

Appendix V-C
**ADDENDUM TO THE
TRAFFIC IMPACT ANALYSIS**

Appendix V-C-A
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TRAFFIC IMPACT ANALYSIS REPORT
FOR THE LYTLE CREEK RANCH
PLANNED DEVELOPMENT PROJECT
Impacts to Existing Roadway Network
Crain & Associates
January 2012**

**ADDENDUM TO THE
TRAFFIC IMPACT ANALYSIS REPORT
FOR THE LYTLE CREEK RANCH
PLANNED DEVELOPMENT PROJECT
IMPACTS TO EXISTING ROADWAY NETWORK**

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January 2012

INTRODUCTION

This is an addendum to the traffic study that Crain & Associates prepared for the Lytle Creek Ranch project and which was incorporated into the Environmental Impact Report (EIR) for the project. After the EIR's certification, various petitioners filed a lawsuit pursuant to the California Environmental Quality Act (CEQA), challenging the EIR and the City's compliance with CEQA. (*Endangered Habitats League, Inc., et al. v. City of Rialto, et al.*, San Bernardino County Superior Court Case No. CIV DS1011874.) On September 30, 2011, the Court ruled that the City did not comply with CEQA in approving the project, and ordered that various portions of the EIR be revised and recirculated (the Court Ruling). This addendum has been prepared in accordance with the Court Ruling, in particular pages 26 to 31 thereof, in which the Court determined that the EIR did not compare existing physical conditions without the project to conditions expected to be produced by the project, as required by *Sunnyvale West Neighborhood Association v. City of Sunnyvale City Council* (2010) 190 Cal.App.4th 1351 ("Sunnyvale").

EXISTING WITH PROJECT CONDITIONS

In conformance with the recent “Sunnyvale” case, Crain & Associates has analyzed the “Existing” and “Existing Plus Project” scenarios for the Lytle Creek Ranch project. The “Sunnyvale” analysis assumes no roadway improvements (except for improvements already completed in 2011) and no traffic volume increases from the original study base year (except for project trips). The results of the “Sunnyvale” analysis show the traffic impacts which would result from the project under these assumptions.

Surface Streets

The project’s August 2007 traffic study (the Traffic Study) analyzed existing traffic conditions at 75 study intersections for existing year (2007). In February 2008, land use revisions were made to the project (a net change from single-family detached homes to multi-family attached homes of 558 residential dwelling units, a net decrease of approximately 15 acres of park use, and a net increase of approximately 9 acres of golf course use), so the Traffic Study was reviewed to make certain it reflected the revised project. The February 2008 study review, which is included in Appendix A, shows that the revised project would have lower trip generation, and therefore less traffic impacts, for both the AM and PM peak hours. To be conservative, however, the “Sunnyvale” analysis assumes the higher trip generation in the Traffic Study.

All counts and field observations in the Traffic Study were performed in the first three months of 2007. Figures 3(a) and 3(b) of the Traffic Study show the Existing (2007) traffic volumes for the AM and PM peak hours, respectively. These traffic volumes are the "baseline" volumes against which the project traffic volumes are analyzed in this “Sunnyvale” analysis. The Figures showing the Volumes are included in Appendix B.

During the data collection period for the Traffic Study, several important roadway routes were not yet available (i.e., not fully constructed) to vehicular traffic in this portion of San Bernardino County. The most important of these include freeway improvements that provided a gap closure between the State Route 210 (SR-210) and State Route 30 (SR-30) freeways, and Glen Helen Parkway extension from the SR-210 ramp connections to Lytle Creek Road. As also noted in the Traffic Study, however, the SR-210/SR-30 gap closure was under construction when the traffic count data was collected in the first three months of 2007. Thus, the traffic analysis for the existing conditions reflects traffic conditions before the completion of the SR-210/SR-30 freeway gap closure project.

This “Sunnyvale” analysis utilizes the same traffic analysis methodology used in the Traffic Study. Traffic volumes generated by the proposed development of the 2,447-acre master planned mixed-use community were assigned to the roadway network using a computerized transportation model which models (replicates) travel demand and traffic volumes. As recommended by the SanBAG staff, the East Valley Transportation Model (EVTM), which was developed by the City of San Bernardino, was used for the Traffic Study.

The EVTm began as the Southern California Association of Governments’ (SCAG) regional transportation model, and then was developed with greater detail in the San Bernardino area, including the study area. The greater detailing was accomplished through the addition of roadway network links and land-use zones in order to better replicate area traffic patterns. To further improve the model's accuracy for the study area, the study team provided the City of San Bernardino staff with the specific details for the Lytle Creek Ranch site. The model included the project details by using site specific land-use and network data added to the EVTm. The model was modified for

the Traffic Study analysis to forecast the development scenario for project build-out under 2007 conditions.

The “Sunnyvale” analysis provides the additional results and conclusions based on forecasts for the With and Without Project scenarios under existing (2007) conditions. A model was prepared which assumes only the routes that existed when the counts were conducted during the first three months of 2007. Specifically, the City of San Bernardino staff ran the EVTm twice with the model modified to incorporate site specific data – once to produce the “Study Year 2007 Without Project” traffic volumes, and once to produce the “Study Year 2007 Plus Project” traffic volumes with the project added. As part of the With Project model run, the volumes of the project trips were determined based on a process known as a select zone analysis.

The EVTm produced existing (2007) year forecasted traffic volumes on the street segments surrounding the project site. Turning movement traffic volumes at study intersections were determined using post-processing model procedures developed under the direction of SanBAG for analyzing the EVTm results. The post-processing procedures are included in a program named B-Turns which is a pivot point model. The B-turns procedure estimates future turning movement volumes at an intersection based on existing turning movement volumes (determined by intersection turning movement counts) and future street segment volumes (i.e., link volumes from the EVTm).

SanBAG authorized the use of the B-turns post processing, and provided the version of the B-Turns program used for the EVTm. The same B-turns program used in the Traffic Study was applied to the results of the added model runs for the Sunnyvale analysis.

The project volumes were then added to the Existing (2007) count volumes to form the “Existing (2007) Plus Project” intersection volumes. The resulting totals are depicted on Figures 1(a) and 1(b). These volumes were utilized in order to determine the traffic impacts that are directly attributable to the proposed project.

The Existing (2007) Plus Project volumes were then analyzed using the same Critical Movement Analysis (CMA) procedures used in the Traffic Study. Also, this analysis assumed the same lane configurations as the existing conditions analysis in the Traffic Study (except for the addition of the roadways within the project site). Table 1 presents the results of the CMA analysis of the Existing (2007) Conditions, taken from the Traffic Study, and “Existing (2007) Plus Project” conditions, based on the added analysis.

Under CEQA, each local jurisdiction must determine which traffic (and other environmental) impacts it considers “significant.” The City of Rialto General Plan states that intersection operations at Levels of Service (LOS) D or better during the peak hour are generally acceptable. Therefore, any intersection operating at LOS E or F will be considered deficient. A traffic impact is considered significant if the project both (1) contributes measurable traffic to and (2) substantially and adversely changes the LOS to any location projected to experience deficient operations under existing conditions. For this addendum, a significant project traffic impact is defined to be those locations (intersections or roadway segments) where the project would contribute 50 or more peak hour trips at a location and where project traffic would cause conditions to degrade below the General Plan goal of LOS D. The project traffic contributions and the conditions for each peak hour at each location are analyzed separately, but the results are combined. Pursuant to standard City of Rialto significance criteria, which are consistent with the San Bernardino County Congestion Management Plan (CMP), an impact is considered significant for the location if the individual impact for either and/or both peak hours is found to be significant.

As shown in Table 1, under Existing (2007) Plus Project conditions, 16 study intersections are significantly impacted by the project during either one or both peak hours when no roadway improvements or cumulative traffic growth are assumed. Of these 16 intersections, 10 of them were identified in the Traffic Study as being

significantly impacted by project traffic under Future (2030) conditions. The remaining 6 intersections were not identified in the Traffic Study as being significantly impacted by project traffic under Future (2030) conditions.

**Table 1
LOS Summary
Existing (2007) Plus Project Traffic Conditions**

<u>No.</u>	<u>Intersection</u>	<u>Peak Hour</u>	<u>Existing (2007) Without Project</u>			<u>Existing (2007) With Project</u>		
			<u>V/C</u>	<u>Delay</u>	<u>LOS</u>	<u>V/C</u>	<u>Delay</u>	<u>LOS</u>
1	I-215 NB On/Off Ramps/Arrowhead Boulevard & Devore Road	AM	[1]	10.2	B	[1]	10.5	B
		PM	[1]	14.2	B	[1]	15.9	C
2	Cajon Boulevard & I-215 SB On/Off Ramps	AM	[1]	9.6	A	[1]	9.7	A
		PM	[1]	9.4	A	[1]	9.5	A
3	Cajon Boulevard & Glen Helen Parkway	AM	0.177	8.9	A	0.188	9.3	A
		PM	0.497	12.0	B	0.551	12.8	B
4	I-215 NB On/Off Ramps & Palm Avenue	AM	[1]	20.6	C	[1]	21.2	C
		PM	[1]	30.8	D	[1]	34.2	D
5	I-215 SB On/Off Ramps & Palm Avenue	AM	1.091	46.7	E	1.099	48.5	E
		PM	0.865	26.3	D	0.893	29.0	D
6	I-215 NB On/Off Ramps & University Parkway	AM	0.576	15.9	B	0.578	16.0	B
		PM	0.694	17.0	B	0.700	17.1	B
7	I-215 SB On/Off Ramps & University Parkway	AM	0.810	20.3	C	0.828	21.3	C
		PM	1.162	72.3	E	1.180	76.7	E *
8	I-15 SB On/Off Ramps & Glen Helen Parkway	AM	[1]	9.9	A	[1]	16.7	C
		PM	[1]	10.6	B	[1]	35.4	E *
9	I-15 NB On/Off Ramps & Glen Helen Parkway	AM	[1]	8.7	A	[1]	10.0	A
		PM	[1]	37.1	E	[1]	207.2	F *
10	Lytle Creek Road & Glen Helen Parkway [2]	AM	N/A	N/A	N/A	N/A	N/A	N/A
		PM	N/A	N/A	N/A	N/A	N/A	N/A
11	Lytle Creek Road & Sierra Avenue	AM	[1]	9.0	A	[1]	13.1	B
		PM	[1]	11.9	B	[1]	236.5	F *
12	I-15 SB On/Off Ramps & Sierra Avenue	AM	[1]	43.8	E	[1]	275.2	F *
		PM	[1]	15.5	C	[1]	252.9	F
13	I-15 NB On/Off Ramps & Sierra Avenue	AM	[1]	30.3	D	[1]	293.2	F *
		PM	[1]	25.6	D	[1]	445.3	F *
14	I-15 SB On/Off Ramps & Duncan Canyon Road [3]	AM	N/A	N/A	N/A	N/A	N/A	N/A
		PM	N/A	N/A	N/A	N/A	N/A	N/A
15	I-15 NB On/Off Ramps/Lytle Creek Road & Duncan Canyon Road [3]	AM	[1]	8.8	A	[1]	8.8	A
		PM	[1]	8.8	A	[1]	8.8	A
16	I-15 SB On/Off Ramps & Summit Avenue	AM	1.288	114.6	F	1.304	118.1	F *
		PM	0.864	21.2	C	0.886	22.9	C
17	I-15 NB On/Off Ramps & Summit Avenue	AM	0.791	19.1	B	0.819	20.4	C
		PM	1.240	99.4	F	1.279	110.6	F *

Table 1 (continued)
LOS Summary
Existing (2007) Plus Project Traffic Conditions

<u>No.</u>	<u>Intersection</u>	<u>Peak Hour</u>	<u>Existing (2007) Without Project</u>			<u>Existing (2007) With Project</u>			
			<u>V/C</u>	<u>Delay</u>	<u>LOS</u>	<u>V/C</u>	<u>Delay</u>	<u>LOS</u>	
18	Riverside Avenue & Sierra Avenue	AM	[1]	40.7	E	[1]	399.2	F	*
		PM	[1]	22.8	C	[1]	406.0	F	*
19	Riverside Avenue & Live Oak Avenue	AM	0.336	16.1	B	0.750	23.0	C	
		PM	0.253	14.7	B	1.040	53.0	D	
20	Riverside Avenue & Alder Avenue	AM	[1]	12.6	B	0.430	19.3	B	
		PM	[1]	12.6	B	0.884	42.0	D	
21	Riverside Avenue & Locust Avenue	AM	[1]	16.4	C	0.541	24.1	C	
		PM	[1]	12.8	B	0.874	42.9	D	
22	Riverside Avenue & Linden Avenue	AM	[1]	35.3	E	1.069	58.6	E	*
		PM	[1]	15.3	C	1.127	91.7	F	*
23	Riverside Avenue & Ayala Drive	AM	0.577	16.5	B	0.732	16.0	B	
		PM	0.447	16.2	B	0.652	14.7	B	
24	Riverside Avenue & Knollwood Avenue	AM	0.307	7.3	A	0.429	8.8	A	
		PM	0.250	5.6	A	0.433	8.2	A	
25	Riverside Avenue & Country Club Drive	AM	0.443	11.8	B	0.689	16.2	B	
		PM	0.408	12.2	B	0.865	22.4	C	
26	Riverside Avenue & Driveway (for Shopping Center)	AM	0.308	6.8	A	0.452	6.1	A	
		PM	0.436	9.6	A	0.560	8.5	A	
27	Casa Grande Drive & Sierra Avenue	AM	N/A	N/A	N/A	N/A	N/A	N/A	
		PM	N/A	N/A	N/A	N/A	N/A	N/A	
28	Casa Grande Drive & Alder Avenue	AM	0.175	17.4	B	0.208	17.5	B	
		PM	0.227	16.6	B	0.362	19.3	B	
29	Casa Grande Drive & Locust Avenue	AM	[1]	12.5	B	[1]	13.9	B	
		PM	[1]	10.7	B	[1]	14.3	B	
30	Summit Avenue & Sierra Avenue	AM	0.279	12.6	B	0.360	11.6	B	
		PM	0.714	16.3	B	0.825	22.0	C	
31	Bohnert Avenue & Locust Avenue	AM	[1]	75.2	F	[1]	210.6	F	*
		PM	[1]	24.6	C	[1]	171.1	F	*
32	Bohnert Avenue & Ayala Drive	AM	0.315	14.2	B	0.465	14.7	B	
		PM	0.624	15.5	B	0.817	23.6	C	
33	Sierra Lakes Parkway/Casmalia Street & Sierra Avenue	AM	0.474	18.1	B	0.501	17.9	B	
		PM	0.701	19.8	B	0.737	20.3	C	
34	Casmalia Street & Alder Avenue	AM	0.836	33.3	C	0.931	49.3	D	
		PM	1.187	124.2	F	1.331	173.2	F	*
35	Casmalia Street & Locust Avenue	AM	0.814	35.5	D	0.896	46.3	D	
		PM	0.711	28.0	C	0.796	37.7	D	
36	Casmalia Street & Ayala Drive	AM	0.437	14.9	B	0.510	15.1	B	
		PM	0.624	18.3	B	0.721	21.3	C	
37	SR-210 Freeway WB On/Off Ramps & Sierra Avenue	AM	0.147	1.1	A	0.174	1.4	A	
		PM	0.208	1.4	A	0.238	1.9	A	

Table 1 (continued)
LOS Summary
Existing (2007) Plus Project Traffic Conditions

<u>No.</u>	<u>Intersection</u>	<u>Peak Hour</u>	<u>Existing (2007) Without Project</u>			<u>Existing (2007) With Project</u>		
			<u>V/C</u>	<u>Delay</u>	<u>LOS</u>	<u>V/C</u>	<u>Delay</u>	<u>LOS</u>
38	SR-210 Freeway EB On/Off Ramps & Sierra Avenue	AM	0.747	23.5	C	0.782	24.7	C
		PM	0.903	40.0	D	0.947	47.6	D
39	SR-210 Freeway WB On/Off Ramps & Alder Avenue	AM	1.029	42.7	D	1.123	67.3	E *
		PM	0.807	10.8	B	0.868	12.8	B
40	SR-210 Freeway EB On/Off Ramps & Alder Avenue	AM	0.628	12.6	B	0.651	13.0	B
		PM	0.796	13.6	B	0.883	17.0	B
41	SR-210 Freeway WB On/Off Ramps & Ayala Drive	AM	N/A	N/A	N/A	N/A	N/A	N/A
		PM	N/A	N/A	N/A	N/A	N/A	N/A
42	SR-210 Freeway EB On/Off Ramps & Ayala Drive	AM	N/A	N/A	N/A	N/A	N/A	N/A
		PM	N/A	N/A	N/A	N/A	N/A	N/A
43	SR-210 Freeway WB On/Off Ramps & Riverside Avenue	AM	N/A	N/A	N/A	N/A	N/A	N/A
		PM	N/A	N/A	N/A	N/A	N/A	N/A
44	SR-210 Freeway EB On/Off Ramps & Riverside Avenue	AM	N/A	N/A	N/A	N/A	N/A	N/A
		PM	N/A	N/A	N/A	N/A	N/A	N/A
45	SR-210 Freeway WB On/Off Ramps & Pepper Avenue	AM	N/A	N/A	N/A	N/A	N/A	N/A
		PM	N/A	N/A	N/A	N/A	N/A	N/A
46	SR-210 Freeway EB On/Off Ramps & Pepper Avenue	AM	N/A	N/A	N/A	N/A	N/A	N/A
		PM	N/A	N/A	N/A	N/A	N/A	N/A
47	SR-210 Freeway WB On/Off Ramps & State Street	AM	N/A	N/A	N/A	N/A	N/A	N/A
		PM	N/A	N/A	N/A	N/A	N/A	N/A
48	SR-210 Freeway EB On/Off Ramps & State Street	AM	N/A	N/A	N/A	N/A	N/A	N/A
		PM	N/A	N/A	N/A	N/A	N/A	N/A
49	Highland Avenue & State Street	AM	0.683	18.2	B	0.773	20.0	C
		PM	0.764	19.6	B	0.860	23.6	C
50	Highland Avenue & California Street	AM	0.325	10.2	B	0.327	10.4	B
		PM	0.439	10.7	B	0.466	10.6	B
51	Highland Avenue & Medical Center Drive	AM	0.299	8.8	A	0.304	8.7	A
		PM	0.405	11.0	B	0.423	10.9	B
52	Highland Avenue & Mount Vernon Avenue	AM	0.552	17.4	B	0.578	17.7	B
		PM	0.596	17.5	B	0.621	17.7	B
53	Highland Avenue & Sierra Avenue	AM	0.467	9.5	A	0.497	9.4	A
		PM	0.398	8.4	A	0.451	8.1	A
54	Highland Avenue/Easton Street & Alder Avenue	AM	0.787	30.2	C	0.815	32.6	C
		PM	0.885	38.0	D	0.967	48.3	D
55	Easton Street & Ayala Drive	AM	0.753	19.5	B	0.773	19.9	B
		PM	1.120	65.5	E	1.164	79.1	E *
56	Easton Street & Riverside Avenue	AM	0.956	46.9	D	1.159	88.9	F *
		PM	1.202	101.5	F	1.616	195.4	F *
57	Easton Street & Highland Avenue	AM	0.431	3.5	A	0.471	3.4	A
		PM	0.620	4.5	A	0.670	4.7	A

Table 1 (continued)
LOS Summary
Existing (2007) Plus Project Traffic Conditions

<u>No.</u>	<u>Intersection</u>	<u>Peak Hour</u>	<u>Existing (2007) Without Project</u>			<u>Existing (2007) With Project</u>		
			<u>V/C</u>	<u>Delay</u>	<u>LOS</u>	<u>V/C</u>	<u>Delay</u>	<u>LOS</u>
58	Baseline Road & Sierra Avenue	AM	0.381	17.8	B	0.410	17.6	B
		PM	0.695	22.0	C	0.744	22.9	C
59	Baseline Road & Alder Avenue	AM	0.684	23.6	C	0.718	25.5	C
		PM	0.919	46.8	D	0.969	56.2	E *
60	Baseline Road & Cedar Avenue/Ayala Drive	AM	0.459	19.0	B	0.496	19.3	B
		PM	0.671	21.2	C	0.697	22.0	C
61	Baseline Road & Cactus Avenue	AM	0.579	19.6	B	0.621	20.5	C
		PM	0.693	18.8	B	0.740	20.7	C
62	Baseline Road & Riverside Avenue	AM	0.647	21.4	C	0.711	22.6	C
		PM	0.792	25.8	C	1.026	51.9	D
63	Baseline Road & Pepper Avenue	AM	0.288	8.2	A	0.320	8.2	A
		PM	0.441	6.6	A	0.468	6.6	A
64	Baseline Road & State Street	AM	N/A	N/A	N/A	N/A	N/A	N/A
		PM	N/A	N/A	N/A	N/A	N/A	N/A
65	Foothill Boulevard & Sierra Avenue	AM	0.532	19.1	B	0.553	19.4	B
		PM	0.910	29.4	C	0.941	32.1	C
66	Foothill Boulevard & Alder Avenue	AM	0.449	13.4	B	0.462	13.7	B
		PM	0.639	15.1	B	0.663	15.6	B
67	Foothill Boulevard & Cedar Avenue	AM	0.598	20.0	B	0.606	20.1	C
		PM	0.807	25.0	C	0.815	25.4	C
68	Foothill Boulevard & Cactus Avenue	AM	0.473	14.3	B	0.491	14.5	B
		PM	0.749	17.8	B	0.770	18.4	B
69	Foothill Boulevard & Riverside Avenue	AM	0.610	20.0	C	0.644	20.6	C
		PM	0.905	32.2	C	0.931	35.8	D
70	Arrow Boulevard & Sierra Avenue	AM	0.430	17.7	B	0.452	17.7	B
		PM	0.776	26.0	C	0.789	26.9	C
71	Arrow Boulevard & Alder Avenue	AM	0.305	18.5	B	0.314	18.6	B
		PM	0.647	19.8	B	0.661	22.5	C
72	Rialto Avenue & Cedar Avenue	AM	0.449	16.2	B	0.451	16.2	B
		PM	0.598	19.7	B	0.601	19.8	B
73	Rialto Avenue & Cactus Avenue	AM	0.206	8.9	A	0.216	8.8	A
		PM	0.317	9.7	A	0.325	9.8	A
74	Merrill Avenue & Cedar Avenue	AM	0.714	17.6	B	0.684	17.2	B
		PM	0.986	32.2	C	0.988	32.5	C
75	Merrill Avenue & Cactus Avenue	AM	0.254	14.0	B	0.264	14.0	B
		PM	0.358	13.1	B	0.366	13.3	B

* Denotes a significant project traffic impact, prior to mitigation.

N/A Intersection does not currently (2007) exist, but is scheduled to be constructed by the study year 2030.

Mitigation Measures

As described in the previous section, several important roadway routes were not yet available in this portion of San Bernardino County during the data collection period in early 2007. The most important of the added routes are those resulting from the SR-210/SR-30 freeway gap closure project¹ and the extension of Glen Helen Parkway. The SR-210/SR-30 freeway gap closure project allowed direct freeway travel from the San Fernando Valley and the Pasadena areas to the San Bernardino area. The Glen Helen Parkway extension better connected the Project area to the adjacent roadway network.²

Field checks were conducted in November 2011 to confirm the roadway network improvement status in the area. The current lane configurations are shown in Figure 2, which is set forth in Appendix B hereto. As confirmed by the field checks and shown in Figure 2, the SR-210/SR-30 freeway gap closure project and Glen Helen Parkway extension were completed improvements and therefore determined to be appropriate to include in this “Sunnyvale” analysis.

The SR-210/SR-30 freeway gap closure project is an important measure to mitigate significant project traffic impacts for Existing (2007) conditions. With the implementation of this freeway facility improvement, traffic volumes using the surface streets along this freeway corridor have been significantly reduced. In order to reflect the changed conditions between 2007 and 2011, the study team determined the specific details for the current (2011) freeway and roadway system geometrics and signal controls and provided that information to the City of San Bernardino staff. The information

¹ As outlined in the District 7 Update 2002, California Department of Transportation, in 1998, the State of California decided to close the 25-mile gap between I-210 and SR-30. Construction started on the eastern end from Foothill Boulevard (Exit 47), and slowly moved east. Field checks were conducted to verify that the mainline freeway section was completed prior to this analysis. Completion of the gap closure ended the existence of SR-30.

² When the Traffic Study was conducted in 2007, Glen Helen Parkway did not provide a connection from its intersection with I-15 Freeway Southbound Ramps to Lytle Creek Road. The November 2011 field check confirmed that this segment has since been connected.

concerning these improvements was incorporated into the version of the EVTMM used for this analysis, and a new model run was performed, producing the “Existing Plus Project With 2011 Routes” scenario. This scenario incorporated into the roadway network the added routes provided by the current (2011) freeway and roadway system conditions. As reflected by the modeling procedures, with the implementation of the SR-210/SR-30 freeway gap closure project, the traffic flow in the area has shifted from surface streets to the freeway system. These volumes were used to determine traffic impacts directly attributable to the proposed project.

Table 2 presents the results of the CMA analysis of the “Existing (2007) Plus Project” and “Existing (2007) Plus Project with Current (2011) Routes” conditions. As shown in Table 2, 10 of the 16 significantly impacted study intersections under the existing (2007) conditions would be fully mitigated by the already completed freeway and roadway system improvements.

Of the 10 intersections mitigated by already completed freeway and roadway system improvements, 8 of those would be fully mitigated by the gap closure project and extension of Glen Helen Parkway. Of those 8 intersections, 5 were not previously identified in the Traffic Study as being significantly impacted by project traffic under Future (2030) conditions. Those intersections are:

9. I-15 NB On/Off Ramps & Glen Helen Parkway
31. Bohnert Avenue & Locust Avenue
34. Casmalia Street & Alder Avenue
39. SR-210 Freeway WB On/Off Ramps & Alder Avenue
56. Easton Street & Riverside Avenue

The remaining 3 of those 8 intersections were identified in the Traffic Study as being significantly impacted by project traffic under Future (2030) conditions. Those intersections are:

16. I-15 SB On/Off Ramps & Summit Avenue
17. I-15 NB On/Off Ramps & Summit Avenue
59. Baseline Road & Alder Avenue

The additional 2 intersections were also identified in the Traffic Study as being significantly impacted by project traffic under Future (2030) conditions. Those intersections are:

11. Lytle Creek Road & Sierra Avenue
55. Easton Street & Ayala Drive

Intersections 11 and 55 would be fully mitigated by the gap closure project and extension of Glen Helen Parkway, as well as by improvements that have been made at those intersections between 2007 and 2011. The improvements made at intersections 11 and 55 are similar to the improvements described in the Traffic Study as required to mitigate impacts at those intersections under Future (2030) conditions. The improvements to intersections 11 and 55 which have been done under 2011 conditions are described below:

11. Lytle Creek Road & Sierra Avenue
 - Improvements suggested in Traffic Study: Restripe Lytle Creek Road and Sierra Avenue to accommodate one left-turn lane and two through lanes in the northwest-bound direction, and one through lane and one through/right-shared lane in the southeast-bound direction. In addition, install a traffic signal at this location.
 - Improvements actually constructed pursuant to Nov. 2011 field check: Lytle Creek Road and Sierra Avenue have been restriped to accommodate one left-turn lane and two through lanes in the northwest-

bound direction, and one through lane and one through/right-shared lane in the southeast-bound direction. A traffic signal has not been installed.

55. Easton Street & Ayala Drive

- Improvements suggested in Traffic Study: Flare and restripe Easton Street in the eastbound direction to accommodate an exclusive right-turn lane. Modify the traffic signal to include a right-turn overlap phase with the left-turn phase in the northbound direction.
- Improvements actually constructed pursuant to Nov. 2011 field check: Easton Street's eastbound approach to Ayala Drive now provides one left-turn, one through and one through/right shared lane. The eastbound approach does not yet accommodate an exclusive right-turn lane, and the traffic signal has not yet been modified to include the right-turn overlap phase with the left-turn phase in the northbound direction.

Of the 6 remaining intersections shown in Table 2 as being significantly impacted under "Existing (2007) Plus Project with Current (2011) Routes" conditions, 5 of those intersections were also shown in the Traffic Study as being significantly impacted by project traffic under Future (2030) conditions. Under this "Sunnyvale" analysis, to assess whether project-specific impacts could be reduced to less-than-significant levels at those 5 intersections, the mitigation measures proposed in the Traffic Study for those 5 intersections to address the Future (2030) conditions (listed in Appendix C to this addendum) were applied to the Existing (2007) Plus Project conditions.

Table 2
LOS Summary
Existing (2007) Plus Project Conditions With Traffic Study Period (2007)
And Current (2011) Freeway/Roadway Improvements

No.	Intersection	Peak Hour	Existing (2007) Without Project			Existing (2007) With Project			Existing (2007) With Current (2011) Route: With Project		
			V/C	Delay	LOS	V/C	Delay	LOS	V/C	Delay	LOS
7	I-215 SB On/Off Ramps & University Parkway	AM	0.810	20.3	C	0.828	21.3	C	1.118	82.9	F *
		PM	1.162	72.3	E	1.180	76.7	E *	1.018	56.2	E *
8	I-15 SB On/Off Ramps & Glen Helen Parkway	AM	[1]	9.9	A	[1]	16.7	C	[1]	336.6	F *
		PM	[1]	10.6	B	[1]	35.4	E *	[1]	680.2	F *
9	I-15 NB On/Off Ramps & Glen Helen Parkway	AM	[1]	8.7	A	[1]	10.0	A	[1]	10.4	B
		PM	[1]	37.1	E	[1]	207.2	F *	[1]	14.8	B
11	Lytle Creek Road & Sierra Avenue	AM	[1]	9.0	A	[1]	13.1	B	0.384	10.2	B
		PM	[1]	11.9	B	[1]	236.5	F *	0.707	18.5	C
12	I-15 SB On/Off Ramps & Sierra Avenue	AM	[1]	43.8	E	[1]	275.2	F *	1.731	155.3	F *
		PM	[1]	15.5	C	[1]	252.9	F *	1.916	275.7	F *
13	I-15 NB On/Off Ramps & Sierra Avenue	AM	[1]	30.3	D	[1]	293.2	F *	1.539	208.7	F *
		PM	[1]	25.6	D	[1]	445.3	F *	2.307	456.4	F *
16	I-15 SB On/Off Ramps & Summit Avenue	AM	1.288	114.6	F	1.304	118.1	F *	0.062	18.0	B
		PM	0.864	21.2	C	0.886	22.9	C	0.115	12.4	B
17	I-15 NB On/Off Ramps & Summit Avenue	AM	0.791	19.1	B	0.819	20.4	C	0.322	7.1	A
		PM	1.240	99.4	F	1.279	110.6	F *	0.185	14.2	B
18	Riverside Avenue & Sierra Avenue	AM	[1]	40.7	E	[1]	399.2	F *	1.101	59.0	F *
		PM	[1]	22.8	C	[1]	406.0	F *	1.474	150.2	F *
22	Riverside Avenue & Linden Avenue	AM	[1]	35.3	E	1.069	58.6	E *	1.168	76.1	E *
		PM	[1]	15.3	C	1.127	91.7	F *	1.636	253.1	F *
31	Bohnert Avenue & Locust Avenue	AM	[1]	75.2	F	[1]	210.6	F *	[1]	15.0	B
		PM	[1]	24.6	C	[1]	171.1	F *	[1]	23.1	C
34	Casmalia Street & Alder Avenue	AM	0.836	33.3	C	0.931	49.3	D	0.368	19.2	B
		PM	1.187	124.2	F	1.331	173.2	F *	0.570	35.3	D
39	SR-210 Freeway WB On/Off Ramps & Alder Avenue	AM	1.029	42.7	D	1.123	67.3	E *	0.437	16.3	B
		PM	0.807	10.8	B	0.868	12.8	B	0.365	10.9	B
55	Easton Street & Ayala Drive	AM	0.753	19.5	B	0.773	19.9	B	0.334	16.4	B
		PM	1.120	65.5	E	1.164	79.1	E *	0.430	21.1	C
56	Easton Street & Riverside Avenue	AM	0.956	46.9	D	1.159	88.9	F *	0.525	13.7	B
		PM	1.202	101.5	F	1.616	195.4	F *	0.662	20.6	C
59	Baseline Road & Alder Avenue	AM	0.684	23.6	C	0.718	25.5	C	0.471	18.7	B
		PM	0.919	46.8	D	0.969	56.2	E *	0.633	29.4	C

* Denotes a significant project traffic impact, prior to mitigation.

[1] Volume to capacity ratio is not provided for two-way, STOP sign-controlled intersections.

The volumes based on the 2011 conditions network with the now available routes were again utilized as were the same CMA procedures used in the Traffic Study. The lane

configurations proposed in the Traffic Study recommended mitigation measures at these 5 intersections were used in the CMA analysis. Table 3 presents the results of the CMA analysis of the “Existing (2007) Plus Project” and “Existing (2007) Plus Project with Current (2011) Routes and Traffic Study Intersection Specific Mitigation” conditions.

As shown in Table 3, 15 of the 16 significantly impacted study intersections under the existing (2007) conditions would be fully mitigated by a combination of (a) the already completed freeway and roadway system improvements and (b) the intersection-specific mitigation measures recommended in the Traffic Study for the 5 intersections as listed in Appendix C to this addendum.

Table 3
LOS Summary
Existing (2007) Plus Project With Current (2011) Freeway/Roadway Improvement
And Future (2030) Mitigation Traffic Conditions

No.	Intersection	Peak Hour	Existing (2007) Without Project			Existing (2007) With Project			Existing (2007) With Current (2011) Routes With Project			Existing (2007) With Proj. With Current (2011) Routes and Intersection Specific Mit		
			V/C	Delay	LOS	V/C	Delay	LOS	V/C	Delay	LOS	V/C	Delay	LOS
7	I-215 SB On/Off Ramps & University Parkway	AM	0.810	20.3	C	0.828	21.3	C	1.118	82.9	F *	0.612	11.2	B
		PM	1.162	72.3	E	1.180	76.7	E *	1.018	56.2	E *	0.619	23.7	C
8	I-15 SB On/Off Ramps & Glen Helen Parkway	AM	[1]	9.9	A	[1]	16.7	C	[1]	336.6	F *			
		PM	[1]	10.6	B	[1]	35.4	E *	[1]	680.2	F *			
9	I-15 NB On/Off Ramps & Glen Helen Parkway	AM	[1]	8.7	A	[1]	10.0	A	[1]	10.4	B			
		PM	[1]	37.1	E	[1]	207.2	F *	[1]	14.8	B			
11	Lytle Creek Road & Sierra Avenue	AM	[1]	9.0	A	[1]	13.1	B	0.384	10.2	B			
		PM	[1]	11.9	B	[1]	236.5	F *	0.707	18.5	C			
12	I-15 SB On/Off Ramps & Sierra Avenue	AM	[1]	43.8	E	[1]	275.2	F *	1.731	155.3	F *	0.476	20.1	C
		PM	[1]	15.5	C	[1]	252.9	F *	1.916	275.7	F *	0.620	23.4	C
13	I-15 NB On/Off Ramps & Sierra Avenue	AM	[1]	30.3	D	[1]	293.2	F *	1.539	208.7	F *	0.624	18.7	B
		PM	[1]	25.6	D	[1]	445.3	F *	2.307	456.4	F *	0.996	40.7	D
16	I-15 SB On/Off Ramps & Summit Avenue	AM	1.288	114.6	F	1.304	118.1	F *	0.062	18.0	B			
		PM	0.864	21.2	C	0.886	22.9	C	0.115	12.4	B			
17	I-15 NB On/Off Ramps & Summit Avenue	AM	0.791	19.1	B	0.819	20.4	C	0.322	7.1	A			
		PM	1.240	99.4	F	1.279	110.6	F *	0.185	14.2	B			
18	Riverside Avenue & Sierra Avenue	AM	[1]	40.7	E	[1]	399.2	F *	1.101	59.0	F *	0.676	13.1	B
		PM	[1]	22.8	C	[1]	406.0	F *	1.474	150.2	F *	0.846	17.0	B
22	Riverside Avenue & Linden Avenue	AM	[1]	35.3	E	1.069	58.6	E *	1.168	76.1	E *	0.531	13.2	B
		PM	[1]	15.3	C	1.127	91.7	F *	1.636	253.1	F *	0.834	27.4	C
31	Bohnert Avenue & Locust Avenue	AM	[1]	75.2	F	[1]	210.6	F *	[1]	15.0	B			
		PM	[1]	24.6	C	[1]	171.1	F *	[1]	23.1	C			
34	Casmalia Street & Alder Avenue	AM	0.836	33.3	C	0.931	49.3	D	0.368	19.2	B			
		PM	1.187	124.2	F	1.331	173.2	F *	0.570	35.3	D			
39	SR-210 Freeway WB On/Off Ramps & Alder Avenue	AM	1.029	42.7	D	1.123	67.3	E *	0.437	16.3	B			
		PM	0.807	10.8	B	0.868	12.8	B	0.365	10.9	B			
55	Easton Street & Ayala Drive	AM	0.753	19.5	B	0.773	19.9	B	0.334	16.4	B			
		PM	1.120	65.5	E	1.164	79.1	E *	0.430	21.1	C			
56	Easton Street & Riverside Avenue	AM	0.956	46.9	D	1.159	88.9	F *	0.525	13.7	B			
		PM	1.202	101.5	F	1.616	195.4	F *	0.662	20.6	C			
59	Baseline Road & Alder Avenue	AM	0.684	23.6	C	0.718	25.5	C	0.471	18.7	B			
		PM	0.919	46.8	D	0.969	56.2	E *	0.633	29.4	C			

* Denotes a significant project traffic impact, prior to mitigation.

[1] Volume to capacity ratio is not provided for two-way, STOP sign-controlled intersections.

However, the impact to 1 of these 16 significantly impacted study intersections under the existing (2007) conditions would remain significant even with the completed freeway and roadway system improvements and intersection-specific mitigation measures recommended in the Traffic Study. That remaining impact would occur at the intersection of I-15 Southbound On/Off Ramps & Glen Helen Parkway.

The significant traffic impact at the intersection of I-15 Southbound On/Off Ramps & Glen Helen Parkway will be mitigated to a less than significant level by freeway improvements proposed at the interchange of I-15 Freeway and I-215 Freeway. Construction of the improvements is scheduled to begin in 2013 and last for about three years. The official project website describes all environmental documents including the preferred alternative by the Project Development Team members as of September 8, 2011. The relevant site information is included in Appendix D. The I-15/I-215 interchange improvements project proposes to add one northbound lane and one southbound lane on the I-15 freeway mainline between the I-215 freeway and Glen Helen Parkway. Some alternatives include additional improvements such as an added separate set of truck lanes. The Traffic Study analysis of the 2030 conditions only assumed the added mainline lanes. The freeway currently provides three lanes in each direction. Adding the two new lanes will increase the mainline capacity and improve the travel speeds in both directions.

The improvement was shown by the Traffic Study model to shift the traffic flow in the area from surface street intersections to the freeway system. The construction of this improvement will substantially change the distribution of existing trips through this intersection. As demonstrated in the Traffic Study, this rerouting of traffic will result in acceptable (LOS D or better) conditions at the intersection of I-15 Southbound On/Off Ramps & Glen Helen Parkway. Thus, the freeway improvement scheduled to begin

construction in 2013 will reduce the impact at the intersection of I-15 Southbound On/Off Ramps & Glen Helen Parkway to less than significant.

However, because the I-15/I-215 interchange improvements project has not yet been constructed, the study team conducted an analysis to determine the level of project build-out that would first cause the impact at the I-15 Southbound On/Off Ramps & Glen Helen Parkway intersection to be significant. Under the existing (2007) conditions, the project contributes 321 trips to this intersection during the AM peak hour out of the total Traffic Study project trip generation from the model of 5,080 trips. The 321 trips contributed to this intersection constitute 6.3% of the total project trip generation. In addition, under the existing (2007) conditions, the project contributes 935 trips to this intersection during the PM peak hour, or 11.7% of the total Traffic Study project model trip generation of 7,972 trips.

It should be noted that typical ITE trip generations (e.g. the ITE Trip Generation estimates used in the Appendix A February 2008 review of the Project revisions) are not as precise as the modeling procedures. The Traffic Study model took into account a number of factors in estimating the site generation including “internal trips” that will travel from one use (e.g., a residence) to another use (e.g., an Elementary School) and thereby never leave the Project area. As shown in Appendix A, the February 2008 analysis demonstrated that the Traffic Study project ITE generation was 6,493 AM Peak Hour trips and 9,840 PM Peak Hour trips. The threshold for a significant impact at an LOS E or F intersection is 50 trips. Based on the 6.3% and 11.7% factors calculated above, the 50 trip significance threshold will be crossed if the project is developed to generate:

1. 794 or more AM peak hour trips and/or
2. 427 or more PM peak hour trips

A series of trip cap and mitigation procedures were developed for implementation with the Project. These procedures are outlined in Appendix E. The procedures were specifically designed to:

1. limit the total Specific Plan development, and
2. phase the mitigation so it is implemented in a timely fashion to avoid significant traffic impacts.

As part of the recommended procedure, rates based on the ITE formulas used in Appendix A were developed for the potential project land-uses. The rates developed from that analysis are shown in Table 4 (which is taken from Appendix E.)

For any portion of the project to be built prior to the completion of the I-15/I-215 interchange improvements substantially as assumed in the Traffic Study, a review of the project portion trip generation should be conducted using the Table 4 rates. If the portion of the project to be built-out would generate 794 or more of the total project AM peak hour trips and/or 427 or more of the total project PM peak hour trips, additional mitigation would be required to avoid a significant impact. The mitigation measure recommended for the intersection of I-15 Southbound On/Off Ramps & Glen Helen Parkway, assuming a greater level of project development will be completed and occupied before the completion of the I-15/I-215 interchange improvements substantially as assumed in the Traffic Study, is as follows:

I-15 Southbound On/Off Ramps & Glen Helen Parkway - Install a traffic signal at this location.

As shown in Table 5, implementation of the above measure will reduce the project traffic impact at this remaining significantly impacted intersection to an acceptable level of service (LOS D or better). The LOS calculation worksheets are included in the Appendix E to this addendum.

Table 4
ITE Based Trip Generation Rates
For Lytle Creek Ranch Specific Plan Project

<i>Land Use</i> ¹	ITE	UNIT OF MEASURE FOR SIZE	Trip Rate for Hours on the Roadway	
			AM Peak	PM Peak
<u>Residential</u>				
Single Family Detached Homes	210	Dwelling Unit	0.75	1.01
Multi-Family Attached Homes	230	Dwelling Unit	0.44	0.52
Detached Senior Housing	251	Dwelling Unit	0.20	0.26
Assisted Living	254	Bed Space	0.14	0.22
<u>Industrial</u> ²				
Industrial Park	130	Bldg. Area in ksf	0.84	0.86
Manufacturing Standard	140	Bldg. Area in ksf	0.73	0.74
Warehousing Standard ³	150	Bldg. Area in ksf	0.45	0.47
Warehousing - High Cube	152	Bldg. Area in ksf	0.12	0.14
<u>Lodging</u>				
Hotel	310	Room	0.56	0.59
Motel	320	Room	0.45	0.47
<u>Retail/Services</u>				
Shopping Center ⁴	820	Bldg. Area in ksf	1.03	3.75
Bank	912	Bldg. Area in ksf	12.34	45.74
Supermarket (≥15,000 sf)	850	ksf	3.25	10.45
Convenience Market (<15,000 sf)	851	ksf	67.03	52.41
Stand Alone Quality Restaurant	931	Bldg. Area in ksf	0.81	7.49
High-Turnover Restaurant	932	Bldg. Area in ksf	11.52	10.92
Fast Food Restaurant	934	Bldg. Area in ksf	53.11	34.64
Gasoline Service Station	944	Fueling Positions	12.07	13.86
<u>Office</u>				
General-Stand Alone	710	Bldg. Area in ksf	1.55	1.49
Medical/Dental	720	Bldg. Area in ksf	2.48	3.72
Office Park	750	Bldg. Area in ksf	1.74	1.50
<u>Recreational</u>				
Park	412	acres	0.01	0.06
Golf Course	430	acres	0.21	0.30
Health/Fitness Club	492	ksf	1.21	4.05
<u>School</u>				
Elementary	520	students	0.42	0.28
Middle/Jr. High	522	students	0.53	0.15
High	530	students	0.41	0.14

Other²

The rate to be considered for other land uses is per the decision of the City Engineer, who shall specify a rate from *Trip Generation, 7th Edition*, ITE if one is available from that source or one from another source which uses actual trip generation count

¹Land-uses, except as noted, to be defined per *Trip Generation, 7th Edition, ITE*.

²Passenger Car Equivalent (PCE) factor to be applied for any use where such factors are used in the San Bernardino County Congestion Management Plan (CMP) or truck trips exceed 10% of peak hour generation.

³Standard warehouses are any warehouses which have less than 24 feet high ceiling or are less than 100,000 square feet in size.

⁴Shopping Centers are not to exceed 20% usage for restaurants (all categories), Cinema (all categories) or any other non-retail use.

Table 5

LOS Summary

**Existing (2007) Plus Project With Current (2011) Freeway/Roadway Improvement
And New Mitigation Traffic Conditions**

No.	Intersection	Peak Hour	Existing (2007) Without Project			Existing (2007) With Project			Existing (2007) With Project With Current (2011) Freeway/Roadway Imp.			Existing (2007) With Project With New Mitigation			
			V/C	Delay	LOS	V/C	Delay	LOS	V/C	Delay	LOS	V/C	Delay	LOS	
8	I-15 SB On/Off Ramps & Glen Helen Parkway	AM	[1]	9.9	A	[1]	16.7	C	[1]	336.6	F	*	0.386	7.0	A
		PM	[1]	10.6	B	[1]	35.4	E	*	[1]	680.2	F	*	0.462	11.5

* Denotes a significant project traffic impact, prior to mitigation.

[1] Volume to capacity ratio is not provided for two-way, STOP sign-controlled intersections.

Freeways

In order to analyze the impact of the project on the regional transportation system (i.e., the freeway network), the output from the transportation model (EVTM) was used and analyzed. The model forecasted total volumes on all links (roadway segments), including the I-15, I-215, SR-210 and SR-30 of the study year of 2007 for both the Without and With Project scenarios. A total of 29 freeway segments near the project site were selected based on the probable routes that would be followed by Project traffic. These segments include those most likely to be significantly impacted by the project.

As indicated in the CMP, the adopted LOS standard for the CMP system is the minimal standard allowed under Section 65089(b)(1)(B) of the California Government Code, defined as LOS E for all segments and intersections, except those designated LOS F in the CMP.³ As such, for this addendum, a significant project traffic impact to the freeway network is defined to be those freeway segments where the project would cause conditions to degrade below LOS E, except for those freeway segments designated LOS F in the CMP.

³ In addition, the CMP makes a provision for any LOS F facility not to deteriorate greater than 10 percent below its LOS value at the time of initial CMP adoption.

As shown in Table 6, the Lytle Creek Ranch project would not have significant traffic impacts at any of the study freeway segments under the existing (2007) conditions.

Table 6
Freeway LOS Summary
Existing (2007) Conditions

No.	Location	Peak Hour	Direction	No. of Lanes	Total Capacity	Existing (2007) Without Project				Existing (2007) With Project			
						Daily Volume	Peak Hour Volume	V/C	LOS	Daily Volume	Peak Hour Volume	V/C	LOS
1	Ontario Fwy (I-15) between Barstow Fwy (I-215) and Glen Helen Parkway	AM	NB	3	6900	133,600	3,600	0.52	A	136,200	3,700	0.54	A
			SB	3	6900		5,400	0.78	C		5,500	0.80	C
		PM	NB	3	6900		6,000	0.87	D		6,100	0.88	D
			SB	3	6900		4,000	0.58	A		4,200	0.61	B
2	Ontario Fwy (I-15) between Glen Helen Parkway and Sierra Ave	AM	NB	3	6900	134,700	3,600	0.52	A	143,200	3,800	0.55	A
			SB	3	6900		5,500	0.80	C		5,900	0.86	D
		PM	NB	3	6900		6,100	0.88	D		6,500	0.94	E
			SB	3	6900		4,000	0.58	A		4,300	0.62	B
3	Ontario Fwy (I-15) between Sierra Ave and Duncan Canyon Road	AM	NB	4	9200	134,700	3,600	0.39	A	145,100	3,800	0.41	A
			SB	4	9200		5,500	0.60	A		6,100	0.66	B
		PM	NB	4	9200		6,100	0.66	B		6,600	0.72	C
			SB	4	9200		4,000	0.43	A		4,400	0.48	A
4	Ontario Fwy (I-15) between Duncan Canyon Road and Summit Ave	AM	NB	4	9200	134,700	3,600	0.39	A	145,100	3,800	0.41	A
			SB	4	9200		5,500	0.60	A		6,100	0.66	B
		PM	NB	4	9200		6,100	0.66	B		6,600	0.72	C
			SB	4	9200		4,000	0.43	A		4,400	0.48	A
5	Ontario Fwy (I-15) between Summit Ave and State Route 210 Fwy	AM	NB	4	9200	142,800	3,800	0.41	A	151,000	3,900	0.42	A
			SB	4	9200		5,700	0.62	B		6,200	0.67	B
		PM	NB	4	9200		6,400	0.70	B		6,800	0.74	C
			SB	4	9200		4,200	0.46	A		4,500	0.49	A
6	Barstow Fwy (I-215) between Ontario Fwy (I-15) and Devore Road	AM	NB	2	4600	52,000	1,600	0.35	A	53,600	1,700	0.37	A
			SB	2	4600		2,400	0.52	A		2,400	0.52	A
		PM	NB	2	4600		2,700	0.59	A		2,900	0.63	B
			SB	2	4600		1,800	0.39	A		1,800	0.39	A
7	Barstow Fwy (I-215) between Devore Road and Palm Ave	AM	NB	2	4600	62,200	1,900	0.41	A	65,600	2,000	0.43	A
			SB	2	4600		2,900	0.63	B		3,100	0.67	B
		PM	NB	2	4600		3,200	0.70	B		3,400	0.74	C
			SB	2	4600		2,100	0.46	A		2,200	0.48	A
8	Barstow Fwy (I-215) between Palm Ave and University Parkway	AM	NB	2	4600	61,200	1,900	0.41	A	63,700	1,900	0.41	A
			SB	2	4600		2,800	0.61	B		3,000	0.65	B
		PM	NB	2	4600		3,100	0.67	B		3,200	0.70	B
			SB	2	4600		2,100	0.46	A		2,200	0.48	A
9	Barstow Fwy (I-215) between University Parkway and State Route 30 Fwy	AM	NB	3	6900	86,700	2,800	0.41	A	88,700	2,800	0.41	A
			SB	3	6900		4,200	0.61	B		4,300	0.62	B
		PM	NB	3	6900		4,700	0.68	B		4,800	0.70	B
			SB	3	6900		3,100	0.45	A		3,200	0.46	A
10	Barstow Fwy (I-215) between State Route 30 Fwy and Mt Vernon Ave/27th St	AM	NB	2	4600	61,200	2,100	0.46	A	67,700	2,200	0.48	A
			SB	2	4600		2,900	0.63	B		3,300	0.72	C
		PM	NB	2	4600		3,200	0.70	B		3,600	0.78	C
			SB	2	4600		2,300	0.50	A		2,600	0.57	A

Table 6 (continued)
Freeway LOS Summary
Existing (2007) Conditions

No.	Location	Existing (2007) Without Project								Existing (2007) With Project			
		Peak	Direction	No. of Lanes	Total Capacity	Daily Volume	Peak			Daily Volume	Peak		
		Hour					Volume	V/C	LOS		Volume	Volume	V/C
11	Barstow Fwy (I-215) between Mt Vernon Ave/27th St and Highland Ave	AM	NB	2	4600	68,300	2,200	0.48	A	61,600	2,200	0.48	A
			SB	2	4600		3,000	0.65	B		2,400	0.52	A
		PM	NB	2	4600		3,400	0.74	C		3,400	0.74	C
			SB	2	4600		2,400	0.52	A		2,000	0.43	A
12	I-215 Fwy between Highland Ave and Massachusetts Ave	AM	NB	2	4600	72,400	2,200	0.48	A	73,300	2,200	0.48	A
			SB	2	4600		3,100	0.67	B		3,100	0.67	B
		PM	NB	2	4600		3,400	0.74	C		3,400	0.74	C
			SB	2	4600		2,500	0.54	A		2,500	0.54	A
13	I-215 Fwy between Massachusetts Ave and State Route 259 Fwy	AM	NB	2	4600	74,500	2,200	0.48	A	75,200	2,300	0.50	A
			SB	2	4600		3,100	0.67	B		3,100	0.67	B
		PM	NB	2	4600		3,400	0.74	C		3,600	0.78	C
			SB	2	4600		2,500	0.54	A		2,500	0.54	A
14	I-215 Fwy between State Route 259 Fwy and Baseline St	AM	NB	3	6900	138,700	4,400	0.64	B	139,600	4,400	0.64	B
			SB	3	6900		5,400	0.78	C		5,500	0.80	C
		PM	NB	3	6900		5,900	0.86	D		6,000	0.87	D
			SB	3	6900		4,900	0.71	C		4,900	0.71	C
15	I-215 Fwy between Baseline St and 5th St	AM	NB	3	6900	154,000	4,900	0.71	C	154,900	4,900	0.71	C
			SB	3	6900		6,000	0.87	D		6,100	0.88	D
		PM	NB	3	6900		6,600	0.96	E		6,600	0.96	E
			SB	3	6900		5,400	0.78	C		5,400	0.78	C
16	I-215 Fwy between 5th St and 2nd St	AM	NB	3	6900	155,100	5,500	0.80	C	156,000	5,500	0.80	C
			SB	3	6900		5,500	0.80	C		5,600	0.81	D
		PM	NB	3	6900		6,100	0.88	D		6,100	0.88	D
			SB	3	6900		6,100	0.88	D		6,200	0.90	D
17	I-215 Fwy between 2nd St and Mill St	AM	NB	4	9200	170,400	6,100	0.66	B	171,000	6,100	0.66	B
			SB	4	9200		6,100	0.66	B		6,100	0.66	B
		PM	NB	4	9200		6,700	0.73	C		6,700	0.73	C
			SB	4	9200		6,700	0.73	C		6,700	0.73	C
18	State Route 210 Fwy between Ontario Fwy (I-15) and Cherry Ave	AM	WB	3	6900	64,300	2,500	0.36	A	68,300	2,500	0.36	A
			EB	3	6900		2,000	0.29	A		2,100	0.30	A
		PM	WB	3	6900		2,300	0.33	A		2,200	0.32	A
			EB	3	6900		2,800	0.41	A		3,500	0.51	A
19	State Route 210 Fwy between Cherry Ave and Citrus Ave	AM	WB	3	6900	57,100	2,200	0.32	A	58,200	2,300	0.33	A
			EB	3	6900		1,800	0.26	A		1,800	0.26	A
		PM	WB	3	6900		2,000	0.29	A		2,000	0.29	A
			EB	3	6900		2,500	0.36	A		2,700	0.39	A
20	State Route 210 Fwy between Citrus Ave and Sierra Ave	AM	WB	2	4600	51,000	2,000	0.43	A	52,100	2,100	0.46	A
			EB	2	4600		1,600	0.35	A		1,600	0.35	A
		PM	WB	2	4600		1,800	0.39	A		1,800	0.39	A
			EB	2	4600		2,200	0.48	A		2,400	0.52	A

Table 6 (continued)
Freeway LOS Summary
Existing (2007) Conditions

No.	Location	Peak Hour	Direction	No. of Lanes	Total Capacity	Existing (2007) Without Project				Existing (2007) With Project			
						Daily Volume	Peak Hour Volume	V/C	LOS	Daily Volume	Peak Hour Volume	V/C	LOS
21	State Route 210 Fwy between Sierra Ave and Alder Ave	AM	WB	2	4600	35,800	1,600	0.35	A	36,700	1,700	0.37	A
			EB	2	4600		1,000	0.22	A		1,000	0.22	A
		PM	WB	2	4600		1,300	0.28	A		1,300	0.28	A
			EB	2	4600		1,500	0.33	A		1,500	0.33	A
22	State Route 210 Fwy between Alder Ave and Ayala Dr	AM	WB	[N/A]	[N/A]	[N/A]	[N/A]	[N/A]	[N/A]	[N/A]	[N/A]	[N/A]	[N/A]
			EB										
		PM	WB										
			EB										
23	State Route 210 Fwy between Ayala Dr and Riverside Ave	AM	WB	[N/A]	[N/A]	[N/A]	[N/A]	[N/A]	[N/A]	[N/A]	[N/A]	[N/A]	[N/A]
			EB										
		PM	WB										
			EB										
24	State Route 210 Fwy between Riverside Ave and Pepper Ave	AM	WB	[N/A]	[N/A]	[N/A]	[N/A]	[N/A]	[N/A]	[N/A]	[N/A]	[N/A]	[N/A]
			EB										
		PM	WB										
			EB										
25	State Route 210 Fwy between Pepper Ave and State St	AM	WB	[N/A]	[N/A]	[N/A]	[N/A]	[N/A]	[N/A]	[N/A]	[N/A]	[N/A]	[N/A]
			EB										
		PM	WB										
			EB										
26	State Route 210 Fwy between State St and Barstow Fwy (I-215)	AM	WB	2	4600	30,600	1,400	0.30	A	31,700	1,400	0.30	A
			EB	2	4600		1,100	0.24	A		1,200	0.26	A
		PM	WB	2	4600		1,200	0.26	A		1,200	0.26	A
			EB	2	4600		1,500	0.33	A		1,500	0.33	A
27	State Route 30 Fwy between Barstow Fwy (I-215) and H St	AM	WB	2	4600	53,000	2,400	0.52	A	54,200	2,400	0.52	A
			EB	2	4600		1,900	0.41	A		2,000	0.43	A
		PM	WB	2	4600		2,200	0.48	A		2,200	0.48	A
			EB	2	4600		2,600	0.57	A		2,600	0.57	A
28	State Route 30 Fwy between H St and State Route 259	AM	WB	2	4600	56,100	2,500	0.54	A	57,200	2,500	0.54	A
			EB	2	4600		2,000	0.43	A		2,100	0.46	A
		PM	WB	2	4600		2,300	0.50	A		2,300	0.50	A
			EB	2	4600		2,800	0.61	B		2,800	0.61	B
29	State Route 30 Fwy between State Route 259 and Waterman Ave	AM	WB	3	6900	115,300	4,800	0.70	B	116,400	4,800	0.70	B
			EB	3	6900		4,000	0.58	A		4,100	0.59	A
		PM	WB	3	6900		4,400	0.64	B		4,400	0.64	B
			EB	3	6900		5,400	0.78	C		5,400	0.78	C

[N/A] Caltrans traffic volume data not available due to construction of State Route 210 Freeway.

