

Figure 4-6
Cumulative AM Peak Hour Intersection Volumes With Project

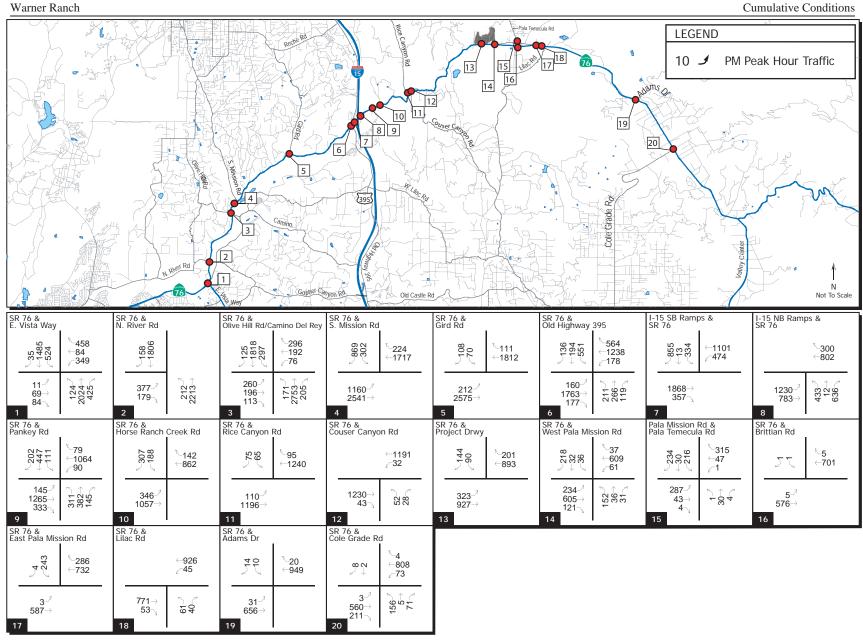


Figure 4-7
Cumulative PM Peak Hour Intersection Volumes With Project

# CHAPTER 5 PREVIOUSLY ADOPTED GENERAL PLAN CONDITIONS

Previously Adopted General Plan conditions represent traffic conditions in 2030.

## PREVIOUSLY ADOPTED GENERAL PLAN TRAFFIC VOLUMES

Traffic growth on area roadways is a function of the expected land development, economic activity, and changes in demographics. Several methods can be used to estimate this growth. For this analysis SANDAG Series 11 traffic forecast model was used to develop Previously Adopted General Plan base volumes. Appendix C contains detailed information about volume development.

## PREVIOUSLY ADOPTED GENERAL PLAN CIRCULATION NETWORK

The following circulation improvements are assumed under Previously Adopted General Plan conditions:

- State Route 76 from East Vista Way to Camino Del Rey: improvement from a 2 lane State Route to a 6 lane Expressway
- State Route 76 from Camino Del Rey to Old Highway 395: improvement from a 2 lane State Route to a 6 lane Prime Arterial
- State Route 76 from Old Highway 395 to I-15: improvement from a 4 lane Collector to a 6 lane Prime Arterial
- State Route 76 from Pankey Road to SR-79: improvement from a 2 lane State Route to a 4 lane Major Road

No other circulation network changes are assumed. Figure 5-1 shows the Previously Adopted General Plan circulation network.

The effect of the proposed project on the study area circulation network was evaluated. Figures 5-2 and 5-3 show the Previously Adopted General Plan roadway segment conditions without and with the proposed project. Table 5-2 shows the Previously Adopted General Plan segment conditions.

## PREVIOUSLY ADOPTED GENERAL PLAN ZONING AND TRIP GENERATION

The project site is made up of 501.27 acres, of which 262.57 acres are zoned for one dwelling unit per every two acres and 238.64 acres are zoned one dwelling unit per every four acres. Using this zoning and acreage 190 dwelling units could be built on the site under the Previously Adopted General Plan Zoning. Table 5-1 illustrates the trip making potential of the Previously Adopted General Plan and compares it to the proposed project.

Table 5-1
Previously Adopted General Plan Trip Generation Comparison

					Al	VI Peak Ho	ur	PI	// Peak Ho	ur
Land Use	Intensity	Unit	Rate/Trips	Daily Trips	Total	In	Out	Total	ln	Out
Estate	190	dwelling	Rate	12	8%	30%	70%	10%	70%	30%
(3-6 DU/acre)	190	unit	Trips	2,280	183	55	129	228	160	69
Previously Adopted G	eneral Plan			2,280	183	55	129	228	160	69
Single Family	F2.4	dwelling	Rate	10	8%	30%	70%	10%	70%	30%
(3-6 DU/acre)	534	unit	Trips	5,340	428	129	300	534	374	161
Condominium	24/	dwelling	Rate	8	8%	20%	80%	10%	70%	30%
(6-20 DU/acre)	246	unit	Trips	1,968	158	32	127	197	138	60
Davidonad Dark	4.22	4.0	Rate	50	13%	50%	50%	9%	50%	50%
Developed Park	4.23	AC	Trips	212	28	14	14	20	10	10
Fire Ctation	1	Ctation	Rate	50	8%	60%	40%	10%	40%	60%
Fire Station	1	Station	Trips	50	4	3	2	5	2	3
Proposed Project	•	•		7,570	618	178	443	756	524	234
Net Increase				5,290	435	123	314	528	364	165

Source: SANDAG

Table 5-2 Previously Adopted General Plan With Project Roadway Segment Conditions

Roadway Segment	Lanes/	LOS E		iously Add eneral Pla		V	Vith Projec	ct	Δ	Δ	GP Non-	CMP
	Class	Capacity	ADT	V/C	LOS	ADT	V/C	LOS	Traffic	v/c	Conformant?	Sig?
State Route 76												
E. Vista Way to N. River Road	6E	108,000	56,000	0.519	С	56,281	0.521	С	281	0.003	No	No
N. River Road to Camino Del Rey	6E	108,000	66,000	0.611	С	66,376	0.615	С	376	0.003	No	No
Camino Del Rey to S. Mission Road	6E	108,000	72,000	0.667	D	72,423	0.671	D	423	0.004	No	No
S. Mission Road to Gird Road	6PA	57,000	48,000	0.842	D	48,486	0.851	D	486	0.009	No	No
Gird Road to Old Hwy 395	6PA	57,000	42,000	0.737	С	42,551	0.747	С	551	0.010	No	No
Old Hwy 395 to I-15 SB Ramp	6PA	57,000	41,000	0.719	С	41,609	0.730	С	609	0.011	No	No
I-15 SB Ramp to I-15 NB Ramp	6PA	57,000	31,000	0.544	В	32,270	0.566	В	1,270	0.022	No	No
I-15 NB Ramp to Pankey Road	4MR	37,000	24,000	0.649	В	25,932	0.701	С	1,932	0.052	No	No
Pankey Road to Horse Ranch Creek Road	4MR	37,000	30,000	0.811	D	32,340	0.874	D	2,340	0.063	No	No
Horse Ranch Creek Road to Rice Canyon Road	4MR	37,000	20,000	0.541	В	22,899	0.619	В	2,899	0.078	No	No
Rice Canyon Road to Couser Canyon Road	4MR	37,000	26,000	0.703	С	29,153	0.788	С	3,153	0.085	No	No
Couser Canyon Road to W. Pala Mission Road	4MR	37,000	27,000	0.730	С	30,263	0.818	D	3,263	0.088	No	No
W. Pala Mission Road to E. Pala Mission Road	4MR	37,000	19,000	0.514	В	19,423	0.525	В	423	0.011	No	No
E. Pala Mission Road to Lilac Road	4MR	37,000	21,000	0.568	В	21,423	0.579	В	423	0.011	No	No
Lilac Road to Adams Drive	4MR	37,000	21,000	0.568	В	21,275	0.575	В	275	0.007	No	No
Adams Drive to Cole Grade Road	4MR	37,000	21,000	0.568	В	21,259	0.575	В	259	0.007	No	No
W. Pala Mission Road												
State Route 76 and Pala Temecula Road	2RC	16,200	6,000	0.370	С	6,851	0.423	С	851	0.053	No	No
Pala Temecula Road												
Pala Mission Road to Trujillo Road	2RC	16,200	5,000	0.309	С	5,661	0.349	С	661	0.041	No	No

Note: 2RC: 2-lane Rural Collector; 4MR: 4-lane Major Road; 6PA: 6-lane Prime Arterial; 6E: 6-lane Expressway.

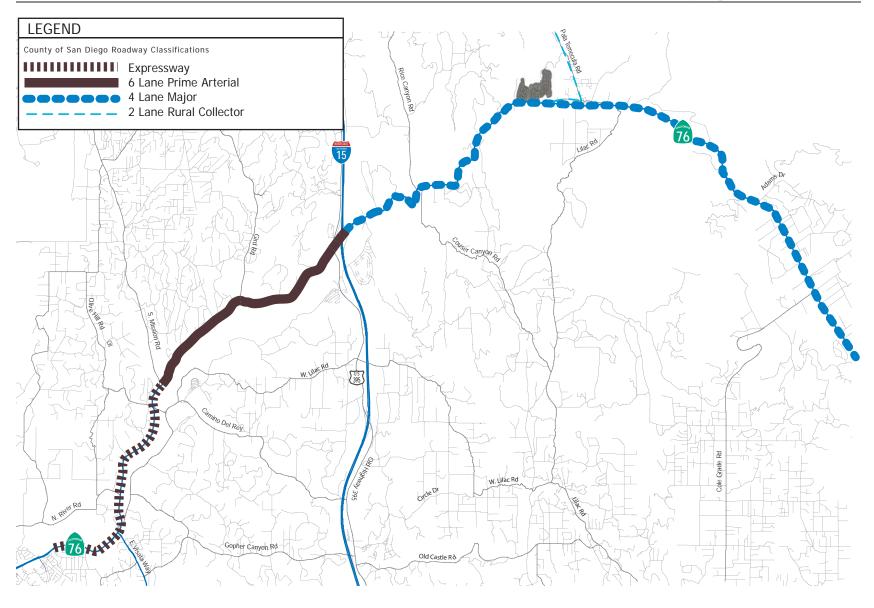
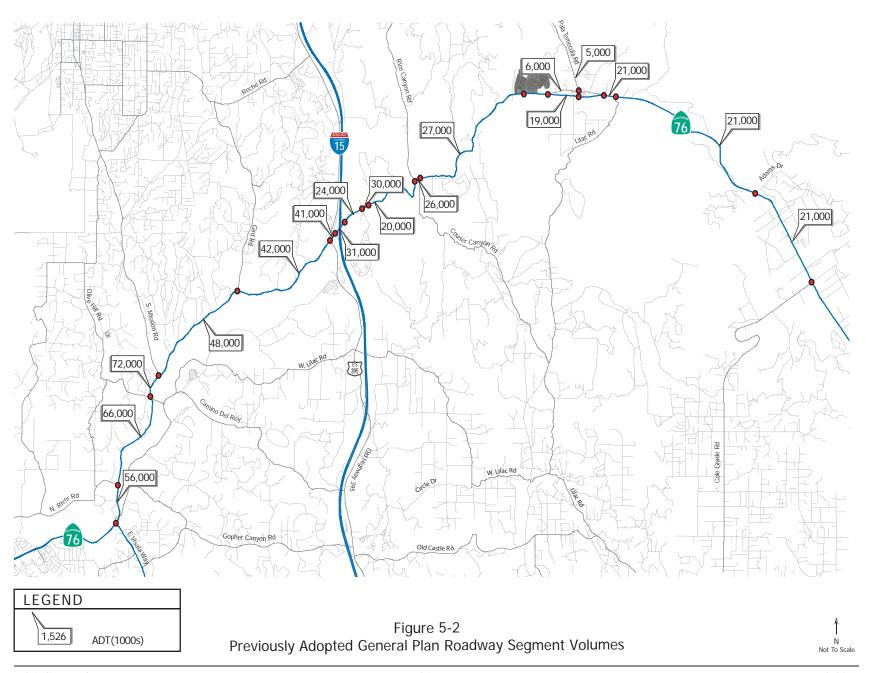
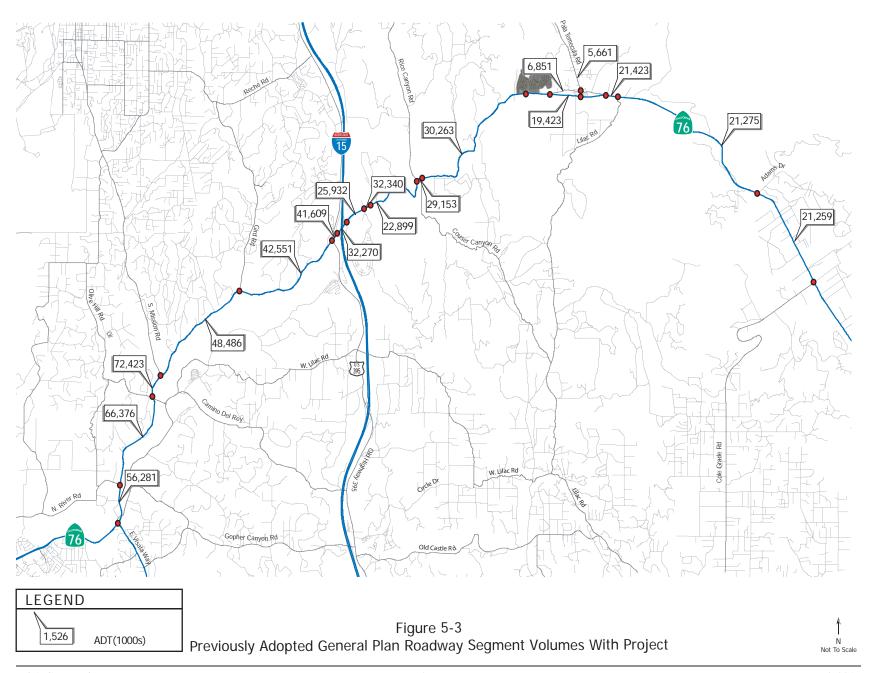


