

# Appendix E

## **Technical Memorandum: County General Plan Update – Recommended Project Alternative [Fehr and Peers, September 2010]**

*This appendix consists of a memorandum that presents an evaluation of the "Recommended Project" Mobility Element road network alternative for the County of San Diego's General Plan Update.*

## TECHNICAL MEMORANDUM

Date: September 20, 2010

To: Kim Howlett, PBS&J

From: Monique Chen, PE, Fehr & Peers  
Phuong Nguyen, Wilson & Company

**Subject: County General Plan Update – Recommended Project Alternative**

SD10-0019

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This memorandum presents an evaluation of the “Recommended Project” alternative for the County of San Diego’s General Plan Update. The analysis below documents trip generation, vehicle miles of travel (VMT), roadway lane miles, lane miles by LOS, and deficient facilities associated with the Recommended Project. This memo also provides the rationale and basis for the various refinements made to the SANDAG Regional Transportation Model output to ensure both the validity and reasonableness of the resulting traffic volumes and Level of Service (LOS).

### TRIP GENERATION

Trip generation quantifies the amount of trip making as a function of the type and magnitude of the assumed land uses associated with the Recommended Project. Trip generation rates as applied to the various land use types under the Recommended Project were consistent with those utilized in the SANDAG Regional Transportation Model, with additional refinements by SANDAG and County Staff to reflect the more rural nature and lower densities of typical County land uses.

**Table 1** displays forecast daily vehicle trip generation for the Recommended Project in the unincorporated portions of San Diego County. Trip generation under existing conditions and buildout of the Existing General Plan are also shown, along with the change in vehicle trips from the Recommended Project when compared with the previously analyzed General Plan Update alternatives.

As shown in the table, the Recommended Project would generate a total of 4,996,859 daily vehicle trips with 1,730,975 in the Northwestern Communities, 2,752,563 in the Southwestern Communities, and 513,321 in the Eastern Communities. The Recommended Project would result in approximately 185,500 fewer daily vehicle trips (-3.6%) than the Existing General Plan. Compared with the previously analyzed General Plan Update alternatives, only the Environmentally Superior alternative would generate fewer daily vehicle trips (approximately 90,000) than the Recommended Project.

**TABLE 1**  
**AVERAGE DAILY VEHICLE TRIP GENERATION**

CPA	Average Daily Vehicle Trips (ADT)							
	Existing	Existing GP	Recommend -ed Project	Change From Recommended Project				
				Referral	Draft Land Use	Hybrid	Environment-ally Superior	Cumulative Analysis
<i>Northwestern Communities</i>								
Bonsall	63,438	112,477	95,378	20,182	18,721	19,781	18,181	20,435
Fallbrook	286,243	412,923	460,570	(816)	(1,871)	2,740	(53,158)	36,357
North County Metro	203,177	308,971	379,309	17,671	3,174	4,710	(45,063)	51,419
Pala - Pauma	61,484	144,156	105,046	2,218	(1,749)	(699)	(3,353)	8,459
Pendleton - De Luz	153,761	228,679	156,586	(1,510)	(731)	(847)	(1,338)	(731)
Rainbow	10,128	38,961	23,747	25,269	(858)	24	(1,290)	25,269
San Dieguito	149,828	258,641	236,956	(2,650)	(3,964)	(4,110)	(2,870)	(2,650)
Valley Center	104,633	220,161	273,383	51,787	6,261	11,260	(22,918)	61,334
Northwestern Communities Subtotal	1,032,692	1,724,969	1,730,975	112,151	18,983	32,859	(111,809)	199,892
<i>Southwestern Communities</i>								
Alpine	214,643	311,826	317,814	43,288	27,874	29,404	13,245	121,646
County Islands	13,443	15,340	18,153	(2,311)	(68)	(74)	68	(291)
Crest - Dehesa	48,729	61,944	56,423	(477)	(480)	(457)	(966)	(457)
Jamul - Dulzura	56,987	144,616	101,595	1,280	(417)	(471)	(4,727)	1,280
Lakeside	436,719	581,552	587,985	(4,805)	(1,380)	(1,734)	(1,675)	(1,380)
Otay	7,496	229,736	351,726	13,171	15,407	15,088	17,257	17,257
Ramona	304,668	467,882	436,569	9,168	1,516	2,011	2,682	9,168
Spring Valley	336,273	412,392	412,083	3,903	6,577	6,266	9,327	9,327
Sweetwater	59,150	74,793	68,136	1,671	411	371	915	1,671
Valle De Oro	383,205	404,852	402,079	4,203	6,718	6,431	9,361	9,361
Southwestern Communities Subtotal	1,861,313	2,704,933	2,752,563	69,091	56,158	56,835	45,487	167,582

