East to 106th Street – Exceeds existing roadway LOS E capacity by approximately 700 daily vehicles, 0.5 change in V/C (Existing plus Project V/C = 0.94) due to the Proposed Project growth.

Palmdale Boulevard from 95th Street East to 90th Street East – Exceeds existing roadway LOS E capacity by approximately 1,300 daily vehicles, 0.32 change in V/C (Existing plus Project V/C = 0.97) due to the Proposed Project growth.

Palmdale Boulevard from 100th Street East to 95th Street East – Exceeds existing roadway LOS E capacity by approximately 1,800 daily vehicles, 0.34 change in V/C (Existing plus Project V/C = 1.00) due to the Proposed Project growth.

Palmdale Boulevard from 105th Street East to 100th Street East – Exceeds existing roadway LOS E capacity by approximately 700 daily vehicles, 0.31 change in V/C (Existing plus Project V/C = .94) due to the Proposed Project growth.

Palmdale Boulevard from 110th Street East to 105th Street East – Exceeds existing roadway LOS E capacity by approximately 700 daily vehicles, 0.33 change in V/C (Existing plus Project V/C = 0.94) due to the Proposed Project growth.

Pearblossom Highway (SR-138) from 82nd Street East to Avenue T-8 – Exceeds existing roadway LOS E capacity by approximately 7,600 daily vehicles, 0.34 change in V/C (Existing plus Project V/C = 1.32) due to the Proposed Project growth.

Pearblossom Highway (SR-138) from 87th Street East to 82nd Street East – Exceeds existing roadway LOS E capacity by approximately 3,400 daily vehicles, 0.34 change in V/C (Existing plus Project V/C = 1.09) due to the Proposed Project growth.

Pearblossom Highway (SR-138) from 96th Street East to 87th Street East – Exceeds existing roadway LOS E capacity by approximately 5,600 daily vehicles, 0.32 change in V/C (Existing plus Project V/C = 1.21) due to the Proposed Project growth.

Pearblossom Highway (SR-138) from 126th Street East to 116th Street East – Exceeds existing roadway LOS E capacity by approximately 6,700 daily vehicles, 0.29 change in V/C (Existing plus Project V/C = 1.27) due to the Proposed Project growth.

Pearblossom Highway (SR-138) from 131st Street East to 126th Street East – Exceeds existing roadway LOS E capacity by approximately 11,200 daily vehicles, 0.49 change in V/C (Existing plus Project V/C = 1.52) due to the Proposed Project growth.

Intersection Levels of Service (LOS)

Implementation of the Proposed Project is expected to result in exceeding the County CMP standard level of service (LOS E), to LOS F, along with a significant increase in V/C due to the Project, at the following locations:

Existing plus Project

3. Lancaster Road & 300th Street West
4. Avenue D & 60th Street West

2035 plus Project

1. Lancaster Road & 300th Street West
2. Avenue D & 60th Street West
4. Pearblossom Highway (SR-138) & 82nd Street East

Freeway Segment Analysis

Based on the established significant impact criteria, the Proposed Project would have a significant impact if it causes a freeway segment at LOS E or F to experience a change in V/C of 0.02 or greater. Based on the results of the modeling and impact analysis, the following locations are forecast to be significantly impacted:

Freeway Segment Impacts due to Planned Growth – Existing plus Project

SR-14 South of SR-138/Future High Desert Corridor (PM Northbound) – Exceeds the CMP LOS E threshold and would have a D/C ratio of .95.

Freeway Segment Impacts due to Future Growth – Future plus Project

SR-14 South of Avenue D/SR-138 (AM Northbound) – Exceeds the CMP LOS E threshold and would have a D/C ratio of 1.04.

SR-14 South of Avenue D/SR-138 (AM Southbound) – Exceeds the CMP LOS E threshold and would have a D/C ratio of 1.09.

SR-14 South of Avenue D/SR-138 (PM Northbound) – Exceeds the CMP LOS E threshold and would have a D/C ratio of 1.32.

SR-14 South of Avenue D/SR-138 (PM Southbound) – Exceeds the CMP LOS E threshold and would have a D/C ratio of 1.10.

SR-14 South of SR-138/High Desert Corridor (PM Northbound) – Exceeds the CMP LOS E threshold and would have a D/C ratio of 0.97.

SR-14 South of SR-138/High Desert Corridor (PM Southbound) – Exceeds the CMP LOS E threshold and would have a D/C ratio of 0.93.

IMPACT 5.16-2: Implementation of the Proposed Project would not result in a change in air traffic patterns, including either an increase in traffic levels or a change in location that results in substantial safety risks. [Threshold T-3]

Impact Analysis: The Proposed Project will result in a significant impact to air traffic patterns if it causes an increase in air traffic levels or introduce incompatible land uses. The Proposed Project will not result in the development of a new airport within the County nor will it introduce new land uses that could prevent safety hazards to air traffic. The Proposed Project has policies aimed at improving the compatibility between aviation facilities and their surroundings, encouraging greater multi-modal access to airports and encouraging the development of a decentralized system of major airports.

IMPACT 5.16-3: Implementation of the Proposed Project would not substantially increase hazards due to a design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment). [Threshold T-4]

Impact Analysis: The Proposed Project promotes highways to be built to specific standards that have been set by the County. These include increasing the number of lanes on major highways and other improvements under the Highway Plan. Hazards due to roadway design features will be evaluated on a project-by-project basis as the buildout of the Proposed Project occurs. All new highways and upgrades will be planned, designed and built to County standards.

The County periodically monitors levels of service, traffic accident patterns, and physical conditions of the existing street system, and upgrade roadways as needed. Additionally, the County applies consistent standards throughout the Highway Plan for street design to promote travel safety. It will accomplish this by designating roadways based on their functional classification, adopting consistent standard street cross sections, coordinating circulation plans of new development project with each other, and adopting common standards for pavement width. Within residential neighborhoods, complete streets will be promoted through traffic-calming devices, shorter block length, and other considerations. Where possible, local street patterns would be designed to create logical and understandable travel paths for users and discourage cut-through traffic.

IMPACT 5.16-4: Implementation of the Proposed Project would not result in inadequate emergency access. [Threshold T-5]

Impact Analysis: Emergency access will be evaluated on a project-by-project basis as the buildout of the Proposed Project occurs. Buildout of the Proposed Project will enhance the capacity of the roadway system by upgrading roadways and intersections when necessary, ensure that the future dedication and acquisitions of roadways are based on projected demand, and implement the construction of paved crossover points through medians for emergency vehicles. Additionally, the Proposed Project will facilitate the consideration of the needs for emergency access in transportation planning. The County will maintain a current evacuation plan, ensure that new development is provided with adequate emergency and/or secondary access, including two points of ingress and egress for most subdivisions, require visible street name signage, and provide directional signage to freeways at key intersections to assist in emergency evacuation operations.

IMPACT 5.16-5: Implementation of the Proposed Project would not conflict with adopted policies, plans, or programs supporting alternative transportation (e.g., bus turnouts, bicycle racks). [Threshold T-6]

Impact Analysis: The Bicycle Plan was adopted by the County Board of Supervisors on March 13, 2012. The Bicycle Plan, which replaces the 1975 Plan of Bikeways, is a sub-element of the Transportation Element of the adopted General Plan. The Bicycle Plan proposes approximately 831 miles of new bikeways throughout the County. Along with the proposed bikeways, the Bicycle Plan recommends various bicycle-friendly policies and programs to promote bicycle ridership among users of all ages and skill sets within the County. A Final Program EIR (State Clearinghouse No. 2011041004) for the Bicycle Plan was completed. The Bicycle Plan also contains elements that support alternative transportation programs, including increased ridership on public transit, developing mass transit as an alternative to automobile travel, the development of rail transit or exclusive bus lanes in high demand corridors, as well as research for and development of new transportation technologies.

The Proposed Project supports alternative modes of transportation, including walking and bicycling, to reduce total VMT. Additionally, the Proposed Project establishes several policies to ensure the safety and mobility of pedestrians and bicyclists. The County will provide safe and convenient access to safe transit, bikeways, and walkways, consider the safety and convenience of pedestrians and cyclists in the design and development of transportation systems, provide safe pedestrian connections across barriers, such as major traffic corridors, drainage and flood control facilities, and grade separations, adopt consistent standards for implementation of Americans with Disabilities Act requirements and in the development review process prioritize direct pedestrian access between building entrances, sidewalks and transit stops. The Bicycle Plan also contains many programs and policies that would mitigate potential hazards or barriers for bicyclists.

Cumulative Impacts

The geographic scope for traffic analysis includes cumulative growth projections for the County that are reflected in the SCAG RTP/SCS, as described in Section 4.4, *Cumulative Impact Assumptions*, of this DEIR. Past projects in Los Angeles County (cities and unincorporated areas) have converted undeveloped and agricultural land to urban uses, resulting in residential and employment population increases and associated demand for expansions of roadway systems. The contribution of these past projects to area growth is also reflected in the SCAG RTP/SCS. The 2012–2035 RTP/SCS provides a blueprint for improving quality of life for residents by providing more choices for where they will live, work, and play, and how they will move around. Safe, secure, and efficient transportation systems will provide improved access to opportunities, such as jobs, education, and healthcare. SCAG utilizes an integrated analytical framework to develop growth projections, travel forecasts, and emissions estimates to support the region's various planning programs. In addition, SCAG maintains a robust subregional modeling and data service program that is essential to the analysis of many of the region's projects and programs.

The primary functions of the Modeling and Forecasting Department include: a) working collaboratively with local jurisdictions to develop socioeconomic growth forecasts as required for regional and local planning; b) providing modeling services for the development and implementation of SCAG's plans, programs, and projects; c) developing and maintaining SCAG's various analytical tools and data to more effectively forecast travel demand and estimate resulting air quality; d) providing member services through a robust subregional

modeling and data distribution program; e) promoting state of the art modeling practices; and, f) coordinating modeling activities within the SCAG Region.

To assess the effects of potential land use changes on the transportation system, SCAG’s regional travel demand model has been applied as incorporated into the North County Sub-Area Travel Demand Model. The SCAG model covers the six county areas (Los Angeles plus Orange, Ventura, Riverside, San Bernardino and Imperial counties). Within Los Angeles County and the Antelope Valley, the sub-area model includes both city land area and unincorporated areas. Thus, the model is the appropriate tool to test changes in land uses in the unincorporated areas, and to take into account changes and growth in the surrounding city areas of Lancaster and Palmdale. The sub-area model was calibrated to Year 2013 conditions and reflects a 2035 future horizon year. Both models were used for this analysis. The base year model is used for the “Existing plus Project” analysis for purposes of CEQA review, and the future 2035 model was also reviewed to understand future build out land uses at 2035.

Because the modeling used for the traffic analyses contained in this Section 5.16, *Transportation and Traffic*, incorporates SCAG’s regional growth projections, the analyses assess the traffic impacts of all cumulative development reasonably anticipated by Year 2035, and buildout levels of the Proposed Area Plan. As discussed, most intersections and roadway/freeway segments will operate at acceptable levels of service with the planned improvements, although some may require additional improvements, as described in Section 5.16.8, *Mitigation Measures*. It should be noted, however, that it has been anticipated in the traffic analysis that the cumulative impact of the Proposed Project traffic along with other regional growth at the identified freeway locations will be largely mitigated by a combination of regional programs that are the responsibility of other agencies, such as cities and Caltrans. Future developers/project applicants will contribute their fair share to these regional programs, as applicable. However, if these programs are not implemented by the agencies with the responsibility to do so, the cumulative transportation and traffic impacts would remain significant and unavoidable. Under these circumstances, the Proposed Project could result in a cumulatively significant traffic impact that may remain significant and unavoidable.