Figure 5-1
Previously Adopted General Plan Circulation Network







## CHAPTER 6 ADOPTED GENERAL PLAN CONDITIONS

Adopted General Plan conditions represent traffic conditions in 2030. This analysis reflects the conditions that are proposed in the Adopted General Plan. The Adopted General Plan represents a decrease in intensity of land use in the back country of the County and a down-grading of many roadway classifications that had yet to be widened to that degree.

## ADOPTED GENERAL PLAN TRAFFIC VOLUMES

Traffic growth on area roadways is a function of the expected land development, economic activity, and changes in demographics. Several methods can be used to estimate this growth. For this analysis Adopted General Plan 2030 traffic forecast model was used to develop Adopted General Plan base volumes. Appendix C contains detailed information about volume development.

## ADOPTED GENERAL PLAN MOBILITY NETWORK

The following circulation improvements are assumed under Adopted General Plan conditions:

- SR-76 from East Vista Way to Mission Road: recently improved from a 2 lane State Route to a 4 lane Major which would eventually become a 6 lane Prime Arterial
- SR-76 from Mission Road to Old Highway 395: improvement from a 2 lane State Route to a 4 lane Major Road with a Raised Median
- SR-76 from Old Highway 395 to I-15: improvement from a 4 lane Collector to a 4 lane Major Road with a Raised Median
- SR-76 from Pankey Road to Couser Canyon Road : improvement from a 2 lane State Route to a 4 lane Major Road
- Pala Temecula Road from Pala Mission Road to Trujillo Road: improvement from a 2 lane Rural Collector to a 2 lane Light Collector with passing lane improvement options

No other circulation network changes are assumed. Figure 6-1 shows the Adopted General Plan mobility network.

The effect of the proposed project on the study area circulation network was evaluated. Figures 6-2 through 6-3 show the Adopted General Plan roadway segment conditions with and without the proposed project. Table 6-1 shows the Adopted General Plan segment conditions.

## ADOPTED GENERAL PLAN ZONING AND TRIP GENERATION

The project site is made up of 501.27 acres and is zoned for one dwelling unit per every forty acres under the Adopted General Plan. Using this zoning and acreage 12 dwelling units could be built on the site under the proposed General Plan Zoning. Table 6-1 illustrates the trip making potential of the Adopted General Plan and compares it to the proposed project.

Table 6-1 Adopted General Plan Trip Generation Comparison

					Al	M Peak Ho	ur	PI	/ Peak Hou	ır
Land Use	Intensity	Unit	Rate/Trips	Daily Trips	Total	In	Out	Total	ln	Out
Estate	10	dwelling	Rate	12	8%	30%	70%	10%	70%	30%
(3-6 DU/acre)	12	unit	Trips	144	12	4	9	15	11	5
Adopted Genera	l Plan			144	12	4	9	15	11	5
Single Family	E24	dwelling	Rate	10	8%	30%	70%	10%	70%	30%
(3-6 DU/acre)	534	unit	Trips	5,340	428	129	300	534	374	161
Condominium	244	dwelling	Rate	8	8%	20%	80%	10%	70%	30%
(6-20 DU/acre)	246	unit	Trips	1,968	158	32	127	197	138	60
Daysland Days	4.22	4.0	Rate	50	13%	50%	50%	9%	50%	50%
Developed Park	4.23	AC	Trips	212	28	14	14	20	10	10
Fire Ctation	1	Ctation	Rate	50	8%	60%	40%	10%	40%	60%
Fire Station	1	Station	Trips	50	4	3	2	5	2	3
Proposed Project	:t			7,570	618	178	443	756	524	234
Net Increase			7,426	606	174	434	741	513	229	

Source: SANDAG

Table 6-2 Adopted General Plan With Project Roadway Segment Conditions

Roadway Segment	Lanes/	LOS E	Adopt	ed Genera	al Plan		ed Genera Vith Projec		Δ	Δ	GP Non-	CMP
	Class	Capacity	ADT	V/C	LOS	ADT	V/C	LOS	Traffic	v/c	Conformant?	Sig?
State Route 76												
E. Vista Way to N. River Road	6PA	57,000	47,333	0.830	D	47,727	0.837	D	394	0.007	No	No
N. River Road to Camino Del Rey	6PA	57,000	56,738	0.995	E	57,266	1.005	F	528	0.009	Yes	No
Camino Del Rey to S. Mission Road	6PA	57,000	60,567	1.063	F	61,161	1.073	F	594	0.010	Yes	No
S. Mission Road to Gird Road	4MR	37,000	41,889	1.132	F	42,572	1.151	F	683	0.018	Yes	No
Gird Road to Old Hwy 395	4MR	37,000	34,238	0.925	Е	35,011	0.946	Е	773	0.021	Yes	Yes
Old Hwy 395 to I-15 SB Ramp	4MR	37,000	36,503	0.987	Е	37,358	1.010	F	855	0.023	Yes	Yes
I-15 SB Ramp to I-15 NB Ramp	4MR	37,000	29,068	0.786	С	30,850	0.834	D	1,782	0.048	No	No
I-15 NB Ramp to Pankey Road	4MR	37,000	27,154	0.734	С	29,865	0.807	D	2,711	0.073	No	No
Pankey Road to Horse Ranch Creek Road	4MR	37,000	24,894	0.673	С	28,178	0.762	С	3,284	0.089	No	No
Horse Ranch Creek Road to Rice Canyon Road	4MR	37,000	30,362	0.821	D	34,431	0.931	Е	4,069	0.110	Yes	Yes
Rice Canyon Road to Couser Canyon Road	4MR	37,000	31,134	0.841	D	35,560	0.961	Е	4,426	0.120	Yes	Yes
Couser Canyon Road to W. Pala Mission Road	2SR	22,900	25,450	1.111	F	30,031	1.311	F	4,581	0.200	Yes	Yes
W. Pala Mission Road to E. Pala Mission Road	2SR	22,900	22,482	0.982	Е	23,076	1.008	F	594	0.026	Yes	Yes
E. Pala Mission Road to Lilac Road	2SR	22,900	17,504	0.764	Е	18,098	0.790	Е	594	0.026	Yes	Yes
Lilac Road to Adams Drive	2SR	22,900	13,396	0.585	С	13,783	0.602	С	387	0.017	No	No
Adams Drive to Cole Grade Road	2SR	22,900	16,807	0.734	Е	17,170	0.750	Е	363	0.016	Yes	No
W. Pala Mission Road												
State Route 76 and Pala Temecula Road	2RC	16,200	3,818	0.236	В	5,013	0.309	С	1,195	0.074	No	No
Pala Temecula Road		•	•	•		-	•		•		<u> </u>	
Pala Mission Road to Trujillo Road	2LC	19,000	6,855	0.361	С	7,783	0.410	С	928	0.049	No	No

Note: 2LC: 2-lane Light Collector; 2RC: 2-lane Rural Collector; 2SR: 2-lanes State Route; 4MR: 4-lane Major Road; 6PA: 6-lane Prime Arterial.

Warner Ranch Adopted General Plan Conditions

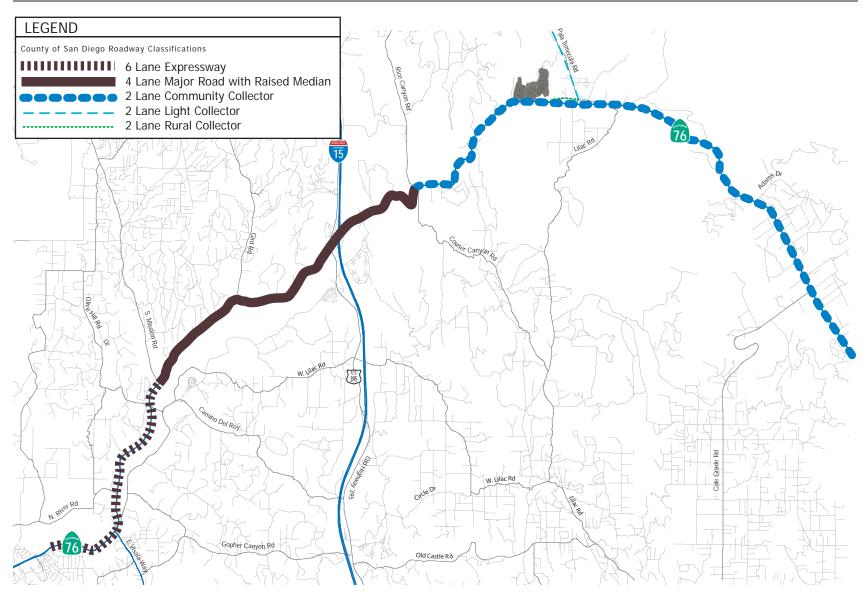
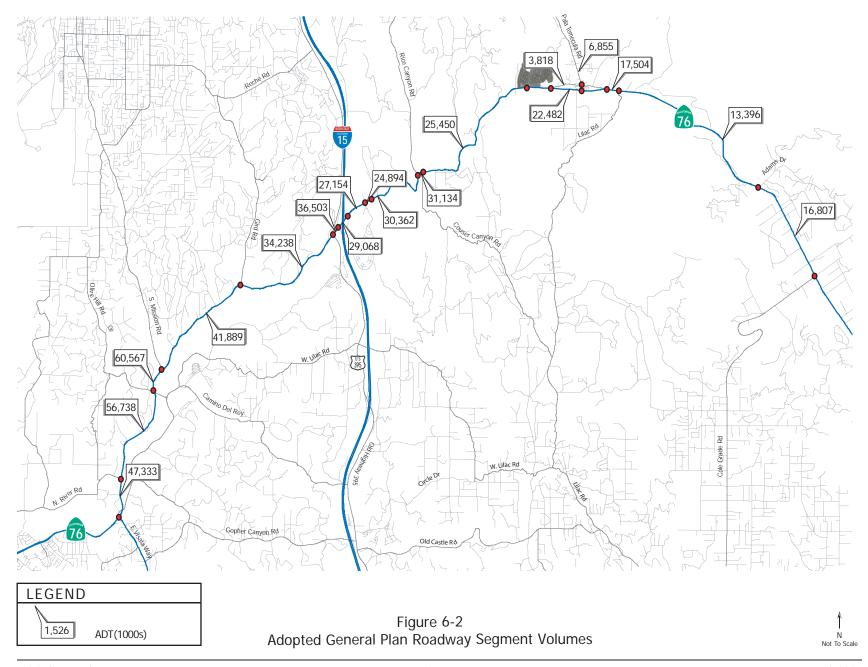
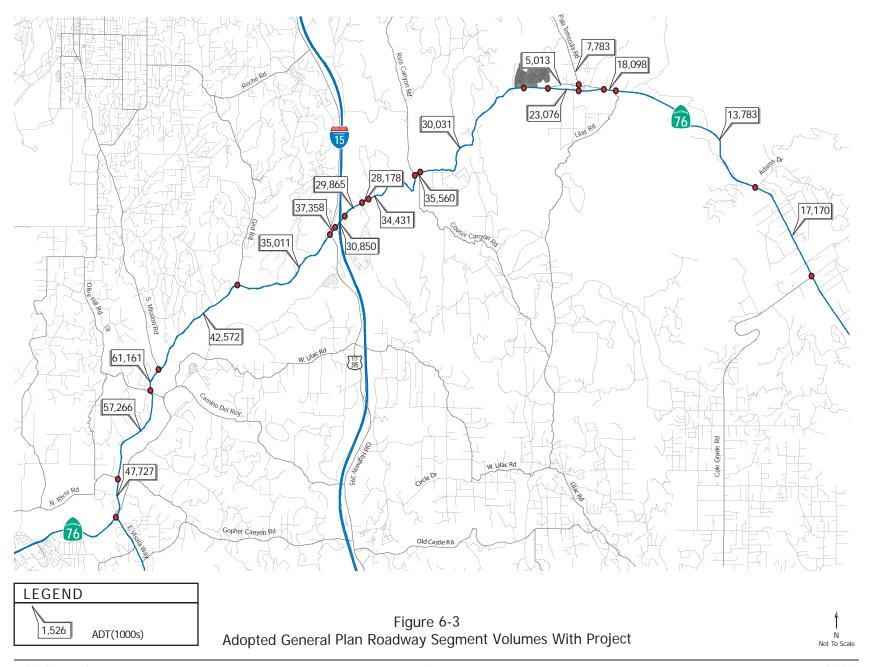