**TABLE 1  
 AVERAGE DAILY VEHICLE TRIP GENERATION**

CPA	Average Daily Vehicle Trips (ADT)							
	Existing	Existing GP	Recommend -ed Project	Change From Recommended Project				
				Referral	Draft Land Use	Hybrid	Environment-ally Superior	Cumulative Analysis
<i>Eastern Communities</i>								
Central Mountain	36,942	49,814	43,490	(87)	(25)	(28)	(280)	(25)
Desert	72,198	285,884	193,155	12,501	8,518	11,086	(1,082)	48,355
Julian	30,945	56,872	42,820	(83)	(934)	(679)	(904)	(83)
Mountain Empire	77,193	297,344	192,976	43,029	(7,061)	(7,178)	(20,831)	56,198
North Mountain	31,568	62,470	40,880	3,944	(9)	403	(252)	5,325
Eastern Communities Subtotal	248,846	752,384	513,321	59,304	489	3,604	(23,349)	109,770
<b>Total</b>	<b>3,142,851</b>	<b>5,182,286</b>	<b>4,996,859</b>	<b>240,546</b>	<b>75,630</b>	<b>93,298</b>	<b>(89,671)</b>	<b>477,244</b>

Source: Fehr & Peers; September 2010

Note: (XX,XXX) indicates negative values.

**VEHICLE MILES OF TRAVEL (VMT)**

Vehicle Miles of Travel (VMT) is a measurement of the total miles traveled by all motor vehicles in the area for a specified time period. VMT is an indicator of the overall magnitude of travel associated with each of the land use and roadway network alternatives. In general, a mix of land uses within closer proximity and requiring less driving distance for interaction can result in a reduction in VMT. Typically more dispersed and segregated (not mixed) land uses result in greater VMT.

**Table 4.2** displays daily VMT for existing conditions, the existing General Plan and the Recommended Project, as well as the change in daily VMT between the Recommended Project and the previously analyzed General Plan Update alternatives. As shown in the table, the Recommended Project would result in approximately 3.7 million less daily VMT (about 13%) than the Existing General Plan. All of the previously analyzed alternatives would result in more VMT than the Recommended Project, except for the Environmentally Superior alternative.

**TABLE 2**  
**DAILY VEHICLE MILES OF TRAVEL (VMT)**

CPA	Daily Vehicle Miles of Travel							
	Existing	Existing GP	Recommend -ed Project	Change From Recommended Project				
				Referral	Draft Land Use	Hybrid	Environment-ally Superior	Cumulative Analysis
<i>Northwestern Communities</i>								
Bonsall	1,179,857	2,198,576	2,072,787	15,003	31,416	18,384	(40,100)	75,849
Fallbrook	1,356,481	2,468,641	2,372,646	852	4,564	(2,934)	(74,328)	65,392
North County Metro	1,645,889	3,074,185	2,793,726	22,208	14,840	7,249	(76,134)	115,622
Pala - Pauma	270,007	623,253	410,445	10,285	1,174	3,450	(12,731)	13,136
Pendleton - De Luz	2,734,946	3,938,832	3,799,348	(247)	2,361	1,166	(3,744)	2,361
Rainbow	422,169	806,804	795,642	15,976	(430)	129	(1,513)	16,931
San Dieguito	503,845	819,883	722,552	(860)	(256)	(1,409)	(1,299)	(256)
Valley Center	402,685	834,261	743,478	71,005	18,856	25,994	(63,881)	94,780
Northwestern Communities Subtotal	8,515,879	14,764,435	13,710,623	134,223	72,526	52,030	(273,729)	383,816
<i>Southwestern Communities</i>								
Alpine	745,350	1,144,080	911,194	239,500	227,789	230,395	213,907	325,653
County Islands	320,638	385,062	391,294	(2,571)	(1,068)	(1,184)	487	487
Crest - Dehesa	151,969	218,408	186,588	18,417	17,207	17,560	14,915	23,808
Jamul - Dulzura	315,670	739,375	549,339	35,265	(37,220)	(36,796)	(57,092)	35,265
Lakeside	1,483,082	2,127,527	2,124,597	58,450	66,256	65,360	56,262	72,808
Otay	24,779	366,917	442,081	18,958	20,891	20,547	21,843	21,843
Ramona	685,606	1,118,342	841,587	26,729	563	8,420	(12,685)	30,549
Spring Valley	870,515	1,194,885	1,166,701	1,839	6,469	6,080	13,977	13,977
Sweetwater	571,218	881,328	859,885	692	4,949	4,631	10,480	10,480
Valle De Oro	568,211	707,773	634,938	2,408	4,035	3,310	3,240	4,035
Southwestern Communities Subtotal	5,737,038	8,883,697	8,108,203	399,688	309,872	318,324	265,335	538,906