APPENDIX A

February 2008 Review

Lytle Creek Ranch Specific Plan Project Trip Generation Comparison

This document compares the project trip generation for the draft Lytle Creek Ranch Specific Plan which was analyzed in the August 2007 traffic study with the currently proposed revised draft Specific Plan in which some land use revisions were made. Based on the trip generation comparison, this document also addresses the potential for changes to the traffic impacts of the Specific Plan which could result from the land use revisions.

A detailed traffic impact analysis for the proposed Lytle Creek Ranch Specific Plan was conducted in August 2007. The draft Specific Plan project described in that study consisted of 8,407 residential dwelling units (including 3,409 single-family detached units and 4,998 attached units), 849,420 square feet of retail development, 2 elementary schools with an enrollment totaling 1,950 students, 131 acres of park use, and a 198-acre golf course. However, the draft Specific Plan that is currently proposed consists of land uses that have been slightly revised compared to the draft Specific Plan that was analyzed in the August 2007 traffic study. These revisions include a net change from single-family detached homes to multi-family attached units of 558 residential dwelling units, a net decrease of approximately 15 acres of park use and a net increase of approximately 9 acres of golf course use. Some of the land uses have also been relocated within and between the four Neighborhoods of the Specific Plan. However, the total number of residential dwelling units, the total size of the retail development and the total number of students for the schools will remain the same. Table 1 below summarizes the land use revisions of the Specific Plan.

Table 1
Comparison of Lytle Creek Ranch Specific Plan
With and Without Land Use Revisions

<u>Land Use</u>	<u>Unit</u>	Currently Proposed Specific Plan (with Land Use Revisions)	Specific Plan (from August 2007 Traffic Study)	Net Change
Single-Family Detached Homes	du	2,851	3,409	-558
Multi-Family Attached Homes	du	5,556	4,998	558
Retail Development	sq. ft.	849,420	849,420	0
Elementary School	student	1,950	1,950	0
Park	acre	116	131	-15
Golf Course	acre	207	198	9

In order to determine if the land use revisions would result in a significant change in traffic impact conclusions, the trip generations for the Specific Plan studied in August 2007 and with the subsequent land use revisions were compared. The traffic study's trip generation assumptions were based on the East Area (computer) Transportation Model as prescribed by the San Bernardino Associated Governments (SanBAG). The trip generation assumptions from the model are based upon modified trip generation rates from the Institute of Transportation Engineers (ITE) Trip Generation Manual. Using the ITE base trip rates from Attachment 1, the trip generation for the Specific Plan that was analyzed in the August 2007 traffic study was determined. The generation values were calculated for the daily, AM peak hour and PM peak hour periods and are shown in Attachment 2. It is important to note that the trip estimates shown in Attachment 2 are about 20 percent (AM plus PM peak hours) higher than the number of trips the model assigned to the network. The difference in trips is due to the model taking into account internal trip linkages and other adjustments, whereas the trip generation estimates based on ITE base rates do not account for these trip discounts. Similarly, the trip generation values for the Specific Plan with the land use revisions were also determined using the ITE rates, as shown in Attachment 3.

A comparison of the total Specific Plan trip generation is contained in Attachments 2 and 3. As this comparison shows, the Specific Plan with the land use revisions is expected to generate fewer total vehicle trips (approximately 2,060 fewer daily trips including 173 fewer trips during the AM peak Hour and 271 fewer trips during the PM peak hour) compared to the Specific Plan proposal prior to the land use revisions as it was analyzed in the August 2007 traffic study. The trip generation values for each of the Neighborhoods are also expected to be less with the exception of Neighborhood 2. In addition, the traffic shifts resulting from the Specific Plan land use revisions are nominal since the overall project generation is approximately 3 percent less during the AM and PM peak hour periods. However, in order to determine if the net increase in trip generation values in Neighborhood 2 would change traffic impact conclusions, an analysis assuming the net trip generation increase in Neighborhood 2 was conducted at those study intersections which are located nearest Neighborhood 2. These intersections are located along Riverside Avenue and are at Linden Avenue, Ayala Drive, Knollwood Avenue and Country Club Drive. As shown in Table 2, the Specific Plan land use revisions are not anticipated to change traffic impact conclusions at the four study intersections nearest Neighborhood 2. [The significant Specific Plan traffic impact at the intersection of Riverside Avenue and Linden Avenue is expected to occur with or without the land use revisions. In addition, the implementation of the mitigation measure for this intersection that was recommended in the August 2007 traffic study is still anticipated to reduce the traffic impact to a less than significant level for the revised Specific Plan.] Thus, it can be concluded that the Specific Plan land use revisions are not expected to alter project traffic impact conclusions at any study locations.

Table 2
Intersection Level of Service Summary
Future (2030) Traffic Conditions
With Lytle Creek Ranch Specific Plan Land Use Revisions

No.	Intersection	Peak Hour	Without Project (2030)			With Project (2030)			With Project + Mitigation (2030)			
			V/C	Delay	LOS	V/C	Delay	LOS	V/C	Delay	LOS	
22	RIVERSIDE AVE & LINDEN AVE	AM	[1]	40.4	E	1.218	108.1	F	*	0.605	13.5	B
		PM	[1]	32.1	D	1.686	280.7	F	*	0.881	26.1	C
23	RIVERSIDE AVE & AYALA DR	AM	0.585	16.0	B	0.835	18.2	B				
		PM	0.388	13.5	B	0.789	17.9	B				
24	RIVERSIDE AVE & KNOLLWOOD AVE	AM	0.305	7.2	A	0.424	8.8	A				
		PM	0.270	5.3	A	0.443	6.5	A				
25	RIVERSIDE AVE & COUNTRY CLUB DR	AM	0.426	12.3	B	0.711	18.3	B				
		PM	0.296	10.8	B	0.787	19.5	B				

* Denotes a significant project traffic impact, prior to mitigation.

[1] Volume to capacity ratio not provided for two-way, STOP sign-controlled intersections.

Attachment 1
ITE Trip Generation Rates

ITE Trip Generation Rates

<u>Land Use/Description</u>	<u>Units</u>	<u>Daily</u>	<u>AM Peak Hour</u>			<u>PM Peak Hour</u>		
			<u>In</u>	<u>Out</u>	<u>Total</u>	<u>In</u>	<u>Out</u>	<u>Total</u>
Single-Family Detached Homes	du	9.57	25%	75%	0.75	63%	37%	1.01
Multi-Family Attached Homes	du	5.86	17%	83%	0.44	67%	33%	0.52
Retail Development (Rates)	1000 sq. ft.	42.94	61%	39%	1.03	48%	52%	3.75
Elementary School	st	1.29	55%	45%	0.42	45%	55%	0.28
Park	acre	2.28	80%	20%	0.01	41%	59%	0.06
Golf Course	acre	5.04	74%	26%	0.21	34%	66%	0.30

Attachment 2

Trip Generation for

August 2007 Draft Specific Plan

Trip Generation for August 2007 Draft Specific Plan

<u>Land Use/Description</u>	<u>Size</u>	<u>Units</u>	<u>Daily</u>	<u>AM Peak Hour</u>			<u>PM Peak Hour</u>			<u>AM + PM</u>
				<u>In</u>	<u>Out</u>	<u>Total</u>	<u>In</u>	<u>Out</u>	<u>Total</u>	<u>Total</u>
Neighborhood I										
Single-Family Detached Homes	970	du	9,283	182	546	728	617	363	980	
Attached Residential Homes	336	du	1,969	25	123	148	117	58	175	
Retail Development (Rates)	0	sq. ft.	0	0	0	0	0	0	0	
Elementary School	0	st	0	0	0	0	0	0	0	
Park	50	acre	114	1	0	1	1	2	3	
Golf Course	0	acre	0	0	0	0	0	0	0	
Total			11,366	208	669	877	735	423	1,158	2,035
Neighborhood II										
Single-Family Detached Homes	1,271	du	12,163	238	715	953	809	475	1,284	
Attached Residential Homes	1,037	du	6,077	78	378	456	361	178	539	
Retail Development (Rates)	163,350	sq. ft.	7,014	102	66	168	294	319	613	
Elementary School	0	st	0	0	0	0	0	0	0	
Park	13	acre	30	0	0	0	0	1	1	
Golf Course	198	acre	998	31	11	42	20	39	59	
Total			26,282	449	1,170	1,619	1,484	1,012	2,496	4,115
Neighborhood III										
Single-Family Detached Homes	1,168	du	11,178	219	657	876	743	437	1,180	
Attached Residential Homes	2,383	du	13,964	178	871	1,049	830	409	1,239	
Retail Development (Rates)	555,390	sq. ft.	23,848	349	223	572	1,000	1,083	2,083	
Elementary School	1,950	st	2,516	450	369	819	246	300	546	
Park	53	acre	121	1	0	1	1	2	3	
Golf Course	0	acre	0	0	0	0	0	0	0	
Total			51,627	1,197	2,120	3,317	2,820	2,231	5,051	8,368

Trip Generation for August 2007 Draft Specific Plan (Continued)

<u>Land Use/Description</u>	<u>Size</u>	<u>Units</u>	<u>Daily</u>	<u>AM Peak Hour</u>			<u>PM Peak Hour</u>			<u>AM + PM</u>
				<u>In</u>	<u>Out</u>	<u>Total</u>	<u>In</u>	<u>Out</u>	<u>Total</u>	<u>Total</u>
Neighborhood IV										
Single-Family Detached Homes	0	du	0	0	0	0	0	0	0	
Attached Residential Homes	1,242	du	7,278	93	453	546	433	213	646	
Retail Development (Rates)	130,680	sq. ft.	5,611	82	53	135	235	255	490	
Elementary School	0	st	0	0	0	0	0	0	0	
Park	15	acre	34	0	0	0	0	1	1	
Golf Course	0	acre	0	0	0	0	0	0	0	
Total			12,923	175	506	681	668	469	1,137	1,818
Total (Neighborhoods I - IV)										
Single-Family Detached Homes	3,409	du	32,624	639	1,918	2,557	2,169	1,274	3,443	
Attached Residential Homes	4,998	du	29,288	374	1,825	2,199	1,741	858	2,599	
Retail Development (Rates)	849,420	sq. ft.	36,474	534	341	875	1,529	1,656	3,185	
Elementary School	1,950	st	2,516	450	369	819	246	300	546	
Park	131	acre	299	1	0	1	3	5	8	
Golf Course	198	acre	998	31	11	42	20	39	59	
Total			102,199	2,029	4,464	6,493	5,708	4,132	9,840	16,333
Total Assigned Trips - Model			79,332	2,090	2,990	5,080	4,303	3,669	7,972	13,052
Percent of ITE			78%			78%			81%	80%

Attachment 3

Trip Generation for

February 2008 Draft Specific Plan

With Land Use Revisions

Trip Generation for February 2008 Draft Specific Plan With Land Use Revisions

<u>Land Use/Description</u>	<u>Size</u>	<u>Units</u>	<u>Daily</u>	<u>AM Peak Hour</u>			<u>PM Peak Hour</u>			<u>AM + PM</u>
				<u>In</u>	<u>Out</u>	<u>Total</u>	<u>In</u>	<u>Out</u>	<u>Total</u>	<u>Total</u>
Neighborhood I										
Single-Family Detached Homes	476	du	4,555	89	268	357	303	178	481	
Attached Residential Homes	802	du	4,700	60	293	353	279	138	417	
Retail Development (Rates)	0	sq. ft.	0	0	0	0	0	0	0	
Elementary School	0	st	0	0	0	0	0	0	0	
Park	11	acre	25	0	0	0	0	1	1	
Golf Course	0	acre	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>	
Total			9,280	149	561	710	582	317	899	1,609
Neighborhood II										
Single-Family Detached Homes	1,305	du	12,489	245	734	979	830	488	1,318	
Attached Residential Homes	1,626	du	9,528	122	593	715	567	279	846	
Retail Development (Rates)	102,452	sq. ft.	4,399	65	41	106	184	200	384	
Elementary School	0	st	0	0	0	0	0	0	0	
Park	19	acre	43	0	0	0	0	1	1	
Golf Course	207	acre	<u>1,043</u>	<u>32</u>	<u>11</u>	<u>43</u>	<u>21</u>	<u>41</u>	<u>62</u>	
Total			27,502	464	1,379	1,843	1,602	1,009	2,611	4,454
Neighborhood III										
Single-Family Detached Homes	1,070	du	10,240	201	602	803	681	400	1,081	
Attached Residential Homes	2,259	du	13,238	169	825	994	787	388	1,175	
Retail Development (Rates)	566,279	sq. ft.	24,316	356	227	583	1,020	1,104	2,124	
Elementary School	1,950	st	2,516	450	369	819	246	300	546	
Park	71	acre	161	1	0	1	2	2	4	
Golf Course	0	acre	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>	
Total			50,471	1,177	2,023	3,200	2,736	2,194	4,930	8,130

Trip Generation for February 2008 Draft Specific Plan With Land Use Revisions (Continued)

<u>Land Use/Description</u>	<u>Size</u>	<u>Units</u>	<u>Daily</u>	<u>AM Peak Hour</u>			<u>PM Peak Hour</u>			<u>AM + PM Total</u>
				<u>In</u>	<u>Out</u>	<u>Total</u>	<u>In</u>	<u>Out</u>	<u>Total</u>	
Neighborhood IV										
Single-Family Detached Homes	0	du	0	0	0	0	0	0	0	
Attached Residential Homes	869	du	5,092	65	317	382	303	149	452	
Retail Development (Rates)	180,689	sq. ft.	7,759	113	73	186	325	353	678	
Elementary School	0	st	0	0	0	0	0	0	0	
Park	15	acre	34	0	0	0	0	1	1	
Golf Course	0	acre	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>	
Total			12,885	178	390	568	628	503	1,131	1,699
Total (Neighborhoods I - IV)										
Single-Family Detached Homes	2,851	du	27,284	535	1,603	2,138	1,814	1,066	2,880	
Attached Residential Homes	5,556	du	32,558	416	2,029	2,445	1,936	953	2,889	
Retail Development (Rates)	849,420	sq. ft.	36,474	534	341	875	1,529	1,656	3,185	
Elementary School	1,950	st	2,516	450	369	819	246	300	546	
Park	116	acre	264	1	0	1	3	4	7	
Golf Course	207	acre	<u>1,043</u>	<u>32</u>	<u>11</u>	<u>43</u>	<u>21</u>	<u>41</u>	<u>62</u>	
Total			100,139	1,968	4,353	6,321	5,549	4,020	9,569	15,890
Total (Specific Plan w/o Land Use Revisions)			102,199	2,029	4,464	6,493	5,708	4,132	9,840	16,333
Percent Change			-2%			-3%			-3%	-3%

Specific Plan Trip Generation Comparison (With Minus Without Land Use Revisions)

	<u>Daily</u>	<u>AM Peak Hour</u>			<u>PM Peak Hour</u>		
		<u>In</u>	<u>Out</u>	<u>Total</u>	<u>In</u>	<u>Out</u>	<u>Total</u>
Neighborhood I	(2,086)	(59)	(108)	(167)	(153)	(106)	(259)
Neighborhood II	1,220	15	209	224	118	(3)	115
Neighborhood III	(1,156)	(20)	(97)	(117)	(84)	(37)	(121)
Neighborhood IV	<u>(38)</u>	<u>3</u>	<u>(116)</u>	<u>(113)</u>	<u>(40)</u>	<u>34</u>	<u>(6)</u>
Total	(2,060)	(61)	(112)	(173)	(159)	(112)	(271)

Attachment 4

Traffic Worksheets for

February 2008 Draft Specific Plan

Lytle Creek Ranch Project
Future 2030 With Project Condition
AM Peak Hour

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

Intersection #22 Linden Ave. and Riverside Ave.

Cycle (sec): 130 Critical Vol./Cap.(X): 1.218
Loss Time (sec): 8 (Y+R=4.0 sec) Average Delay (sec/veh): 108.1
Optimal Cycle: 130 Level Of Service: F

Table with columns for Street Name (Linden Ave., Riverside Ave.), Approach (North Bound, South Bound, East Bound, West Bound), Movement (L, T, R), Control (Split Phase, Protected), Rights (Include), Min. Green, and Lanes.

Volume Module table with columns for Base Vol, Growth Adj, Initial Bse, User Adj, PHF Adj, PHF Volume, Reduct Vol, Reduced Vol, PCE Adj, MLF Adj, and Final Volume across various movements.

Saturation Flow Module table with columns for Sat/Lane, Adjustment, Lanes, and Final Sat. across various movements.

Capacity Analysis Module table with columns for Vol/Sat, Crit Moves, Green/Cycle, Volume/Cap, Delay/Veh, User DelAdj, AdjDel/Veh, LOS by Move, and HCM2kAvgQ across various movements.

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

Lytle Creek Ranch Project
 Future 2030 With Project+Mitigation Condition
 AM Peak Hour

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

 Intersection #22 Linden Ave. and Riverside Ave.

Cycle (sec): 65 Critical Vol./Cap.(X): 0.605
 Loss Time (sec): 8 (Y+R=4.0 sec) Average Delay (sec/veh): 13.5
 Optimal Cycle: 60 Level Of Service: B

Street Name:	Linden Ave.						Riverside Ave.								
Approach:	North Bound			South Bound			East Bound			West Bound					
Movement:	L	T	R	L	T	R	L	T	R	L	T	R			
Control:	Split Phase			Split Phase			Protected			Protected					
Rights:	Include			Include			Include			Include					
Min. Green:	6	6	6	6	6	6	6	6	6	6	6	6			
Lanes:	0	0	1	0	0	1	1	0	0	1	1	0	1	1	0

Volume Module:

Base Vol:	21	14	7	210	33	34	68	1357	86	62	944	161
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	21	14	7	210	33	34	68	1357	86	62	944	161
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
PHF Volume:	22	15	7	221	35	36	72	1428	91	65	994	169
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	22	15	7	221	35	36	72	1428	91	65	994	169
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	22	15	7	221	35	36	72	1428	91	65	994	169

Saturation Flow Module:

Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Lanes:	0.52	0.32	0.16	1.74	0.26	1.00	1.00	1.88	0.12	1.00	1.71	0.29
Final Sat.:	924	616	308	3134	492	1900	1800	3574	226	1800	3246	554

Capacity Analysis Module:

Vol/Sat:	0.02	0.02	0.02	0.07	0.07	0.02	0.04	0.40	0.40	0.04	0.31	0.31
Crit Moves:	****			****			****			****		
Green/Cycle:	0.09	0.09	0.09	0.10	0.10	0.10	0.16	0.59	0.59	0.09	0.52	0.52
Volume/Cap:	0.26	0.26	0.26	0.68	0.68	0.18	0.25	0.68	0.68	0.39	0.59	0.59
Delay/Veh:	28.2	28.2	28.2	33.0	33.0	27.0	24.5	10.0	10.0	29.3	11.1	11.1
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	28.2	28.2	28.2	33.0	33.0	27.0	24.5	10.0	10.0	29.3	11.1	11.1
LOS by Move:	C	C	C	C	C	C	C	B	B	C	B	B
HCM2kAvgQ:	1	1	1	4	4	1	2	11	11	2	9	9

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

Lytle Creek Ranch Project
Future 2030 With Project Condition
PM Peak Hour

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

Intersection #22 Linden Ave. and Riverside Ave.

Cycle (sec): 130 Critical Vol./Cap. (X): 1.686
Loss Time (sec): 8 (Y+R=4.0 sec) Average Delay (sec/veh): 280.7
Optimal Cycle: 130 Level Of Service: F

Table with columns for Street Name (Linden Ave., Riverside Ave.), Approach (North Bound, South Bound, East Bound, West Bound), Movement (L, T, R), Control (Split Phase, Protected), Rights (Include), Min. Green, and Lanes.

Volume Module: Table with columns for Base Vol, Growth Adj, Initial Bse, User Adj, PHF Adj, PHF Volume, Reduct Vol, Reduced Vol, PCE Adj, MLF Adj, and Final Volume across various movement categories.

Saturation Flow Module: Table with columns for Sat/Lane, Adjustment, Lanes, and Final Sat. across various movement categories.

Capacity Analysis Module: Table with columns for Vol/Sat, Crit Moves, Green/Cycle, Volume/Cap, Delay/Veh, User DelAdj, AdjDel/Veh, LOS by Move, and HCM2kAvgQ across various movement categories.

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

Lytle Creek Ranch Project
 Future 2030 With Project+Mitigation Condition
 PM Peak Hour

Level Of Service Computation Report

2000 HCM Operations Method (Base Volume Alternative)

Intersection #22 Linden Ave. and Riverside Ave.

Cycle (sec): 75 Critical Vol./Cap. (X): 0.881
 Loss Time (sec): 8 (Y+R=4.0 sec) Average Delay (sec/veh): 26.1
 Optimal Cycle: 81 Level Of Service: C

Street Name: Linden Ave. Riverside Ave.

Approach: North Bound South Bound East Bound West Bound

Movement: L - T - R L - T - R L - T - R L - T - R

Control: Split Phase Split Phase Protected Protected

Rights: Include Include Include Include

Min. Green: 6 6 6 6 6 6 6 6 6 6 6 6

Lanes: 0 0 1 0 0 1 1 0 0 1 1 0 1 0 1 1 0

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Volume Module:

Base Vol:	38	30	30	594	30	89	135	1219	87	71	1284	415
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	38	30	30	594	30	89	135	1219	87	71	1284	415
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
PHF Volume:	40	32	32	625	32	94	142	1283	92	75	1352	437
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	40	32	32	625	32	94	142	1283	92	75	1352	437
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	40	32	32	625	32	94	142	1283	92	75	1352	437

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Saturation Flow Module:

Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Lanes:	0.40	0.30	0.30	1.91	0.09	1.00	1.00	1.87	0.13	1.00	1.51	0.49
Final Sat.:	721	569	569	3436	174	1900	1800	3547	253	1800	2872	928

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Capacity Analysis Module:

Vol/Sat:	0.06	0.06	0.06	0.18	0.18	0.05	0.08	0.36	0.36	0.04	0.47	0.47
Crit Moves:	****			****			****			****		
Green/Cycle:	0.08	0.08	0.08	0.20	0.20	0.20	0.09	0.50	0.50	0.11	0.52	0.52
Volume/Cap:	0.69	0.69	0.69	0.90	0.90	0.24	0.90	0.72	0.72	0.38	0.90	0.90
Delay/Veh:	46.8	46.8	46.8	43.3	43.3	25.4	77.5	16.1	16.1	32.1	22.1	22.1
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	46.8	46.8	46.8	43.3	43.3	25.4	77.5	16.1	16.1	32.1	22.1	22.1
LOS by Move:	D	D	D	D	D	C	E	B	B	C	C	C
HCM2kAvgQ:	4	4	4	12	12	2	7	14	14	2	23	23

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

Lytle Creek Ranch Project
Future 2030 With Project Condition
AM Peak Hour

Level Of Service Computation Report

2000 HCM Operations Method (Base Volume Alternative)

Intersection #23 Ayala Dr. and Riverside Ave.

Cycle (sec): 60 Critical Vol./Cap.(X): 0.835
Loss Time (sec): 6 (Y+R=4.0 sec) Average Delay (sec/veh): 18.2
Optimal Cycle: 60 Level Of Service: B

Table with columns for Street Name (Ayala Dr., Riverside Ave.), Approach (North Bound, South Bound, East Bound, West Bound), Movement (L, T, R), Control (Split Phase, Protected), Rights (Include), Min. Green, and Lanes.

Volume Module: Table with columns for Base Vol, Growth Adj, Initial Bse, User Adj, PHF Adj, PHF Volume, Reduct Vol, Reduced Vol, PCE Adj, MLF Adj, and Final Volume across four approaches.

Saturation Flow Module: Table with columns for Sat/Lane, Adjustment, Lanes, and Final Sat. across four approaches.

Capacity Analysis Module: Table with columns for Vol/Sat, Crit Moves, Green/Cycle, Volume/Cap, Delay/Veh, User DelAdj, AdjDel/Veh, LOS by Move, and HCM2kAvgQ across four approaches.

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

Lytle Creek Ranch Project
Future 2030 With Project Condition
PM Peak Hour

Level Of Service Computation Report

2000 HCM Operations Method (Base Volume Alternative)

Intersection #23 Ayala Dr. and Riverside Ave.

Cycle (sec): 60 Critical Vol./Cap.(X): 0.789
Loss Time (sec): 6 (Y+R=4.0 sec) Average Delay (sec/veh): 17.9
Optimal Cycle: 60 Level Of Service: B

Table with columns for Street Name (Ayala Dr., Riverside Ave.), Approach (North Bound, South Bound, East Bound, West Bound), Movement (L, T, R), Control (Split Phase, Protected), Rights (Include), Min. Green, and Lanes.

Volume Module:

Table showing traffic volume calculations including Base Vol, Growth Adj, Initial Bse, User Adj, PHF Adj, PHF Volume, Reduct Vol, Reduced Vol, PCE Adj, MLF Adj, and Final Volume.

Saturation Flow Module:

Table showing saturation flow calculations including Sat/Lane, Adjustment, Lanes, and Final Sat.

Capacity Analysis Module:

Table showing capacity analysis calculations including Vol/Sat, Crit Moves, Green/Cycle, Volume/Cap, Delay/Veh, User DelAdj, AdjDel/Veh, LOS by Move, and HCM2kAvgQ.

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

Lytle Creek Ranch Project
Future 2030 With Project Condition
AM Peak Hour

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

Intersection #24 Knollwood Ave. and Riverside Ave.

Cycle (sec): 60 Critical Vol./Cap. (X): 0.424
Loss Time (sec): 6 (Y+R=4.0 sec) Average Delay (sec/veh): 8.8
Optimal Cycle: 60 Level Of Service: A

Street Name: Knollwood Ave. Riverside Ave.

Approach: North Bound South Bound East Bound West Bound
Movement: L - T - R L - T - R L - T - R L - T - R

Control: Split Phase Split Phase Protected Protected
Rights: Include Include Include Include
Min. Green: 6 6 6 6 6 6 6 6 6 6 6 6
Lanes: 0 0 0 0 0 1 0 0 0 1 1 0 2 0 0 0 0 1 1 0

Volume Module:

Base Vol: 0 0 0 9 0 165 17 1358 0 0 1177 16
Growth Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
Initial Bse: 0 0 0 9 0 165 17 1358 0 0 1177 16
User Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
PHF Adj: 0.95 0.95 0.95 0.95 0.95 0.95 0.95 0.95 0.95 0.95 0.95 0.95
PHF Volume: 0 0 0 9 0 174 18 1429 0 0 1239 17
Reduct Vol: 0 0 0 0 0 0 0 0 0 0 0 0
Reduced Vol: 0 0 0 9 0 174 18 1429 0 0 1239 17
PCE Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
MLF Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
FinalVolume: 0 0 0 9 0 174 18 1429 0 0 1239 17

Saturation Flow Module:

Sat/Lane: 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900
Adjustment: 0.95 1.00 1.00 0.95 1.00 1.00 0.95 1.00 1.00 0.95 1.00 1.00
Lanes: 0.00 0.00 0.00 1.00 0.00 1.00 1.00 2.00 0.00 0.00 1.97 0.03
Final Sat.: 0 0 0 1800 0 1900 1800 3800 0 0 3749 51

Capacity Analysis Module:

Vol/Sat: 0.00 0.00 0.00 0.01 0.00 0.09 0.01 0.38 0.00 0.00 0.33 0.33
Crit Moves: **** **** ****
Green/Cycle: 0.00 0.00 0.00 0.16 0.00 0.16 0.17 0.64 0.00 0.00 0.57 0.57
Volume/Cap: 0.00 0.00 0.00 0.03 0.00 0.58 0.06 0.58 0.00 0.00 0.58 0.58
Delay/Veh: 0.0 0.0 0.0 21.5 0.0 26.5 20.8 6.5 0.0 0.0 8.6 8.6
User DelAdj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
AdjDel/Veh: 0.0 0.0 0.0 21.5 0.0 26.5 20.8 6.5 0.0 0.0 8.6 8.6
LOS by Move: A A A C A C C A A A A A
HCM2kAvgQ: 0 0 0 0 0 4 0 8 0 0 8 8

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

Lytle Creek Ranch Project
Future 2030 With Project Condition
PM Peak Hour

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

Intersection #24 Knollwood Ave. and Riverside Ave.

Cycle (sec): 70 Critical Vol./Cap.(X): 0.443
Loss Time (sec): 6 (Y+R=4.0 sec) Average Delay (sec/veh): 6.5
Optimal Cycle: 60 Level Of Service: A

Street Name: Knollwood Ave. Riverside Ave.

Approach: North Bound South Bound East Bound West Bound
Movement: L - T - R L - T - R L - T - R L - T - R

Control: Split Phase Split Phase Protected Protected
Rights: Include Include Include Include
Min. Green: 6 6 6 6 6 6 6 6 6 6 6 6
Lanes: 0 0 0 0 0 1 0 0 0 1 1 0 2 0 0 0 0 1 1 0

Volume Module:

Base Vol: 0 0 0 9 0 87 44 1444 0 0 1239 41
Growth Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
Initial Bse: 0 0 0 9 0 87 44 1444 0 0 1239 41
User Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
PHF Adj: 0.95 0.95 0.95 0.95 0.95 0.95 0.95 0.95 0.95 0.95 0.95 0.95
PHF Volume: 0 0 0 9 0 92 46 1520 0 0 1304 43
Reduct Vol: 0 0 0 0 0 0 0 0 0 0 0 0
Reduced Vol: 0 0 0 9 0 92 46 1520 0 0 1304 43
PCE Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
MLF Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
FinalVolume: 0 0 0 9 0 92 46 1520 0 0 1304 43

Saturation Flow Module:

Sat/Lane: 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900
Adjustment: 0.95 1.00 1.00 0.95 1.00 1.00 0.95 1.00 1.00 0.95 1.00 1.00
Lanes: 0.00 0.00 0.00 1.00 0.00 1.00 1.00 2.00 0.00 0.00 1.94 0.06
Final Sat.: 0 0 0 1800 0 1900 1800 3800 0 0 3678 122

Capacity Analysis Module:

Vol/Sat: 0.00 0.00 0.00 0.01 0.00 0.05 0.03 0.40 0.00 0.00 0.35 0.35
Crit Moves: **** **** ****
Green/Cycle: 0.00 0.00 0.00 0.09 0.00 0.09 0.16 0.74 0.00 0.00 0.66 0.66
Volume/Cap: 0.00 0.00 0.00 0.06 0.00 0.54 0.16 0.54 0.00 0.00 0.53 0.53
Delay/Veh: 0.0 0.0 0.0 29.3 0.0 34.0 25.6 4.2 0.0 0.0 6.3 6.3
User DelAdj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
AdjDel/Veh: 0.0 0.0 0.0 29.3 0.0 34.0 25.6 4.2 0.0 0.0 6.3 6.3
LOS by Move: A A A C A C C A A A A A
HCM2kAvgQ: 0 0 0 0 0 3 1 8 0 0 8 8

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

Lytle Creek Ranch Project
Future 2030 With Project Condition
AM Peak Hour

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

Intersection #25 Country Club Dr. and Riverside Ave.

Cycle (sec): 60 Critical Vol./Cap.(X): 0.711
Loss Time (sec): 6 (Y+R=4.0 sec) Average Delay (sec/veh): 18.3
Optimal Cycle: 60 Level Of Service: B

Table with columns for Street Name (Country Club Dr., Riverside Ave.), Approach (North Bound, South Bound, East Bound, West Bound), Movement (L, T, R), Control (Permitted, Protected), Rights (Include), and Min. Green (6). Includes a Lanes row with values like 0 1 0 0 1.

Volume Module table with columns for Base Vol, Growth Adj, Initial Bse, User Adj, PHF Adj, PHF Volume, Reduct Vol, Reduced Vol, PCE Adj, MLF Adj, and Final Volume. Values range from 126 to 1099.

Saturation Flow Module table with columns for Sat/Lane, Adjustment, Lanes, and Final Sat. Values range from 0.53 to 1.00.

Capacity Analysis Module table with columns for Vol/Sat, Crit Moves, Green/Cycle, Volume/Cap, Delay/Veh, User DelAdj, AdjDel/Veh, LOS by Move, and HCM2kAvgQ. Values range from 0.01 to 0.35.

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

Lytle Creek Ranch Project
Future 2030 With Project Condition
PM Peak Hour

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

Intersection #25 Country Club Dr. and Riverside Ave.

Cycle (sec): 60 Critical Vol./Cap. (X): 0.787
Loss Time (sec): 6 (Y+R=4.0 sec) Average Delay (sec/veh): 19.5
Optimal Cycle: 60 Level Of Service: B

Table with columns for Street Name (Country Club Dr., Riverside Ave.), Approach (North Bound, South Bound, East Bound, West Bound), Movement (L, T, R), Control (Permitted, Protected), Rights (Include), Min. Green, and Lanes.

Volume Module table showing Base Vol, Growth Adj, Initial Bse, User Adj, PHF Adj, PHF Volume, Reduct Vol, Reduced Vol, PCE Adj, MLF Adj, and Final Volume across various movements.

Saturation Flow Module table showing Sat/Lane, Adjustment, Lanes, and Final Sat. values.

Capacity Analysis Module table showing Vol/Sat, Crit Moves, Green/Cycle, Volume/Cap, Delay/Veh, User DelAdj, AdjDel/Veh, LOS by Move, and HCM2kAvgQ values.

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

APPENDIX B

Figures

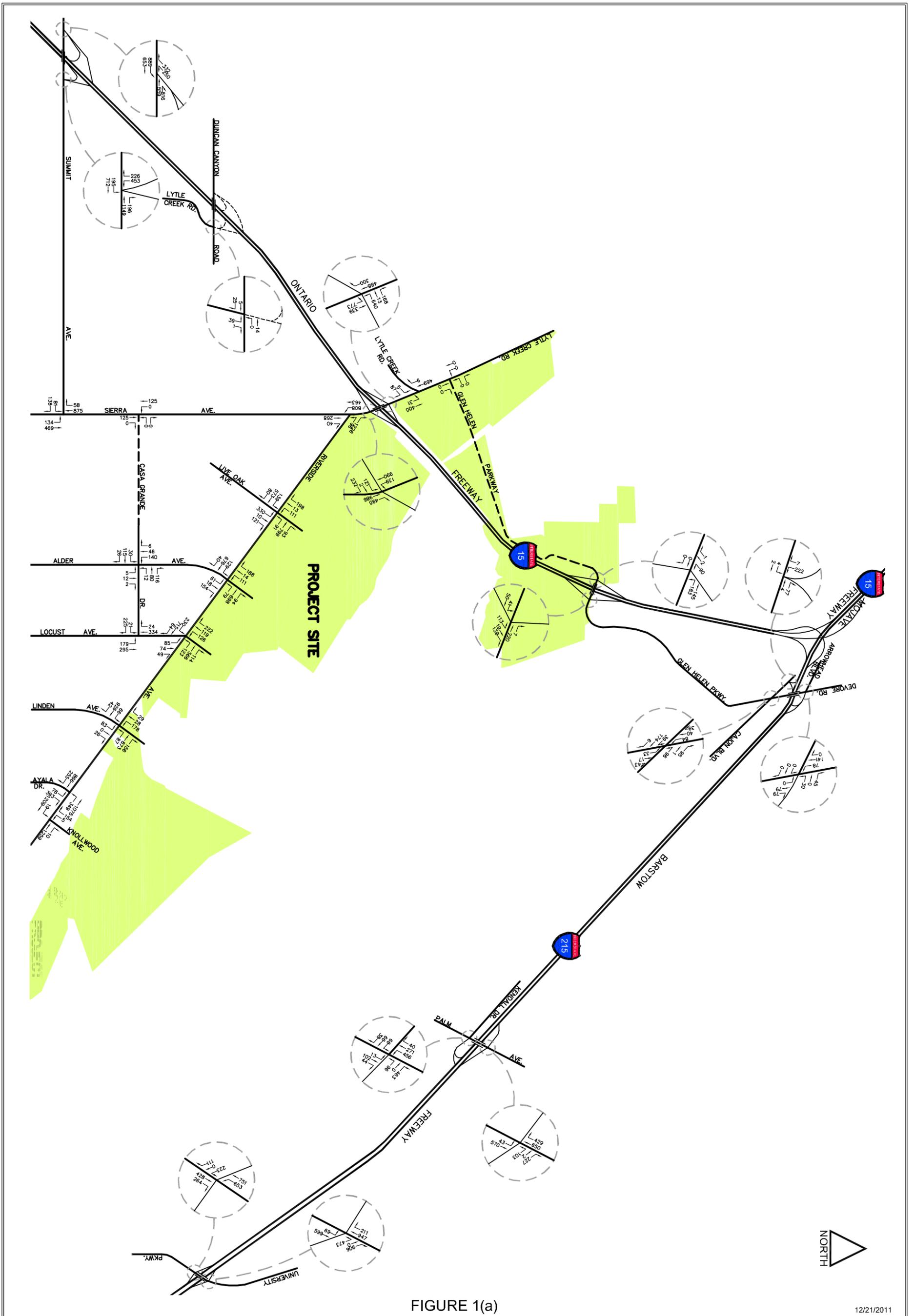


FIGURE 1(a)

12/21/2011

Lytle Creek Ranch 2011-12VAM2007WP

EXISTING (2007) TRAFFIC VOLUMES
WITH PROJECT
AM PEAK HOUR



STICK(EX)WP
Transportation Planning
Traffic Engineering
300 Corporate Pointe, Suite 470
Culver City, California 90230
PH (310) 473 6508 F (310) 444 9771
www.crainandassociates.com

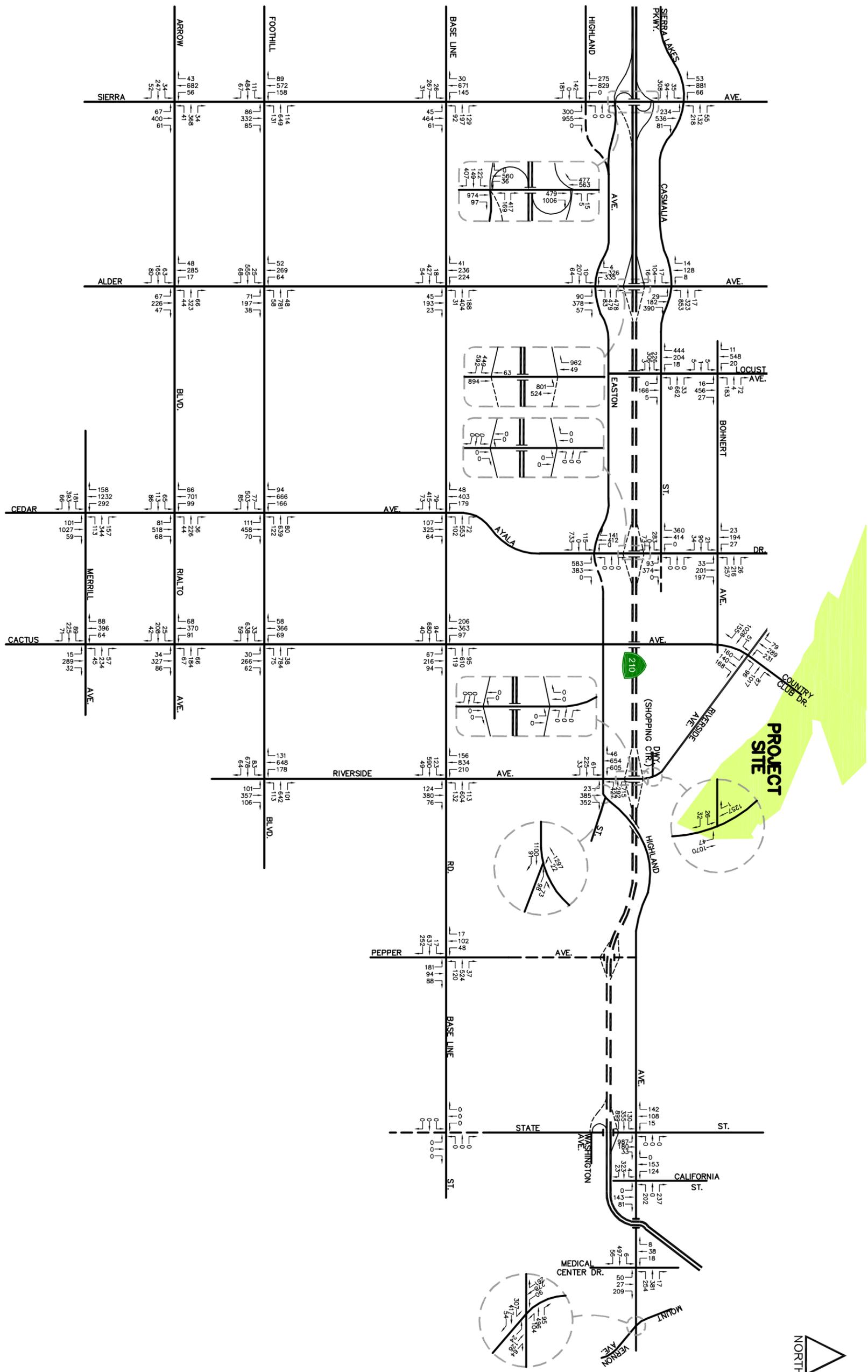


FIGURE 1(a)

12/21/2011

EXISTING (2007) TRAFFIC VOLUMES
WITH PROJECT
AM PEAK HOUR

STICK(EX)WP
CA CRAIN
 &
ASSOCIATES
 Transportation Planning
 Traffic Engineering
 300 Corporate Pointe, Suite 470
 Culver City, California 90230
 PH (310) 473 6508 F (310) 444 9771
 www.crainandassociates.com

Lytle Creek Ranch2011-12VAM2007WP

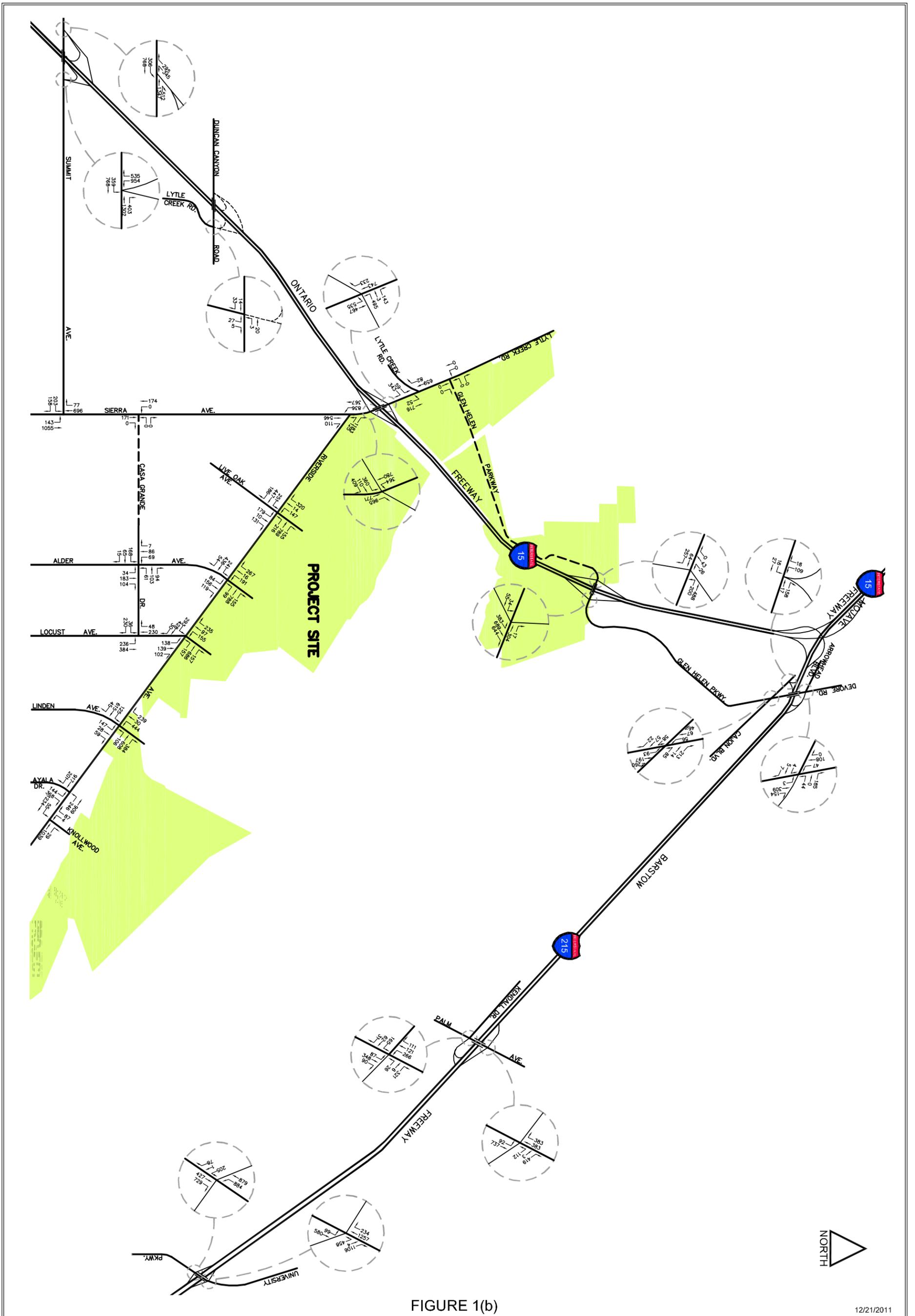


FIGURE 1(b)

12/21/2011

EXISTING (2007) TRAFFIC VOLUMES
WITH PROJECT
PM PEAK HOUR



STICK(EX)WP
Transportation Planning
Traffic Engineering
300 Corporate Pointe, Suite 470
Culver City, California 90230
PH (310) 473 6508 F (310) 444 9771
www.crainandassociates.com

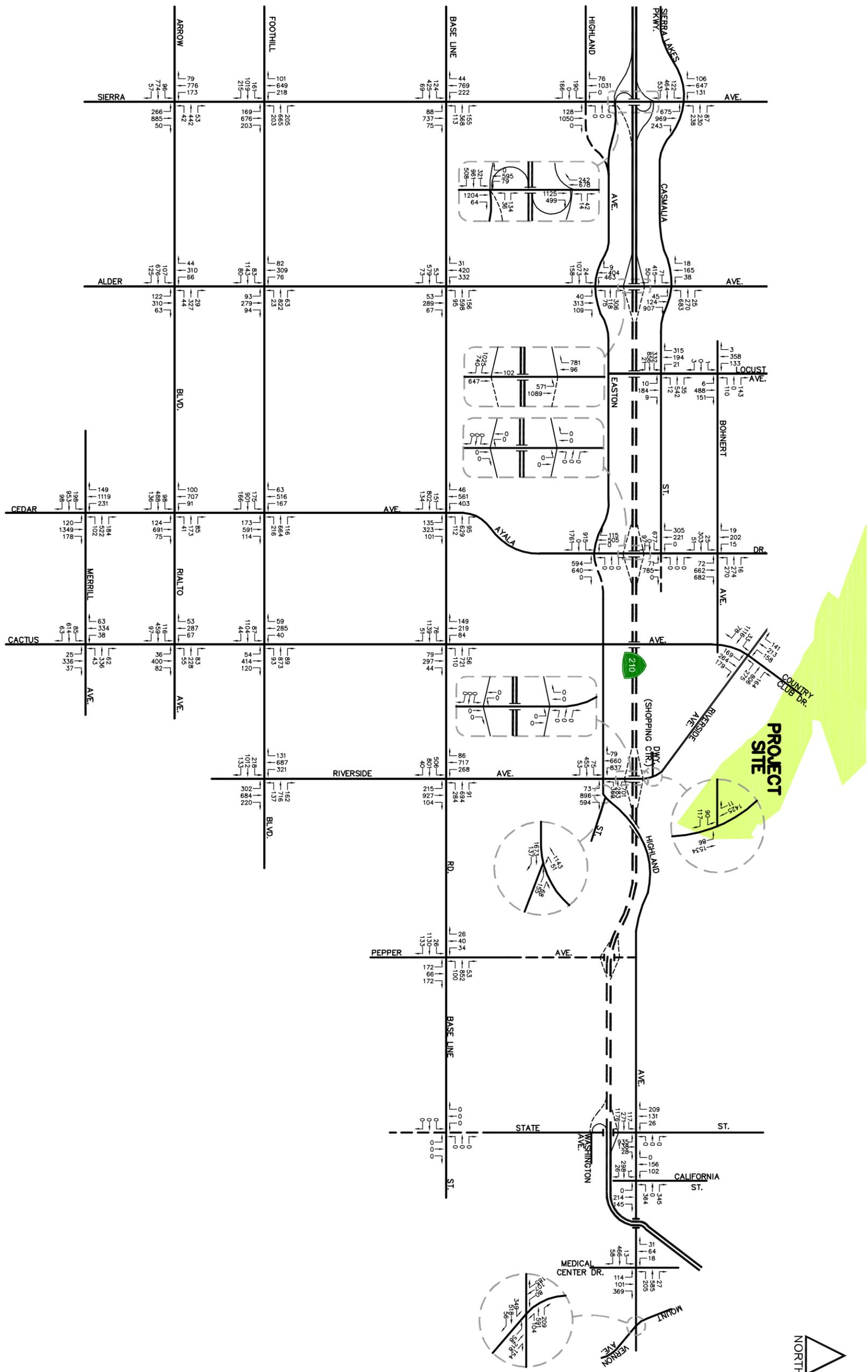


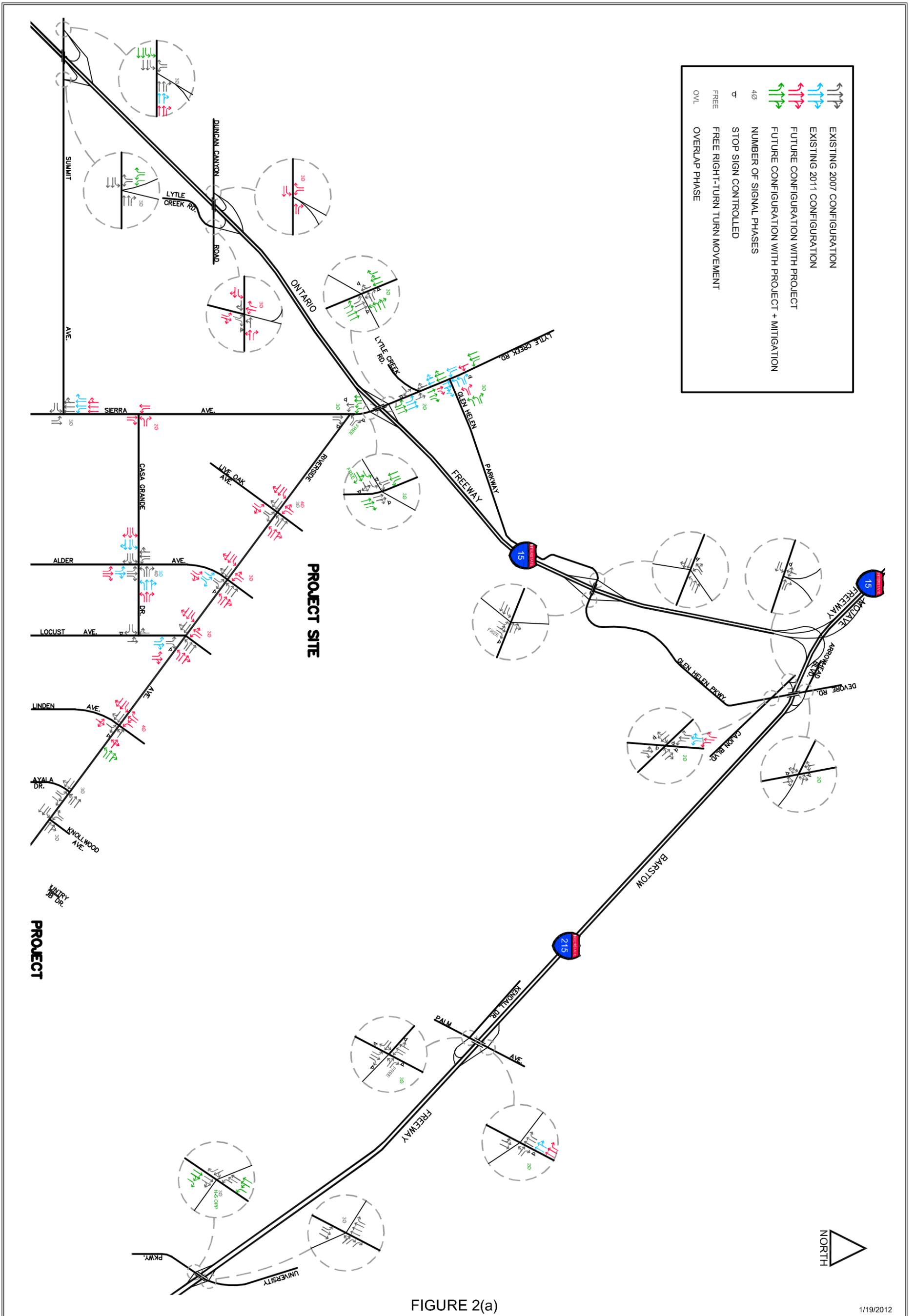
FIGURE 1(b)