Figure 6-1 Adopted General Plan Mobility Network





# CHAPTER 7 TRANSIT & ON-SITE CIRCULATION

## **ON-SITE CIRCULATION**

The project takes access via State Route 76 from a central, private roadway. The project site has two emergency only driveways. These access points are closed for public use and will be controlled in a manner satisfactory to Caltrans and the County Engineer. The two emergency-only driveways connect to SR-76 on either side of the main access point.

The main driveway is planned as a two lane road separated by a median with a 64-foot curb-to-curb width. The main driveway is estimated to serve 7,540 vehicles per day. The first side street from the main entrance leads to parking facilities for park uses. The second side street accesses the western edge of the development. This street has a curb-to-curb width of 36-feet. The main driveway ends at a T-intersection with an east-west street alignment.

Street 1 is estimated to carry less than 1,000 vehicles per day west of the main driveway and approximately 3,500 vehicles per day east of the main driveway. Stop signs will serve as positive control at internal intersections.

## **PEDESTRIAN**

The existing pedestrian network does not currently provide a continuous sidewalk connecting adjoining land uses along State Route 76. The project proponent will provide sidewalk, curb and gutter along the project frontage. All internal pedestrian networks will be constructed to meet County standards as they relate to pedestrians.

## **TRANSIT**

Transit service is offered by the North County Transit District (NCTD) throughout the urbanized area and into the more rural areas of North San Diego County through the mountain communities along the corridor. NCTD provides Route 389 that services the Pala community. The routes last scheduled bus stop is the Pala Casino where it then proceeds west on the State Route 76 to connect to Interstate 15 and travels north to the Escondido Transit Center. Any impacts to area transportation facilities/resources during the construction period of the project frontage are expected to be short-term in nature and, therefore, insignificant in terms of transportation network operations.

## **BICYCLE**

While cyclist may be present on many of the back country roads, there are no dedicated bicycle lanes for them and they would follow standard vehicular rules of the road. A Class II bike lane is recommended under the San Diego County General Plan Mobility Element. No bicycle lanes currently exist along the project frontage. The project proponent will provide for a standard 8' shoulder serving a bicycle lane with the frontage improvements.

#### **PARKING**

The parking for the project shall be identified on the project plans and will meet DPLU requirements.

# CHAPTER 8 IMPACTS AND MITIGATION

This chapter identifies significant impacts, project mitigation, and outlines the applicant's TIF contribution as well as their fair share contributions.

## CONSTRUCTION IMPACTS

It is not estimated that the project will require any street closures during construction. There are no sidewalks in the area, as such, sidewalk closures would not be an issue. In addition, construction impacts on the area are projected to be minimal since construction vehicles are estimated to contribute fewer vehicles during the peak hours than the project would after completion. Excess dirt haul from the widening of SR-76 by the project will be hauled to the project site and to another location to be determined. However, the traffic generated by the dirt haul is also estimated to contribute fewer vehicles during the peak hours than the project would after completion.

#### SIGNIFICANT IMPACTS

The following intersections and roadway segments were found to be significantly impacted by the proposed project based on the significance criteria presented in Appendix A:

## **Direct Impacts**

## **Roadway Segments**

- SR-76 from East Vista Way to North River Road
- SR-76 from North River Road to Camino Del Rey
- SR-76 from Camino Del Rey to South Mission Road
- SR-76 from South Mission Road to Gird Road
- SR-76 from Gird Road to Old Highway 395
- SR-76 between I-15 Ramps

#### Intersections

- SR-76 / East Vista Way
- SR-76 / I-15 SB Ramp
- SR-76 / I-15 NB Ramp
- SR-76 / Project Driveway (being signalized as a project feature)

## **Cumulative Impacts**

## **Roadway Segments**

- SR-76 from West of E. Vista Way to North River Road
- SR-76 from North River Road to Camino Del Rey
- SR-76 from Camino Del Rey to South Mission Road
- SR-76 from South Mission Road to Gird Road
- SR-76 from Gird Road to Old Highway 395
- SR-76 from Old Highway 395 to I-15 SB Ramp
- SR-76 between I-15 Ramps
- I-15 NB Ramp to Pankey Road
- SR-76 from Horse Ranch Creek Road to Rice Canyon Road
- SR-76 from Rice Canyon Road to Couser Canyon Road
- SR-76 from Couser Canyon Road to West Pala Mission Road

- SR-76 from West Pala Mission Road to East Pala Mission Road
- SR-76 from East Pala Mission Road to Lilac Road
- SR-76 from Lilac Road to Adams Drive
- SR-76 from Adams Drive to Cole Grade Road

## **Intersections**

- SR-76 / East Vista Way
- SR-76 / North River Road
- SR-76 / Camino Del Rey
- SR-76 / South Mission Road
- SR-76 / Gird Road
- SR-76 / Old Highway 395
- SR-76 / I-15 SB Ramp
- SR-76 / I-15 NB Ramp
- SR-76 / Rice Canyon Road
- SR-76 / Couser Canyon Road
- SR-76 / East Pala Mission Road
- SR-76 / Lilac Road
- SR-76 / Cole Grade Road

Table 8-1
Direct Impacts and Mitigations

ID#	Location	Mitigation Measure	Fully Mitigated?
Direc	t Impacts		
Segn	nent		
1	SR-76: West of E. Vista Way to N. River Road	The Caltrans SR-76 Middle Project, which will widen SR-76	
2	SR-76: N. River Road to Camino Del Rey	from two lanes to four lanes, and it is now completed.	Yes
3	SR-76: Camino Del Rey to S. Mission Rd		
4	SR-76: S. Mission Road to Gird Road	The Caltrans SR-76 East Project, which will widen SR-76	
5	SR-76: Gird Road to Old Highway 395	from two lanes to four lanes. Work on the ramps at I-15 have been completed and construction has begun on the	Yes <sup>2</sup>
6	SR-76: I-15 SB Ramp to I-15 NB Ramp	remainder.	
Inters	section		
1	SR-76 / E. Vista Way	The Caltrans SR-76 Middle Project, which will widen SR-76 from two lanes to four lanes, and it is now completed.	Yes
2	SR-76 / I-15 SB Ramp	The Caltrans SR-76 East Project, which will reconfigure the	Yes
3	SR-76 / I-15 NB Ramp	interchange, and it is now completed.	res
4	SR-76 / Project Driveway <sup>1</sup>	Improve the project frontage and channelized/signalize the main public entrance intersection on SR-76 as a project feature.	Yes

<sup>&</sup>lt;sup>1</sup> Signal warrants can be found in Appendix H.

<sup>&</sup>lt;sup>2</sup>When completed by Caltrans.

Table 8-2A Cumulative Impacts and Mitigations

ID#	Location	Mitigation Measure	Fully Mitigated?
Cum	ulative Impacts		
Segn	nent		
1	SR-76: West of E. Vista Way to N. River Road		
2	SR-76: N. River Road to Camino Del Rey	Participate in an update to the TIF program <sup>1</sup> and pay any new fees.	$No^2$
3	SR-76: Camino Del Rey to S. Mission Rd	Hew Ices.	
4	SR-76: S. Mission Road to Gird Road	Await the completion of the SR-76 East Project	
5	SR-76: Gird Road to Old Highway 395	improvements to a 4 lane major roadway. Work on the	Yes <sup>3</sup>
6	SR-76: Old Highway 395 to I-15 SB Ramp	ramps at I-15 is now complete and construction has begun	1623
7	SR-76: I-15 SB Ramp to I-15 NB Ramp	on the remainder to obtain 4 lanes.	
8	I-15 NB Ramp to Pankey Road		
9	SR-76: Horse Ranch Creek Road to Rice Canyon Road	Participate in an update to the TIF program <sup>1</sup> and pay any new fees to ultimately help improve this to a 4 lane major	Yes
10	SR-76: Rice Canyon Road to Couser Canyon Road	roadway	
11	SR-76: Couser Canyon Road to W. Pala Mission Road		
12	SR-76: W. Pala Mission Road to E. Pala Mission Road	Provide abutting improvements at the project frontage and design and construct improvements including signalization	No
13	SR-76: E. Pala Mission Road to Lilac Road	at the intersection of SR-76 with Cole Grade Road.	110
14	SR-76: Lilac Road to Adams Drive		
15	SR-76: Adams Drive to Cole Grade Road		

<sup>1</sup>Note: An update is necessary to the TIF program since the project, like several others, is non-conformal to the currently adopted land use plan and existing TIF program.

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Note: Since a commitment to funding is not identified to achieve the planned 6 lane ultimate cross section this would remain at 4 lanes.

<sup>&</sup>lt;sup>3</sup>Note: Less than desirable levels of service have been disclosed and accepted for this portion of roadway in the recently adopted Mobility Element even after completion of the SR-76 East section improvements to a 4 lane expressway.

Table 8-2B Cumulative Impacts and Mitigations

ID#	Location	Mitigation Measure	Fully Mitigated?
Cum	ulative Impacts		
Inters	section		
1	SR-76 / E. Vista Way	Destinate in an analysis to the TIE and any and	
2	SR-76 / N. River Road	Participate in an update to the TIF program <sup>1</sup> and pay any new fees.	No <sup>2</sup>
3	SR-76 / Camino Del Rey	new rees.	
4	SR-76 / S. Mission Road	Await the completion of the SR-76 East Project	
5	SR-76 / Gird Road	improvements to a 4 lane major roadway which will also reconfigure the intersections. Work on this project has	Yes <sup>3</sup>
6	SR-76 / Old Highway 395	begun.	
7	SR-76 / I-15 SB Ramp	Although the interchange is now improved make a fair-share contribution of 12.3% of the unfunded cost of approximately	Yes
8	SR-76 / I-15 NB Ramp	\$10M to be used by Caltrans to close the funding gap on the interchange improvements and intersections at the I-15/SR-76 interchange.	res
9	SR-76 / Rice Canyon Road	Participate in an update to the TIF program <sup>1</sup> and pay any	
10	SR-76 / Couser Canyon Road	new fees to ultimately improve this to a 4 lane major roadway which will also reconfigure the intersections.	Yes
11	SR-76 / E. Pala Mission Road	No changes or improvements here since the improvements	NI-
12	SR-76 / Lilac Road	associated with this project are focused at the intersection of SR-76 at Cole Grade Road.	No
13	SR-76 / Cole Grade Road	Design and construct improvements including signalization at the intersection of SR-76 with Cole Grade Road.	Yes

<sup>&</sup>lt;sup>1</sup>Note: An update is necessary to the TIF program since the project, like several others, is non-conformal to the currently adopted land use plan and existing TIF program.