**TABLE 2**  
**DAILY VEHICLE MILES OF TRAVEL (VMT)**

CPA	Daily Vehicle Miles of Travel							
	Existing	Existing GP	Recommend -ed Project	Change From Recommended Project				
				Referral	Draft Land Use	Hybrid	Environment-ally Superior	Cumulative Analysis
<i>Eastern Communities</i>								
Central Mountain	559,722	229,028	839,991	12,073	13,930	17,613	(11,959)	52,665
Desert	161,005	686,572	306,690	16,882	(2,012)	6,102	(21,987)	29,081
Julian	66,945	1,301,424	99,568	(4,365)	(13,288)	(10,382)	(17,393)	4,437
Mountain Empire	623,737	1,655,818	1,216,086	89,599	(19,017)	(18,965)	(74,305)	146,015
North Mountain	257,823	857,490	418,854	22,774	(22,372)	(12,508)	(36,864)	35,003
Eastern Communities Subtotal	1,669,232	4,730,332	2,881,189	136,963	(42,759)	(18,140)	(162,508)	267,201
<b>Total</b>	<b>15,922,149</b>	<b>28,378,464</b>	<b>24,700,016</b>	<b>670,873</b>	<b>339,638</b>	<b>352,213</b>	<b>(170,903)</b>	<b>1,189,922</b>

Source: Fehr & Peers; September 2010

Note: (XX,XXX) indicates negative values.

### LANE MILES BY FACILITY TYPE

**Table 3** displays lane miles by facility type (State highways, ME roads and local public roads), as well as by subregion and CPA for the Recommended Project.

As shown, the Recommended Project includes 612.6 lane miles of State highways, 2,397.7 lane miles of County ME roads, and 702.5 lane miles of local public roads, for a total of 3,712.8 roadway lane miles in the unincorporated County. Under the Recommended Project, County ME roadway lane miles are fairly evenly distributed amongst the three subregions (35% each in the Northwestern and Southwestern Communities, and 30% in the Eastern Communities). Close to half of the State highway lane miles would be located in the Eastern Communities. Local public road lane miles would also be fairly evenly distributed amongst the three subregions (30% each in the Northwestern and Eastern Communities, and 40% in the Southwestern Communities).

**TABLE 3  
 ROADWAY LANE MILES BY SUBREGION AND CPA  
 RECOMMENDED PROJECT**

CPA	Lane Miles			
	State Highway	ME Roads	Local Public Roads	Total
<i>Northwestern Communities</i>				
Bonsall	17.2	83.4	21.6	122.2
Fallbrook	26.1	151.1	50.0	227.2
North County Metro	15.2	200.8	34.7	250.7
Pala - Pauma	60.0	46.1	3.4	109.5
Pendleton - De Luz	-	57.7	2.4	60.1
Rainbow	-	19.1	-	19.1
San Dieguito	-	105.7	54.2	159.9
Valley Center	-	181.0	36.4	217.4
Northwestern Communities Subtotal	118.5	844.9	202.7	1,166.1
<i>Southwestern Communities</i>				
Alpine	-	107.7	32.5	140.2
County Islands	-	3.9	-	3.9
Crest - Dehesa	-	63.0	9.1	72.1
Jamul - Dulzura	54.7	99.5	59.6	213.8
Lakeside	31.5	180.5	52.6	264.6
Otay	-	61.1	6.5	67.6
Ramona	64.6	149.8	51.8	266.2
Spring Valley	-	62.4	31.8	94.2
Sweetwater	-	25.0	8.1	33.1
Valle De Oro	10.8	98.7	34.0	143.5
Southwestern Communities Subtotal	161.6	851.6	286.0	1,299.2
<i>Eastern Communities</i>				
Central Mountain	42.6	146.2	66.2	255.0
Desert	60.3	266.2	8.1	334.6

**TABLE 3  
 ROADWAY LANE MILES BY SUBREGION AND CPA  
 RECOMMENDED PROJECT**

CPA	Lane Miles			
	State Highway	ME Roads	Local Public Roads	Total
Julian	35.0	24.5	1.4	60.9
Mountain Empire	70.7	144.2	76.4	291.3
North Mountain	123.9	120.1	61.7	305.7
Eastern Communities Subtotal	332.5	701.2	213.8	1,247.5
<b>Total</b>	<b>612.6</b>	<b>2,397.7</b>	<b>702.5</b>	<b>3,712.8</b>

Source: Fehr & Peers; September 2010

**REFINEMENT AND APPLICATION OF MODEL OUTPUT**

Output from the SANDAG traffic model included forecast traffic volumes (ADTs) and plots displaying roadway segment LOS for the Recommended Project. Additional review of the model output was undertaken to ensure both the validity and reasonableness of the resulting traffic volumes and LOS.

Based upon detailed review of the model output, in a number of instances the LOS as reported by the model was adjusted to account for the following:

1. Variability in traffic forecasts associated with centroid loadings – The coding and location of centroid connectors (connect the TAZ to the roadway network) can impact the loading of traffic onto the adjacent roadway segments. TAZ sizes can vary with large TAZs more common in less developed, more rural areas with fewer roadway facilities. The traffic model in these situations can result in excess volume loadings specifically on the immediately adjacent links. Forecast traffic volumes and associated deficiencies were reviewed to ensure a balanced and reasonable loading pattern from the TAZs onto the adjacent roadway network.
2. Variability in traffic forecasts associated with local streets – The SANDAG regional model roadway network does not reflect all local streets, which could result in potential over-forecasting on adjacent Mobility Element roads. Forecast traffic volumes and associated deficiencies were reviewed to ensure reasonable trip distribution and assignment to the modeled roadway network.
3. Overall accuracy of forecast traffic volumes – Traffic forecasts have an associated level of accuracy, which is typically and conservatively assumed as plus or minus ten percent (10%) for roadway segments. Identified deficiencies from the traffic model were examined to ensure reasonability within the expected accuracy of the model.