12/21/2011

EXISTING (2007) TRAFFIC VOLUMES
WITH PROJECT
PM PEAK HOUR

STICK(EX)WP
CA CRAIN
 &
ASSOCIATES
 Transportation Planning
 Traffic Engineering
 300 Corporate Pointe, Suite 470
 Culver City, California 90230
 PH (310) 473 6508 F (310) 444 9771
 www.crainandassociates.com

Lytle Creek Ranch2011-12/PM2007WP



1/19/2012

FN: LYTLE CREEK RANCH 2011-12 LANE-CONFIG 2011-12

LANE CONFIGURATION



STICK(WP)
 Transportation Planning
 Traffic Engineering
 2007 Sawtelle Boulevard
 Los Angeles California 90025
 PH (310) 473 6508 F (310) 444 9771
 www.crainandassociates.com

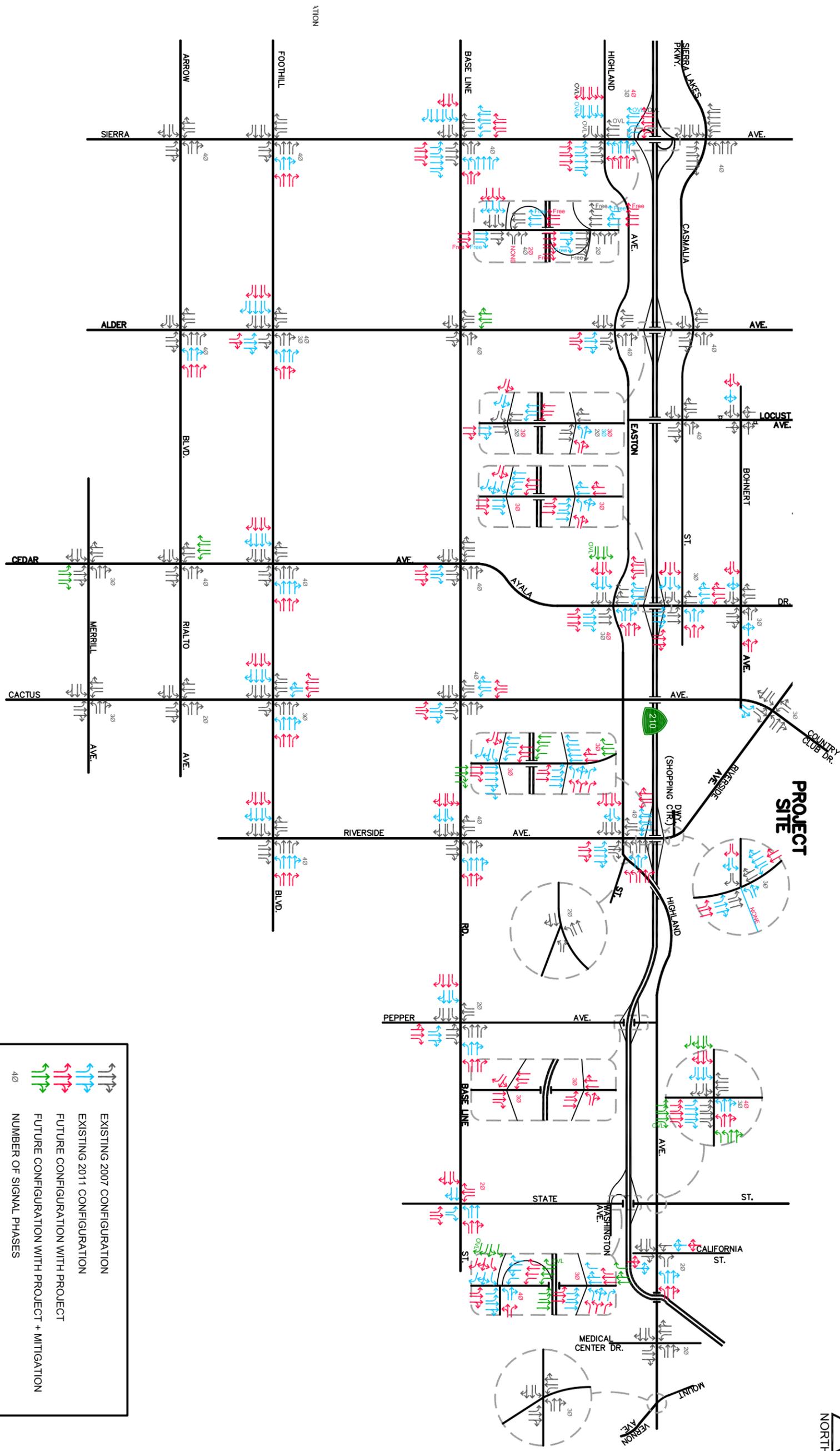


FIGURE 2(b)

12/12/2011

FN: LYTLE CREEK RANCH\2011-12\LANE-CONFIG 2011-12

LANE CONFIGURATION

STICK(WP)
 Transportation Planning
 Traffic Engineering
 2007 Sawtelle Boulevard
 Los Angeles California 90025
 PH (310) 473 6508 F (310) 444 9771
 www.crainandassociates.com

CA CRAIN & ASSOCIATES

APPENDIX C

August 2007 Traffic Study Proposed Mitigation Measures

The Traffic Study proposed the following mitigation measures that were assumed in this analysis:

7. I-215 SB On/Off Ramps & University Pkwy – Improve University Parkway to provide an exclusive right-turn lane in the northbound direction, and one left-turn lane, one left/through-shared lane and one through lane in the southbound direction. In order to accommodate the left-through-shared lane, modify the existing traffic signal to allow split phases for the northbound and southbound approaches.
12. I-15 SB On/Off Ramps & Sierra Avenue – Improve Sierra Avenue to provide dual left-turn lanes and two through lanes in the northwest-bound direction, and one through lane, one through/right-shared lane and one right-turn lane in the southeast-bound direction. Also, widen the southbound off-ramp to accommodate one left-turn lane, one left/right-shared lane and one right-turn lane. In addition, install a traffic signal at this location.
13. I-15 NB On/Off Ramps & Sierra Avenue – Improve Sierra Avenue to provide one additional through lane in the southeast-bound direction, and one exclusive right-turn lane in the northwest-bound direction. Reconstruct the northbound off-ramp to accommodate one left-turn lane, one left/through-shared lane and one free right-turn lane. In addition, install a traffic signal at this location.
18. Riverside Avenue & Sierra Avenue – Widen and restripe Sierra Avenue to provide dual left-turn lanes and two through lanes in the southbound direction. Also improve the intersection to allow a free right-turn from Riverside Avenue onto Sierra Avenue. Install a traffic signal at this intersection.
22. Riverside Avenue & Linden Avenue – Widen and restripe to provide one left-turn lane, and one through lane and one through/right-shared lane in the northwest-bound direction.

APPENDIX D

The I-15/I-215 interchange improvements project

CALIFORNIA DEPARTMENT OF
TRANSPORTATION
 DISTRICT 8 | RIVERSIDE & SAN BERNARDINO COUNTIES

[Caltrans Home](#) → [District 8 Home](#) → [I-15/215 I/C Improvements \(Devore\)](#)

PROJECTS | **san bernardino county** | **I-15/I-215 I/C Imprvmt. Devore**



Project Overview and Significance

The purpose of the proposed project is to reduce congestion, reduce accidents, and improve freeway operation. San Bernardino Associated Governments (SANBAG) and Caltrans are studying a number of proposed improvements for the Interstate-15 (I-15)/Interstate-215 (I-215) interchange. The project limits on I-15 are from 2.3 miles south to 2.0 miles north of the I-15/215 interchange and on I-215 from 1 mile south to the I-15/215 interchange.

These improvements include the addition of one northbound lane and one southbound lane on I-15 between I-215 and Glen Helen Parkway, where the current freeway is three lanes in each direction. The addition of the new lanes will provide a continuous set of four lanes in each direction between State Route 60 and US Highway 395.

It is proposed to reconfigure the I-15/I-215 interchange and adjacent local interchanges to reduce traffic delays, improve the flow of goods through the region and enhance the reliability of goods headed to and from freight facilities in the Los Angeles Basin, including the Ports of Los Angeles and Long Beach.

Truck bypass lanes also are proposed to help improve traffic flow along this major freight movement route. I-15 is designated a Corridor of National Significance, and this interchange is a critical bottleneck for the region. Adding truck bypass lanes will eliminate the need for slower-moving trucks to weave across heavy, faster-moving automobile traffic to enter the right lanes as they pass through the interchange.

Currently the interchange experiences 1,200 daily vehicle hours of delay at an annual cost of \$3.75 million. Without the improvement project, these numbers are expected to increase by the year 2040 to 25,000 daily vehicle hours of delay at an annual cost of more than \$80 million.

The interchange was named the highest short-term priority in the Interstate 15 Comprehensive Corridor Study prepared for SANBAG, Caltrans and the Southern California Association of Governments in 2005. **Get more information about the project [background and history](#)**

Project Funding

Project funding is anticipated to be a combination of State, Federal, and local Measure I funds.

DOWNLOAD [DRAFT ENVIRONMENTAL DOCUMENT](#):  (45 mb)

DOWNLOAD [DRAFT PROJECT REPORT](#):  (400 mb)

DOWNLOAD [EXHIBITS FROM PUBLIC MEETING \[on June 2011\]](#):  (153 k)

ALTERNATIVES CONSIDERED (PDFs):

Alternative 1 (No Build).

Alternative 2 includes full route continuity both northbound and southbound on I-15 by almost reconstructing the existing

I-15/I-215 interchange, a truck bypass lane in both directions on I-15 and relocating Devore Road interchange at I-215 about 2900 feet to the south, at an estimated cost of \$ 406 M-

Alternative 3 includes full route continuity both northbound and southbound on I-15 by almost reconstructing the existing I-15/I-215 interchange, a truck bypass lane in both directions on I-15 and relocating the southbound Devore Road ramps at I-215 about 2900 feet to the south, at an estimated cost of \$383 M-

Alternative 3a maintains most of the existing bridge structures, provides route continuity to the south on I-15, provides a truck bypass lane in both directions on I-15 and relocates the southbound Devore Road ramps at I-215 about 1500 feet to the south, at an estimated cost of \$323 M- (*NOTE: pdf contains 2 pages - maps alt3a_1 & alt3a_2*). *This alternative was selected as the preferred alternative by the Project Development Team members on September 8, 2011 and will be further evaluated through the environmental approval process scheduled for completion in early 2012.*

Alternative 5 maintains most of the existing bridge structures, but does not provide route continuity for I-15, provides a truck bypass lane in both directions on I-15 and relocates Devore Road interchange at I-215 about 2900 feet to the south, at an estimated cost of \$330 M-

Project Schedule

On July 1, 2010 the California Transportation Commission (CTC) approved this project for Design Build. This project will be one of the ten design-build projects allocated to Caltrans. This project will be awarded to a Design-Build firm based on best value. A Request for Proposal (RFP) will be released to Prequalified Design-Build firms in accordance with the guidelines and criteria established by Caltrans. The selected Design Build firm will design and build the project.

The key project milestones are:

- Public circulation of the Environmental Document was from June 6, 2011 to July 7, 2011
- Request for Qualifications (RFQ) released on July 19, 2011
- Statement of Qualifications (SOQ) were received as of September 15, 2011
- Prequalification determination November 2011
- Release of Request for Proposal: late 2011
- Project Approval and Environmental Document Approval: early 2012
- Receive Proposal: Mid 2012
- Right of Way acquisition: Mid 2012 to Mid 2014
- Award Design Build Contract Fall of 2012
- Design and Construction Late 2012 to 2016

Project Contact

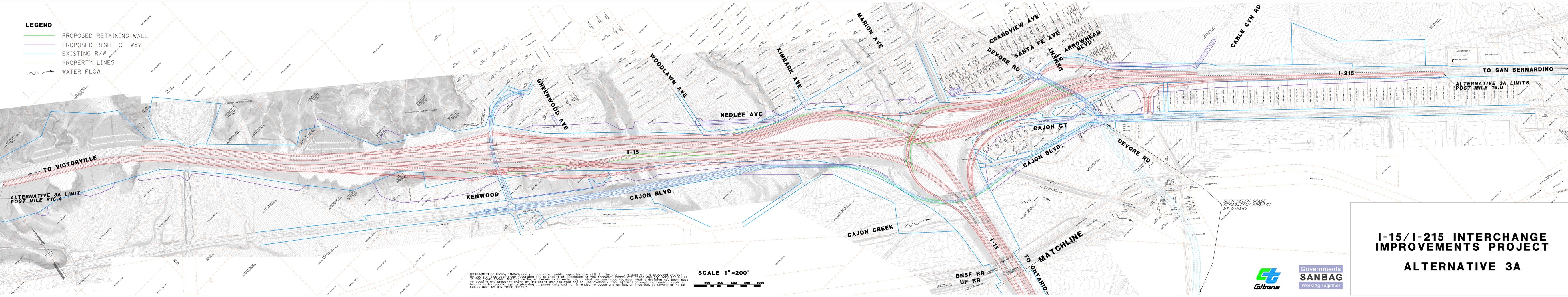
Jesus Paez, Project Director, (909) 383-6314

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LEGEND

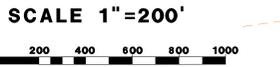
- PROPOSED RETAINING WALL
- PROPOSED RIGHT OF WAY
- EXISTING R/W
- - - PROPERTY LINES
- ~ WATER FLOW



ALTERNATIVE 3A LIMIT
POST MILE R16.4

ALTERNATIVE 3A LIMITS
POST MILE 16.0

DISCLAIMER: Caltrans, SANBAG, and various other public agencies are still in the planning stages of the proposed project. No decision has been made regarding the alignment or expansion of the freeways, roads, off ramps and ancillary facilities in the areas shown. Nothing reflected herein is intended to, or shall be construed to, mean that a decision has been made to acquire any property shown or implement any depicted capital improvement. The information contained and/or depicted herein is for public agency planning purposes only and not intended to cause any action, or inaction, by anyone or to be relied upon by any third party.*



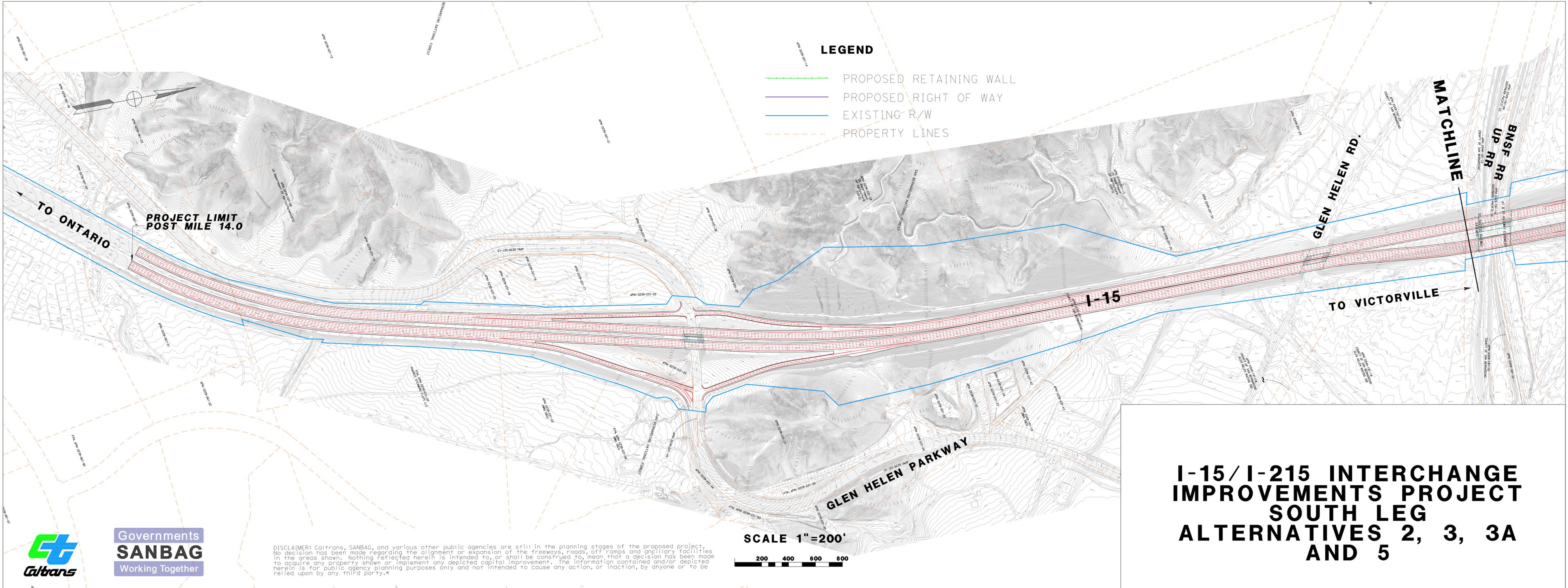
GLEN HELEN GRADE SEPARATION PROJECT BY OTHERS

I-15/I-215 INTERCHANGE IMPROVEMENTS PROJECT

ALTERNATIVE 3A



DATE PLOTTED => 8/24/2011
TIME PLOTTED => 8:11 AM



LEGEND

- PROPOSED RETAINING WALL
- PROPOSED RIGHT OF WAY
- EXISTING R/W
- PROPERTY LINES

**PROJECT LIMIT
POST MILE 14.0**

TO ONTARIO

TO VICTORVILLE

MATCHLINE

**BNSF RR
UP RR**

I-15

GLEN HELEN PARKWAY

GLEN HELEN RD.

**I-15/I-215 INTERCHANGE
IMPROVEMENTS PROJECT
SOUTH LEG
ALTERNATIVES 2, 3, 3A
AND 5**

SCALE 1"=200'



DISCLAIMER: Caltrans, SANBAG, and various other public agencies are still in the planning stages of the proposed project. No decision has been made regarding the alignment or expansion of the freeways, roads, off ramps and ancillary facilities in the areas shown. Nothing reflected herein is intended to, or shall be construed to, mean that a decision has been made to acquire any property shown or implement any depicted capital improvement. The information contained and/or depicted herein is for public agency planning purposes only and not intended to cause any action, or inaction, by anyone or to be relied upon by any third party.*



APPENDIX E

Phasing of Roadway Improvement Mitigation
(March 15, 2010 Letter to Mr. Peter Lewandowski)



EMAIL TRANSMITTED

March 15, 2010

Mr. Peter Lewandowski
Principal
Environmental Impact Sciences
26051 Via Concha
Mission Viejo, California 92691-5614

RE: Phasing of Lytle Creek Ranch Roadway Improvement Mitigation Measures

Dear Peter,

As requested, we have developed a draft phasing procedure and timeline for the subset of transportation mitigation measures/roadway improvements from the Lytle Creek Ranch Specific Plan (LCRSP) Traffic Impact Assessment (TIA) which are recommended for construction by the project. The phasing analysis determines the amount of trip generation during the AM and PM peak hours of the roadway when a project traffic impact is estimated to be considered “significant” at a study location. The mitigation measure “trigger” values were calculated for a subset of mitigation measures from the LCRSP traffic study dated February 2008. The subset of mitigation measures are those recommended for implementation by the project based on the overall cost of the subset being similar to the project’s total fair-share cost of the total cumulative mitigation program, as well as these measures being in close proximity to the LCRSP area. Project implementation of these cumulatively required improvements will help ensure installation of the needed site adjacent roadway improvements by the time they first are needed.

In order to determine trigger values, there are two key assumptions:

- The project traffic impacts at each intersection are proportional to the overall LCRSP project trip generation; and

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310 444 9771 (fax)

www.crainandassociates.com

- If the final “With Project” LOS is unacceptable, the project impact is considered “significant” whenever the project trip threshold is exceeded.

The following list of mitigation measures recommended for implementation by the project includes the project trip generation trigger levels. For each of the six locations, the list presents the level of project development which will first cause a “significant” CEQA or CMP impact, as those terms are defined in our May 12, 2009 letter. In order to minimize adverse traffic impacts, we recommend incorporating these trigger values into the Development Agreement and/or LCRSP. Specifically, we would recommend that prior to receiving a building permit, the applicant for each of the LCRSP’s “planning areas” and/or “B” level subdivision maps, whichever is deemed most appropriate by the City, submit a trip generation report (for uniformity and consistency using the factors in the attached Appendix A – Generation Rates). The trip generation report should be acceptable to the City’s Director of Development Services (Director). The trip generation report will include the total LCRSP projects to that time. Specifically, on the day the report is submitted, all buildings in the LCRSP area for which a building permit application has been filed following the LCRSP’s enactment shall be included in the trip generation table. The report should include those projects for which the application has been approved, but should not include applications which have been subsequently withdrawn or rejected.

The Appendix A table will determine AM and PM peak hour generation values and will be used to determine which of the mitigation measures the LCRSP generation would exceed the trigger generation value during either the AM or PM peak hour. The triggers listed below would only be modified based upon an agreement between the Applicant, as defined in the project’s CEQA document, and the Director. Those mitigation measures for which the trigger level would be exceeded then must be installed prior to the issuance of a Certificate of Occupancy or at an earlier time set by the Director. A substitute improvement and/or Condition of Approval may be agreed-to by the Applicant and Director, but only if it is determined (in consultation with the City Engineer) that the substitute improvement and/or condition would be as equally effective as the originally required improvement in relieving traffic congestion at the location.

Project Study Intersections Mitigation Measures

The improvements are described below and a worksheet for calculating the trigger values contained in Appendix B.

12. I-15 SB On/Off Ramps & Sierra Avenue – Improve Sierra Avenue to provide dual left-turn lanes and two through lanes in the northwest-bound direction, and two through lanes and

one free right-turn lane in the southeast-bound direction. Also, widen the southbound off-ramp to accommodate one left-turn lane, one left/right-shared lane and one right-turn lane. In addition, install a traffic signal at this location.
(AM Peak Hour = 272, PM Peak Hour = 281)

13. I-15 NB On/Off Ramps & Sierra Avenue – Improve Sierra Avenue to provide dual left-turn lanes and two through lanes in the southeast-bound direction, and two through lanes and one right-turn lane in the northwest-bound direction. Reconstruct the northbound off-ramp to accommodate one left-turn lane, one left/through-shared lane and one free right-turn lane. In addition, install a traffic signal at this location.
(AM Peak Hour = 240, PM Peak Hour = 222)
16. I-15 SB On/Off Ramps & Summit Avenue – Restripe Summit Avenue to accommodate one additional left-turn lane in the eastbound direction.
(AM Peak Hour = N/A, PM Peak Hour = 5125*)
17. I-15 NB On/Off Ramps & Summit Avenue – Restripe the northbound off-ramp to provide dual left-turn lanes and one right-turn lane.
(AM Peak Hour = N/A, PM Peak Hour = 5125)
18. Riverside Avenue & Sierra Avenue – Widen and restripe Sierra Avenue to provide dual left-turn lanes and two through lanes in the southbound direction. Also improve the intersection to allow a free right-turn from Riverside Avenue onto Sierra Avenue. Install a traffic signal at this intersection.
(AM Peak Hour = 258, PM Peak Hour = 247)
22. Riverside Avenue & Linden Avenue – Widen and restripe to provide one left-turn lane, one through lane and one through/right-shared lane in the northwest-bound direction.
(AM Peak Hour = 250, PM Peak Hour = 210)

*No project significant traffic impact is anticipated at this intersection, so values from the adjacent intersection within the same interchange were used.

The above improvements, if funded as part of later development projects within the LCRSP area, would be subject to any “in-lieu credit” provisions of any applicable City or other government agency transportation fees. Inclusion of the above requirement to have such measures implemented in relationship to the development within the LCRSP area would not alter fee provisions, including any applicable in-lieu credit.

Mr. Peter Lewandowski
March 15, 2010
Page 4

Please contact me with any questions or requests for analysis modifications.

Sincerely,

A handwritten signature in black ink, appearing to read "George Rhyner". The signature is written in a cursive, flowing style.

George Rhyner
Senior Transportation Engineer

GR:cw
C19837C
JA79256
attachments

cc: Mike Story

APPENDIX A

Generation Rates

Lytle Creek Ranch Specific Plan Trip Generation Rates

<i>Land Use</i> ¹	ITE	UNIT OF MEASURE FOR SIZE	Trip Rate for Hours on the Roadway	
			AM Peak	PM Peak
<i>Residential</i>				
Single Family Detached Homes	210	Dwelling Unit	0.75	1.01
Multi-Family Attached Homes	230	Dwelling Unit	0.44	0.52
Detached Senior Housing	251	Dwelling Unit	0.20	0.26
Assisted Living	254	Bed Space	0.14	0.22
<i>Industrial</i> ²				
Industrial Park	130	Bldg. Area in ksf	0.84	0.86
Manufacturing Standard	140	Bldg. Area in ksf	0.73	0.74
Warehousing Standard ³	150	Bldg. Area in ksf	0.45	0.47
Warehousing - High Cube	152	Bldg. Area in ksf	0.12	0.14
<i>Lodging</i>				
Hotel	310	Room	0.56	0.59
Motel	320	Room	0.45	0.47
<i>Retail/Services</i>				
Shopping Center ⁴	820	Bldg. Area in ksf	1.03	3.75
Bank	912	Bldg. Area in ksf	12.34	45.74
Supermarket (≥15,000 sf)	850	ksf	3.25	10.45
Convenience Market (<15,000 sf)	851	ksf	67.03	52.41
Stand Alone Quality Restaurant	931	Bldg. Area in ksf	0.81	7.49
High-Turnover Restaurant	932	Bldg. Area in ksf	11.52	10.92
Fast Food Restaurant	934	Bldg. Area in ksf	53.11	34.64
Gasoline Service Station	944	Fueling Positions	12.07	13.86
<i>Office</i>				
General-Stand Alone	710	Bldg. Area in ksf	1.55	1.49
Medical/Dental	720	Bldg. Area in ksf	2.48	3.72
Office Park	750	Bldg. Area in ksf	1.74	1.50
<i>Recreational</i>				
Park	412	acres	0.01	0.06
Golf Course	430	acres	0.21	0.30
Health/Fitness Club	492	ksf	1.21	4.05
<i>School</i>				
Elementary	520	students	0.42	0.28
Middle/Jr. High	522	students	0.53	0.15
High	530	students	0.41	0.14
<i>Other</i> ²				
The rate to be considered for other land uses is per the decision of the City Engineer, who shall specify a rate from <i>Trip Generation, 7th Edition</i> , ITE if one is available from that source or one from another source which uses actual trip generation count				
¹ Land-uses, except as noted, to be defined per <i>Trip Generation, 7th Edition, ITE</i> . ² Passenger Car Equivalent (PCE) factor to be applied for any use where such factors are used in the San Bernardino County Congestion Management Plan (CMP) or truck trips exceed 10% of peak hour generation. ³ Standard warehouses are any warehouses which have less than 24 feet high ceiling or are less than 100,000 square feet in size. ⁴ Shopping Centers are not to exceed 20% usage for restaurants (all categories), Cinema (all categories) or any other non-retail use.				

APPENDIX B

Trigger Value Calculations

APPENDIX F

LOS Calculation Worksheet

Existing (2007) Plus Project

Lytle Creek Ranch Project
Existing 2007 Traffic Condition
AM Peak Hour

Level Of Service Computation Report

2000 HCM Unsignalized Method (Base Volume Alternative)

Intersection #1 Devore Rd & I-215 NB On/Off-Ramps / Arrowhead Bl

Average Delay (sec/veh): 3.1 Worst Case Level Of Service: B[10.5]

Table with columns for Street Name, Approach, Movement, Control, Rights, and Lanes. Rows include Devore Rd and I-215 NB On/Off-Ramps / Arrowhead.

Volume Module:AM Peak Hour

Table with columns for Base Vol, Growth Adj, Initial Bse, User Adj, PHF Adj, PHF Volume, Reduct Vol, and Final Volume. Rows include Devore Rd and I-215 NB On/Off-Ramps / Arrowhead.

Critical Gap Module:

Table with columns for Critical Gp and FollowUpTim. Rows include Devore Rd and I-215 NB On/Off-Ramps / Arrowhead.

Capacity Module:

Table with columns for Cnflct Vol, Potent Cap., Move Cap., and Volume/Cap. Rows include Devore Rd and I-215 NB On/Off-Ramps / Arrowhead.

Level Of Service Module:

Table with columns for 2Way95thQ, Control Del, LOS by Move, Movement, Shared Cap., SharedQueue, Shrd ConDel, Shared LOS, ApproachDel, and ApproachLOS. Rows include Devore Rd and I-215 NB On/Off-Ramps / Arrowhead.

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

Lytle Creek Ranch Project
Existing 2007 Traffic Condition
AM Peak Hour

Level Of Service Computation Report

2000 HCM Unsignalized Method (Base Volume Alternative)

Intersection #2 I-215 SB On/Off-Ramps & Cajon Bl

Average Delay (sec/veh): 7.1 Worst Case Level Of Service: A[9.7]

Table with columns for Street Name (I-215 SB On/Off-Ramps, Cajon Bl), Approach (North Bound, South Bound, East Bound, West Bound), Movement (L, T, R), Control (Stop Sign, Uncontrolled), Rights (Include), and Lanes (0, 1).

Table for Volume Module:AM Peak Hour. Rows include Base Vol, Growth Adj, Initial Bse, User Adj, PHF Adj, PHF Volume, Reduct Vol, and Final Volume. Columns correspond to the four approaches.

Table for Critical Gap Module. Rows include Critical Gp and FollowUpTim. Columns correspond to the four approaches.

Table for Capacity Module. Rows include Cnflct Vol, Potent Cap., Move Cap., and Volume/Cap. Columns correspond to the four approaches.

Table for Level Of Service Module. Rows include 2Way95thQ, Control Del, LOS by Move, Movement, Shared Cap., SharedQueue, Shrd ConDel, Shared LOS, ApproachDel, and ApproachLOS. Columns correspond to the four approaches.

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

Lytle Creek Ranch Project
Existing 2007 Traffic Condition
AM Peak Hour

Level Of Service Computation Report

2000 HCM 4-Way Stop Method (Base Volume Alternative)

Intersection #3 Glen Helen Pkwy & Cajon Bl

Cycle (sec): 100 Critical Vol./Cap.(X): 0.188
Loss Time (sec): 0 (Y+R=4.0 sec) Average Delay (sec/veh): 9.3
Optimal Cycle: 0 Level Of Service: A

Table with columns for Street Name (Glen Helen Pkwy, Cajon Bl), Approach (North Bound, South Bound, East Bound, West Bound), Movement (L, T, R), Control (Stop Sign), Rights (Include), Min. Green (6), and Lanes (0, 1, 0, 0, 1).

Volume Module:AM Peak Hour

Table showing traffic volume data including Base Vol, Growth Adj, Initial Bse, User Adj, PHF Adj, PHF Volume, Reduct Vol, Reduced Vol, PCE Adj, MLF Adj, and Final Volume for various movements.

Saturation Flow Module:

Table showing saturation flow data including Adjustment (1.00), Lanes (0.66, 0.34, 1.00), and Final Sat. (364, 187, 655).

Capacity Analysis Module:

Table showing capacity analysis data including Vol/Sat, Crit Moves, Delay/Veh, Delay Adj, AdjDel/Veh, LOS by Move, ApproachDel, Delay Adj, ApprAdjDel, LOS by Appr, and AllWayAvgQ.

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

Lytle Creek Ranch Project
Existing 2007 Traffic Condition
AM Peak Hour

Level Of Service Computation Report

2000 HCM Unsignalized Method (Base Volume Alternative)

Intersection #4 Palm Ave & I-215 NB On/Off-Ramps

Average Delay (sec/veh): 3.7 Worst Case Level Of Service: C[21.2]

Table with columns: Street Name, Approach, Movement, Control, Rights, Lanes. Rows for Palm Ave and I-215 NB On/Off-Ramps.

Volume Module: Table with columns: Base Vol, Growth Adj, Initial Bse, User Adj, PHF Adj, PHF Volume, Reduct Vol, Final Volume. Rows for Palm Ave and I-215 NB On/Off-Ramps.

Critical Gap Module: Table with columns: Critical Gp, FollowUpTim. Rows for Palm Ave and I-215 NB On/Off-Ramps.

Capacity Module: Table with columns: Cnflct Vol, Potent Cap., Move Cap., Volume/Cap. Rows for Palm Ave and I-215 NB On/Off-Ramps.

Level Of Service Module: Table with columns: 2Way95thQ, Control Del, LOS by Move, Movement, Shared Cap., SharedQueue, Shrd ConDel, Shared LOS, ApproachDel, ApproachLOS. Rows for Palm Ave and I-215 NB On/Off-Ramps.

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

Lytle Creek Ranch Project
Existing 2007 Traffic Condition
AM Peak Hour

Level Of Service Computation Report

2000 HCM 4-Way Stop Method (Base Volume Alternative)

Intersection #5 Palm Ave & I-215 SB On/Off-Ramps / Kendall Dr.

Cycle (sec): 100 Critical Vol./Cap.(X): 1.099
Loss Time (sec): 0 (Y+R=4.0 sec) Average Delay (sec/veh): 48.5
Optimal Cycle: 0 Level Of Service: E

Street Name: Palm Ave I-215 SB On/Off-Ramps / Kendall D

Approach: North Bound South Bound East Bound West Bound

Movement: L - T - R L - T - R L - T - R L - T - R

Control: Stop Sign Stop Sign Stop Sign Stop Sign
Rights: Include Include Include Include

Min. Green: 6 6 6 6 6 6 6 6 6 6 6 6

Lanes: 1 0 1 0 1 1 0 1 1 0 0 1 0 0 0 1

Volume Module:

Base Vol: 13 102 44 456 271 40 68 66 38 96 0 463
Growth Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
Initial Bse: 13 102 44 456 271 40 68 66 38 96 0 463
User Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
PHF Adj: 0.95 0.95 0.95 0.95 0.95 0.95 0.95 0.95 0.95 0.95 0.95 0.95
PHF Volume: 14 107 46 480 285 42 72 69 40 101 0 487
Reduct Vol: 0 0 0 0 0 0 0 0 0 0 0 0
Reduced Vol: 14 107 46 480 285 42 72 69 40 101 0 487
PCE Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
MLF Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
Final Volume: 14 107 46 480 285 42 72 69 40 101 0 487

Saturation Flow Module:

Adjustment: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
Lanes: 1.00 1.00 1.00 1.00 1.74 0.26 0.51 0.49 1.00 1.00 0.00 1.00
Final Sat.: 359 379 408 437 802 120 207 201 456 438 0 519

Capacity Analysis Module:

Vol/Sat: 0.04 0.28 0.11 1.10 0.36 0.35 0.35 0.35 0.09 0.23 xxxxx 0.94
Crit Moves: **** **** ****
Delay/Veh: 12.8 15.3 12.2 101.0 14.4 14.2 15.6 15.6 11.1 13.2 0.0 51.3
Delay Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
AdjDel/Veh: 12.8 15.3 12.2 101.0 14.4 14.2 15.6 15.6 11.1 13.2 0.0 51.3
LOS by Move: B C B F B B C C B B * F
ApproachDel: 14.3 65.9 14.6 44.7
Delay Adj: 1.00 1.00 1.00
ApprAdjDel: 14.3 65.9 14.6 44.7
LOS by Appr: B F B E
AllWayAvgQ: 0.0 0.4 0.1 10.9 0.5 0.5 0.5 0.5 0.1 0.3 0.3 6.0

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

Lytle Creek Ranch Project
Existing 2007 Traffic Condition
AM Peak Hour

Level Of Service Computation Report

2000 HCM Operations Method (Base Volume Alternative)

Intersection #6 University Pkwy & I-215 NB On/Off-Ramps

Cycle (sec): 60 Critical Vol./Cap.(X): 0.578
Loss Time (sec): 6 (Y+R=4.0 sec) Average Delay (sec/veh): 16.0
Optimal Cycle: OPTIMIZED Level Of Service: B

Table with columns for Street Name, Approach, Movement, Control, Rights, Min. Green, and Lanes. Rows include University Pkwy and I-215 NB On/Off-Ramps with sub-rows for North, South, East, and West bounds.

Volume Module: Table showing traffic volume metrics such as Base Vol, Growth Adj, Initial Bse, User Adj, PHF Adj, PHF Volume, Reduct Vol, Reduced Vol, PCE Adj, MLF Adj, and Final Volume across different approaches.

Saturation Flow Module: Table showing saturation flow metrics like Sat/Lane, Adjustment, Lanes, and Final Sat. for each approach.

Capacity Analysis Module: Table showing capacity analysis metrics including Vol/Sat, Crit Moves, Green/Cycle, Volume/Cap, Delay/Veh, User DelAdj, AdjDel/Veh, LOS by Move, and HCM2kAvgQ.

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

Lytle Creek Ranch Project
Existing 2007 Traffic Condition
AM Peak Hour

Level Of Service Computation Report

2000 HCM Operations Method (Base Volume Alternative)

Intersection #7 University Pkwy & I-215 SB On/Off-Ramps

Cycle (sec): 60 Critical Vol./Cap.(X): 0.828
Loss Time (sec): 6 (Y+R=4.0 sec) Average Delay (sec/veh): 21.3
Optimal Cycle: OPTIMIZED Level Of Service: C

Table with columns for Street Name, Approach, Movement, Control, Rights, Min. Green, and Lanes. Rows include University Pkwy and I-215 SB On/Off-Ramps with sub-rows for North, South, East, and West bounds.

Volume Module table with columns for Base Vol, Growth Adj, Initial Bse, User Adj, PHF Adj, PHF Volume, Reduct Vol, Reduced Vol, PCE Adj, MLF Adj, and Final Volume. Rows include University Pkwy and I-215 SB On/Off-Ramps.

Saturation Flow Module table with columns for Sat/Lane, Adjustment, Lanes, and Final Sat. Rows include University Pkwy and I-215 SB On/Off-Ramps.

Capacity Analysis Module table with columns for Vol/Sat, Crit Moves, Green/Cycle, Volume/Cap, Delay/Veh, User DelAdj, AdjDel/Veh, LOS by Move, and HCM2kAvgQ. Rows include University Pkwy and I-215 SB On/Off-Ramps.

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

Lytle Creek Ranch Project
Existing 2007 Traffic Condition
AM Peak Hour

Level Of Service Computation Report

2000 HCM Unsignalized Method (Base Volume Alternative)

Intersection #8 I-15 SB On/Off-Ramps & Glen Helen Pkwy

Average Delay (sec/veh): 8.1 Worst Case Level Of Service: C[16.7]

Table with columns for Street Name, Approach, Movement, Control, Rights, and Lanes for I-15 SB On/Off-Ramps and Glen Helen Pkwy.

Volume Module table showing Base Vol, Growth Adj, Initial Bse, User Adj, PHF Adj, PHF Volume, Reduct Vol, and Final Volume for various movements.

Critical Gap Module table showing Critical Gap and FollowUpTim for different movements.

Capacity Module table showing Cnflct Vol, Potent Cap., Move Cap., and Volume/Cap for various movements.

Level Of Service Module table showing 2Way95thQ, Control Del, LOS by Move, Movement, Shared Cap., SharedQueue, Shrd ConDel, Shared LOS, ApproachDel, and ApproachLOS.

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

Lytle Creek Ranch Project
Existing 2007 Traffic Condition
AM Peak Hour

Level Of Service Computation Report

2000 HCM Unsignalized Method (Base Volume Alternative)

Intersection #9 I-15 NB On/Off-Ramps & Glen Helen Pkwy

Average Delay (sec/veh): 5.1 Worst Case Level Of Service: A[10.0]

Table with columns for Street Name, Approach, Movement, Control, Rights, and Lanes for I-15 NB On/Off-Ramps and Glen Helen Pkwy.

Volume Module:

Table with columns for Base Vol, Growth Adj, Initial Bse, User Adj, PHF Adj, PHF Volume, Reduct Vol, and Final Volume.

Critical Gap Module:

Table with columns for Critical Gp and FollowUpTim.

Capacity Module:

Table with columns for Cnflct Vol, Potent Cap., Move Cap., and Volume/Cap.

Level Of Service Module:

Table with columns for 2Way95thQ, Control Del, LOS by Move, Movement, Shared Cap., SharedQueue, Shrd ConDel, Shared LOS, ApproachDel, and ApproachLOS.

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

Lytle Creek Ranch Project
Existing 2007 Traffic Condition
AM Peak Hour

Level Of Service Computation Report

2000 HCM Unsignalized Method (Base Volume Alternative)

Intersection #11 Lytle Creek Rd & Sierra Ave

Average Delay (sec/veh): 1.5 Worst Case Level Of Service: B[13.1]

Table with columns for Street Name, Approach, Movement, Control, Rights, and Lanes. Rows include Lytle Creek Rd (North/South Bound) and Sierra Ave / Lytle Creek Rd (East/West Bound).

Volume Module table with columns for Base Vol, Growth Adj, Initial Bse, User Adj, PHF Adj, PHF Volume, Reduct Vol, and Final Volume. Rows include Lytle Creek Rd and Sierra Ave / Lytle Creek Rd.

Critical Gap Module table with columns for Critical Gp and FollowUpTim. Rows include Lytle Creek Rd and Sierra Ave / Lytle Creek Rd.

Capacity Module table with columns for Cnflct Vol, Potent Cap., Move Cap., and Volume/Cap. Rows include Lytle Creek Rd and Sierra Ave / Lytle Creek Rd.

Level Of Service Module table with columns for 2Way95thQ, Control Del, LOS by Move, Movement, Shared Cap., Shrd ConDel, Shared LOS, ApproachDel, and ApproachLOS. Rows include Lytle Creek Rd and Sierra Ave / Lytle Creek Rd.

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

Lytle Creek Ranch Project
Existing 2007 Traffic Condition
AM Peak Hour

Level Of Service Computation Report

2000 HCM 4-Way Stop Method (Base Volume Alternative)

Intersection #12 I-15 SB On/Off-Ramps & Sierra Ave

Cycle (sec): 100 Critical Vol./Cap.(X): 1.810
Loss Time (sec): 0 (Y+R=4.0 sec) Average Delay (sec/veh): 275.2
Optimal Cycle: 0 Level Of Service: F

Table with columns for Street Name, Approach, Movement, Control, Rights, Min. Green, and Lanes. Rows include I-15 SB On/Off-Ramps and Sierra Ave with North, South, East, and West bounds.

Volume Module:

Table showing traffic volume calculations including Base Vol, Growth Adj, Initial Bse, User Adj, PHF Adj, PHF Volume, Reduct Vol, Reduced Vol, PCE Adj, MLF Adj, and Final Volume.

Saturation Flow Module:

Table showing saturation flow adjustments and lane counts for different movements.

Capacity Analysis Module:

Table showing capacity analysis metrics including Vol/Sat, Crit Moves, Delay/Veh, Delay Adj, AdjDel/Veh, LOS by Move, ApproachDel, Delay Adj, ApprAdjDel, LOS by Appr, and AllWayAvgQ.

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

Lytle Creek Ranch Project
Existing 2007 Traffic Condition
AM Peak Hour

Level Of Service Computation Report

2000 HCM 4-Way Stop Method (Base Volume Alternative)

Intersection #13 I-15 NB On/Off-Ramps & Sierra Ave

Cycle (sec): 100 Critical Vol./Cap.(X): 2.127
Loss Time (sec): 0 (Y+R=4.0 sec) Average Delay (sec/veh): 293.2
Optimal Cycle: 0 Level Of Service: F

Table with columns for Street Name, Approach, Movement, Control, Rights, Min. Green, and Lanes. Rows include I-15 NB On/Off-Ramps and Sierra Ave with sub-rows for North, South, East, and West bounds.

Volume Module:

Table showing traffic volume calculations including Base Vol, Growth Adj, Initial Bse, User Adj, PHF Adj, PHF Volume, Reduct Vol, Reduced Vol, PCE Adj, MLF Adj, and Final Volume.

Saturation Flow Module:

Table showing saturation flow adjustments including Adjustment, Lanes, and Final Sat.

Capacity Analysis Module:

Table showing capacity analysis results including Vol/Sat, Crit Moves, Delay/Veh, Delay Adj, AdjDel/Veh, LOS by Move, ApproachDel, Delay Adj, ApprAdjDel, LOS by Appr, and AllWayAvgQ.

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

Lytle Creek Ranch Project
Existing 2007 Traffic Condition
AM Peak Hour

Level Of Service Computation Report

2000 HCM Unsignalized Method (Base Volume Alternative)

Intersection #15 Lytle Creek Rd. and Duncan Canyon Rd.

Average Delay (sec/veh): 4.2 Worst Case Level Of Service: A[8.8]

Table with columns for Street Name (Lytle Creek Rd., Duncan Canyon Rd.), Approach (North Bound, South Bound, East Bound, West Bound), Movement (L, T, R), Control (Stop Sign, Uncontrolled), Rights (Include), and Lanes.

Volume Module: Table showing Base Vol, Growth Adj, Initial Bse, User Adj, PHF Adj, PHF Volume, Reduct Vol, and Final Volume for each approach.

Critical Gap Module: Table showing Critical Gp and FollowUpTim for each approach.

Capacity Module: Table showing Cnflct Vol, Potent Cap., Move Cap., and Volume/Cap for each approach.

Level Of Service Module: Table showing 2Way95thQ, Control Del, LOS by Move, Movement, Shared Cap., SharedQueue, Shrd ConDel, Shared LOS, ApproachDel, and ApproachLOS for each approach.

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

Lytle Creek Ranch Project
Existing 2007 Traffic Condition
AM Peak Hour

Level Of Service Computation Report

2000 HCM Operations Method (Base Volume Alternative)

Intersection #16 I-15 SB On/Off Ramps and Summit Ave.

Cycle (sec): 95 Critical Vol./Cap.(X): 1.304
Loss Time (sec): 6 (Y+R=4.0 sec) Average Delay (sec/veh): 118.1
Optimal Cycle: OPTIMIZED Level Of Service: F

Table with columns for Street Name, Approach, Movement, Control, Rights, Min. Green, and Lanes. Rows include I-15 SB On/Off Ramps and Summit Ave. with sub-rows for North, South, East, and West bounds.

Volume Module table showing Base Vol, Growth Adj, Initial Bse, User Adj, PHF Adj, PHF Volume, Reduct Vol, Reduced Vol, PCE Adj, MLF Adj, and Final Volume across various movement categories.

Saturation Flow Module table showing Sat/Lane, Adjustment, Lanes, and Final Sat. values for different movements.

Capacity Analysis Module table showing Vol/Sat, Crit Moves, Green/Cycle, Volume/Cap, Delay/Veh, User DelAdj, AdjDel/Veh, LOS by Move, and HCM2kAvgQ values.

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

Lytle Creek Ranch Project
Existing 2007 Traffic Condition
AM Peak Hour

Level Of Service Computation Report

2000 HCM Operations Method (Base Volume Alternative)

Intersection #17 I-15 NB On/Off Ramps and Summit Ave.

Cycle (sec): 60 Critical Vol./Cap.(X): 0.819
Loss Time (sec): 6 (Y+R=4.0 sec) Average Delay (sec/veh): 20.4
Optimal Cycle: OPTIMIZED Level Of Service: C

Table with columns for Street Name, Approach, Movement, Control, Rights, Min. Green, and Lanes. Rows include I-15 NB On/Off Ramps and Summit Ave. with sub-rows for North, South, East, and West bounds.

Volume Module: Table with columns for Base Vol, Growth Adj, Initial Bse, User Adj, PHF Adj, PHF Volume, Reduct Vol, Reduced Vol, PCE Adj, MLF Adj, and Final Volume. Rows include various adjustment factors and resulting volumes.

Saturation Flow Module: Table with columns for Sat/Lane, Adjustment, Lanes, and Final Sat. Rows include saturation flow rates and adjustments.

Capacity Analysis Module: Table with columns for Vol/Sat, Crit Moves, Green/Cycle, Volume/Cap, Delay/Veh, User DelAdj, AdjDel/Veh, LOS by Move, and HCM2kAvgQ. Rows include capacity analysis metrics.

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

Lytle Creek Ranch Project
Existing 2007 Traffic Condition
AM Peak Hour

Level Of Service Computation Report

2000 HCM 4-Way Stop Method (Base Volume Alternative)

Intersection #18 Sierra Ave & Riverside Ave

Cycle (sec): 100 Critical Vol./Cap.(X): 2.417
Loss Time (sec): 0 (Y+R=4.0 sec) Average Delay (sec/veh): 399.2
Optimal Cycle: 0 Level Of Service: F

Table with columns for Street Name (Sierra Ave, Riverside Ave), Approach (North Bound, South Bound, East Bound, West Bound), Movement (L, T, R), Control (Stop Sign), Rights (Include), Min. Green, and Lanes.

Volume Module table showing Base Vol, Growth Adj, Initial Bse, User Adj, PHF Adj, PHF Volume, Reduct Vol, Reduced Vol, PCE Adj, MLF Adj, and Final Volume for each approach.

Saturation Flow Module table showing Adjustment, Lanes, and Final Sat. for each approach.

Capacity Analysis Module table showing Vol/Sat, Crit Moves, Delay/Veh, Delay Adj, AdjDel/Veh, LOS by Move, ApproachDel, Delay Adj, ApprAdjDel, LOS by Appr, and AllWayAvgQ.

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

Lytle Creek Ranch Project
Existing 2007 Traffic Condition
AM Peak Hour

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

Intersection #19 Live Oak Ave & Riverside Ave

Cycle (sec): 60 Critical Vol./Cap.(X): 0.750
Loss Time (sec): 6 (Y+R=4.0 sec) Average Delay (sec/veh): 23.0
Optimal Cycle: 60 Level Of Service: C

Street Name:	Live Oak Ave						Riverside Ave													
Approach:	North Bound			South Bound			East Bound			West Bound										
Movement:	L	-	T	-	R	L	-	T	-	R	L	-	T	-	R	L	-	T	-	R
Control:	Protected			Protected			Protected			Protected										
Rights:	Include			Include			Include			Include										
Min. Green:	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6					
Lanes:	1	0	0	1	0	1	0	0	1	0	1	0	1	1	0	1	0	1	1	0

Volume Module:

Base Vol:	330	10	121	111	13	198	139	573	80	91	799	93
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	330	10	121	111	13	198	139	573	80	91	799	93
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
PHF Volume:	347	11	127	117	14	208	146	603	84	96	841	98
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	347	11	127	117	14	208	146	603	84	96	841	98
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Final Volume:	347	11	127	117	14	208	146	603	84	96	841	98

Saturation Flow Module:

Sat/Lane:	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Adjustment:	0.94	1.00	1.00	0.94	1.00	1.00	0.94	1.00	1.00	0.94	1.00	1.00
Lanes:	1.00	0.08	0.92	1.00	0.06	0.94	1.00	1.75	0.25	1.00	1.79	0.21
Final Sat.:	1700	137	1663	1700	111	1689	1700	3159	441	1700	3225	375

Capacity Analysis Module:

Vol/Sat:	0.20	0.08	0.08	0.07	0.12	0.12	0.09	0.19	0.19	0.06	0.26	0.26
Crit Moves:	****			****			****			****		
Green/Cycle:	0.27	0.22	0.22	0.22	0.16	0.16	0.11	0.30	0.30	0.16	0.35	0.35
Volume/Cap:	0.75	0.35	0.35	0.31	0.75	0.75	0.75	0.63	0.63	0.35	0.75	0.75
Delay/Veh:	26.6	20.4	20.4	20.2	34.0	34.0	40.6	19.2	19.2	23.3	19.8	19.8
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	26.6	20.4	20.4	20.2	34.0	34.0	40.6	19.2	19.2	23.3	19.8	19.8
LOS by Move:	C	C	C	C	C	C	D	B	B	C	B	B
HCM2kAvgQ:	8	2	2	2	6	6	5	7	7	2	10	10

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

Lytle Creek Ranch Project
Existing 2007 Traffic Condition
AM Peak Hour

Level Of Service Computation Report

2000 HCM Operations Method (Base Volume Alternative)

Intersection #20 Alder Ave. and Riverside Ave.

Cycle (sec): 100 Critical Vol./Cap.(X): 0.430
Loss Time (sec): 0 (Y+R=4.0 sec) Average Delay (sec/veh): 19.3
Optimal Cycle: 33 Level Of Service: B

Table with columns for Street Name (Alder Ave., Riverside Ave.), Approach (North Bound, South Bound, East Bound, West Bound), Movement (L, T, R), Control, Rights, Min. Green, and Lanes.

Volume Module table with columns for Base Vol, Growth Adj, Initial Bse, User Adj, PHF Adj, PHF Volume, Reduct Vol, Reduced Vol, PCE Adj, MLF Adj, and Final Volume.

Saturation Flow Module table with columns for Sat/Lane, Adjustment, Lanes, and Final Sat.

Capacity Analysis Module table with columns for Vol/Sat, Crit Moves, Green/Cycle, Volume/Cap, Delay/Veh, User DelAdj, AdjDel/Veh, LOS by Move, and HCM2kAvgQ.

