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January 24, 2011

To: Mr. Dennis Campbell
County of San Diego, DPLU
5201 Ruffin Road Suite B
San Diego, California 92123

From: Justin Rasas, P.E.

RE: Campus Park Project Feature Clarification for SR-76 at Pankey Road and Pankey Road at Pankey Place

The purpose of this memo is to clarify the project feature status for two study intersections in the Campus Park Traffic Impact Study (TIS) dated May 12, 2009. The intersections are SR-76 at Pankey Road (referenced as intersection #8 within the TIS) and Pankey Road at Pankey Place (intersection #29).

Table 14 from the Campus Park TIS documented NO direct impacts at SR-76/Pankey Road (intersection #8) using un-signalized intersection operations (stop control on the minor legs) and NO direct impacts at Pankey Road/Pankey Place (intersection #29) using un-signalized intersection operations (stop control on the minor leg). The intersection of SR-76 at Pankey Road was improved by the recent widening of SR-76 to four lanes; however, the minor approaches are stop controlled as analyzed in the TIS (Figure 18). The intersection of Pankey Road at Pankey Place (#29) currently does not exist and will be constructed according to the project roadway phasing requirements. The intersection of Pankey Road and Pankey Place will operate at acceptable level of service with stop control on the minor leg (under existing + project conditions) as documented in Table 14 of the TIS. Table 14 and Figure 18 from the Campus Park TIS are included in **Attachment A**.

After circulation of the Campus Park EIR, the proposed project was reduced by 325 dwelling units. Originally, a project feature of constructing a traffic signal when warranted was recommended for the intersection of SR-76 at Pankey Road (#8) as shown in Figure 29b (included in **Attachment B**). However, the previously recommended project feature is no longer economically feasible due to the reduced number of dwelling units. Therefore, a traffic signal is not required as documented in the TIS and is no longer proposed as a project feature. The intersection of Pankey Road at Pankey Place (#29) has NO project feature identified other than constructing an un-signalized intersection as shown in Figure 29d (also included in Attachment B). The construction of the un-signalized intersection of Pankey Road at Pankey Place will be completed in accordance with the project phasing. As documented in the Campus Park TIS, the intersections of SR-76/Pankey Road and Pankey Road/Pankey Place do NOT require the construction of traffic signals to operate at acceptable levels of service as documented in the Campus Park TIS.

Cc: Nael Areigat (DPLU); Nick Ortiz (DPW); Bruce Tabb (Passerelle);
David Davis (Passerelle)

ATTACHMENT A

Campus Park TIS (May 12, 2009) Excerpts - Table 14 and Figure 18

TABLE 14: EXISTING + PROJECT INTERSECTION LEVEL OF SERVICE (PRIOR TO MITIGATION)

Intersection & (Analysis) ¹	Move-ment	Peak Hour	Existing		Existing + Project				County		CMP
			Delay ²	LOS ³	Delay ²	LOS ³	Delta ⁴	CM Vol ⁵	Sig ⁶	Sig ⁷	
1) SR-76 (Pala Rd) at Via Monserate (U)	SB LR	AM	86.1	F	118.7	F	NA	0	No	NA	
	SB LR	PM	91.4	F	138.0	F	NA	0	No	NA	
	All	AM	5.0	A	6.5	A	1.5	NA	NA	No	
	All	PM	2.9	A	4.0	A	1.1	NA	NA	No	
2) SR-76 (Pala Rd) at Gird Rd (S)	All	AM	12.9	B	13.6	B	0.7	NA	No	No	
	All	PM	12.6	B	13.6	B	1.0	NA	No	No	
3) SR-76 (Pala Rd) at Sage Rd (U)	SB LR	AM	22.6	C	24.9	C	NA	0	No	NA	
	SB LR	PM	33.0	D	39.8	E	NA	0	No	NA	
	All	AM	0.2	A	0.3	A	0.1	NA	NA	No	
	All	PM	0.4	A	0.5	A	0.1	NA	NA	No	
4) SR-76 (Pala Rd) at Old Hwy 395 (S)	All	AM	29.7	C	33.9	C	4.2	NA	No	No	
	All	PM	30.2	C	36.3	C	6.1	NA	No	No	
6) SR-76 (Pala Rd) at I-15 SB Ramps (S)	All	AM	27.5	C	29.1	C	1.6	NA	No	No	
	All	PM	28.4	C	28.9	C	0.5	NA	No	No	
7) SR-76 (Pala Rd) at I-15 NB Ramps (S)	All	AM	22.4	C	28.6	C	6.2	NA	No	No	
	All	PM	46.7	D	63.7	E	17.0	NA	Yes	Yes	
8) SR-76 (Pala Rd) at Pankey Road (U)	NB LTR	AM	12.2	B	15.0	B	NA	29	No	No	
	NB LTR	PM	14.6	B	26.2	D	NA	36	No	No	
	SB LTR	AM	0.0	A	13.1	B	NA	29	No	No	
	SB LTR	PM	0.0	A	17.8	C	NA	15	No	No	
9) SR-76 (Pala Rd) at Horse Ranch Creek Rd (S)	All	AM	DNE	NA	16.1	B	NA	NA	No	No	
	All	PM	DNE	NA	20.3	C	NA	NA	No	No	
10) SR-76 (Pala Rd) at Rice Canyon Road (U)	SB LR	AM	10.5	B	10.8	B	0.3	5	No	No	
	SB LR	PM	12.4	B	13.1	B	0.7	5	No	No	
11) SR-76 (Pala Rd) at Couser Canyon Road (U)	NB LR	AM	11.4	B	12.6	B	1.2	15	No	No	
	NB LR	PM	13.5	B	15.5	C	2.0	13	No	No	
12) Old Highway 395 at Pala Mesa Dr (U) East leg completed with project	EB LTR	AM	11.0	B	14.2	B	NA	34	No	No	
	EB LTR	PM	11.1	B	18.2	C	NA	40	No	No	
	WB LTR	AM	DNE	NA	17.5	C	NA	94	No	No	
	WB LTR	PM	DNE	NA	24.3	C	NA	160	No	No	
14) Old Highway 395 at Stewart Canyon Road (U)	WB LTR	AM	10.8	B	11.3	B	NA	131	No	No	
	WB LTR	PM	11.9	B	16.7	C	NA	126	No	No	
15) Old Highway 395 at Reche Road (U)	EB LR	AM	18.4	C	39.5	E	NA	20	Yes	NA	
	EB LR	PM	35.9	E	219.2	F	NA	45	Yes	NA	
	All	AM	10.6	B	17.6	B	7.0	NA	NA	No	
	All	PM	17.6	B	77.9	F	60.3	NA	NA	Yes	
19) Mission Road at Old Highway 395 (S)	SB L	AM	12.2	B	12.8	B	0.6	NA	No	No	
	SB L	PM	27.3	C	40.7	D	13.4	NA	No	No	
20) Mission Road at I-15 SB Ramps (S)	SB LTR	AM	20.6	C	34.8	D	14.2	NA	No	No	
	SB LTR	PM	19.3	B	36.6	D	17.3	NA	No	No	
21) Mission Road at I-15 NB Ramps (S)	All	AM	17.2	B	19.0	B	1.8	NA	No	No	
	All	PM	37.5	D	49.1	D	11.6	NA	No	No	
22) Stewart Canyon Rd at HRCR/Pankey Road (U)	EB LR	AM	8.7	A	9.3	A	NA	88	No	No	
	EB LR	PM	8.7	A	9.6	A	NA	180	No	No	
23) Horse Ranch Crk Rd at Baltimore Oriole (U)	WB LR	AM	DNE	NA	10.9	B	NA	No	No	No	
	WB LR	PM	DNE	NA	13.3	B	NA	No	No	No	
24) Horse Ranch Crk Rd at Longspur Rd (U)	All-Way	AM	DNE	NA	8.7	A	NA	No	No	No	
	All-Way	PM	DNE	NA	11.9	B	NA	No	No	No	
25) Horse Ranch Crk Rd at Harvest Glen Ln (U)	All-Way	AM	DNE	NA	10.1	B	NA	No	No	No	
	All-Way	PM	DNE	NA	20.8	C	NA	No	No	No	
26) Horse Ranch Crk Rd at Pardee South Loop (U)	WB LR	AM	DNE	NA	10.7	B	NA	No	No	No	
	WB LR	PM	DNE	NA	11.9	B	NA	No	No	No	
27) Horse Ranch Crk Rd at School/Park Access (U)	WB LR	AM	DNE	NA	0.0	A	NA	No	No	No	
	WB LR	PM	DNE	NA	0.0	A	NA	No	No	No	
28) Horse Ranch Crk Rd at Street R (U)	All-Way	AM	DNE	NA	10.1	B	NA	No	No	No	
	All-Way	PM	DNE	NA	16.1	C	NA	No	No	No	
29) Pankey/Pala Mesa Dr at Street R (U)	WB LR	AM	DNE	NA	9.4	A	NA	No	No	No	
	WB LR	PM	DNE	NA	9.5	A	NA	No	No	No	
34) SR-76 (Mission Ave) at S. Mission Rd (S)	All	AM	18.9	B	19.4	B	0.5	NA	No	No	
	All	PM	21.5	C	22.1	C	0.6	NA	No	No	