Conduct of the aforementioned reasonability checks and adjustments resulted in a refined list of roadway segment deficiencies associated with the Recommended Project. **Table 4** displays the specific roadway segment deficiency adjustments, by CPA, that resulted in deletion of the subject segment as a deficiency, along with the rationale. Note that the number indicated in the “Adjustment Rationale” column represents one or more of the three situations referenced on the pervious page.

**TABLE 4  
 MODEL OUTPUT MANUAL ADJUSTMENTS  
 RECOMMENDED PROJECT**

CPA	Facility Type	Roadway	Segment Limits	Adjustment Rationale
<i>Northwestern Communities</i>				
Bonsall	ME Road	Old Hwy 395	Dublin (W) Rd to West Lilac Rd	3
		Old Hwy 395	West Lilac Rd to I-15 SB Ramps	3
Fallbrook	ME Road	Pankey Road	Pala Rd to Shearer Crossing	1 & 3
		Stage Coach Lane	Alvarado St to Fallbrook St	2 & 3
		Mission Road	Clemmens Ln to Ohearn Rd	2 & 3
		Mission Road	Ohearn Rd to Laurine Ln	2 & 3
		Mission Road	De Luz Rd to Vine St	2 & 3
		Mission Road	Vine St to Brandon Rd	3
		Mission Road	Stage Coach Ln to Davis Dr	3 & 2
		Alvarado Street	Main Ave to West of Brandon Rd	3
		Fallbrook Street	Old Stage Rd to Mandarin Dr	2
		Old Hwy 395	White Lilac Rd to Mission Rd	3
		Old Hwy 395	Stewart Canyon Rd to Pala Mesa Dr	3
		Reche Road	Fallbrook St to Green Canyon Rd	2 & 3
North County Metro	State Hwy	SR-78	Smilax Rd to Sycamore Ave	1 & 3
	ME Road	Deer Springs Road	Mesa Rock Rd to I-15 NB Ramps	3
		Bear Valley Parkway	Eldorado Dr to San Pasqual Valley Rd	3
Pala - Pauma	-	-	-	-
Pendleton - De Luz	-	-	-	-
Rainbow	ME Road	Old Hwy 395	New Rainbow Valley Rd to White Lilac Rd	3
San Dieguito	ME Road	Paseo Delicias	Via De La Valle to La Granada	3
		El Camino Del Norte	Via de Fortuna to Via Roswitha	2
Valley Center	ME Road	Valley Center Road	Lilac Rd to Canyon Rd	3

**TABLE 4  
 MODEL OUTPUT MANUAL ADJUSTMENTS  
 RECOMMENDED PROJECT**

CPA	Facility Type	Roadway	Segment Limits	Adjustment Rationale
Valley Center	ME Road	Valley Center Road	Canyon Rd to New Southern Pass	3
		Valley Center Road	New Southern Pass to Miller Rd	3
		Valley Center Road	Turtle Rock to Rock Hill Ranch	3 & 2
<i>Southwestern Communities</i>				
Alpine	ME Road	Alpine Boulevard	Arnold Wy to Peutz Valley Rd	1
		Alpine Boulevard	Tavern Rd to Boulders Rd	3
		South Grade Road	Eltinge Dr to Olive View Rd	3
		Tavern Road	I-8 WB Ramps to Alpine Blvd	3
County Islands	-	-	-	-
Crest - Dehesa	-	-	-	-
Jamul - Dulzura	State Hwy	Campo Road/SR-94	Fair Acres Ln to Steele Canyon Rd	3
Lakeside	ME Road	Lake Jennings Park Road	I-8 WB Off-Ramp to I-8 EB Off-Ramp	3
		Julian Avenue	Los Coches Rd to Cypress Ln	2 & 3
		Mapleview Street	SR-67 SB Off Ramp to Maine Ave/SR-67 On Ramp	2
		Greenfield Drive	Graves Ave to Ballantyne St	2 & 3
		Graves Avenue	Graves Ave to Bradley Ave	2 & 3
Otay	ME Road	Otay Mesa Road	Enrico Firmi to west of Alta Road	2 & 3
		Enrico Firmi	SR-11 to Otay Mesa Rd	2
		Sempre Viva Road	SR-11 EB Ramps to Loop Rd	3
Ramona	State Hwy	SR-67	East of Ranchro de Oro Dr to Mussey Grade Rd	1 & 3
	ME Road	San Vicente Road	H St to 11 <sup>th</sup> St	1 & 3
		San Vicente Road	Warnock Dr to Wildcat Canyon Rd	3
		San Vicente Road	Wildcat Canyon Rd to west of Serra Wy	3
		Pine Street	Ash St to Cedar St	3
		Wildcat Canyon Road	San Vicente Oak Rd to Harry Hertzberg Wy	3
Spring Valley	ME Road	Jamacha Boulevard	Sweetwater Rd to Kempton St	2 & 3
		Paradise Valley Road	Worthington St to Elkelton Blvd	3