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

Lytle Creek Ranch Project
Existing 2007 Traffic Condition
AM Peak Hour

Level Of Service Computation Report

2000 HCM Operations Method (Base Volume Alternative)

Intersection #21 Locust Ave. and Riverside Ave.

Cycle (sec): 100 Critical Vol./Cap.(X): 0.541
Loss Time (sec): 0 (Y+R=4.0 sec) Average Delay (sec/veh): 24.1
Optimal Cycle: 40 Level Of Service: C

Table with columns for Street Name (Locust Ave., Riverside Ave.), Approach (North Bound, South Bound, East Bound, West Bound), Movement (L, T, R), Control, Rights, Min. Green, and Lanes.

Volume Module table with columns for Base Vol, Growth Adj, Initial Bse, User Adj, PHF Adj, PHF Volume, Reduct Vol, Reduced Vol, PCE Adj, MLF Adj, and Final Volume.

Saturation Flow Module table with columns for Sat/Lane, Adjustment, Lanes, and Final Sat.

Capacity Analysis Module table with columns for Vol/Sat, Crit Moves, Green/Cycle, Volume/Cap, Delay/Veh, User DelAdj, AdjDel/Veh, LOS by Move, and HCM2kAvgQ.

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

Lytle Creek Ranch Project
Existing 2007 Traffic Condition
AM Peak Hour

Level Of Service Computation Report

2000 HCM Operations Method (Base Volume Alternative)

Intersection #22 Linden Ave. and Riverside Ave.

Cycle (sec): 100 Critical Vol./Cap.(X): 1.069
Loss Time (sec): 0 (Y+R=4.0 sec) Average Delay (sec/veh): 58.6
Optimal Cycle: 130 Level Of Service: E

Table with columns for Street Name (Linden Ave., Riverside Ave.), Approach (North Bound, South Bound, East Bound, West Bound), Movement (L, T, R), Control (Split Phase, Protected), Rights (Include), and Lanes.

Volume Module table showing Base Vol, Growth Adj, Initial Bse, User Adj, PHF Adj, PHF Volume, Reduct Vol, Reduced Vol, PCE Adj, MLF Adj, and Final Volume across various movements.

Saturation Flow Module table showing Sat/Lane, Adjustment, Lanes, and Final Sat. values.

Capacity Analysis Module table showing Vol/Sat, Crit Moves, Green/Cycle, Volume/Cap, Delay/Veh, User DelAdj, AdjDel/Veh, LOS by Move, and HCM2kAvgQ values.

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

Lytle Creek Ranch Project
Existing 2007 Traffic Condition
AM Peak Hour

Level Of Service Computation Report

2000 HCM Operations Method (Base Volume Alternative)

Intersection #23 Ayala Dr. and Riverside Ave.

Cycle (sec): 60 Critical Vol./Cap.(X): 0.732
Loss Time (sec): 6 (Y+R=4.0 sec) Average Delay (sec/veh): 16.0
Optimal Cycle: 60 Level Of Service: B

Table with columns for Street Name (Ayala Dr., Riverside Ave.), Approach (North Bound, South Bound, East Bound, West Bound), Movement (L, T, R), Control (Split Phase, Protected), Rights (Include), Min. Green, and Lanes.

Volume Module table with columns for Base Vol, Growth Adj, Initial Bse, User Adj, PHF Adj, PHF Volume, Reduct Vol, Reduced Vol, PCE Adj, MLF Adj, and Final Volume.

Saturation Flow Module table with columns for Sat/Lane, Adjustment, Lanes, and Final Sat.

Capacity Analysis Module table with columns for Vol/Sat, Crit Moves, Green/Cycle, Volume/Cap, Delay/Veh, User DelAdj, AdjDel/Veh, LOS by Move, and HCM2kAvgQ.

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

Lytle Creek Ranch Project
Existing 2007 Traffic Condition
AM Peak Hour

Level Of Service Computation Report

2000 HCM Operations Method (Base Volume Alternative)

Intersection #24 Knollwood Ave. and Riverside Ave.

Cycle (sec): 60 Critical Vol./Cap.(X): 0.429
Loss Time (sec): 6 (Y+R=4.0 sec) Average Delay (sec/veh): 8.8
Optimal Cycle: 60 Level Of Service: A

Street Name: Knollwood Ave. Riverside Ave.
Approach: North Bound South Bound East Bound West Bound
Movement: L - T - R L - T - R L - T - R L - T - R
Control: Split Phase Split Phase Protected Protected
Rights: Include Include Include Include
Min. Green: 6 6 6 6 6 6 6 6 6 6 6 6
Lanes: 0 0 0 0 0 1 0 0 0 1 1 0 2 0 0 0 0 1 1 0

Volume Module:
Base Vol: 0 0 0 5 0 154 19 1209 0 0 1259 10
Growth Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
Initial Bse: 0 0 0 5 0 154 19 1209 0 0 1259 10
User Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
PHF Adj: 0.95 0.95 0.95 0.95 0.95 0.95 0.95 0.95 0.95 0.95 0.95 0.95
PHF Volume: 0 0 0 5 0 162 20 1273 0 0 1325 11
Reduct Vol: 0 0 0 0 0 0 0 0 0 0 0 0
Reduced Vol: 0 0 0 5 0 162 20 1273 0 0 1325 11
PCE Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
MLF Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
Final Volume: 0 0 0 5 0 162 20 1273 0 0 1325 11

Saturation Flow Module:
Sat/Lane: 1800 1800 1800 1800 1800 1800 1800 1800 1800 1800 1800 1800
Adjustment: 0.94 1.00 1.00 0.94 1.00 1.00 0.94 1.00 1.00 0.94 1.00 1.00
Lanes: 0.00 0.00 0.00 1.00 0.00 1.00 1.00 2.00 0.00 0.00 1.98 0.02
Final Sat.: 0 0 0 1700 0 1800 1700 3600 0 0 3572 28

Capacity Analysis Module:
Vol/Sat: 0.00 0.00 0.00 0.00 0.00 0.09 0.01 0.35 0.00 0.00 0.37 0.37
Crit Moves: ****
Green/Cycle: 0.00 0.00 0.00 0.16 0.00 0.16 0.10 0.58 0.00 0.00 0.64 0.64
Volume/Cap: 0.00 0.00 0.00 0.02 0.00 0.58 0.12 0.61 0.00 0.00 0.58 0.58
Delay/Veh: 0.0 0.0 0.0 21.5 0.0 26.4 24.9 8.7 0.0 0.0 6.4 6.4
User DelAdj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
AdjDel/Veh: 0.0 0.0 0.0 21.5 0.0 26.4 24.9 8.7 0.0 0.0 6.4 6.4
LOS by Move: A A A C A C C A A A A A
HCM2kAvgQ: 0 0 0 0 0 4 0 8 0 0 8 8

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

Lytle Creek Ranch Project
Existing 2007 Traffic Condition
AM Peak Hour

Level Of Service Computation Report

2000 HCM Operations Method (Base Volume Alternative)

Intersection #25 Country Club Dr. and Riverside Ave.

Cycle (sec): 60 Critical Vol./Cap.(X): 0.689
Loss Time (sec): 6 (Y+R=4.0 sec) Average Delay (sec/veh): 16.2
Optimal Cycle: 60 Level Of Service: B

Table with columns for Street Name (Country Club Dr., Riverside Ave.), Approach (North Bound, South Bound, East Bound, West Bound), Movement (L, T, R), Control, Rights, Min. Green, and Lanes.

Volume Module table with columns for Base Vol, Growth Adj, Initial Bse, User Adj, PHF Adj, PHF Volume, Reduct Vol, Reduced Vol, PCE Adj, MLF Adj, and Final Volume.

Saturation Flow Module table with columns for Sat/Lane, Adjustment, Lanes, and Final Sat.

Capacity Analysis Module table with columns for Vol/Sat, Crit Moves, Green/Cycle, Volume/Cap, Delay/Veh, User DelAdj, AdjDel/Veh, LOS by Move, and HCM2kAvgQ.

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

Lytle Creek Ranch Project
Existing 2007 Traffic Condition
AM Peak Hour

Level Of Service Computation Report

2000 HCM Operations Method (Base Volume Alternative)

Intersection #26 Riverside Ave. and Dwy.(Shopping Ctr.)

Cycle (sec): 70 Critical Vol./Cap.(X): 0.452
Loss Time (sec): 6 (Y+R=4.0 sec) Average Delay (sec/veh): 6.1
Optimal Cycle: OPTIMIZED Level Of Service: A

Table with columns for Street Name, Approach, Movement, Control, Rights, Min. Green, and Lanes. Rows include Riverside Ave. and Dwy.(Shopping Ctr.) with North, South, East, and West bound movements.

Volume Module table showing Base Vol, Growth Adj, Initial Bse, User Adj, PHF Adj, PHF Volume, Reduct Vol, Reduced Vol, PCE Adj, MLF Adj, and Final Volume across various lanes.

Saturation Flow Module table showing Sat/Lane, Adjustment, Lanes, and Final Sat. values for different lane configurations.

Capacity Analysis Module table showing Vol/Sat, Crit Moves, Green/Cycle, Volume/Cap, Delay/Veh, User DelAdj, AdjDel/Veh, LOS by Move, and HCM2kAvgQ values.

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

Lytle Creek Ranch Project
Existing 2007 Traffic Condition
AM Peak Hour

Level Of Service Computation Report

2000 HCM Operations Method (Base Volume Alternative)

Intersection #28 Alder Ave. and Casa Grande Dr.

Cycle (sec): 60 Critical Vol./Cap.(X): 0.208
Loss Time (sec): 8 (Y+R=4.0 sec) Average Delay (sec/veh): 17.5
Optimal Cycle: OPTIMIZED Level Of Service: B

Table with columns for Street Name (Alder Ave., Casa Grande Dr.), Approach (North Bound, South Bound, East Bound, West Bound), Movement (L, T, R), Control, Rights, Min. Green, and Lanes.

Volume Module table with columns for Base Vol, Growth Adj, Initial Bse, User Adj, PHF Adj, PHF Volume, Reduct Vol, Reduced Vol, PCE Adj, MLF Adj, and Final Volume.

Saturation Flow Module table with columns for Sat/Lane, Adjustment, Lanes, and Final Sat.

Capacity Analysis Module table with columns for Vol/Sat, Crit Moves, Green/Cycle, Volume/Cap, Delay/Veh, User DelAdj, AdjDel/Veh, LOS by Move, and HCM2kAvgQ.

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

Lytle Creek Ranch Project
Existing 2007 Traffic Condition
AM Peak Hour

Level Of Service Computation Report

2000 HCM Unsignalized Method (Base Volume Alternative)

Intersection #29 Locust Ave. and Casa Grande Dr.

Average Delay (sec/veh): 4.6 Worst Case Level Of Service: B[13.9]

Table with columns for Street Name (Locust Ave., Casa Grande Dr.), Approach (North Bound, South Bound, East Bound, West Bound), Movement (L, T, R), Control (Uncontrolled, Stop Sign), Rights (Include), and Lanes (0, 1, 0, 0, 0).

Volume Module: Table with columns for Base Vol, Growth Adj, Initial Bse, User Adj, PHF Adj, PHF Volume, Reduct Vol, and Final Volume across various approaches.

Critical Gap Module: Table with columns for Critical Gp and FollowUpTim across various approaches.

Capacity Module: Table with columns for Cnflct Vol, Potent Cap., Move Cap., and Volume/Cap across various approaches.

Level Of Service Module: Table with columns for 2Way95thQ, Control Del, LOS by Move, Movement, Shared Cap., SharedQueue, Shrd ConDel, Shared LOS, ApproachDel, and ApproachLOS across various approaches.

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

Lytle Creek Ranch Project
Existing 2007 Traffic Condition
AM Peak Hour

Level Of Service Computation Report

2000 HCM Operations Method (Base Volume Alternative)

Intersection #30 Sierra Ave. and Summit Ave.

Cycle (sec): 60 Critical Vol./Cap.(X): 0.360
Loss Time (sec): 6 (Y+R=4.0 sec) Average Delay (sec/veh): 11.6
Optimal Cycle: OPTIMIZED Level Of Service: B

Table with columns for Street Name (Sierra Ave., Summit Ave.), Approach (North Bound, South Bound, East Bound, West Bound), Movement (L, T, R), Control, Rights, Min. Green, and Lanes.

Volume Module table with columns for Base Vol, Growth Adj, Initial Bse, User Adj, PHF Adj, PHF Volume, Reduct Vol, Reduced Vol, PCE Adj, MLF Adj, and Final Volume.

Saturation Flow Module table with columns for Sat/Lane, Adjustment, Lanes, and Final Sat.

Capacity Analysis Module table with columns for Vol/Sat, Crit Moves, Green/Cycle, Volume/Cap, Delay/Veh, User DelAdj, AdjDel/Veh, LOS by Move, and HCM2kAvgQ.

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

Lytle Creek Ranch Project
Existing 2007 Traffic Condition
AM Peak Hour

Level Of Service Computation Report

2000 HCM Unsignalized Method (Base Volume Alternative)

Intersection #31 Locust Ave. and Bohnert Ave.

Average Delay (sec/veh): 40.9 Worst Case Level Of Service: F[210.6]

Table with columns for Street Name (Locust Ave., Bohnert Ave.), Approach (North Bound, South Bound, East Bound, West Bound), Movement (L, T, R), Control (Uncontrolled, Stop Sign), Rights (Include), and Lanes (0, 1, 0, 0).

Volume Module: Table with columns for Base Vol, Growth Adj, Initial Bse, User Adj, PHF Adj, PHF Volume, Reduct Vol, and Final Volume across four approaches.

Critical Gap Module: Table with columns for Critical Gp and FollowUpTim across four approaches.

Capacity Module: Table with columns for Cnflct Vol, Potent Cap., Move Cap., and Volume/Cap across four approaches.

Level Of Service Module: Table with columns for 2Way95thQ, Control Del, LOS by Move, Movement, Shared Cap., SharedQueue, Shrd ConDel, Shared LOS, ApproachDel, and ApproachLOS across four approaches.

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

Lytle Creek Ranch Project
Existing 2007 Traffic Condition
AM Peak Hour

Level Of Service Computation Report

2000 HCM Operations Method (Base Volume Alternative)

Intersection #32 Ayala Dr. and Bohnert Ave.

Cycle (sec): 60 Critical Vol./Cap.(X): 0.465
Loss Time (sec): 6 (Y+R=4.0 sec) Average Delay (sec/veh): 14.7
Optimal Cycle: OPTIMIZED Level Of Service: B

Table with columns for Street Name (Ayala Dr., Bohnert Ave.), Approach (North Bound, South Bound, East Bound, West Bound), Movement (L, T, R), Control, Rights, Min. Green, and Lanes.

Volume Module table with columns for Base Vol, Growth Adj, Initial Bse, User Adj, PHF Adj, PHF Volume, Reduct Vol, Reduced Vol, PCE Adj, MLF Adj, and Final Volume.

Saturation Flow Module table with columns for Sat/Lane, Adjustment, Lanes, and Final Sat.

Capacity Analysis Module table with columns for Vol/Sat, Crit Moves, Green/Cycle, Volume/Cap, Delay/Veh, User DelAdj, AdjDel/Veh, LOS by Move, and HCM2kAvgQ.

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

Lytle Creek Ranch Project
Existing 2007 Traffic Condition
AM Peak Hour

Level Of Service Computation Report

2000 HCM Operations Method (Base Volume Alternative)

Intersection #33 Sierra Ave. and Sierra Lakes Pkwy/Casmalia St.

Cycle (sec): 60 Critical Vol./Cap.(X): 0.501
Loss Time (sec): 0 (Y+R=4.0 sec) Average Delay (sec/veh): 17.9
Optimal Cycle: OPTIMIZED Level Of Service: B

Table with columns for Street Name, Approach, Movement, Control, Rights, Min. Green, and Lanes. Rows include Sierra Ave. and Sierra Lakes Pkwy/Casmalia St. with sub-rows for North/South and East/West bounds.

Volume Module: Table showing Base Vol, Growth Adj, Initial Bse, User Adj, PHF Adj, PHF Volume, Reduct Vol, Reduced Vol, PCE Adj, MLF Adj, and Final Volume across various lanes.

Saturation Flow Module: Table showing Sat/Lane, Adjustment, Lanes, and Final Sat. values for different approaches.

Capacity Analysis Module: Table showing Vol/Sat, Crit Moves, Green/Cycle, Volume/Cap, Delay/Veh, User DelAdj, AdjDel/Veh, LOS by Move, and HCM2kAvgQ values.

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

Lytle Creek Ranch Project
Existing 2007 Traffic Condition
AM Peak Hour

Level Of Service Computation Report

2000 HCM Operations Method (Base Volume Alternative)

Intersection #34 Alder Ave. and Casmalia St.

Cycle (sec): 75 Critical Vol./Cap.(X): 0.931
Loss Time (sec): 8 (Y+R=4.0 sec) Average Delay (sec/veh): 49.3
Optimal Cycle: OPTIMIZED Level Of Service: D

Table with columns for Street Name (Alder Ave., Casmalia St.), Approach (North Bound, South Bound, East Bound, West Bound), Movement (L, T, R), Control, Rights, Min. Green, and Lanes.

Volume Module table with columns for Base Vol, Growth Adj, Initial Bse, User Adj, PHF Adj, PHF Volume, Reduct Vol, Reduced Vol, PCE Adj, MLF Adj, and Final Volume.

Saturation Flow Module table with columns for Sat/Lane, Adjustment, Lanes, and Final Sat.

Capacity Analysis Module table with columns for Vol/Sat, Crit Moves, Green/Cycle, Volume/Cap, Delay/Veh, User DelAdj, AdjDel/Veh, LOS by Move, and HCM2kAvgQ.

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

Lytle Creek Ranch Project
Existing 2007 Traffic Condition
AM Peak Hour

Level Of Service Computation Report

2000 HCM Operations Method (Base Volume Alternative)

Intersection #35 Locust Ave. and Casmalia St.

Cycle (sec): 80 Critical Vol./Cap.(X): 0.896
Loss Time (sec): 8 (Y+R=4.0 sec) Average Delay (sec/veh): 46.3
Optimal Cycle: OPTIMIZED Level Of Service: D

Table with columns for Street Name (Locust Ave., Casmalia St.), Approach (North Bound, South Bound, East Bound, West Bound), Movement (L, T, R), Control, Rights, Min. Green, and Lanes.

Volume Module table with columns for Base Vol, Growth Adj, Initial Bse, User Adj, PHF Adj, PHF Volume, Reduct Vol, Reduced Vol, PCE Adj, MLF Adj, and Final Volume.

Saturation Flow Module table with columns for Sat/Lane, Adjustment, Lanes, and Final Sat.

Capacity Analysis Module table with columns for Vol/Sat, Crit Moves, Green/Cycle, Volume/Cap, Delay/Veh, User DelAdj, AdjDel/Veh, LOS by Move, and HCM2kAvgQ.

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

Lytle Creek Ranch Project
Existing 2007 Traffic Condition
AM Peak Hour

Level Of Service Computation Report

2000 HCM Operations Method (Base Volume Alternative)

Intersection #36 Ayala Dr. and Casmalia St.

Cycle (sec): 60 Critical Vol./Cap.(X): 0.510
Loss Time (sec): 6 (Y+R=4.0 sec) Average Delay (sec/veh): 15.1
Optimal Cycle: OPTIMIZED Level Of Service: B

Table with columns for Street Name (Ayala Dr., Casmalia St.), Approach (North Bound, South Bound, East Bound, West Bound), Movement (L, T, R), Control, Rights, Min. Green, and Lanes.

Volume Module table with columns for Base Vol, Growth Adj, Initial Bse, User Adj, PHF Adj, PHF Volume, Reduct Vol, Reduced Vol, PCE Adj, MLF Adj, and Final Volume.

Saturation Flow Module table with columns for Sat/Lane, Adjustment, Lanes, and Final Sat.

Capacity Analysis Module table with columns for Vol/Sat, Crit Moves, Green/Cycle, Volume/Cap, Delay/Veh, User DelAdj, AdjDel/Veh, LOS by Move, and HCM2kAvgQ.

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

Lytle Creek Ranch Project
Existing 2007 Traffic Condition
AM Peak Hour

Level Of Service Computation Report

2000 HCM Operations Method (Base Volume Alternative)

Intersection #37 Sierra Ave. and SR-210 Fwy. WB On/Off Ramps

Cycle (sec): 100 Critical Vol./Cap.(X): 0.174
Loss Time (sec): 4 (Y+R=4.0 sec) Average Delay (sec/veh): 1.4
Optimal Cycle: OPTIMIZED Level Of Service: A

Table with columns for Street Name, Approach, Movement, Control, Rights, Min. Green, and Lanes. Rows include Sierra Ave. and SR-210 Fwy. WB On/Off Ramps with sub-rows for North/South and East/West bounds.

Volume Module:

Table with columns for Base Vol, Growth Adj, Initial Bse, User Adj, PHF Adj, PHF Volume, Reduct Vol, Reduced Vol, PCE Adj, MLF Adj, and Final Volume. Rows include various traffic volume and adjustment factors.

Saturation Flow Module:

Table with columns for Sat/Lane, Adjustment, Lanes, and Final Sat. Rows include saturation flow and lane-related data.

Capacity Analysis Module:

Table with columns for Vol/Sat, Crit Moves, Green/Cycle, Volume/Cap, Delay/Veh, User DelAdj, AdjDel/Veh, LOS by Move, and HCM2kAvgQ. Rows include capacity analysis metrics.

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

Lytle Creek Ranch Project
Existing 2007 Traffic Condition
AM Peak Hour

Level Of Service Computation Report

2000 HCM Operations Method (Base Volume Alternative)

Intersection #38 Sierra Ave. and SR-210 Fwy. EB Off Ramp/Highland Ave.

Cycle (sec): 60 Critical Vol./Cap.(X): 0.782
Loss Time (sec): 8 (Y+R=4.0 sec) Average Delay (sec/veh): 24.7
Optimal Cycle: OPTIMIZED Level Of Service: C

Table with columns for Street Name, Approach, Movement, Control, Rights, Min. Green, and Lanes. Rows include Sierra Ave. and SR-210 Fwy. EB Off Ramp/Highland.

Volume Module table with columns for Base Vol, Growth Adj, Initial Bse, User Adj, PHF Adj, PHF Volume, Reduct Vol, Reduced Vol, PCE Adj, MLF Adj, and Final Volume.

Saturation Flow Module table with columns for Sat/Lane, Adjustment, Lanes, and Final Sat.

Capacity Analysis Module table with columns for Vol/Sat, Crit Moves, Green/Cycle, Volume/Cap, Delay/Veh, User DelAdj, AdjDel/Veh, LOS by Move, and HCM2kAvgQ.

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

Lytle Creek Ranch Project
Existing 2007 Traffic Condition
AM Peak Hour

Level Of Service Computation Report

2000 HCM Operations Method (Base Volume Alternative)

Intersection #39 Alder Ave. and SR-210 Fwy. WB On/Off Ramps

Cycle (sec): 70 Critical Vol./Cap.(X): 1.123
Loss Time (sec): 4 (Y+R=4.0 sec) Average Delay (sec/veh): 67.3
Optimal Cycle: OPTIMIZED Level Of Service: E

Table with columns for Street Name, Approach, Movement, Control, Rights, Min. Green, and Lanes. Rows include Alder Ave. and SR-210 Fwy. WB On/Off Ramps with sub-rows for North/South and East/West bounds.

Volume Module: Table with columns for Base Vol, Growth Adj, Initial Bse, User Adj, PHF Adj, PHF Volume, Reduct Vol, Reduced Vol, PCE Adj, MLF Adj, Final Volume. Rows include Alder Ave. and SR-210 Fwy. WB On/Off Ramps.

Saturation Flow Module: Table with columns for Sat/Lane, Adjustment, Lanes, Final Sat. Rows include Alder Ave. and SR-210 Fwy. WB On/Off Ramps.

Capacity Analysis Module: Table with columns for Vol/Sat, Crit Moves, Green/Cycle, Volume/Cap, Delay/Veh, User DelAdj, AdjDel/Veh, LOS by Move, HCM2kAvgQ. Rows include Alder Ave. and SR-210 Fwy. WB On/Off Ramps.

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

Lytle Creek Ranch Project
Existing 2007 Traffic Condition
AM Peak Hour

Level Of Service Computation Report

2000 HCM Operations Method (Base Volume Alternative)

Intersection #40 Alder Ave. and SR-210 Fwy. EB On/Off Ramps

Cycle (sec): 60 Critical Vol./Cap.(X): 0.651
Loss Time (sec): 4 (Y+R=4.0 sec) Average Delay (sec/veh): 13.0
Optimal Cycle: OPTIMIZED Level Of Service: B

Table with columns for Street Name, Approach, Movement, Control, Rights, Min. Green, and Lanes. Rows include Alder Ave. and SR-210 Fwy. EB On/Off Ramps with sub-rows for North/South and East/West bounds.

Volume Module table with columns for Base Vol, Growth Adj, Initial Bse, User Adj, PHF Adj, PHF Volume, Reduct Vol, Reduced Vol, PCE Adj, MLF Adj, and Final Volume. Rows include Alder Ave. and SR-210 Fwy. EB On/Off Ramps.

Saturation Flow Module table with columns for Sat/Lane, Adjustment, Lanes, and Final Sat. Rows include Alder Ave. and SR-210 Fwy. EB On/Off Ramps.

Capacity Analysis Module table with columns for Vol/Sat, Crit Moves, Green/Cycle, Volume/Cap, Delay/Veh, User DelAdj, AdjDel/Veh, LOS by Move, and HCM2kAvgQ. Rows include Alder Ave. and SR-210 Fwy. EB On/Off Ramps.

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

Lytle Creek Ranch Project
Existing 2007 Traffic Condition
AM Peak Hour

Level Of Service Computation Report

2000 HCM Operations Method (Base Volume Alternative)

Intersection #49 State St. and Highland Ave.

Cycle (sec): 60 Critical Vol./Cap.(X): 0.773
Loss Time (sec): 6 (Y+R=4.0 sec) Average Delay (sec/veh): 20.0
Optimal Cycle: OPTIMIZED Level Of Service: C

Table with columns for Street Name (State St., Highland Ave.), Approach (North Bound, South Bound, East Bound, West Bound), Movement (L, T, R), Control, Rights, Min. Green, and Lanes.

Volume Module: Table with columns for Base Vol, Growth Adj, Initial Bse, User Adj, PHF Adj, PHF Volume, Reduct Vol, Reduced Vol, PCE Adj, MLF Adj, Final Volume.

Saturation Flow Module: Table with columns for Sat/Lane, Adjustment, Lanes, Final Sat.

Capacity Analysis Module: Table with columns for Vol/Sat, Crit Moves, Green/Cycle, Volume/Cap, Delay/Veh, User DelAdj, AdjDel/Veh, LOS by Move, HCM2kAvgQ.

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

Lytle Creek Ranch Project
Existing 2007 Traffic Condition
AM Peak Hour

Level Of Service Computation Report

2000 HCM Operations Method (Base Volume Alternative)

Intersection #50 California St. and Highland Ave.

Cycle (sec): 60 Critical Vol./Cap.(X): 0.327
Loss Time (sec): 4 (Y+R=4.0 sec) Average Delay (sec/veh): 10.4
Optimal Cycle: OPTIMIZED Level Of Service: B

Table with columns for Street Name (California St., Highland Ave.), Approach (North Bound, South Bound, East Bound, West Bound), Movement (L, T, R), Control (Permitted), Rights (Include), and Lanes.

Volume Module: Table with columns for Base Vol, Growth Adj, Initial Bse, User Adj, PHF Adj, PHF Volume, Reduct Vol, Reduced Vol, PCE Adj, MLF Adj, Final Volume across 12 lanes.

Saturation Flow Module: Table with columns for Sat/Lane, Adjustment, Lanes, Final Sat. across 12 lanes.

Capacity Analysis Module: Table with columns for Vol/Sat, Crit Moves, Green/Cycle, Volume/Cap, Delay/Veh, User DelAdj, AdjDel/Veh, LOS by Move, HCM2kAvgQ across 12 lanes.

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

Lytle Creek Ranch Project
Existing 2007 Traffic Condition
AM Peak Hour

Level Of Service Computation Report

2000 HCM Operations Method (Base Volume Alternative)

Intersection #51 Medical Ctr. Dr. and Highland Ave.

Cycle (sec): 60 Critical Vol./Cap.(X): 0.304
Loss Time (sec): 4 (Y+R=4.0 sec) Average Delay (sec/veh): 8.7
Optimal Cycle: OPTIMIZED Level Of Service: A

Table with columns for Street Name (Medical Ctr. Dr., Highland Ave.), Approach (North Bound, South Bound, East Bound, West Bound), Movement (L, T, R), Control (Permitted), Rights (Include), and Lanes (1, 0, 1, 1, 0).

Volume Module table with columns for Base Vol, Growth Adj, Initial Bse, User Adj, PHF Adj, PHF Volume, Reduct Vol, Reduced Vol, PCE Adj, MLF Adj, and Final Volume across 12 lanes.

Saturation Flow Module table with columns for Sat/Lane, Adjustment, Lanes, and Final Sat. across 12 lanes.

Capacity Analysis Module table with columns for Vol/Sat, Crit Moves, Green/Cycle, Volume/Cap, Delay/Veh, User DelAdj, AdjDel/Veh, LOS by Move, and HCM2kAvgQ across 12 lanes.

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

Lytle Creek Ranch Project
Existing 2007 Traffic Condition
AM Peak Hour

Level Of Service Computation Report

2000 HCM Operations Method (Base Volume Alternative)

Intersection #52 Mt. Vernon Ave. and Highland Ave.

Cycle (sec): 60 Critical Vol./Cap.(X): 0.578
Loss Time (sec): 6 (Y+R=4.0 sec) Average Delay (sec/veh): 17.7
Optimal Cycle: OPTIMIZED Level Of Service: B

Table with columns for Street Name (Mt. Vernon Ave., Highland Ave.), Approach (North Bound, South Bound, East Bound, West Bound), Movement (L, T, R), Control, Rights, Min. Green, and Lanes.

Volume Module table with columns for Base Vol, Growth Adj, Initial Bse, User Adj, PHF Adj, PHF Volume, Reduct Vol, Reduced Vol, PCE Adj, MLF Adj, and Final Volume.

Saturation Flow Module table with columns for Sat/Lane, Adjustment, Lanes, and Final Sat.

Capacity Analysis Module table with columns for Vol/Sat, Crit Moves, Green/Cycle, Volume/Cap, Delay/Veh, User DelAdj, AdjDel/Veh, LOS by Move, and HCM2kAvgQ.

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

Lytle Creek Ranch Project
Existing 2007 Traffic Condition
AM Peak Hour

Level Of Service Computation Report

2000 HCM Operations Method (Base Volume Alternative)

Intersection #53 Sierra Ave. and Highland Ave.

Cycle (sec): 60 Critical Vol./Cap.(X): 0.497
Loss Time (sec): 6 (Y+R=4.0 sec) Average Delay (sec/veh): 9.4
Optimal Cycle: OPTIMIZED Level Of Service: A

Table with columns for Street Name (Sierra Ave., Highland Ave.), Approach (North Bound, South Bound, East Bound, West Bound), Movement (L, T, R), Control, Rights, Min. Green, and Lanes.

Volume Module table with columns for Base Vol, Growth Adj, Initial Bse, User Adj, PHF Adj, PHF Volume, Reduct Vol, Reduced Vol, PCE Adj, MLF Adj, and Final Volume.

Saturation Flow Module table with columns for Sat/Lane, Adjustment, Lanes, and Final Sat.

Capacity Analysis Module table with columns for Vol/Sat, Crit Moves, Green/Cycle, Volume/Cap, Delay/Veh, User DelAdj, AdjDel/Veh, LOS by Move, and HCM2kAvgQ.

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

Lytle Creek Ranch Project
Existing 2007 Traffic Condition
AM Peak Hour

Level Of Service Computation Report

2000 HCM Operations Method (Base Volume Alternative)

Intersection #54 Alder Ave. and Highland Ave.

Cycle (sec): 65 Critical Vol./Cap.(X): 0.815
Loss Time (sec): 8 (Y+R=4.0 sec) Average Delay (sec/veh): 32.6
Optimal Cycle: OPTIMIZED Level Of Service: C

Table with columns for Street Name (Alder Ave., Highland Ave.), Approach (North Bound, South Bound, East Bound, West Bound), Movement (L, T, R), Control, Rights, Min. Green, and Lanes.

Volume Module table with columns for Base Vol, Growth Adj, Initial Bse, User Adj, PHF Adj, PHF Volume, Reduct Vol, Reduced Vol, PCE Adj, MLF Adj, and Final Volume.

Saturation Flow Module table with columns for Sat/Lane, Adjustment, Lanes, and Final Sat.

Capacity Analysis Module table with columns for Vol/Sat, Crit Moves, Green/Cycle, Volume/Cap, Delay/Veh, User DelAdj, AdjDel/Veh, LOS by Move, and HCM2kAvgQ.

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

Lytle Creek Ranch Project
Existing 2007 Traffic Condition
AM Peak Hour

Level Of Service Computation Report

2000 HCM Operations Method (Base Volume Alternative)

Intersection #55 Ayala Dr. and Easton St.

Cycle (sec): 60 Critical Vol./Cap.(X): 0.773
Loss Time (sec): 6 (Y+R=4.0 sec) Average Delay (sec/veh): 19.9
Optimal Cycle: OPTIMIZED Level Of Service: B

Table with columns for Street Name (Ayala Dr., Easton St.), Approach (North Bound, South Bound, East Bound, West Bound), Movement (L, T, R), Control, Rights, Min. Green, and Lanes.

Volume Module table showing Base Vol, Growth Adj, Initial Bse, User Adj, PHF Adj, PHF Volume, Reduct Vol, Reduced Vol, PCE Adj, MLF Adj, and Final Volume across various movements.

Saturation Flow Module table showing Sat/Lane, Adjustment, Lanes, and Final Sat. values.

Capacity Analysis Module table showing Vol/Sat, Crit Moves, Green/Cycle, Volume/Cap, Delay/Veh, User DelAdj, AdjDel/Veh, LOS by Move, and HCM2kAvgQ.

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

Lytle Creek Ranch Project
Existing 2007 Traffic Condition
AM Peak Hour

Level Of Service Computation Report

2000 HCM Operations Method (Base Volume Alternative)

Intersection #56 Riverside Ave. and Easton St.

Cycle (sec): 90 Critical Vol./Cap.(X): 1.159
Loss Time (sec): 8 (Y+R=4.0 sec) Average Delay (sec/veh): 88.9
Optimal Cycle: OPTIMIZED Level Of Service: F

Table with columns for Street Name (Riverside Ave., Easton St.), Approach (North Bound, South Bound, East Bound, West Bound), Movement (L, T, R), Control, Rights, Min. Green, and Lanes.

Volume Module table with columns for Base Vol, Growth Adj, Initial Bse, User Adj, PHF Adj, PHF Volume, Reduct Vol, Reduced Vol, PCE Adj, MLF Adj, and Final Volume.

Saturation Flow Module table with columns for Sat/Lane, Adjustment, Lanes, and Final Sat.

Capacity Analysis Module table with columns for Vol/Sat, Crit Moves, Green/Cycle, Volume/Cap, Delay/Veh, User DelAdj, AdjDel/Veh, LOS by Move, and HCM2kAvgQ.

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

Lytle Creek Ranch Project
Existing 2007 Traffic Condition
AM Peak Hour

Level Of Service Computation Report

2000 HCM Operations Method (Base Volume Alternative)

Intersection #57 Easton St. and Highland Ave.

Cycle (sec): 60 Critical Vol./Cap.(X): 0.471
Loss Time (sec): 4 (Y+R=4.0 sec) Average Delay (sec/veh): 3.4
Optimal Cycle: OPTIMIZED Level Of Service: A

Table with columns for Street Name, Approach, Movement, Control, Rights, Min. Green, and Lanes. Rows include Easton St. and Easton St. / Highland Ave. with sub-rows for North, South, East, and West bounds.

Volume Module table with columns for Base Vol, Growth Adj, Initial Bse, User Adj, PHF Adj, PHF Volume, Reduct Vol, Reduced Vol, PCE Adj, MLF Adj, and Final Volume. Rows include Easton St. and Easton St. / Highland Ave.

Saturation Flow Module table with columns for Sat/Lane, Adjustment, Lanes, and Final Sat. Rows include Easton St. and Easton St. / Highland Ave.

Capacity Analysis Module table with columns for Vol/Sat, Crit Moves, Green/Cycle, Volume/Cap, Delay/Veh, User DelAdj, AdjDel/Veh, LOS by Move, and HCM2kAvgQ. Rows include Easton St. and Easton St. / Highland Ave.

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

Lytle Creek Ranch Project
Existing 2007 Traffic Condition
AM Peak Hour

Level Of Service Computation Report

2000 HCM Operations Method (Base Volume Alternative)

Intersection #58 Sierra Ave. and Baseline Rd.

Cycle (sec): 60 Critical Vol./Cap.(X): 0.410
Loss Time (sec): 8 (Y+R=4.0 sec) Average Delay (sec/veh): 17.6
Optimal Cycle: OPTIMIZED Level Of Service: B

Table with columns for Street Name (Sierra Ave., Baseline Rd.), Approach (North Bound, South Bound, East Bound, West Bound), Movement (L, T, R), Control, Rights, Min. Green, and Lanes.

Volume Module table with columns for Base Vol, Growth Adj, Initial Bse, User Adj, PHF Adj, PHF Volume, Reduct Vol, Reduced Vol, PCE Adj, MLF Adj, and Final Volume.

Saturation Flow Module table with columns for Sat/Lane, Adjustment, Lanes, and Final Sat.

Capacity Analysis Module table with columns for Vol/Sat, Crit Moves, Green/Cycle, Volume/Cap, Delay/Veh, User DelAdj, AdjDel/Veh, LOS by Move, and HCM2kAvgQ.

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

Lytle Creek Ranch Project
Existing 2007 Traffic Condition
AM Peak Hour

Level Of Service Computation Report

2000 HCM Operations Method (Base Volume Alternative)

Intersection #59 Alder Ave. and Baseline Rd.

Cycle (sec): 60 Critical Vol./Cap.(X): 0.718
Loss Time (sec): 8 (Y+R=4.0 sec) Average Delay (sec/veh): 25.5
Optimal Cycle: OPTIMIZED Level Of Service: C

Table with columns for Street Name (Alder Ave., Baseline Rd.), Approach (North Bound, South Bound, East Bound, West Bound), Movement (L, T, R), Control, Rights, Min. Green, and Lanes.

Volume Module table with columns for Base Vol, Growth Adj, Initial Bse, User Adj, PHF Adj, PHF Volume, Reduct Vol, Reduced Vol, PCE Adj, MLF Adj, and Final Volume.

Saturation Flow Module table with columns for Sat/Lane, Adjustment, Lanes, and Final Sat.

Capacity Analysis Module table with columns for Vol/Sat, Crit Moves, Green/Cycle, Volume/Cap, Delay/Veh, User DelAdj, AdjDel/Veh, LOS by Move, and HCM2kAvgQ.

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

Lytle Creek Ranch Project
Existing 2007 Traffic Condition
AM Peak Hour

Level Of Service Computation Report

2000 HCM Operations Method (Base Volume Alternative)

Intersection #60 Cedar Ave./Ayala Dr. and Baseline Rd.

Cycle (sec): 60 Critical Vol./Cap.(X): 0.496
Loss Time (sec): 8 (Y+R=4.0 sec) Average Delay (sec/veh): 19.3
Optimal Cycle: OPTIMIZED Level Of Service: B

Table with columns for Street Name (Cedar Ave./Ayala Dr., Baseline Rd.), Approach (North Bound, South Bound, East Bound, West Bound), Movement (L, T, R), Control, Rights, Min. Green, and Lanes.

Volume Module table with columns for Base Vol, Growth Adj, Initial Bse, User Adj, PHF Adj, PHF Volume, Reduct Vol, Reduced Vol, PCE Adj, MLF Adj, and Final Volume.

Saturation Flow Module table with columns for Sat/Lane, Adjustment, Lanes, and Final Sat.

Capacity Analysis Module table with columns for Vol/Sat, Crit Moves, Green/Cycle, Volume/Cap, Delay/Veh, User DelAdj, AdjDel/Veh, LOS by Move, and HCM2kAvgQ.

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

Lytle Creek Ranch Project
Existing 2007 Traffic Condition
AM Peak Hour

Level Of Service Computation Report

2000 HCM Operations Method (Base Volume Alternative)

Intersection #61 Cactus Ave. and Baseline Rd.

Cycle (sec): 60 Critical Vol./Cap.(X): 0.621
Loss Time (sec): 8 (Y+R=4.0 sec) Average Delay (sec/veh): 20.5
Optimal Cycle: OPTIMIZED Level Of Service: C

Table with columns for Street Name (Cactus Ave., Baseline Rd.), Approach (North Bound, South Bound, East Bound, West Bound), Movement (L, T, R), Control, Rights, Min. Green, and Lanes.

Volume Module table with columns for Base Vol, Growth Adj, Initial Bse, User Adj, PHF Adj, PHF Volume, Reduct Vol, Reduced Vol, PCE Adj, MLF Adj, and Final Volume.

Saturation Flow Module table with columns for Sat/Lane, Adjustment, Lanes, and Final Sat.

Capacity Analysis Module table with columns for Vol/Sat, Crit Moves, Green/Cycle, Volume/Cap, Delay/Veh, User DelAdj, AdjDel/Veh, LOS by Move, and HCM2kAvgQ.

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

Lytle Creek Ranch Project
Existing 2007 Traffic Condition
AM Peak Hour

Level Of Service Computation Report

2000 HCM Operations Method (Base Volume Alternative)

Intersection #62 Riverside Ave. and Baseline Rd.

Cycle (sec): 60 Critical Vol./Cap.(X): 0.711
Loss Time (sec): 8 (Y+R=4.0 sec) Average Delay (sec/veh): 22.6
Optimal Cycle: OPTIMIZED Level Of Service: C

Table with columns for Street Name (Riverside Ave., Baseline Rd.), Approach (North Bound, South Bound, East Bound, West Bound), Movement (L, T, R), Control, Rights, Min. Green, and Lanes.

Volume Module table with columns for Base Vol, Growth Adj, Initial Bse, User Adj, PHF Adj, PHF Volume, Reduct Vol, Reduced Vol, PCE Adj, MLF Adj, and Final Volume.

Saturation Flow Module table with columns for Sat/Lane, Adjustment, Lanes, and Final Sat.

Capacity Analysis Module table with columns for Vol/Sat, Crit Moves, Green/Cycle, Volume/Cap, Delay/Veh, User DelAdj, AdjDel/Veh, LOS by Move, and HCM2kAvgQ.

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

Lytle Creek Ranch Project
Existing 2007 Traffic Condition
AM Peak Hour

Level Of Service Computation Report

2000 HCM Operations Method (Base Volume Alternative)

Intersection #63 Pepper Ave. and Baseline. Rd.

Cycle (sec): 60 Critical Vol./Cap.(X): 0.320
Loss Time (sec): 4 (Y+R=4.0 sec) Average Delay (sec/veh): 8.2
Optimal Cycle: OPTIMIZED Level Of Service: A

Table with columns for Street Name (Pepper Ave., Baseline. Rd.), Approach (North Bound, South Bound, East Bound, West Bound), Movement (L, T, R), Control (Permitted), Rights (Include), and Lanes (0, 1, 2).

Volume Module table with columns for Base Vol, Growth Adj, Initial Bse, User Adj, PHF Adj, PHF Volume, Reduct Vol, Reduced Vol, PCE Adj, MLF Adj, and Final Volume across 12 lanes.

Saturation Flow Module table with columns for Sat/Lane, Adjustment, Lanes, and Final Sat. across 12 lanes.

Capacity Analysis Module table with columns for Vol/Sat, Crit Moves, Green/Cycle, Volume/Cap, Delay/Veh, User DelAdj, AdjDel/Veh, LOS by Move, and HCM2kAvgQ across 12 lanes.

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

Lytle Creek Ranch Project
Existing 2007 Traffic Condition
AM Peak Hour

Level Of Service Computation Report

2000 HCM Operations Method (Base Volume Alternative)

Intersection #65 Sierra Ave. and Foothill Blvd.

Cycle (sec): 60 Critical Vol./Cap.(X): 0.553
Loss Time (sec): 8 (Y+R=4.0 sec) Average Delay (sec/veh): 19.4
Optimal Cycle: OPTIMIZED Level Of Service: B

Table with columns for Street Name (Sierra Ave., Foothill Blvd.), Approach (North Bound, South Bound, East Bound, West Bound), Movement (L, T, R), Control, Rights, Min. Green, and Lanes.

Volume Module table with columns for Base Vol, Growth Adj, Initial Bse, User Adj, PHF Adj, PHF Volume, Reduct Vol, Reduced Vol, PCE Adj, MLF Adj, and Final Volume.

Saturation Flow Module table with columns for Sat/Lane, Adjustment, Lanes, and Final Sat.

Capacity Analysis Module table with columns for Vol/Sat, Crit Moves, Green/Cycle, Volume/Cap, Delay/Veh, User DelAdj, AdjDel/Veh, LOS by Move, and HCM2kAvgQ.

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

Lytle Creek Ranch Project
Existing 2007 Traffic Condition
AM Peak Hour

Level Of Service Computation Report

2000 HCM Operations Method (Base Volume Alternative)

Intersection #66 Alder Ave. and Foothill Blvd.

Cycle (sec): 60 Critical Vol./Cap.(X): 0.462
Loss Time (sec): 6 (Y+R=4.0 sec) Average Delay (sec/veh): 13.7
Optimal Cycle: OPTIMIZED Level Of Service: B

Table with columns for Street Name (Alder Ave., Foothill Blvd.), Approach (North Bound, South Bound, East Bound, West Bound), Movement (L, T, R), Control, Rights, Min. Green, and Lanes.

Volume Module:AM Peak Hour

Table with columns for Base Vol, Growth Adj, Initial Bse, User Adj, PHF Adj, PHF Volume, Reduct Vol, Reduced Vol, PCE Adj, MLF Adj, and Final Volume.

Saturation Flow Module:

Table with columns for Sat/Lane, Adjustment, Lanes, and Final Sat.

Capacity Analysis Module:

Table with columns for Vol/Sat, Crit Moves, Green/Cycle, Volume/Cap, Delay/Veh, User DelAdj, AdjDel/Veh, LOS by Move, and HCM2kAvgQ.

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

Lytle Creek Ranch Project
Existing 2007 Traffic Condition
AM Peak Hour

Level Of Service Computation Report

2000 HCM Operations Method (Base Volume Alternative)

Intersection #67 Cedar Ave. and Foothill Blvd.

Cycle (sec): 60 Critical Vol./Cap.(X): 0.606
Loss Time (sec): 8 (Y+R=4.0 sec) Average Delay (sec/veh): 20.1
Optimal Cycle: OPTIMIZED Level Of Service: C

Table with columns for Street Name (Cedar Ave., Foothill Blvd.), Approach (North Bound, South Bound, East Bound, West Bound), Movement (L, T, R), Control, Rights, Min. Green, and Lanes.

Volume Module table with columns for Base Vol, Growth Adj, Initial Bse, User Adj, PHF Adj, PHF Volume, Reduct Vol, Reduced Vol, PCE Adj, MLF Adj, and Final Volume.

Saturation Flow Module table with columns for Sat/Lane, Adjustment, Lanes, and Final Sat.

Capacity Analysis Module table with columns for Vol/Sat, Crit Moves, Green/Cycle, Volume/Cap, Delay/Veh, User DelAdj, AdjDel/Veh, LOS by Move, and HCM2kAvgQ.

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

Lytle Creek Ranch Project
Existing 2007 Traffic Condition
AM Peak Hour

Level Of Service Computation Report

2000 HCM Operations Method (Base Volume Alternative)

Intersection #68 Cactus Ave. and Foothill Blvd.

Cycle (sec): 60 Critical Vol./Cap.(X): 0.491
Loss Time (sec): 6 (Y+R=4.0 sec) Average Delay (sec/veh): 14.5
Optimal Cycle: OPTIMIZED Level Of Service: B

Table with columns for Street Name (Cactus Ave., Foothill Blvd.), Approach (North Bound, South Bound, East Bound, West Bound), Movement (L, T, R), Control, Rights, Min. Green, and Lanes.

Volume Module: Table with columns for Base Vol, Growth Adj, Initial Bse, User Adj, PHF Adj, PHF Volume, Reduct Vol, Reduced Vol, PCE Adj, MLF Adj, and Final Volume.

Saturation Flow Module: Table with columns for Sat/Lane, Adjustment, Lanes, and Final Sat.

Capacity Analysis Module: Table with columns for Vol/Sat, Crit Moves, Green/Cycle, Volume/Cap, Delay/Veh, User DelAdj, AdjDel/Veh, LOS by Move, and HCM2kAvgQ.

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

Lytle Creek Ranch Project
Existing 2007 Traffic Condition
AM Peak Hour

Level Of Service Computation Report

2000 HCM Operations Method (Base Volume Alternative)

Intersection #69 Riverside Ave. and Foothill Blvd.

Cycle (sec): 60 Critical Vol./Cap.(X): 0.644
Loss Time (sec): 8 (Y+R=4.0 sec) Average Delay (sec/veh): 20.6
Optimal Cycle: OPTIMIZED Level Of Service: C

Table with columns for Street Name (Riverside Ave., Foothill Blvd.), Approach (North Bound, South Bound, East Bound, West Bound), Movement (L, T, R), Control, Rights, Min. Green, and Lanes.

Volume Module: Table with columns for Base Vol, Growth Adj, Initial Bse, User Adj, PHF Adj, PHF Volume, Reduct Vol, Reduced Vol, PCE Adj, MLF Adj, and Final Volume.

Saturation Flow Module: Table with columns for Sat/Lane, Adjustment, Lanes, and Final Sat.

Capacity Analysis Module: Table with columns for Vol/Sat, Crit Moves, Green/Cycle, Volume/Cap, Delay/Veh, User DelAdj, AdjDel/Veh, LOS by Move, and HCM2kAvgQ.

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

Lytle Creek Ranch Project
Existing 2007 Traffic Condition
AM Peak Hour

Level Of Service Computation Report

2000 HCM Operations Method (Base Volume Alternative)

Intersection #70 Sierra Ave. and Arrow Blvd.

Cycle (sec): 60 Critical Vol./Cap.(X): 0.452
Loss Time (sec): 8 (Y+R=4.0 sec) Average Delay (sec/veh): 17.7
Optimal Cycle: OPTIMIZED Level Of Service: B

Table with columns for Street Name (Sierra Ave., Arrow Blvd.), Approach (North Bound, South Bound, East Bound, West Bound), Movement (L, T, R), Control, Rights, Min. Green, and Lanes.

Volume Module table with columns for Base Vol, Growth Adj, Initial Bse, User Adj, PHF Adj, PHF Volume, Reduct Vol, Reduced Vol, PCE Adj, MLF Adj, and Final Volume.

Saturation Flow Module table with columns for Sat/Lane, Adjustment, Lanes, and Final Sat.

Capacity Analysis Module table with columns for Vol/Sat, Crit Moves, Green/Cycle, Volume/Cap, Delay/Veh, User DelAdj, AdjDel/Veh, LOS by Move, and HCM2kAvgQ.

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

Lytle Creek Ranch Project
Existing 2007 Traffic Condition
AM Peak Hour

Level Of Service Computation Report

2000 HCM Operations Method (Base Volume Alternative)

Intersection #71 Alder Ave. and Arrow Blvd.

Cycle (sec): 60 Critical Vol./Cap.(X): 0.314
Loss Time (sec): 8 (Y+R=4.0 sec) Average Delay (sec/veh): 18.6
Optimal Cycle: OPTIMIZED Level Of Service: B

Table with columns for Street Name (Alder Ave., Arrow Blvd.), Approach (North Bound, South Bound, East Bound, West Bound), Movement (L, T, R), Control, Rights, Min. Green, and Lanes.

Volume Module table with columns for Base Vol, Growth Adj, Initial Bse, User Adj, PHF Adj, PHF Volume, Reduct Vol, Reduced Vol, PCE Adj, MLF Adj, and Final Volume.

Saturation Flow Module table with columns for Sat/Lane, Adjustment, Lanes, and Final Sat.

Capacity Analysis Module table with columns for Vol/Sat, Crit Moves, Green/Cycle, Volume/Cap, Delay/Veh, User DelAdj, AdjDel/Veh, LOS by Move, and HCM2kAvgQ.

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

Lytle Creek Ranch Project
Existing 2007 Traffic Condition
AM Peak Hour

Level Of Service Computation Report

2000 HCM Operations Method (Base Volume Alternative)

Intersection #72 Cedar Ave. and Rialto Ave.

Cycle (sec): 60 Critical Vol./Cap.(X): 0.451
Loss Time (sec): 8 (Y+R=4.0 sec) Average Delay (sec/veh): 16.2
Optimal Cycle: OPTIMIZED Level Of Service: B

Table with columns for Street Name (Cedar Ave., Rialto Ave.), Approach (North Bound, South Bound, East Bound, West Bound), Movement (L, T, R), Control, Rights, Min. Green, and Lanes.

Volume Module table with columns for Base Vol, Growth Adj, Initial Bse, User Adj, PHF Adj, PHF Volume, Reduct Vol, Reduced Vol, PCE Adj, MLF Adj, and Final Volume.

Saturation Flow Module table with columns for Sat/Lane, Adjustment, Lanes, and Final Sat.

Capacity Analysis Module table with columns for Vol/Sat, Crit Moves, Green/Cycle, Volume/Cap, Delay/Veh, User DelAdj, AdjDel/Veh, LOS by Move, and HCM2kAvgQ.

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

Lytle Creek Ranch Project
Existing 2007 Traffic Condition
AM Peak Hour

Level Of Service Computation Report

2000 HCM Operations Method (Base Volume Alternative)

Intersection #73 Cactus Ave. and Rialto Ave.

Cycle (sec): 60 Critical Vol./Cap.(X): 0.216
Loss Time (sec): 4 (Y+R=4.0 sec) Average Delay (sec/veh): 8.8
Optimal Cycle: OPTIMIZED Level Of Service: A

Table with columns for Street Name (Cactus Ave., Rialto Ave.), Approach (North Bound, South Bound, East Bound, West Bound), Movement (L, T, R), Control (Permitted), Rights (Include), Min. Green, and Lanes.

Volume Module table with columns for Base Vol, Growth Adj, Initial Bse, User Adj, PHF Adj, PHF Volume, Reduct Vol, Reduced Vol, PCE Adj, MLF Adj, and Final Volume across various movements.

Saturation Flow Module table with columns for Sat/Lane, Adjustment, Lanes, and Final Sat. across various movements.

Capacity Analysis Module table with columns for Vol/Sat, Crit Moves, Green/Cycle, Volume/Cap, Delay/Veh, User DelAdj, AdjDel/Veh, LOS by Move, and HCM2kAvgQ across various movements.