Notes: 1) Intersection Analysis - (S) Signalized, (U) Unsignalized 2) Delay - HCM Control Delay in seconds. 3) LOS: Level of Service. 4) Delta is the increase in delay from project. 5) CM Vol: Critical Movement Volume used to show project volumes on the critical movement. 6) County Sig: is the project have a calculated impact based on the critical volume (Yes or No). 7) CMP Sig: Congestion Management Program significant impact based on CMP criteria (Yes or No). DNE: Does Not Exist. NA: Not Applicable

Figure 18a: Existing + Project Roadway Conditions

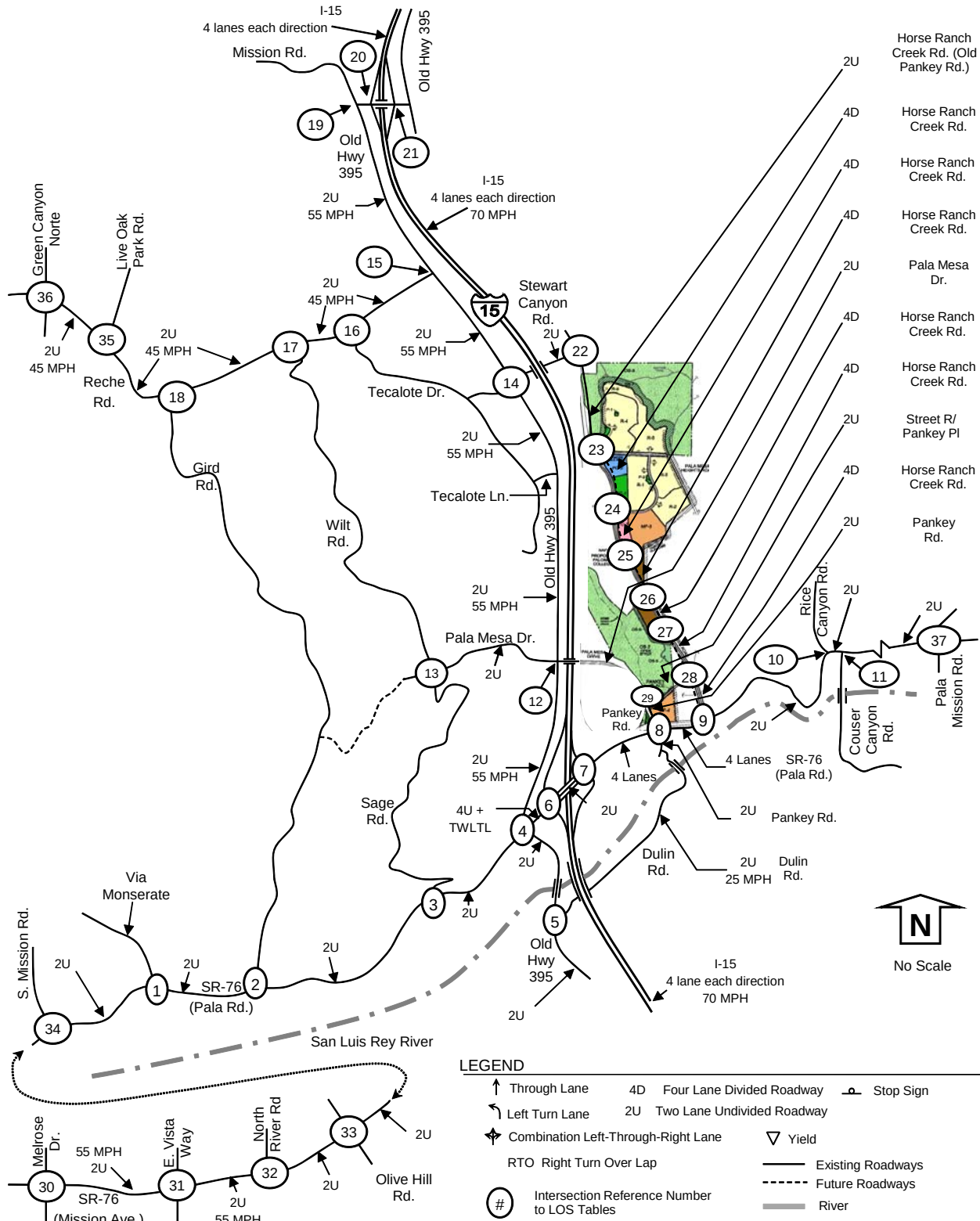


Figure 18b: Existing + Project Roadway Conditions

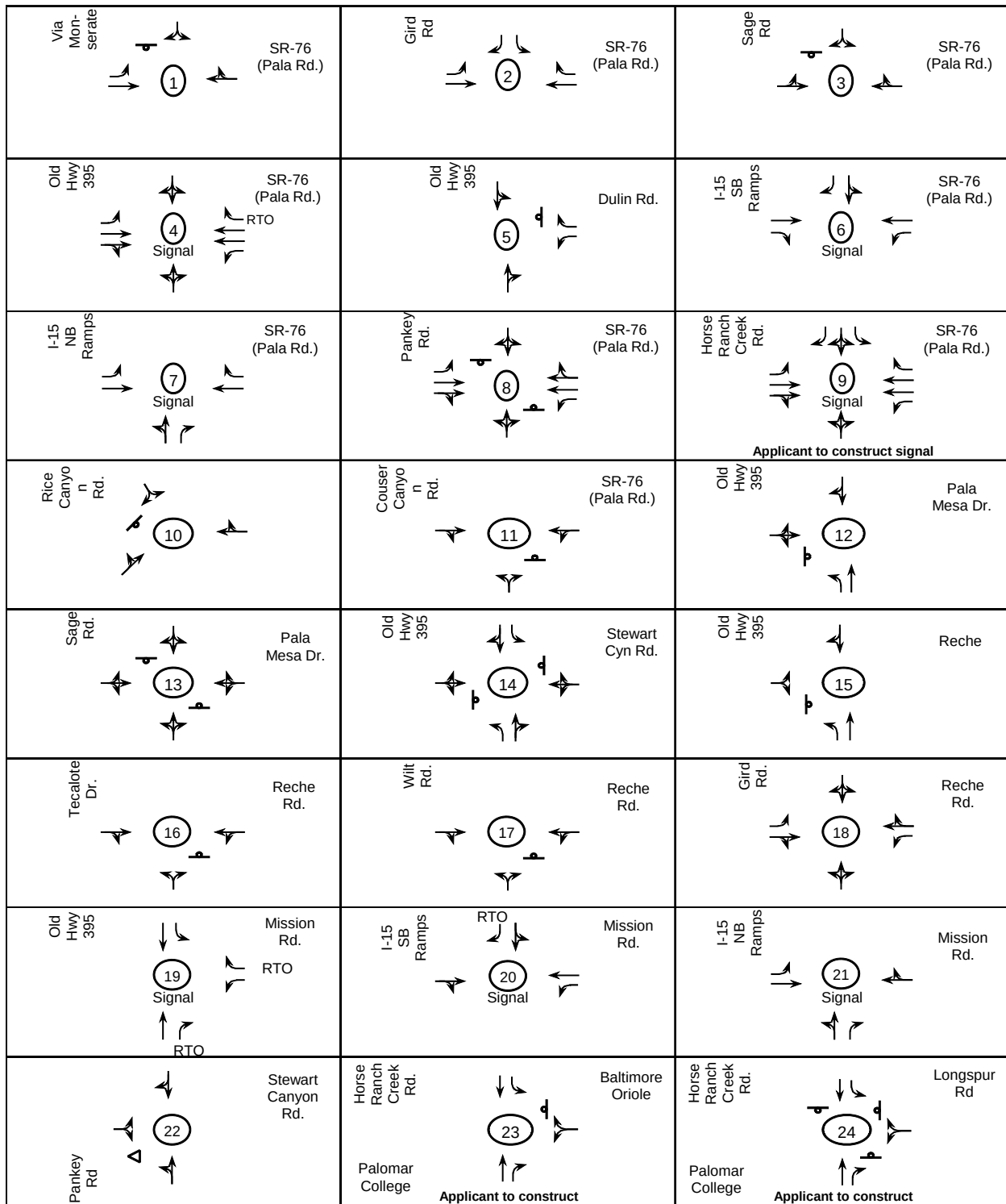
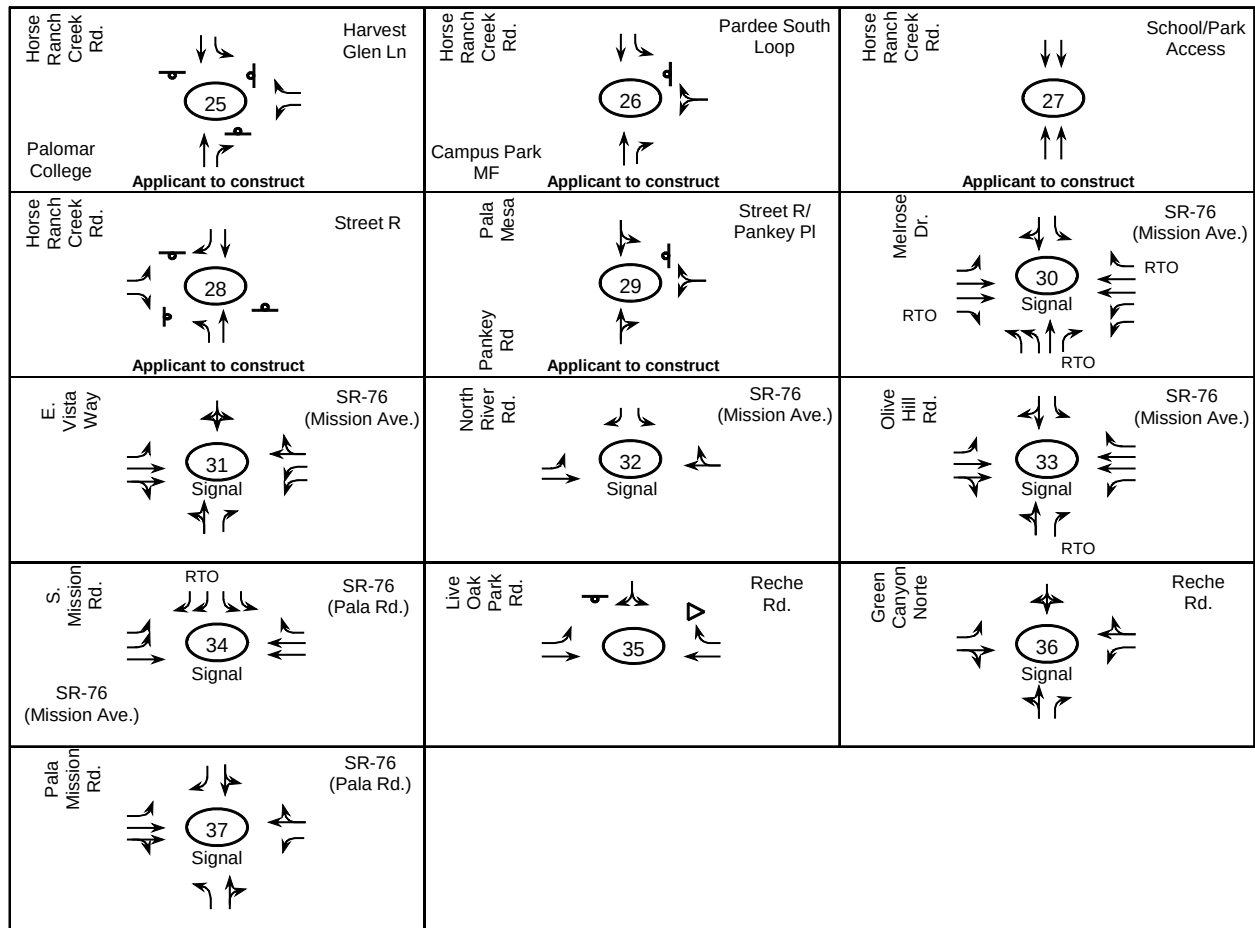