**TABLE 4  
 MODEL OUTPUT MANUAL ADJUSTMENTS  
 RECOMMENDED PROJECT**

CPA	Facility Type	Roadway	Segment Limits	Adjustment Rationale
Spring Valley	ME Road	Kenwood Drive	Bancroft Dr to James Circle	3
		Kenwood Drive	Andreen St to SR-94 EB Ramps	3
Sweetwater	ME Road	Sweetwater Road	Plaza Bonita Center Wy to Mesa Vista Wy	3
		Sweetwater Road	Mesa Vista Wy to Willow St	3
		Sweetwater Road	Willow St to Orchard Hill Rd	3
Valle De Oro	ME Road	Conrad Drive	Sierra Madre Rd to Campo Rd	2 & 3
		Kenwood Drive	Campo Rd to SR-94 WB Ramps	2 & 3
		Avocado Boulevard	SR-94 WB Ramps to Madrid Wy	2 & 3
		North Barcelona Street	Campo Rd to Delores St	2
<i>Eastern Communities</i>				
Central Mountain	-	-	-	-
Desert	ME Road	Palm Canyon Drive	Ocotillo Cir to Borrego Springs Rd	1
		Christmas Circle	Palm Canyon Dr to Sunset Rd	2 & 3
		Christmas Circle	Sunset Rd to Borrego Springs Rd	2
		Borrego Spring Road	Diamond Bar Rd to Tilting T Dr	2 & 3
		Palm Canyon Drive	Christmas Circle to Stirrup Rd	2
Julian	-	-	-	-
Mountain Empire	State Hwy	Tecate Road/SR-188	Campo Rd to Airport Rd	1 & 3
	ME Road	Ribbonwood Road	Manzanita Dulce Rd to I-8 EB Ramps	1
		Carrizo Gorge Road	Carrizo Gorge Rd to I-8 EB Ramps	1
North Mountain	-	-	-	-

Source: Fehr & Peers; September 2010

As noted, the segments displayed in Table 4 were deleted from the list of roadway segments considered to be operating at substandard LOS E/F.

**LANE MILES BY LOS**

**Table 5** displays roadway network performance for the Recommended Project. Roadway lane miles by LOS category are reported by facility type (State highways and ME roads), as well as by subregion and CPA. This analysis incorporates the model output refinements and LOS adjustments outlined in the

previous section. Lane miles operating at LOS E and F are identified as deficiencies and subject to mitigation.

**TABLE 5  
 ROADWAY LANE MILES BY LEVEL OF SERVICE  
 RECOMMENDED PROJECT**

CPA	Lane Miles											
	LOS A-C			LOS D			LOS E			LOS F		
	State Hwy	ME Roads	Total	State Hwy	ME Roads	Total	State Hwy	ME Roads	Total	State Hwy	ME Roads	Total
<i>Northwestern Communities</i>												
Bonsall	4.4	76.5	80.9	0.4	6.9	7.3	2.7	-	2.7	9.7	-	9.7
Fallbrook	21.3	82.4	103.7	4.2	54.7	58.9	0.6	4.2	4.8	-	9.8	9.8
North County Metro	14.9	176.1	191.0	0.3	23.3	23.6	-	-	-	-	1.4	1.4
Pala - Pauma	49.6	36.2	85.8	6.2	9.9	16.1	-	-	-	4.2	-	4.2
Pendleton - De Luz	-	42.4	42.4	-	15.3	15.3	-	-	-	-	-	-
Rainbow	-	13.4	13.4	-	4.3	4.3	-	1.3	1.3	-	.1	.1
San Dieguito	-	52.3	52.3	-	19.1	19.1	-	10.1	10.1	-	24.2	24.2
Valley Center	-	104.4	104.4	-	60.0	60.0	-	8.7	8.7	-	7.9	7.9
Northwestern Communities Subtotal	90.2	583.7	673.9	11.1	193.5	204.6	3.3	24.3	27.6	13.9	43.4	57.3
<i>Southwestern Communities</i>												
Alpine	-	83.2	83.2	-	20.8	20.8	-	0.3	0.3	-	3.4	3.4
County Islands	-	-	-	-	3.6	3.6	-	-	-	-	0.3	0.3
Crest - Dehesa	-	53.8	53.8	-	9.2	9.2	-	-	-	-	-	-
Jamul - Dulzura	38.6	95.3	133.9	16.1	1.1	17.2	-	3.1	3.1	0	-	0
Lakeside	17.1	137.6	154.7	7.6	24.9	32.6	5.6	4.5	10.0	1.2	13.5	14.7
Otay	-	51.8	51.8	-	9.3	9.3	-	-	-	-	0	0
Ramona	53.6	119.2	172.8	10.1	27.6	37.7	0.9	0.2	1.1	-	2.8	2.8