## FAIR SHARE CONTRIBUTION

The project applicant shall make fair-share contributions for improvements at the I-15/SR-76 specified in Table 8-2.

Table 8-3 Fair Share Percentages

Roadway Segment	Existing	Total Cumulative	Growth	Project	Fair Share
	ADT	ADT	ADT	ADT	% of Growth
State Route 76					
I-15 NB Ramp to Pankey Road <sup>1</sup>	11,031	33,575	22,544	2764	12.3%

Note: This is the information on which to base the fair share contribution to the unfunded improvements at the I-15/SR76 interchange. The payments would be collected proportionally to the permits issued for the project.

<sup>2</sup>Note:Since a commitment to funding is not identified to achieve the planned 6 lane ultimate cross section this would remain at 4 lanes

<sup>&</sup>lt;sup>3</sup>Note: Less than desirable levels of service have been disclosed and accepted for this portion of roadway in the recently adopted Mobility Element even after completion of the SR-76 East section improvements to a 4 lane expressway.

## TIF UPDATE

The County may also condition the project applicant to fund an update of the TIF program to help underwrite the cost of reflecting new, non-conformal projects in the updated fee program which would result in a new cost formulation for the TIF payment that the project would be subject to.

## SR-76 CORRIDOR IMPROVEMENTS

Caltrans has begun work on the SR-76 East project which will extend the improvements to a 4-lane facility all the way easterly to I-15. This work began in 2014 and is expected to be completed within three years. However, the ultimate further improvement to a 6 lane facility has been considered in the recent General Plan Update and rejected as a matter of policy. Therefore, it is expected that the eventual traffic volumes in this area would exceed those typically associated with a 4-lane facility, and the consequences of doing so have been addressed in the environmental certification of the Mobility Element.

At the I-15 interchange with SR-76, Caltrans has completed improvements that reconfigured the entire interchange. However, there is a funding shortfall or gap in the financing needed to ultimately pay for those improvements. For that reason, several projects, including Warner Ranch, shall be expected to contribute a fair-share payment to help close that funding gap.

To the east of I-15 and extending to Couser Canyon Rd the currently adopted TIF program includes a project to bring the improvements to a 4-lane facility. Although that project has not yet been programmed, all participants in the TIF as well as any updated TIF would be participating in paying for the cost of those improvements.

Easterly of Couser Canyon Road there is no TIF or other project that will be making improvements other than those localized improvements associated with individual projects. An example includes the fronting improvements the Warner Ranch project will be making along with the signalized intersection for project access. A final localized intersection is also being proposed to be improved, and a contribution to those improvements would be made by this project at the SR-76 at Cole Grade Road intersection to signalize and otherwise improve that location.

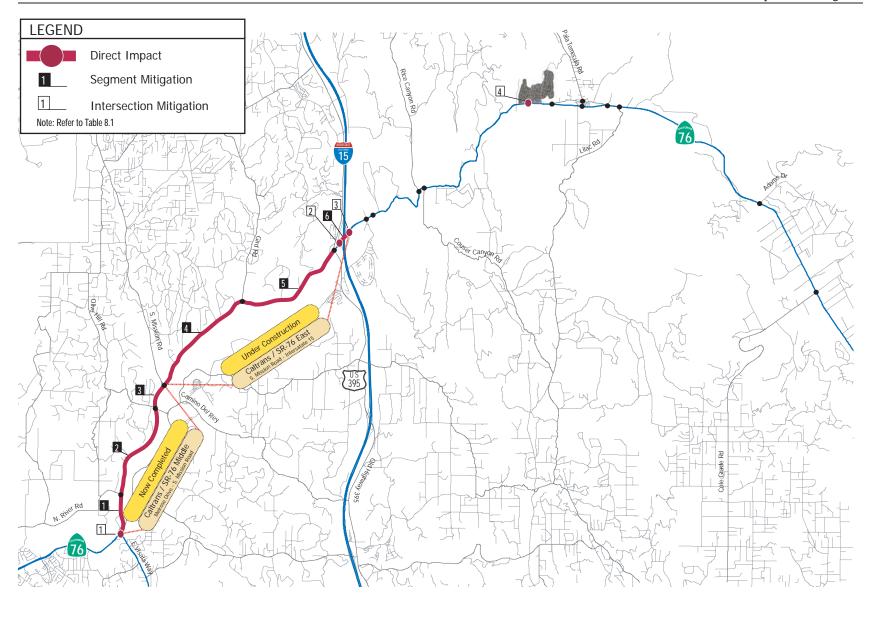
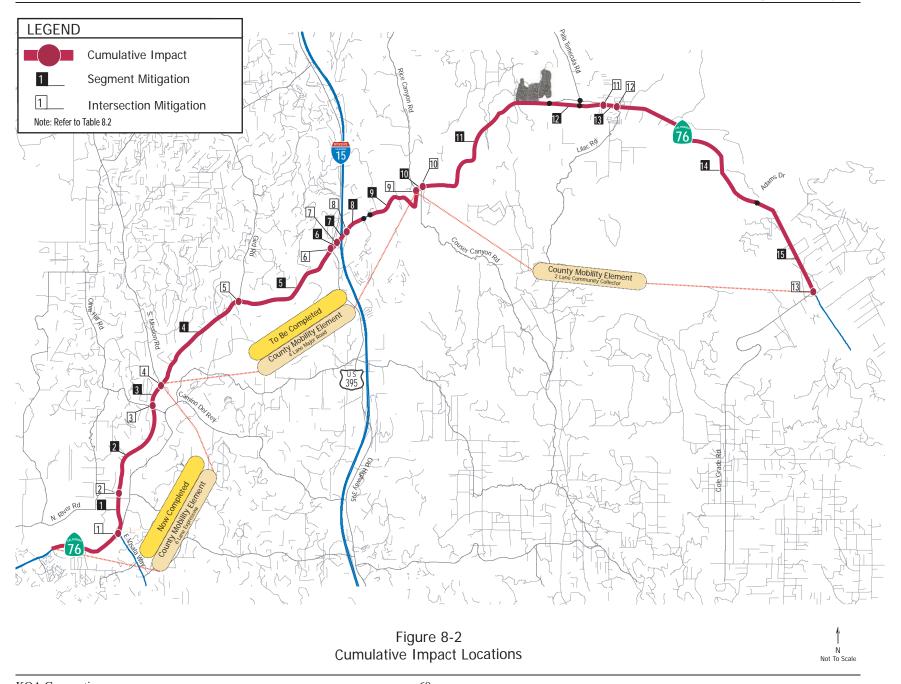


Figure 8-1 Direct Impact Locations



## CHAPTER 9 SUMMARY OF ANALYSIS

This chapter summarizes the operations at the study intersections and segments. Table 9-1 shows the summary of roadway segment conditions for each scenario, while Tables 9-2 and 9-3 show the summary of segment conditions after mitigation. Tables 9-4 and 9-5 show the summary of intersection conditions for each scenario, while Tables 9-6 and 9-7 shows the summary of intersection conditions after mitigation. Analysis worksheets for the mitigated scenarios are included in Appendix I.

Table 9-1 Summary of Roadway Segment Conditions

Roadway Segment	Exis	sting	Existing	+ Project		ting + ulative	Exist Cumul Pro	ative +	Adopted General Plan		Adopted General Plan With Project	
	V/C	LOS	V/C	LOS	V/C	LOS	V/C	LOS	V/C	LOS	V/C	LOS
State Route 76												
E. Vista Way to N. River Road	1.258	F	1.275	F	2.476	F	2.494	F	0.830	D	0.837	D
N. River Road to Camino Del Rey	1.735	F	1.759	F	2.921	F	2.945	F	0.995	E	1.005	F
Camino Del Rey to S. Mission Road	1.717	F	1.743	F	3.186	F	3.212	F	1.063	F	1.073	F
S. Mission Road to Gird Road	1.168	F	1.199	F	2.133	F	2.164	F	1.132	F	1.151	F
Gird Road to Old Hwy 395	1.039	F	1.073	F	1.870	F	1.905	F	0.925	E	0.946	E
Old Hwy 395 to I-15 SB Ramp	0.860	D	0.885	D	1.226	F	1.251	F	0.987	Е	1.010	F
I-15 SB Ramp to I-15 NB Ramp	0.845	Е	0.925	Е	1.476	F	1.556	F	0.786	С	0.834	D
I-15 NB Ramp to Pankey Road	0.298	Α	0.373	А	0.833	D	0.907	E	0.734	С	0.807	D
Pankey Road to Horse Ranch Creek Road	0.298	Α	0.389	Α	0.796	С	0.886	D	0.673	С	0.762	С
Horse Ranch Creek Road to Rice Canyon Road	0.482	С	0.663	D	1.282	F	1.463	F	0.821	D	0.931	E
Rice Canyon Road to Couser Canyon Road	0.482	С	0.679	D	1.280	F	1.477	F	0.841	D	0.961	E
Couser Canyon Road to W. Pala Mission Road	0.446	С	0.650	D	1.282	F	1.486	F	1.111	F	1.311	F
W. Pala Mission Road to E. Pala Mission Road	0.451	С	0.478	С	1.003	F	1.030	F	0.982	Е	1.008	F
E. Pala Mission Road to Lilac Road	0.385	С	0.412	С	1.105	F	1.131	F	0.764	Е	0.790	Е
Lilac Road to Adams Drive	0.413	С	0.430	С	1.092	F	1.109	F	0.585	С	0.602	С
Adams Drive to Cole Grade Road	0.397	С	0.413	С	1.048	F	1.064	F	0.734	E	0.750	E
W. Pala Mission Road												
State Route 76 and Pala Temecula Road	0.291	С	0.366	С	0.370	С	0.445	D	0.236	В	0.309	С
Pala Temecula Road												
Pala Mission Road to Trujillo Road	0.513	D	0.572	D	0.606	D	0.664	D	0.361	С	0.410	С

Table 9-2 Summary of Mitigated Roadway Segments – Existing Plus Project Conditions

Doodway Sagment	Mitigated	LOS E	Existing			Existing	+ Project + N	litigation	Mitigated2
Roadway Segment	Lanes/ Class	Lanes/ Class Capacity		V/C	LOS	ADT	V/C	LOS	Mitigated?
State Route 76									
E. Vista Way to N. River Road	4MR	37,000	28,805	1.258	F	29,207	0.789	С	Yes
N River Road to Camino Del Rey	4MR	37,000	39,736	1.735	F	40,274	1.088	F	Yes
Camino Del Rey to S. Mission Road	4MR	37,000	39,316	1.717	F	39,922	1.079	F	Yes
S. Mission Road to Gird Road	4MR	37,000	26,752	1.168	F	27,448	0.742	С	Yes
Gird Road to Old Hwy 395	4MR	37,000	23,789	1.039	F	24,577	0.664	В	Yes
I-15 SB Ramp to I-15 NB Ramp	4MR	37,000	19,359	0.845	Е	21,176	0.572	В	Yes

Note: 4MR: 4-lane Major Road

Table 9-3
Summary of Mitigated Roadway Segments – Cumulative Conditions

Roadway Segment	Mitigated <sup>1</sup> Lanes/ Class	LOS E	Existing + Cumulative			Exist + Pro	Mitigated?			
	Lanes/ Class	Capacity	ADT	V/C	LOS	ADT	V/C	LOS	7	
State Route 76										
E. Vista Way to N. River Road	4MR	37,000	56,706	2.476	F	57,108	1.543	F	No <sup>2</sup>	
N. River Road to Camino Del Rey	4MR	37,000	66,900	2.921	F	67,438	1.823	F	No <sup>2</sup>	
Camino Del Rey to S. Mission Road	4MR	37,000	72,950	3.186	F	73,556	1.988	F	No <sup>2</sup>	
S. Mission Road to Gird Road	4MR	37,000	48,854	2.133	F	49,550	1.339	F	Yes <sup>3</sup>	
Gird Road to Old Hwy 395	4MR	37,000	42,830	1.870	F	43,618	1.179	F	Yes <sup>3</sup>	
Old Hwy 395 to I-15 SB Ramp	4MR	37,000	41,913	1.226	F	42,785	1.156	F	Yes <sup>3</sup>	
I-15 SB Ramp to I-15 NB Ramp	4MR	37,000	33,810	1.476	F	35,627	0.963	Е	Yes <sup>4</sup>	
I-15 NB Ramp to Pankey Road	4MR	37,000	30,811	0.833	D	33,575	0.907	Е	Yes	
Horse Ranch Creek Road to Rice Canyon Road	4MR	37,000	29,361	1.282	F	33,509	0.906	Е	Yes	
Rice Canyon Road to Couser Canyon Road	4MR	37,000	29,308	1.280	F	33,820	0.914	Е	Yes	

<sup>&</sup>lt;sup>1</sup>.Note: 4MR: 4-lane Major; 2SR: 2-lane state route

<sup>&</sup>lt;sup>2</sup> Note: Funding for 6 lanes is not identified.