Figure 18c: Existing + Project Roadway Conditions



ATTACHMENT B

Campus Park TIS (May 12, 2009) Excerpts - Figure 29b and Figure 29d

Figure 29b: Recommended Mitigation Measures and Improvements

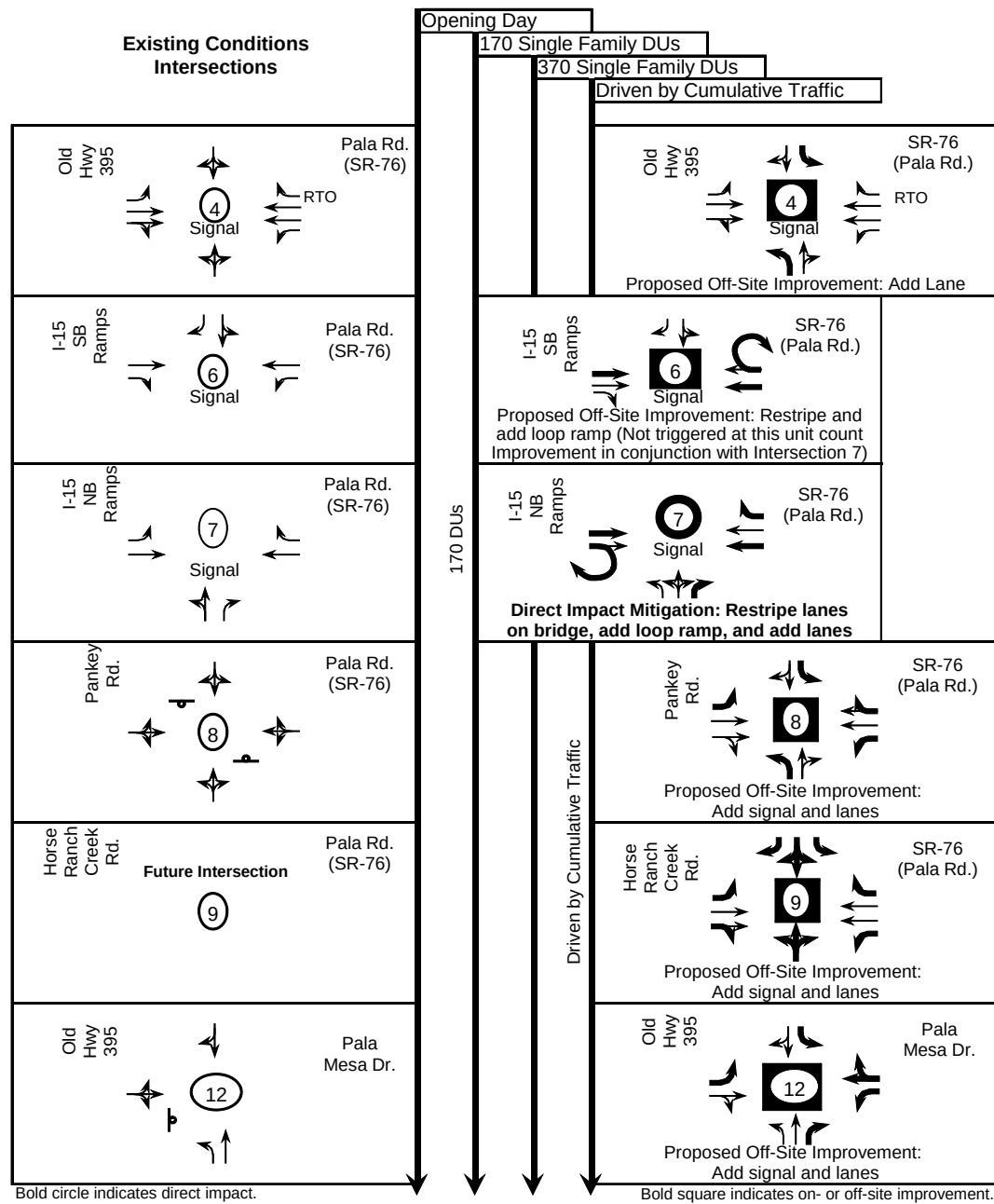


Figure 29d: Recommended Mitigation Measures and Improvements

Existing Conditions Intersections and Segments		Opening Day	
		170 Single Family DUs	
		370 Single Family DUs	
		Driven by Cumulative Traffic	
Horse Ranch Creek Rd. Future Intersection 28 Pankey Place (aka Street R)	Horse Ranch Creek Rd. Install Signal 28 Pankey Place (aka Street R)		
Pala Mesa Drive Future Intersection 29 Pankey Place (aka Street R)	Pala Mesa Drive Pankey Place (aka Street R) 29 Proposed On-Site Improvement: construct intersection		
SR-76 (I-15 SB Ramp to I-15 NB Ramp) 2U	SR-76 (I-15 SB Ramp to I-15 NB Ramp) 4U		
Horse Ranch Creek Road (Baltimore Oriole Road to SR-76) ¹ Future Roadway	Proposed On-Site Improvement Horse Ranch Creek Road (Baltimore Oriole Road to SR-76) ¹ Pala Mesa Dr SR-76 4D		
Pala Mesa Drive (east of bridge over I-15 to SR-76) Future Roadway	Proposed On-Site Improvement Horse Ranch Creek Road Pala Mesa Dr SR-76 4U 2U		
Street R/Pankey Place (Pala Mesa Dr to Horse Ranch Creek Road) Future Roadway	Proposed On-Site Improvement Horse Ranch Creek Road Street R/Pankey Place SR-76 2U		

Notes: 4D = 4 lane divided roadway, 2U = 2 lane divided roadway

(1) includes transition to Pankey Road located south of Stewart Canyon Road

Bold roadway lines indicate project feature by applicant



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January 21, 2011

To: Mr. Dennis Campbell
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 5201 Ruffin Road Suite B
 San Diego, California 92123

From: Justin Rasas, P.E.

RE: Campus Park I-15 Revised Cumulative Analysis

After the circulation of the Campus Park EIR, the density of three land uses changed. The proposed project for Campus Park was reduced by 325 dwelling units. Accretive submitted a Major Pre Application for a proposed mixed-use project to be located in the western area of Valley Center. And, Merriam Mountains was denied by the County Board of Supervisors. The purpose of this memo is to determine if there was a change to the Campus Park EIR cumulative findings along the study sections of Interstate 15.

The Campus Park removal of 325 dwelling units resulted in reduced volumes along I-15 as shown in **Table 1** (project assignment calculations included in **Attachment A**).

Table 1: Campus Park I-15 Peak Hour Volumes per EIR and Reduced Project

Freeway Segment =>	I-15 Rainbow Valley Blvd to Mission Rd				I-15 Mission Rd to SR-76 (Pala Rd)				I-15 SR-76 to Escondido Hwy (Old 395)			
	A M		P M		A M		P M		A M		P M	
	NB	SB	NB	SB	NB	SB	NB	SB	NB	SB	NB	SB
Volume Source Noted Below												
Campus Park (EIR)	99	68	97	136	14	9	13	19	73	86	128	102
Campus Park (Reduced Project)	74	62	85	110	10	8	11	15	67	65	105	92
Reduced Campus Park (Removed Vol)	-25	-6	-12	-26	-4	-1	-2	-4	-6	-21	-23	-10

The Accretive project is calculated to add traffic to I-15 based on a SANDAG select zone assignment as shown in **Attachment B**. The amount of traffic added to I-15 is shown in **Table 2**.

Table 2: Accretive I-15 Peak Hour Volume Addition

Freeway Segment =>	I-15 Rainbow Valley Blvd to Mission Rd				I-15 Mission Rd to SR-76 (Pala Rd)				I-15 SR-76 to Escondido Hwy (Old 395)			
	A M		P M		A M		P M		A M		P M	
	NB	SB	NB	SB	NB	SB	NB	SB	NB	SB	NB	SB
Volume Source Noted Below												
Accretive Major Pre Application Project	51	23	38	69	51	23	38	69	51	23	38	69

The County Board of Supervisors denial of Merriam Mountains resulted in a reduction of I-15 volumes as shown in **Table 3**. The source of reduction is from the Merriam Mountains EIR traffic study with an excerpt included in **Attachment C**.

Table 3: Merriam Mountains I-15 Peak Hour Volume Reduction

Freeway Segment =>	I-15 Rainbow Valley Blvd to Mission Rd				I-15 Mission Rd to SR-76 (Pala Rd)				I-15 SR-76 to Escondido Hwy (Old 395)			
	A M		P M		A M		P M		A M		P M	
	NB	SB	NB	SB	NB	SB	NB	SB	NB	SB	NB	SB
Volume Source Noted Below												
Merriam Mountains EIR	-130	-66	-118	-189	-130	-66	-118	-189	-130	-66	-118	-189



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The change in I-15 cumulative peak hour volumes due to the addition of the Accretive Major Pre Application and the removal of Merriam Mountains is shown in **Table 4**.