**TABLE 5  
 ROADWAY LANE MILES BY LEVEL OF SERVICE  
 RECOMMENDED PROJECT**

CPA	Lane Miles											
	LOS A-C			LOS D			LOS E			LOS F		
	State Hwy	ME Roads	Total	State Hwy	ME Roads	Total	State Hwy	ME Roads	Total	State Hwy	ME Roads	Total
Spring Valley	-	41.5	41.5	-	17.3	17.3	-	2.2	2.2	-	1.3	1.3
Sweetwater	-	16.7	16.7	-	7.6	7.6	-	0.7	0.7	-	-	-
Valle De Oro	9.0	77.0	86.0	1.8	13.6	15.4	-	3.2	3.2	-	4.9	4.9
Southwestern Communities Subtotal	118.3	676.1	794.4	35.7	135.1	170.8	6.4	14.2	20.6	1.2	26.2	27.4
<i>Eastern Communities</i>												
Central Mountain	42.6	145.3	187.9	-	0.9	0.9	-	-	-	-	-	-
Desert	60.3	257.0	317.3	-	9.2	9.2	-	-	-	-	-	-
Julian	35.0	24.5	59.5	-	-	-	-	-	-	-	-	-
Mountain Empire	62.8	140.1	202.9	7.9	4.1	12.0	-	-	-	-	-	-
North Mountain	123.9	109.7	233.6	-	10.4	10.4	-	-	-	-	-	-
Eastern Communities Subtotal	324.6	676.6	1,001.2	7.9	24.6	32.5	-	-	-	-	-	-
<b>Total</b>	<b>533.1</b>	<b>1,936.4</b>	<b>2,469.5</b>	<b>54.7</b>	<b>353.2</b>	<b>407.9</b>	<b>9.8</b>	<b>38.6</b>	<b>48.4</b>	<b>15.1</b>	<b>69.6</b>	<b>84.7</b>

Source: Fehr & Peers; September 2010

As shown in Table 5, a total of 48.4 lane miles of facilities (9.8 lane miles of State highways and 38.6 lane miles of ME roads) would operate at LOS E. A total of 84.7 lane miles of facilities (15.1 lane miles of State highways and 69.6 lane miles of ME roads) would operate at LOS F under buildout of Recommended Project.

The Northwestern Communities would have the most deficient roadway lane miles at 84.9; the Southwestern Communities are projected to have 48.0 lane miles of deficient facilities (approximately

half of the Northwestern Communities), with the Eastern Communities having the zero deficient roadway.

**Table 6** summarizes the projected total number of deficient roadway segments and corresponding deficient roadway lane miles throughout the unincorporated County under buildout of the Recommended Project.

**TABLE 6  
SUMMARY OF DEFICIENT ROADWAYS  
RECOMMENDED PROJECT**

Type	State Highways	ME Roads	Total
Deficient Segments (#)	11	65	76
Deficient Lane Miles	24.9	108.2	133.1

Source: Fehr & Peers; September 2010

#### **DEFICIENT FACILITIES**

**Table 7** lists the deficient roadway segments (LOS E and F) in the unincorporated portion of the County of San Diego under the Recommended Project. This table also includes forecast ADT, LOS, roadway classification type, and mitigated classification. The roadway classification represents the General Plan Update classification as indicated for the Recommended Project, and the mitigated roadway classification represents the classification which would be required to mitigate the identified deficiency.

#### **ROAD 3A OPTION**

As per the County's request, the option without Road 3A in Valley Center was also reviewed. Based upon SANDAG model output, the following two ME roads would be affected without Road 3A:

- West Lilac Road, between Shirey Road and Lilac Walk would operate at substandard LOS E without Road 3A (LOS C with Road 3A in place); and
- Old Hwy 395, between West Lilac Road and I-15 SB-Ramps would operate at substandard LOS F without Road 3A (LOS E with Road 3A in place).