Existing Regulations and Standard Conditions

There are no existing regulations or standard conditions that apply to transportation and traffic.

Level of Significance before Mitigation

Upon implementation of regulatory requirements and standard conditions of approval, the following impacts would be less than significant: 5.16-2, 5.16-3, 5.16-4 and 5.16-5.

Without mitigation, the following impacts would be **potentially significant**:

- Impact 5.16-1 Buildout in accordance with the Proposed Project would impact levels of service on the existing roadway system.

Mitigation Measures

Impact 5.16-1

- T-1 The County shall continue to monitor potential impacts on roadway segments and intersections on a project-by-project basis as buildout occurs by requiring traffic studies for all projects that could significantly impact traffic and circulation patterns. Future projects shall be evaluated and traffic improvements shall be identified to maintain minimum levels of service in accordance with the County's Traffic Impact Analysis Guidelines, where feasible mitigation is available.
- T-2 The County shall implement over time objectives and policies contained within the Antelope Valley Area Plan and the adopted General Plan Transportation Element. Implementation of those policies will help mitigate any potential impacts of Project growth and/or highway amendments on the transportation system.
- T-3 The County shall participate with Metro, the CMP agency in Los Angeles County, on a potential Congestion Mitigation Fee program that would replace the current CMP Debit/Credit approach. Under a countywide fee program, each jurisdiction, including the County, will select and build capital transportation projects, adopt a fee ordinance, collect fees and control revenues. A fee program will require a nexus analysis, and apply only to net new construction on commercial and industrial space and additional residential units and needs to be approved by Metro and the local jurisdictions. A countywide fee, if adopted, will allow the County to mitigate the impacts of development via the payment of the transportation impact fee in lieu of asking each development project for individual mitigation measures, or asking for fair share payments of mitigation. The fee program would itself constitute a "fair-share" program that would apply to all development (of a certain size) within the unincorporated areas.
- T-4 The County of Los Angeles shall continue to secure the funding needed to implement the future planned improvements within the Project Area. A variety of funding sources shall be explored, such as Metro's CMP Fee Program as described under T-3, Metro Call for Project funds, and federal and state grant opportunities. If the CMP fee program is not adopted by Metro and the County of Los Angeles, other funding sources for regional transportation needs in the Project Area, including Caltrans facilities, shall be pursued such as a potential North County Development Impact Fee Program, development agreements for large projects, and/or mitigation agreements between future applicants and Caltrans for projects that impact Caltrans facilities.
- T-5 The County shall work with Caltrans as they prepare plans to add additional lanes or complete other improvements to various freeways within and adjacent to unincorporated areas. This includes adding or extending mixed flow general purpose lanes, adding or extending existing HOV lanes, adding Express Lanes (high occupancy toll lanes), incorporating truck climbing lanes, improving interchanges and other freeway related improvements.

T-6 The County shall require traffic engineering firms retained to prepare traffic impact studies for future development projects to consult with Caltrans, when a development proposal meets the requirements of statewide, regional, or areawide significance per CEQA Guidelines §15206(b). When preparing traffic impact studies, the most up to date Guide for the Preparation of Traffic Impact Studies from Caltrans shall be followed. Proposed developments meeting the criteria of statewide, regional or areawide include:

- Proposed residential developments of more than 500 dwelling units
- Proposed shopping centers or business establishments employing more than 1,000 persons or encompassing more than 500,000 square feet of floor space.
- Proposed commercial office buildings employing more than 1,000 persons or encompassing more than 250,000 square feet of floor space
- Proposed hotel/motel developments of more than 500 rooms

When the CEQA criteria of regional significance are not met, Caltrans recommends that Project Applicants consult with Caltrans when a proposed development includes the following characteristics:

- All proposed developments that have the potential to cause a significant impact to state facilities (right-of-way, intersections, interchanges, etc.) and when required mitigation improvements are proposed in the initial study. Mitigation concurrence should be obtained from Caltrans as early as possible.
- Any development that assigns 50 or more trips (passenger car equivalent trips) during peak hours to a state highway/freeway.
- Any development that assigns 10 or more trips (passenger car equivalent trips) during peak hours to an off-ramp. On/off-ramps that are very close to each other in which the project trips may cause congestion on the left-turn lane storage to the on-ramp.
- Any development located adjacent to or within 100 feet of a state highway facility and may require a Caltrans Encroachment Permit. (Exceptions: additions to single family homes or 10 residential units or less).
- When the County cannot determine whether or not Caltrans will expect a traffic impact analysis pursuant to CEQA.

Level of Significance after Mitigation

Impact 5.16-1

The impacted locations are still considered to be significantly impacted with mitigation. Because this is a program-level analysis, additional case-by-case mitigation analysis of impacts and mitigation will occur at the project level to determine more specific physical, program and policy-level mitigation measures to reduce the level of impact below a significant level.

Furthermore, inasmuch as the primary responsibility for approving and/or completing certain improvements lies with agencies other than the County (i.e., cities and Caltrans), there is the potential that significant impacts may not be fully mitigated if such improvements are not completed for reasons beyond the County's control (e.g., the County cannot undertake or require improvements outside of the County's jurisdiction or the County cannot construct improvements in the Caltrans right-of-way without Caltrans' approval). Therefore, Impact 5.16-1 would remain significant and unavoidable.

References

Southern California Association of Governments (SCAG). 2012, April 4. Regional Transportation Plan/
Sustainable Communities Strategy 2012-2035. <http://rtpscs.scag.ca.gov/Pages/default.aspx>

County of Los Angeles. 2012. County of Los Angeles Bicycle Master Plan.
<http://dpw.lacounty.gov/bike/masterplan.cfm>

County of Los Angeles. 1980. County of Los Angeles General Plan.

County of Los Angeles. 2014. County of Los Angeles Draft General Plan.

County of Los Angeles. 2010. Congestion Management Program.

Transportation Research Board (TRB), 2010. Highway Capacity Manual.

This page intentionally left blank.

Appendix A: CMP Study Intersections – Technical Calculations

Project Title:		ANTELOPE VALLEY AREA PLAN				
Intersection:		1 300th Street West & Lancaster Road				
Description:		Existing				
Date/Time:		AM PEAK HOUR				
Thru Lane:	1600 vph				N-S Split Phase :	N
Left Lane:	1600 vph				E-W Split Phase :	N
Double Lt Penalty:	10 %				Lost Time (% of cycle) :	10
ITS:	0 %				V/C Round Off (decs.) :	3
OLA Movements :						
FF Movements:						
APPROACH	MVMT	LANES	VOLUME	CAPACITY	V/C	ICU ANALYSIS
Southbound	RT	0.50	1	800	0.001 *	N-S(1): 0.001 * N-S(2): 0.001 * E-W(1): 0.034 E-W(2): 0.079 *
	TH	0.00	0	0	0.000	
	LT	0.50	1	800	0.001 *	
Westbound	RT	0.00	1	0	0.000	V/C: 0.080 Lost Time: 0.100 ITS: 0.000
	TH	1.00	126	1,600	0.079 *	
	LT	0.00	0	0	0.000	
Northbound	RT	0.00	0	0	0.000	ICU: 0.180
	TH	0.00	0	0	0.000 *	
	LT	0.00	0	0	0.000 *	
Eastbound	RT	0.00	0	0	0.000	LOS: A
	TH	1.00	54	1,600	0.034	
	LT	0.00	0	0	0.000 *	
Date/Time:		PM PEAK HOUR				
APPROACH	MVMT	LANES	VOLUME	CAPACITY	V/C	ICU ANALYSIS
Southbound	RT	0.38	5	615	0.008 *	N-S(1): 0.008 * N-S(2): 0.008 * E-W(1): 0.104 * E-W(2): 0.074
	TH	0.00	0	0	0.000	
	LT	0.62	8	985	0.008 *	
Westbound	RT	0.00	4	0	0.000	V/C: 0.112 Lost Time: 0.100 ITS: 0.000
	TH	1.00	113	1,600	0.073	
	LT	0.00	0	0	0.000 *	
Northbound	RT	0.00	0	0	0.000	ICU: 0.212
	TH	0.00	0	0	0.000 *	
	LT	0.00	0	0	0.000 *	
Eastbound	RT	0.00	0	0	0.000	LOS: A
	TH	1.00	166	1,600	0.104 *	
	LT	0.00	1	1,600	0.001	

* - Denotes critical movement

Project Title: ANTELOPE VALLEY AREA PLAN Intersection: 2 60th Street West & Avenue D Description: Existing Date/Time: AM PEAK HOUR							
Thru Lane:	1600 vph					N-S Split Phase :	N
Left Lane:	1600 vph					E-W Split Phase :	N
Double Lt Penalty:	10 %					Lost Time (% of cycle) :	10
ITS:	0 %					V/C Round Off (decs.) :	3
OLA Movements :							
FF Movements:							
APPROACH	MVMT	LANES	VOLUME	CAPACITY	V/C	ICU ANALYSIS	
Southbound	RT	0.00	1	0	0.000	N-S(1):	0.030
	TH	1.00	59	1,600	0.039 *	N-S(2):	0.045 *
	LT	0.00	3	1,600	0.002	E-W(1):	0.088 *
Westbound	RT	0.00	4	0	0.000	E-W(2):	0.076
	TH	1.00	115	1,600	0.075	V/C:	0.133
	LT	0.00	1	1,600	0.001 *	Lost Time:	0.100
Northbound	RT	0.00	7	0	0.000	ITS:	0.000
	TH	1.00	27	1,600	0.028	ICU:	0.233
	LT	0.00	10	1,600	0.006 *	LOS:	A
Eastbound	RT	0.00	23	0	0.000		
	TH	1.00	115	1,600	0.087 *		
	LT	0.00	1	1,600	0.001		
Date/Time: PM PEAK HOUR							
APPROACH	MVMT	LANES	VOLUME	CAPACITY	V/C	ICU ANALYSIS	
Southbound	RT	0.00	2	0	0.000	N-S(1):	0.038 *
	TH	1.00	33	1,600	0.024	N-S(2):	0.033
	LT	0.00	4	1,600	0.003 *	E-W(1):	0.143 *
Westbound	RT	0.00	6	0	0.000	E-W(2):	0.108
	TH	1.00	159	1,600	0.106	V/C:	0.181
	LT	0.00	4	1,600	0.003 *	Lost Time:	0.100
Northbound	RT	0.00	2	0	0.000	ITS:	0.000
	TH	1.00	40	1,600	0.035 *	ICU:	0.281
	LT	0.00	14	1,600	0.009	LOS:	A
Eastbound	RT	0.00	25	0	0.000		
	TH	1.00	196	1,600	0.140 *		
	LT	0.00	3	1,600	0.002		