Table 4: Campus Park Revised I-15 Cumulative Volumes

Freeway Segment =>	I-15				I-15				I-15			
	Rainbow Valley Blvd to Mission Rd				Mission Rd to SR-76 (Pala Rd)				SR-76 to Escondido Hwy (Old 395)			
	A M		P M		A M		P M		A M		P M	
Volume Source Noted Below	NB	SB	NB	SB	NB	SB	NB	SB	NB	SB	NB	SB
Campus Park Cumulative (EIR)	311	305	419	464	198	252	343	283	710	956	1340	816
Accretive Major Pre Application Project	51	23	38	69	51	23	38	69	51	23	38	69
Merriam Mountains EIR	-130	-66	-118	-189	-130	-66	-118	-189	-130	-66	-118	-189
Revised Campus Park Cumulative	232	262	339	344	119	209	263	163	631	913	1260	696

The Campus Park EIR Traffic Impact Study listed the cumulative volumes and potential impacts in Table 26 from page 106, which is shown below as **Table 5**.

Table 5: Campus Park EIR Traffic Study Table 26 (Traffic Study pg 106)

Freeway Segment	I-15				I-15				I-15			
	Rainbow Valley Blvd to Mission Rd				Mission Rd to SR-76 (Pala Rd)				SR-76 to Escondido Hwy (Old 395)			
<u>Existing (Year 2006)</u>												
ADT	136,000				127,000				120,000			
Peak Hour	A M		P M		A M		P M		A M		P M	
Direction	NB	SB	NB	SB	NB	SB	NB	SB	NB	SB	NB	SB
Number of Lanes	4	4	4	4	4	4	4	4	4	4	4	4
Capacity (1)	9,400	9,400	9,400	9,400	9,400	9,400	9,400	9,400	9,400	9,400	9,400	9,400
K Factor (2)	0.0619	0.0619	0.0738	0.0738	0.0619	0.0619	0.0738	0.0738	0.0590	0.0590	0.0723	0.0723
D Factor (3)	0.1653	0.8347	0.6398	0.3602	0.1653	0.8347	0.6398	0.3602	0.1989	0.8011	0.6955	0.3045
Truck Factor (4)	0.9186	0.9186	0.9186	0.9186	0.9186	0.9186	0.9186	0.9186	0.8977	0.8977	0.8977	0.8977
Peak Hour Volume	1,515	7,650	6,991	3,936	1,415	7,143	6,528	3,675	1,569	6,318	6,722	2,943
Volume to Capacity	0.161	0.814	0.744	0.419	0.150	0.760	0.694	0.391	0.167	0.672	0.715	0.313
LOS	A	D	C	A	A	C	C	A	A	C	C	A
<u>Project Pk Hr Vol</u>	99	68	97	136	14	9	13	19	73	86	128	102
<u>Existing + Project</u>												
Peak Hour Volume	1,614	7,718	7,088	4,072	1,429	7,152	6,541	3,694	1,642	6,404	6,850	3,045
Volume to Capacity	0.172	0.821	0.754	0.433	0.152	0.761	0.696	0.393	0.175	0.681	0.729	0.324
LOS	A	D	C	B	A	C	C	A	A	C	C	A
Increase in V/C	0.011	0.007	0.010	0.014	0.001	0.001	0.001	0.002	0.008	0.009	0.014	0.011
County Impact?	No	No	No	No	No	No	No	No	No	No	No	No
CMP Impact?	No	No	No	No	No	No	No	No	No	No	No	No
<u>Cumulative Pk Hr Vol</u>	311	305	419	464	198	252	343	283	710	956	1340	816
<u>Existing+Cumulative</u>												
Peak Hour Volume	1,826	7,955	7,410	4,400	1,613	7,395	6,871	3,958	2,279	7,274	8,062	3,759
Volume to Capacity	0.194	0.846	0.788	0.468	0.172	0.787	0.731	0.421	0.242	0.774	0.858	0.400
LOS	A	D	C	B	A	C	C	B	A	C	D	A
<u>Existing+Cumulative+Project</u>												
Peak Hour Volume	1,925	8,023	7,507	4,536	1,627	7,404	6,884	3,977	2,352	7,360	8,190	3,861
Volume to Capacity	0.205	0.853	0.799	0.483	0.173	0.788	0.732	0.423	0.250	0.783	0.871	0.411
LOS	A	D	C	B	A	C	C	B	A	C	D	A
Increase in V/C	0.011	0.007	0.010	0.014	0.001	0.001	0.001	0.002	0.008	0.009	0.014	0.011
Cumulative Impact?	No	No	No	No	No	No	No	No	No	No	No	No

Notes: (1) Capacity of 2,350 passenger cars per hour per lane (pcphpl) from Caltrans' Guide for the Preparation of Traffic Impact Studies, Dec 2002. (2) Latest K factor from Caltrans (based on 2005 data), which is the percentage of Annual Average Daily Traffic (AADT) in both directions. (3) Latest D factor from Caltrans (based on 2005 data), which when multiplied by K and ADT will provide peak hour volume. (4) Latest truck factor from Caltrans (based on 2000 data). CMP: Congestion Management Program impact.



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With the revised land use changes, the Campus Park EIR Traffic Study Table 26 has been updated with the revised Campus Park project volumes and revised cumulative volumes as shown in **Table 6**.

Table 6: Campus Park Revised I-15 Cumulative LOS Table

Freeway Segment	I-15 Rainbow Valley Blvd to Mission Rd				I-15 Mission Rd to SR-76 (Pala Rd)				I-15 SR-76 to Escondido Hwy (Old 395)			
<u>Existing (Year 2006)</u>	ADT 136,000				127,000				120,000			
Peak Hour Direction	A M		P M		A M		P M		A M		P M	
Number of Lanes	NB 4	SB 4	NB 4	SB 4	NB 4	SB 4	NB 4	SB 4	NB 4	SB 4	NB 4	SB 4
Capacity (1)	9,400	9,400	9,400	9,400	9,400	9,400	9,400	9,400	9,400	9,400	9,400	9,400
K Factor (2)	0.0619	0.0619	0.0738	0.0738	0.0619	0.0619	0.0738	0.0738	0.0590	0.0590	0.0723	0.0723
D Factor (3)	0.1653	0.8347	0.6398	0.3602	0.1653	0.8347	0.6398	0.3602	0.1989	0.8011	0.6955	0.3045
Truck Factor (4)	0.9186	0.9186	0.9186	0.9186	0.9186	0.9186	0.9186	0.9186	0.8977	0.8977	0.8977	0.8977
Peak Hour Volume	1,515	7,650	6,991	3,936	1,415	7,143	6,528	3,675	1,569	6,318	6,722	2,943
Volume to Capacity	0.161	0.814	0.744	0.419	0.150	0.760	0.694	0.391	0.167	0.672	0.715	0.313
LOS	A	D	C	A	A	C	C	A	A	C	C	A
<u>Project Pk Hr Vol</u>	74	62	85	110	10	8	11	15	67	65	105	92
<u>Existing + Project</u>												
Peak Hour Volume	1,589	7,712	7,076	4,046	1,425	7,151	6,539	3,690	1,636	6,383	6,827	3,035
Volume to Capacity	0.169	0.820	0.753	0.430	0.152	0.761	0.696	0.393	0.174	0.679	0.726	0.323
LOS	A	D	C	B	A	C	C	A	A	C	C	A
Increase in V/C	0.008	0.007	0.009	0.012	0.001	0.001	0.001	0.002	0.007	0.007	0.011	0.010
County Impact?	No	No	No	No	No	No	No	No	No	No	No	No
CMP Impact?	No	No	No	No	No	No	No	No	No	No	No	No
<u>Cumulative Pk Hr Vol</u>	232	262	339	344	119	209	263	163	631	913	1260	696
<u>Existing+Cumulative</u>												
Peak Hour Volume	1,747	7,912	7,330	4,280	1,534	7,352	6,791	3,838	2,200	7,231	7,982	3,639
Volume to Capacity	0.186	0.842	0.780	0.455	0.163	0.782	0.722	0.408	0.234	0.769	0.849	0.387
LOS	A	D	C	B	A	C	C	A	A	C	D	A
<u>Existing+Cumulative+Project</u>												
Peak Hour Volume	1,821	7,974	7,415	4,390	1,544	7,360	6,802	3,853	2,267	7,296	8,087	3,731
Volume to Capacity	0.194	0.848	0.789	0.467	0.164	0.783	0.724	0.410	0.241	0.776	0.860	0.397
LOS	A	D	C	B	A	C	C	A	A	C	D	A
Increase in V/C	0.008	0.007	0.009	0.012	0.001	0.001	0.001	0.002	0.007	0.007	0.011	0.010
Cumulative Impact?	No	No	No	No	No	No	No	No	No	No	No	No