**TABLE 7  
 DEFICIENT FACILITIES (LOS E/F) BY SUBREGION AND CPA  
 RECOMMENDED PROJECT**

CPA	Facility Type	Roadway	Segment Limits	Classification	ADT	LOS	Mitigated Classification
<i>Northwestern Communities</i>							
Bonsall	State Hwy	Mission Road/SR-76	Oceanside/County Boundary to Vista Wy	4-Ln State Highway	55,100	F	6-Ln State Highway
		Mission Road/SR-76	Vista Wy to Holly Ln	4-Ln State Highway	44,400	E	6-Ln State Highway
		Mission Road/SR-76	Holly Ln to North River Rd	4-Ln State Highway	44,400	E	6-Ln State Highway
		Mission Road/SR-76	North River Rd to Via Montellano	4-Ln State Highway	54,300	F	6-Ln State Highway
		Mission Road/SR-76	Via Montellano to Mission Rd	4-Ln State Highway	54,600	F	6-Ln State Highway
Fallbrook	State Hwy	Pala Road/SR-76	Old Hwy 395 to I-15 SB Ramps	4-Ln State Highway	40,400	E	6-Ln State Highway
	ME Road	De Luz Road	Dougherty St to Mission Rd	2.2C	14,700	E	2.1A
		Mission Road	Live Oak Park Rd to Old Hwy 395	4.2B	32,800	F	6.2
		Mission Road	Old Hwy 395 to I-15 SB Ramps	4.2B	38,300	F	6.2
		Old Hwy 395	Mission Rd to Reche Rd	2.1A	18,700	E	4.2B
		Old Hwy 395	Reche Rd to Stewart Canyon Rd	2.1A	22,900	F	4.2B
		Old Hwy 395	Pala Rd to Dublin (E) Rd	2.1D	13,900	E	4.2B
Old Hwy 395	Dublin (E) Rd to Dublin (W) Rd	2.1D	16,500	E	4.2B		
North County Metro	ME Road	Deer Springs Road	I-15 NB Ramps to N Centre City Pkwy	4.1B	45,100	F	6.2
		Mountain Meadows Road / Mirar De Valle	North Broadway to Alps Ln	2.1D	20,200	F	4.2B
Pala - Pauma	State Hwy	Pala Road/SR-76	Pala Del Norte Rd to 6 <sup>th</sup> St	2-Ln State Highway	25,400	F	4-Ln State Highway



**TABLE 7  
 DEFICIENT FACILITIES (LOS E/F) BY SUBREGION AND CPA  
 RECOMMENDED PROJECT**

CPA	Facility Type	Roadway	Segment Limits	Classification	ADT	LOS	Mitigated Classification
Rainbow	ME Road	Rainbow Valley Boulevard	I-15 NB Ramps to Old Hwy 395	2.2E	17,400	F	4.2B
		Old Hwy 395	5th St to Rainbow Valley Rd	2.1D	16,100	E	4.2B
		Old Hwy 395	Rainbow Valley Rd to Rainbow Valley Blvd	2.1D	16,000	E	4.2B
San Dieguito	ME Road	Del Dios Highway	Via Rancho Pkwy to El Camino Del Norte	2.1D	29,000	F	4.1B
		Paseo Delicias	El Camino Del Norte to El Montevideo	2.2A	24,300	F	4.2B
		Paseo Delicias	El Montevideo to Via De La Valle	2.2A	23,100	F	4.2B
		La Bajada	El Mirlo to Los Morros	2.2F	24,400	F	4.2B
		La Granada	Los Morros to Rambla De Las Flores	2.2F	19,000	F	4.2B
		La Granada	Rambia de las Flores to Avenida De Acacias	2.2F	14,900	E	4.2B
		La Granada	Avenida De Acacias to Paseo Delicias	2.2F	16,800	F	4.2B
		Linea Del Cielo	El Camino Real to Rambla De Las Flores	2.2F	11,000	E	2.2D
		Via De La Valle	El Camino Real to Las Planideras	2.1B	25,300	F	4.2B
		Via De La Valle	Las Planideras to Calzada Del Bosque	2.1E	24,800	F	4.2B
		Via De La Valle	Calzada Del Bosque to Via de Santa Fe	2.1E	25,200	F	4.2B
		Via De La Valle	Via de Santa Fe to Paseo Delicias	2.1E	16,300	E	4.2B
		El Camino Del Norte	Aliso Canyon Rd to Del Dios Hwy	2.2F	13,700	E	2.1A
		El Apajo	Via De La Valle to Via De Santa Fe	2.1A	17,200	E	4.2B
		San Dieguito Road	El Apajo to Circa Oriente	2.1A	17,600	E	4.2B



