



Appendix C.4

TRAFFIC IMPACT ANALYSIS OF REVISED PROJECT





Letter Report

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I. INTRODUCTION

Urban Systems Associates (USAI) previously prepared a traffic impact analysis (“TIA”) dated March 23, 2012, for the Originally Proposed Project, as defined in the One Paseo Draft EIR. Subsequently, the applicant reduced the size and intensity of the proposed project, referred to as the Revised Project. USAI conducted an analysis of the Revised Project, dated February 28, 2013, to assess the change in traffic impacts and mitigation, if any, by virtue of the changes made to the project. In response to public input received on the Draft EIR, the Revised Project analysis was modified to (i) utilize City of San Diego intersection signal timing and (ii) utilize higher retail trip generation rate for Phase I of the project. In addition, a table was prepared comparing the Year 2030 analysis in the Revised Project traffic study to an updated SANDAG model run dated January 31, 2013 which included the future build-out of Del Mar Highlands Town Center and Pacific Highlands Ranch. The updated analysis summarized in this Letter Report includes additional queuing analysis along Del Mar Heights Road (which was not included in the February 28, 2013 TIA) to determine if adequate storage is provided through the corridor. Also, in response to public input, additional street segments outside the project study area (not evaluated in February 28, 2013 TIA) were evaluated in this report. Finally, an arterial corridor analysis was conducted on Del Mar Heights Road between I-5 and Carmel Canyon Road which was also not evaluated in the February 28, 2013 TIA.

This updated analysis clarifies whether the Revised Project, with the modifications to the analysis assumptions outlined above, would result in any new impacts and/or mitigation not previously identified.

II. MODIFIED ANALYSIS ASSUMPTIONS

In response to public comments received on the Draft EIR, the trip generation rate assumption for the retail use in Phase 1 has been modified and study intersections along Del Mar Heights Road have been re-analyzed using the City's signal timing sheets. The City's signal timing sheets include signal timing, pedestrian walk timing, pedestrian clearance timing, and coordination cycles for the corridor. Caltrans timing for the I-5 / Del Mar Heights Road interchange have also been used in this analysis as was used in the Revised Project analysis.

The trip generation rate for the retail use of Phase 1 has been modified to a Community Shopping Center rate which is 70 trips per 1,000 square feet (ksf). The trip generation rate for 100,650 square feet of retail in Phase 1 has been modified to 70 trips per ksf versus the 40 trips per ksf previously used in the Revised Project analysis. The trip rate of 40 per ksf is utilized primarily for Specialty Retail / Strip Commercial whereas the 70 trips per ksf is for a Community Shopping Center. As shown in **Attachment 1**, using the higher trip rate, Phase 1 would generate 14,705 average daily trips with 945 AM (783 In / 162 Out) peak hour trips and 1,653 PM (596 In / 1,057 out) peak hour trips. Using the retail trip rate of 40 per ksf in Phase 1, the trip generation in the Revised Project analysis is 10,234 ADT. So the higher trip generation rate of 70 per ksf represents a 44% $(4,471 / 10,234 \times 100\%)$ increase from the Revised Project ADT in Phase 1. For clarification, Phase 2 and 3 retail trip generation assumptions have not been modified since the trip rate used reflects a Community Shopping Center rate. In addition, all 1,200 seats of the proposed Cinema are assumed in Phase 1 of this analysis whereas the previous February 28, 2013 TIA analyzed 400 seats in Phase 1.

The purpose of modifying the retail trip generation and signal timing assumptions in Phase 1 is to reflect a more conservative analysis and determine if the modified assumptions would result in any new impacts and/or mitigation not previously identified. In the Existing with Project (Phase 1) scenario, an analysis was conducted using the more conservative trip rate of 70 per ksf on all study area street segments, intersections, freeways segments, and freeway ramp meters analyzed in the Revised Project.

Attachment 2 shows the Existing with Project (Phase 1) street segment analysis.

Attachment 3 shows the Existing with Project (Phase 1) intersection analysis.

Attachment 4 shows the Existing with Project (Phase 1) freeway segment level of service (LOS) summary.

Attachment 5 shows the Existing with Project (Phase 1) ramp meter analysis.

In the Near Term with Project (Phase 1) scenario, all study area street segments, intersections, freeways segments, and freeway ramp meters were analyzed using the higher trip generation rate for retail.

Attachment 6 shows the Near Term with Project (Phase 1) street segment analysis.

Attachment 7 shows the Near Term with Project (Phase 1) intersection analysis.

Attachment 8 shows the Near Term with Project (Phase 1) freeway segment LOS summary.

Attachment 9 shows the Near Term with Project (Phase 1) ramp meter analysis.

Comparison tables were prepared of the Existing condition with and without the Project (Phase 1) to determine if any new impacts occur as a result of the higher trip generation rate for retail.

Attachment 10 shows three (3) significant impacts in the Existing with/without Project (Phase 1) street segment comparison table.

Attachment 11 shows two (2) significant impacts in the Existing with/without Project (Phase 1) intersection comparison table.

Attachment 12 shows no significant impacts in the Existing with/without Project (Phase 1) freeway segment comparison table.

Attachment 13 shows no significant impacts in the Existing with/without Project (Phase 1) ramp meter comparison table.