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

Lytle Creek Ranch Project
Existing 2007 Traffic Condition
AM Peak Hour

Level Of Service Computation Report

2000 HCM Operations Method (Base Volume Alternative)

Intersection #74 Cedar Ave. and Merrill Ave.

Cycle (sec): 60 Critical Vol./Cap.(X): 0.684
Loss Time (sec): 6 (Y+R=4.0 sec) Average Delay (sec/veh): 17.2
Optimal Cycle: OPTIMIZED Level Of Service: B

Table with columns for Street Name (Cedar Ave., Merrill Ave.), Approach (North Bound, South Bound, East Bound, West Bound), Movement (L, T, R), Control, Rights, Min. Green, and Lanes.

Volume Module table with columns for Base Vol, Growth Adj, Initial Bse, User Adj, PHF Adj, PHF Volume, Reduct Vol, Reduced Vol, PCE Adj, MLF Adj, and Final Volume.

Saturation Flow Module table with columns for Sat/Lane, Adjustment, Lanes, and Final Sat.

Capacity Analysis Module table with columns for Vol/Sat, Crit Moves, Green/Cycle, Volume/Cap, Delay/Veh, User DelAdj, AdjDel/Veh, LOS by Move, and HCM2kAvgQ.

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

Lytle Creek Ranch Project
Existing 2007 Traffic Condition
AM Peak Hour

Level Of Service Computation Report

2000 HCM Operations Method (Base Volume Alternative)

Intersection #75 Cactus Ave. and Merrill Ave.

Cycle (sec): 60 Critical Vol./Cap.(X): 0.264
Loss Time (sec): 6 (Y+R=4.0 sec) Average Delay (sec/veh): 14.0
Optimal Cycle: OPTIMIZED Level Of Service: B

Table with columns for Street Name (Cactus Ave., Merrill Ave.), Approach (North Bound, South Bound, East Bound, West Bound), Movement (L, T, R), Control, Rights, Min. Green, and Lanes.

Volume Module table with columns for Base Vol, Growth Adj, Initial Bse, User Adj, PHF Adj, PHF Volume, Reduct Vol, Reduced Vol, PCE Adj, MLF Adj, and Final Volume.

Saturation Flow Module table with columns for Sat/Lane, Adjustment, Lanes, and Final Sat.

Capacity Analysis Module table with columns for Vol/Sat, Crit Moves, Green/Cycle, Volume/Cap, Delay/Veh, User DelAdj, AdjDel/Veh, LOS by Move, and HCM2kAvgQ.

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

Lytle Creek Ranch Project
Existing 2007 Traffic Condition
PM Peak Hour

Level Of Service Computation Report

2000 HCM Unsignalized Method (Base Volume Alternative)

Intersection #1 Devore Rd & I-215 NB On/Off-Ramps / Arrowhead Bl

Average Delay (sec/veh): 5.0 Worst Case Level Of Service: C[15.9]

Table with columns for Street Name, Approach, Movement, Control, Rights, and Lanes. Rows include Devore Rd and I-215 NB On/Off-Ramps / Arrowhead Bl with various lane configurations and control types like Uncontrolled and Stop Sign.

Volume Module:AM Peak Hour

Table showing traffic volume data including Base Vol, Growth Adj, Initial Bse, User Adj, PHF Adj, PHF Volume, Reduct Vol, and Final Volume across different approaches.

Critical Gap Module:

Table showing critical gap and follow-up time data for different approaches and movements.

Capacity Module:

Table showing capacity data including Conflict Vol, Potent Cap., Move Cap., and Volume/Cap. for various approaches.

Level Of Service Module:

Table showing level of service data including 2Way95thQ, Control Del, LOS by Move, Movement, Shared Cap., Shared Queue, Shrd ConDel, Shared LOS, ApproachDel, and ApproachLOS.

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

Lytle Creek Ranch Project
Existing 2007 Traffic Condition
PM Peak Hour

Level Of Service Computation Report

2000 HCM Unsignalized Method (Base Volume Alternative)

Intersection #2 I-215 SB On/Off-Ramps & Cajon Bl

Average Delay (sec/veh): 3.8 Worst Case Level Of Service: A[9.5]

Table with columns for Street Name, Approach, Movement, Control, Rights, and Lanes for I-215 SB On/Off-Ramps and Cajon Bl.

Volume Module:AM Peak Hour

Table showing volume calculations: Base Vol, Growth Adj, Initial Bse, User Adj, PHF Adj, PHF Volume, Reduct Vol, Final Volume.

Critical Gap Module:

Table showing Critical Gap and FollowUpTim values for different movements.

Capacity Module:

Table showing Capacity calculations: Cnflct Vol, Potent Cap., Move Cap., Volume/Cap.

Level Of Service Module:

Table showing Level of Service calculations: 2Way95thQ, Control Del, LOS by Move, Movement, Shared Cap., SharedQueue, Shrd ConDel, Shared LOS, ApproachDel, ApproachLOS.

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

Lytle Creek Ranch Project
Existing 2007 Traffic Condition
PM Peak Hour

Level Of Service Computation Report

2000 HCM 4-Way Stop Method (Base Volume Alternative)

Intersection #3 Glen Helen Pkwy & Cajon Bl

Cycle (sec): 100 Critical Vol./Cap.(X): 0.551
Loss Time (sec): 0 (Y+R=4.0 sec) Average Delay (sec/veh): 12.8
Optimal Cycle: 0 Level Of Service: B

Table with columns for Street Name (Glen Helen Pkwy, Cajon Bl), Approach (North Bound, South Bound, East Bound, West Bound), Movement (L, T, R), Control (Stop Sign), Rights (Include), Min. Green (6), and Lanes (0, 1, 0, 0, 1).

Volume Module:AM Peak Hour

Table with 13 columns for traffic volume metrics: Base Vol, Growth Adj, Initial Bse, User Adj, PHF Adj, PHF Volume, Reduct Vol, Reduced Vol, PCE Adj, MLF Adj, Final Volume.

Saturation Flow Module:

Table with 13 columns for saturation flow metrics: Adjustment, Lanes, Final Sat.

Capacity Analysis Module:

Table with 13 columns for capacity analysis metrics: Vol/Sat, Crit Moves, Delay/Veh, Delay Adj, AdjDel/Veh, LOS by Move, ApproachDel, Delay Adj, ApprAdjDel, LOS by Appr, AllWayAvgQ.

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

Lytle Creek Ranch Project
Existing 2007 Traffic Condition
PM Peak Hour

Level Of Service Computation Report

2000 HCM Unsignalized Method (Base Volume Alternative)

Intersection #4 Palm Ave & I-215 NB On/Off-Ramps

Average Delay (sec/veh): 9.0 Worst Case Level Of Service: D[34.2]

Table with columns for Street Name (Palm Ave, I-215 NB On/Off-Ramps), Approach (North Bound, South Bound, East Bound, West Bound), Movement (L, T, R), Control (Uncontrolled, Stop Sign), Rights (Include), and Lanes (0, 1, 0, 0, 0, 0, 2, 0, 1, 0, 0, 0, 0, 0, 0, 1, 0, 0, 1).

Volume Module: Table with columns for Base Vol, Growth Adj, Initial Bse, User Adj, PHF Adj, PHF Volume, Reduct Vol, Final Volume, and values for each approach and movement.

Critical Gap Module: Table with columns for Critical Gp, FollowUpTim, and values for each approach and movement.

Capacity Module: Table with columns for Cnflct Vol, Potent Cap., Move Cap., Volume/Cap, and values for each approach and movement.

Level Of Service Module: Table with columns for 2Way95thQ, Control Del, LOS by Move, Movement, Shared Cap., SharedQueue, Shrd ConDel, Shared LOS, ApproachDel, ApproachLOS, and values for each approach and movement.

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

Lytle Creek Ranch Project
Existing 2007 Traffic Condition
PM Peak Hour

Level Of Service Computation Report

2000 HCM 4-Way Stop Method (Base Volume Alternative)

Intersection #5 Palm Ave & I-215 SB On/Off-Ramps / Kendall Dr.

Cycle (sec): 100 Critical Vol./Cap.(X): 0.893
Loss Time (sec): 0 (Y+R=4.0 sec) Average Delay (sec/veh): 29.0
Optimal Cycle: 0 Level Of Service: D

Street Name: Palm Ave I-215 SB On/Off-Ramps / Kendall D
Approach: North Bound South Bound East Bound West Bound
Movement: L - T - R L - T - R L - T - R L - T - R
Control: Stop Sign Stop Sign Stop Sign Stop Sign
Rights: Include Include Include Include
Min. Green: 6 6 6 6 6 6 6 6 6 6 6 6
Lanes: 1 0 1 0 1 1 0 1 1 0 0 1 0 0 0 1

Volume Module:
Base Vol: 87 348 90 266 121 111 165 62 31 26 6 321
Growth Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
Initial Bse: 87 348 90 266 121 111 165 62 31 26 6 321
User Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
PHF Adj: 0.95 0.95 0.95 0.95 0.95 0.95 0.95 0.95 0.95 0.95 0.95 0.95
PHF Volume: 92 366 95 280 127 117 174 65 33 27 6 338
Reduct Vol: 0 0 0 0 0 0 0 0 0 0 0 0
Reduced Vol: 92 366 95 280 127 117 174 65 33 27 6 338
PCE Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
MLF Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
FinalVolume: 92 366 95 280 127 117 174 65 33 27 6 338

Saturation Flow Module:
Adjustment: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
Lanes: 1.00 1.00 1.00 1.00 1.04 0.96 0.73 0.27 1.00 0.81 0.19 1.00
Final Sat.: 378 410 433 380 413 407 279 105 426 315 73 451

Capacity Analysis Module:
Vol/Sat: 0.24 0.89 0.22 0.74 0.31 0.29 0.62 0.62 0.08 0.09 0.09 0.75
Crit Moves: ****
Delay/Veh: 14.7 49.9 12.8 32.6 15.1 13.9 24.3 24.3 11.3 12.4 12.4 28.8
Delay Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
AdjDel/Veh: 14.7 49.9 12.8 32.6 15.1 13.9 24.3 24.3 11.3 12.4 12.4 28.8
LOS by Move: B E B D C B C C B B B D
ApproachDel: 37.7 24.2 22.8 27.3
Delay Adj: 1.00 1.00 1.00
ApprAdjDel: 37.7 24.2 22.8 27.3
LOS by Appr: E C C D
AllWayAvgQ: 0.3 4.4 0.3 2.2 0.4 0.4 1.3 1.3 0.1 0.1 0.1 2.3

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

Lytle Creek Ranch Project
Existing 2007 Traffic Condition
PM Peak Hour

Level Of Service Computation Report

2000 HCM Operations Method (Base Volume Alternative)

Intersection #6 University Pkwy & I-215 NB On/Off-Ramps

Cycle (sec): 60 Critical Vol./Cap.(X): 0.700
Loss Time (sec): 6 (Y+R=4.0 sec) Average Delay (sec/veh): 17.1
Optimal Cycle: OPTIMIZED Level Of Service: B

Table with columns for Street Name, Approach, Movement, Control, Rights, Min. Green, and Lanes. Rows include University Pkwy and I-215 NB On/Off-Ramps with various movement and control details.

Volume Module:

Table showing traffic volume data including Base Vol, Growth Adj, Initial Bse, User Adj, PHF Adj, PHF Volume, Reduct Vol, Reduced Vol, PCE Adj, MLF Adj, and Final Volume across different movements.

Saturation Flow Module:

Table showing saturation flow data including Sat/Lane, Adjustment, Lanes, and Final Sat. for various movements.

Capacity Analysis Module:

Table showing capacity analysis data including Vol/Sat, Crit Moves, Green/Cycle, Volume/Cap, Delay/Veh, User DelAdj, AdjDel/Veh, LOS by Move, and HCM2kAvgQ for various movements.

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

Lytle Creek Ranch Project
Existing 2007 Traffic Condition
PM Peak Hour

Level Of Service Computation Report

2000 HCM Operations Method (Base Volume Alternative)

Intersection #7 University Pkwy & I-215 SB On/Off-Ramps

Cycle (sec): 90 Critical Vol./Cap.(X): 1.180
Loss Time (sec): 6 (Y+R=4.0 sec) Average Delay (sec/veh): 76.7
Optimal Cycle: OPTIMIZED Level Of Service: E

Table with columns for Street Name, Approach, Movement, Control, Rights, Min. Green, and Lanes. Rows include University Pkwy and I-215 SB On/Off-Ramps with various movement and control details.

Volume Module:

Table showing traffic volume data including Base Vol, Growth Adj, Initial Bse, User Adj, PHF Adj, PHF Volume, Reduct Vol, Reduced Vol, PCE Adj, MLF Adj, and Final Volume across different movements.

Saturation Flow Module:

Table showing saturation flow data including Sat/Lane, Adjustment, Lanes, and Final Sat. values for different movements.

Capacity Analysis Module:

Table showing capacity analysis data including Vol/Sat, Crit Moves, Green/Cycle, Volume/Cap, Delay/Veh, User DelAdj, AdjDel/Veh, LOS by Move, and HCM2kAvgQ values.

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

Lytle Creek Ranch Project
Existing 2007 Traffic Condition
PM Peak Hour

Level Of Service Computation Report

2000 HCM Unsignalized Method (Base Volume Alternative)

Intersection #8 I-15 SB On/Off-Ramps & Glen Helen Pkwy

Average Delay (sec/veh): 3.8 Worst Case Level Of Service: E[35.4]

Table with columns for Street Name, Approach, Movement, Control, Rights, and Lanes. Rows include I-15 SB On/Off-Ramps and Glen Helen Pkwy with various movement and control details.

Volume Module:

Table showing traffic volume data including Base Vol, Growth Adj, Initial Bse, User Adj, PHF Adj, PHF Volume, Reduct Vol, and Final Volume for various movements.

Critical Gap Module:

Table showing critical gap and follow-up time data for different movements.

Capacity Module:

Table showing capacity-related data including Conflict Vol, Potent Cap., Move Cap., and Volume/Cap.

Level Of Service Module:

Table showing level of service data including 2Way95thQ, Control Del, LOS by Move, Movement, Shared Cap., Shared Queue, Shrd ConDel, Shared LOS, ApproachDel, and ApproachLOS.

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

Lytle Creek Ranch Project
Existing 2007 Traffic Condition
PM Peak Hour

Level Of Service Computation Report

2000 HCM Unsignalized Method (Base Volume Alternative)

Intersection #9 I-15 NB On/Off-Ramps & Glen Helen Pkwy

Average Delay (sec/veh): 167.3 Worst Case Level Of Service: F[207.2]

Table with columns for Street Name, Approach, Movement, Control, Rights, and Lanes. Rows include I-15 NB On/Off-Ramps and Glen Helen Pkwy with various movement and control details.

Volume Module:

Table showing volume adjustments: Base Vol, Growth Adj, Initial Bse, User Adj, PHF Adj, PHF Volume, Reduct Vol, Final Volume.

Critical Gap Module:

Table showing critical gap and follow-up time values for different movements.

Capacity Module:

Table showing capacity-related metrics: Cnflct Vol, Potent Cap., Move Cap., Volume/Cap.

Level Of Service Module:

Table showing level of service metrics: 2Way95thQ, Control Del, LOS by Move, Movement, Shared Cap., SharedQueue, Shrd ConDel, Shared LOS, ApproachDel, ApproachLOS.

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

Lytle Creek Ranch Project
Existing 2007 Traffic Condition
PM Peak Hour

Level Of Service Computation Report

2000 HCM Unsignalized Method (Base Volume Alternative)

Intersection #11 Lytle Creek Rd & Sierra Ave

Average Delay (sec/veh): 50.0 Worst Case Level Of Service: F[236.5]

Table with columns for Street Name, Approach, Movement, Control, Rights, and Lanes. Rows include Lytle Creek Rd (North/South Bound) and Sierra Ave / Lytle Creek Rd (East/West Bound).

Volume Module:

Table showing traffic volume metrics: Base Vol, Growth Adj, Initial Bse, User Adj, PHF Adj, PHF Volume, Reduct Vol, and Final Volume for each approach.

Critical Gap Module:

Table showing critical gap and follow-up time for each approach.

Capacity Module:

Table showing capacity metrics: Conflict Vol, Potent Cap., Move Cap., and Volume/Cap for each approach.

Level Of Service Module:

Table showing level of service metrics: 2Way95thQ, Control Del, LOS by Move, Movement, Shared Cap., Shared Queue, Shrd ConDel, Shared LOS, Approach Del, and Approach LOS.

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

Lytle Creek Ranch Project
Existing 2007 Traffic Condition
PM Peak Hour

Level Of Service Computation Report

2000 HCM 4-Way Stop Method (Base Volume Alternative)

Intersection #12 I-15 SB On/Off-Ramps & Sierra Ave

Cycle (sec): 100 Critical Vol./Cap.(X): 2.087
Loss Time (sec): 0 (Y+R=4.0 sec) Average Delay (sec/veh): 252.9
Optimal Cycle: 0 Level Of Service: F

Street Name:	I-15 SB On/Off-Ramps						Sierra Ave					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Stop Sign			Stop Sign			Stop Sign			Stop Sign		
Rights:	Include			Include			Include			Include		
Min. Green:	6	6	6	6	6	6	6	6	6	6	6	6
Lanes:	0	0	0	0	1	0	0	0	1	1	0	2

Volume Module:

Base Vol:	0	0	0	495	3	143	0	743	233	535	467	0
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	0	0	0	495	3	143	0	743	233	535	467	0
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
PHF Volume:	0	0	0	521	3	151	0	782	245	563	492	0
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	0	0	0	521	3	151	0	782	245	563	492	0
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Final Volume:	0	0	0	521	3	151	0	782	245	563	492	0

Saturation Flow Module:

Adjustment:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Lanes:	0.00	0.00	0.00	0.99	0.01	1.00	0.00	0.76	0.24	1.00	2.00	0.00
Final Sat.:	0	0	0	432	3	505	0	375	118	450	960	0

Capacity Analysis Module:

Vol/Sat:	xxxx	xxxx	xxxx	1.21	1.21	0.30	xxxx	2.09	2.09	1.25	0.51	xxxx
Crit Moves:					****			****			****	
Delay/Veh:	0.0	0.0	0.0	138.9	139	12.8	0.0	512	512.2	155.1	17.8	0.0
Delay Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	0.0	0.0	0.0	138.9	139	12.8	0.0	512	512.2	155.1	17.8	0.0
LOS by Move:	*	*	*	F	F	B	*	F	F	F	C	*
ApproachDel:	xxxxxxx			110.8			512.2			91.1		
Delay Adj:	xxxxxxx			1.00			1.00			1.00		
ApprAdjDel:	xxxxxxx			110.8			512.2			91.1		
LOS by Appr:	*			F			F			F		
AllWayAvgQ:	0.0	0.0	0.0	15.4	15.4	0.4	68.6	68.6	68.6	18.1	1.0	0.0

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

Lytle Creek Ranch Project
Existing 2007 Traffic Condition
PM Peak Hour

Level Of Service Computation Report

2000 HCM 4-Way Stop Method (Base Volume Alternative)

Intersection #13 I-15 NB On/Off-Ramps & Sierra Ave

Cycle (sec): 100 Critical Vol./Cap.(X): 2.479
Loss Time (sec): 0 (Y+R=4.0 sec) Average Delay (sec/veh): 445.3
Optimal Cycle: 0 Level Of Service: F

Table with columns for Street Name (I-15 NB On/Off-Ramps, Sierra Ave), Approach (North Bound, South Bound, East Bound, West Bound), Movement (L, T, R), Control (Stop Sign), Rights (Include), Min. Green, and Lanes.

Volume Module:

Table with columns for Base Vol, Growth Adj, Initial Bse, User Adj, PHF Adj, PHF Volume, Reduct Vol, Reduced Vol, PCE Adj, MLF Adj, and Final Volume.

Saturation Flow Module:

Table with columns for Adjustment, Lanes, and Final Sat.

Capacity Analysis Module:

Table with columns for Vol/Sat, Crit Moves, Delay/Veh, Delay Adj, AdjDel/Veh, LOS by Move, ApproachDel, Delay Adj, ApprAdjDel, LOS by Appr, and AllWayAvgQ.

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

Lytle Creek Ranch Project
Existing 2007 Traffic Condition
PM Peak Hour

Level Of Service Computation Report

2000 HCM Unsignalized Method (Base Volume Alternative)

Intersection #15 Lytle Creek Rd. and Duncan Canyon Rd.

Average Delay (sec/veh): 3.0 Worst Case Level Of Service: A[8.8]

Table with columns for Street Name (Lytle Creek Rd., Duncan Canyon Rd.), Approach (North Bound, South Bound, East Bound, West Bound), Movement (L, T, R), Control (Stop Sign, Uncontrolled), Rights (Include), and Lanes.

Volume Module table with columns for Base Vol, Growth Adj, Initial Bse, User Adj, PHF Adj, PHF Volume, Reduct Vol, and Final Volume across four approaches.

Critical Gap Module table with columns for Critical Gp and FollowUpTim across four approaches.

Capacity Module table with columns for Cnflct Vol, Potent Cap., Move Cap., and Volume/Cap across four approaches.

Level Of Service Module table with columns for 2Way95thQ, Control Del, LOS by Move, Movement, Shared Cap., SharedQueue, Shrd ConDel, Shared LOS, ApproachDel, and ApproachLOS across four approaches.

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

Lytle Creek Ranch Project
Existing 2007 Traffic Condition
PM Peak Hour

Level Of Service Computation Report

2000 HCM Operations Method (Base Volume Alternative)

Intersection #16 I-15 SB On/Off Ramps and Summit Ave.

Cycle (sec): 60 Critical Vol./Cap.(X): 0.886
Loss Time (sec): 6 (Y+R=4.0 sec) Average Delay (sec/veh): 22.9
Optimal Cycle: OPTIMIZED Level Of Service: C

Table with columns for Street Name (I-15 SB On/Off Ramps, Summit Ave.), Approach (North Bound, South Bound, East Bound, West Bound), Movement (L, T, R), Control (Split Phase, Protected), Rights (Include), Min. Green, and Lanes.

Volume Module:

Table with columns for Base Vol, Growth Adj, Initial Bse, User Adj, PHF Adj, PHF Volume, Reduct Vol, Reduced Vol, PCE Adj, MLF Adj, and Final Volume.

Saturation Flow Module:

Table with columns for Sat/Lane, Adjustment, Lanes, and Final Sat.

Capacity Analysis Module:

Table with columns for Vol/Sat, Crit Moves, Green/Cycle, Volume/Cap, Delay/Veh, User DelAdj, AdjDel/Veh, LOS by Move, and HCM2kAvgQ.

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

Lytle Creek Ranch Project
Existing 2007 Traffic Condition
PM Peak Hour

Level Of Service Computation Report

2000 HCM Operations Method (Base Volume Alternative)

Intersection #17 I-15 NB On/Off Ramps and Summit Ave.

Cycle (sec): 90 Critical Vol./Cap.(X): 1.279
Loss Time (sec): 6 (Y+R=4.0 sec) Average Delay (sec/veh): 110.6
Optimal Cycle: OPTIMIZED Level Of Service: F

Table with columns for Street Name (I-15 NB On/Off Ramps, Summit Ave.), Approach (North Bound, South Bound, East Bound, West Bound), Movement (L, T, R), Control (Split Phase, Protected), Rights (Include), Min. Green, and Lanes.

Volume Module:

Table with columns for Base Vol, Growth Adj, Initial Bse, User Adj, PHF Adj, PHF Volume, Reduct Vol, Reduced Vol, PCE Adj, MLF Adj, and Final Volume.

Saturation Flow Module:

Table with columns for Sat/Lane, Adjustment, Lanes, and Final Sat.

Capacity Analysis Module:

Table with columns for Vol/Sat, Crit Moves, Green/Cycle, Volume/Cap, Delay/Veh, User DelAdj, AdjDel/Veh, LOS by Move, and HCM2kAvgQ.

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

Lytle Creek Ranch Project
Existing 2007 Traffic Condition
PM Peak Hour

Level Of Service Computation Report

2000 HCM 4-Way Stop Method (Base Volume Alternative)

Intersection #18 Sierra Ave & Riverside Ave

Cycle (sec): 100 Critical Vol./Cap.(X): 2.437
Loss Time (sec): 0 (Y+R=4.0 sec) Average Delay (sec/veh): 406.0
Optimal Cycle: 0 Level Of Service: F

Table with columns for Street Name (Sierra Ave, Riverside Ave), Approach (North Bound, South Bound, East Bound, West Bound), Movement (L, T, R), Control (Stop Sign), Rights (Include), Min. Green, and Lanes.

Volume Module:

Table with columns for Base Vol, Growth Adj, Initial Bse, User Adj, PHF Adj, PHF Volume, Reduct Vol, Reduced Vol, PCE Adj, MLF Adj, and Final Volume.

Saturation Flow Module:

Table with columns for Adjustment, Lanes, and Final Sat.

Capacity Analysis Module:

Table with columns for Vol/Sat, Crit Moves, Delay/Veh, Delay Adj, AdjDel/Veh, LOS by Move, ApproachDel, Delay Adj, ApprAdjDel, LOS by Appr, and AllWayAvgQ.

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

Lytle Creek Ranch Project
Existing 2007 Traffic Condition
PM Peak Hour

Level Of Service Computation Report

2000 HCM Operations Method (Base Volume Alternative)

Intersection #19 Live Oak Ave & Riverside Ave

Cycle (sec): 60 Critical Vol./Cap.(X): 1.040
Loss Time (sec): 6 (Y+R=4.0 sec) Average Delay (sec/veh): 53.0
Optimal Cycle: OPTIMIZED Level Of Service: D

Table with columns for Street Name (Live Oak Ave, Riverside Ave), Approach (North Bound, South Bound, East Bound, West Bound), Movement (L, T, R), Control (Split Phase, Protected), Rights (Include), Min. Green, and Lanes.

Volume Module:

Table with 13 columns for traffic volume metrics: Base Vol, Growth Adj, Initial Bse, User Adj, PHF Adj, PHF Volume, Reduct Vol, Reduced Vol, PCE Adj, MLF Adj, Final Volume.

Saturation Flow Module:

Table with 13 columns for saturation flow metrics: Sat/Lane, Adjustment, Lanes, Final Sat.

Capacity Analysis Module:

Table with 13 columns for capacity analysis metrics: Vol/Sat, Crit Moves, Green/Cycle, Volume/Cap, Delay/Veh, User DelAdj, AdjDel/Veh, LOS by Move, HCM2kAvgQ.

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

Lytle Creek Ranch Project
Existing 2007 Traffic Condition
PM Peak Hour

Level Of Service Computation Report

2000 HCM Operations Method (Base Volume Alternative)

Intersection #20 Alder Ave. and Riverside Ave.

Cycle (sec): 100 Critical Vol./Cap.(X): 0.884
Loss Time (sec): 0 (Y+R=4.0 sec) Average Delay (sec/veh): 42.0
Optimal Cycle: 130 Level Of Service: D

Table with columns for Street Name (Alder Ave., Riverside Ave.), Approach (North Bound, South Bound, East Bound, West Bound), Movement (L, T, R), Control (Protected), Rights (Include), Min. Green (6), and Lanes (0, 1, 0, 1, 0).

Volume Module:

Table with 13 columns for traffic volume metrics: Base Vol, Growth Adj, Initial Bse, User Adj, PHF Adj, PHF Volume, Reduct Vol, Reduced Vol, PCE Adj, MLF Adj, Final Volume.

Saturation Flow Module:

Table with 13 columns for saturation flow metrics: Sat/Lane, Adjustment, Lanes, Final Sat.

Capacity Analysis Module:

Table with 13 columns for capacity analysis metrics: Vol/Sat, Crit Moves, Green/Cycle, Volume/Cap, Delay/Veh, User DelAdj, AdjDel/Veh, LOS by Move, HCM2kAvgQ.

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

Lytle Creek Ranch Project
Existing 2007 Traffic Condition
PM Peak Hour

Level Of Service Computation Report

2000 HCM Operations Method (Base Volume Alternative)

Intersection #21 Locust Ave. and Riverside Ave.

Cycle (sec): 100 Critical Vol./Cap.(X): 0.874
Loss Time (sec): 0 (Y+R=4.0 sec) Average Delay (sec/veh): 42.9
Optimal Cycle: 130 Level Of Service: D

Table with columns for Street Name (Locust Ave., Riverside Ave.), Approach (North Bound, South Bound, East Bound, West Bound), Movement (L, T, R), Control (Protected), Rights (Include), Min. Green (6), and Lanes (0, 1, 0, 1, 0).

Volume Module:

Table with 13 columns for traffic volume metrics: Base Vol, Growth Adj, Initial Bse, User Adj, PHF Adj, PHF Volume, Reduct Vol, Reduced Vol, PCE Adj, MLF Adj, Final Volume.

Saturation Flow Module:

Table with 13 columns for saturation flow metrics: Sat/Lane, Adjustment, Lanes, Final Sat.

Capacity Analysis Module:

Table with 13 columns for capacity analysis metrics: Vol/Sat, Crit Moves, Green/Cycle, Volume/Cap, Delay/Veh, User DelAdj, AdjDel/Veh, LOS by Move, HCM2kAvgQ.

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

Lytle Creek Ranch Project
Existing 2007 Traffic Condition
PM Peak Hour

Level Of Service Computation Report

2000 HCM Operations Method (Base Volume Alternative)

Intersection #22 Linden Ave. and Riverside Ave.

Cycle (sec): 100 Critical Vol./Cap.(X): 1.127
Loss Time (sec): 0 (Y+R=4.0 sec) Average Delay (sec/veh): 91.7
Optimal Cycle: 130 Level Of Service: F

Table with columns for Street Name (Linden Ave., Riverside Ave.), Approach (North Bound, South Bound, East Bound, West Bound), Movement (L, T, R), Control (Split Phase, Protected), Rights (Include), Min. Green, and Lanes.

Volume Module:

Table with 13 columns for traffic volume metrics: Base Vol, Growth Adj, Initial Bse, User Adj, PHF Adj, PHF Volume, Reduct Vol, Reduced Vol, PCE Adj, MLF Adj, Final Volume.

Saturation Flow Module:

Table with 13 columns for saturation flow metrics: Sat/Lane, Adjustment, Lanes, Final Sat.

Capacity Analysis Module:

Table with 13 columns for capacity analysis metrics: Vol/Sat, Crit Moves, Green/Cycle, Volume/Cap, Delay/Veh, User DelAdj, AdjDel/Veh, LOS by Move, HCM2kAvgQ.

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

Lytle Creek Ranch Project
Existing 2007 Traffic Condition
PM Peak Hour

Level Of Service Computation Report

2000 HCM Operations Method (Base Volume Alternative)

Intersection #23 Ayala Dr. and Riverside Ave.

Cycle (sec): 60 Critical Vol./Cap.(X): 0.652
Loss Time (sec): 6 (Y+R=4.0 sec) Average Delay (sec/veh): 14.7
Optimal Cycle: OPTIMIZED Level Of Service: B

Street Name:	Ayala Dr.						Riverside Ave.													
Approach:	North Bound			South Bound			East Bound			West Bound										
Movement:	L	T	R	L	T	R	L	T	R	L	T	R								
Control:	Split Phase			Split Phase			Protected			Protected										
Rights:	Include			Include			Include			Include										
Min. Green:	6	6	6	6	6	6	6	6	6	6	6	6								
Lanes:	1	0	0	0	2	0	0	0	0	0	0	0	1	1	0	1	0	2	0	0

Volume Module:

Base Vol:	144	0	368	0	0	0	0	917	201	246	909	0
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	144	0	368	0	0	0	0	917	201	246	909	0
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
PHF Volume:	152	0	387	0	0	0	0	965	212	259	957	0
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	152	0	387	0	0	0	0	965	212	259	957	0
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Final Volume:	152	0	387	0	0	0	0	965	212	259	957	0

Saturation Flow Module:

Sat/Lane:	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Adjustment:	0.94	1.00	1.00	0.94	1.00	1.00	0.94	1.00	1.00	0.94	1.00	1.00
Lanes:	1.00	0.00	2.00	0.00	0.00	0.00	0.00	1.64	0.36	1.00	2.00	0.00
Final Sat.:	1700	0	3600	0	0	0	0	2953	647	1700	3600	0

Capacity Analysis Module:

Vol/Sat:	0.09	0.00	0.11	0.00	0.00	0.00	0.00	0.33	0.33	0.15	0.27	0.00
Crit Moves:			****					****		****		
Green/Cycle:	0.17	0.00	0.17	0.00	0.00	0.00	0.00	0.50	0.50	0.23	0.53	0.00
Volume/Cap:	0.54	0.00	0.65	0.00	0.00	0.00	0.00	0.65	0.65	0.65	0.50	0.00
Delay/Veh:	25.1	0.0	26.0	0.0	0.0	0.0	0.0	11.9	11.9	24.6	9.1	0.0
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	25.1	0.0	26.0	0.0	0.0	0.0	0.0	11.9	11.9	24.6	9.1	0.0
LOS by Move:	C	A	C	A	A	A	A	B	B	C	A	A
HCM2kAvgQ:	4	0	5	0	0	0	0	9	9	6	6	0

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

Lytle Creek Ranch Project
Existing 2007 Traffic Condition
PM Peak Hour

Level Of Service Computation Report

2000 HCM Operations Method (Base Volume Alternative)

Intersection #24 Knollwood Ave. and Riverside Ave.

Cycle (sec): 120 Critical Vol./Cap.(X): 0.433
Loss Time (sec): 6 (Y+R=4.0 sec) Average Delay (sec/veh): 8.2
Optimal Cycle: OPTIMIZED Level Of Service: A

Table with columns for Street Name (Knollwood Ave., Riverside Ave.), Approach (North Bound, South Bound, East Bound, West Bound), Movement (L, T, R), Control (Split Phase, Protected), Rights (Include), Min. Green, and Lanes.

Volume Module:

Table with columns for Base Vol, Growth Adj, Initial Bse, User Adj, PHF Adj, PHF Volume, Reduct Vol, Reduced Vol, PCE Adj, MLF Adj, and Final Volume.

Saturation Flow Module:

Table with columns for Sat/Lane, Adjustment, Lanes, and Final Sat.

Capacity Analysis Module:

Table with columns for Vol/Sat, Crit Moves, Green/Cycle, Volume/Cap, Delay/Veh, User DelAdj, AdjDel/Veh, LOS by Move, and HCM2kAvgQ.

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

Lytle Creek Ranch Project
Existing 2007 Traffic Condition
PM Peak Hour

Level Of Service Computation Report

2000 HCM Operations Method (Base Volume Alternative)

Intersection #25 Country Club Dr. and Riverside Ave.

Cycle (sec): 60 Critical Vol./Cap.(X): 0.865
Loss Time (sec): 6 (Y+R=4.0 sec) Average Delay (sec/veh): 22.4
Optimal Cycle: OPTIMIZED Level Of Service: C

Table with columns for Street Name (Country Club Dr., Riverside Ave.), Approach (North Bound, South Bound, East Bound, West Bound), Movement (L, T, R), Control (Permitted, Protected), Rights (Include), Min. Green, and Lanes.

Volume Module:

Table with columns for Base Vol, Growth Adj, Initial Bse, User Adj, PHF Adj, PHF Volume, Reduct Vol, Reduced Vol, PCE Adj, MLF Adj, and Final Volume.

Saturation Flow Module:

Table with columns for Sat/Lane, Adjustment, Lanes, and Final Sat.

Capacity Analysis Module:

Table with columns for Vol/Sat, Crit Moves, Green/Cycle, Volume/Cap, Delay/Veh, User DelAdj, AdjDel/Veh, LOS by Move, and HCM2kAvgQ.

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

Lytle Creek Ranch Project
Existing 2007 Traffic Condition
PM Peak Hour

Level Of Service Computation Report

2000 HCM Operations Method (Base Volume Alternative)

Intersection #26 Riverside Ave. and Dwy.(Shopping Ctr.)

Cycle (sec): 60 Critical Vol./Cap.(X): 0.560
Loss Time (sec): 6 (Y+R=4.0 sec) Average Delay (sec/veh): 8.5
Optimal Cycle: OPTIMIZED Level Of Service: A

Street Name: Riverside Ave. Dwy.(Shopping Ctr.)

Approach: North Bound South Bound East Bound West Bound

Movement: L - T - R L - T - R L - T - R L - T - R

Control: Protected Protected Split Phase Split Phase

Rights: Include Include Include Include

Min. Green: 6 6 6 6 6 6 6 6 6 6 6 6

Lanes: 1 0 2 0 0 0 0 1 1 0 1 0 0 0 0 0

Volume Module:

Base Vol: 86 1534 0 0 1425 11 90 0 117 0 0 0

Growth Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00

Initial Bse: 86 1534 0 0 1425 11 90 0 117 0 0 0

User Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00

PHF Adj: 0.95 0.95 0.95 0.95 0.95 0.95 0.95 0.95 0.95 0.95 0.95 0.95

PHF Volume: 91 1615 0 0 1500 12 95 0 123 0 0 0

Reduct Vol: 0 0 0 0 0 0 0 0 0 0 0 0

Reduced Vol: 91 1615 0 0 1500 12 95 0 123 0 0 0

PCE Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00

MLF Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00

FinalVolume: 91 1615 0 0 1500 12 95 0 123 0 0 0

Saturation Flow Module:

Sat/Lane: 1800 1800 1800 1800 1800 1800 1800 1800 1800 1800 1800 1800

Adjustment: 0.94 1.00 1.00 0.94 1.00 1.00 0.94 1.00 1.00 0.94 1.00 1.00

Lanes: 1.00 2.00 0.00 0.00 1.98 0.02 1.00 0.00 1.00 0.00 0.00 0.00

Final Sat.: 1700 3600 0 0 3572 28 1700 0 1800 0 0 0

Capacity Analysis Module:

Vol/Sat: 0.05 0.45 0.00 0.00 0.42 0.42 0.06 0.00 0.07 0.00 0.00 0.00

Crit Moves: **** **** ****

Green/Cycle: 0.15 0.69 0.00 0.00 0.64 0.64 0.11 0.00 0.11 0.00 0.00 0.00

Volume/Cap: 0.35 0.65 0.00 0.00 0.65 0.65 0.53 0.00 0.65 0.00 0.00 0.00

Delay/Veh: 23.6 5.7 0.0 0.0 7.3 7.3 28.3 0.0 33.2 0.0 0.0 0.0

User DelAdj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00

AdjDel/Veh: 23.6 5.7 0.0 0.0 7.3 7.3 28.3 0.0 33.2 0.0 0.0 0.0

LOS by Move: C A A A A A C A C A A A

HCM2kAvgQ: 2 9 0 0 10 10 3 0 4 0 0 0

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

Lytle Creek Ranch Project
Existing 2007 Traffic Condition
PM Peak Hour

Level Of Service Computation Report

2000 HCM Operations Method (Base Volume Alternative)

Intersection #28 Alder Ave. and Casa Grande Dr.

Cycle (sec): 60 Critical Vol./Cap.(X): 0.362
Loss Time (sec): 8 (Y+R=4.0 sec) Average Delay (sec/veh): 19.3
Optimal Cycle: OPTIMIZED Level Of Service: B

Table with columns for Street Name (Alder Ave., Casa Grande Dr.), Approach (North Bound, South Bound, East Bound, West Bound), Movement (L, T, R), Control (Protected), Rights (Include), Min. Green, and Lanes.

Volume Module:

Table with columns for Base Vol, Growth Adj, Initial Bse, User Adj, PHF Adj, PHF Volume, Reduct Vol, Reduced Vol, PCE Adj, MLF Adj, and Final Volume.

Saturation Flow Module:

Table with columns for Sat/Lane, Adjustment, Lanes, and Final Sat.

Capacity Analysis Module:

Table with columns for Vol/Sat, Crit Moves, Green/Cycle, Volume/Cap, Delay/Veh, User DelAdj, AdjDel/Veh, LOS by Move, and HCM2kAvgQ.

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

Lytle Creek Ranch Project
Existing 2007 Traffic Condition
PM Peak Hour

Level Of Service Computation Report

2000 HCM Unsignalized Method (Base Volume Alternative)

Intersection #29 Locust Ave. and Casa Grande Dr.

Average Delay (sec/veh): 5.0 Worst Case Level Of Service: B[14.3]

Table with columns for Street Name (Locust Ave., Casa Grande Dr.), Approach (North Bound, South Bound, East Bound, West Bound), Movement (L, T, R), Control (Uncontrolled, Stop Sign), Rights (Include), and Lanes (0, 1, 0, 0, 0).

Volume Module table with columns for Base Vol, Growth Adj, Initial Bse, User Adj, PHF Adj, PHF Volume, Reduct Vol, and Final Volume across various movement categories.

Critical Gap Module table with columns for Critical Gp and FollowUpTim across movement categories.

Capacity Module table with columns for Cnflct Vol, Potent Cap., Move Cap., and Volume/Cap across movement categories.

Level Of Service Module table with columns for 2Way95thQ, Control Del, LOS by Move, Movement, Shared Cap., SharedQueue, Shrd ConDel, Shared LOS, ApproachDel, and ApproachLOS across movement categories.

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

Lytle Creek Ranch Project
Existing 2007 Traffic Condition
PM Peak Hour

Level Of Service Computation Report

2000 HCM Operations Method (Base Volume Alternative)

Intersection #30 Sierra Ave. and Summit Ave.

Cycle (sec): 60 Critical Vol./Cap.(X): 0.825
Loss Time (sec): 6 (Y+R=4.0 sec) Average Delay (sec/veh): 22.0
Optimal Cycle: OPTIMIZED Level Of Service: C

Table with columns for Street Name (Sierra Ave., Summit Ave.), Approach (North Bound, South Bound, East Bound, West Bound), Movement (L, T, R), Control (Protected, Split Phase), Rights (Include), Min. Green, and Lanes.

Volume Module:

Table with columns for Base Vol, Growth Adj, Initial Bse, User Adj, PHF Adj, PHF Volume, Reduct Vol, Reduced Vol, PCE Adj, MLF Adj, and Final Volume.

Saturation Flow Module:

Table with columns for Sat/Lane, Adjustment, Lanes, and Final Sat.

Capacity Analysis Module:

Table with columns for Vol/Sat, Crit Moves, Green/Cycle, Volume/Cap, Delay/Veh, User DelAdj, AdjDel/Veh, LOS by Move, and HCM2kAvgQ.

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

Lytle Creek Ranch Project
Existing 2007 Traffic Condition
PM Peak Hour

Level Of Service Computation Report

2000 HCM Unsignalized Method (Base Volume Alternative)

Intersection #31 Locust Ave. and Bohnert Ave.

Average Delay (sec/veh): 32.0 Worst Case Level Of Service: F[171.1]

Table with columns for Street Name (Locust Ave., Bohnert Ave.), Approach (North Bound, South Bound, East Bound, West Bound), Movement (L, T, R), Control (Uncontrolled, Stop Sign), Rights (Include), and Lanes (0, 1, 2).

Volume Module table showing Base Vol, Growth Adj, Initial Bse, User Adj, PHF Adj, PHF Volume, Reduct Vol, and Final Volume for each approach.

Critical Gap Module table showing Critical Gp and FollowUpTim for each approach.

Capacity Module table showing Cnflct Vol, Potent Cap., Move Cap., and Volume/Cap for each approach.

Level Of Service Module table showing 2Way95thQ, Control Del, LOS by Move, Movement, Shared Cap., SharedQueue, Shrd ConDel, Shared LOS, ApproachDel, and ApproachLOS for each approach.

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

Lytle Creek Ranch Project
Existing 2007 Traffic Condition
PM Peak Hour

Level Of Service Computation Report

2000 HCM Operations Method (Base Volume Alternative)

Intersection #32 Ayala Dr. and Bohnert Ave.

Cycle (sec): 60 Critical Vol./Cap.(X): 0.817
Loss Time (sec): 6 (Y+R=4.0 sec) Average Delay (sec/veh): 23.6
Optimal Cycle: OPTIMIZED Level Of Service: C

Table with columns for Street Name (Ayala Dr., Bohnert Ave.), Approach (North Bound, South Bound, East Bound, West Bound), Movement (L, T, R), Control, Rights, Min. Green, and Lanes.

Volume Module:

Table with columns for Base Vol, Growth Adj, Initial Bse, User Adj, PHF Adj, PHF Volume, Reduct Vol, Reduced Vol, PCE Adj, MLF Adj, and Final Volume.

Saturation Flow Module:

Table with columns for Sat/Lane, Adjustment, Lanes, and Final Sat.

Capacity Analysis Module:

Table with columns for Vol/Sat, Crit Moves, Green/Cycle, Volume/Cap, Delay/Veh, User DelAdj, AdjDel/Veh, LOS by Move, and HCM2kAvgQ.

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

Lytle Creek Ranch Project
Existing 2007 Traffic Condition
PM Peak Hour

Level Of Service Computation Report

2000 HCM Operations Method (Base Volume Alternative)

Intersection #33 Sierra Ave. and Sierra Lakes Pkwy/Casmalia St.

Cycle (sec): 60 Critical Vol./Cap.(X): 0.737
Loss Time (sec): 0 (Y+R=4.0 sec) Average Delay (sec/veh): 20.3
Optimal Cycle: OPTIMIZED Level Of Service: C

Table with columns for Street Name, Approach, Movement, Control, Rights, Min. Green, and Lanes for Sierra Ave. and Sierra Lakes Pkwy/Casmalia St.

Volume Module:

Table with columns for Base Vol, Growth Adj, Initial Bse, User Adj, PHF Adj, PHF Volume, Reduct Vol, Reduced Vol, PCE Adj, MLF Adj, and Final Volume.

Saturation Flow Module:

Table with columns for Sat/Lane, Adjustment, Lanes, and Final Sat.

Capacity Analysis Module:

Table with columns for Vol/Sat, Crit Moves, Green/Cycle, Volume/Cap, Delay/Veh, User DelAdj, AdjDel/Veh, LOS by Move, and HCM2kAvgQ.

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

Lytle Creek Ranch Project
Existing 2007 Traffic Condition
PM Peak Hour

Level Of Service Computation Report

2000 HCM Operations Method (Base Volume Alternative)

Intersection #34 Alder Ave. and Casmalia St.

Cycle (sec): 130 Critical Vol./Cap.(X): 1.331
Loss Time (sec): 8 (Y+R=4.0 sec) Average Delay (sec/veh): 173.2
Optimal Cycle: OPTIMIZED Level Of Service: F

Street Name:	Alder Ave.						Casmalia St.					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Protected			Protected			Protected			Protected		
Rights:	Include			Include			Include			Include		
Min. Green:	6	6	6	6	6	6	6	6	6	6	6	6
Lanes:	1	0	1	1	0	1	1	0	0	1	0	1

Volume Module:

Base Vol:	45	124	907	38	165	18	71	415	50	683	270	25
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	45	124	907	38	165	18	71	415	50	683	270	25
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
PHF Volume:	47	131	955	40	174	19	75	437	53	719	284	26
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	47	131	955	40	174	19	75	437	53	719	284	26
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Final Volume:	47	131	955	40	174	19	75	437	53	719	284	26

Saturation Flow Module:

Sat/Lane:	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Adjustment:	0.94	1.00	1.00	0.94	1.00	1.00	0.94	1.00	1.00	0.94	1.00	1.00
Lanes:	1.00	1.00	1.00	1.00	1.80	0.20	1.00	0.89	0.11	1.00	1.00	1.00
Final Sat.:	1700	1800	1800	1700	3246	354	1700	1606	194	1700	1800	1800

Capacity Analysis Module:

Vol/Sat:	0.03	0.07	0.53	0.02	0.05	0.05	0.04	0.27	0.27	0.42	0.16	0.01
Crit Moves:			****	****				****		****		
Green/Cycle:	0.20	0.39	0.39	0.05	0.23	0.23	0.11	0.20	0.20	0.31	0.39	0.39
Volume/Cap:	0.14	0.19	1.37	0.51	0.23	0.23	0.38	1.37	1.37	1.37	0.40	0.04
Delay/Veh:	43.0	26.4	215.8	66.1	40.6	40.6	54.6	237	236.9	224.7	29.0	24.4
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	43.0	26.4	215.8	66.1	40.6	40.6	54.6	237	236.9	224.7	29.0	24.4
LOS by Move:	D	C	F	E	D	D	D	F	F	F	C	C
HCM2kAvgQ:	2	3	70	2	3	3	3	37	37	57	8	1

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

Lytle Creek Ranch Project
Existing 2007 Traffic Condition
PM Peak Hour

Level Of Service Computation Report

2000 HCM Operations Method (Base Volume Alternative)

Intersection #35 Locust Ave. and Casmalia St.

Cycle (sec): 75 Critical Vol./Cap.(X): 0.796
Loss Time (sec): 8 (Y+R=4.0 sec) Average Delay (sec/veh): 37.7
Optimal Cycle: OPTIMIZED Level Of Service: D

Table with columns for Street Name (Locust Ave., Casmalia St.), Approach (North Bound, South Bound, East Bound, West Bound), Movement (L, T, R), Control (Protected), Rights (Include), Min. Green, and Lanes.

Volume Module:

Table with columns for Base Vol, Growth Adj, Initial Bse, User Adj, PHF Adj, PHF Volume, Reduct Vol, Reduced Vol, PCE Adj, MLF Adj, and Final Volume.

Saturation Flow Module:

Table with columns for Sat/Lane, Adjustment, Lanes, and Final Sat.

Capacity Analysis Module:

Table with columns for Vol/Sat, Crit Moves, Green/Cycle, Volume/Cap, Delay/Veh, User DelAdj, AdjDel/Veh, LOS by Move, and HCM2kAvgQ.

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

Lytle Creek Ranch Project
Existing 2007 Traffic Condition
PM Peak Hour

Level Of Service Computation Report

2000 HCM Operations Method (Base Volume Alternative)

Intersection #36 Ayala Dr. and Casmalia St.

Cycle (sec): 60 Critical Vol./Cap.(X): 0.721
Loss Time (sec): 6 (Y+R=4.0 sec) Average Delay (sec/veh): 21.3
Optimal Cycle: OPTIMIZED Level Of Service: C

Street Name:	Ayala Dr.						Casmalia St.					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Protected			Protected			Split Phase			Split Phase		
Rights:	Include			Include			Include			Include		
Min. Green:	6	6	6	6	6	6	6	6	6	6	6	6
Lanes:	1	0	2	0	0	1	1	0	0	0	0	0

Volume Module:

Base Vol:	71	785	0	0	221	305	677	0	97	0	0	0
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	71	785	0	0	221	305	677	0	97	0	0	0
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
PHF Volume:	75	826	0	0	233	321	713	0	102	0	0	0
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	75	826	0	0	233	321	713	0	102	0	0	0
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	75	826	0	0	233	321	713	0	102	0	0	0

Saturation Flow Module:

Sat/Lane:	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Adjustment:	0.94	1.00	1.00	0.94	1.00	1.00	0.94	1.00	1.00	0.94	1.00	1.00
Lanes:	1.00	2.00	0.00	0.00	1.00	1.00	1.00	0.00	2.00	0.00	0.00	0.00
Final Sat.:	1700	3600	0	0	1800	1800	1700	0	3600	0	0	0

Capacity Analysis Module:

Vol/Sat:	0.04	0.23	0.00	0.00	0.13	0.18	0.42	0.00	0.03	0.00	0.00	0.00
Crit Moves:	****			****			****					
Green/Cycle:	0.14	0.28	0.00	0.00	0.25	0.25	0.52	0.00	0.52	0.00	0.00	0.00
Volume/Cap:	0.32	0.81	0.00	0.00	0.53	0.73	0.81	0.00	0.05	0.00	0.00	0.00
Delay/Veh:	24.1	25.0	0.0	0.0	20.1	24.3	17.8	0.0	7.2	0.0	0.0	0.0
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	24.1	25.0	0.0	0.0	20.1	24.3	17.8	0.0	7.2	0.0	0.0	0.0
LOS by Move:	C	C	A	A	C	C	B	A	A	A	A	A
HCM2kAvgQ:	2	10	0	0	4	7	14	0	0	0	0	0

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

Lytle Creek Ranch Project
Existing 2007 Traffic Condition
PM Peak Hour

Level Of Service Computation Report

2000 HCM Operations Method (Base Volume Alternative)

Intersection #37 Sierra Ave. and SR-210 Fwy. WB On/Off Ramps

Cycle (sec): 80 Critical Vol./Cap.(X): 0.238
Loss Time (sec): 4 (Y+R=4.0 sec) Average Delay (sec/veh): 1.9
Optimal Cycle: OPTIMIZED Level Of Service: A

Street Name: Sierra Ave. SR-210 Fwy. WB On/Off Ramps

Approach: North Bound South Bound East Bound West Bound

Movement: L - T - R L - T - R L - T - R L - T - R

Control: Permitted Permitted Split Phase Split Phase

Rights: Ignore Ignore Include Include

Min. Green: 6 6 6 6 6 6 6 6 6 6 6 6

Lanes: 0 0 3 0 2 0 0 2 0 2 0 0 0 0 0 1 0 1! 0 1

Volume Module:

Base Vol: 0 1125 499 0 678 242 0 0 0 14 0 42

Growth Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00

Initial Bse: 0 1125 499 0 678 242 0 0 0 14 0 42

User Adj: 1.00 1.00 0.00 1.00 1.00 0.00 1.00 1.00 1.00 1.00 1.00 1.00

PHF Adj: 0.95 0.95 0.00 0.95 0.95 0.00 0.95 0.95 0.95 0.95 0.95 0.95

PHF Volume: 0 1184 0 0 714 0 0 0 0 15 0 44

Reduct Vol: 0 0 0 0 0 0 0 0 0 0 0 0

Reduced Vol: 0 1184 0 0 714 0 0 0 0 15 0 44

PCE Adj: 1.00 1.00 0.00 1.00 1.00 0.00 1.00 1.00 1.00 1.00 1.00 1.00

MLF Adj: 1.00 1.00 0.00 1.00 1.00 0.00 1.00 1.00 1.00 1.00 1.00 1.00

FinalVolume: 0 1184 0 0 714 0 0 0 0 15 0 44

Saturation Flow Module:

Sat/Lane: 1800 1800 1800 1800 1800 1800 1800 1800 1800 1800 1800 1800

Adjustment: 0.94 1.00 1.00 0.94 1.00 1.00 0.94 1.00 1.00 0.94 1.00 1.00

Lanes: 0.00 3.00 2.00 0.00 2.00 2.00 0.00 0.00 0.00 1.26 0.00 1.74

Final Sat.: 0 5400 3600 0 3600 3600 0 0 0 2143 0 3130

Capacity Analysis Module:

Vol/Sat: 0.00 0.22 0.00 0.00 0.20 0.00 0.00 0.00 0.00 0.01 0.00 0.01

Crit Moves: ****

Green/Cycle: 0.00 0.88 0.00 0.00 0.88 0.00 0.00 0.00 0.00 0.08 0.00 0.08

Volume/Cap: 0.00 0.25 0.00 0.00 0.23 0.00 0.00 0.00 0.00 0.09 0.00 0.19

Delay/Veh: 0.0 0.8 0.0 0.0 0.8 0.0 0.0 0.0 0.0 34.5 0.0 35.0

User DelAdj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00

AdjDel/Veh: 0.0 0.8 0.0 0.0 0.8 0.0 0.0 0.0 0.0 34.5 0.0 35.0

LOS by Move: A A A A A A A A A C A D

HCM2kAvgQ: 0 2 0 0 2 0 0 0 0 0 0 1

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

Lytle Creek Ranch Project
Existing 2007 Traffic Condition
PM Peak Hour

Level Of Service Computation Report

2000 HCM Operations Method (Base Volume Alternative)

Intersection #38 Sierra Ave. and SR-210 Fwy. EB Off Ramp/Highland Ave.