<sup>&</sup>lt;sup>3</sup>. Note: Underdesirable LOS levels for this facility have been anticipated and accepted in the Mobility Element.

<sup>&</sup>lt;sup>4</sup> Note: A substantial contribution to the cost of improvements has been identified at this location.

Table 9-4 Summary of Intersection Conditions AM Peak Hour

Intersection	Exist	ting	Existi Proj	•	Existi Cumul		Existir Cumula Proje	tive +
	Delay	LOS	Delay	LOS	Delay	LOS	Delay	LOS
AM Peak Hour								
1. SR 76 / E. Vista Way	84.1	F	88.1	F	252.1	F	256.6	F
2. SR 76/N. River Road	21.1	С	22.3	С	220.3	F	226.7	F
3. SR 76/Olive Hill Road/Camino Del Rey	36.7	D	38.1	D	136.4	F	139.3	F
4. SR 76/ S. Mission Road	28.8	С	29.0	С	184.9	F	188.9	F
5. SR 76/ Gird Road	13.4	В	13.5	В	165.7	F	173.4	F
6. Old Highway 395 / SR 76	31.1	С	31.3	С	160.4	F	162.7	F
7. I-15 / SR 76 SB Ramp	31.1	С	44.2	D	197.6	F	221.1	F
8. I-15 / SR 76 NB Ramp	23.6	С	28.4	С	95.8	F	127.7	F
9. SR 76 / Pankey Road	10.7	В	14.6	В	21.0	С	22.0	С
10. SR 76 / Horse Ranch Creek Road	N/A	N/A	N/A	N/A	17.9	В	18.2	В
11. SR 76 / Rice Canyon Road	11.2	В	16.0	С	114.7	F	465.8	F
12. SR 76 / Couser Canyon Road	12.3	В	17.4	С	69.3	F	232.7	F
13. SR 76/Driveway	0.5	Α	18.8	В	1.6	Α	17.8	В
14. SR 76 / W. Pala Mission Road	26.4	С	28.5	С	23.9	С	25.3	С
15. Pala Mission Rd./ Pala Temecula Road	9.7	Α	10.4	В	13.3	В	15.2	С
16. SR 76 / Brittian Road	9.1	Α	9.2	Α	10.8	В	11.0	В
17. SR 76/ E. Pala Missions Road	12.5	В	13.2	В	34.0	D	39.5	Е
18. SR 76/ Lilac Road	11.8	В	12.3	В	25.8	D	28.5	D
19. SR 76 / Adams Drive	10.1	В	10.2	В	13.9	В	14.2	В
20. SR 76 / Cole Grade Road	17.0	С	17.5	С	287.0	F	307.2	F

Table 9-5 Summary of Intersection Conditions PM Peak Hour

Intersection	Existing		Existing + Project		Existing + Cumulative		Existing + Cumulative + Project	
	Delay	LOS	Delay	LOS	Delay	LOS	Delay	LOS
PM Peak Hour								
1. SR 76 / E. Vista Way	68.7	Ε	71.9	Е	248.2	F	253.9	F
2. SR 76/N. River Road	34.5	С	37.0	D	310.1	F	318.4	F
3. SR 76/Olive Hill Road/Camino Del Rey	40.7	D	42.6	D	206.5	F	211.1	F
4. SR 76/ S. Mission Road	31.9	С	34.1	С	283.8	F	290.7	F
5. SR 76/ Gird Road	11.6	В	12.0	В	241.7	F	251.7	F
6. Old Highway 395 / SR 76	30.8	С	31.3	С	240.0	F	246.5	F
7. I-15 / SR 76 SB Ramp	58.8	Ε	74.6	Е	335.5	F	357.9	F
8. I-15 / SR 76 NB Ramp	51.1	D	60.1	E	240.0	F	272.9	F
9. SR 76 / Pankey Road	11.1	В	19.8	С	29.1	С	33.2	С
10. SR 76 / Horse Ranch Creek Road	N/A	N/A	N/A	N/A	18.7	В	19.7	В
11. SR 76 / Rice Canyon Road	13.3	В	26.7	D	531.2	F	Overflow	F
12. SR 76 / Couser Canyon Road	14.8	В	23.9	С	297.6	F	933.8	F
13. SR 76/Driveway	0.5	Α	11.5	В	2.3	Α	19.3	В
14. SR 76 / W. Pala Mission Road	27.6	С	32.2	С	25.0	С	35.5	D
15. Pala Mission Rd./ Pala Temecula Road	11.2	В	12.7	В	17.3	С	22.5	С
16. SR 76 / Brittian Road	10.1	В	10.5	В	19.3	С	20.5	С
17. SR 76/ E. Pala Missions Road	16.7	С	18.4	С	512.9	F	600.1	F
18. SR 76/ Lilac Road	13.1	В	15.7	С	93.0	F	167.6	F
19. SR 76 / Adams Drive	13.4	В	13.8	В	32.3	D	33.9	D
20. SR 76 / Cole Grade Road	17.9	С	18.5	С	967.0	F	Overflow	F

Table 9-6
Summary of Mitigated Intersections – Existing Plus Project Conditions

Intersection	Existing		Existing + Project		Existing + Miti	Fully Mitigated?	
	Delay	LOS	Delay	LOS	Delay	LOS	wiitigateu?
AM Peak Hour							
1. SR 76 / E. Vista Way	84.1	F	88.1	F	39.2	D	Yes
PM Peak Hour							
1. SR 76 / E. Vista Way	68.7	E	71.9	E	44.9	D	Yes
7. I-15 / SR 76 SB Ramp	58.8	E	74.6	E	27.5	С	Yes
8. I-15 / SR 76 NB Ramp	51.1	D	60.1	Е	27.9	С	Yes

**Table 9-7 Summary of Mitigated Intersections – Cumulative Conditions** 

Intersection	Existing		Existing + Cumulative + Project		Existing + Cumulative + Project + Mitigation		Fully Mitigated?	
	Delay	LOS	Delay	LOS	Delay	LOS		
AM Peak Hour								
1. SR 76 / E. Vista Way	252.1	F	256.6	F	57.8	E	No <sup>1</sup>	
2. SR 76/N. River Road	220.3	F	226.7	F	27.5	С	Yes	
3. SR 76/Olive Hill Road/Camino Del Rey	136.4	F	139.3	F	61.2	E	No <sup>1</sup>	
4. SR 76/ S. Mission Road	184.9	F	188.9	F	70.1	Е	Yes <sup>2</sup>	
5. SR 76/ Gird Road	165.7	F	173.4	F	26.1	С	Yes	
6. Old Highway 395 / SR 76	160.4	F	162.7	F	32.5	С	Yes	
7. I-15 / SR 76 SB Ramp	197.6	F	221.1	F	42.3	D	Yes	
8. I-15 / SR 76 NB Ramp	95.8	F	127.7	F	26.1	С	Yes	
11. SR 76 / Rice Canyon Road	114.7	F	465.8	F	14.6	В	Yes	
12. SR 76 / Couser Canyon Road	25.8	D	28.5	D	13.4	В	Yes	
20. SR 76 / Cole Grade Road	287.0	F	307.2	F	19.7	В	Yes	
PM Peak Hour								
1. SR 76 / E. Vista Way	248.2	F	253.9	F	106.9	F	No <sup>1</sup>	
2. SR 76/N. River Road	310.1	F	318.4	F	57.8	Е	No <sup>1</sup>	
3. SR 76/Olive Hill Road/Camino Del Rey	206.5	F	211.1	F	105.7	F	No <sup>1</sup>	
4. SR 76/ S. Mission Road	283.8	F	290.7	F	52.3	D	Yes	
5. SR 76/ Gird Road	241.7	F	251.7	F	24.1	С	Yes	
6. Old Highway 395 / SR 76	240.0	F	246.5	F	39.9	D	Yes	
7. I-15 / SR 76 SB Ramp	335.5	F	357.9	F	79.0	Е	Yes <sup>3</sup>	
8. I-15 / SR 76 NB Ramp	240.0	F	272.9	F	45.5	D	Yes <sup>3</sup>	
11. SR 76 / Rice Canyon Road	531.2	F	Overflow	F	11.8	В	Yes	
12. SR 76 / Couser Canyon Road	297.6	F	933.8	F	23.9	С	Yes	
20. SR 76 / Cole Grade Road	967.0	F	Overflow	F	16.3	В	Yes	

<sup>&</sup>lt;sup>1</sup>Funding for 6 lanes has not been identified.

<sup>2</sup>Unacceptable LOS has previously been identified and accepted.

<sup>3</sup> A substantial contribution to the cost of improvements has been identified for the interchange.

Warner Ranch Recommendations

# CHAPTER 10 RECOMMENDATIONS

The proposed project consists of 534 single-family detached homes, 246 multi-family condominiums, a small park and a fire station. Based on the preceding analysis of this project we recommend the mitigation measures and fair share contributions described in Chapter 8.

## Prepared By:

J. Arnold Torma, PE - Principal Engineer Rogelio Pelayo - Senior Transportation Planner

## APPENDIX A

# LEVEL OF SERVICE CONCEPTS, ANALYSIS METHODOLOGIES, STANDARDS OF SIGNIFICANCE

## Roadway Segment Level of Service Definitions

LOS	V/C	Congestion/Delay	Traffic Description
(Used for surface stre	eets, freeways, expressways an	d conventional highways)	
"A"	<u>&lt;</u> 0.41	None	Free flow.
"B"	>0.41-0.62	None	Free to stable flow, light to moderate volumes.
"C"	>0.62-0.80	None to minimal	Stable flow, moderate volumes, freedom to maneuver noticeably restricted.
"D"	>0.80-0.92	Minimal to substantial	Approaches unstable flow, heavy volumes, very limited freedom to maneuver.
"E"	>0.92-1.00	Significant	Extremely unstable flow, maneuverability and psychological comfort extremely poor.
(Used for surface stre	eets and conventional highways	)	
"F"	>1.00	Considerable	Forced or breakdown flow. Delay measured in average travel speed (MPH). Signalized segments experience delays >60.0 seconds/vehicle.
(Used for freeways a	nd expressways)		
"F(0)"	>1.00-1.25	Considerable 0-1 hour delay	Forced flow, heavy congestion, long queues form behind breakdown points, stop and go.
"F(1)"	>1.25-1.35	Severe 1-2 hour delay	Very heavy congestion, very long queues.
"F(2)"	>1.35-1.45	Very Severe 2-3 hour delay	Extremely heavy congestion, longer queues, more numerous breakdown points, longer stop periods.
"F(3)"	>1.45	Extremely Severe 3+ hours of delay	Gridlock

Source: Caltrans, 1992.

## LEVEL OF SERVICE (LOS) DEFINITIONS

The concept of LOS is defined as a qualitative measure describing operational conditions within a traffic stream, and the motorist's and/or passengers' perception of operations. A LOS definition generally describes these conditions in terms of such factors as speed, travel time, freedom to maneuver, comfort, convenience, and safety. Levels of service for freeway segments can generally be categorized as shown in the table above.