* - Denotes critical movement

Project Title: ANTELOPE VALLEY AREA PLAN Intersection: 3 Red Rover Mine Road & Sierra Highway Description: Existing Date/Time: AM PEAK HOUR							
Thru Lane:	1600 vph					N-S Split Phase :	N
Left Lane:	1600 vph					E-W Split Phase :	N
Double Lt Penalty:	10 %					Lost Time (% of cycle) :	10
ITS:	0 %					V/C Round Off (decs.) :	3
OLA Movements :							
FF Movements:							
APPROACH	MVMT	LANES	VOLUME	CAPACITY	V/C	ICU ANALYSIS	
Southbound	RT	1.00	10	1,600	0.006	N-S(1):	0.019 *
	TH	1.00	10	1,600	0.013 *	N-S(2):	0.019 *
	LT	0.00	10	1,600	0.006 *	E-W(1):	0.019 *
Westbound	RT	0.00	10	0	0.000	E-W(2):	0.019 *
	TH	1.00	10	1,600	0.013 *	V/C:	0.038
	LT	1.00	10	1,600	0.006 *	Lost Time:	0.100
Northbound	RT	1.00	10	1,600	0.006	ITS:	0.000
	TH	1.00	10	1,600	0.013 *	ICU:	0.138
	LT	0.00	10	1,600	0.006 *	LOS:	A
Eastbound	RT	0.00	10	0	0.000		
	TH	1.00	10	1,600	0.013 *		
	LT	1.00	10	1,600	0.006 *		
Date/Time: PM PEAK HOUR							
APPROACH	MVMT	LANES	VOLUME	CAPACITY	V/C	ICU ANALYSIS	
Southbound	RT	1.00	10	1,600	0.006	N-S(1):	0.019 *
	TH	1.00	10	1,600	0.013 *	N-S(2):	0.019 *
	LT	0.00	10	1,600	0.006 *	E-W(1):	0.019 *
Westbound	RT	0.00	10	0	0.000	E-W(2):	0.019 *
	TH	1.00	10	1,600	0.013 *	V/C:	0.038
	LT	1.00	10	1,600	0.006 *	Lost Time:	0.100
Northbound	RT	1.00	10	1,600	0.006	ITS:	0.000
	TH	1.00	10	1,600	0.013 *	ICU:	0.138
	LT	0.00	10	1,600	0.006 *	LOS:	A
Eastbound	RT	0.00	10	0	0.000		
	TH	1.00	10	1,600	0.013 *		
	LT	1.00	10	1,600	0.006 *		

* - Denotes critical movement

Project Title: ANTELOPE VALLEY AREA PLAN Intersection: 4 82nd Street East & Pearblossom Highway Description: Existing Date/Time: AM PEAK HOUR							
Thru Lane:	1600 vph					N-S Split Phase :	N
Left Lane:	1600 vph					E-W Split Phase :	N
Double Lt Penalty:	10 %					Lost Time (% of cycle) :	10
ITS:	0 %					V/C Round Off (decs.) :	3
OLA Movements :							
FF Movements:							
APPROACH	MVMT	LANES	VOLUME	CAPACITY	V/C	ICU ANALYSIS	
Southbound	RT	0.00	10	0	0.000	N-S(1):	0.019
	TH	1.00	10	1,600	0.013 *	N-S(2):	0.076 *
	LT	1.00	10	1,600	0.006	E-W(1):	0.400 *
Westbound	RT	1.00	10	1,600	0.006	E-W(2):	0.378
	TH	1.00	595	1,600	0.372		
	LT	1.00	10	1,600	0.006 *	V/C:	0.476
Northbound	RT	0.00	10	0	0.000	Lost Time:	0.100
	TH	1.00	10	1,600	0.013	ITS:	0.000
	LT	1.00	101	1,600	0.063 *		
Eastbound	RT	0.00	206	0	0.000	ICU:	0.576
	TH	1.00	424	1,600	0.394 *		
	LT	1.00	10	1,600	0.006	LOS:	A
Date/Time: PM PEAK HOUR							
APPROACH	MVMT	LANES	VOLUME	CAPACITY	V/C	ICU ANALYSIS	
Southbound	RT	0.00	10	0	0.000	N-S(1):	0.019
	TH	1.00	10	1,600	0.013 *	N-S(2):	0.123 *
	LT	1.00	10	1,600	0.006	E-W(1):	0.475 *
Westbound	RT	1.00	10	1,600	0.006	E-W(2):	0.347
	TH	1.00	545	1,600	0.341		
	LT	1.00	10	1,600	0.006 *	V/C:	0.598
Northbound	RT	0.00	10	0	0.000	Lost Time:	0.100
	TH	1.00	10	1,600	0.013	ITS:	0.000
	LT	1.00	176	1,600	0.110 *		
Eastbound	RT	0.00	128	0	0.000	ICU:	0.698
	TH	1.00	622	1,600	0.469 *		
	LT	1.00	10	1,600	0.006	LOS:	B

* - Denotes critical movement

Project Title: ANTELOPE VALLEY AREA PLAN Intersection: 5 Pearblossom Highway & Antelope Highway Description: Existing Date/Time: AM PEAK HOUR								
Thru Lane:	1600 vph					N-S Split Phase :	N	
Left Lane:	1600 vph					E-W Split Phase :	N	
Double Lt Penalty:	10 %					Lost Time (% of cycle) :	10	
ITS:	0 %					V/C Round Off (decs.) :	3	
OLA Movements :								
FF Movements:								
APPROACH	MVMT	LANES	VOLUME	CAPACITY	V/C	ICU ANALYSIS		
Southbound	RT	0.00	0	0	0.000	N-S(1):	0.006 *	
	TH	0.00	0	0	0.000	N-S(2):	0.000	
	LT	1.00	10	1,600	0.006 *	E-W(1):	0.273	
Westbound	RT	0.00	10	0	0.000	E-W(2):	0.437 *	
	TH	1.00	309	1,600	0.199 *	V/C:	0.443	
	LT	0.00	0	0	0.000	Lost Time:	0.100	
Northbound	RT	0.00	0	0	0.000	ITS:	0.000	
	TH	0.00	0	0	0.000 *	ICU:	0.543	
	LT	0.00	0	0	0.000	LOS:	A	
Eastbound	RT	0.00	0	0	0.000			
	TH	1.00	436	1,600	0.273			
	LT	1.00	380	1,600	0.238 *			
Date/Time: PM PEAK HOUR								
APPROACH	MVMT	LANES	VOLUME	CAPACITY	V/C	ICU ANALYSIS		
Southbound	RT	0.00	0	0	0.000	N-S(1):	0.006 *	
	TH	0.00	0	0	0.000	N-S(2):	0.000	
	LT	1.00	10	1,600	0.006 *	E-W(1):	0.321	
Westbound	RT	0.00	10	0	0.000	E-W(2):	0.526 *	
	TH	1.00	443	1,600	0.283 *	V/C:	0.532	
	LT	0.00	0	0	0.000	Lost Time:	0.100	
Northbound	RT	0.00	0	0	0.000	ITS:	0.000	
	TH	0.00	0	0	0.000 *	ICU:	0.632	
	LT	0.00	0	0	0.000	LOS:	B	
Eastbound	RT	0.00	0	0	0.000			
	TH	1.00	514	1,600	0.321			
	LT	1.00	389	1,600	0.243 *			

* - Denotes critical movement

Project Title: ANTELOPE VALLEY AREA PLAN Intersection: 1 300th Street West & Lancaster Road Description: Existing Plus Project Date/Time: AM PEAK HOUR							
Thru Lane:	1600 vph					N-S Split Phase :	N
Left Lane:	1600 vph					E-W Split Phase :	N
Double Lt Penalty:	10 %					Lost Time (% of cycle) :	10
ITS:	0 %					V/C Round Off (decs.) :	3
OLA Movements :							
FF Movements:							
APPROACH	MVMT	LANES	VOLUME	CAPACITY	V/C	ICU ANALYSIS	
Southbound	RT	0.70	370	1,117	0.331 *	N-S(1):	0.331 *
	TH	0.00	0	0	0.000	N-S(2):	0.331 *
	LT	0.30	160	483	0.331 *	E-W(1):	0.531
Westbound	RT	0.00	220	0	0.000	E-W(2):	0.588 *
	TH	1.00	500	1,600	0.450 *	V/C:	0.919
	LT	0.00	0	0	0.000	Lost Time:	0.100
Northbound	RT	0.00	0	0	0.000	ITS:	0.000
	TH	0.00	0	0	0.000 *	ICU:	1.019
	LT	0.00	0	0	0.000 *	LOS:	F
Eastbound	RT	0.00	0	0	0.000		
	TH	1.00	630	1,600	0.531		
	LT	0.00	220	1,600	0.138 *		
Date/Time: PM PEAK HOUR							
APPROACH	MVMT	LANES	VOLUME	CAPACITY	V/C	ICU ANALYSIS	
Southbound	RT	0.60	260	967	0.269 *	N-S(1):	0.269 *
	TH	0.00	0	0	0.000	N-S(2):	0.269 *
	LT	0.40	170	633	0.269 *	E-W(1):	0.644
Westbound	RT	0.00	180	0	0.000	E-W(2):	0.675 *
	TH	1.00	500	1,600	0.425 *	V/C:	0.944
	LT	0.00	0	0	0.000	Lost Time:	0.100
Northbound	RT	0.00	0	0	0.000	ITS:	0.000
	TH	0.00	0	0	0.000 *	ICU:	1.044
	LT	0.00	0	0	0.000 *	LOS:	F
Eastbound	RT	0.00	0	0	0.000		
	TH	1.00	630	1,600	0.644		
	LT	0.00	400	1,600	0.250 *		

* - Denotes critical movement

Project Title: ANTELOPE VALLEY AREA PLAN Intersection: 2 60th Street West & Avenue D Description: Existing Plus Project						
Date/Time: AM PEAK HOUR						
Thru Lane:	1600 vph					N-S Split Phase : N
Left Lane:	1600 vph					E-W Split Phase : N
Double Lt Penalty:	10 %					Lost Time (% of cycle) : 10
ITS:	0 %					V/C Round Off (decs.) : 3
OLA Movements :						
FF Movements:						
APPROACH	MVMT	LANES	VOLUME	CAPACITY	V/C	ICU ANALYSIS
Southbound	RT	0.00	150	0	0.000	N-S(1): 0.319 N-S(2): 0.413 * E-W(1): 0.476 * E-W(2): 0.456
	TH	1.00	290	1,600	0.400 *	
	LT	0.00	200	1,600	0.125	
Westbound	RT	0.00	220	0	0.000	V/C: 0.889 Lost Time: 0.100 ITS: 0.000
	TH	1.00	320	1,600	0.350	
	LT	0.00	20	1,600	0.013 *	
Northbound	RT	0.00	20	0	0.000	ICU: 0.989
	TH	1.00	270	1,600	0.194	
	LT	0.00	20	1,600	0.013 *	
Eastbound	RT	0.00	40	0	0.000	LOS: E
	TH	1.00	530	1,600	0.463 *	
	LT	0.00	170	1,600	0.106	
Date/Time: PM PEAK HOUR						
APPROACH	MVMT	LANES	VOLUME	CAPACITY	V/C	ICU ANALYSIS
Southbound	RT	0.00	160	0	0.000	N-S(1): 0.456 N-S(2): 0.512 * E-W(1): 0.376 E-W(2): 0.606 *
	TH	1.00	320	1,600	0.481 *	
	LT	0.00	290	1,600	0.181	
Westbound	RT	0.00	200	0	0.000	V/C: 1.118 Lost Time: 0.100 ITS: 0.000
	TH	1.00	540	1,600	0.475 *	
	LT	0.00	20	1,600	0.013	
Northbound	RT	0.00	20	0	0.000	ICU: 1.218
	TH	1.00	370	1,600	0.275	
	LT	0.00	50	1,600	0.031 *	
Eastbound	RT	0.00	30	0	0.000	LOS: F
	TH	1.00	340	1,600	0.363	
	LT	0.00	210	1,600	0.131 *	