**TABLE 7  
 DEFICIENT FACILITIES (LOS E/F) BY SUBREGION AND CPA  
 RECOMMENDED PROJECT**

CPA	Facility Type	Roadway	Segment Limits	Classification	ADT	LOS	Mitigated Classification
Valley Center	ME Road	Mountain Meadows Road/ Mirar De Valle Road	Alps Ln to Burnt Mountain Rd	2.1D	20,100	F	4.2B
		Mountain Meadows Road/ Mirar De Valle Road	Burnt Mountain to Red Ironbark Dr	2.1D	19,600	F	4.2B
		Mountain Meadows Road/ Mirar De Valle Road	Red Ironbark Dr to Cypress Ridge	2.1D	27,400	F	4.2B
		Lilac Road	Cypress Ridge to Valley Center Rd	4.2B	33,900	F	6.2
		Valley Center Road	Miller Rd to Indian Creek Rd	4.2A	32,400	E	6.2
		Wood Valley Road	Oakmont Rd to Augusta Dr	2.2C	17,600	E	4.2B
		Wood Valley Road	Augusta Dr to Karibu Ln	2.2C	14,300	E	2.1A
		New Road 19	Lilac Rd to Mirar de Valle	4.2B	28,000	E	4.1B
<i>Southwestern Communities</i>							
Alpine	ME Road	Alpine Boulevard	Boulders Rd to Alpine Special Treatment Center	2.2A	20,300	F	4.2B
		Alpine Boulevard	Alpine Special Treatment Center to W. Victoria Dr	2.2A	15,200	E	4.2B
		Alpine Boulevard	W. Victoria Dr to Louis Drive	2.2A	20,000	F	4.2B
		Willows Road	Alpine Blvd to Otto Ave	2.2E	20,400	F	4.2B
		Willows Road	Otto Ave to Viejas Grade Rd	2.2E	27,200	F	4.1B
County Island	ME Road	Pomerado Road	I-15 NB Ramps to Willow Creek Rd	4.1A	35,400	F	6.2



**TABLE 7  
 DEFICIENT FACILITIES (LOS E/F) BY SUBREGION AND CPA  
 RECOMMENDED PROJECT**

CPA	Facility Type	Roadway	Segment Limits	Classification	ADT	LOS	Mitigated Classification
Jamul - Dulzura	ME Road	Lyons Valley Road	Campo Rd to Skyline Truck Trail	2.2B	18,200	E	4.2B
Lakeside	State Hwy	SR-67	Poway/County Boundary to Scripps Poway	4-Ln State Highway	35,700	F	6-Ln State Highway
		SR-67	Scripps Poway Pkwy To Sycamore Park	4-Ln State Highway	46,200	E	6-Ln State Highway
		SR-67	Johnson Lake Rd to Posthill Rd	4-Ln State Highway	46,600	E	6-Ln State Highway
	ME Road	Maine Avenue	Mapleview St to Lakeshore Dr	2.2E	16,200	F	4.2B
		Maine Avenue	Lakeshore Dr to Parkside St	2.2E	17,200	F	4.2B
		Maine Avenue	Parkside St to Woodside Ave	2.2E	15,000	E	4.2B
		Lake Jennings Park Road	I-8 Business Route to I-8 WB Off-Ramp	4.1B	37,300	F	6.2
		Los Coches Road	Woodside Ave to Julian Ave	2.1D	18,000	E	4.2B
		Los Coches Road	Julian Ave to I-8 Business Route	2.1D	17,900	E	4.2B
		Mapleview Street	Maine Ave to Ashwood St	4.1A	48,900	F	6.2
Woodside Avenue	SR-67 NB Off Ramp to Riverford Rd	4.2A	30,200	F	4.1A		
Wildcat Canyon Road	Willow Rd to Lakeside/Ramona CPA Boundary	2.1D	28,600	F	4.1B		
Ramona	State Hwy	Main Street/SR-78	9th St to 11th St	4-Ln State Highway	29,300	E	6-Ln State Highway
	ME Road	7th Street	Elm St to A St	2.2E	12,900	E	2.1D
		7th Street	Main St to D St	2.2E	14,500	F	2.1D
		Wildcat Canyon Road	Harry Hertzberg Way to Lakeside/Barona CPA Boundary	2.1D	35,100	F	6.2



**TABLE 7  
 DEFICIENT FACILITIES (LOS E/F) BY SUBREGION AND CPA  
 RECOMMENDED PROJECT**

CPA	Facility Type	Roadway	Segment Limits	Classification	ADT	LOS	Mitigated Classification
Spring Valley	ME Road	Paradise Valley Road	Elkelton Blvd to Sweetwater Rd	4.1B	35,000	F	6.2
		Jamacha Road	SR-125 SB Ramps to SR-125 NB Ramps	4.1B	34,100	E	6.2
		Jamacha Road	SR-125 NB Ramps to Sweetwater Rd	4.1B	39,100	F	6.2
		Bancroft Drive	Troy St to SR-94 EB Ramp	2.2D	18,600	E	4.2B
Sweetwater	ME Road	Briarwood Road	SR-54 WB Ramps to Robinwood Rd	2.1D	17,700	E	4.2B
		Central Avenue	Sweetwater Rd to Bonita Rd	2.2C	15,400	E	4.2B
			Bonita Rd to Frisbee St	2.2B	15,500	E	4.2B
Valle De Oro	ME Road	Jamacha Road	Campo Rd/SR-94 to Fury Ln	6.2	62,200	F	6.1
		Campo Road	Kenwood Dr to Conrad Dr	4.2B	47,800	F	6.2
		Fuerte Drive	Bancroft Dr to Lemon Ave	2.2E	13,000	E	4.2B
		Fuerte Drive	Lemon Ave to Grandview Dr	2.2E	19,300	F	4.2B
		Fuerte Drive	Grandview Dr to Avocado Blvd	2.2E	13,500	E	4.2B

Source: Fehr & Peers; September 2010