## San Diego County Roadway Classifications, Levels of Service (LOS) and Average Daily Traffic (ADT)

		Maximum Recommended ADT by LOS								
Street Classification	Lanes	Α	В	С	D	E				
		Free flow	Steady flow	Stable flow	Approach unstable	Unstable flow				
Expressway	6	36,000	54,000	70,000	86,000	108,000				
Prime	6	22,200	37,000	44,600	50,000	57,000				
Major	4	14,800	24,700	29,600	33,400	37,000				
Collector	4	13,700	22,800	27,400	30,800	34,200				
Town Collector	2	3,000	6,000	9,500	13,500	19,000				
Collector	2	1,900	4,100	7,100	10,900	16,200				
State Route <sup>1</sup>	2			14,400	16,200	22,900				
State Route w/LTL <sup>2</sup>	2			17,000	18,800	25,500				

<sup>&</sup>lt;sup>1</sup> Refer to Guidelines for Determining Significance: Section 4.3.1 (Table 3) Signalized Intersection Spacing Over One Mile for LOS Criteria

<sup>&</sup>lt;sup>2</sup> The capacity of the 2SR w/ LTL is determined by adding the additional capacity of a collector series road with left turn lanes to the State Route base capacity.

## Signalized Intersection Level of Service Highway Capacity Manual Operational Analysis Method

The operational analysis method for evaluation of signalized intersections presented in the 2000 Highway Capacity Manual (Transportation Research Board Special Report 209) defines level of service in terms of delay, or more specifically, control stopped delay per vehicle. Delay is a measure of driver and/or passenger discomfort, frustration, fuel consumption, and lost travel time.

Control Stopped Delay Per Vehicle (seconds)	Level of Service (LOS) Characteristics
<10	LOS A describes operations with very low delay. This occurs when progression is extremely favorable, and most vehicles do not stop at all. Short cycle lengths may also contribute to low delay.
>10 – 20	LOS B describes operations with generally good progression and/or short cycle lengths. More vehicles stop than for LOS A, causing higher levels of average delay.
>20 – 35	LOS C describes operations with higher delays, which may result from fair progression and/or longer cycle lengths. Individual cycle failures may begin to appear at this level. The number of vehicles stopping is significant at this level, although many still pass through the intersection without stopping.
>35 – 55	LOS D describes operations with high delay, resulting from some combination of unfavorable progression, long cycle lengths, or high volumes. The influence of congestion becomes more noticeable, and individual cycle failures are noticeable.
>55 – 80	LOS E is considered to be the limit of acceptable delay. Individual cycle failures are frequent occurrences.
>80	LOS F describes a condition of excessively high delay, considered unacceptable to most drivers. This condition often occurs when arrival flow rates exceed the capacity of the intersection. Poor progression and long cycle lengths may also be major contributing causes to such delay.

Source: Highway Capacity Manual 2000, Exhibit 16-2

## MINOR STREET STOP AND ALL-WAY STOP CONTROLLED INTERSECTION LEVEL OF SERVICE HIGHWAY CAPACITY MANUAL OPERATIONAL ANALYSIS METHOD

The Highway Capacity Manual (HCM) analysis method for evaluating minor street stop intersections is based on the average total delay for each impeded movement. For all-way stop controlled intersections it is based on the average total delay for the entire intersection. As used here, total delay is defined as the total elapsed time from when a when a vehicle stops at the end of a queue until the vehicle departs from the stop line; this time includes the time required for the vehicle to travel from the last-in-queue to the first-in-queue position. The average total delay for any particular minor movement is a function of the service rate or capacity of the approach and the degree of saturation. The resulting delay is used to determine the level of service as shown in the following table.

Average Total Delay	Level of Service (LOS) Characteristics
0-10	LOS A – Little or no delay
>10 – 15	LOS B – Short traffic delay
>15 – 25	LOS C – Average traffic delay
>25 – 35	LOS D – Long traffic delays
>35 – 50	LOS E – Very long traffic delays
>50	LOS F – When the demand exceeds the capacity of the lane, extreme delays will be encountered and
	queuing may cause severe congestion to the intersection.

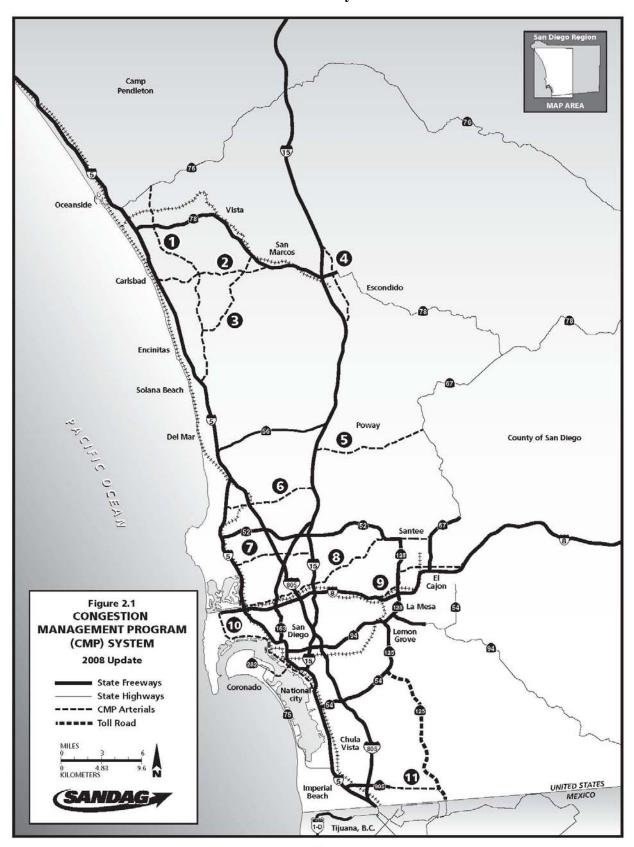
Source: Highway Capacity Manual 2000, Exhibit 17-22

## County of San Diego Measure of Significant Project Impacts

Roadway			ncrease on Segments		Intersection	Allowable Increase at Congested Intersections			
Segment LOS	2-Lane Road	4-Lane Road	6-Lane Road	2-Lane Highway	LOS	Signalized	Unsignalized		
LOS E	200 ADT	400 ADT	600 ADT	325 ADT	LOS E	Delay of 2 seconds	20 peak hour trips on a critical movement		
LOS F	100 ADT	200 ADT	300 ADT	225 ADT	LOS F	Delay of 1 second, or 5 peak hour trips on a critical movement	5 peak hour trips on a critical movement		

Note: A critical movement is one that is experiencing excessive queues.

## 2008 CMP Roadway Network



## Table 2.3 CMP System Roadways

#### CMP Freeways:

Interstate 5 (I-5): Orange County Line to United States/Mexico Border

Interstate 8: Nimitz Boulevard to Imperial County Line

Interstate 15: Riverside County Line to I-5

Interstate 805: I-5 (North) to I-5 (South)

State Route 52 (SR 52): I-5 to SR 125

State Route 54: I-5 to Briarwood Road

State Route 56: I-5 to I-15

State Route 67: Mapleview Street to I-8

State Route 78: I-5 to North Broadway

State Route 94: I-5 to Avocado Boulevard

State Route 125: SR 54 to SR 52

State Route 125: SR 905 to San Miguel Road<sup>1</sup>

State Route 163: I-15 to I-5

State Route 905: Oro Vista Road to Otay Mesa Road

#### CMP Highways:

State Route 54: SR 94 to Grove Road

State Route 67: SR 78 to Mapleview Road

State Route 75: I-5 (North) to I-5 (South)

State Route 76: Coast Highway to SR 79

State Route 78: North Broadway to Imperial County Line

State Route 79: Riverside County Line to I-8

State Route 94: Avocado Boulevard to Old Highway 80

State Route 282: Alameda Boulevard to Orange Avenue

#### CMP Arterials:

- (1) Manchester Avenue/El Camino Real: I-5 to SR 76/Mission Avenue
- (2) Palomar Airport Road/San Marcos Boulevard: I-5 to SR 78
- (3) Olivenhain Road/Rancho Santa Fe Road: El Camino Real to SR 78
- (4) Centre City Parkway: I-15 (North) to I-15 (South)
- (5) Scripps Poway Parkway: I-15 to SR 67
- (6) La Jolla Village Drive/Miramar Road: I-5 to I-15
- (7) Balboa Avenue: I-5 to I-15
- (8) Sea World Drive/Friars Road/Mission Gorge Road/Woodside Avenue: I-5 to SR 67
- (9) Fletcher Parkway/Broadway/E. Main Street: I-8 (West) to I-8 (East)
- (10) Nimitz Boulevard/North Harbor Drive/Grape Hawthorne Streets/Pacific Highway/Harbor Drive: I-8 to I-5
- (11) Otay Mesa Road-Interim State Route 905: SR 905 (West) to SR 905 (East)<sup>2</sup>

<sup>&</sup>lt;sup>1</sup> This portion of SR 125 is a privately-funded toll road that opened to traffic in November 2007. Currently, LOS data are not available.

<sup>&</sup>lt;sup>2</sup> This CMP Arterial is designated as an interim facility on the CMP network and will be replaced by a state highway following its construction.

## APPENDIX B

## MODELING INFORMATION / TRIP GENERATION

## (NOT SO)

# BRIEF GUIDE OF VEHICULAR TRAFFIC GENERATION RATES FOR THE SAN DIEGO REGION



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## APRIL 2002

NOTE: This listing only represents a *guide* of average, or estimated, traffic generation "driveway" rates and some very general trip data for land uses (emphasis on acreage and building square footage) in the San Diego region. These rates (both local and national) are subject to change as future documentation becomes available, or as regional sources are updated. For more specific information regarding traffic data and trip rates, please refer to the San Diego Traffic Generators manual. *Always check with local jurisdictions for their preferred or applicable rates*.