Cycle (sec): 100 Critical Vol./Cap.(X): 0.947
Loss Time (sec): 8 (Y+R=4.0 sec) Average Delay (sec/veh): 47.6
Optimal Cycle: OPTIMIZED Level Of Service: D

Street Name: Sierra Ave. SR-210 Fwy. EB Off Ramp/Highland

Approach: North Bound South Bound East Bound West Bound

Movement: L - T - R L - T - R L - T - R L - T - R

Control: Protected Protected Protected Protected
Rights: Include Include Include Include
Min. Green: 6 6 6 6 6 6 6 6 6 6 6 6
Lanes: 0 0 1 1 0 1 0 2 0 0 1 0 1 1 0 1 0 0 0 2

Volume Module:

Base Vol: 0 1204 64 79 595 0 321 961 508 36 0 134
Growth Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
Initial Bse: 0 1204 64 79 595 0 321 961 508 36 0 134
User Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
PHF Adj: 0.95 0.95 0.95 0.95 0.95 0.95 0.95 0.95 0.95 0.95 0.95 0.95
PHF Volume: 0 1267 67 83 626 0 338 1012 535 38 0 141
Reduct Vol: 0 0 0 0 0 0 0 0 0 0 0 0
Reduced Vol: 0 1267 67 83 626 0 338 1012 535 38 0 141
PCE Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
MLF Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
Final Volume: 0 1267 67 83 626 0 338 1012 535 38 0 141

Saturation Flow Module:

Sat/Lane: 1800 1800 1800 1800 1800 1800 1800 1800 1800 1800 1800 1800
Adjustment: 0.94 1.00 1.00 0.94 1.00 1.00 0.94 1.00 1.00 0.94 1.00 1.00
Lanes: 0.00 1.90 0.10 1.00 2.00 0.00 1.00 1.31 0.69 1.00 0.00 2.00
Final Sat.: 0 3418 182 1700 3600 0 1700 2355 1245 1700 0 3600

Capacity Analysis Module:

Vol/Sat: 0.00 0.37 0.37 0.05 0.17 0.00 0.20 0.43 0.43 0.02 0.00 0.04
Crit Moves: ****
Green/Cycle: 0.00 0.37 0.37 0.06 0.32 0.00 0.38 0.43 0.43 0.06 0.00 0.11
Volume/Cap: 0.00 1.00 1.00 0.82 0.54 0.00 0.53 1.00 1.00 0.37 0.00 0.35
Delay/Veh: 0.0 56.2 56.2 84.2 28.5 0.0 25.1 51.5 51.5 47.5 0.0 41.4
User DelAdj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
AdjDel/Veh: 0.0 56.2 56.2 84.2 28.5 0.0 25.1 51.5 51.5 47.5 0.0 41.4
LOS by Move: A E E F C A C D D D A D
HCM2kAvgQ: 0 28 28 5 8 0 9 31 31 2 0 2

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

Lytle Creek Ranch Project
Existing 2007 Traffic Condition
PM Peak Hour

Level Of Service Computation Report

2000 HCM Operations Method (Base Volume Alternative)

Intersection #39 Alder Ave. and SR-210 Fwy. WB On/Off Ramps

Cycle (sec): 60 Critical Vol./Cap.(X): 0.868
Loss Time (sec): 4 (Y+R=4.0 sec) Average Delay (sec/veh): 12.8
Optimal Cycle: OPTIMIZED Level Of Service: B

Street Name: Alder Ave. SR-210 Fwy. WB On/Off Ramps

Approach: North Bound South Bound East Bound West Bound

Movement: L - T - R L - T - R L - T - R L - T - R

Control: Protected Permitted Permitted Permitted

Rights: Include Include Include Include

Min. Green: 6 6 6 6 6 6 6 6 6 6 6 6

Lanes: 1 0 2 0 0 0 0 1 1 0 0 0 0 0 0 0

Volume Module:

Base Vol: 571 1089 0 0 96 781 0 0 0 0 0 0

Growth Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00

Initial Bse: 571 1089 0 0 96 781 0 0 0 0 0 0

User Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00

PHF Adj: 0.95 0.95 0.95 0.95 0.95 0.95 0.95 0.95 0.95 0.95 0.95 0.95

PHF Volume: 601 1146 0 0 101 822 0 0 0 0 0 0

Reduct Vol: 0 0 0 0 0 0 0 0 0 0 0 0

Reduced Vol: 601 1146 0 0 101 822 0 0 0 0 0 0

PCE Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00

MLF Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00

FinalVolume: 601 1146 0 0 101 822 0 0 0 0 0 0

Saturation Flow Module:

Sat/Lane: 1800 1800 1800 1800 1800 1800 1800 1800 1800 1800 1800 1800

Adjustment: 0.94 1.00 1.00 0.94 1.00 1.00 0.94 1.00 1.00 0.94 1.00 1.00

Lanes: 1.00 2.00 0.00 0.00 1.00 1.00 0.00 0.00 0.00 0.00 0.00 0.00

Final Sat.: 1700 3600 0 0 1800 1800 0 0 0 0 0 0

Capacity Analysis Module:

Vol/Sat: 0.35 0.32 0.00 0.00 0.06 0.46 0.00 0.00 0.00 0.00 0.00 0.00

Crit Moves: **** ****

Green/Cycle: 0.41 0.93 0.00 0.00 0.53 0.53 0.00 0.00 0.00 0.00 0.00 0.00

Volume/Cap: 0.87 0.34 0.00 0.00 0.11 0.87 0.00 0.00 0.00 0.00 0.00 0.00

Delay/Veh: 27.6 0.3 0.0 0.0 7.1 20.2 0.0 0.0 0.0 0.0 0.0 0.0

User DelAdj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00

AdjDel/Veh: 27.6 0.3 0.0 0.0 7.1 20.2 0.0 0.0 0.0 0.0 0.0 0.0

LOS by Move: C A A A A C A A A A A A

HCM2kAvgQ: 14 1 0 0 1 17 0 0 0 0 0 0

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

Lytle Creek Ranch Project
Existing 2007 Traffic Condition
PM Peak Hour

Level Of Service Computation Report

2000 HCM Operations Method (Base Volume Alternative)

Intersection #40 Alder Ave. and SR-210 Fwy. EB On/Off Ramps

Cycle (sec): 60 Critical Vol./Cap.(X): 0.883
Loss Time (sec): 4 (Y+R=4.0 sec) Average Delay (sec/veh): 17.0
Optimal Cycle: OPTIMIZED Level Of Service: B

Street Name:	Alder Ave.						SR-210 Fwy. EB On/Off Ramps					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Permitted			Permitted			Split Phase			Split Phase		
Rights:	Include			Include			Include			Include		
Min. Green:	6	6	6	6	6	6	6	6	6	6	6	6
Lanes:	0	0	2	0	0	2	1	0	0	1	0	0

Volume Module:

Base Vol:	0	647	0	0	102	0	1025	0	740	0	0	0
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	0	647	0	0	102	0	1025	0	740	0	0	0
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
PHF Volume:	0	681	0	0	107	0	1079	0	779	0	0	0
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	0	681	0	0	107	0	1079	0	779	0	0	0
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Final Volume:	0	681	0	0	107	0	1079	0	779	0	0	0

Saturation Flow Module:

Sat/Lane:	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Adjustment:	0.94	1.00	1.00	0.94	1.00	1.00	0.94	1.00	1.00	0.94	1.00	1.00
Lanes:	0.00	2.00	0.00	0.00	2.00	0.00	1.00	0.00	1.00	0.00	0.00	0.00
Final Sat.:	0	3600	0	0	3600	0	1700	0	1800	0	0	0

Capacity Analysis Module:

Vol/Sat:	0.00	0.19	0.00	0.00	0.03	0.00	0.63	0.00	0.43	0.00	0.00	0.00
Crit Moves:	****			****			****			****		
Green/Cycle:	0.00	0.21	0.00	0.00	0.21	0.00	0.72	0.00	0.72	0.00	0.00	0.00
Volume/Cap:	0.00	0.88	0.00	0.00	0.14	0.00	0.88	0.00	0.60	0.00	0.00	0.00
Delay/Veh:	0.0	34.5	0.0	0.0	19.2	0.0	14.3	0.0	5.0	0.0	0.0	0.0
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	0.0	34.5	0.0	0.0	19.2	0.0	14.3	0.0	5.0	0.0	0.0	0.0
LOS by Move:	A	C	A	A	B	A	B	A	A	A	A	A
HCM2kAvgQ:	0	10	0	0	1	0	20	0	8	0	0	0

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

Lytle Creek Ranch Project
Existing 2007 Traffic Condition
PM Peak Hour

Level Of Service Computation Report

2000 HCM Operations Method (Base Volume Alternative)

Intersection #49 State St. and Highland Ave.

Cycle (sec): 60 Critical Vol./Cap.(X): 0.860
Loss Time (sec): 6 (Y+R=4.0 sec) Average Delay (sec/veh): 23.6
Optimal Cycle: OPTIMIZED Level Of Service: C

Street Name:	State St.						Highland Ave.					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Protected			Protected			Split Phase			Split Phase		
Rights:	Include			Include			Include			Include		
Min. Green:	6	6	6	6	6	6	6	6	6	6	6	6
Lanes:	2	0	2	0	2	1	0	1	0	0	0	0

Volume Module:

Base Vol:	935	138	28	26	131	209	117	271	1176	0	0	0
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	935	138	28	26	131	209	117	271	1176	0	0	0
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
PHF Volume:	984	145	29	27	138	220	123	285	1238	0	0	0
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	984	145	29	27	138	220	123	285	1238	0	0	0
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	984	145	29	27	138	220	123	285	1238	0	0	0

Saturation Flow Module:

Sat/Lane:	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Adjustment:	0.89	1.00	1.00	0.94	1.00	1.00	0.94	1.00	1.00	0.94	1.00	1.00
Lanes:	2.00	2.00	1.00	1.00	2.00	1.00	0.31	0.69	2.00	0.00	0.00	0.00
Final Sat.:	3200	3600	1800	1700	3600	1800	533	1235	3600	0	0	0

Capacity Analysis Module:

Vol/Sat:	0.31	0.04	0.02	0.02	0.04	0.12	0.23	0.23	0.34	0.00	0.00	0.00
Crit Moves:	****			****			****					
Green/Cycle:	0.36	0.25	0.25	0.25	0.14	0.14	0.40	0.40	0.40	0.00	0.00	0.00
Volume/Cap:	0.86	0.16	0.07	0.06	0.27	0.86	0.58	0.58	0.86	0.00	0.00	0.00
Delay/Veh:	24.6	17.7	17.2	17.2	23.2	49.3	15.2	15.2	21.9	0.0	0.0	0.0
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	24.6	17.7	17.2	17.2	23.2	49.3	15.2	15.2	21.9	0.0	0.0	0.0
LOS by Move:	C	B	B	B	C	D	B	B	C	A	A	A
HCM2kAvgQ:	13	1	0	0	1	7	7	7	14	0	0	0

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

Lytle Creek Ranch Project
Existing 2007 Traffic Condition
PM Peak Hour

Level Of Service Computation Report

2000 HCM Operations Method (Base Volume Alternative)

Intersection #50 California St. and Highland Ave.

Cycle (sec): 60 Critical Vol./Cap.(X): 0.466
Loss Time (sec): 4 (Y+R=4.0 sec) Average Delay (sec/veh): 10.6
Optimal Cycle: OPTIMIZED Level Of Service: B

Table with columns for Street Name (California St., Highland Ave.), Approach (North Bound, South Bound, East Bound, West Bound), Movement (L, T, R), Control (Permitted), Rights (Include), Min. Green, and Lanes.

Volume Module:

Table with columns for Base Vol, Growth Adj, Initial Bse, User Adj, PHF Adj, PHF Volume, Reduct Vol, Reduced Vol, PCE Adj, MLF Adj, and Final Volume.

Saturation Flow Module:

Table with columns for Sat/Lane, Adjustment, Lanes, and Final Sat.

Capacity Analysis Module:

Table with columns for Vol/Sat, Crit Moves, Green/Cycle, Volume/Cap, Delay/Veh, User DelAdj, AdjDel/Veh, LOS by Move, and HCM2kAvgQ.

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

Lytle Creek Ranch Project
Existing 2007 Traffic Condition
PM Peak Hour

Level Of Service Computation Report

2000 HCM Operations Method (Base Volume Alternative)

Intersection #51 Medical Ctr. Dr. and Highland Ave.

Cycle (sec): 60 Critical Vol./Cap.(X): 0.423
Loss Time (sec): 4 (Y+R=4.0 sec) Average Delay (sec/veh): 10.9
Optimal Cycle: OPTIMIZED Level Of Service: B

Table with columns for Street Name (Medical Ctr. Dr., Highland Ave.), Approach (North Bound, South Bound, East Bound, West Bound), Movement (L, T, R), Control (Permitted), Rights (Include), and Lanes (1, 0, 1, 1, 0).

Volume Module:

Table with columns for Base Vol, Growth Adj, Initial Bse, User Adj, PHF Adj, PHF Volume, Reduct Vol, Reduced Vol, PCE Adj, MLF Adj, and Final Volume across various movements.

Saturation Flow Module:

Table with columns for Sat/Lane, Adjustment, Lanes, and Final Sat. across various movements.

Capacity Analysis Module:

Table with columns for Vol/Sat, Crit Moves, Green/Cycle, Volume/Cap, Delay/Veh, User DelAdj, AdjDel/Veh, LOS by Move, and HCM2kAvgQ across various movements.

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

Lytle Creek Ranch Project
Existing 2007 Traffic Condition
PM Peak Hour

Level Of Service Computation Report

2000 HCM Operations Method (Base Volume Alternative)

Intersection #52 Mt. Vernon Ave. and Highland Ave.

Cycle (sec): 60 Critical Vol./Cap.(X): 0.621
Loss Time (sec): 6 (Y+R=4.0 sec) Average Delay (sec/veh): 17.7
Optimal Cycle: OPTIMIZED Level Of Service: B

Table with columns for Street Name (Mt. Vernon Ave., Highland Ave.), Approach (North Bound, South Bound, East Bound, West Bound), Movement (L, T, R), Control (Permitted, Protected), Rights (Include), and Lanes (1, 0, 1, 1, 0).

Volume Module:

Table with 13 columns for traffic volume metrics: Base Vol, Growth Adj, Initial Bse, User Adj, PHF Adj, PHF Volume, Reduct Vol, Reduced Vol, PCE Adj, MLF Adj, Final Volume.

Saturation Flow Module:

Table with 13 columns for saturation flow metrics: Sat/Lane, Adjustment, Lanes, Final Sat.

Capacity Analysis Module:

Table with 13 columns for capacity analysis metrics: Vol/Sat, Crit Moves, Green/Cycle, Volume/Cap, Delay/Veh, User DelAdj, AdjDel/Veh, LOS by Move, HCM2kAvgQ.

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

Lytle Creek Ranch Project
Existing 2007 Traffic Condition
PM Peak Hour

Level Of Service Computation Report

2000 HCM Operations Method (Base Volume Alternative)

Intersection #53 Sierra Ave. and Highland Ave.

Cycle (sec): 60 Critical Vol./Cap.(X): 0.451
Loss Time (sec): 6 (Y+R=4.0 sec) Average Delay (sec/veh): 8.1
Optimal Cycle: OPTIMIZED Level Of Service: A

Table with columns for Street Name (Sierra Ave., Highland Ave.), Approach (North Bound, South Bound, East Bound, West Bound), Movement (L, T, R), Control (Protected, Permitted, Split Phase), Rights (Include, Ovl), Min. Green, and Lanes.

Volume Module:

Table with columns for Base Vol, Growth Adj, Initial Bse, User Adj, PHF Adj, PHF Volume, Reduct Vol, Reduced Vol, PCE Adj, MLF Adj, and Final Volume.

Saturation Flow Module:

Table with columns for Sat/Lane, Adjustment, Lanes, and Final Sat.

Capacity Analysis Module:

Table with columns for Vol/Sat, Crit Moves, Green/Cycle, Volume/Cap, Delay/Veh, User DelAdj, AdjDel/Veh, LOS by Move, and HCM2kAvgQ.

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

Lytle Creek Ranch Project
Existing 2007 Traffic Condition
PM Peak Hour

Level Of Service Computation Report

2000 HCM Operations Method (Base Volume Alternative)

Intersection #54 Alder Ave. and Highland Ave.

Cycle (sec): 85 Critical Vol./Cap.(X): 0.967
Loss Time (sec): 8 (Y+R=4.0 sec) Average Delay (sec/veh): 48.3
Optimal Cycle: OPTIMIZED Level Of Service: D

Table with columns for Street Name (Alder Ave., Highland Ave.), Approach (North Bound, South Bound, East Bound, West Bound), Movement (L, T, R), Control (Protected), Rights (Include), Min. Green, and Lanes.

Volume Module:

Table with columns for Base Vol, Growth Adj, Initial Bse, User Adj, PHF Adj, PHF Volume, Reduct Vol, Reduced Vol, PCE Adj, MLF Adj, and Final Volume.

Saturation Flow Module:

Table with columns for Sat/Lane, Adjustment, Lanes, and Final Sat.

Capacity Analysis Module:

Table with columns for Vol/Sat, Crit Moves, Green/Cycle, Volume/Cap, Delay/Veh, User DelAdj, AdjDel/Veh, LOS by Move, and HCM2kAvgQ.

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

Lytle Creek Ranch Project
Existing 2007 Traffic Condition
PM Peak Hour

Level Of Service Computation Report

2000 HCM Operations Method (Base Volume Alternative)

Intersection #55 Ayala Dr. and Easton St.

Cycle (sec): 85 Critical Vol./Cap.(X): 1.164
Loss Time (sec): 6 (Y+R=4.0 sec) Average Delay (sec/veh): 79.1
Optimal Cycle: OPTIMIZED Level Of Service: E

Table with columns for Street Name (Ayala Dr., Easton St.), Approach (North Bound, South Bound, East Bound, West Bound), Movement (L, T, R), Control (Protected, Permitted, Split Phase), Rights (Include), Min. Green, and Lanes.

Volume Module:

Table with columns for Base Vol, Growth Adj, Initial Bse, User Adj, PHF Adj, PHF Volume, Reduct Vol, Reduced Vol, PCE Adj, MLF Adj, and Final Volume.

Saturation Flow Module:

Table with columns for Sat/Lane, Adjustment, Lanes, and Final Sat.

Capacity Analysis Module:

Table with columns for Vol/Sat, Crit Moves, Green/Cycle, Volume/Cap, Delay/Veh, User DelAdj, AdjDel/Veh, LOS by Move, and HCM2kAvgQ.

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

Lytle Creek Ranch Project
Existing 2007 Traffic Condition
PM Peak Hour

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

Intersection #56 Riverside Ave. and Easton St.

Cycle (sec): 110 Critical Vol./Cap.(X): 1.616
Loss Time (sec): 8 (Y+R=4.0 sec) Average Delay (sec/veh): 195.4
Optimal Cycle: OPTIMIZED Level Of Service: F

Street Name:	Riverside Ave.						Easton St.													
Approach:	North Bound			South Bound			East Bound			West Bound										
Movement:	L	-	T	-	R	L	-	T	-	R	L	-	T	-	R	L	-	T	-	R
Control:	Protected			Protected			Protected			Protected										
Rights:	Include			Include			Include			Include										
Min. Green:	6	6	6	6	6	6	6	6	6	6	6	6								
Lanes:	1	0	1	0	1	1	0	1	0	1	1	0	2	0	1	2	0	2	0	1

Volume Module:

Base Vol:	73	896	594	837	660	79	75	455	53	369	283	701
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	73	896	594	837	660	79	75	455	53	369	283	701
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
PHF Volume:	77	943	625	881	695	83	79	479	56	388	298	738
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	77	943	625	881	695	83	79	479	56	388	298	738
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Final Volume:	77	943	625	881	695	83	79	479	56	388	298	738

Saturation Flow Module:

Sat/Lane:	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Adjustment:	0.94	1.00	1.00	0.94	1.00	1.00	0.94	1.00	1.00	0.89	1.00	1.00
Lanes:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	2.00	1.00	2.00	2.00	1.00
Final Sat.:	1700	1800	1800	1700	1800	1800	1700	3600	1800	3200	3600	1800

Capacity Analysis Module:

Vol/Sat:	0.05	0.52	0.35	0.52	0.39	0.05	0.05	0.13	0.03	0.12	0.08	0.41
Crit Moves:	****			****			****			****		
Green/Cycle:	0.08	0.31	0.31	0.31	0.55	0.55	0.05	0.16	0.16	0.14	0.25	0.25
Volume/Cap:	0.58	1.66	1.10	1.66	0.70	0.08	0.85	0.85	0.20	0.85	0.34	1.66
Delay/Veh:	55.5	344	106.9	344.9	20.5	11.8	100.5	56.3	40.6	59.4	34.3	350.1
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	55.5	344	106.9	344.9	20.5	11.8	100.5	56.3	40.6	59.4	34.3	350.1
LOS by Move:	E	F	F	F	C	B	F	E	D	E	C	F
HCM2kAvgQ:	4	78	32	77	18	1	5	10	2	10	4	62

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

Lytle Creek Ranch Project
Existing 2007 Traffic Condition
PM Peak Hour

Level Of Service Computation Report

2000 HCM Operations Method (Base Volume Alternative)

Intersection #57 Easton St. and Highland Ave.

Cycle (sec): 60 Critical Vol./Cap.(X): 0.670
Loss Time (sec): 4 (Y+R=4.0 sec) Average Delay (sec/veh): 4.7
Optimal Cycle: OPTIMIZED Level Of Service: A

Table with columns for Street Name, Approach, Movement, Control, Rights, Min. Green, and Lanes. Rows include Easton St. and Easton St. / Highland Ave. with various traffic control details.

Volume Module:

Table with columns for Base Vol, Growth Adj, Initial Bse, User Adj, PHF Adj, PHF Volume, Reduct Vol, Reduced Vol, PCE Adj, MLF Adj, and Final Volume. Rows include traffic volume and adjustment factors.

Saturation Flow Module:

Table with columns for Sat/Lane, Adjustment, Lanes, and Final Sat. Rows include saturation flow and lane adjustment factors.

Capacity Analysis Module:

Table with columns for Vol/Sat, Crit Moves, Green/Cycle, Volume/Cap, Delay/Veh, User DelAdj, AdjDel/Veh, LOS by Move, and HCM2kAvgQ. Rows include capacity analysis metrics.

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

Lytle Creek Ranch Project
Existing 2007 Traffic Condition
PM Peak Hour

Level Of Service Computation Report

2000 HCM Operations Method (Base Volume Alternative)

Intersection #58 Sierra Ave. and Baseline Rd.

Cycle (sec): 60 Critical Vol./Cap.(X): 0.744
Loss Time (sec): 8 (Y+R=4.0 sec) Average Delay (sec/veh): 22.9
Optimal Cycle: OPTIMIZED Level Of Service: C

Street Name:	Sierra Ave.					Baseline Rd.										
Approach:	North Bound		South Bound			East Bound			West Bound							
Movement:	L	T	R	L	T	R	L	T	R	L	T	R				
Control:	Protected		Protected			Protected			Protected							
Rights:	Include		Include			Include			Include							
Min. Green:	6	6	6	6	6	6	6	6	6	6	6	6				
Lanes:	1	0	2	0	1	1	0	2	0	1	1	0	1	1	0	1

Volume Module:

Base Vol:	88	737	75	222	769	44	124	425	69	113	368	155
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	88	737	75	222	769	44	124	425	69	113	368	155
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
PHF Volume:	93	776	79	234	809	46	131	447	73	119	387	163
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	93	776	79	234	809	46	131	447	73	119	387	163
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Final Volume:	93	776	79	234	809	46	131	447	73	119	387	163

Saturation Flow Module:

Sat/Lane:	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Adjustment:	0.94	1.00	1.00	0.94	1.00	1.00	0.94	1.00	1.00	0.94	1.00	1.00
Lanes:	1.00	2.00	1.00	1.00	2.00	1.00	1.00	1.72	0.28	1.00	1.00	1.00
Final Sat.:	1700	3600	1800	1700	3600	1800	1700	3097	503	1700	1800	1800

Capacity Analysis Module:

Vol/Sat:	0.05	0.22	0.04	0.14	0.22	0.03	0.08	0.14	0.14	0.07	0.22	0.09
Crit Moves:	****		****			****			****			
Green/Cycle:	0.15	0.29	0.29	0.18	0.33	0.33	0.10	0.23	0.23	0.16	0.29	0.29
Volume/Cap:	0.37	0.74	0.15	0.74	0.68	0.08	0.74	0.62	0.62	0.44	0.74	0.31
Delay/Veh:	24.1	22.2	16.0	32.4	19.1	14.0	41.9	22.2	22.2	23.8	25.1	17.0
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	24.1	22.2	16.0	32.4	19.1	14.0	41.9	22.2	22.2	23.8	25.1	17.0
LOS by Move:	C	C	B	C	B	B	D	C	C	C	C	B
HCM2kAvgQ:	2	8	1	6	8	1	4	5	5	3	8	3

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

Lytle Creek Ranch Project
Existing 2007 Traffic Condition
PM Peak Hour

Level Of Service Computation Report

2000 HCM Operations Method (Base Volume Alternative)

Intersection #59 Alder Ave. and Baseline Rd.

Cycle (sec): 95 Critical Vol./Cap.(X): 0.969
Loss Time (sec): 8 (Y+R=4.0 sec) Average Delay (sec/veh): 56.2
Optimal Cycle: OPTIMIZED Level Of Service: E

Table with columns for Street Name (Alder Ave., Baseline Rd.), Approach (North Bound, South Bound, East Bound, West Bound), Movement (L, T, R), Control (Protected), Rights (Include), Min. Green, and Lanes.

Volume Module:

Table with columns for Base Vol, Growth Adj, Initial Bse, User Adj, PHF Adj, PHF Volume, Reduct Vol, Reduced Vol, PCE Adj, MLF Adj, and Final Volume.

Saturation Flow Module:

Table with columns for Sat/Lane, Adjustment, Lanes, and Final Sat.

Capacity Analysis Module:

Table with columns for Vol/Sat, Crit Moves, Green/Cycle, Volume/Cap, Delay/Veh, User DelAdj, AdjDel/Veh, LOS by Move, and HCM2kAvgQ.

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

Lytle Creek Ranch Project
Existing 2007 Traffic Condition
PM Peak Hour

Level Of Service Computation Report

2000 HCM Operations Method (Base Volume Alternative)

Intersection #60 Cedar Ave./Ayala Dr. and Baseline Rd.

Cycle (sec): 60 Critical Vol./Cap.(X): 0.697
Loss Time (sec): 8 (Y+R=4.0 sec) Average Delay (sec/veh): 22.0
Optimal Cycle: OPTIMIZED Level Of Service: C

Table with columns for Street Name (Cedar Ave./Ayala Dr., Baseline Rd.), Approach (North Bound, South Bound, East Bound, West Bound), Movement (L, T, R), Control (Protected), Rights (Include), Min. Green (6), and Lanes (1, 0, 1, 1, 0).

Volume Module:

Table with 13 columns for traffic volume metrics: Base Vol, Growth Adj, Initial Bse, User Adj, PHF Adj, PHF Volume, Reduct Vol, Reduced Vol, PCE Adj, MLF Adj, Final Volume.

Saturation Flow Module:

Table with 13 columns for saturation flow metrics: Sat/Lane, Adjustment, Lanes, Final Sat.

Capacity Analysis Module:

Table with 13 columns for capacity analysis metrics: Vol/Sat, Crit Moves, Green/Cycle, Volume/Cap, Delay/Veh, User DelAdj, AdjDel/Veh, LOS by Move, HCM2kAvgQ.

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

Lytle Creek Ranch Project
Existing 2007 Traffic Condition
PM Peak Hour

Level Of Service Computation Report

2000 HCM Operations Method (Base Volume Alternative)

Intersection #61 Cactus Ave. and Baseline Rd.

Cycle (sec): 60 Critical Vol./Cap.(X): 0.740
Loss Time (sec): 8 (Y+R=4.0 sec) Average Delay (sec/veh): 20.7
Optimal Cycle: OPTIMIZED Level Of Service: C

Table with columns for Street Name (Cactus Ave., Baseline Rd.), Approach (North Bound, South Bound, East Bound, West Bound), Movement (L, T, R), Control (Protected), Rights (Include), Min. Green, and Lanes.

Volume Module:

Table with columns for Base Vol, Growth Adj, Initial Bse, User Adj, PHF Adj, PHF Volume, Reduct Vol, Reduced Vol, PCE Adj, MLF Adj, and Final Volume.

Saturation Flow Module:

Table with columns for Sat/Lane, Adjustment, Lanes, and Final Sat.

Capacity Analysis Module:

Table with columns for Vol/Sat, Crit Moves, Green/Cycle, Volume/Cap, Delay/Veh, User DelAdj, AdjDel/Veh, LOS by Move, and HCM2kAvgQ.

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

Lytle Creek Ranch Project
Existing 2007 Traffic Condition
PM Peak Hour

Level Of Service Computation Report

2000 HCM Operations Method (Base Volume Alternative)

Intersection #62 Riverside Ave. and Baseline Rd.

Cycle (sec): 60 Critical Vol./Cap.(X): 1.026
Loss Time (sec): 8 (Y+R=4.0 sec) Average Delay (sec/veh): 51.9
Optimal Cycle: OPTIMIZED Level Of Service: D

Table with columns for Street Name (Riverside Ave., Baseline Rd.), Approach (North Bound, South Bound, East Bound, West Bound), Movement (L, T, R), Control (Protected), Rights (Include), Min. Green (6), and Lanes (1, 0, 1, 1, 0).

Volume Module:

Table with 13 columns for traffic volume metrics: Base Vol, Growth Adj, Initial Bse, User Adj, PHF Adj, PHF Volume, Reduct Vol, Reduced Vol, PCE Adj, MLF Adj, Final Volume.

Saturation Flow Module:

Table with 13 columns for saturation flow metrics: Sat/Lane, Adjustment, Lanes, Final Sat.

Capacity Analysis Module:

Table with 13 columns for capacity analysis metrics: Vol/Sat, Crit Moves, Green/Cycle, Volume/Cap, Delay/Veh, User DelAdj, AdjDel/Veh, LOS by Move, HCM2kAvgQ.

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

Lytle Creek Ranch Project
Existing 2007 Traffic Condition
PM Peak Hour

Level Of Service Computation Report

2000 HCM Operations Method (Base Volume Alternative)

Intersection #63 Pepper Ave. and Baseline. Rd.

Cycle (sec): 60 Critical Vol./Cap.(X): 0.468
Loss Time (sec): 4 (Y+R=4.0 sec) Average Delay (sec/veh): 6.6
Optimal Cycle: OPTIMIZED Level Of Service: A

Table with columns for Street Name (Pepper Ave., Baseline. Rd.), Approach (North Bound, South Bound, East Bound, West Bound), Movement (L, T, R), Control (Permitted), Rights (Include), Min. Green, and Lanes.

Volume Module:

Table with columns for Base Vol, Growth Adj, Initial Bse, User Adj, PHF Adj, PHF Volume, Reduct Vol, Reduced Vol, PCE Adj, MLF Adj, and Final Volume.

Saturation Flow Module:

Table with columns for Sat/Lane, Adjustment, Lanes, and Final Sat.

Capacity Analysis Module:

Table with columns for Vol/Sat, Crit Moves, Green/Cycle, Volume/Cap, Delay/Veh, User DelAdj, AdjDel/Veh, LOS by Move, and HCM2kAvgQ.

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

Lytle Creek Ranch Project
Existing 2007 Traffic Condition
PM Peak Hour

Level Of Service Computation Report

2000 HCM Operations Method (Base Volume Alternative)

Intersection #65 Sierra Ave. and Foothill Blvd.

Cycle (sec): 60 Critical Vol./Cap.(X): 0.941
Loss Time (sec): 8 (Y+R=4.0 sec) Average Delay (sec/veh): 32.1
Optimal Cycle: OPTIMIZED Level Of Service: C

Table with columns for Street Name (Sierra Ave., Foothill Blvd.), Approach (North Bound, South Bound, East Bound, West Bound), Movement (L, T, R), Control (Protected), Rights (Include), Min. Green, and Lanes.

Volume Module:

Table with columns for Base Vol, Growth Adj, Initial Bse, User Adj, PHF Adj, PHF Volume, Reduct Vol, Reduced Vol, PCE Adj, MLF Adj, and Final Volume.

Saturation Flow Module:

Table with columns for Sat/Lane, Adjustment, Lanes, and Final Sat.

Capacity Analysis Module:

Table with columns for Vol/Sat, Crit Moves, Green/Cycle, Volume/Cap, Delay/Veh, User DelAdj, AdjDel/Veh, LOS by Move, and HCM2kAvgQ.

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

Lytle Creek Ranch Project
Existing 2007 Traffic Condition
PM Peak Hour

Level Of Service Computation Report

2000 HCM Operations Method (Base Volume Alternative)

Intersection #66 Alder Ave. and Foothill Blvd.

Cycle (sec): 60 Critical Vol./Cap.(X): 0.663
Loss Time (sec): 6 (Y+R=4.0 sec) Average Delay (sec/veh): 15.6
Optimal Cycle: OPTIMIZED Level Of Service: B

Street Name:	Alder Ave.						Foothill Blvd.					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Permitted			Permitted			Protected			Protected		
Rights:	Include			Include			Include			Include		
Min. Green:	6	6	6	6	6	6	6	6	6	6	6	6
Lanes:	1	0	0	1	0	1	1	0	2	1	0	1

Volume Module:AM Peak Hour

Base Vol:	93	279	94	76	309	82	83	1143	80	23	822	63
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	93	279	94	76	309	82	83	1143	80	23	822	63
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
PHF Volume:	103	309	104	84	342	91	92	1266	89	25	911	70
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	103	309	104	84	342	91	92	1266	89	25	911	70
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	103	309	104	84	342	91	92	1266	89	25	911	70

Saturation Flow Module:

Sat/Lane:	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Adjustment:	0.94	1.00	1.00	0.94	1.00	1.00	0.94	1.00	1.00	0.94	1.00	1.00
Lanes:	1.00	0.75	0.25	1.00	1.58	0.42	1.00	2.00	1.00	1.00	1.86	0.14
Final Sat.:	1700	1346	454	1700	2845	755	1700	3600	1800	1700	3344	256

Capacity Analysis Module:

Vol/Sat:	0.06	0.23	0.23	0.05	0.12	0.12	0.05	0.35	0.05	0.01	0.27	0.27
Crit Moves:	****						****			****		
Green/Cycle:	0.32	0.32	0.32	0.32	0.32	0.32	0.16	0.48	0.48	0.10	0.43	0.43
Volume/Cap:	0.19	0.73	0.73	0.16	0.38	0.38	0.34	0.73	0.10	0.15	0.64	0.64
Delay/Veh:	15.1	22.9	22.9	14.9	16.2	16.2	23.3	13.9	8.5	25.1	14.4	14.4
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	15.1	22.9	22.9	14.9	16.2	16.2	23.3	13.9	8.5	25.1	14.4	14.4
LOS by Move:	B	C	C	B	B	B	C	B	A	C	B	B
HCM2kAvgQ:	2	8	8	1	3	3	2	11	1	1	8	8

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

Lytle Creek Ranch Project
Existing 2007 Traffic Condition
PM Peak Hour

Level Of Service Computation Report

2000 HCM Operations Method (Base Volume Alternative)

Intersection #67 Cedar Ave. and Foothill Blvd.

Cycle (sec): 60 Critical Vol./Cap.(X): 0.815
Loss Time (sec): 8 (Y+R=4.0 sec) Average Delay (sec/veh): 25.4
Optimal Cycle: OPTIMIZED Level Of Service: C

Street Name:	Cedar Ave.						Foothill Blvd.					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Protected			Protected			Protected			Protected		
Rights:	Include			Include			Include			Include		
Min. Green:	6	6	6	6	6	6	6	6	6	6	6	6
Lanes:	1	0	1	1	0	1	1	0	2	1	0	2

Volume Module:

Base Vol:	173	591	114	167	516	63	175	901	166	216	664	116
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	173	591	114	167	516	63	175	901	166	216	664	116
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
PHF Volume:	182	622	120	176	543	66	184	948	175	227	699	122
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	182	622	120	176	543	66	184	948	175	227	699	122
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Final Volume:	182	622	120	176	543	66	184	948	175	227	699	122

Saturation Flow Module:

Sat/Lane:	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Adjustment:	0.94	1.00	1.00	0.94	1.00	1.00	0.94	1.00	1.00	0.94	1.00	1.00
Lanes:	1.00	1.68	0.32	1.00	1.78	0.22	1.00	2.00	1.00	1.00	2.00	1.00
Final Sat.:	1700	3018	582	1700	3208	392	1700	3600	1800	1700	3600	1800

Capacity Analysis Module:

Vol/Sat:	0.11	0.21	0.21	0.10	0.17	0.17	0.11	0.26	0.10	0.13	0.19	0.07
Crit Moves:	****			****			****			****		
Green/Cycle:	0.15	0.25	0.25	0.13	0.23	0.23	0.17	0.32	0.32	0.16	0.31	0.31
Volume/Cap:	0.73	0.82	0.82	0.82	0.73	0.73	0.62	0.82	0.30	0.82	0.62	0.22
Delay/Veh:	34.7	26.9	26.9	46.3	24.5	24.5	27.0	23.2	15.5	40.9	18.7	15.4
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	34.7	26.9	26.9	46.3	24.5	24.5	27.0	23.2	15.5	40.9	18.7	15.4
LOS by Move:	C	C	C	D	C	C	C	C	B	D	B	B
HCM2kAvgQ:	5	9	9	6	7	7	4	11	3	7	7	2

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

Lytle Creek Ranch Project
Existing 2007 Traffic Condition
PM Peak Hour

Level Of Service Computation Report

2000 HCM Operations Method (Base Volume Alternative)

Intersection #68 Cactus Ave. and Foothill Blvd.

Cycle (sec): 60 Critical Vol./Cap.(X): 0.770
Loss Time (sec): 6 (Y+R=4.0 sec) Average Delay (sec/veh): 18.4
Optimal Cycle: OPTIMIZED Level Of Service: B

Table with columns for Street Name (Cactus Ave., Foothill Blvd.), Approach (North Bound, South Bound, East Bound, West Bound), Movement (L, T, R), Control (Permitted, Protected), Rights (Include), and Lanes (1, 0, 2, 0, 1).

Volume Module:

Table with 13 columns for traffic metrics: Base Vol, Growth Adj, Initial Bse, User Adj, PHF Adj, PHF Volume, Reduct Vol, Reduced Vol, PCE Adj, MLF Adj, Final Volume.

Saturation Flow Module:

Table with 13 columns for saturation flow metrics: Sat/Lane, Adjustment, Lanes, Final Sat.

Capacity Analysis Module:

Table with 13 columns for capacity analysis metrics: Vol/Sat, Crit Moves, Green/Cycle, Volume/Cap, Delay/Veh, User DelAdj, AdjDel/Veh, LOS by Move, HCM2kAvgQ.

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

Lytle Creek Ranch Project
Existing 2007 Traffic Condition
PM Peak Hour

Level Of Service Computation Report

2000 HCM Operations Method (Base Volume Alternative)

Intersection #69 Riverside Ave. and Foothill Blvd.

Cycle (sec): 60 Critical Vol./Cap.(X): 0.931
Loss Time (sec): 8 (Y+R=4.0 sec) Average Delay (sec/veh): 35.8
Optimal Cycle: OPTIMIZED Level Of Service: D

Table with columns for Street Name (Riverside Ave., Foothill Blvd.), Approach (North Bound, South Bound, East Bound, West Bound), Movement (L, T, R), Control (Protected), Rights (Include), Min. Green, and Lanes.

Volume Module:

Table with columns for Base Vol, Growth Adj, Initial Bse, User Adj, PHF Adj, PHF Volume, Reduct Vol, Reduced Vol, PCE Adj, MLF Adj, and Final Volume.

Saturation Flow Module:

Table with columns for Sat/Lane, Adjustment, Lanes, and Final Sat.

Capacity Analysis Module:

Table with columns for Vol/Sat, Crit Moves, Green/Cycle, Volume/Cap, Delay/Veh, User DelAdj, AdjDel/Veh, LOS by Move, and HCM2kAvgQ.

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

Lytle Creek Ranch Project
Existing 2007 Traffic Condition
PM Peak Hour

Level Of Service Computation Report

2000 HCM Operations Method (Base Volume Alternative)

Intersection #70 Sierra Ave. and Arrow Blvd.

Cycle (sec): 60 Critical Vol./Cap.(X): 0.789
Loss Time (sec): 8 (Y+R=4.0 sec) Average Delay (sec/veh): 26.9
Optimal Cycle: OPTIMIZED Level Of Service: C

Table with columns for Street Name (Sierra Ave., Arrow Blvd.), Approach (North Bound, South Bound, East Bound, West Bound), Movement (L, T, R), Control (Protected), Rights (Include), Min. Green, and Lanes.

Volume Module:

Table with columns for Base Vol, Growth Adj, Initial Bse, User Adj, PHF Adj, PHF Volume, Reduct Vol, Reduced Vol, PCE Adj, MLF Adj, and Final Volume.

Saturation Flow Module:

Table with columns for Sat/Lane, Adjustment, Lanes, and Final Sat.

Capacity Analysis Module:

Table with columns for Vol/Sat, Crit Moves, Green/Cycle, Volume/Cap, Delay/Veh, User DelAdj, AdjDel/Veh, LOS by Move, and HCM2kAvgQ.

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

Lytle Creek Ranch Project
Existing 2007 Traffic Condition
PM Peak Hour

Level Of Service Computation Report

2000 HCM Operations Method (Base Volume Alternative)

Intersection #71 Alder Ave. and Arrow Blvd.

Cycle (sec): 60 Critical Vol./Cap.(X): 0.661
Loss Time (sec): 8 (Y+R=4.0 sec) Average Delay (sec/veh): 22.5
Optimal Cycle: OPTIMIZED Level Of Service: C

Table with columns for Street Name (Alder Ave., Arrow Blvd.), Approach (North Bound, South Bound, East Bound, West Bound), Movement (L, T, R), Control (Protected), Rights (Include), Min. Green, and Lanes.

Volume Module:

Table with columns for Base Vol, Growth Adj, Initial Bse, User Adj, PHF Adj, PHF Volume, Reduct Vol, Reduced Vol, PCE Adj, MLF Adj, and Final Volume.

Saturation Flow Module:

Table with columns for Sat/Lane, Adjustment, Lanes, and Final Sat.

Capacity Analysis Module:

Table with columns for Vol/Sat, Crit Moves, Green/Cycle, Volume/Cap, Delay/Veh, User DelAdj, AdjDel/Veh, LOS by Move, and HCM2kAvgQ.

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

Lytle Creek Ranch Project
Existing 2007 Traffic Condition
PM Peak Hour

Level Of Service Computation Report

2000 HCM Operations Method (Base Volume Alternative)

Intersection #72 Cedar Ave. and Rialto Ave.

Cycle (sec): 60 Critical Vol./Cap.(X): 0.601
Loss Time (sec): 8 (Y+R=4.0 sec) Average Delay (sec/veh): 19.8
Optimal Cycle: OPTIMIZED Level Of Service: B

Table with columns for Street Name (Cedar Ave., Rialto Ave.), Approach (North Bound, South Bound, East Bound, West Bound), Movement (L, T, R), Control (Protected), Rights (Include), Min. Green (6), and Lanes (1, 0, 1, 1, 0).

Volume Module:

Table with 13 columns for traffic volume metrics: Base Vol, Growth Adj, Initial Bse, User Adj, PHF Adj, PHF Volume, Reduct Vol, Reduced Vol, PCE Adj, MLF Adj, Final Volume.

Saturation Flow Module:

Table with 13 columns for saturation flow metrics: Sat/Lane, Adjustment, Lanes, Final Sat.

Capacity Analysis Module:

Table with 13 columns for capacity analysis metrics: Vol/Sat, Crit Moves, Green/Cycle, Volume/Cap, Delay/Veh, User DelAdj, AdjDel/Veh, LOS by Move, HCM2kAvgQ.

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

Lytle Creek Ranch Project
Existing 2007 Traffic Condition
PM Peak Hour

Level Of Service Computation Report

2000 HCM Operations Method (Base Volume Alternative)

Intersection #73 Cactus Ave. and Rialto Ave.

Cycle (sec): 60 Critical Vol./Cap.(X): 0.325
Loss Time (sec): 4 (Y+R=4.0 sec) Average Delay (sec/veh): 9.8
Optimal Cycle: OPTIMIZED Level Of Service: A

Table with columns for Street Name (Cactus Ave., Rialto Ave.), Approach (North Bound, South Bound, East Bound, West Bound), Movement (L, T, R), Control (Permitted), Rights (Include), Min. Green, and Lanes.

Volume Module:

Table with columns for Base Vol, Growth Adj, Initial Bse, User Adj, PHF Adj, PHF Volume, Reduct Vol, Reduced Vol, PCE Adj, MLF Adj, and Final Volume.

Saturation Flow Module:

Table with columns for Sat/Lane, Adjustment, Lanes, and Final Sat.

Capacity Analysis Module:

Table with columns for Vol/Sat, Crit Moves, Green/Cycle, Volume/Cap, Delay/Veh, User DelAdj, AdjDel/Veh, LOS by Move, and HCM2kAvgQ.

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

Lytle Creek Ranch Project
Existing 2007 Traffic Condition
PM Peak Hour

Level Of Service Computation Report

2000 HCM Operations Method (Base Volume Alternative)

Intersection #74 Cedar Ave. and Merrill Ave.

Cycle (sec): 65 Critical Vol./Cap.(X): 0.988
Loss Time (sec): 6 (Y+R=4.0 sec) Average Delay (sec/veh): 32.5
Optimal Cycle: OPTIMIZED Level Of Service: C

Table with columns for Street Name (Cedar Ave., Merrill Ave.), Approach (North Bound, South Bound, East Bound, West Bound), Movement (L, T, R), Control (Protected, Permitted), Rights (Include), Min. Green, and Lanes.

Volume Module:

Table with columns for Base Vol, Growth Adj, Initial Bse, User Adj, PHF Adj, PHF Volume, Reduct Vol, Reduced Vol, PCE Adj, MLF Adj, and Final Volume.

Saturation Flow Module:

Table with columns for Sat/Lane, Adjustment, Lanes, and Final Sat.

Capacity Analysis Module:

Table with columns for Vol/Sat, Crit Moves, Green/Cycle, Volume/Cap, Delay/Veh, User DelAdj, AdjDel/Veh, LOS by Move, and HCM2kAvgQ.

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

Lytle Creek Ranch Project
Existing 2007 Traffic Condition
PM Peak Hour

Level Of Service Computation Report

2000 HCM Operations Method (Base Volume Alternative)

Intersection #75 Cactus Ave. and Merrill Ave.

Cycle (sec): 60 Critical Vol./Cap.(X): 0.366
Loss Time (sec): 6 (Y+R=4.0 sec) Average Delay (sec/veh): 13.3
Optimal Cycle: OPTIMIZED Level Of Service: B

Table with columns for Street Name (Cactus Ave., Merrill Ave.), Approach (North Bound, South Bound, East Bound, West Bound), Movement (L, T, R), Control (Protected, Permitted), Rights (Include), Min. Green, and Lanes.

Volume Module:

Table with 13 columns for traffic volume metrics: Base Vol, Growth Adj, Initial Bse, User Adj, PHF Adj, PHF Volume, Reduct Vol, Reduced Vol, PCE Adj, MLF Adj, Final Volume.

Saturation Flow Module:

Table with 13 columns for saturation flow metrics: Sat/Lane, Adjustment, Lanes, Final Sat.

Capacity Analysis Module:

Table with 13 columns for capacity analysis metrics: Vol/Sat, Crit Moves, Green/Cycle, Volume/Cap, Delay/Veh, User DelAdj, AdjDel/Veh, LOS by Move, HCM2kAvgQ.