* - Denotes critical movement

Project Title: ANTELOPE VALLEY AREA PLAN Intersection: 3 Red Rover Mine Road & Sierra Highway Description: Existing Plus Project Date/Time: AM PEAK HOUR							
Thru Lane:	1600 vph					N-S Split Phase :	N
Left Lane:	1600 vph					E-W Split Phase :	N
Double Lt Penalty:	10 %					Lost Time (% of cycle) :	10
ITS:	0 %					V/C Round Off (decs.) :	3
OLA Movements :							
FF Movements:							
APPROACH	MVMT	LANES	VOLUME	CAPACITY	V/C	ICU ANALYSIS	
Southbound	RT	1.00	10	1,600	0.006	N-S(1):	0.244 *
	TH	1.00	10	1,600	0.013 *	N-S(2):	0.244 *
	LT	0.00	10	1,600	0.006	E-W(1):	0.019
Westbound	RT	0.00	10	0	0.000	E-W(2):	0.025 *
	TH	1.00	20	1,600	0.019 *	V/C:	0.269
	LT	1.00	10	1,600	0.006	Lost Time:	0.100
Northbound	RT	1.00	10	1,600	0.006	ITS:	0.000
	TH	1.00	10	1,600	0.238	ICU:	0.369
	LT	0.00	370	1,600	0.231 *	LOS:	A
Eastbound	RT	0.00	10	0	0.000		
	TH	1.00	10	1,600	0.013		
	LT	1.00	10	1,600	0.006 *		
Date/Time: PM PEAK HOUR							
APPROACH	MVMT	LANES	VOLUME	CAPACITY	V/C	ICU ANALYSIS	
Southbound	RT	1.00	10	1,600	0.006	N-S(1):	0.219 *
	TH	1.00	10	1,600	0.013 *	N-S(2):	0.219 *
	LT	0.00	10	1,600	0.006 *	E-W(1):	0.087 *
Westbound	RT	0.00	10	0	0.000	E-W(2):	0.019
	TH	1.00	10	1,600	0.013	V/C:	0.306
	LT	1.00	10	1,600	0.006 *	Lost Time:	0.100
Northbound	RT	1.00	10	1,600	0.006	ITS:	0.000
	TH	1.00	10	1,600	0.213 *	ICU:	0.406
	LT	0.00	330	1,600	0.206 *	LOS:	A
Eastbound	RT	0.00	10	0	0.000		
	TH	1.00	120	1,600	0.081 *		
	LT	1.00	10	1,600	0.006		

* - Denotes critical movement

Project Title: ANTELOPE VALLEY AREA PLAN Intersection: 4 82nd Street East & Pearblossom Highway Description: Existing Plus Project						
Date/Time: AM PEAK HOUR						
Thru Lane:	1600 vph					N-S Split Phase : N
Left Lane:	1600 vph					E-W Split Phase : N
Double Lt Penalty:	10 %					Lost Time (% of cycle) : 10
ITS:	0 %					V/C Round Off (decs.) : 3
OLA Movements :						
FF Movements:						
APPROACH	MVMT	LANES	VOLUME	CAPACITY	V/C	ICU ANALYSIS
Southbound	RT	0.00	20	0	0.000	N-S(1): 0.019
	TH	1.00	10	1,600	0.019 *	N-S(2): 0.113 *
	LT	1.00	10	1,600	0.006	E-W(1): 0.487 *
Westbound	RT	1.00	10	1,600	0.006	E-W(2): 0.482
	TH	1.00	740	1,600	0.463	
	LT	1.00	10	1,600	0.006 *	V/C: 0.600
Northbound	RT	0.00	10	0	0.000	Lost Time: 0.100
	TH	1.00	10	1,600	0.013	ITS: 0.000
	LT	1.00	150	1,600	0.094 *	
Eastbound	RT	0.00	60	0	0.000	ICU: 0.700
	TH	1.00	710	1,600	0.481 *	
	LT	1.00	30	1,600	0.019	LOS: B
Date/Time: PM PEAK HOUR						
APPROACH	MVMT	LANES	VOLUME	CAPACITY	V/C	ICU ANALYSIS
Southbound	RT	0.00	50	0	0.000	N-S(1): 0.019
	TH	1.00	10	1,600	0.038 *	N-S(2): 0.076 *
	LT	1.00	10	1,600	0.006	E-W(1): 0.600 *
Westbound	RT	1.00	10	1,600	0.006	E-W(2): 0.513
	TH	1.00	800	1,600	0.500	
	LT	1.00	10	1,600	0.006 *	V/C: 0.676
Northbound	RT	0.00	10	0	0.000	Lost Time: 0.100
	TH	1.00	10	1,600	0.013	ITS: 0.000
	LT	1.00	60	1,600	0.038 *	
Eastbound	RT	0.00	180	0	0.000	ICU: 0.776
	TH	1.00	770	1,600	0.594 *	
	LT	1.00	20	1,600	0.013	LOS: C

* - Denotes critical movement

Project Title:		ANTELOPE VALLEY AREA PLAN				
Intersection:		5 Pearblossom Highway & Antelope Highway				
Description:		Existing Plus Project				
Date/Time:		AM PEAK HOUR				
Thru Lane:	1600 vph				N-S Split Phase :	N
Left Lane:	1600 vph				E-W Split Phase :	N
Double Lt Penalty:	10 %				Lost Time (% of cycle) :	10
ITS:	0 %				V/C Round Off (decs.) :	3
OLA Movements :						
FF Movements:						
APPROACH	MVMT	LANES	VOLUME	CAPACITY	V/C	ICU ANALYSIS
Southbound	RT	0.00	0	0	0.000	N-S(1): 0.006 *
	TH	0.00	0	0	0.000	N-S(2): 0.000
	LT	1.00	10	1,600	0.006 *	E-W(1): 0.456
Westbound	RT	0.00	10	0	0.000	E-W(2): 0.619 *
	TH	1.00	550	1,600	0.350 *	V/C: 0.625
	LT	0.00	0	0	0.000	Lost Time: 0.100
Northbound	RT	0.00	0	0	0.000	ITS: 0.000
	TH	0.00	0	0	0.000 *	ICU: 0.725
	LT	0.00	0	0	0.000	LOS: C
Eastbound	RT	0.00	0	0	0.000	
	TH	1.00	730	1,600	0.456	
	LT	1.00	430	1,600	0.269 *	
Date/Time:		PM PEAK HOUR				
APPROACH	MVMT	LANES	VOLUME	CAPACITY	V/C	ICU ANALYSIS
Southbound	RT	0.00	0	0	0.000	N-S(1): 0.006 *
	TH	0.00	0	0	0.000	N-S(2): 0.000
	LT	1.00	10	1,600	0.006 *	E-W(1): 0.419
Westbound	RT	0.00	10	0	0.000	E-W(2): 0.750 *
	TH	1.00	750	1,600	0.475 *	V/C: 0.756
	LT	0.00	0	0	0.000	Lost Time: 0.100
Northbound	RT	0.00	0	0	0.000	ITS: 0.000
	TH	0.00	0	0	0.000 *	ICU: 0.856
	LT	0.00	0	0	0.000	LOS: D
Eastbound	RT	0.00	0	0	0.000	
	TH	1.00	670	1,600	0.419	
	LT	1.00	440	1,600	0.275 *	

* - Denotes critical movement

Project Title:		ANTELOPE VALLEY AREA PLAN				
Intersection:		1 300th Street West & Lancaster Road				
Description:		2035 Baseline				
Date/Time:		AM PEAK HOUR				
Thru Lane:	1600 vph				N-S Split Phase :	N
Left Lane:	1600 vph				E-W Split Phase :	N
Double Lt Penalty:	10 %				Lost Time (% of cycle) :	10
ITS:	0 %				V/C Round Off (decs.) :	3
OLA Movements :						
FF Movements:						
APPROACH	MVMT	LANES	VOLUME	CAPACITY	V/C	ICU ANALYSIS
Southbound	RT	2.00	260	3,200	0.081	N-S(1): 0.100 * N-S(2): 0.087 E-W(1): 0.260 E-W(2): 0.387 *
	TH	1.00	10	1,600	0.006	
	LT	2.00	250	2,880	0.087 *	
Westbound	RT	1.00	100	1,600	0.063	V/C: 0.487 Lost Time: 0.100 ITS: 0.000
	TH	3.00	1,610	4,800	0.335 *	
	LT	1.00	10	1,600	0.006	
Northbound	RT	0.00	10	0	0.000	ICU: 0.587
	TH	1.00	10	1,600	0.013 *	
	LT	1.00	10	1,600	0.006	
Eastbound	RT	1.00	10	1,600	0.006	LOS: A
	TH	3.00	1,220	4,800	0.254	
	LT	2.00	150	2,880	0.052 *	
Date/Time:		PM PEAK HOUR				
APPROACH	MVMT	LANES	VOLUME	CAPACITY	V/C	ICU ANALYSIS
Southbound	RT	2.00	320	3,200	0.100 *	N-S(1): 0.082 N-S(2): 0.106 * E-W(1): 0.333 E-W(2): 0.467 *
	TH	1.00	10	1,600	0.006	
	LT	2.00	200	2,880	0.069	
Westbound	RT	1.00	200	1,600	0.125	V/C: 0.573 Lost Time: 0.100 ITS: 0.000
	TH	3.00	1,740	4,800	0.363 *	
	LT	1.00	10	1,600	0.006	
Northbound	RT	0.00	10	0	0.000	ICU: 0.673
	TH	1.00	10	1,600	0.013	
	LT	1.00	10	1,600	0.006 *	
Eastbound	RT	1.00	10	1,600	0.006	LOS: B
	TH	3.00	1,570	4,800	0.327	
	LT	2.00	300	2,880	0.104 *	

* - Denotes critical movement

Project Title: ANTELOPE VALLEY AREA PLAN Intersection: 2 60th Street West & Avenue D Description: 2035 Baseline						
Date/Time: AM PEAK HOUR						
Thru Lane:	1600 vph					N-S Split Phase : N
Left Lane:	1600 vph					E-W Split Phase : N
Double Lt Penalty:	10 %					Lost Time (% of cycle) : 10
ITS:	0 %					V/C Round Off (decs.) : 3
OLA Movements :						
FF Movements:						
APPROACH	MVMT	LANES	VOLUME	CAPACITY	V/C	ICU ANALYSIS
Southbound	RT	1.00	60	1,600	0.038	N-S(1): 0.081 * N-S(2): 0.066 E-W(1): 0.338 E-W(2): 0.560 *
	TH	1.00	50	1,600	0.031	
	LT	1.00	40	1,600	0.025 *	
Westbound	RT	1.00	20	1,600	0.013	V/C: 0.641 Lost Time: 0.100 ITS: 0.000
	TH	2.00	1,750	3,200	0.547 *	
	LT	1.00	0	1,600	0.000	
Northbound	RT	0.00	0	0	0.000	ICU: 0.741
	TH	1.00	90	1,600	0.056 *	
	LT	2.00	80	2,880	0.028	
Eastbound	RT	1.00	100	1,600	0.063	LOS: C
	TH	2.00	1,080	3,200	0.338	
	LT	1.00	20	1,600	0.013 *	
Date/Time: PM PEAK HOUR						
APPROACH	MVMT	LANES	VOLUME	CAPACITY	V/C	ICU ANALYSIS
Southbound	RT	1.00	50	1,600	0.031	N-S(1): 0.094 * N-S(2): 0.069 E-W(1): 0.441 E-W(2): 0.631 *
	TH	1.00	30	1,600	0.019	
	LT	1.00	20	1,600	0.013 *	
Westbound	RT	1.00	30	1,600	0.019	V/C: 0.725 Lost Time: 0.100 ITS: 0.000
	TH	2.00	1,940	3,200	0.606 *	
	LT	1.00	0	1,600	0.000	
Northbound	RT	0.00	0	0	0.000	ICU: 0.825
	TH	1.00	130	1,600	0.081 *	
	LT	2.00	110	2,880	0.038	
Eastbound	RT	1.00	80	1,600	0.050	LOS: D
	TH	2.00	1,410	3,200	0.441	
	LT	1.00	40	1,600	0.025 *	