LAND USE	TRIP CATEGORIES [PRIMARY:DIVERTED:PASS-BY] <sup>P</sup>	ESTIMATED WEEKDAY VEHICLE TRIP GENERATION RATE (DRIVEWAY)			R % (plus IN:OUT ratio)  1. Between 3:00-6:30 P.M.		TRIP LENGTH (Miles) <sup>L</sup>	
AGRICULTURE (Open S	pace)[80:18:2]	2/acre**					10.8	
AIRPORT	[78:20:2]						12.5	
Commercial	[/0.20.2]	60/acre, 100/flight, 70/1000 sq. ft.* **	5%	(6:4)	6%	(5:5)	12.5	
General Aviation Heliports		6/acre, 2/flight, 6/based aircraft* ** 100/acre**	9%	(7:3)	15%	(5:5)		
AUTOMOBILES								
Car Wash		000/site / 00/s are tit	407	/F.F\	m/	/E.E)		
Automatic Self-serve		900/site, 600/acre** 100/wash stall**	4% 4%	(5:5) (5:5)	9% 8%	(5:5) (5:5)		
	[21:51:28]	4404 444 6 11	<b></b> 0.				2.8	
with/Food Mart with/Food Mart & C	`ar Wash	160/vehicle fueling space** 155/vehicle fueling space**	7% 8%	(5:5) (5:5)	8% 9%	(5:5) (5:5)		
Older Service Station	n Design	150/vehicle fueling space, 900/station**	7%	(5:5)	9%	(5:5)		
Sales (Dealer & Repair) Auto Repair Center	)	50/1000 sq. ft., 300/acre, 60/service stall* ** 20/1000 sq. ft., 400/acre, 20/service stall*	5% 8%	(7:3) (7:3)	8% 11%	(4:6) (4:6)		
Auto Parts Sales		60/1000 sq. ft. **	4%	(7.3)	10%	(4.0)		
Quick Lube		40/service stall**	7%	(6:4)	10%	(5:5)		
Tire Store		25/1000 sq. ft., 30/service stall**	7%	(6:4)	11%	(5:5)		
CEMETERY		5/acre*						
CHURCH (or Synagogue)	) [64:25:11]	9/1000 sq. ft., 30/acre** (quadruple rates for Sunday, or days of assembly)	5%	(6:4)	8%	(5:5)	5.1	
COMMERCIAL/RETAILS	oing Contor	35/1000 sq. ft., <sup>c</sup> 400/acre*	4%	(7:3)	10%	(5:5)		
Super Regional Shopp (More than 80 acre		35/1000 Sq. 1t.,- 400/acre	470	(7.3)	10%	(5.5)		
800,000 sq. ft., w/								
major stores) Regional Shopping Ce	enter[54:35:11]	50/1000 sq. ft., <sup>c</sup> 500/acre*	4%	(7:3)	9%	(5:5)	5.2	
(40-80acres, 400,0	000-800,000	55,1555 54,107, 555,550		(1.1-)		(= - = )		
sq. ft., w/usually 2+	major stores) Center[47:31:22]	80/1000 sq. ft., 700/acre* **	4%	(6:4)	10%	(5:5)	3.6	
(15-40 acres, 125,0	000-400,000 sq. ft.,	007.000 047.117 70074010		(0.1)	.070	(0.0)	0.0	
w/usually 1 major st restaurant(s), grocer								
Neighborhood Shopping	ig Center	120/1000 sq. ft., 1200/acre* **	4%	(6:4)	10%	(5:5)		
(Less than 15 acres	s, less than	·						
125,000 sq. ft., w/ & drugstore, cleaner	/usually_grocery rs, beauty & barber shop,							
& fast food services)	)							
Commercial Shops Specialty Retail/Strip	[45:40:15]	40/1000 sq. ft., 400/acre*	3%	(6:4)	9%	(5:5)	4.3	
Electronics Superstor		50/1000 sq. ft**	3/0	(0.4)	10%	(5:5)	4.5	
Factory Outlet		40/1000 sq. ft. 2000/sers * * *	3%	(7:3)	9% 10%	(5:5)		
Supermarket Drugstore		150/1000 sq. ft., 2000/acre* ** 90/1000 sq. ft.**	4% 4%	(7:3) (6:4)	10% 10%	(5:5) (5:5)		
Convenience Market		500/1000 sq. ft. * *	8%	(5:5)	8%	(5:5)		
Convenience Market	: (24 hours) t (w/gasoline pumps)	700/1000 sq. ft. ** 850/1000 sq. ft., 550/vehicle fueling space **	9% 6%	(5:5) (5:5)	7% 7%	(5:5) (5:5)		
Discount Club	(mgasemie pampe)	60/1000 sq. ft., 600/acre* **	1%	(7:3)	9%	(5.5)		
Discount Store Furniture Store		60/1000 sq. ft., 600/acre** 6/1000 sq. ft., 100/acre**	3% 4%	(6:4) (7:3)	8% 9%	(5:5) (5:5)		
Lumber Store		30/1000 sq. ft., 150/acre**	7%	(6:4)	9%	(5:5)		
Home Improvement S		40/1000 sq. ft. **	5%	(6:4)	8%	(5:5)		
Hardware/Paint Stor Garden Nursery	e	60/1000 sq. ft., 600/acre** 40/1000 sq. ft., 90/acre**	2% 3%	(6:4) (6:4)	9% 10%	(5:5) (5:5)		
Mixed Use: Commercia	al (w/supermarket)/Residential	110/1000 sq. ft., 2000/acre* (commercial only)	3%	(6:4)	9%	(5:5)		
		5/dwelling unit, 200/acre* (residential only)	9%	(3:7)	13%	(6:4)		
EDUCATION	104.0.01	2 Alabadant 100 comit	4001	(0, 0)	<b>~</b> .	(2.7)	2.2	
University (4 years) Junior College (2 year	[91:9:0] rs)[92:7:1]	2.4/student, 100 acre* 1.2/student, 24/1000 sq. ft., 120/acre* **	10% 12%	(8:2) (8:2)	9% 9%	(3:7) (6:4)	8.9 9.0	
High School	[75:19:6]	1.3/student, 15/1000 sq. ft., 60/acre* **	20%	(7:3)	10%	(4:6)	4.8	
Middle/Junior High	[63:25:12] [57:25:10]	1.4/student, 12/1000 sq. ft. 50/acre** 1.6/student, 14/1000 sq. ft., 90/acre* **	30% 32%	(6:4) (6:4)	9% 9%	(4:6) (4:6)	5.0 3.4	
Day Care	[37.23.10]	5/child, 80/1000 sq. ft.**	17%	(5:5)	18%	(5:5)	3.7	
	[35:42:23]						3.4	
Bank (Walk-In only)	[55.12.25]	150/1000 sq. ft., 1000/acre* **	4%	(7:3)	8%	(4:6)	J. 1	
with Drive-Through Drive-Through only		200/1000 sq. ft., 1500/acre* 250 (125 one-way)/lane*	5% 3%	(6:4) (5:5)	10% 13%	(5:5) (5:5)		
Savings & Loan		60/1000 sq. ft., 600/acre**	2%	(3.3)	9%	(5.5)		
Drive-Through only		100 (50 one-way)/lane**	4%		15%			
	[73:25:2]						8.3	
General Convalescent/Nursing		20/bed, 25/1000 sq. ft., 250/acre* 3/bed**	8% 7%	(7:3) (6:4)	10% <i>7</i> %	(4:6) (4:6)		
INDUSTRIAL								
	k (commercial included) [79:19:2]	16/1000 sq. ft., 200/acre* **	12%	(8:2)	12%	(2:8)	9.0	
Industrial Park (no comma Industrial Plant (multiple	mercial) e shifts)[92:5:3]	8/1000 sq. ft., 90/acre** 10/1000 sq. ft., 120/acre*	11% 14%	(9:1) (8:2)	12% 15%	(2:8) (3:7)	11.7	
Manufacturing/Assemb		4/1000 sq. ft., 50/acre**	19%	(9:1)	20%	(2:8)		
Warehousing Storage		5/1000 sq. ft., 60/acre** 2/1000 sq. ft., 0.2/vault, 30/acre*	13% <i>6</i> %	(7:3) (5:5)	15% 9%	(4:6) (5:5)		
Science Research & D		8/1000 sq. ft., 80/acre*	16%	(9:1)	14%	(1:9)		
Landfill & Recycling C	Center	6/acre	11%	(5:5)	10%	(4:6)		
		(OVER)						

LAND USE	TRIP CATEGORIES [PRIMARY:DIVERTED:PASS-BY] <sup>P</sup>	ESTIMATED WEEKDAY VEHICLE TRIP GENERATION RATE (DRIVEWAY)	HIGHEST F Between 6:0	TRIP LENGTH (Miles) <sup>L</sup>			
LIBRARY	[44:44:12]	50/1000 sq. ft., 400/acre**	2%	(7:3)	10%	(5:5)	3.9
LODGING Hotel (w/convention facilit Motel Resort Hotel	[58:38:4] ties/restaurant)	10/occupied room, 300/acre 9/occupied room, 200/acre* 8/occupied room, 100/acre*	6% 8% 5%	(6:4) (4:6) (6:4)	8% 9% 7%	(6:4) (6:4) (4:6)	7.6
Business Hotel	[82:16:2]	7/occupied room**	8%	(4:6)	9%	(6:4)	11.0
	[62.10.2]	2.5/military & civilian personnel*	9%	(9:1)	10%	(2:8)	11.2
OFFICE Standard Commercial C (less than 100,000 s	Office[77:19:4] sq. ft.)	20/1000 sq. ft., ° 300/acre*	14%	(9:1)	13%	(2:8)	8.8
Large (High-Rise) Comn (more than 100,000	nercial Office [82:15:3] sq. ft., 6+ stories)	17/1000 sq. ft., <sup>o</sup> 600/acre*	13%	(9:1)	14%	(2:8)	10.0
Office Park (400,000+ Single Tenant Office	- sq. ft.)	12/1000 sq.ft., 200/acre* ** 14/1000 sq. ft., 180/acre*	13% 15%	(9:1) (9:1)	13% 15%	(2:8) (2:8)	8.8
Corporate Headquarte	ers nter)[50:34:16]	7/1000 sq. ft., 110/acre* 30/1000 sq. ft.**	17% 9%	(9:1) (9:1)	16% 12%	(1:9) (3:7)	6.0
Post Office	,	•		(9.1)		(3.7)	0.0
Central/Walk-In Or Community (not inc	nly cluding mail drop lane)	90/1000 sq. ft.** 200/1000 sq. ft., 1300/acre*	5% <i>6</i> %	(6:4)	7% 9%	(5:5)	
Community (w/mai		300/1000 sq. ft., 2000/acre*	7%	(5:5)	10%	(5:5)	
Mail Drop Lane or Department of Moto	r Vehicles	1500 (750 one-way)/lane* 180/1000 sq. ft., 900/acre**	7% 6%	(5:5) (6:4)	12% 10%	(5:5) (4:6)	
Medical-Dental	[60:30:10]	50/1000 sq. ft., 500/acre*	6%	(8:2)	11%	(3:7)	6.4
PARKS	[66:28:6]	F0/2*	4%	(F. F.)	8%	/F F)	5.4
Regional (developed)	eting rooms and sports facilities)	50/acre* 20/acre*	13%	(5:5)	9%	(5:5)	
Neighborhood/County ( State (average 1000 ac		5/acre (add for specific sport uses), 6/picnic site* ** 1/acre, 10/picnic site**					
Amusement (Theme)	ores)	80/acre, 130/acre (summer only)**			6%	(6:4)	
San Diego Zoo Sea World		115/acre* 80/acre*					
RECREATION							
Beach, Ocean or Bay	[52:39:9]	600/1000 ft. shoreline, 60/acre*					6.3
Beach, Lake (fresh wate Bowling Center	er)	50/1000 ft. shoreline, 5/acre* 30/1000 sq. ft., 300/acre, 30/lane **	7%	(7:3)	11%	(4:6)	
Campground		4/campsite**	4%	(7.5)	8%	(4.0)	
Golf Course  Driving Range only		7/acre, 40/hole, 700/course* ** 70/acre, 14/tee box*	7% 3%	(8:2) (7:3)	9% 9%	(3:7) (5:5)	
Marinas		4/berth, 20/acre* **	3%	(3:7)	7%	(6:4)	
Multi-purpose (miniatu Racquetball/Health Cl	re golf, video arcade, batting cage, etc.)	90/acre 30/1000 sq. ft., 300/acre, 40/court*	2% 4%	(6:4)	6% 9%	(6:4)	
Tennis Courts	idb	16/acre, 30/court**	5%	(0.4)	11%	(5:5)	
Sports Facilities Outdoor Stadium		50/acre, 0.2/seat*					
Indoor Arena		30/acre, 0.1/seat*					
Racetrack Theaters (multiplex w/r	matinee) [66:17:17]	40/acre, 0.6 seat* 80/1000 sq. ft., 1.8/seat, 360/screen*	1/3%		8%	(6:4)	6.1
	[86:11:3]	33, 1000 34, 11., 1.0/3841, 000/38/38/	,,		3,0	(0.1)	7.9
Estate, Urban or Rural		12/dwelling unit *R	8%	(3:7)	10%	(7:3)	7.9
(average 1-2 DU/acr Single Family Detached		10/dwelling unit *R	8%	(3:7)	10%	(7:3)	
(average 3-6 DU/acr							
Condominium (or any multi-family o	6-20 DU/acre)	8/dwelling unit *R	8%	(2:8)	10%	(7:3)	
Apartment	units more than 20 DU/acre)	6/dwelling unit *R	8%	(2:8)	9%	(7:3)	
Military Housing (off-ba	se, multi-family)						
(less than 6 DU/acre (6-20 DU/acre)	e)	8/dwelling unit 6/dwelling unit	7% 7%	(3:7) (3:7)	9% 9%	(6:4) (6:4)	
Mobile Home		Ç					
Family Adults Only		5/dwelling unit, 40/acre* 3/dwelling unit, 20/acre*	8% 9%	(3:7) (3:7)	11% 10%	(6:4) (6:4)	
Retirement Community		4/dwellingunit**	5%	(4:6)	7%	(6:4)	
Congregate Care Facil		2.5/dwelling unit**	4%	(6:4)	8%	(5:5)	
RESTAURANT <sup>S</sup>	[51:37:12]	100/1000 sq. ft., 3/seat, 500/acre* **	1%	(6:4)	8%	(7:3)	4.7
Sit-down, high turnover		160/1000 sq. ft., 6/seat, 1000/acre* **	8%	(5:5)	8%	(6:4)	
Fast Food (w/drive-thro Fast Food (without drive		650/1000 sq. ft., 20/seat, 3000/acre* ** 700/1000 sq. ft.**	7% 5%	(5:5) (6:4)	7% 7%	(5:5) (5:5)	
Delicatessen (7am-4pm		150/1000 sq. ft., 11/seat*	9%	(6:4)	3%	(3:7)	
TRANSPORTATION		05/4000 - 0.44					
Bus Depot Truck Terminal		25/1000 sq. ft. ** 10/1000 sq. ft., 7/bay, 80/acre**	9%	(4:6)	8%	(5:5)	
Waterport/Marine Term		170/berth, 12/acre**					
Transit Station (Light R Park & Ride Lots	kali w/parking)	300/acre, 2 <sup>1/2</sup> /parking space (4/occupied)** 400/acre (600/paved acre), 5/parking space (8/occupied)***	14% 14%	(7:3) (7:3)	15% 15%	(3:7) (3:7)	

<sup>\*</sup> Primary source: San Diego Traffic Generators.