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

Existing (2007) Plus Project With 2011 Config

Lytle Creek Ranch Project
 Existing 2007 Traffic Condition
 AM Peak Hour

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

 Intersection #7 University Pkwy & I-215 SB On/Off-Ramps

Cycle (sec): 60 Critical Vol./Cap.(X): 1.118
 Loss Time (sec): 6 (Y+R=4.0 sec) Average Delay (sec/veh): 82.9
 Optimal Cycle: 130 Level Of Service: F

Street Name:	University Pkwy						I-215 SB On/Off-Ramps													
Approach:	North Bound			South Bound			East Bound			West Bound										
Movement:	L	T	R	L	T	R	L	T	R	L	T	R								
Control:	Protected			Protected			Split Phase			Split Phase										
Rights:	Include			Include			Include			Include										
Min. Green:	6	6	6	6	6	6	6	6	6	6	6	6								
Lanes:	0	0	1	1	0	1	0	2	0	0	0	1	0	0	1	0	0	0	0	0

Volume Module:

Base Vol:	0	219	249	1296	412	0	94	0	25	0	0	0
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	0	219	249	1296	412	0	94	0	25	0	0	0
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
PHF Volume:	0	231	262	1364	434	0	99	0	26	0	0	0
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	0	231	262	1364	434	0	99	0	26	0	0	0
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Final Volume:	0	231	262	1364	434	0	99	0	26	0	0	0

Saturation Flow Module:

Sat/Lane:	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Adjustment:	0.94	1.00	1.00	0.94	1.00	1.00	0.94	1.00	1.00	0.94	1.00	1.00
Lanes:	0.00	1.00	1.00	1.00	2.00	0.00	1.00	0.00	1.00	0.00	0.00	0.00
Final Sat.:	0	1800	1800	1700	3600	0	1700	0	1800	0	0	0

Capacity Analysis Module:

Vol/Sat:	0.00	0.13	0.15	0.80	0.12	0.00	0.06	0.00	0.01	0.00	0.00	0.00
Crit Moves:			****	****			****					
Green/Cycle:	0.00	0.12	0.12	0.68	0.44	0.00	0.10	0.00	0.10	0.00	0.00	0.00
Volume/Cap:	0.00	1.04	1.19	1.19	0.28	0.00	0.58	0.00	0.15	0.00	0.00	0.00
Delay/Veh:	0.0	79.2	131.6	102.0	10.9	0.0	30.8	0.0	25.0	0.0	0.0	0.0
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	0.0	79.2	131.6	102.0	10.9	0.0	30.8	0.0	25.0	0.0	0.0	0.0
LOS by Move:	A	E	F	F	B	A	C	A	C	A	A	A
HCM2kAvgQ:	0	10	13	58	3	0	3	0	1	0	0	0

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

Lytle Creek Ranch Project
Existing 2007 Traffic Condition
AM Peak Hour

Level Of Service Computation Report

2000 HCM Unsignalized Method (Base Volume Alternative)

Intersection #8 I-15 SB On/Off-Ramps & Glen Helen Pkwy

Average Delay (sec/veh): 54.9 Worst Case Level Of Service: F[336.6]

Street Name:	I-15 SB On/Off-Ramps						Glen Helen Pkwy					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Stop Sign			Stop Sign			Uncontrolled			Uncontrolled		
Rights:	Include			Include			Include			Include		
Lanes:	0	0	0	0	0	0	1	1	0	1	0	0

Volume Module:	I-15 SB On/Off-Ramps			I-15 SB On/Off-Ramps			Glen Helen Pkwy			Glen Helen Pkwy		
Base Vol:	0	0	0	110	1	6	0	0	0	513	225	0
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	0	0	0	110	1	6	0	0	0	513	225	0
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
PHF Volume:	0	0	0	116	1	6	0	0	0	540	237	0
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Final Volume:	0	0	0	116	1	6	0	0	0	540	237	0

Critical Gap Module:	I-15 SB On/Off-Ramps			I-15 SB On/Off-Ramps			Glen Helen Pkwy			Glen Helen Pkwy		
Critical Gp:	xxxxx	xxxx	xxxxx	6.8	6.5	6.9	xxxxx	xxxx	xxxxx	4.1	xxxx	xxxxx
FollowUpTim:	xxxxx	xxxx	xxxxx	3.5	4.0	3.3	xxxxx	xxxx	xxxxx	2.2	xxxx	xxxxx

Capacity Module:	I-15 SB On/Off-Ramps			I-15 SB On/Off-Ramps			Glen Helen Pkwy			Glen Helen Pkwy		
Cnflict Vol:	xxxxx	xxxxx	xxxxxx	1317	1317	118	xxxxx	xxxxx	xxxxxx	0	xxxxx	xxxxxx
Potent Cap.:	xxxxx	xxxxx	xxxxxx	152	159	917	xxxxx	xxxxx	xxxxxx	900	xxxxx	xxxxxx
Move Cap.:	xxxxx	xxxxx	xxxxxx	79	64	917	xxxxx	xxxxx	xxxxxx	900	xxxxx	xxxxxx
Volume/Cap:	xxxxx	xxxxx	xxxxx	1.46	0.02	0.01	xxxxx	xxxxx	xxxxx	0.60	xxxxx	xxxxx

Level Of Service Module:	I-15 SB On/Off-Ramps			I-15 SB On/Off-Ramps			Glen Helen Pkwy			Glen Helen Pkwy		
2Way95thQ:	xxxx	xxxx	xxxxx	9.3	xxxx	xxxxx	xxxx	xxxx	xxxxx	4.1	xxxx	xxxxx
Control Del:	xxxxx	xxxx	xxxxxx	356.9	xxxx	xxxxxx	xxxxxx	xxxx	xxxxxx	14.8	xxxx	xxxxxx
LOS by Move:	*	*	*	F	*	*	*	*	*	B	*	*
Movement:	LT	LTR	RT	LT	LTR	RT	LT	LTR	RT	LT	LTR	RT
Shared Cap.:	xxxxx	xxxxx	xxxxxx	xxxxx	xxxxx	314	xxxxx	xxxxx	xxxxxx	xxxxx	xxxxx	xxxxxx
Shared Queue:	xxxxx	xxxx	xxxxxx	xxxxxx	xxxx	0.1	xxxxxx	xxxx	xxxxxx	xxxxxx	xxxx	xxxxxx
Shrd ConDel:	xxxxxx	xxxx	xxxxxx	xxxxxx	xxxx	16.7	xxxxxx	xxxx	xxxxxx	xxxxxx	xxxx	xxxxxx
Shared LOS:	*	*	*	*	*	C	*	*	*	*	*	*
ApproachDel:	xxxxxxx			336.6			xxxxxxx			xxxxxxx		
ApproachLOS:	*			F			*			*		

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

Lytle Creek Ranch Project
Existing 2007 Traffic Condition
AM Peak Hour

Level Of Service Computation Report

2000 HCM Unsignalized Method (Base Volume Alternative)

Intersection #9 I-15 NB On/Off-Ramps & Glen Helen Pkwy

Average Delay (sec/veh): 5.3 Worst Case Level Of Service: B[10.4]

Street Name:	I-15 NB On/Off-Ramps						Glen Helen Pkwy													
Approach:	North Bound			South Bound			East Bound			West Bound										
Movement:	L	T	R	L	T	R	L	T	R	L	T	R								
Control:	Stop Sign			Stop Sign			Uncontrolled			Uncontrolled										
Rights:	Include			Include			Include			Include										
Lanes:	1	1	0	0	1	0	0	0	0	0	1	0	2	0	0	0	0	1	1	0

Volume Module:

Base Vol:	124	18	227	0	0	0	45	61	0	0	319	5
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	124	18	227	0	0	0	45	61	0	0	319	5
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
PHF Volume:	131	19	239	0	0	0	47	64	0	0	336	5
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Final Volume:	131	19	239	0	0	0	47	64	0	0	336	5

Critical Gap Module:

Critical Gp:	6.8	6.5	6.9	xxxxx	xxxx	xxxxx	4.1	xxxx	xxxxx	xxxxx	xxxx	xxxxx
FollowUpTim:	3.5	4.0	3.3	xxxxx	xxxx	xxxxx	2.2	xxxx	xxxxx	xxxxx	xxxx	xxxxx

Capacity Module:

Cnflct Vol:	327	500	32	xxxxx	xxxx	xxxxx	341	xxxx	xxxxx	xxxx	xxxx	xxxxx
Potent Cap.:	648	476	1041	xxxxx	xxxx	xxxxx	1229	xxxx	xxxxx	xxxx	xxxx	xxxxx
Move Cap.:	629	457	1041	xxxxx	xxxx	xxxxx	1229	xxxx	xxxxx	xxxx	xxxx	xxxxx
Volume/Cap:	0.21	0.04	0.23	xxxx	xxxx	xxxx	0.04	xxxx	xxxx	xxxx	xxxx	xxxx

Level Of Service Module:

2Way95thQ:	0.3	xxxx	0.9	xxxx	xxxx	xxxxx	0.1	xxxx	xxxxx	xxxx	xxxx	xxxxx
Control Del:	11.4	xxxx	9.5	xxxxx	xxxx	xxxxx	8.0	xxxx	xxxxx	xxxxx	xxxx	xxxxx
LOS by Move:	B	*	A	*	*	*	A	*	*	*	*	*
Movement:	LT	LTR	RT	LT	LTR	RT	LT	LTR	RT	LT	LTR	RT
Shared Cap.:	580	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx
Shared Queue:	0.5	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx
Shrd ConDel:	12.3	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx
Shared LOS:	B	*	*	*	*	*	*	*	*	*	*	*
ApproachDel:	10.4			xxxxxxx			xxxxxxx			xxxxxxx		
ApproachLOS:	B			*			*			*		

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

 Lytle Creek Ranch Project
 Existing 2007 Traffic Condition
 AM Peak Hour

Level Of Service Computation Report
 2000 HCM 4-Way Stop Method (Base Volume Alternative)

 Intersection #11 Lytle Creek Rd & Sierra Ave

Cycle (sec): 100 Critical Vol./Cap.(X): 0.384
 Loss Time (sec): 0 (Y+R=4.0 sec) Average Delay (sec/veh): 10.2
 Optimal Cycle: 0 Level Of Service: B

Street Name: Lytle Creek Rd Sierra Ave / Lytle Creek Rd
 Approach: North Bound South Bound East Bound West Bound
 Movement: L - T - R L - T - R L - T - R L - T - R

Control: Stop Sign Stop Sign Stop Sign Stop Sign
 Rights: Include Include Include Include
 Min. Green: 6 6 6 6 6 6 6 6 6 6 6 6
 Lanes: 0 0 1 0 0 0 0 0 0 1 1 0 1 0 2 0 0

Volume Module:
 Base Vol: 15 0 30 0 0 0 0 361 0 0 524 0
 Growth Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
 Initial Bse: 15 0 30 0 0 0 0 361 0 0 524 0
 User Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
 PHF Adj: 0.95 0.95 0.95 0.95 0.95 0.95 0.95 0.95 0.95 0.95 0.95 0.95
 PHF Volume: 16 0 32 0 0 0 0 380 0 0 552 0
 Reduct Vol: 0 0 0 0 0 0 0 0 0 0 0 0
 Reduced Vol: 16 0 32 0 0 0 0 380 0 0 552 0
 PCE Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
 MLF Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
 Final Volume: 16 0 32 0 0 0 0 380 0 0 552 0

Saturation Flow Module:
 Adjustment: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
 Lanes: 0.33 0.00 0.67 0.00 0.00 0.00 0.00 2.00 0.00 1.00 2.00 0.00
 Final Sat.: 209 0 418 0 0 0 0 1383 0 650 1437 0

Capacity Analysis Module:
 Vol/Sat: 0.08 xxxx 0.08 xxxx xxxx xxxx xxxx 0.27 xxxx 0.00 0.38 xxxx
 Crit Moves: **** **** ****
 Delay/Veh: 8.7 0.0 8.7 0.0 0.0 0.0 0.0 9.7 0.0 0.0 10.7 0.0
 Delay Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
 AdjDel/Veh: 8.7 0.0 8.7 0.0 0.0 0.0 0.0 9.7 0.0 0.0 10.7 0.0
 LOS by Move: A * A * * * * * A * * B *
 ApproachDel: 8.7 xxxxxx 9.7 10.7
 Delay Adj: 1.00 xxxxxx 1.00 1.00
 ApprAdjDel: 8.7 xxxxxx 9.7 10.7
 LOS by Appr: A * * A B
 AllWayAvgQ: 0.1 0.1 0.1 0.0 0.0 0.0 0.0 0.4 0.4 0.0 0.6 0.0

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

 Lytle Creek Ranch Project
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Level Of Service Computation Report
 2000 HCM 4-Way Stop Method (Base Volume Alternative)

 Intersection #12 I-15 SB On/Off-Ramps & Sierra Ave

Cycle (sec): 100 Critical Vol./Cap.(X): 1.731
 Loss Time (sec): 0 (Y+R=4.0 sec) Average Delay (sec/veh): 155.3
 Optimal Cycle: 0 Level Of Service: F

Street Name:	I-15 SB On/Off-Ramps						Sierra Ave														
Approach:	North Bound			South Bound			East Bound			West Bound											
Movement:	L	-	T	-	R	L	-	T	-	R	L	-	T	-	R						
Control:	Stop Sign			Stop Sign			Stop Sign			Stop Sign											
Rights:	Include			Include			Include			Include											
Min. Green:	6	6	6	6	6	6	6	6	6	6	6	6									
Lanes:	0	0	0	0	0	0	0	1	0	0	1	0	0	0	1	0	1	0	2	0	0

Volume Module:

Base Vol:	0	0	0	355	4	90	0	262	130	794	400	0
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	0	0	0	355	4	90	0	262	130	794	400	0
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
PHF Volume:	0	0	0	374	4	95	0	276	137	836	421	0
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	0	0	0	374	4	95	0	276	137	836	421	0
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Final Volume:	0	0	0	374	4	95	0	276	137	836	421	0

Saturation Flow Module:

Adjustment:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Lanes:	0.00	0.00	0.00	0.99	0.01	1.00	0.00	0.67	0.33	1.00	2.00	0.00
Final Sat.:	0	0	0	444	5	524	0	344	171	483	1023	0

Capacity Analysis Module:

Vol/Sat:	xxxx	xxxx	xxxx	0.84	0.84	0.18	xxxx	0.80	0.80	1.73	0.41	xxxx
Crit Moves:				****				****		****		
Delay/Veh:	0.0	0.0	0.0	39.9	39.9	11.0	0.0	32.1	32.1	355.8	14.3	0.0
Delay Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	0.0	0.0	0.0	39.9	39.9	11.0	0.0	32.1	32.1	355.8	14.3	0.0
LOS by Move:	*	*	*	E	E	B	*	D	D	F	B	*
ApproachDel:	xxxxxxx				34.1			32.1			241.4	
Delay Adj:	xxxxxxx				1.00			1.00			1.00	
ApprAdjDel:	xxxxxxx				34.1			32.1			241.4	
LOS by Appr:		*			D			D			F	
AllWayAvgQ:	0.0	0.0	0.0	3.6	3.6	0.2	3.2	3.2	3.2	46.4	0.7	0.0

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

 Lytle Creek Ranch Project
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Level Of Service Computation Report
 2000 HCM 4-Way Stop Method (Base Volume Alternative)

 Intersection #13 I-15 NB On/Off-Ramps & Sierra Ave

Cycle (sec): 100 Critical Vol./Cap.(X): 1.539
 Loss Time (sec): 0 (Y+R=4.0 sec) Average Delay (sec/veh): 208.7
 Optimal Cycle: 0 Level Of Service: F

Street Name:	I-15 NB On/Off-Ramps						Sierra Ave								
Approach:	North Bound			South Bound			East Bound			West Bound					
Movement:	L	-	T	-	R	L	-	T	-	R	L	-	T	-	R
Control:	Stop Sign			Stop Sign			Stop Sign			Stop Sign					
Rights:	Include			Include			Include			Include					
Min. Green:	6	6	6	6	6	6	6	6	6	6	6	6			
Lanes:	1	0	1	0	0	0	0	0	0	0	1	0	1	0	0

Volume Module:	I-15 NB On/Off-Ramps			I-15 SB On/Off-Ramps			Sierra Ave East			Sierra Ave West		
Base Vol:	138	1	504	0	0	0	29	600	0	0	1063	355
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	138	1	504	0	0	0	29	600	0	0	1063	355
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
PHF Volume:	145	1	531	0	0	0	31	632	0	0	1119	374
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	145	1	531	0	0	0	31	632	0	0	1119	374
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Final Volume:	145	1	531	0	0	0	31	632	0	0	1119	374

Saturation Flow Module:	I-15 NB On/Off-Ramps			I-15 SB On/Off-Ramps			Sierra Ave East			Sierra Ave West		
Adjustment:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Lanes:	1.00	0.01	0.99	0.00	0.00	0.00	1.00	1.00	0.00	0.00	1.50	0.50
Final Sat.:	928	-479	480	0	0	0	419	448	0	0	727	251

Capacity Analysis Module:	I-15 NB On/Off-Ramps			I-15 SB On/Off-Ramps			Sierra Ave East			Sierra Ave West		
Vol/Sat:	0.16-0.00	1.11	xxxx	xxxx	xxxx	xxxx	0.07	1.41	xxxx	xxxx	1.54	1.49
Crit Moves:		****						****			****	
Delay/Veh:	78.8	96.3	96.3	0.0	0.0	0.0	11.9	219	0.0	0.0	273	250.9
Delay Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	78.8	96.3	96.3	0.0	0.0	0.0	11.9	219	0.0	0.0	273	250.9
LOS by Move:	F	F	F	*	*	*	B	F	*	*	F	F
ApproachDel:	78.8			xxxxxxx			209.7			267.1		
Delay Adj:	1.00			xxxxxxx			1.00			1.00		
ApprAdjDel:	78.8			xxxxxxx			209.7			267.1		
LOS by Appr:	F			*			F			F		
AllWayAvgQ:	11.6	11.6	11.6	0.0	0.0	0.0	0.1	26.0	0.0	0.0	36.2	33.5

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

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

 Intersection #16 I-15 SB On/Off Ramps and Summit Ave.

Cycle (sec): 95 Critical Vol./Cap.(X): 0.062
 Loss Time (sec): 6 (Y+R=4.0 sec) Average Delay (sec/veh): 18.0
 Optimal Cycle: 60 Level Of Service: B

Street Name:	I-15 SB On/Off Ramps						Summit Ave.					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Split Phase			Split Phase			Protected			Protected		
Rights:	Include			Include			Include			Include		
Min. Green:	6	6	6	6	6	6	6	6	6	6	6	6
Lanes:	0	0	0	1	0	0	1	0	2	0	0	1

Volume Module:

Base Vol:	0	0	0	50	0	9	0	31	0	0	92	0
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	0	0	0	50	0	9	0	31	0	0	92	0
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
PHF Volume:	0	0	0	53	0	9	0	33	0	0	97	0
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	0	0	0	53	0	9	0	33	0	0	97	0
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Final Volume:	0	0	0	53	0	9	0	33	0	0	97	0

Saturation Flow Module:

Sat/Lane:	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Adjustment:	0.94	1.00	1.00	0.94	1.00	1.00	0.94	1.00	1.00	0.94	1.00	1.00
Lanes:	0.00	0.00	0.00	1.00	0.00	1.00	1.00	2.00	0.00	0.00	2.00	0.00
Final Sat.:	0	0	0	1700	0	1800	1700	3600	0	0	3600	0

Capacity Analysis Module:

Vol/Sat:	0.00	0.00	0.00	0.03	0.00	0.01	0.00	0.01	0.00	0.00	0.03	0.00
Crit Moves:				****			****			****		
Green/Cycle:	0.00	0.00	0.00	0.47	0.00	0.47	0.00	0.23	0.00	0.00	0.41	0.00
Volume/Cap:	0.00	0.00	0.00	0.07	0.00	0.01	0.00	0.04	0.00	0.00	0.07	0.00
Delay/Veh:	0.0	0.0	0.0	13.9	0.0	13.5	0.0	28.1	0.0	0.0	17.2	0.0
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	0.0	0.0	0.0	13.9	0.0	13.5	0.0	28.1	0.0	0.0	17.2	0.0
LOS by Move:	A	A	A	B	A	B	A	C	A	A	B	A
HCM2kAvgQ:	0	0	0	1	0	0	0	0	0	0	1	0

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

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

 Intersection #17 I-15 NB On/Off Ramps and Summit Ave.

Cycle (sec): 60 Critical Vol./Cap.(X): 0.322
 Loss Time (sec): 6 (Y+R=4.0 sec) Average Delay (sec/veh): 7.1
 Optimal Cycle: 60 Level Of Service: A

Street Name:	I-15 NB On/Off Ramps						Summit Ave.					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Split Phase			Split Phase			Protected			Protected		
Rights:	Include			Include			Include			Include		
Min. Green:	6	6	6	6	6	6	6	6	6	6	6	6
Lanes:	0	0	0	1	0	0	1	0	2	0	0	2

Volume Module:	I-15 NB On/Off Ramps			I-15 SB On/Off Ramps			Summit Ave. East			Summit Ave. West		
Base Vol:	0	0	0	0	0	0	134	11	0	0	707	0
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	0	0	0	0	0	0	134	11	0	0	707	0
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
PHF Volume:	0	0	0	0	0	0	141	12	0	0	744	0
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	0	0	0	0	0	0	141	12	0	0	744	0
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Final Volume:	0	0	0	0	0	0	141	12	0	0	744	0

Saturation Flow Module:	I-15 NB On/Off Ramps			I-15 SB On/Off Ramps			Summit Ave. East			Summit Ave. West		
Sat/Lane:	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Adjustment:	0.94	1.00	1.00	0.94	1.00	1.00	0.94	1.00	1.00	0.94	1.00	1.00
Lanes:	0.00	0.00	0.00	1.00	0.00	1.00	1.00	2.00	0.00	0.00	2.00	1.00
Final Sat.:	0	0	0	1700	0	1800	1700	3600	0	0	3600	1800

Capacity Analysis Module:	I-15 NB On/Off Ramps			I-15 SB On/Off Ramps			Summit Ave. East			Summit Ave. West		
Vol/Sat:	0.00	0.00	0.00	0.00	0.00	0.00	0.08	0.00	0.00	0.00	0.21	0.00
Crit Moves:							****			****		
Green/Cycle:	0.00	0.00	0.00	0.00	0.00	0.00	0.26	0.45	0.00	0.00	0.64	0.00
Volume/Cap:	0.00	0.00	0.00	0.00	0.00	0.00	0.32	0.01	0.00	0.00	0.32	0.00
Delay/Veh:	0.0	0.0	0.0	0.0	0.0	0.0	18.5	9.1	0.0	0.0	4.9	0.0
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	0.0	0.0	0.0	0.0	0.0	0.0	18.5	9.1	0.0	0.0	4.9	0.0
LOS by Move:	A	A	A	A	A	A	B	A	A	A	A	A
HCM2kAvgQ:	0	0	0	0	0	0	2	0	0	0	3	0

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

 Lytle Creek Ranch Project
 Existing 2007 Traffic Condition
 AM Peak Hour

Level Of Service Computation Report
 2000 HCM 4-Way Stop Method (Base Volume Alternative)

 Intersection #18 Sierra Ave & Riverside Ave

Cycle (sec): 60 Critical Vol./Cap.(X): 1.101
 Loss Time (sec): 6 (Y+R=4.0 sec) Average Delay (sec/veh): 59.0
 Optimal Cycle: 0 Level Of Service: F

Street Name:	Sierra Ave						Riverside Ave					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Stop Sign			Stop Sign			Stop Sign			Stop Sign		
Rights:	Include			Include			Include			Ignore		
Min. Green:	6	6	6	6	6	6	6	6	6	6	6	6
Lanes:	0	0	1	0	1	1	1	0	1	0	0	0
	0	0	0	0	0	0	0	0	0	0	0	1

Volume Module:

Base Vol:	0	736	0	541	116	0	0	0	0	0	0	696
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	0	736	0	541	116	0	0	0	0	0	0	696
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00
PHF Adj:	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.00
PHF Volume:	0	775	0	569	122	0	0	0	0	0	0	0
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	0	775	0	569	122	0	0	0	0	0	0	0
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00
FinalVolume:	0	775	0	569	122	0	0	0	0	0	0	0

Saturation Flow Module:

Adjustment:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Lanes:	0.00	1.00	1.00	1.00	1.00	0.00	0.00	0.00	0.00	1.00	0.00	1.00
Final Sat.:	0	704	793	656	721	0	0	0	0	458	0	538

Capacity Analysis Module:

Vol/Sat:	xxxx	1.10	0.00	0.87	0.17	xxxx	xxxx	xxxx	xxxx	0.00	xxxx	0.00
Crit Moves:	****			****						****		
Delay/Veh:	0.0	85.6	0.0	33.6	8.7	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Delay Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	0.0	85.6	0.0	33.6	8.7	0.0	0.0	0.0	0.0	0.0	0.0	0.0
LOS by Move:	*	F	*	D	A	*	*	*	*	*	*	*
ApproachDel:	85.6			29.2			xxxxxxx			xxxxxxx		
Delay Adj:	1.00			1.00			xxxxxxx			xxxxxxx		
ApprAdjDel:	85.6			29.2			xxxxxxx			xxxxxxx		
LOS by Appr:	F			D			*			*		
AllWayAvgQ:	0.0	15.2	0.0	4.6	0.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0

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

Lytle Creek Ranch Project
 Existing 2007 Traffic Condition
 AM Peak Hour

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

 Intersection #22 Linden Ave. and Riverside Ave.

Cycle (sec): 100 Critical Vol./Cap.(X): 1.168
 Loss Time (sec): 0 (Y+R=4.0 sec) Average Delay (sec/veh): 76.1
 Optimal Cycle: 130 Level Of Service: E

Street Name:	Linden Ave.						Riverside Ave.					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Split Phase			Split Phase			Protected			Protected		
Rights:	Include			Include			Include			Include		
Min. Green:	6	6	6	6	6	6	6	6	6	6	6	6
Lanes:	0	0	1! 0 0	1	1	0 0 1	1	0	1 1 0	0	0	1! 0 0

Volume Module:	Linden Ave.			Linden Ave.			Riverside Ave.			Riverside Ave.		
Base Vol:	74	0	4	178	28	29	66	894	55	35	1139	156
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	74	0	4	178	28	29	66	894	55	35	1139	156
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
PHF Volume:	78	0	4	187	29	31	69	941	58	37	1199	164
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	78	0	4	187	29	31	69	941	58	37	1199	164
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	78	0	4	187	29	31	69	941	58	37	1199	164

Saturation Flow Module:	Linden Ave.			Linden Ave.			Riverside Ave.			Riverside Ave.		
Sat/Lane:	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Adjustment:	0.94	1.00	1.00	0.94	1.00	1.00	0.94	1.00	1.00	0.94	1.00	1.00
Lanes:	0.95	0.00	0.05	1.74	0.26	1.00	1.00	1.88	0.12	0.03	0.85	0.12
Final Sat.:	1617	0	87	2960	466	1800	1700	3391	209	47	1539	211

Capacity Analysis Module:	Linden Ave.			Linden Ave.			Riverside Ave.			Riverside Ave.		
Vol/Sat:	0.05	0.00	0.05	0.06	0.06	0.02	0.04	0.28	0.28	0.78	0.78	0.78
Crit Moves:	****			****			****			****		
Green/Cycle:	0.06	0.00	0.06	0.06	0.06	0.06	0.06	0.23	0.23	0.65	0.82	0.82
Volume/Cap:	0.80	0.00	0.80	1.05	1.05	0.28	0.65	1.20	1.20	1.20	0.95	0.95
Delay/Veh:	81.5	0.0	81.5	125.0	125	46.4	59.0	140	140.2	116.2	21.5	21.5
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	81.5	0.0	81.5	125.0	125	46.4	59.0	140	140.2	116.2	21.5	21.5
LOS by Move:	F	A	F	F	F	D	E	F	F	F	C	C
HCM2kAvgQ:	5	0	5	7	7	1	3	29	29	73	42	42

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

 Lytle Creek Ranch Project
 Existing 2007 Traffic Condition
 AM Peak Hour

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

 Intersection #31 Locust Ave. and Bohnert Ave.

Average Delay (sec/veh): 2.1 Worst Case Level Of Service: B[15.0]

Street Name:	Locust Ave.				Bohnert Ave.															
Approach:	North Bound		South Bound		East Bound		West Bound													
Movement:	L	T	R	L	T	R	L	T	R	L	T	R								
Control:	Uncontrolled		Uncontrolled		Stop Sign		Stop Sign													
Rights:	Include		Include		Include		Include													
Lanes:	0	0	0	1	0	0	1	0	0	0	1	0	0	1	0	0	0	1	0	0

Volume Module:	Locust Ave.				Bohnert Ave.							
Base Vol:	0	363	15	7	260	0	0	0	0	72	0	26
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	0	363	15	7	260	0	0	0	0	72	0	26
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
PHF Volume:	0	382	16	7	274	0	0	0	0	76	0	27
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Final Volume:	0	382	16	7	274	0	0	0	0	76	0	27

Critical Gap Module:	Locust Ave.				Bohnert Ave.							
Critical Gp:	xxxxx	xxxx	xxxxxx	4.1	xxxx	xxxxxx	7.1	6.5	6.2	6.4	6.5	6.2
FollowUpTim:	xxxxx	xxxx	xxxxxx	2.2	xxxx	xxxxxx	3.5	4.0	3.3	3.5	4.0	3.3

Capacity Module:	Locust Ave.				Bohnert Ave.							
Cnflct Vol:	xxxxx	xxxxx	xxxxxx	398	xxxxx	xxxxxx	692	686	274	678	678	390
Potent Cap.:	xxxxx	xxxxx	xxxxxx	1172	xxxxx	xxxxxx	361	373	770	421	376	663
Move Cap.:	xxxxx	xxxxx	xxxxxx	1172	xxxxx	xxxxxx	344	370	770	419	374	663
Volume/Cap:	xxxxx	xxxxx	xxxxx	0.01	xxxxx	xxxxx	0.00	0.00	0.00	0.18	0.00	0.04

Level Of Service Module:	Locust Ave.				Bohnert Ave.							
2Way95thQ:	xxxx	xxxx	xxxxxx	0.0	xxxx	xxxxxx	xxxx	xxxx	xxxxxx	xxxx	xxxx	xxxxxx
Control Del:	xxxxx	xxxx	xxxxxx	8.1	xxxx	xxxxxx	xxxxxx	xxxx	xxxxxx	xxxxxx	xxxx	xxxxxx
LOS by Move:	*	*	*	A	*	*	*	*	*	*	*	*
Movement:	LT	LTR	RT	LT	LTR	RT	LT	LTR	RT	LT	LTR	RT
Shared Cap.:	xxxxx	xxxxx	xxxxxx	xxxxx	xxxxx	xxxxxx	xxxxx	xxxxx	0	xxxxx	464	xxxxxx
SharedQueue:	xxxxx	xxxx	xxxxxx	0.0	xxxxx	xxxxxx	xxxxxx	xxxx	xxxxxx	xxxxxx	0.8	xxxxxx
Shrd ConDel:	xxxxx	xxxx	xxxxxx	8.1	xxxxx	xxxxxx	xxxxxx	xxxx	xxxxxx	xxxxxx	15.0	xxxxxx
Shared LOS:	*	*	*	A	*	*	*	*	*	*	B	*
ApproachDel:	xxxxxxx			xxxxxxx			xxxxxxx			15.0		
ApproachLOS:	*			*			*			B		

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

Lytle Creek Ranch Project
Existing 2007 Traffic Condition
AM Peak Hour

Level Of Service Computation Report

2000 HCM Operations Method (Base Volume Alternative)

Intersection #34 Alder Ave. and Casmalia St.

Cycle (sec): 75 Critical Vol./Cap.(X): 0.368
Loss Time (sec): 8 (Y+R=4.0 sec) Average Delay (sec/veh): 19.2
Optimal Cycle: 60 Level Of Service: B

Street Name:	Alder Ave.						Casmalia St.					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Protected			Protected			Protected			Protected		
Rights:	Include			Include			Include			Include		
Min. Green:	6	6	6	6	6	6	6	6	6	6	6	6
Lanes:	1	0	1	1	0	1	1	0	1	1	0	1

Volume Module:

Base Vol:	14	6	202	0	2	0	0	39	7	297	19	1
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	14	6	202	0	2	0	0	39	7	297	19	1
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
PHF Volume:	15	6	213	0	2	0	0	41	7	313	20	1
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	15	6	213	0	2	0	0	41	7	313	20	1
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Final Volume:	15	6	213	0	2	0	0	41	7	313	20	1

Saturation Flow Module:

Sat/Lane:	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Adjustment:	0.94	1.00	1.00	0.94	1.00	1.00	0.94	1.00	1.00	0.94	1.00	1.00
Lanes:	1.00	1.00	1.00	1.00	2.00	0.00	1.00	0.85	0.15	1.00	1.00	1.00
Final Sat.:	1700	1800	1800	1700	3600	0	1700	1526	274	1700	1800	1800

Capacity Analysis Module:

Vol/Sat:	0.01	0.00	0.12	0.00	0.00	0.00	0.00	0.03	0.03	0.18	0.01	0.00
Crit Moves:			****	****				****		****		
Green/Cycle:	0.18	0.29	0.29	0.00	0.18	0.00	0.00	0.08	0.08	0.45	0.26	0.26
Volume/Cap:	0.05	0.01	0.41	0.00	0.00	0.00	0.00	0.34	0.34	0.41	0.04	0.00
Delay/Veh:	25.3	19.1	22.1	0.0	25.0	0.0	0.0	34.0	34.0	14.4	20.6	20.4
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	25.3	19.1	22.1	0.0	25.0	0.0	0.0	34.0	34.0	14.4	20.6	20.4
LOS by Move:	C	B	C	A	C	A	A	C	C	B	C	C
HCM2kAvgQ:	0	0	4	0	0	0	0	1	1	5	0	0

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

Lytle Creek Ranch Project
Existing 2007 Traffic Condition
AM Peak Hour

Level Of Service Computation Report

2000 HCM Operations Method (Base Volume Alternative)

Intersection #39 Alder Ave. and SR-210 Fwy. WB On/Off Ramps

Cycle (sec): 70 Critical Vol./Cap.(X): 0.437
Loss Time (sec): 4 (Y+R=4.0 sec) Average Delay (sec/veh): 16.3
Optimal Cycle: 60 Level Of Service: B

Street Name:	Alder Ave.						SR-210 Fwy. WB On/Off Ramps													
Approach:	North Bound			South Bound			East Bound			West Bound										
Movement:	L	T	R	L	T	R	L	T	R	L	T	R								
Control:	Protected			Permitted			Split Phase			Split Phase										
Rights:	Include			Include			Include			Include										
Min. Green:	6	6	6	6	6	6	6	6	6	6	6	6								
Lanes:	1	0	2	0	0	0	0	1	1	0	0	0	0	0	0	1	0	0	1	0

Volume Module:

Base Vol:	225	182	0	0	47	257	0	0	0	197	0	42
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	225	182	0	0	47	257	0	0	0	197	0	42
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
PHF Volume:	237	192	0	0	49	271	0	0	0	207	0	44
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	237	192	0	0	49	271	0	0	0	207	0	44
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	237	192	0	0	49	271	0	0	0	207	0	44

Saturation Flow Module:

Sat/Lane:	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Adjustment:	0.94	1.00	1.00	0.94	1.00	1.00	0.94	1.00	1.00	0.94	1.00	1.00
Lanes:	1.00	2.00	0.00	0.00	1.00	1.00	0.00	0.00	0.00	1.00	0.00	1.00
Final Sat.:	1700	3600	0	0	1800	1800	0	0	0	1700	0	1800

Capacity Analysis Module:

Vol/Sat:	0.14	0.05	0.00	0.00	0.03	0.15	0.00	0.00	0.00	0.12	0.00	0.02
Crit Moves:	****			****			****			****		
Green/Cycle:	0.32	0.66	0.00	0.00	0.34	0.34	0.00	0.00	0.00	0.28	0.00	0.28
Volume/Cap:	0.44	0.08	0.00	0.00	0.08	0.44	0.00	0.00	0.00	0.44	0.00	0.09
Delay/Veh:	19.4	4.2	0.0	0.0	15.5	18.1	0.0	0.0	0.0	21.3	0.0	18.7
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	19.4	4.2	0.0	0.0	15.5	18.1	0.0	0.0	0.0	21.3	0.0	18.7
LOS by Move:	B	A	A	A	B	B	A	A	A	C	A	B
HCM2kAvgQ:	5	1	0	0	1	5	0	0	0	4	0	1

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

 Lytle Creek Ranch Project
 Existing 2007 Traffic Condition
 AM Peak Hour

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

 Intersection #55 Ayala Dr. and Easton St.

Cycle (sec): 60 Critical Vol./Cap.(X): 0.334
 Loss Time (sec): 6 (Y+R=4.0 sec) Average Delay (sec/veh): 16.4
 Optimal Cycle: 60 Level Of Service: B

Street Name:	Ayala Dr.						Easton St.					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Protected			Protected			Protected			Protected		
Rights:	Include			Include			Include			Include		
Min. Green:	6	6	6	6	6	6	6	6	6	6	6	6
Lanes:	1	0	2	0	1	1	1	0	1	1	0	1

Volume Module:

Base Vol:	11	483	18	58	295	40	26	10	5	51	41	183
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	11	483	18	58	295	40	26	10	5	51	41	183
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
PHF Volume:	12	508	19	61	311	42	27	11	5	54	43	193
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	12	508	19	61	311	42	27	11	5	54	43	193
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	12	508	19	61	311	42	27	11	5	54	43	193

Saturation Flow Module:

Sat/Lane:	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Adjustment:	0.94	1.00	1.00	0.94	1.00	1.00	0.94	1.00	1.00	0.94	1.00	1.00
Lanes:	1.00	2.00	1.00	1.00	2.00	1.00	1.00	1.33	0.67	1.00	1.00	1.00
Final Sat.:	1700	3600	1800	1700	3600	1800	1700	2400	1200	1700	1800	1800

Capacity Analysis Module:

Vol/Sat:	0.01	0.14	0.01	0.04	0.09	0.02	0.02	0.00	0.00	0.03	0.02	0.11
Crit Moves:	****			****			****			****		
Green/Cycle:	0.25	0.40	0.40	0.10	0.25	0.25	0.10	0.20	0.20	0.20	0.30	0.30
Volume/Cap:	0.03	0.36	0.03	0.36	0.35	0.09	0.16	0.02	0.02	0.16	0.08	0.36
Delay/Veh:	17.0	12.8	11.0	26.4	18.7	17.4	25.1	19.3	19.3	20.0	15.0	16.7
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	17.0	12.8	11.0	26.4	18.7	17.4	25.1	19.3	19.3	20.0	15.0	16.7
LOS by Move:	B	B	B	C	B	B	C	B	B	C	B	B
HCM2kAvgQ:	0	4	0	2	3	1	1	0	0	1	1	3

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

Lytle Creek Ranch Project
Existing 2007 Traffic Condition
AM Peak Hour

Level Of Service Computation Report

2000 HCM Operations Method (Base Volume Alternative)

Intersection #56 Riverside Ave. and Easton St.

Cycle (sec): 90 Critical Vol./Cap.(X): 0.525
Loss Time (sec): 8 (Y+R=4.0 sec) Average Delay (sec/veh): 13.7
Optimal Cycle: 60 Level Of Service: B

Street Name:	Riverside Ave.						Easton St.													
Approach:	North Bound			South Bound			East Bound			West Bound										
Movement:	L	-	T	-	R	L	-	T	-	R	L	-	T	-	R	L	-	T	-	R
Control:	Protected			Protected			Protected			Protected										
Rights:	Include			Include			Include			Include										
Min. Green:	6	6	6	6	6	6	6	6	6	6	6	6								
Lanes:	1	0	1	1	0	1	0	1	1	0	1	0	2	0	1	2	0	2	0	1

Volume Module:

Base Vol:	29	4	124	67	6	20	3	1215	4	28	1136	20
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	29	4	124	67	6	20	3	1215	4	28	1136	20
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
PHF Volume:	31	4	131	71	6	21	3	1279	4	29	1196	21
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	31	4	131	71	6	21	3	1279	4	29	1196	21
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Final Volume:	31	4	131	71	6	21	3	1279	4	29	1196	21

Saturation Flow Module:

Sat/Lane:	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Adjustment:	0.94	1.00	1.00	0.94	1.00	1.00	0.94	1.00	1.00	0.89	1.00	1.00
Lanes:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	2.00	1.00	2.00	2.00	1.00
Final Sat.:	1700	1800	1800	1700	1800	1800	1700	3600	1800	3200	3600	1800

Capacity Analysis Module:

Vol/Sat:	0.02	0.00	0.07	0.04	0.00	0.01	0.00	0.36	0.00	0.01	0.33	0.01
Crit Moves:			****	****				****		****		
Green/Cycle:	0.10	0.13	0.13	0.07	0.10	0.10	0.12	0.64	0.64	0.07	0.59	0.59
Volume/Cap:	0.18	0.02	0.56	0.56	0.03	0.11	0.02	0.56	0.00	0.14	0.56	0.02
Delay/Veh:	37.4	34.1	39.5	45.5	36.4	36.9	35.1	9.4	5.9	39.9	11.8	7.7
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	37.4	34.1	39.5	45.5	36.4	36.9	35.1	9.4	5.9	39.9	11.8	7.7
LOS by Move:	D	C	D	D	D	D	D	A	A	D	B	A
HCM2kAvgQ:	1	0	4	3	0	1	0	10	0	1	10	0

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

Lytle Creek Ranch Project
 Existing 2007 Traffic Condition
 AM Peak Hour

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

 Intersection #59 Alder Ave. and Baseline Rd.

Cycle (sec): 60 Critical Vol./Cap.(X): 0.471
 Loss Time (sec): 8 (Y+R=4.0 sec) Average Delay (sec/veh): 18.7
 Optimal Cycle: 60 Level Of Service: B

Street Name:	Alder Ave.						Baseline Rd.					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Protected			Protected			Protected			Protected		
Rights:	Include			Include			Include			Include		
Min. Green:	6	6	6	6	6	6	6	6	6	6	6	6
Lanes:	1	0	0	1	0	1	1	0	0	1	0	0

Volume Module:

Base Vol:	40	379	13	78	323	21	15	128	59	17	104	104
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	40	379	13	78	323	21	15	128	59	17	104	104
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
PHF Volume:	42	399	14	82	340	22	16	135	62	18	109	109
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	42	399	14	82	340	22	16	135	62	18	109	109
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	42	399	14	82	340	22	16	135	62	18	109	109

Saturation Flow Module:

Sat/Lane:	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Adjustment:	0.94	1.00	1.00	0.94	1.00	1.00	0.94	1.00	1.00	0.94	1.00	1.00
Lanes:	1.00	0.97	0.03	1.00	1.00	1.00	1.00	0.68	0.32	1.00	0.50	0.50
Final Sat.:	1700	1740	60	1700	1800	1800	1700	1232	568	1700	900	900

Capacity Analysis Module:

Vol/Sat:	0.02	0.23	0.23	0.05	0.19	0.01	0.01	0.11	0.11	0.01	0.12	0.12
Crit Moves:	****			****			****			****		
Green/Cycle:	0.19	0.44	0.44	0.10	0.35	0.35	0.10	0.17	0.17	0.16	0.23	0.23
Volume/Cap:	0.13	0.53	0.53	0.48	0.54	0.04	0.09	0.63	0.63	0.07	0.53	0.53
Delay/Veh:	20.6	13.1	13.1	27.7	16.6	12.8	24.8	27.2	27.2	21.6	21.4	21.4
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	20.6	13.1	13.1	27.7	16.6	12.8	24.8	27.2	27.2	21.6	21.4	21.4
LOS by Move:	C	B	B	C	B	B	C	C	C	C	C	C
HCM2kAvgQ:	1	6	6	2	6	0	0	5	5	0	4	4

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

Lytle Creek Ranch Project
 Existing 2007 Traffic Condition
 PM Peak Hour

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

 Intersection #7 University Pkwy & I-215 SB On/Off-Ramps

Cycle (sec): 90 Critical Vol./Cap.(X): 1.018
 Loss Time (sec): 6 (Y+R=4.0 sec) Average Delay (sec/veh): 56.2
 Optimal Cycle: 130 Level Of Service: E

Street Name:	University Pkwy						I-215 SB On/Off-Ramps													
	North Bound			South Bound			East Bound			West Bound										
Approach:	L	T	R	L	T	R	L	T	R	L	T	R								
Control:	Protected			Protected			Split Phase			Split Phase										
Rights:	Include			Include			Include			Include										
Min. Green:	6	6	6	6	6	6	6	6	6	6	6	6								
Lanes:	0	0	1	1	0	1	0	2	0	0	0	1	0	0	1	0	0	0	0	0

Volume Module:

Base Vol:	0	446	380	943	402	0	202	0	18	0	0	0
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	0	446	380	943	402	0	202	0	18	0	0	0
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
PHF Volume:	0	469	400	993	423	0	213	0	19	0	0	0
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	0	469	400	993	423	0	213	0	19	0	0	0
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Final Volume:	0	469	400	993	423	0	213	0	19	0	0	0

Saturation Flow Module:

Sat/Lane:	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Adjustment:	0.94	1.00	1.00	0.94	1.00	1.00	0.94	1.00	1.00	0.94	1.00	1.00
Lanes:	0.00	1.08	0.92	1.00	2.00	0.00	1.00	0.00	1.00	0.00	0.00	0.00
Final Sat.:	0	1944	1656	1700	3600	0	1700	0	1800	0	0	0

Capacity Analysis Module:

Vol/Sat:	0.00	0.24	0.24	0.58	0.12	0.00	0.13	0.00	0.01	0.00	0.00	0.00
Crit Moves:	****			****			****					
Green/Cycle:	0.00	0.24	0.24	0.57	0.52	0.00	0.12	0.00	0.12	0.00	0.00	0.00
Volume/Cap:	0.00	1.02	1.02	1.02	0.23	0.00	1.02	0.00	0.09	0.00	0.00	0.00
Delay/Veh:	0.0	69.8	69.8	52.7	11.9	0.0	106.6	0.0	35.2	0.0	0.0	0.0
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	0.0	69.8	69.8	52.7	11.9	0.0	106.6	0.0	35.2	0.0	0.0	0.0
LOS by Move:	A	E	E	D	B	A	F	A	D	A	A	A
HCM2kAvgQ:	0	19	19	39	3	0	11	0	1	0	0	0

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

 Lytle Creek Ranch Project
 Existing 2007 Traffic Condition
 PM Peak Hour

Level Of Service Computation Report

2000 HCM Unsignalized Method (Base Volume Alternative)

Intersection #8 I-15 SB On/Off-Ramps & Glen Helen Pkwy

Average Delay (sec/veh): 67.5 Worst Case Level Of Service: F[680.2]

Street Name:	I-15 SB On/Off-Ramps						Glen Helen Pkwy					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Stop Sign			Stop Sign			Uncontrolled			Uncontrolled		
Rights:	Include			Include			Include			Include		
Lanes:	0	0	0	0	0	0	0	0	1	1	0	0

Volume Module:	I-15 SB On/Off-Ramps			I-15 SB On/Off-Ramps			Glen Helen Pkwy			Glen Helen Pkwy		
Base Vol:	0	0	0	109	0	20	0	65	76	575	533	0
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	0	0	0	109	0	20	0	65	76	575	533	0
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
PHF Volume:	0	0	0	115	0	21	0	68	80	605	561	0
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Final Volume:	0	0	0	115	0	21	0	68	80	605	561	0

Critical Gap Module:	I-15 SB On/Off-Ramps			I-15 SB On/Off-Ramps			Glen Helen Pkwy			Glen Helen Pkwy		
Critical Gp:	xxxxx	xxxx	xxxxx	6.8	6.5	6.9	xxxxx	xxxx	xxxxx	4.1	xxxx	xxxxx
FollowUpTim:	xxxxx	xxxx	xxxxx	3.5	4.0	3.3	xxxxx	xxxx	xxxxx	2.2	xxxx	xxxxx

Capacity Module:	I-15 SB On/Off-Ramps			I-15 SB On/Off-Ramps			Glen Helen Pkwy			Glen Helen Pkwy		
Cnflct Vol:	xxxxx	xxxxx	xxxxx	1806	1920	281	xxxxx	xxxxx	xxxxx	148	xxxxx	xxxxx
Potent Cap.:	xxxxx	xxxxx	xxxxx	72	68	723	xxxxx	xxxxx	xxxxx	1445	xxxxx	xxxxx
Move Cap.:	xxxxx	xxxxx	xxxxx	48	40	723	xxxxx	xxxxx	xxxxx	1445	xxxxx	xxxxx
Volume/Cap:	xxxxx	xxxxx	xxxxx	2.37	0.00	0.03	xxxxx	xxxxx	xxxxx	0.42	xxxxx	xxxxx

Level Of Service Module:	I-15 SB On/Off-Ramps			I-15 SB On/Off-Ramps			Glen Helen Pkwy			Glen Helen Pkwy		
2Way95thQ:	xxxx	xxxx	xxxxx	11.9	xxxx	xxxxx	xxxx	xxxx	xxxxx	2.1	xxxx	xxxxx
Control Del:	xxxxx	xxxx	xxxxx	803.1	xxxx	xxxxx	xxxxx	xxxx	xxxxx	9.3	xxxx	xxxxx
LOS by Move:	*	*	*	F	*	*	*	*	*	A	*	*
Movement:	LT	LTR	RT	LT	LTR	RT	LT	LTR	RT	LT	LTR	RT
Shared Cap.:	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx	723	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx
SharedQueue:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	0.1	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx
Shrd ConDel:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	10.1	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx
Shared LOS:	*	*	*	*	*	B	*	*	*	*	*	*
ApproachDel:	xxxxxxx			680.2			xxxxxxx			xxxxxxx		
ApproachLOS:	*			F			*			*		

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

Lytle Creek Ranch Project
Existing 2007 Traffic Condition
PM Peak Hour

Level Of Service Computation Report

2000 HCM Unsignalized Method (Base Volume Alternative)

Intersection #9 I-15 NB On/Off-Ramps & Glen Helen Pkwy

Average Delay (sec/veh): 8.1 Worst Case Level Of Service: B[14.8]

Street Name:	I-15 NB On/Off-Ramps						Glen Helen Pkwy													
Approach:	North Bound			South Bound			East Bound			West Bound										
Movement:	L	T	R	L	T	R	L	T	R	L	T	R								
Control:	Stop Sign			Stop Sign			Uncontrolled			Uncontrolled										
Rights:	Include			Include			Include			Include										
Lanes:	1	1	0	0	1	0	0	0	0	0	1	0	2	0	0	0	0	1	1	0

Volume Module:

Base Vol:	367	11	370	0	0	0	73	100	0	0	483	34
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	367	11	370	0	0	0	73	100	0	0	483	34
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
PHF Volume:	386	12	389	0	0	0	77	105	0	0	508	36
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Final Volume:	386	12	389	0	0	0	77	105	0	0	508	36

Critical Gap Module:

Critical Gp:	6.8	6.5	6.9	xxxxx	xxxx	xxxxx	4.1	xxxx	xxxxx	xxxxx	xxxx	xxxxx
FollowUpTim:	3.5	4.0	3.3	xxxxx	xxxx	xxxxx	2.2	xxxx	xxxxx	xxxxx	xxxx	xxxxx

Capacity Module:

Cnflct Vol:	513	803	53	xxxxx	xxxx	xxxxx	544	xxxx	xxxxx	xxxx	xxxx	xxxxx
Potent Cap.:	496	319	1010	xxxxx	xxxx	xxxxx	1035	xxxx	xxxxx	xxxx	xxxx	xxxxx
Move Cap.:	467	295	1010	xxxxx	xxxx	xxxxx	1035	xxxx	xxxxx	xxxx	xxxx	xxxxx
Volume/Cap:	0.83	0.04	0.39	xxxx	xxxx	xxxx	0.07	xxxx	xxxx	xxxx	xxxx	xxxx

Level Of Service Module:

2Way95thQ:	2.0	xxxx	1.8	xxxx	xxxx	xxxxx	0.2	xxxx	xxxxx	xxxx	xxxx	xxxxx
Control Del:	18.0	xxxx	10.8	xxxxx	xxxx	xxxxx	8.8	xxxx	xxxxx	xxxxx	xxxx	xxxxx
LOS by Move:	C	*	B	*	*	*	A	*	*	*	*	*
Movement:	LT	LTR	RT	LT	LTR	RT	LT	LTR	RT	LT	LTR	RT
Shared Cap.:	453	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx
Shared Queue:	2.2	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx
Shrd ConDel:	19.4	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx
Shared LOS:	C	*	*	*	*	*	*	*	*	*	*	*
ApproachDel:	14.8		xxxxxxx			xxxxxxx			xxxxxxx			xxxxxxx
ApproachLOS:	B		*			*			*			*

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

Lytle Creek Ranch Project
 Existing 2007 Traffic Condition
 PM Peak Hour

Level Of Service Computation Report
 2000 HCM 4-Way Stop Method (Base Volume Alternative)

 Intersection #11 Lytle Creek Rd & Sierra Ave

Cycle (sec): 100 Critical Vol./Cap.(X): 0.707
 Loss Time (sec): 0 (Y+R=4.0 sec) Average Delay (sec/veh): 18.5
 Optimal Cycle: 0 Level Of Service: C

Street Name:	Lytle Creek Rd						Sierra Ave / Lytle Creek Rd														
Approach:	North Bound			South Bound			East Bound			West Bound											
Movement:	L	-	T	-	R	L	-	T	-	R	L	-	T	-	R	L	-	T	-	R	
Control:	Stop Sign			Stop Sign			Stop Sign			Stop Sign											
Rights:	Include			Include			Include			Include											
Min. Green:	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6
Lanes:	0	0	1	0	0	0	0	0	0	0	0	0	1	1	0	1	0	2	0	0	

Volume Module:

Base Vol:	10	0	42	0	0	0	0	861	0	0	742	0
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	10	0	42	0	0	0	0	861	0	0	742	0
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
PHF Volume:	11	0	44	0	0	0	0	906	0	0	781	0
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	11	0	44	0	0	0	0	906	0	0	781	0
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	11	0	44	0	0	0	0	906	0	0	781	0

Saturation Flow Module:

Adjustment:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Lanes:	0.19	0.00	0.81	0.00	0.00	0.00	0.00	2.00	0.00	1.00	2.00	0.00
Final Sat.:	110	0	463	0	0	0	0	1282	0	565	1242	0

Capacity Analysis Module:

Vol/Sat:	0.10	xxxx	0.10	xxxx	xxxx	xxxx	xxxx	0.71	xxxx	0.00	0.63	xxxx
Crit Moves:	****							****			****	
Delay/Veh:	9.7	0.0	9.7	0.0	0.0	0.0	0.0	20.2	0.0	0.0	17.2	0.0
Delay Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	9.7	0.0	9.7	0.0	0.0	0.0	0.0	20.2	0.0	0.0	17.2	0.0
LOS by Move:	A	*	A	*	*	*	*	C	*	*	C	*
ApproachDel:	9.7			xxxxxxx			20.2			17.2		
Delay Adj:	1.00			xxxxxx			1.00			1.00		
ApprAdjDel:	9.7			xxxxxxx			20.2			17.2		
LOS by Appr:	A			*			C			C		
AllWayAvgQ:	0.1	0.1	0.1	0.0	0.0	0.0	0.0	2.1	2.1	0.0	1.5	0.0

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

 Lytle Creek Ranch Project
 Existing 2007 Traffic Condition
 PM Peak Hour

Level Of Service Computation Report
 2000 HCM 4-Way Stop Method (Base Volume Alternative)

 Intersection #12 I-15 SB On/Off-Ramps & Sierra Ave

Cycle (sec): 100 Critical Vol./Cap.(X): 1.916
 Loss Time (sec): 0 (Y+R=4.0 sec) Average Delay (sec/veh): 275.7
 Optimal Cycle: 0 Level Of Service: F

I-15 SB On/Off-Ramps						Sierra Ave						
North Bound			South Bound			East Bound			West Bound			
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Stop Sign			Stop Sign			Stop Sign			Stop Sign		
Rights:	Include			Include			Include			Include		
Min. Green:	6	6	6	6	6	6	6	6	6	6	6	6
Lanes:	0	0	0	0	1	0	0	1	0	0	2	0

Volume Module:

Base Vol:	0	0	0	445	6	120	0	625	277	794	580	0
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	0	0	0	445	6	120	0	625	277	794	580	0
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
PHF Volume:	0	0	0	468	6	126	0	658	292	836	611	0
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	0	0	0	468	6	126	0	658	292	836	611	0
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	0	0	0	468	6	126	0	658	292	836	611	0

Saturation Flow Module:

Adjustment:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Lanes:	0.00	0.00	0.00	0.99	0.01	1.00	0.00	0.69	0.31	1.00	2.00	0.00
Final Sat.:	0	0	0	419	6	492	0	343	152	450	961	0

Capacity Analysis Module:

Vol/Sat:	xxxx	xxxx	xxxx	1.12	1.12	0.26	xxxx	1.92	1.92	1.86	0.64	xxxx
Crit Moves:					****			****		****		
Delay/Veh:	0.0	0.0	0.0	107.9	108	12.5	0.0	437	437.1	412.4	22.3	0.0
Delay Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	0.0	0.0	0.0	107.9	108	12.5	0.0	437	437.1	412.4	22.3	0.0
LOS by Move:	*	*	*	F	F	B	*	F	F	F	C	*
ApproachDel:	xxxxxxx				87.8			437.1			247.7	
Delay Adj:	xxxxxx				1.00			1.00			1.00	
ApprAdjDel:	xxxxxxx				87.8			437.1			247.7	
LOS by Appr:		*			F			F			F	
AllWayAvgQ:	0.0	0.0	0.0	11.4	11.4	0.3	58.8	58.8	58.8	50.2	1.6	0.0

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

Lytle Creek Ranch Project
 Existing 2007 Traffic Condition
 PM Peak Hour

Level Of Service Computation Report
 2000 HCM 4-Way Stop Method (Base Volume Alternative)

 Intersection #13 I-15 NB On/Off-Ramps & Sierra Ave

Cycle (sec): 100 Critical Vol./Cap.(X): 2.307
 Loss Time (sec): 0 (Y+R=4.0 sec) Average Delay (sec/veh): 456.4
 Optimal Cycle: 0 Level Of Service: F

Street Name:	I-15 NB On/Off-Ramps						Sierra Ave													
Approach:	North Bound			South Bound			East Bound			West Bound										
Movement:	L	T	R	L	T	R	L	T	R	L	T	R								
Control:	Stop Sign			Stop Sign			Stop Sign			Stop Sign										
Rights:	Include			Include			Include			Include										
Min. Green:	6	6	6	6	6	6	6	6	6	6	6	6								
Lanes:	1	0	1	0	0	0	0	0	0	0	1	0	0	1	0	0	0	1	1	0

Volume Module:

Base Vol:	263	2	853	0	0	0	177	794	154	0	1114	663
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	263	2	853	0	0	0	177	794	154	0	1114	663
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
PHF Volume:	277	2	898	0	0	0	186	836	162	0	1173	698
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	277	2	898	0	0	0	186	836	162	0	1173	698
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	277	2	898	0	0	0	186	836	162	0	1173	698

Saturation Flow Module:

Adjustment:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Lanes:	1.00	0.01	0.99	0.00	0.00	0.00	1.00	0.84	0.16	0.00	1.25	0.75
Final Sat.:	874	-450	451	0	0	0	401	362	70	0	574	360

Capacity Analysis Module:

Vol/Sat:	0.32-0.00	1.99	xxxx	xxxx	xxxx	0.47	2.31	2.31	xxxx	2.04	1.94	
Crit Moves:		****					****			****		
Delay/Veh:	361.3	464	464.4	0.0	0.0	0.0	19.1	613	612.7	0.0	495	445.5
Delay Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	361.3	464	464.4	0.0	0.0	0.0	19.1	613	612.7	0.0	495	445.5
LOS by Move:	F	F	F	*	*	*	C	F	F	*	F	F
ApproachDel:	361.3			xxxxxxx			519.3			476.3		
Delay Adj:	1.00			xxxxxx			1.00			1.00		
ApprAdjDel:	361.3			xxxxxxx			519.3			476.3		
LOS by Appr:	F			*			F			F		
AllWayAvgQ:	57.4	57.4	57.4	0.0	0.0	0.0	0.8	72.3	72.3	0.0	62.2	58.4

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

Lytle Creek Ranch Project
 Existing 2007 Traffic Condition
 PM Peak Hour

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

 Intersection #16 I-15 SB On/Off Ramps and Summit Ave.