Notes: (1) Capacity of 2,350 passenger cars per hour per lane (pcphpl) from Caltrans' Guide for the Preparation of Traffic Impact Studies, Dec 2002. (2) Latest K factor from Caltrans (based on 2005 data), which is the percentage of Annual Average Daily Traffic (AADT) in both directions. (3) Latest D factor from Caltrans (based on 2005 data), which when multiplied by K and ADT will provide peak hour volume. (4) Latest truck factor from Caltrans (based on 2000 data). CMP: Congestion Management Program impact.

As shown in Table 6, no new cumulative impacts were calculated based on the aforementioned land use density changes.

Cc: Nael Arigat (County of San Diego, DPW)
Nick Ortiz (County of San Diego, DPW)
Bruce Tabb (Passerelle)
David Davis (Passerelle)

ATTACHMENT A

Campus Park Reduced Project Peak Hour Volume Assignment on I-15

CAMPUS PARK REDUCED PROJECT ASSIGNMENT ON I-15.

The EIR TIA I-15 peak hour volumes are recreated in the left column with a new assignment for the reduced residential units in the right column. The arrows represent the direction of AM & (PM) peak hour volumes on I-15 north of Mission, between Mission & SR-76, and south of SR-76. The shaded cell on the right show where the residential volumes were reduced to match the new TG unit count as shown on the next page.

From EIR Traffic Study					Reduced Project (-325 Dus)				
I-15 North of Mission Ave	↓	68	AM	99	↓	62	AM	74	
		(137)	PM	(97)		(110)	PM	(85)	
	Int #20 Mission			Int #21 Mission					
	Mission Ave at I-15 SB Ramp			I-15 NB Ramp					
	From Fig 14b			From Fig 14b					
	Residential			NEW Residential					
	From Fig 16b			From Fig 16b					
	Commercial			Commercial					
	Total on & off			Total on & off					
	at Mission Ave			at Mission Ave					
Mission Ave ←									
I-15 North of SR-76	↓	9	AM	14	↓	8	AM	10	
		(19)	PM	(13)		(15)	PM	(11)	
	Int #6 SR-76			Int #6 SR-76					
	SR-76 at I-15 SB Ramp			I-15 NB Ramp					
	From Fig 14b			From Fig 14b					
	Residential			NEW Residential					
	From Fig 16b			From Fig 16b					
	Commercial			Commercial					
	Total on & off			Total on & off					
	at SR-76			at SR-76					
SR-76 ←									
I-15 South of SR-76	↓	86	AM	73	↓	65	AM	67	
		(102)	PM	(128)		(92)	PM	(105)	
	Int #6 SR-76			Int #6 SR-76					
	SR-76 at I-15 SB Ramp			I-15 NB Ramp					
	From Fig 14b			From Fig 14b					
	Residential			NEW Residential					
	From Fig 16b			From Fig 16b					
	Commercial			Commercial					
	Total on & off			Total on & off					
	at SR-76			at SR-76					
SR-76 ←									

REDUCED CAMPUS PARK TRIP GENERATION

Proposed Land Use	Rate	Size & Units	ADT	%	Split	AM		%	Split	PM	
						IN	OUT			IN	OUT
Residential - Single Family	10 /DU	521 DU	5,210	8%	0.3 0.7	125	292	10%	0.7 0.3	365	156
Residential - Multi Family	8 /DU	230 DU	1,840	8%	0.2 0.8	29	118	10%	0.7 0.3	129	55
Town Center (Neighborhood Shopping)	120 /KSF	61,200 SF	7,344	4%	0.6 0.4	176	118	10%	0.5 0.5	368	367
Office (more than 100KSF)	17 /KSF	157,000 SF	2,669	13%	0.9 0.1	312	35	14%	0.2 0.8	75	298
Neighborhood Park	5 /Acre	3.6 Acres	18	4%	0.5 0.5	0	0	8%	0.5 0.5	1	1
Neighborhood Park (Sports Complex)	50 /Acre	5.2 Acres	260	4%	0.5 0.5	5	5	8%	0.5 0.5	10	10
Revised Project						17,341				647	568
Approved Traffic Impact Study (TIS)						19,941				689	734
Delta (negative represent reduction of trip over approved TIS)						-2,600				-42	-166
										948	887
										1,130	965
										-182	-78

Source: SANDAG Brief Guide of Vehicular Traffic Generation Rates for the San Diego Region, April 2002. DU - Dwelling Unit; SF - Square Feet; KSF - 1,000 sf; ADT-Average Daily Traffic; Split-percent inbound and outbound.

						AM	AM		PM	PM
						IN	OUT		IN	OUT
CAMPUS PARK NEW										
Residential	Percent		7050			154	410		494	211
	0.02		141			3	8		(10)	(4)
	0.12		846			18	49		(59)	(25)
	0.13		917			20	53		(64)	(27)