R Fitted curve equation: t = -2.169 Ln(d) + 12.85t = trips/DU, d = density (DU/acre), DU = dwelling unit

Suggested PASS-BY [ during P.M. peak period COMMERCIAL/RE	od (based	ed or divert on combir	ed < 1 mile] percentages for trip rate reductions only nation of local data/review and Other sources **):
Regional Shopp	oing Cent	er	20%
Community	"	"	30%
Neighborhood	"	"	40%

Neignbornood
Specialty Retail/Strip Commercial (other)
Supermarket
Convenience Market
Discount Club/Store
FINANCIAL 10% 40% 50% Bank AUTOMOBILE 25% Gasoline Station RESTAURANT 50% Quality
Sit-down high turnover 10% 20% Fast Food

<sup>\*</sup> Other sources: ITE Trip Generation Report [6th Edition], Trip Generation Rates (other agencies and publications), various SANDAG & CALTRANS studies, reports and estimates.

Trip category percentage ratios are daily from local household surveys, often cannot be applied to very specific land uses, and do not include non-resident drivers (draft SANDAG *Analysis of Trip Diversion*, revised November, 1990):

PRIMARY - one trip directly between origin and primary destination.

DIVERTED - linked trip (having one or more stops along the way to a primary destination) whose distance compared to direct distance ≥ 1 mile.

PASS-BY - undiverted or diverted < 1 mile.

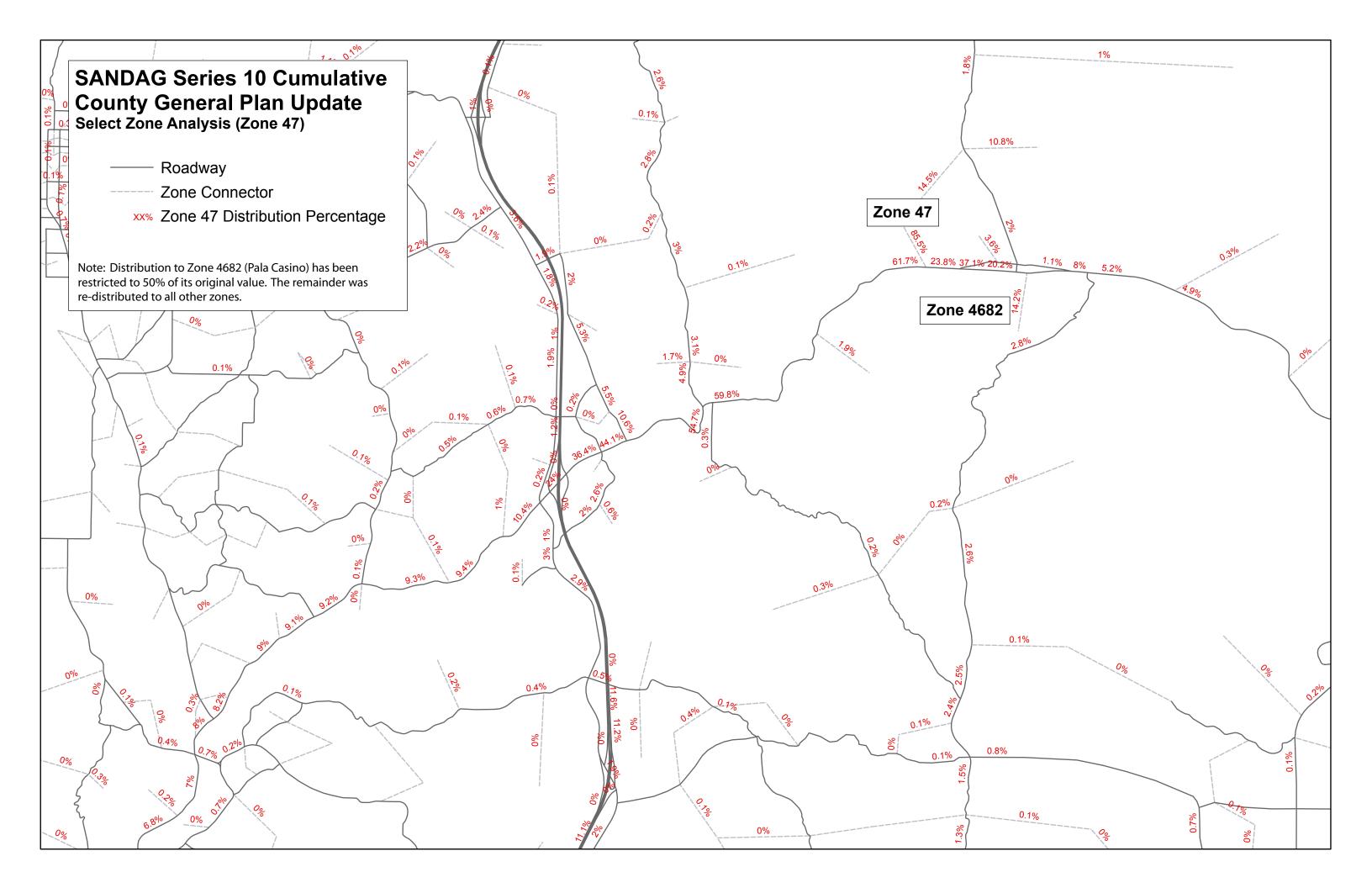
L Trip lengths are average weighted for all trips to and from general land use site. (All trips system-wide average length = 6.9 miles)

Fitted curve equation: Ln(T) = 0.502 Ln(x) + 6.945 T = total trips, x = 1,000 sq. ft. Ln(T) = 0.756 Ln(x) + 3.950 T = total trips, x = 1,000 sq. ft.

Trip Reductions - In order to help promote regional "smart growth" policies, and acknowledge San Diego's expanding mass transit system, consider vehicle trip rate reductions (with proper documentation and necessary adjustments for peak periods). The following are some examples:

<sup>[1]</sup> A 5% daily trip reduction for land uses with transit access or near transit stations accessible within 1/4 mile.

<sup>[2]</sup> Up to 10% daily trip reduction for mixed-use developments where residential and commercial retail are combined (demonstrate mode split of walking trips to replace vehicular trips).

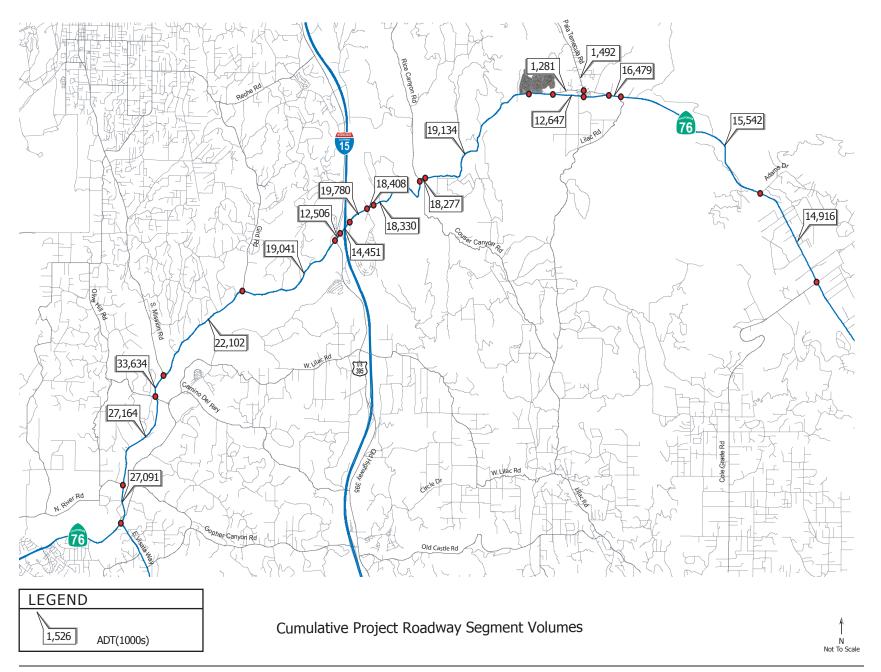


					AM Peak Hour		PM Peak Hour		ur	
Land Use	Intensity	Unit	Rate/Trips	Daily Trips	Total	ln	Out	Total	ln	Out
Single Family	534	dwelling	Rate	10	8%	30%	70%	10%	70%	30%
(3-6 DU/acre)	334	unit	Trips	5,340	428	129	300	534	374	161
Condominium	246	dwelling	Rate	8	8%	20%	80%	10%	70%	30%
(6-20 DU/acre)	240	unit	Trips	1,968	158	32	127	197	138	60
Developed Park	4.23	AC	Rate	50	13%	50%	50%	9%	50%	50%
Developed Falk	4.23	AC	Trips	212	28	14	14	20	10	10
Fire Station	1	Station	Rate	50	8%	60%	40%	10%	40%	60%
THE STATION	'	Station	Trips	50	4	3	2	5	2	3
		Proposea	Project Totals	7,570	618	178	443	756	524	234

Source: SANDAG

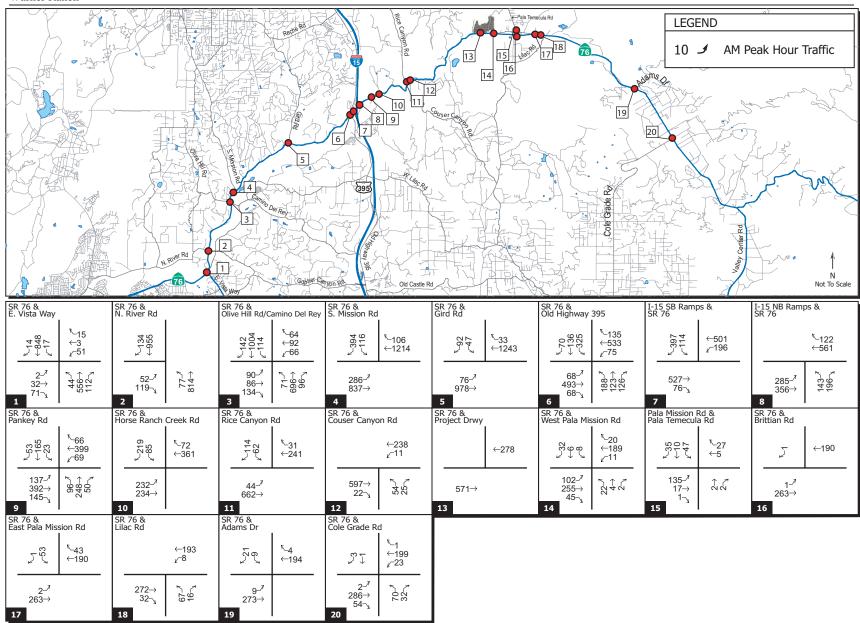
Land Use	Intensity	Unit	Rate/Trips	Daily Trips	Total	ln	Out	Total	ln	Out
Estate 100	190	dwelling	Rate	12	8%	30%	70%	10%	70%	30%
(3-6 DU/acre)	6 DU/acre)	unit	Trips	2,280	183	55	129	228	160	69
Previously Adopted General Plan				2,280	183	55	129	228	160	69
Difference (Trips Increased)				5,290	435	123	314	<i>528</i>	364	165

					AM Peak Hour			PM Peak Hour		
Land Use	Intensity	Unit	Rate/Trips	Daily Trips	Total	In	Out	Total	In	Out
Estate	12	dwelling	Rate	12	8%	30%	70%	10%	70%	30%
(3-6 DU/acre)	12	unit	Trips	144	12	4	9	15	11	5
Adopted General Plan				144	12	4	9	15	11	5
Difference (Trips Increased)				7,426	606	174	434	741	513	229



KOA Corporation October 2011

#### Warner Ranch



Cumulative Only AM Peak Hour Intersection Volumes

KOA Corporation October 2011