* - Denotes critical movement

Project Title:		ANTELOPE VALLEY AREA PLAN				
Intersection:		3 Red Rover Mine Road & Sierra Highway				
Description:		2035 Baseline				
Date/Time:		AM PEAK HOUR				
Thru Lane:	1600 vph				N-S Split Phase :	N
Left Lane:	1600 vph				E-W Split Phase :	N
Double Lt Penalty:	10 %				Lost Time (% of cycle) :	10
ITS:	0 %				V/C Round Off (decs.) :	3
OLA Movements :						
FF Movements:						
APPROACH	MVMT	LANES	VOLUME	CAPACITY	V/C	ICU ANALYSIS
Southbound	RT	1.00	10	1,600	0.006	N-S(1): 0.019 * N-S(2): 0.019 * E-W(1): 0.019 * E-W(2): 0.019 *
	TH	1.00	10	1,600	0.013 *	
	LT	0.00	10	1,600	0.006 *	
Westbound	RT	0.00	10	0	0.000	V/C: 0.038 Lost Time: 0.100 ITS: 0.000
	TH	1.00	10	1,600	0.013 *	
	LT	1.00	10	1,600	0.006 *	
Northbound	RT	1.00	10	1,600	0.006	ICU: 0.138
	TH	1.00	10	1,600	0.013 *	
	LT	0.00	10	1,600	0.006 *	
Eastbound	RT	0.00	10	0	0.000	LOS: A
	TH	1.00	10	1,600	0.013 *	
	LT	1.00	10	1,600	0.006 *	
Date/Time:		PM PEAK HOUR				
APPROACH	MVMT	LANES	VOLUME	CAPACITY	V/C	ICU ANALYSIS
Southbound	RT	1.00	10	1,600	0.006	N-S(1): 0.019 * N-S(2): 0.019 * E-W(1): 0.019 * E-W(2): 0.019 *
	TH	1.00	10	1,600	0.013 *	
	LT	0.00	10	1,600	0.006 *	
Westbound	RT	0.00	10	0	0.000	V/C: 0.038 Lost Time: 0.100 ITS: 0.000
	TH	1.00	10	1,600	0.013 *	
	LT	1.00	10	1,600	0.006 *	
Northbound	RT	1.00	10	1,600	0.006	ICU: 0.138
	TH	1.00	10	1,600	0.013 *	
	LT	0.00	10	1,600	0.006 *	
Eastbound	RT	0.00	10	0	0.000	LOS: A
	TH	1.00	10	1,600	0.013 *	
	LT	1.00	10	1,600	0.006 *	

* - Denotes critical movement

Project Title: ANTELOPE VALLEY AREA PLAN Intersection: 4 82nd Street East & Pearblossom Highway Description: 2035 Baseline						
Date/Time: AM PEAK HOUR						
Thru Lane:	1600 vph					N-S Split Phase : N
Left Lane:	1600 vph					E-W Split Phase : N
Double Lt Penalty:	10 %					Lost Time (% of cycle) : 10
ITS:	0 %					V/C Round Off (decs.) : 3
OLA Movements :						
FF Movements:						
APPROACH	MVMT	LANES	VOLUME	CAPACITY	V/C	ICU ANALYSIS
Southbound	RT	0.00	10	0	0.000	N-S(1): 0.019 N-S(2): 0.088 * E-W(1): 0.331 * E-W(2): 0.325
	TH	1.00	10	1,600	0.013 *	
	LT	1.00	10	1,600	0.006	
Westbound	RT	1.00	10	1,600	0.006	V/C: 0.419 Lost Time: 0.100 ITS: 0.000
	TH	1.00	510	1,600	0.319	
	LT	1.00	10	1,600	0.006 *	
Northbound	RT	0.00	10	0	0.000	ICU: 0.519 LOS: A
	TH	1.00	10	1,600	0.013	
	LT	1.00	120	1,600	0.075 *	
Eastbound	RT	0.00	80	0	0.000	
	TH	1.00	440	1,600	0.325 *	
	LT	1.00	10	1,600	0.006	
Date/Time: PM PEAK HOUR						
APPROACH	MVMT	LANES	VOLUME	CAPACITY	V/C	ICU ANALYSIS
Southbound	RT	0.00	10	0	0.000	N-S(1): 0.019 N-S(2): 0.082 * E-W(1): 0.550 * E-W(2): 0.281
	TH	1.00	10	1,600	0.013 *	
	LT	1.00	10	1,600	0.006	
Westbound	RT	1.00	10	1,600	0.006	V/C: 0.632 Lost Time: 0.100 ITS: 0.000
	TH	1.00	440	1,600	0.275	
	LT	1.00	10	1,600	0.006 *	
Northbound	RT	0.00	10	0	0.000	ICU: 0.732 LOS: C
	TH	1.00	10	1,600	0.013	
	LT	1.00	110	1,600	0.069 *	
Eastbound	RT	0.00	120	0	0.000	
	TH	1.00	750	1,600	0.544 *	
	LT	1.00	10	1,600	0.006	

* - Denotes critical movement

Project Title:		ANTELOPE VALLEY AREA PLAN				
Intersection:		5 Pearblossom Highway & Antelope Highway				
Description:		2035 Baseline				
Date/Time:		AM PEAK HOUR				
Thru Lane:	1600 vph				N-S Split Phase :	N
Left Lane:	1600 vph				E-W Split Phase :	N
Double Lt Penalty:	10 %				Lost Time (% of cycle) :	10
ITS:	0 %				V/C Round Off (decs.) :	3
OLA Movements :						
FF Movements:						
APPROACH	MVMT	LANES	VOLUME	CAPACITY	V/C	ICU ANALYSIS
Southbound	RT	0.00	0	0	0.000	N-S(1): 0.006 *
	TH	0.00	0	0	0.000	N-S(2): 0.000
	LT	1.00	10	1,600	0.006 *	E-W(1): 0.231
Westbound	RT	0.00	10	0	0.000	E-W(2): 0.338 *
	TH	1.00	420	1,600	0.269 *	V/C: 0.344
	LT	0.00	0	0	0.000	Lost Time: 0.100
Northbound	RT	0.00	0	0	0.000	ITS: 0.000
	TH	0.00	0	0	0.000 *	ICU: 0.444
	LT	0.00	0	0	0.000	LOS: A
Eastbound	RT	0.00	0	0	0.000	
	TH	1.00	370	1,600	0.231	
	LT	1.00	110	1,600	0.069 *	
Date/Time:		PM PEAK HOUR				
APPROACH	MVMT	LANES	VOLUME	CAPACITY	V/C	ICU ANALYSIS
Southbound	RT	0.00	0	0	0.000	N-S(1): 0.006 *
	TH	0.00	0	0	0.000	N-S(2): 0.000
	LT	1.00	10	1,600	0.006 *	E-W(1): 0.363 *
Westbound	RT	0.00	10	0	0.000	E-W(2): 0.356
	TH	1.00	350	1,600	0.225	V/C: 0.369
	LT	0.00	0	0	0.000 *	Lost Time: 0.100
Northbound	RT	0.00	0	0	0.000	ITS: 0.000
	TH	0.00	0	0	0.000 *	ICU: 0.469
	LT	0.00	0	0	0.000	LOS: A
Eastbound	RT	0.00	0	0	0.000	
	TH	1.00	580	1,600	0.363 *	
	LT	1.00	210	1,600	0.131	

* - Denotes critical movement

Project Title: ANTELOPE VALLEY AREA PLAN Intersection: 1 300th Street West & Lancaster Road Description: 2035 Plus Project						
Date/Time: AM PEAK HOUR						
Thru Lane:	1600 vph					N-S Split Phase : N
Left Lane:	1600 vph					E-W Split Phase : N
Double Lt Penalty:	10 %					Lost Time (% of cycle) : 10
ITS:	0 %					V/C Round Off (decs.) : 3
OLA Movements :						
FF Movements:						
APPROACH	MVMT	LANES	VOLUME	CAPACITY	V/C	ICU ANALYSIS
Southbound	RT	2.00	730	3,200	0.228 *	N-S(1): 0.136
	TH	1.00	30	1,600	0.019	N-S(2): 0.253 *
	LT	2.00	320	2,880	0.111	E-W(1): 0.480
Westbound	RT	1.00	430	1,600	0.269	E-W(2): 0.732 *
	TH	3.00	2,780	4,800	0.579 *	
	LT	1.00	100	1,600	0.063	V/C: 0.985
Northbound	RT	0.00	30	0	0.000	Lost Time: 0.100
	TH	1.00	10	1,600	0.025	ITS: 0.000
	LT	1.00	40	1,600	0.025 *	
Eastbound	RT	1.00	100	1,600	0.063	ICU: 1.085
	TH	3.00	2,000	4,800	0.417	
	LT	2.00	440	2,880	0.153 *	LOS: F
Date/Time: PM PEAK HOUR						
APPROACH	MVMT	LANES	VOLUME	CAPACITY	V/C	ICU ANALYSIS
Southbound	RT	2.00	510	3,200	0.159 *	N-S(1): 0.187
	TH	1.00	10	1,600	0.006	N-S(2): 0.215 *
	LT	2.00	340	2,880	0.118	E-W(1): 0.529
Westbound	RT	1.00	360	1,600	0.225	E-W(2): 0.793 *
	TH	3.00	2,470	4,800	0.515 *	
	LT	1.00	50	1,600	0.031	V/C: 1.008
Northbound	RT	0.00	80	0	0.000	Lost Time: 0.100
	TH	1.00	30	1,600	0.069	ITS: 0.000
	LT	1.00	90	1,600	0.056 *	
Eastbound	RT	1.00	50	1,600	0.031	ICU: 1.108
	TH	3.00	2,390	4,800	0.498	
	LT	2.00	800	2,880	0.278 *	LOS: F