ATTACHMENT B

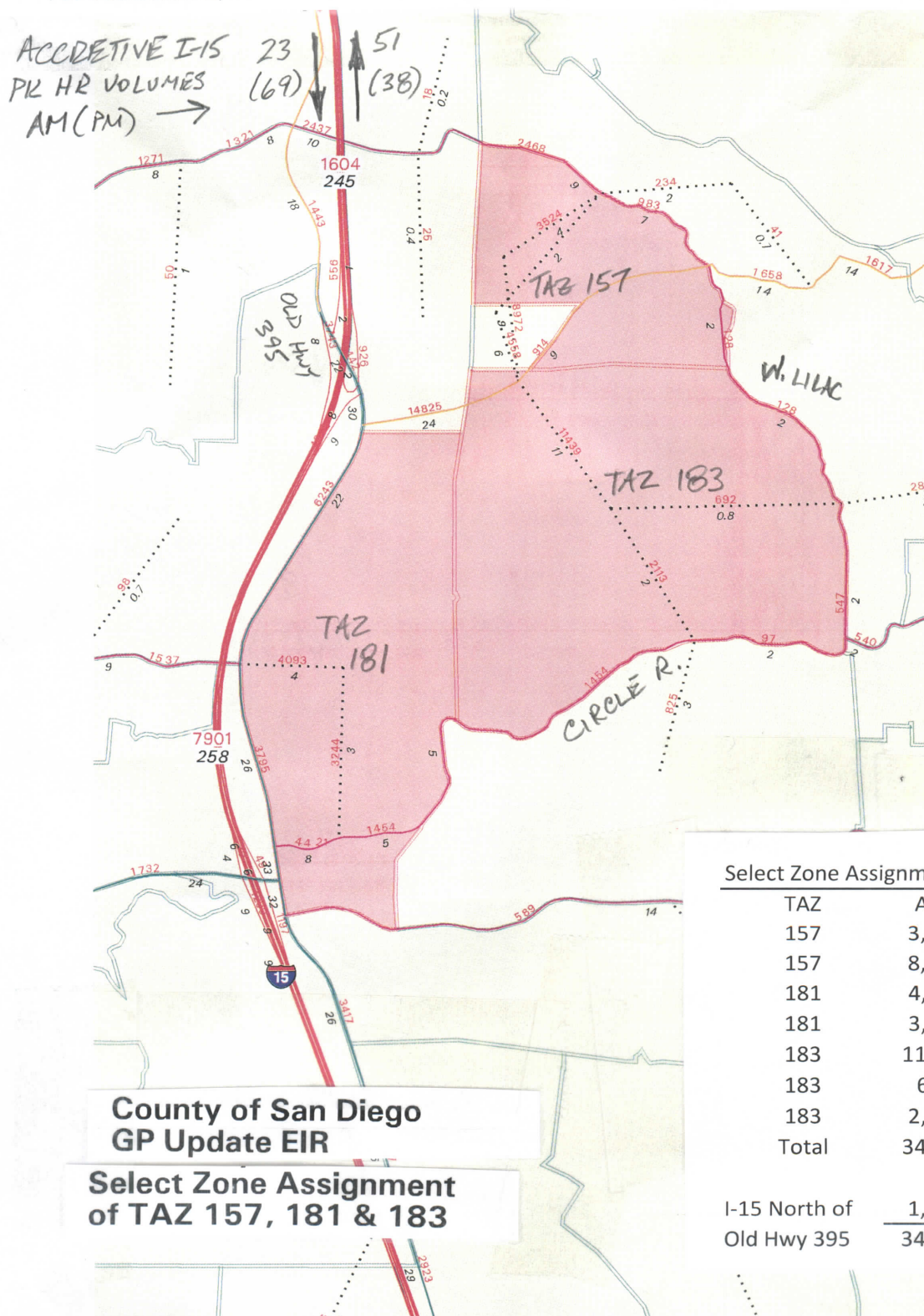
Accretive Peak Hour Traffic Volume Assignment to I-15

Accretive Major Pre Application Proposed Land Uses

Proposed Land Use	Rate	Size & Units	ADT	%	Split	AM				PM			
						IN	OUT	%	Split	IN	OUT		
Residential - Single Family	10 /DU	745 DU	7,450	8%	0.3 0.7	179	417	10%	0.7 0.3	522	224		
Residential - Multi Family	8 /DU	1,000 DU	8,000	8%	0.2 0.8	128	512	10%	0.7 0.3	560	240		
Neighborhood Shopping Center	1200 /acre	5 Acres	6,000	4%	0.6 0.4	144	96	10%	0.5 0.5	300	300		
EXTERNAL TOTAL (no schools or park[1])			21,450			451	1,025			1,382	764		

Source: SANDAG Brief Guide of Vehicular Traffic Generation Rates for the San Diego Region, April 2002. SF - Square Feet; ADT-Average Daily Traffic; Split-percent inbound and outbound. [1] Schools not included in TG because school boundaries are unknown at this time. School boundaries most likely will not require I-15 travel. Park TG not included due to local attraction characteristics where minimal I-15 peak hour traffic would serve.

I-15 Distribution to/from the North 5% 1073 23 51 (69) (38)



ATTACHMENT C

Merriam Mountains Peak Hour Traffic Volume Reduction on I-15

MERRIAM MOUNTAINS SPECIFIC PLAN

APPENDIX M – PART I

TRAFFIC IMPACT ANALYSIS

GPA 04-06; SP 04-006; R04-013; VTM5381; S04-035, S04-036, S04-037,
S04-038; Log No. 04-08-028; SCH No. 2004091166

for the

RECIRCULATED ENVIRONMENTAL IMPACT REPORT

March 2009

Note: Comments will be accepted on the entire appendix.

TRAFFIC IMPACT ANALYSIS

MERRIAM MOUNTAINS

San Diego County, California
February 26, 2009

MERRIAM MOUNTAINS SPECIFIC PLAN

GPA 04-06; SP 04-006; R04-013; VTM5381; S04-035, S04-036, S04-037, S04-038; Log No. 04-08-028;
SCH No. 2004091166

LLG Ref. 3-03-1265

Prepared by:

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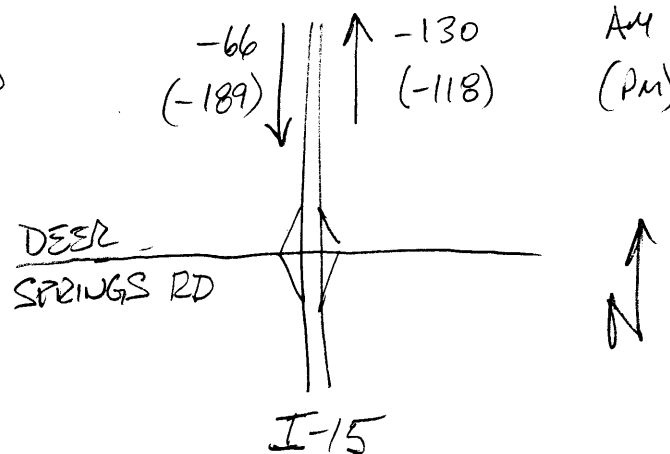
**TABLE 9-5
NEAR-TERM FREEWAY OPERATIONS**

Freeway Segment	Dir.	# of Lanes	Hourly Capacity ^a	ADT	Peak Hour Volume ^b		Project Volume		Existing + Project Peak Hour Volume		V/C ^c		LOS		Δ V/C	
					AM	PM	AM	PM	AM	PM	AM	PM	AM	PM	AM	PM
I-15																
Center City Pkwy. to Deer Springs Rd.	NB	4	8,000	135,540	4,595	6,152	266	799	4,861	6,951	0.608	0.869	B	D	0.033	0.100
	SB	4	8,000		5,338	4,419	593	448	5,931	4,867	0.741	0.608	C	B	0.074	0.056
Deer Springs Rd. to Gopher Canyon Rd.	NB	4	8,000	127,080	4,633	6,202	130	118	4,763	6,320	0.595	0.790	B	C	0.016	0.015
	SB	4	8,000		5,382	4,455	66	189	5,448	4,644	0.681	0.580	C	B	0.008	0.024
SR 78																
Mar Vista Dr. to Sycamore Ave.	EB	3	6,000	148,730	5,330	6,436	69	242	5,399	6,678	0.900	1.113	D	F(0)	0.012	0.040
	WB	3	6,000		5,964	6,226	214	110	6,178	6,336	1.030	1.056	F(0)	F(0)	0.036	0.018
Sycamore Ave. to San Marcos Blvd.	EB	3	6,000	138,870	5,036	6,081	36	119	5,072	6,200	0.845	1.033	D	F(0)	0.006	0.020
	WB	3	6,000		5,634	5,882	104	57	5,738	5,939	0.956	0.990	E	E	0.017	0.009
San Marcos Blvd. to Twin Oaks Valley Rd.	EB	3	7,200	145,930	5,330	6,436	16	65	5,346	6,501	0.742	0.903	C	D	0.002	0.009
	WB	3	7,200		5,964	6,226	55	28	6,019	6,254	0.836	0.869	D	D	0.008	0.004

Footnotes:

- Capacity calculated at 2000 vph per lane and 1200 vph per HOV lane
- Values calculated in the Existing Conditions table
- $V/C = ((ADT)(K)(D)/\text{Truck Factor}/\text{Capacity})$

PEAK HOUR VOLUMES REMOVED
FROM I-15 WITHOUT
MERRIAM MOUNTAINS.