Cycle (sec): 60 Critical Vol./Cap.(X): 0.115
 Loss Time (sec): 6 (Y+R=4.0 sec) Average Delay (sec/veh): 12.4
 Optimal Cycle: 60 Level Of Service: B

Street Name:	I-15 SB On/Off Ramps						Summit Ave.					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Split Phase			Split Phase			Protected			Protected		
Rights:	Include			Include			Include			Include		
Min. Green:	6	6	6	6	6	6	6	6	6	6	6	6
Lanes:	0	0	0	0	0	0	1	0	2	0	0	1

Volume Module:

Base Vol:	0	0	0	101	0	51	0	40	0	0	141	0
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	0	0	0	101	0	51	0	40	0	0	141	0
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
PHF Volume:	0	0	0	106	0	54	0	42	0	0	148	0
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	0	0	0	106	0	54	0	42	0	0	148	0
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Final Volume:	0	0	0	106	0	54	0	42	0	0	148	0

Saturation Flow Module:

Sat/Lane:	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Adjustment:	0.94	1.00	1.00	0.94	1.00	1.00	0.94	1.00	1.00	0.94	1.00	1.00
Lanes:	0.00	0.00	0.00	1.00	0.00	1.00	1.00	2.00	0.00	0.00	2.00	0.00
Final Sat.:	0	0	0	1700	0	1800	1700	3600	0	0	3600	0

Capacity Analysis Module:

Vol/Sat:	0.00	0.00	0.00	0.06	0.00	0.03	0.00	0.01	0.00	0.00	0.04	0.00
Crit Moves:				****			****			****		
Green/Cycle:	0.00	0.00	0.00	0.48	0.00	0.48	0.00	0.21	0.00	0.00	0.32	0.00
Volume/Cap:	0.00	0.00	0.00	0.13	0.00	0.06	0.00	0.06	0.00	0.00	0.13	0.00
Delay/Veh:	0.0	0.0	0.0	8.7	0.0	8.3	0.0	19.0	0.0	0.0	14.6	0.0
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	0.0	0.0	0.0	8.7	0.0	8.3	0.0	19.0	0.0	0.0	14.6	0.0
LOS by Move:	A	A	A	A	A	A	A	B	A	A	B	A
HCM2kAvgQ:	0	0	0	1	0	1	0	0	0	0	1	0

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

Lytle Creek Ranch Project
 Existing 2007 Traffic Condition
 PM Peak Hour

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

 Intersection #17 I-15 NB On/Off Ramps and Summit Ave.

Cycle (sec): 90 Critical Vol./Cap.(X): 0.185
 Loss Time (sec): 6 (Y+R=4.0 sec) Average Delay (sec/veh): 14.2
 Optimal Cycle: 60 Level Of Service: B

Street Name:	I-15 NB On/Off Ramps						Summit Ave.														
Approach:	North Bound			South Bound			East Bound			West Bound											
Movement:	L	-	T	-	R	L	-	T	-	R	L	-	T	-	R	L	-	T	-	R	
Control:	Split Phase			Split Phase			Protected			Protected											
Rights:	Include			Include			Include			Include											
Min. Green:	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6
Lanes:	0	0	0	0	0	0	1	0	0	0	1	1	0	2	0	0	0	0	2	0	1

Volume Module:

Base Vol:	0	0	0	0	0	0	146	85	0	0	281	0
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	0	0	0	0	0	0	146	85	0	0	281	0
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
PHF Volume:	0	0	0	0	0	0	154	89	0	0	296	0
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	0	0	0	0	0	0	154	89	0	0	296	0
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Final Volume:	0	0	0	0	0	0	154	89	0	0	296	0

Saturation Flow Module:

Sat/Lane:	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Adjustment:	0.94	1.00	1.00	0.94	1.00	1.00	0.94	1.00	1.00	0.94	1.00	1.00
Lanes:	0.00	0.00	0.00	1.00	0.00	1.00	1.00	2.00	0.00	0.00	2.00	1.00
Final Sat.:	0	0	0	1700	0	1800	1700	3600	0	0	3600	1800

Capacity Analysis Module:

Vol/Sat:	0.00	0.00	0.00	0.00	0.00	0.00	0.09	0.02	0.00	0.00	0.08	0.00
Crit Moves:							****			****		
Green/Cycle:	0.00	0.00	0.00	0.00	0.00	0.00	0.49	0.47	0.00	0.00	0.44	0.00
Volume/Cap:	0.00	0.00	0.00	0.00	0.00	0.00	0.18	0.05	0.00	0.00	0.18	0.00
Delay/Veh:	0.0	0.0	0.0	0.0	0.0	0.0	13.0	13.1	0.0	0.0	15.2	0.0
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	0.0	0.0	0.0	0.0	0.0	0.0	13.0	13.1	0.0	0.0	15.2	0.0
LOS by Move:	A	A	A	A	A	A	B	B	A	A	B	A
HCM2kAvgQ:	0	0	0	0	0	0	3	1	0	0	2	0

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

Lytle Creek Ranch Project
 Existing 2007 Traffic Condition
 PM Peak Hour

Level Of Service Computation Report
 2000 HCM 4-Way Stop Method (Base Volume Alternative)

 Intersection #18 Sierra Ave & Riverside Ave

Cycle (sec): 60 Critical Vol./Cap.(X): 1.474
 Loss Time (sec): 6 (Y+R=4.0 sec) Average Delay (sec/veh): 150.2
 Optimal Cycle: 0 Level Of Service: F

Street Name:	Sierra Ave						Riverside Ave					
	North Bound			South Bound			East Bound			West Bound		
Approach:	L	T	R	L	T	R	L	T	R	L	T	R
Movement:												
Control:	Stop Sign			Stop Sign			Stop Sign			Stop Sign		
Rights:	Include			Include			Include			Ignore		
Min. Green:	6	6	6	6	6	6	6	6	6	6	6	6
Lanes:	0	0	1	0	1	0	0	0	0	1	0	0

Volume Module:

Base Vol:	0	889	0	734	389	0	0	0	0	0	0	917
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	0	889	0	734	389	0	0	0	0	0	0	917
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00
PHF Adj:	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.00
PHF Volume:	0	936	0	773	409	0	0	0	0	0	0	0
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	0	936	0	773	409	0	0	0	0	0	0	0
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00
Final Volume:	0	936	0	773	409	0	0	0	0	0	0	0

Saturation Flow Module:

Adjustment:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Lanes:	0.00	1.00	1.00	1.00	1.00	0.00	0.00	0.00	0.00	1.00	0.00	1.00
Final Sat.:	0	635	701	655	721	0	0	0	0	450	0	528

Capacity Analysis Module:

Vol/Sat:	xxxx	1.47	0.00	1.18	0.57	xxxx	xxxx	xxxx	xxxx	0.00	xxxx	0.00
Crit Moves:		***		***						***		
Delay/Veh:	0.0	238	0.0	115.6	14.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Delay Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	0.0	238	0.0	115.6	14.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
LOS by Move:	*	F	*	F	B	*	*	*	*	*	*	*
ApproachDel:		238.2			80.4		xxxxxxx			xxxxxxx		
Delay Adj:		1.00			1.00		xxxxxx			xxxxxx		
ApprAdjDel:		238.2			80.4		xxxxxxx			xxxxxxx		
LOS by Appr:		F			F			*			*	
AllWayAvgQ:	0.0	40.5	0.0	19.5	1.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0

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

Lytle Creek Ranch Project
 Existing 2007 Traffic Condition
 PM Peak Hour

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

 Intersection #22 Linden Ave. and Riverside Ave.

Cycle (sec): 100 Critical Vol./Cap.(X): 1.636
 Loss Time (sec): 0 (Y+R=4.0 sec) Average Delay (sec/veh): 253.1
 Optimal Cycle: 130 Level Of Service: F

Street Name:	Linden Ave.						Riverside Ave.					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Split Phase			Split Phase			Protected			Protected		
Rights:	Include			Include			Include			Include		
Min. Green:	6	6	6	6	6	6	6	6	6	6	6	6
Lanes:	0	0	1! 0	0	1	1	1	0	1	1	0	1! 0

Volume Module:

Base Vol:	128	28	41	444	30	239	125	1195	77	29	1293	384
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	128	28	41	444	30	239	125	1195	77	29	1293	384
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
PHF Volume:	135	29	43	467	32	252	132	1258	81	31	1361	404
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	135	29	43	467	32	252	132	1258	81	31	1361	404
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Final Volume:	135	29	43	467	32	252	132	1258	81	31	1361	404

Saturation Flow Module:

Sat/Lane:	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Adjustment:	0.94	1.00	1.00	0.94	1.00	1.00	0.94	1.00	1.00	0.94	1.00	1.00
Lanes:	0.66	0.14	0.20	1.88	0.12	1.00	1.00	1.88	0.12	0.02	0.76	0.22
Final Sat.:	1126	246	361	3196	216	1800	1700	3382	218	31	1363	405

Capacity Analysis Module:

Vol/Sat:	0.12	0.12	0.12	0.15	0.15	0.14	0.08	0.37	0.37	1.00	1.00	1.00
Crit Moves:	****			****			****			****		
Green/Cycle:	0.07	0.07	0.07	0.09	0.09	0.09	0.06	0.23	0.23	0.61	0.78	0.78
Volume/Cap:	1.64	1.64	1.64	1.64	1.64	1.56	1.28	1.64	1.64	1.64	1.28	1.28
Delay/Veh:	365.5	366	365.5	346.4	346	327.3	230.5	331	330.6	310.0	145	144.8
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	365.5	366	365.5	346.4	346	327.3	230.5	331	330.6	310.0	145	144.8
LOS by Move:	F	F	F	F	F	F	F	F	F	F	F	F
HCM2kAvgQ:	19	19	19	22	22	21	10	54	54	140	104	104

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

Lytle Creek Ranch Project
Existing 2007 Traffic Condition
PM Peak Hour

Level Of Service Computation Report

2000 HCM Unsignalized Method (Base Volume Alternative)

Intersection #31 Locust Ave. and Bohnert Ave.

Average Delay (sec/veh): 1.3 Worst Case Level Of Service: C[23.1]

Street Name:	Locust Ave.						Bohnert Ave.					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Uncontrolled			Uncontrolled			Stop Sign			Stop Sign		
Rights:	Include			Include			Include			Include		
Lanes:	0	0	0	1	0	0	1	0	0	1	0	0

Volume Module:	Locust Ave.			Bohnert Ave.			Bohnert Ave.			Bohnert Ave.		
Base Vol:	0	510	65	37	517	0	0	0	0	35	0	17
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	0	510	65	37	517	0	0	0	0	35	0	17
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
PHF Volume:	0	537	68	39	544	0	0	0	0	37	0	18
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Final Volume:	0	537	68	39	544	0	0	0	0	37	0	18

Critical Gap Module:	Locust Ave.			Bohnert Ave.			Bohnert Ave.			Bohnert Ave.		
Critical Gp:	xxxxx	xxxx	xxxxx	4.1	xxxx	xxxxx	7.1	6.5	6.2	6.4	6.5	6.2
FollowUpTim:	xxxxx	xxxx	xxxxx	2.2	xxxx	xxxxx	3.5	4.0	3.3	3.5	4.0	3.3

Capacity Module:	Locust Ave.			Bohnert Ave.			Bohnert Ave.			Bohnert Ave.		
Cnflict Vol:	xxxxx	xxxxx	xxxxx	605	xxxxx	xxxxx	1202	1227	544	1193	1193	571
Potent Cap.:	xxxxx	xxxxx	xxxxx	983	xxxxx	xxxxx	163	180	543	208	188	524
Move Cap.:	xxxxx	xxxxx	xxxxx	983	xxxxx	xxxxx	152	173	543	202	181	524
Volume/Cap:	xxxxx	xxxxx	xxxxx	0.04	xxxxx	xxxxx	0.00	0.00	0.00	0.18	0.00	0.03

Level Of Service Module:	Locust Ave.			Bohnert Ave.			Bohnert Ave.			Bohnert Ave.		
2Way95thQ:	xxxx	xxxx	xxxxx	0.1	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx
Control Del:	xxxxx	xxxx	xxxxx	8.8	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx
LOS by Move:	*	*	*	A	*	*	*	*	*	*	*	*
Movement:	LT - LTR - RT											
Shared Cap.:	xxxxx	0	xxxxx	253	xxxxx							
SharedQueue:	xxxxx	xxxx	xxxxx	0.1	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	0.8	xxxxx
Shrd ConDel:	xxxxx	xxxx	xxxxx	8.8	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	23.1	xxxxx
Shared LOS:	*	*	*	A	*	*	*	*	*	*	C	*
ApproachDel:	xxxxxxx	23.1	xxxxxxx									
ApproachLOS:	*	*	*	*	*	*	*	*	*	C	*	

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

 Lytle Creek Ranch Project
 Existing 2007 Traffic Condition
 PM Peak Hour

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

Intersection #34 Alder Ave. and Casmalia St.

Cycle (sec): 130 Critical Vol./Cap.(X): 0.570
 Loss Time (sec): 8 (Y+R=4.0 sec) Average Delay (sec/veh): 35.3
 Optimal Cycle: 60 Level Of Service: D

Street Name:	Alder Ave.						Casmalia St.								
Approach:	North Bound			South Bound			East Bound			West Bound					
Movement:	L	-	T	-	R	L	-	T	-	R	L	-	T	-	R
Control:	Protected			Protected			Protected			Protected					
Rights:	Include			Include			Include			Include					
Min. Green:	6	6	6	6	6	6	6	6	6	6	6	6			
Lanes:	1	0	1	1	0	1	0	1	1	0	1	0	0	1	0

Volume Module:

Base Vol:	28	4	480	1	4	0	0	92	19	305	17	0
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	28	4	480	1	4	0	0	92	19	305	17	0
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
PHF Volume:	29	4	505	1	4	0	0	97	20	321	18	0
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	29	4	505	1	4	0	0	97	20	321	18	0
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Final Volume:	29	4	505	1	4	0	0	97	20	321	18	0

Saturation Flow Module:

Sat/Lane:	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Adjustment:	0.94	1.00	1.00	0.94	1.00	1.00	0.94	1.00	1.00	0.94	1.00	1.00
Lanes:	1.00	1.00	1.00	1.00	2.00	0.00	1.00	0.83	0.17	1.00	1.00	1.00
Final Sat.:	1700	1800	1800	1700	3600	0	1700	1492	308	1700	1800	1800

Capacity Analysis Module:

Vol/Sat:	0.02	0.00	0.28	0.00	0.00	0.00	0.00	0.06	0.06	0.19	0.01	0.00
Crit Moves:			****	****				****		****		
Green/Cycle:	0.26	0.47	0.47	0.05	0.26	0.00	0.00	0.11	0.11	0.32	0.21	0.00
Volume/Cap:	0.07	0.00	0.60	0.01	0.00	0.00	0.00	0.60	0.60	0.60	0.05	0.00
Delay/Veh:	36.5	18.4	26.7	59.2	35.9	0.0	0.0	60.3	60.3	39.4	40.8	0.0
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	36.5	18.4	26.7	59.2	35.9	0.0	0.0	60.3	60.3	39.4	40.8	0.0
LOS by Move:	D	B	C	E	D	A	A	E	E	D	D	A
HCM2kAvgQ:	1	0	15	0	0	0	0	5	5	12	1	0

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

 Lytle Creek Ranch Project
 Existing 2007 Traffic Condition
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Level Of Service Computation Report

2000 HCM Operations Method (Base Volume Alternative)

Intersection #39 Alder Ave. and SR-210 Fwy. WB On/Off Ramps

Cycle (sec): 60 Critical Vol./Cap.(X): 0.365
 Loss Time (sec): 4 (Y+R=4.0 sec) Average Delay (sec/veh): 10.9
 Optimal Cycle: 60 Level Of Service: B

Street Name:	Alder Ave.						SR-210 Fwy. WB On/Off Ramps					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Protected			Permitted			Split Phase			Split Phase		
Rights:	Include			Include			Include			Include		
Min. Green:	6	6	6	6	6	6	6	6	6	6	6	6
Lanes:	1	0	2	0	0	1	0	0	0	1	0	0

Volume Module:

Base Vol:	159	478	0	0	88	240	0	0	0	164	0	43
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	159	478	0	0	88	240	0	0	0	164	0	43
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
PHF Volume:	167	503	0	0	93	253	0	0	0	173	0	45
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	167	503	0	0	93	253	0	0	0	173	0	45
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Final Volume:	167	503	0	0	93	253	0	0	0	173	0	45

Saturation Flow Module:

Sat/Lane:	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Adjustment:	0.94	1.00	1.00	0.94	1.00	1.00	0.94	1.00	1.00	0.94	1.00	1.00
Lanes:	1.00	2.00	0.00	0.00	1.00	1.00	0.00	0.00	0.00	1.00	0.00	1.00
Final Sat.:	1700	3600	0	0	1800	1800	0	0	0	1700	0	1800

Capacity Analysis Module:

Vol/Sat:	0.10	0.14	0.00	0.00	0.05	0.14	0.00	0.00	0.00	0.10	0.00	0.03
Crit Moves:	****			****			****			****		
Green/Cycle:	0.27	0.65	0.00	0.00	0.38	0.38	0.00	0.00	0.00	0.28	0.00	0.28
Volume/Cap:	0.36	0.21	0.00	0.00	0.13	0.36	0.00	0.00	0.00	0.36	0.00	0.09
Delay/Veh:	18.2	4.2	0.0	0.0	12.0	13.4	0.0	0.0	0.0	17.9	0.0	16.1
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	18.2	4.2	0.0	0.0	12.0	13.4	0.0	0.0	0.0	17.9	0.0	16.1
LOS by Move:	B	A	A	A	B	B	A	A	A	B	A	B
HCM2kAvgQ:	3	2	0	0	1	4	0	0	0	3	0	1

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

Lytle Creek Ranch Project
 Existing 2007 Traffic Condition
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Level Of Service Computation Report
 2000 HCM Operations Method (Base Volume Alternative)

 Intersection #55 Ayala Dr. and Easton St.

Cycle (sec): 85 Critical Vol./Cap.(X): 0.430
 Loss Time (sec): 6 (Y+R=4.0 sec) Average Delay (sec/veh): 21.1
 Optimal Cycle: 60 Level Of Service: C

Street Name:	Ayala Dr.						Easton St.					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Protected			Protected			Protected			Protected		
Rights:	Include			Include			Include			Include		
Min. Green:	6	6	6	6	6	6	6	6	6	6	6	6
Lanes:	1	0	2	0	1	1	1	0	1	1	0	1

Volume Module:

Base Vol:	10	494	108	245	624	40	39	52	14	67	26	135
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	10	494	108	245	624	40	39	52	14	67	26	135
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
PHF Volume:	11	520	114	258	657	42	41	55	15	71	27	142
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	11	520	114	258	657	42	41	55	15	71	27	142
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Final Volume:	11	520	114	258	657	42	41	55	15	71	27	142

Saturation Flow Module:

Sat/Lane:	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Adjustment:	0.94	1.00	1.00	0.94	1.00	1.00	0.94	1.00	1.00	0.94	1.00	1.00
Lanes:	1.00	2.00	1.00	1.00	2.00	1.00	1.00	1.58	0.42	1.00	1.00	1.00
Final Sat.:	1700	3600	1800	1700	3600	1800	1700	2836	764	1700	1800	1800

Capacity Analysis Module:

Vol/Sat:	0.01	0.14	0.06	0.15	0.18	0.02	0.02	0.02	0.02	0.04	0.02	0.08
Crit Moves:	****			****			****			****		
Green/Cycle:	0.19	0.33	0.33	0.35	0.49	0.49	0.07	0.13	0.13	0.13	0.18	0.18
Volume/Cap:	0.03	0.44	0.19	0.44	0.37	0.05	0.34	0.15	0.15	0.33	0.08	0.44
Delay/Veh:	28.2	22.5	20.5	21.9	13.7	11.4	39.3	33.3	33.3	34.8	29.0	31.8
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	28.2	22.5	20.5	21.9	13.7	11.4	39.3	33.3	33.3	34.8	29.0	31.8
LOS by Move:	C	C	C	C	B	B	D	C	C	C	C	C
HCM2kAvgQ:	0	6	2	6	5	1	1	1	1	2	1	4

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

Lytle Creek Ranch Project
Existing 2007 Traffic Condition
PM Peak Hour

Level Of Service Computation Report

2000 HCM Operations Method (Base Volume Alternative)

Intersection #56 Riverside Ave. and Easton St.

Cycle (sec): 110 Critical Vol./Cap.(X): 0.662
Loss Time (sec): 8 (Y+R=4.0 sec) Average Delay (sec/veh): 20.6
Optimal Cycle: 60 Level Of Service: C

Street Name:	Riverside Ave.						Easton St.					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Protected			Protected			Protected			Protected		
Rights:	Include			Include			Include			Include		
Min. Green:	6	6	6	6	6	6	6	6	6	6	6	6
Lanes:	1	0	1	1	0	1	1	0	2	2	0	2

Volume Module:	Riverside Ave.			Riverside Ave.			Easton St.			Easton St.		
Base Vol:	43	50	159	174	44	48	18	1418	12	138	1339	237
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	43	50	159	174	44	48	18	1418	12	138	1339	237
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
PHF Volume:	45	53	167	183	46	51	19	1493	13	145	1409	249
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	45	53	167	183	46	51	19	1493	13	145	1409	249
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Final Volume:	45	53	167	183	46	51	19	1493	13	145	1409	249

Saturation Flow Module:	Riverside Ave.			Riverside Ave.			Easton St.			Easton St.		
Sat/Lane:	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Adjustment:	0.94	1.00	1.00	0.94	1.00	1.00	0.94	1.00	1.00	0.89	1.00	1.00
Lanes:	1.00	1.00	2.00	1.00	1.00	1.00	1.00	2.00	1.00	2.00	2.00	1.00
Final Sat.:	1700	1800	3600	1700	1800	1800	1700	3600	1800	3200	3600	1800

Capacity Analysis Module:	Riverside Ave.			Riverside Ave.			Easton St.			Easton St.		
Vol/Sat:	0.03	0.03	0.05	0.11	0.03	0.03	0.01	0.41	0.01	0.05	0.39	0.14
Crit Moves:			****	****				****		****		
Green/Cycle:	0.12	0.07	0.07	0.16	0.12	0.12	0.08	0.63	0.63	0.07	0.61	0.61
Volume/Cap:	0.23	0.42	0.66	0.66	0.22	0.24	0.13	0.66	0.01	0.66	0.64	0.23
Delay/Veh:	44.7	49.5	54.8	49.1	44.3	44.5	47.0	13.9	7.8	57.4	14.4	9.8
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	44.7	49.5	54.8	49.1	44.3	44.5	47.0	13.9	7.8	57.4	14.4	9.8
LOS by Move:	D	D	D	D	D	D	D	B	A	E	B	A
HCM2kAvgQ:	2	2	4	7	2	2	1	16	0	4	16	4

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

Lytle Creek Ranch Project
 Existing 2007 Traffic Condition
 PM Peak Hour

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

 Intersection #59 Alder Ave. and Baseline Rd.

Cycle (sec): 95 Critical Vol./Cap.(X): 0.633
 Loss Time (sec): 8 (Y+R=4.0 sec) Average Delay (sec/veh): 29.4
 Optimal Cycle: 60 Level Of Service: C

Street Name:	Alder Ave.						Baseline Rd.					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Protected			Protected			Protected			Protected		
Rights:	Include			Include			Include			Include		
Min. Green:	6	6	6	6	6	6	6	6	6	6	6	6
Lanes:	1	0	0	1	0	1	1	0	0	1	0	0

Volume Module:

Base Vol:	68	394	28	135	401	39	63	215	62	32	282	78
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	68	394	28	135	401	39	63	215	62	32	282	78
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
PHF Volume:	72	415	29	142	422	41	66	226	65	34	297	82
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	72	415	29	142	422	41	66	226	65	34	297	82
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Final Volume:	72	415	29	142	422	41	66	226	65	34	297	82

Saturation Flow Module:

Sat/Lane:	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Adjustment:	0.94	1.00	1.00	0.94	1.00	1.00	0.94	1.00	1.00	0.94	1.00	1.00
Lanes:	1.00	0.93	0.07	1.00	1.00	1.00	1.00	0.78	0.22	1.00	0.78	0.22
Final Sat.:	1700	1681	119	1700	1800	1800	1700	1397	403	1700	1410	390

Capacity Analysis Module:

Vol/Sat:	0.04	0.25	0.25	0.08	0.23	0.02	0.04	0.16	0.16	0.02	0.21	0.21
Crit Moves:	****			****			****			****		
Green/Cycle:	0.11	0.39	0.39	0.13	0.41	0.41	0.06	0.28	0.28	0.11	0.33	0.33
Volume/Cap:	0.38	0.63	0.63	0.63	0.57	0.06	0.62	0.57	0.57	0.18	0.63	0.63
Delay/Veh:	40.5	25.5	25.5	44.9	22.7	16.9	53.8	30.6	30.6	38.8	29.1	29.1
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	40.5	25.5	25.5	44.9	22.7	16.9	53.8	30.6	30.6	38.8	29.1	29.1
LOS by Move:	D	C	C	D	C	B	D	C	C	D	C	C
HCM2kAvgQ:	2	11	11	5	10	1	3	8	8	1	10	10

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

Existing (2007) Plus Project With 2011 Config & 2030 Mitigation Measures

Lytle Creek Ranch Project
 Existing 2007 Traffic Condition
 AM Peak Hour

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

Intersection #7 University Pkwy & I-215 SB On/Off-Ramps

Cycle (sec): 60 Critical Vol./Cap.(X): 0.612
 Loss Time (sec): 6 (Y+R=4.0 sec) Average Delay (sec/veh): 11.2
 Optimal Cycle: 60 Level Of Service: B

Street Name:	University Pkwy						I-215 SB On/Off-Ramps													
Approach:	North Bound			South Bound			East Bound			West Bound										
Movement:	L	T	R	L	T	R	L	T	R	L	T	R								
Control:	Split Phase			Split Phase			Split Phase			Split Phase										
Rights:	Include			Include			Include			Include										
Min. Green:	6	6	6	6	6	6	6	6	6	6	6	6								
Lanes:	0	0	1	1	1	1	1	1	0	0	0	1	0	0	1	0	0	0	0	0

Volume Module:

Base Vol:	0	219	249	1296	412	0	94	0	25	0	0	0
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	0	219	249	1296	412	0	94	0	25	0	0	0
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
PHF Volume:	0	231	262	1364	434	0	99	0	26	0	0	0
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	0	231	262	1364	434	0	99	0	26	0	0	0
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Final Volume:	0	231	262	1364	434	0	99	0	26	0	0	0

Saturation Flow Module:

Sat/Lane:	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Adjustment:	0.94	1.00	1.00	0.94	1.00	1.00	0.94	1.00	1.00	0.94	1.00	1.00
Lanes:	0.00	1.40	1.60	2.00	1.00	0.00	1.00	0.00	1.00	0.00	0.00	0.00
Final Sat.:	0	2527	2873	3400	1800	0	1700	0	1800	0	0	0

Capacity Analysis Module:

Vol/Sat:	0.00	0.09	0.09	0.40	0.24	0.00	0.06	0.00	0.01	0.00	0.00	0.00
Crit Moves:	****			****			****					
Green/Cycle:	0.00	0.15	0.15	0.65	0.65	0.00	0.10	0.00	0.10	0.00	0.00	0.00
Volume/Cap:	0.00	0.62	0.62	0.62	0.37	0.00	0.58	0.00	0.15	0.00	0.00	0.00
Delay/Veh:	0.0	25.4	25.4	6.5	4.8	0.0	30.8	0.0	25.0	0.0	0.0	0.0
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	0.0	25.4	25.4	6.5	4.8	0.0	30.8	0.0	25.0	0.0	0.0	0.0
LOS by Move:	A	C	C	A	A	A	C	A	C	A	A	A
HCM2kAvgQ:	0	4	4	9	4	0	3	0	1	0	0	0

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

 Lytle Creek Ranch Project
 Existing 2007 Traffic Condition
 AM Peak Hour

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

Intersection #12 I-15 SB On/Off-Ramps & Sierra Ave

Cycle (sec): 100 Critical Vol./Cap.(X): 0.476
 Loss Time (sec): 0 (Y+R=4.0 sec) Average Delay (sec/veh): 20.1
 Optimal Cycle: 60 Level Of Service: C

Street Name:	I-15 SB On/Off-Ramps						Sierra Ave					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Split Phase			Split Phase			Permitted			Protected		
Rights:	Include			Include			Include			Include		
Min. Green:	6	6	6	6	6	6	6	6	6	6	6	6
Lanes:	0	0	0	1	0	1	0	0	1	2	0	2

Volume Module:

Base Vol:	0	0	0	355	4	90	0	262	130	794	400	0
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	0	0	0	355	4	90	0	262	130	794	400	0
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
PHF Volume:	0	0	0	374	4	95	0	276	137	836	421	0
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	0	0	0	374	4	95	0	276	137	836	421	0
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Final Volume:	0	0	0	374	4	95	0	276	137	836	421	0

Saturation Flow Module:

Sat/Lane:	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Adjustment:	0.94	1.00	1.00	0.94	1.00	1.00	0.94	1.00	1.00	0.89	1.00	1.00
Lanes:	0.00	0.00	0.00	1.79	0.02	1.19	0.00	2.00	1.00	2.00	2.00	0.00
Final Sat.:	0	0	0	3048	30	2142	0	3600	1800	3200	3600	0

Capacity Analysis Module:

Vol/Sat:	0.00	0.00	0.00	0.12	0.14	0.04	0.00	0.08	0.08	0.26	0.12	0.00
Crit Moves:				****			****			****		
Green/Cycle:	0.00	0.00	0.00	0.29	0.29	0.29	0.00	0.16	0.16	0.55	0.71	0.00
Volume/Cap:	0.00	0.00	0.00	0.42	0.48	0.15	0.00	0.48	0.47	0.48	0.16	0.00
Delay/Veh:	0.0	0.0	0.0	28.9	29.5	26.3	0.0	38.5	38.5	14.0	4.8	0.0
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	0.0	0.0	0.0	28.9	29.5	26.3	0.0	38.5	38.5	14.0	4.8	0.0
LOS by Move:	A	A	A	C	C	C	A	D	D	B	A	A
HCM2kAvgQ:	0	0	0	6	7	2	0	4	4	9	2	0

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

Lytle Creek Ranch Project
 Existing 2007 Traffic Condition
 AM Peak Hour

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

Intersection #13 I-15 NB On/Off-Ramps & Sierra Ave

Cycle (sec): 100 Critical Vol./Cap.(X): 0.624
 Loss Time (sec): 0 (Y+R=4.0 sec) Average Delay (sec/veh): 18.7
 Optimal Cycle: 60 Level Of Service: B

Street Name:	I-15 NB On/Off-Ramps						Sierra Ave													
Approach:	North Bound			South Bound			East Bound			West Bound										
Movement:	L	T	R	L	T	R	L	T	R	L	T	R								
Control:	Split Phase			Split Phase			Protected			Permitted										
Rights:	Include			Include			Include			Include										
Min. Green:	6	6	6	6	6	6	6	6	6	6	6	6								
Lanes:	1	1	0	0	1	0	0	0	0	0	1	0	2	0	0	0	0	2	0	1

Volume Module:

Base Vol:	138	1	504	0	0	0	29	600	0	0	1063	355
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	138	1	504	0	0	0	29	600	0	0	1063	355
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
PHF Volume:	145	1	531	0	0	0	31	632	0	0	1119	374
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	145	1	531	0	0	0	31	632	0	0	1119	374
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Final Volume:	145	1	531	0	0	0	31	632	0	0	1119	374

Saturation Flow Module:

Sat/Lane:	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Adjustment:	0.94	1.00	1.00	0.94	1.00	1.00	0.94	1.00	1.00	0.94	1.00	1.00
Lanes:	1.99	0.01	1.00	0.00	0.00	0.00	1.00	2.00	0.00	0.00	2.00	1.00
Final Sat.:	3377	24	1800	0	0	0	1700	3600	0	0	3600	1800

Capacity Analysis Module:

Vol/Sat:	0.04	0.04	0.29	0.00	0.00	0.00	0.02	0.18	0.00	0.00	0.31	0.21
Crit Moves:			****				****			****		
Green/Cycle:	0.46	0.46	0.46	0.00	0.00	0.00	0.06	0.54	0.00	0.00	0.48	0.48
Volume/Cap:	0.09	0.09	0.64	0.00	0.00	0.00	0.30	0.32	0.00	0.00	0.64	0.43
Delay/Veh:	15.4	15.4	22.6	0.0	0.0	0.0	46.6	12.8	0.0	0.0	20.3	17.2
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	15.4	15.4	22.6	0.0	0.0	0.0	46.6	12.8	0.0	0.0	20.3	17.2
LOS by Move:	B	B	C	A	A	A	D	B	A	A	C	B
HCM2kAvgQ:	1	1	13	0	0	0	1	5	0	0	13	8

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

 Lytle Creek Ranch Project
 Existing 2007 Traffic Condition
 AM Peak Hour

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

Intersection #18 Sierra Ave & Riverside Ave

Cycle (sec): 60 Critical Vol./Cap.(X): 0.676
 Loss Time (sec): 6 (Y+R=4.0 sec) Average Delay (sec/veh): 13.1
 Optimal Cycle: 60 Level Of Service: B

Street Name:	Sierra Ave						Riverside Ave													
Approach:	North Bound			South Bound			East Bound			West Bound										
Movement:	L	-	T	-	R	L	-	T	-	R	L	-	T	-	R					
Control:	Permitted			Protected			Split Phase			Split Phase										
Rights:	Include			Include			Include			Ignore										
Min. Green:	6	6	6	6	6	6	6	6	6	6	6	6								
Lanes:	0	0	1	0	1	2	0	2	0	0	0	0	0	0	0	1	0	0	0	1

Volume Module:

Base Vol:	0	736	0	541	116	0	0	0	0	0	0	696
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	0	736	0	541	116	0	0	0	0	0	0	696
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00
PHF Adj:	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.00
PHF Volume:	0	775	0	569	122	0	0	0	0	0	0	0
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	0	775	0	569	122	0	0	0	0	0	0	0
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00
Final Volume:	0	775	0	569	122	0	0	0	0	0	0	0

Saturation Flow Module:

Sat/Lane:	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Adjustment:	0.94	1.00	1.00	0.89	1.00	1.00	0.94	1.00	1.00	0.94	1.00	1.00
Lanes:	0.00	1.00	1.00	2.00	2.00	0.00	0.00	0.00	0.00	1.00	0.00	1.00
Final Sat.:	0	1800	1800	3200	3600	0	0	0	0	1700	0	1800

Capacity Analysis Module:

Vol/Sat:	0.00	0.43	0.00	0.18	0.03	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Crit Moves:	****			****								
Green/Cycle:	0.00	0.64	0.00	0.26	0.90	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Volume/Cap:	0.00	0.68	0.00	0.68	0.04	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Delay/Veh:	0.0	8.6	0.0	22.0	0.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	0.0	8.6	0.0	22.0	0.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0
LOS by Move:	A	A	A	C	A	A	A	A	A	A	A	A
HCM2kAvgQ:	0	10	0	7	0	0	0	0	0	0	0	0

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

Lytle Creek Ranch Project
 Existing 2007 Traffic Condition
 AM Peak Hour

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

 Intersection #22 Linden Ave. and Riverside Ave.

Cycle (sec): 100 Critical Vol./Cap.(X): 0.531
 Loss Time (sec): 0 (Y+R=4.0 sec) Average Delay (sec/veh): 13.2
 Optimal Cycle: 49 Level Of Service: B

Street Name:	Linden Ave.						Riverside Ave.								
Approach:	North Bound			South Bound			East Bound			West Bound					
Movement:	L	T	R	L	T	R	L	T	R	L	T	R			
Control:	Split Phase			Split Phase			Protected			Protected					
Rights:	Include			Include			Include			Include					
Min. Green:	6	6	6	6	6	6	6	6	6	6	6	6			
Lanes:	0	0	1	0	0	1	1	0	0	1	1	0	1	1	0

Volume Module:

Base Vol:	74	0	4	178	28	29	66	894	55	35	1139	156
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	74	0	4	178	28	29	66	894	55	35	1139	156
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
PHF Volume:	78	0	4	187	29	31	69	941	58	37	1199	164
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	78	0	4	187	29	31	69	941	58	37	1199	164
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Final Volume:	78	0	4	187	29	31	69	941	58	37	1199	164

Saturation Flow Module:

Sat/Lane:	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Adjustment:	0.94	1.00	1.00	0.94	1.00	1.00	0.94	1.00	1.00	0.94	1.00	1.00
Lanes:	0.95	0.00	0.05	1.74	0.26	1.00	1.00	1.88	0.12	1.00	1.76	0.24
Final Sat.:	1617	0	87	2960	466	1800	1700	3391	209	1700	3166	434

Capacity Analysis Module:

Vol/Sat:	0.05	0.00	0.05	0.06	0.06	0.02	0.04	0.28	0.28	0.02	0.38	0.38
Crit Moves:	****			****			****			****		
Green/Cycle:	0.09	0.00	0.09	0.12	0.12	0.12	0.08	0.65	0.65	0.14	0.71	0.71
Volume/Cap:	0.53	0.00	0.53	0.53	0.53	0.14	0.53	0.43	0.43	0.15	0.53	0.53
Delay/Veh:	46.9	0.0	46.9	42.7	42.7	39.8	48.5	8.6	8.6	38.1	6.8	6.8
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	46.9	0.0	46.9	42.7	42.7	39.8	48.5	8.6	8.6	38.1	6.8	6.8
LOS by Move:	D	A	D	D	D	D	D	A	A	D	A	A
HCM2kAvgQ:	3	0	3	4	4	1	3	7	7	1	10	10

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

 Lytle Creek Ranch Project
 Existing 2007 Traffic Condition
 PM Peak Hour

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

Intersection #7 University Pkwy & I-215 SB On/Off-Ramps

Cycle (sec): 90 Critical Vol./Cap.(X): 0.619
 Loss Time (sec): 6 (Y+R=4.0 sec) Average Delay (sec/veh): 23.7
 Optimal Cycle: 60 Level Of Service: C

Street Name:	University Pkwy						I-215 SB On/Off-Ramps													
Approach:	North Bound			South Bound			East Bound			West Bound										
Movement:	L	T	R	L	T	R	L	T	R	L	T	R								
Control:	Split Phase			Split Phase			Split Phase			Split Phase										
Rights:	Include			Include			Include			Include										
Min. Green:	6	6	6	6	6	6	6	6	6	6	6	6								
Lanes:	0	0	1	1	1	1	1	1	0	0	0	1	0	0	1	0	0	0	0	0

Volume Module:

Base Vol:	0	446	380	943	402	0	202	0	18	0	0	0
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	0	446	380	943	402	0	202	0	18	0	0	0
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
PHF Volume:	0	469	400	993	423	0	213	0	19	0	0	0
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	0	469	400	993	423	0	213	0	19	0	0	0
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Final Volume:	0	469	400	993	423	0	213	0	19	0	0	0

Saturation Flow Module:

Sat/Lane:	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Adjustment:	0.94	1.00	1.00	0.94	1.00	1.00	0.94	1.00	1.00	0.94	1.00	1.00
Lanes:	0.00	1.62	1.38	2.00	1.00	0.00	1.00	0.00	1.00	0.00	0.00	0.00
Final Sat.:	0	2916	2484	3400	1800	0	1700	0	1800	0	0	0

Capacity Analysis Module:

Vol/Sat:	0.00	0.16	0.16	0.29	0.24	0.00	0.13	0.00	0.01	0.00	0.00	0.00
Crit Moves:			****	****			****					
Green/Cycle:	0.00	0.26	0.26	0.47	0.47	0.00	0.20	0.00	0.20	0.00	0.00	0.00
Volume/Cap:	0.00	0.62	0.62	0.62	0.50	0.00	0.62	0.00	0.05	0.00	0.00	0.00
Delay/Veh:	0.0	30.2	30.2	18.3	16.6	0.0	36.2	0.0	29.0	0.0	0.0	0.0
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	0.0	30.2	30.2	18.3	16.6	0.0	36.2	0.0	29.0	0.0	0.0	0.0
LOS by Move:	A	C	C	B	B	A	D	A	C	A	A	A
HCM2kAvgQ:	0	8	8	11	8	0	7	0	0	0	0	0

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

 Lytle Creek Ranch Project
 Existing 2007 Traffic Condition
 PM Peak Hour

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

Intersection #12 I-15 SB On/Off-Ramps & Sierra Ave

Cycle (sec): 100 Critical Vol./Cap.(X): 0.620
 Loss Time (sec): 0 (Y+R=4.0 sec) Average Delay (sec/veh): 23.4
 Optimal Cycle: 60 Level Of Service: C

Street Name:	I-15 SB On/Off-Ramps						Sierra Ave					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Split Phase			Split Phase			Permitted			Protected		
Rights:	Include			Include			Include			Include		
Min. Green:	6	6	6	6	6	6	6	6	6	6	6	6
Lanes:	0	0	0	1	0	1	0	0	1	2	0	2

Volume Module:

Base Vol:	0	0	0	445	6	120	0	625	277	794	580	0
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	0	0	0	445	6	120	0	625	277	794	580	0
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
PHF Volume:	0	0	0	468	6	126	0	658	292	836	611	0
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	0	0	0	468	6	126	0	658	292	836	611	0
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Final Volume:	0	0	0	468	6	126	0	658	292	836	611	0

Saturation Flow Module:

Sat/Lane:	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Adjustment:	0.94	1.00	1.00	0.94	1.00	1.00	0.94	1.00	1.00	0.89	1.00	1.00
Lanes:	0.00	0.00	0.00	1.78	0.02	1.20	0.00	2.00	1.00	2.00	2.00	0.00
Final Sat.:	0	0	0	3028	36	2158	0	3600	1800	3200	3600	0

Capacity Analysis Module:

Vol/Sat:	0.00	0.00	0.00	0.15	0.18	0.06	0.00	0.18	0.16	0.26	0.17	0.00
Crit Moves:				****			****			****		
Green/Cycle:	0.00	0.00	0.00	0.28	0.28	0.28	0.00	0.29	0.29	0.42	0.72	0.00
Volume/Cap:	0.00	0.00	0.00	0.54	0.62	0.21	0.00	0.62	0.55	0.62	0.24	0.00
Delay/Veh:	0.0	0.0	0.0	30.9	32.3	27.2	0.0	31.2	30.1	23.6	4.9	0.0
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	0.0	0.0	0.0	30.9	32.3	27.2	0.0	31.2	30.1	23.6	4.9	0.0
LOS by Move:	A	A	A	C	C	C	A	C	C	C	A	A
HCM2kAvgQ:	0	0	0	8	9	2	0	9	8	12	3	0

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

Lytle Creek Ranch Project
 Existing 2007 Traffic Condition
 PM Peak Hour

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

Intersection #13 I-15 NB On/Off-Ramps & Sierra Ave

Cycle (sec): 100 Critical Vol./Cap.(X): 0.996
 Loss Time (sec): 0 (Y+R=4.0 sec) Average Delay (sec/veh): 40.7
 Optimal Cycle: 130 Level Of Service: D

Street Name:	I-15 NB On/Off-Ramps						Sierra Ave													
Approach:	North Bound			South Bound			East Bound			West Bound										
Movement:	L	T	R	L	T	R	L	T	R	L	T	R								
Control:	Split Phase			Split Phase			Protected			Permitted										
Rights:	Include			Include			Include			Include										
Min. Green:	6	6	6	6	6	6	6	6	6	6	6	6								
Lanes:	1	1	0	0	1	0	0	0	0	0	1	0	1	1	0	0	0	2	0	1

Volume Module:

Base Vol:	263	2	853	0	0	0	177	794	154	0	1114	663
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	263	2	853	0	0	0	177	794	154	0	1114	663
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
PHF Volume:	277	2	898	0	0	0	186	836	162	0	1173	698
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	277	2	898	0	0	0	186	836	162	0	1173	698
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	277	2	898	0	0	0	186	836	162	0	1173	698

Saturation Flow Module:

Sat/Lane:	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Adjustment:	0.94	1.00	1.00	0.94	1.00	1.00	0.94	1.00	1.00	0.94	1.00	1.00
Lanes:	1.99	0.01	1.00	0.00	0.00	0.00	1.00	1.68	0.32	0.00	2.00	1.00
Final Sat.:	3376	26	1800	0	0	0	1700	3015	585	0	3600	1800

Capacity Analysis Module:

Vol/Sat:	0.08	0.08	0.50	0.00	0.00	0.00	0.11	0.28	0.28	0.00	0.33	0.39
Crit Moves:			****				****					****
Green/Cycle:	0.50	0.50	0.50	0.00	0.00	0.00	0.11	0.50	0.50	0.00	0.39	0.39
Volume/Cap:	0.16	0.16	1.00	0.00	0.00	0.00	1.00	0.56	0.56	0.00	0.84	1.00
Delay/Veh:	13.6	13.6	53.8	0.0	0.0	0.0	109.1	17.7	17.7	0.0	32.2	63.4
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	13.6	13.6	53.8	0.0	0.0	0.0	109.1	17.7	17.7	0.0	32.2	63.4
LOS by Move:	B	B	D	A	A	A	F	B	B	A	C	E
HCM2kAvgQ:	2	2	35	0	0	0	10	11	11	0	19	29

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

Lytle Creek Ranch Project
 Existing 2007 Traffic Condition
 PM Peak Hour

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

Intersection #18 Sierra Ave & Riverside Ave

Cycle (sec): 60 Critical Vol./Cap.(X): 0.846
 Loss Time (sec): 6 (Y+R=4.0 sec) Average Delay (sec/veh): 17.0
 Optimal Cycle: 60 Level Of Service: B

Street Name:	Sierra Ave						Riverside Ave													
Approach:	North Bound			South Bound			East Bound			West Bound										
Movement:	L	-	T	-	R	L	-	T	-	R	L	-	T	-	R					
Control:	Permitted			Protected			Split Phase			Split Phase										
Rights:	Include			Include			Include			Ignore										
Min. Green:	6	6	6	6	6	6	6	6	6	6	6	6								
Lanes:	0	0	1	0	1	2	0	2	0	0	0	0	0	0	0	1	0	0	0	1

Volume Module:

Base Vol:	0	889	0	734	389	0	0	0	0	0	0	917
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	0	889	0	734	389	0	0	0	0	0	0	917
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00
PHF Adj:	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.00
PHF Volume:	0	936	0	773	409	0	0	0	0	0	0	0
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	0	936	0	773	409	0	0	0	0	0	0	0
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00
Final Volume:	0	936	0	773	409	0	0	0	0	0	0	0

Saturation Flow Module:

Sat/Lane:	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Adjustment:	0.94	1.00	1.00	0.89	1.00	1.00	0.94	1.00	1.00	0.94	1.00	1.00
Lanes:	0.00	1.00	1.00	2.00	2.00	0.00	0.00	0.00	0.00	1.00	0.00	1.00
Final Sat.:	0	1800	1800	3200	3600	0	0	0	0	1700	0	1800

Capacity Analysis Module:

Vol/Sat:	0.00	0.52	0.00	0.24	0.11	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Crit Moves:	****			****								
Green/Cycle:	0.00	0.61	0.00	0.29	0.90	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Volume/Cap:	0.00	0.85	0.00	0.85	0.13	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Delay/Veh:	0.0	15.5	0.0	27.6	0.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	0.0	15.5	0.0	27.6	0.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0
LOS by Move:	A	B	A	C	A	A	A	A	A	A	A	A
HCM2kAvgQ:	0	17	0	11	1	0	0	0	0	0	0	0

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

Lytle Creek Ranch Project
 Existing 2007 Traffic Condition
 PM Peak Hour

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

 Intersection #22 Linden Ave. and Riverside Ave.

Cycle (sec): 100 Critical Vol./Cap.(X): 0.834
 Loss Time (sec): 0 (Y+R=4.0 sec) Average Delay (sec/veh): 27.4
 Optimal Cycle: 130 Level Of Service: C

Street Name:	Linden Ave.						Riverside Ave.								
Approach:	North Bound			South Bound			East Bound			West Bound					
Movement:	L	-	T	-	R	L	-	T	-	R	L	-	T	-	R
Control:	Split Phase			Split Phase			Protected			Protected					
Rights:	Include			Include			Include			Include					
Min. Green:	6	6	6	6	6	6	6	6	6	6	6	6			
Lanes:	0	0	1	0	0	1	1	0	0	1	1	0	1	1	0

Volume Module:

Base Vol:	128	28	41	444	30	239	125	1195	77	29	1293	384
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	128	28	41	444	30	239	125	1195	77	29	1293	384
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
PHF Volume:	135	29	43	467	32	252	132	1258	81	31	1361	404
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	135	29	43	467	32	252	132	1258	81	31	1361	404
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Final Volume:	135	29	43	467	32	252	132	1258	81	31	1361	404

Saturation Flow Module:

Sat/Lane:	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Adjustment:	0.94	1.00	1.00	0.94	1.00	1.00	0.94	1.00	1.00	0.94	1.00	1.00
Lanes:	0.66	0.14	0.20	1.88	0.12	1.00	1.00	1.88	0.12	1.00	1.54	0.46
Final Sat.:	1126	246	361	3196	216	1800	1700	3382	218	1700	2776	824

Capacity Analysis Module:

Vol/Sat:	0.12	0.12	0.12	0.15	0.15	0.14	0.08	0.37	0.37	0.02	0.49	0.49
Crit Moves:	****			****			****			****		
Green/Cycle:	0.14	0.14	0.14	0.18	0.18	0.18	0.09	0.59	0.59	0.09	0.59	0.59
Volume/Cap:	0.83	0.83	0.83	0.83	0.83	0.80	0.83	0.63	0.63	0.19	0.83	0.83
Delay/Veh:	62.5	62.5	62.5	49.6	49.6	52.7	74.5	14.3	14.3	42.3	19.6	19.6
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	62.5	62.5	62.5	49.6	49.6	52.7	74.5	14.3	14.3	42.3	19.6	19.6
LOS by Move:	E	E	E	D	D	D	E	B	B	D	B	B
HCM2kAvgQ:	9	9	9	10	10	10	7	14	14	1	24	24

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

Existing (2007) Plus Project With Recommended New Mitigation Measure

 Lytle Creek Ranch Project
 Existing 2007 Traffic Condition
 AM Peak Hour

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

 Intersection #8 I-15 SB On/Off-Ramps & Glen Helen Pkwy

Cycle (sec): 100 Critical Vol./Cap.(X): 0.386
 Loss Time (sec): 0 (Y+R=4.0 sec) Average Delay (sec/veh): 7.0
 Optimal Cycle: 60 Level Of Service: A

Street Name:	I-15 SB On/Off-Ramps						Glen Helen Pkwy													
Approach:	North Bound			South Bound			East Bound			West Bound										
Movement:	L	-	T	-	R	L	-	T	-	R	L	-	T	-	R					
Control:	Split Phase			Split Phase			Split Phase			Split Phase										
Rights:	Include			Include			Include			Include										
Min. Green:	6	6	6	6	6	6	6	6	6	6	6	6								
Lanes:	0	0	0	0	0	1	0	0	1	0	0	0	1	1	0	1	0	2	0	0

Volume Module:

Base Vol:	0	0	0	110	1	6	0	0	0	513	225	0
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	0	0	0	110	1	6	0	0	0	513	225	0
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
PHF Volume:	0	0	0	116	1	6	0	0	0	540	237	0
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	0	0	0	116	1	6	0	0	0	540	237	0
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	0	0	0	116	1	6	0	0	0	540	237	0

Saturation Flow Module:

Sat/Lane:	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Adjustment:	0.94	1.00	1.00	0.94	1.00	1.00	0.94	1.00	1.00	0.94	1.00	1.00
Lanes:	0.00	0.00	0.00	1.00	0.14	0.86	0.00	2.00	0.00	1.00	2.00	0.00
Final Sat.:	0	0	0	1700	257	1543	0	3600	0	1700	3600	0

Capacity Analysis Module:

Vol/Sat:	0.00	0.00	0.00	0.07	0.00	0.00	0.00	0.00	0.00	0.32	0.07	0.00
Crit Moves:	****						****					
Green/Cycle:	0.00	0.00	0.00	0.18	0.18	0.18	0.00	0.00	0.00	0.82	0.82	0.00
Volume/Cap:	0.00	0.00	0.00	0.39	0.02	0.02	0.00	0.00	0.00	0.39	0.08	0.00
Delay/Veh:	0.0	0.0	0.0	37.2	34.1	34.1	0.0	0.0	0.0	2.5	1.7	0.0
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	0.0	0.0	0.0	37.2	34.1	34.1	0.0	0.0	0.0	2.5	1.7	0.0
LOS by Move:	A	A	A	D	C	C	A	A	A	A	A	A
HCM2kAvgQ:	0	0	0	4	0	0	0	0	0	5	1	0

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

 Lytle Creek Ranch Project
 Existing 2007 Traffic Condition
 PM Peak Hour

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

 Intersection #8 I-15 SB On/Off-Ramps & Glen Helen Pkwy

Cycle (sec): 100 Critical Vol./Cap.(X): 0.462
 Loss Time (sec): 0 (Y+R=4.0 sec) Average Delay (sec/veh): 11.5
 Optimal Cycle: 60 Level Of Service: B

Street Name:	I-15 SB On/Off-Ramps						Glen Helen Pkwy													
Approach:	North Bound			South Bound			East Bound			West Bound										
Movement:	L	-	T	-	R	L	-	T	-	R	L	-	T	-	R					
Control:	Split Phase			Split Phase			Split Phase			Split Phase										
Rights:	Include			Include			Include			Include										
Min. Green:	6	6	6	6	6	6	6	6	6	6	6	6								
Lanes:	0	0	0	0	0	1	0	0	1	0	0	0	1	1	0	1	0	2	0	0

Volume Module:

Base Vol:	0	0	0	109	0	20	0	65	76	575	533	0
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	0	0	0	109	0	20	0	65	76	575	533	0
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
PHF Volume:	0	0	0	115	0	21	0	68	80	605	561	0
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	0	0	0	115	0	21	0	68	80	605	561	0
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Final Volume:	0	0	0	115	0	21	0	68	80	605	561	0

Saturation Flow Module:

Sat/Lane:	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Adjustment:	0.94	1.00	1.00	0.94	1.00	1.00	0.94	1.00	1.00	0.94	1.00	1.00
Lanes:	0.00	0.00	0.00	1.00	0.00	1.00	0.00	1.00	1.00	1.00	2.00	0.00
Final Sat.:	0	0	0	1700	0	1800	0	1800	1800	1700	3600	0

Capacity Analysis Module:

Vol/Sat:	0.00	0.00	0.00	0.07	0.00	0.01	0.00	0.04	0.04	0.36	0.16	0.00
Crit Moves:				****				****		****		
Green/Cycle:	0.00	0.00	0.00	0.14	0.00	0.14	0.00	0.09	0.09	0.76	0.76	0.00
Volume/Cap:	0.00	0.00	0.00	0.47	0.00	0.08	0.00	0.40	0.47	0.47	0.20	0.00
Delay/Veh:	0.0	0.0	0.0	40.7	0.0	37.2	0.0	43.3	44.0	4.7	3.4	0.0
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	0.0	0.0	0.0	40.7	0.0	37.2	0.0	43.3	44.0	4.7	3.4	0.0
LOS by Move:	A	A	A	D	A	D	A	D	D	A	A	A
HCM2kAvgQ:	0	0	0	4	0	1	0	2	3	7	2	0

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