* - Denotes critical movement

Project Title: ANTELOPE VALLEY AREA PLAN Intersection: 2 60th Street West & Avenue D Description: 2035 Plus Project						
Date/Time: AM PEAK HOUR						
Thru Lane:	1600 vph					N-S Split Phase : N
Left Lane:	1600 vph					E-W Split Phase : N
Double Lt Penalty:	10 %					Lost Time (% of cycle) : 10
ITS:	0 %					V/C Round Off (decs.) : 3
OLA Movements :						
FF Movements:						
APPROACH	MVMT	LANES	VOLUME	CAPACITY	V/C	ICU ANALYSIS
Southbound	RT	1.00	170	1,600	0.106 *	N-S(1): 0.144
	TH	1.00	130	1,600	0.081	N-S(2): 0.196 *
	LT	1.00	150	1,600	0.094	E-W(1): 0.826
Westbound	RT	1.00	40	1,600	0.025	E-W(2): 1.007 *
	TH	2.00	3,100	3,200	0.969 *	V/C: 1.203
	LT	1.00	20	1,600	0.013	Lost Time: 0.100
Northbound	RT	0.00	20	0	0.000	ITS: 0.000
	TH	1.00	60	1,600	0.050	
	LT	2.00	260	2,880	0.090 *	ICU: 1.303
Eastbound	RT	1.00	60	1,600	0.038	
	TH	2.00	2,600	3,200	0.813	LOS: F
	LT	1.00	60	1,600	0.038 *	
Date/Time: PM PEAK HOUR						
APPROACH	MVMT	LANES	VOLUME	CAPACITY	V/C	ICU ANALYSIS
Southbound	RT	1.00	130	1,600	0.081 *	N-S(1): 0.137
	TH	1.00	90	1,600	0.056	N-S(2): 0.241 *
	LT	1.00	90	1,600	0.056	E-W(1): 0.860
Westbound	RT	1.00	110	1,600	0.069	E-W(2): 1.225 *
	TH	2.00	3,660	3,200	1.144 *	V/C: 1.466
	LT	1.00	20	1,600	0.013	Lost Time: 0.100
Northbound	RT	0.00	20	0	0.000	ITS: 0.000
	TH	1.00	110	1,600	0.081	
	LT	2.00	460	2,880	0.160 *	ICU: 1.566
Eastbound	RT	1.00	70	1,600	0.044	
	TH	2.00	2,710	3,200	0.847	LOS: F
	LT	1.00	130	1,600	0.081 *	

* - Denotes critical movement

Project Title:	ANTELOPE VALLEY AREA PLAN		
Intersection:	3 Red Rover Mine Road & Sierra Highway		
Description:	2035 Plus Project		
Date/Time:	AM PEAK HOUR		
Thru Lane:	1600 vph	N-S Split Phase :	N
Left Lane:	1600 vph	E-W Split Phase :	N
Double Lt Penalty:	10 %	Lost Time (% of cycle) :	10
ITS:	0 %	V/C Round Off (decs.) :	3
OLA Movements :			
FF Movements:			

APPROACH	MVMT	LANES	VOLUME	CAPACITY	V/C	ICU ANALYSIS
Southbound	RT	1.00	10	1,600	0.006	N-S(1): 0.212
	TH	1.00	10	1,600	0.013 *	N-S(2): 0.213 *
	LT	0.00	10	1,600	0.006	E-W(1): 0.019
Westbound	RT	0.00	10	0	0.000	E-W(2): 0.025 *
	TH	1.00	20	1,600	0.019 *	V/C: 0.238
	LT	1.00	10	1,600	0.006	Lost Time: 0.100
Northbound	RT	1.00	10	1,600	0.006	ITS: 0.000
	TH	1.00	10	1,600	0.206	
	LT	0.00	320	1,600	0.200 *	ICU: 0.338
Eastbound	RT	0.00	10	0	0.000	LOS: A
	TH	1.00	10	1,600	0.013	
	LT	1.00	10	1,600	0.006 *	

Date/Time:	PM PEAK HOUR		
-------------------	---------------------	--	--

APPROACH	MVMT	LANES	VOLUME	CAPACITY	V/C	ICU ANALYSIS
Southbound	RT	1.00	10	1,600	0.006	N-S(1): 0.169 *
	TH	1.00	10	1,600	0.013 *	N-S(2): 0.169 *
	LT	0.00	10	1,600	0.006 *	E-W(1): 0.056 *
Westbound	RT	0.00	10	0	0.000	E-W(2): 0.019
	TH	1.00	10	1,600	0.013	V/C: 0.225
	LT	1.00	10	1,600	0.006 *	Lost Time: 0.100
Northbound	RT	1.00	10	1,600	0.006	ITS: 0.000
	TH	1.00	10	1,600	0.163 *	
	LT	0.00	250	1,600	0.156 *	ICU: 0.325
Eastbound	RT	0.00	20	0	0.000	LOS: A
	TH	1.00	60	1,600	0.050 *	
	LT	1.00	10	1,600	0.006	

* - Denotes critical movement

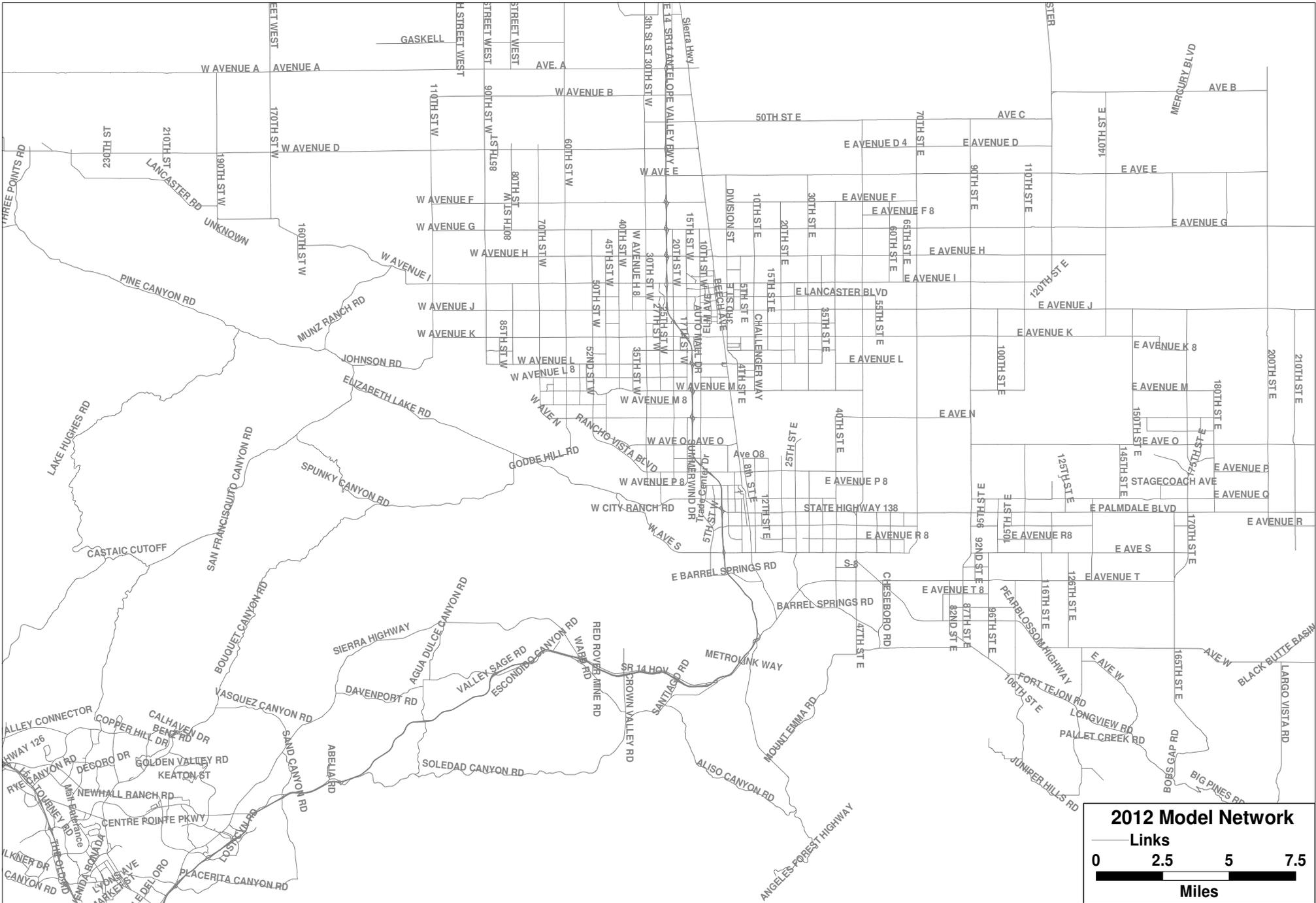
Project Title:		ANTELOPE VALLEY AREA PLAN				
Intersection:		4 82nd Street East & Pearblossom Highway				
Description:		2035 Plus Project				
Date/Time:		AM PEAK HOUR				
Thru Lane:	1600 vph				N-S Split Phase :	N
Left Lane:	1600 vph				E-W Split Phase :	N
Double Lt Penalty:	10 %				Lost Time (% of cycle) :	10
ITS:	0 %				V/C Round Off (decs.) :	3
OLA Movements :						
FF Movements:						
APPROACH	MVMT	LANES	VOLUME	CAPACITY	V/C	ICU ANALYSIS
Southbound	RT	0.00	10	0	0.000	N-S(1): 0.019
	TH	1.00	10	1,600	0.013 *	N-S(2): 0.276 *
	LT	1.00	10	1,600	0.006	E-W(1): 0.737
Westbound	RT	1.00	10	1,600	0.006	E-W(2): 0.812 *
	TH	1.00	1,290	1,600	0.806 *	V/C: 1.088
	LT	1.00	10	1,600	0.006	Lost Time: 0.100
Northbound	RT	0.00	10	0	0.000	ITS: 0.000
	TH	1.00	10	1,600	0.013	ICU: 1.188
	LT	1.00	420	1,600	0.263 *	LOS: F
Eastbound	RT	0.00	260	0	0.000	
	TH	1.00	910	1,600	0.731	
	LT	1.00	10	1,600	0.006 *	
Date/Time:		PM PEAK HOUR				
APPROACH	MVMT	LANES	VOLUME	CAPACITY	V/C	ICU ANALYSIS
Southbound	RT	0.00	10	0	0.000	N-S(1): 0.019
	TH	1.00	10	1,600	0.013 *	N-S(2): 0.276 *
	LT	1.00	10	1,600	0.006	E-W(1): 1.175 *
Westbound	RT	1.00	10	1,600	0.006	E-W(2): 0.644
	TH	1.00	1,020	1,600	0.638	V/C: 1.451
	LT	1.00	10	1,600	0.006 *	Lost Time: 0.100
Northbound	RT	0.00	10	0	0.000	ITS: 0.000
	TH	1.00	10	1,600	0.013	ICU: 1.551
	LT	1.00	420	1,600	0.263 *	LOS: F
Eastbound	RT	0.00	430	0	0.000	
	TH	1.00	1,440	1,600	1.169 *	
	LT	1.00	10	1,600	0.006	