LOS	V/C
A	<0.41
B	0.62
C	0.8
D	0.92
E	1
F(0)	1.25
F(1)	1.35
F(2)	1.45
F(3)	>1.46



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November 2, 2010

To: Mr. David Davis
Passerelle
402 W. Broadway, Suite 1320
San Diego, California 92101

From: Justin Rasas, P.E.

RE: Campus Park dwelling unit impact threshold for SR-76 segment over I-15

The purpose of this memo is to document the near-term residential dwelling unit count that would trigger the calculated direct impacts to the SR-76 segment over I-15. The proposed improvements are loop ramps that are calculated to mitigate the SR-76 segment over I-15 through removing the left turn lane on the bridge thereby providing room to re-stripe to a 4 lane roadway. The SR-76/I-15 NB Ramp intersection is also calculated to have a direct impact from the combined residential and commercial components of the project. The proposed loop ramps will also mitigate the calculated impact at the SR-76/I-15 NB Ramp intersection.

The process to determine the amount of product that will create an impact requires determining the threshold of when an impact will be triggered. As shown below, the segment of SR-76 between the I-15 NB and SB Ramps were triggered as direct impacts in the AM eastbound direction, PM eastbound direction, and PM westbound direction.

Campus Park AM and PM Volumes (approved project)

State Route 76		Lanes in		AM (Eastbound)			Project			Change In			AM (Westbound)			Project			Change In				
Study Limits	each dir	Vol	Dir	Cap	v/c	LOS	Vol	E+P	v/c	LOS	v/c	Sig	Vol	Dir	Cap	v/c	LOS	Vol	E+P	v/c	LOS	v/c	Sig
I-15 SB to NB Ramps	1	844	EB	950	0.89	E	83	927	0.98	E	0.09	Yes	539	WB	950	0.57	C	157	696	0.73	D	0.17	No
State Route 76		Lanes in		PM (Eastbound)			Project			Change In			PM (Westbound)			Project			Change In				
Study Limits	each dir	Vol	Dir	Cap	v/c	LOS	Vol	E+P	v/c	LOS	v/c	Sig	Vol	Dir	Cap	v/c	LOS	Vol	E+P	v/c	LOS	v/c	Sig
I-15 SB to NB Ramps	1	718	EB	950	0.76	D	135	853	0.90	E	0.14	Yes	1153	WB	950	1.21	F	199	1352	1.42	F	0.21	Yes

Source: SANDAG Hwycov 2007. Notes: Dir = Direction. Vol = Volume. Cap = Capacity. v/c = volume to capacity ratio. LOS = Level of Service.

The volumes that would not trigger an impact based on an allowable volume to capacity (v/c) threshold of 0.02 under LOS E or F conditions are shown below.

Campus Park AM and PM Volumes TO DETERMINE SR-76 SEGMENT OVER I-15 IMPACT

State Route 76		Lanes in		AM (Eastbound)			Project			Change In			AM (Westbound)			Project			Change In				
Study Limits	each dir	Vol	Dir	Cap	v/c	LOS	Vol	E+P	v/c	LOS	v/c	Sig	Vol	Dir	Cap	v/c	LOS	Vol	E+P	v/c	LOS	v/c	Sig
I-15 SB to NB Ramps	1	844	EB	950	0.89	E	22	866	0.91	E	0.02	No	539	WB	950	0.57	C	157	696	0.73	D	0.17	No
State Route 76		Lanes in		PM (Eastbound)			Project			Change In			PM (Westbound)			Project			Change In				
Study Limits	each dir	Vol	Dir	Cap	v/c	LOS	Vol	E+P	v/c	LOS	v/c	Sig	Vol	Dir	Cap	v/c	LOS	Vol	E+P	v/c	LOS	v/c	Sig
I-15 SB to NB Ramps	1	718	EB	950	0.76	D	98	816	0.86	D	0.10	No	1153	WB	950	1.21	F	22	1175	1.24	F	0.02	No

Source: SANDAG Hwycov 2007. Notes: Dir = Direction. Vol = Volume. Cap = Capacity. v/c = volume to capacity ratio. LOS = Level of Service.

As shown above, the allowable project volumes are 22 AM eastbound trips (based on dropping to a 0.02 v/c ratio), 98 PM eastbound trips (based on improving to a LOS D condition), and 22 PM westbound trips (based on dropping to a 0.02 v/c ratio) before an impact is calculated.



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The Campus Park traffic study dated May 12, 2009 documents in Section 3.3.1 on page 32 how the near-term distribution and assignment is based on a 30% internal capture rate as this reflects the highest project ADT (residential + commercial with a 30% internal capture rate) as compared to the individual residential or individual commercial uses. The traffic study impacts were based on this mix of residential and commercial uses and documented a threshold of 170 dwelling units under near-term conditions that would trigger the need for the proposed loop ramps. If only residential uses are desired to determine the impact threshold, then a mix of single- and multi-family dwelling units is required to determine which of the previously mentioned thresholds is met (one of the following: 22 AM east bound trips, 98 PM eastbound trips, or 22 PM westbound trips). As shown in the table below, a mix of 147 single-family plus 230 multi-family units will trigger the PM westbound threshold of 22 vehicles (noted in bold below). The mix below is based on the revised Campus Park residential mix of a maximum 230 multi-family dwelling units (therefore all are included below) and 147 of the maximum 521 single-family units.

Proposed Land Use	Rate	Size & Units	ADT	%	Split	AM				PM			
						IN	OUT	%	Split	IN	OUT		
Residential - Single Family	10 /DU	147 DU	1,470	8%	0.3 0.7	35	82	10%	0.7 0.3	103	44		
Residential - Multi Family	8 /DU	230 DU	1,840	8%	0.2 0.8	29	118	10%	0.7 0.3	129	55		
Totals		377	3,310			64	200			232	99		
Distribution along SR-76 between I-15 SB and NB Ramps						10%	22%			10%	22%		
Assignment along SR-76 between I-15 SB and NB Ramps						6	44			23	22		
Allowable volumes before an impact is calculated						22	na			98	22		

If the mix is only single-family, then the total dwelling unit count is shown below.

Proposed Land Use	Rate	Size & Units	ADT	%	Split	AM				PM			
						IN	OUT	%	Split	IN	OUT		
Residential - Single Family	10 /DU	330 DU	3,300	8%	0.3 0.7	79	185	10%	0.7 0.3	231	99		
Residential - Multi Family	8 /DU	0 DU	0	8%	0.2 0.8	0	0	10%	0.7 0.3	0	0		
Totals		330	3,300			79	185			231	99		
Distribution along SR-76 between I-15 SB and NB Ramps						10%	22%			10%	22%		
Assignment along SR-76 between I-15 SB and NB Ramps						8	41			23	22		
Allowable volumes before an impact is calculated						22	na			98	22		

County staff requested an Average Daily Trip (ADT) equivalent to a residential mix for the project. Taking the average ADT between the single-family with multi-family mix to just the single-family use, the ADT is calculated at 3,305 (3,310+3,300 divided by 2). Therefore, the residential ADT possible before the impact threshold is reached on SR-76 between the I-15 SB and I-15 NB Ramps is 3,305 ADT.