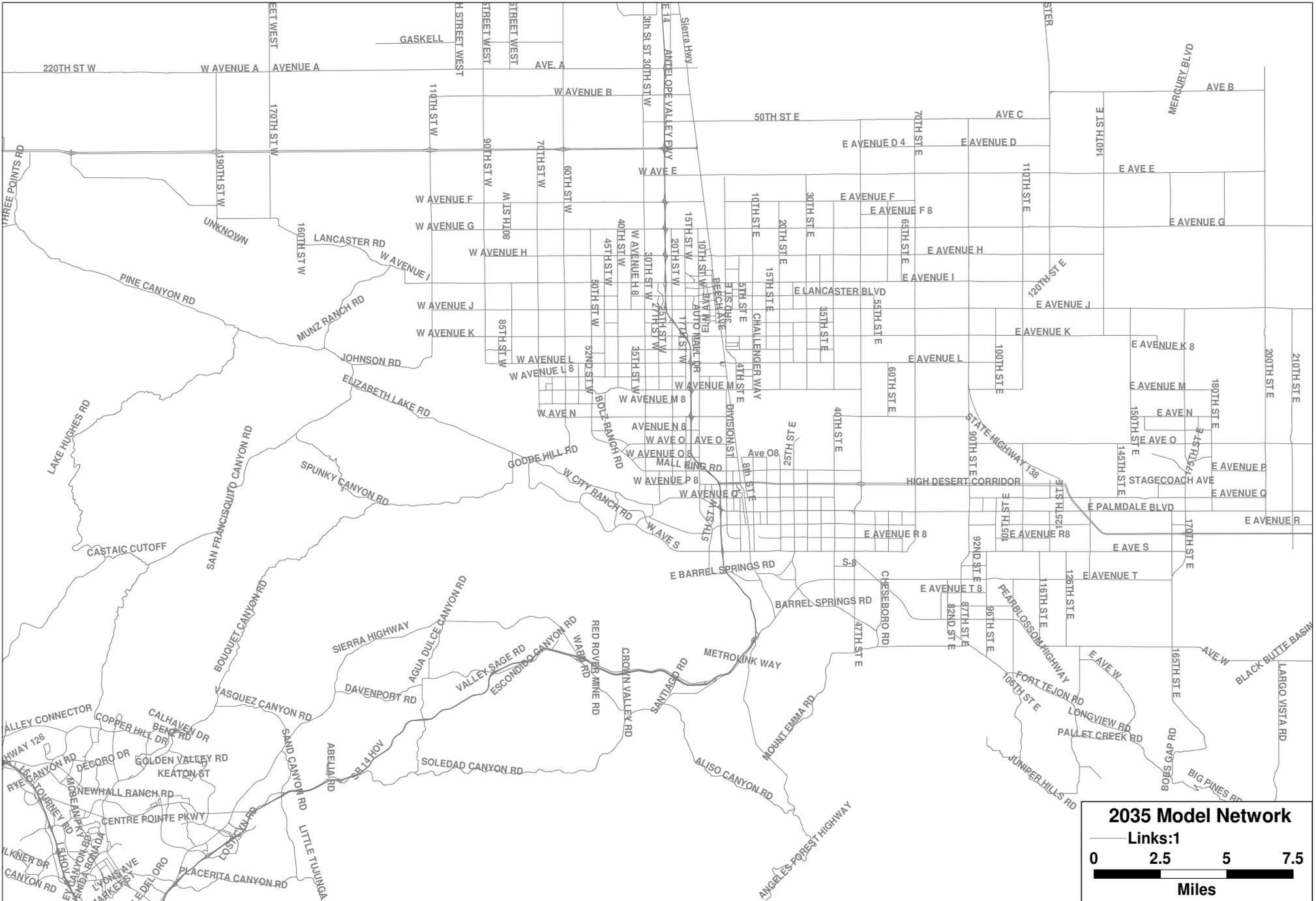
* - Denotes critical movement

Project Title:		ANTELOPE VALLEY AREA PLAN				
Intersection:		5 Pearblossom Highway & Antelope Highway				
Description:		2035 Plus Project				
Date/Time:		AM PEAK HOUR				
Thru Lane:	1600 vph				N-S Split Phase :	N
Left Lane:	1600 vph				E-W Split Phase :	N
Double Lt Penalty:	10 %				Lost Time (% of cycle) :	10
ITS:	0 %				V/C Round Off (decs.) :	3
OLA Movements :						
FF Movements:						
APPROACH	MVMT	LANES	VOLUME	CAPACITY	V/C	ICU ANALYSIS
Southbound	RT	0.00	0	0	0.000	N-S(1): 0.006 *
	TH	0.00	0	0	0.000	N-S(2): 0.000
	LT	1.00	10	1,600	0.006 *	E-W(1): 0.400
Westbound	RT	0.00	10	0	0.000	E-W(2): 0.544 *
	TH	1.00	510	1,600	0.325 *	V/C: 0.550
	LT	0.00	0	0	0.000	Lost Time: 0.100
Northbound	RT	0.00	0	0	0.000	ITS: 0.000
	TH	0.00	0	0	0.000 *	ICU: 0.650
	LT	0.00	0	0	0.000	LOS: B
Eastbound	RT	0.00	0	0	0.000	
	TH	1.00	640	1,600	0.400	
	LT	1.00	350	1,600	0.219 *	
Date/Time:		PM PEAK HOUR				
APPROACH	MVMT	LANES	VOLUME	CAPACITY	V/C	ICU ANALYSIS
Southbound	RT	0.00	0	0	0.000	N-S(1): 0.006 *
	TH	0.00	0	0	0.000	N-S(2): 0.000
	LT	1.00	10	1,600	0.006 *	E-W(1): 0.394
Westbound	RT	0.00	10	0	0.000	E-W(2): 0.594 *
	TH	1.00	630	1,600	0.400 *	V/C: 0.600
	LT	0.00	0	0	0.000	Lost Time: 0.100
Northbound	RT	0.00	0	0	0.000	ITS: 0.000
	TH	0.00	0	0	0.000 *	ICU: 0.700
	LT	0.00	0	0	0.000	LOS: B
Eastbound	RT	0.00	0	0	0.000	
	TH	1.00	630	1,600	0.394	
	LT	1.00	310	1,600	0.194 *	

* - Denotes critical movement

Appendix B: Sub-Area Model Transportation Network





Appendix C: Roadway Segment Analysis Scenarios

Study Location	Location	To	From	Functional Class	Potential Number of Lanes	Potential Roadway Capacity	Existing Conditions				Existing Plus Project Conditions						2035 Baseline Conditions						2035 Plus Project Conditions					
							Lanes	Speed	Volume	V/C	Lanes	Speed	Volume	Change	Percent Change	V/C	Lanes	Speed	Volume	Change	Percent Change	V/C	Lanes	Speed Limit	Volume	Change	Percent Change	V/C
1	100th St E	Avenue J	Avenue J-8	Limited Secondary Highway	2	18,000	2	55	500	0.03	2	55	800	300	60%	0.04	2	55	500	0	0%	0.03	2	55	600	100	20%	0.03
2	100th St E	Lancaster City Line	Avenue L	Limited Secondary Highway	2	18,000	2	55	500	0.03	2	55	500	0	0%	0.03	2	55	500	0	0%	0.03	2	55	2,300	1,800	360%	0.13
3	100th St W	Lancaster Blvd	Avenue J	Major Highway	6	54,000	2	35	500	0.03	2	35	500	0	0%	0.03	2	35	500	0	0%	0.03	2	35	500	0	0%	0.03
4	100th St W	Avenue D	Avenue D-8	Limited Secondary Highway	2	18,000	2	35	500	0.03	2	35	4,000	3,500	700%	0.22	2	35	1,300	800	160%	0.07	2	35	7,700	7,200	1440%	0.43
5	100th St W	Avenue E	Avenue F	Limited Secondary Highway	2	18,000	2	35	500	0.03	2	35	1,800	1,300	260%	0.10	2	35	1,800	1,300	260%	0.10	2	35	8,400	7,900	1580%	0.47
6	10th St W	Palmdale City Line	Avenue O	Secondary Highway	4	36,000	4	60	14,500	0.40	4	60	19,000	4,500	31%	0.53	4	60	14,000	-500	-3%	0.39	4	60	22,100	7,600	52%	0.61
7	10th St W	Auto Center Dr	Elizabeth Lake Rd	Secondary Highway	4	36,000	5	55	14,500	0.32	5	55	17,400	2,900	20%	0.39	5	55	16,500	2,000	14%	0.37	5	55	19,500	5,000	34%	0.43
8	110th St W	Johnson Rd	Avenue M	Local / Collector	2	15,000	2		< 10,000	*	2		< 10,000			*		< 10,000			*	2		< 10,000			*	
9	120th St E	Avenue L	Avenue Q	Expressway	4	44,000	2	55	5,200	0.24	2	55	18,000	12,800	246%	0.82	4	55	3,200	-2,000	-38%	0.07	4	55	10,600	5,400	104%	0.24
10	170th Street E	Avenue T	Avenue W	Secondary Highway	4	36,000	2	40	3,500	0.19	2	40	15,200	11,700	334%	0.84	2	40	3,700	200	6%	0.21	2	40	9,800	6,300	180%	0.54
11	170th Street E	Avenue W	165th Street	Secondary Highway	4	36,000	2	40	1,000	0.06	2	40	8,900	7,900	790%	0.49	2	40	700	-300	-30%	0.04	2	40	5,300	4,300	430%	0.29
12	200th Street E	Avenue G	Avenue J	Secondary Highway	4	36,000	2	45	1,000	0.06	2	45	6,700	5,700	570%	0.37	2	45	700	-300	-30%	0.04	2	45	5,100	4,100	410%	0.28
13	25th St W	Avenue O	Palmdale City Line	Secondary Highway	4	36,000	4	50	6,100	0.17	4	50	6,100	0	0%	0.17	4	50	9,600	3,500	57%	0.27	4	50	10,300	4,200	69%	0.29
14	35th St W	Avenue N	Avenue N-8	Local / Collector	2	15,000	2		< 10,000	*	2		< 10,000			*		< 10,000			*	2		< 10,000			*	
15	40th St W	Avenue N	Avenue N-8	Local / Collector	2	15,000	2		< 10,000	*	2		< 10,000			*		< 10,000			*	2		< 10,000			*	
16	50th St E	Avenue K-4	Avenue L	Expressway	4	44,000	2	55	2,200	0.10	2	55	7,400	5,200	236%	0.34	2	55	1,700	-500	-23%	0.08	2	55	7,100	4,900	223%	0.32
17	70th St E	Lancaster City Line	Avenue K-8	Major Highway	6	54,000	2	55	500	0.03	2	55	2,200	1,700	340%	0.12	2	55	500	0	0%	0.03	2	55	1,200	700	140%	0.07
18	70th St E	Avenue K-12	Avenue L	Major Highway	6	54,000	2	55	500	0.03	2	55	2,200	1,700	340%	0.12	2	55	500	0	0%	0.03	2	55	1,400	900	180%	0.08
19	80th St W	Lancaster City Line	Lancaster City Line	Major Highway	6	54,000	2	55	1,700	0.09	2	55	7,300	5,600	329%	0.41	2	55	2,100	400	24%	0.12	2	55	5,800	4,100	241%	0.32
20	87th St W	Ritter Ranch Rd	Elizabeth Lake Rd	Local / Collector	2	15,000	2		< 10,000	*	2		< 10,000			*		< 10,000			*	2		< 10,000			*	
21	Agua Dulce Canyon Road	Soledad Canyon Road	Sierra Highway	Limited Secondary Highway	2	18,000	2	40	7,800	0.43	2	40	8,400	600	8%	0.47	2	40	7,600	-200	-3%	0.42	2	40	8,300	500	6%	0.46
22	Amargosa Creek Rd	Portal Pass Rd	Johnson Rd	Local / Collector	2	15,000	2		< 10,000	*	2		< 10,000			*		< 10,000			*	2		< 10,000			*	
23	Avenue E	110th St W	Lancaster City Line	Major Highway	6	54,000	2	40	500	0.03	2	40	600	100	20%	0.03	2	40	500	0	0%	0.03	2	40	1,600	1,100	220%	0.09
24	Avenue E	100th St W	70th St W	Limited Secondary Highway	2	18,000	2	40	1,800	0.10	2	40	11,800	10,000	556%	0.66	2	40	2,900	1,100	61%	0.16	2	40	14,300	12,500	694%	0.79
25	Avenue F	110th St W	Lancaster City Line	Major Highway	6	54,000	2	40	500	0.03	2	40	600	100	20%	0.03	2	40	500	0	0%	0.03	2	40	1,600	1,100	220%	0.09
26	Avenue F	Lancaster City Line	95th St W	Major Highway	6	54,000	2	40	600	0.03	2	40	3,000	2,400	400%	0.17	2	40	700	100	17%	0.04	2	40	3,700	3,100	517%	0.21
27	Avenue F	95th St W	70th St W	Limited Secondary Highway	2	18,000	2	40	1,800	0.10	2	40	11,800	10,000	556%	0.66	2	40	2,900	1,100	61%	0.16	2	40	14,300	12,500	694%	0.79
28	Avenue G	25th St W	Division St	Expressway	4	44,000	2	55	5,200	0.24	2	55	19,000	13,800	265%	0.86	2	55	5,300	100	2%	0.24	2	55	18,700	13,500	260%	0.85
29	Avenue G	SR-14 Antelope Valley Freeway	15th Street W	Expressway	4	44,000	2	55	4,400	0.20	2	55	14,900	10,500	239%	0.68	2	55	2,600	-1,800	-41%	0.12	2	55	15,200	10,800	245%	0.69
30	Avenue G	15th Street W	10th Street W	Expressway	4	44,000	2	55	4,500	0.20	2	55	15,500	11,000	244%	0.70	2	55	2,600	-1,900	-42%	0.12	2	55	15,600	11,100	247%	0.71
31	Avenue G	10th Street W	Sierra Highway	Expressway	4	44,000	2	55	5,200	0.24	2	55	19,000	13,800	265%	0.86	2	55	3,200	-2,000	-38%	0.15	2	55	18,700	13,500	260%	0.85
32	Avenue G	Sierra Highway	Division Street	Expressway	4	44,000	2	55	4,700	0.21	2	55	11,900	7,200	153%	0.54	2	55	5,300	600	13%	0.24	2	55	13,500	8,800	187%	0.61
33	Avenue H	110th St W	70th St W	Major Highway	6	54,000	2	45	500	0.03	2	45	4,900	4,400	880%	0.27	2	45	500	0	0%	0.03	2	45	4,400	3,900	780%	0.24
34	Avenue H	Division St	40th St E	Expressway	4	44,000	2	55	9,000	0.41	2	55	17,000	8,000	89%	0.77	2	55	7,900	-1,100	-12%	0.36	2	55	16,400	7,400	82%	0.75
35	Avenue J	90th Street E	100th Street E	Major Highway	6	54,000	2	40	500	0.03	2	40	3,200	2,700	540%	0.18	2	40	600	100	20%	0.03	2	40	2,000	1,500	300%	0.11
36	Avenue J	100th Street E	110th Street E	Major Highway	6	54,000	2	40	500	0.03	2	40	3,600	3,100	620%	0.20	2	40	500	0	0%	0.03	2	40	1,300	800	160%	0.07
37	Avenue J	110th Street E	140th Street E	Major Highway	6	54,000	2	40	500	0.03	2	40	3,700	3,200	640%	0.21	2	40	500	0	0%	0.03	2	40	1,000	500	100%	0.06
38	Avenue J	140th Street E	150th Street E	Major Highway	6	54,000	2	40	500	0.03	2	40	5,400	4,900	980%	0.30	2	40	500	0	0%	0.03	2	40	1,500	1,000	200%	0.08
39	Avenue J	150th Street E	170th Street E	Major Highway	6	54,000	2	40	500	0.03	2	40	4,800	4,300	860%	0.27	2	40	500	0	0%	0.03	2	40	1,800	1,300	260%	0.10
40	Avenue J	170th Street E	200th Street E	Major Highway	6	54,000	2	40	500	0.03	2	40	5,300	4,800	960%	0.29	2	40	500	0	0%	0.03	2	40	3,300	2,800	560%	0.18
41	Avenue K-8	52nd St W	50th St W	Secondary Highway	2	18,000	2	40	600	0.03	2	40	900	300	50%	0.05	2	40	600	0	0%	0.03	2	40	800	200	33%	0.04
42	Avenue L	40th St E	45th St E	Expressway	4	44,000	2	55	500	0.02	2	55	500	0	0%	0.02	4	55	8,200	7,700	1540%	0.19	4	55	12,000	11,500	2300%	0.27
43	Avenue L	50th St E	80th St E	Expressway	4	44,000	2	55	500	0.02	2	55	500	0	0%	0.02	4	55	8,700	8,200	1640%	0.20	4	55	16,900	16,400	3280%	0.38
44	Avenue L	90th St E	120th St E	Expressway	4	44,000	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	4	55	500			0.01	4	55	2,400			0.05
45	Avenue L	55th St W	40th St W	Expressway	4	44,000	2	40	19,000	0.86	2	40	21,300	2,300	12%	0.97	4	40	20,100	1,100	6%	0.46	4	40	23,000	4,000	21%	0.52
46	Avenue L-8	10th St W	SR 14	Secondary Highway	4	36,000	4	40	4,300	0.12	4	40	4,300	0	0%	0.12	4	40	4,700	400	9%	0.13	4	40	4,800	500	12%	0.13
47	Avenue L-8	SR 14	30th St W	Secondary Highway	4	36,000	2	35	600	0.03	2	35	600	0	0%	0.03	2	35	500	-100	-17%	0.03	2	35	500	-100	-17%	0.03
48	Avenue L-8	60th St W	80th St W	Secondary Highway	4	36,000	4	40	3,900	0.11	4	40	4,000	100	3%	0.11	4	40	4,000	100	3%	0.11	4	40	4,300	400	10%	0.12
49	Avenue M	Elizabeth Lake Rd	80th St W	Local / Collector	2	15,000	2		< 10,000	*	2		< 10,000			*	2		< 10,000			*	2		< 10,000			*
50	Avenue N-8	45th St W	30th St W	Local / Collector	2	15,000	2		< 10,000	*	2		< 10,000			*	2		< 10,000			*	2		< 10,000			*
51	Avenue N-8	20th St W	Palmdale City Line	Local / Collector	2	15,000	2		< 10,000	*	2		< 10,000			*	2		< 10,000			*	2		< 10,000			*
52	Avenue O	145th Street E	150th Street E	Major Highway	6	54,000	2	55	6,600	0.37	2	55	13,200	6,600	100%	0.73	2	55	5,200	-1,400	-21%	0.29	2	55	11,700	5,100	77%	0.65
53	Avenue O	150th Street E																										

Study Location	Location	To	From	Functional Class	Potential Number of Lanes	Potential Roadway Capacity	Existing Conditions				Existing Plus Project Conditions					2035 Baseline Conditions					2035 Plus Project Conditions							
							Lanes	Speed	Volume	V/C	Lanes	Speed	Volume	Change	Percent Change	V/C	Lanes	Speed	Volume	Change	Percent Change	V/C	Lanes	Speed Limit	Volume	Change	Percent Change	V/C
85	Lancaster Road	70th Street W	60th Street W	Expressway	4	44,000	2	40	800	0.04	2	40	7,000	6,200	775%	0.32	2	40	1,100	300	38%	0.05	2	40	4,100	3,300	413%	0.19
86	Palmdale Boulevard	90th Street E	95th Street E	Major Highway	6	54,000	2	55	11,700	0.65	2	55	17,500	5,800	50%	0.97	2	55	7,400	-4,300	-37%	0.41	2	55	13,400	1,700	15%	0.74
87	Palmdale Boulevard	95th Street E	100th Street E	Major Highway	6	54,000	2	55	11,900	0.66	2	55	18,000	6,100	51%	1.00	2	55	7,600	-4,300	-36%	0.42	2	55	15,300	3,400	29%	0.85
88	Palmdale Boulevard	100th Street E	105th Street E	Major Highway	6	54,000	2	55	11,300	0.63	2	55	16,900	5,600	50%	0.94	2	55	7,200	-4,100	-36%	0.40	2	55	14,400	3,100	27%	0.80
89	Palmdale Boulevard	105th Street E	110 Street E	Major Highway	6	54,000	2	55	11,000	0.61	2	55	16,900	5,900	54%	0.94	2	55	6,700	-4,300	-39%	0.37	2	55	14,300	3,300	30%	0.79
90	Pearblossom Highway (SR-138)	70th Street E	Avenue T 8	Major Highway	6	54,000	4	45	18,400	0.51	4	45	25,900	7,500	41%	0.72	6	55	15,200	-3,200	-17%	0.28	6	55	33,900	15,500	84%	0.63
91	Pearblossom Highway (SR-138)	Avenue T 8	82nd Street E	Major Highway	6	54,000	2	40	17,600	0.98	2	40	23,800	6,200	35%	1.32	6	55	14,000	-3,600	-20%	0.26	6	55	33,900	16,300	93%	0.63
92	Pearblossom Highway (SR-138)	82nd Street E	87th Street E	Major Highway	6	54,000	2	40	13,500	0.75	2	40	19,600	6,100	45%	1.09	6	55	11,700	-1,800	-13%	0.22	6	55	24,800	11,300	84%	0.46
93	Pearblossom Highway (SR-138)	87th Street E	96th Street E	Major Highway	6	54,000	2	55	16,000	0.89	2	55	21,800	5,800	36%	1.21	6	55	11,800	-4,200	-26%	0.22	6	55	26,700	10,700	67%	0.49
94	Pearblossom Highway (SR-138)	96th Street E	106th Street E	Major Highway	6	54,000	4	55	17,900	0.50	4	55	31,800	13,900	78%	0.88	6	55	12,300	-5,600	-31%	0.23	6	55	30,600	12,700	71%	0.57
95	Pearblossom Highway (SR-138)	106th Street E	116th Street E	Major Highway	6	54,000	4	55	17,800	0.49	4	55	23,100	5,300	30%	0.64	6	55	12,500	-5,300	-30%	0.23	6	55	27,000	9,200	52%	0.50
96	Pearblossom Highway (SR-138)	116th Street E	126th Street E	Major Highway	6	54,000	2	55	17,700	0.98	2	55	22,900	5,200	29%	1.27	4	55	12,500	-5,200	-29%	0.35	4	55	26,800	9,100	51%	0.74
97	Pearblossom Highway (SR-138)	126th Street E	131st Street E	Major Highway	6	54,000	2	50	18,600	1.03	2	50	27,400	8,800	47%	1.52	4	50	13,000	-5,600	-30%	0.36	4	50	31,400	12,800	69%	0.87
98	Pearblossom Highway (SR-138)	131 Street E	170th Street E	Major Highway	6	54,000	4	45	17,700	0.49	4	45	21,300	3,600	20%	0.59	4	45	11,600	-6,100	-34%	0.32	4	45	21,100	3,400	19%	0.59
99	Portal Pass Rd	Elizabeth Lake Rd	Ritter Ranch Rd	Local / Collector	2	15,000	2		< 10,000	*	2		< 10,000			*	2		< 10,000			*	2		< 10,000			*
100	Ritter Ranch Rd	Portal Pass Rd	Bouquet Canyon Rd	Local / Collector	2	15,000	2		< 10,000	*	2		< 10,000			*	2		< 10,000			*	2		< 10,000			*
101	San Fransisquito Canyon Rd	Angeles National Forest Boundary	Elizabeth Lake Rd	Secondary Highway	4	36,000	2	40	1,600	0.09	2	40	7,700	6,100	381%	0.43	2	40	1,700	100	6%	0.09	2	40	4,200	2,600	163%	0.23