The three significant impacts in **Attachment 10** for street segments are the same impacts that occur in the Revised Project analysis. As shown in **Attachment 12 & 13**, the freeway segments and ramp meters analyzed result in no significant impacts, which is consistent with the Revised Project analysis. In **Attachment 11**, the two intersection significant impacts at Del Mar Heights Road / High Bluff Drive and at Carmel Creek Road / Del Mar Trail move up from Phase 2 to Phase 1 in the Existing With Project (Phase 1) scenario compared to the Revised Project analysis.

Comparison tables were prepared for the Near Term condition with and without the Project (Phase 1) to determine if any new impacts occur as a result of the higher trip generation rate for retail.

Attachment 14 shows three (3) significant impacts in the Near Term with/without Project (Phase 1) street segment comparison table.

Attachment 15 shows three (3) significant impacts in the Near Term with/without Project (Phase 1) intersection comparison table.

Attachment 16 shows no significant impacts in the Near Term with/without Project (Phase 1) freeway segment comparison table.

Attachment 17 shows no significant impacts in the Near Term with/without Project (Phase 1) ramp meter comparison table.

The significant impacts in **Attachment 14** for street segments are the same impacts that occur in the Revised Project analysis. As shown in **Attachment 16 & 17**, the freeway segments and ramp meters analyzed result in no significant impacts, which is consistent with the Revised Project analysis. In **Attachment 15**, two of the three intersection significant impacts at Del Mar Heights Road / High Bluff Drive and at Del Mar Height Road / El Camino Real move up from Phase 2 to Phase 1 in the Near Term With Project (Phase 1) scenario compared to the Revised Project analysis. The third intersection impact occurs at Carmel Creek Road / Del Mar Trail which is consistent with the Revised Project analysis.

Attachment 18 shows two (2) significant intersection impacts in Existing with/without Project (Phase 1&2) summary table. One (1) additional significant impact at Del Mar Heights Road / High Bluff Drive compared to the Revised Project analysis.

Attachment 19 shows three (3) significant intersection impacts in the Existing with/without Project (Build-out) summary table. Two (2) additional significant impacts at Del Mar Heights Road / High Bluff Drive & Del Mar Heights Road / El Camino Real compared to the Revised Project analysis.

Attachment 20 shows three (3) significant intersection impacts in the Near Term with/without Project (Phase 1&2) summary table which is consistent with the Revised Project analysis.

Attachment 21 shows four (4) significant intersection impacts in the Near Term with/without Project (Build-out) summary table which is consistent with the Revised Project analysis.

Attachment 22 shows seven (7) significant intersection impacts in the Year 2030 with/without Project (Build-out) summary table. The location of the significant impacts remain the same as the Revised Project analysis, however, at Del Mar Heights Road / El Camino Real, an AM peak hour impact occurs in the updated analysis and at Del Mar Heights Road / High Bluff Drive, there is no AM peak hour impact compared to the Revised Project analysis.

The updated Revised Project analysis using the higher trip generation for Phase 1 retail and City's signal timing sheets along Del Mar Heights Road does not result in any new significant impacts that have not been previously identified.

III. PROPOSED MITIGATION

The next step is to determine if the significantly impacted street segments and intersections in the updated analysis would still be mitigated by the proposed improvements outlined in the Revised Project TIA. As discussed in Section II of this Letter Report, three (3) significant street segment impacts occur based on the updated analysis in Existing with Project (Phase 1) and Near Term with Project (Phase 1). **Attachment 23** shows acceptable levels of service "C" or better to El Camino Real and Via de la Valle when the segments are widened to 4 lanes. Del Mar Heights Road between the I-5 NB ramps and High Bluff Drive shows unacceptable levels of service. An arterial corridor analysis has been conducted along Del Mar Heights Road which shows acceptable levels of service, refer to Section IV of this Letter Report.

Based on the updated analysis for intersections along Del Mar Heights Road using the City's signal timing, **Attachment 24** provides the delays and levels of service with and without mitigation in the Year 2030 with Project scenario. As shown, all three intersections operate at acceptable levels of service D or better with mitigation. At Del Mar Heights Road / High Bluff Drive and Del Mar Height Road / El Camino Real, there is no change to the mitigation proposed in the Revised Project analysis.

At Del Mar Heights Road / I-5 NB ramps, the mitigation proposed in this updated analysis has been modified from what is proposed in the Revised Project analysis based on new information and meetings/discussions with Caltrans. To fully mitigate the project's significant impacts to the Del Mar Heights Bridge over I-5, an additional lane would be required. This means one lane, either eastbound or westbound, would need to be added. Based on the I-5/SR-56 Interchange EIR, Caltrans plans to lengthen the bridge to accommodate additional widening of the I-5 freeway main-lanes and has undertaken a preliminary study for the addition of a single lane to the bridge. The Advanced Planning Study (APS) showing this concept is provided in Appendix I to this letter report. For a south side widening, the extra eastbound lane could be easily added by reconfiguring the proposed Caltrans bridge to accommodate one additional eastbound lane. In addition, by providing a third eastbound lane, the transit service proposed in the future would have the possibility for a Queue Jumper Lane at the northbound ramps traffic signal.

A bridge widening on the north side is only feasible if Del Mar Heights Road is widened to eight (8) lanes due to lane alignment issues. However, based on constraints along Del Mar Heights Road such as the Shell Station on the south side and AT&T Switching Station, a north side widening to accommodate a fourth westbound through lane is not feasible as shown in Attachment 47. The south side lane addition is only feasible for One Paseo in the long term when Caltrans replaces the bridge to accommodate the I-5/SR-56 Interchange project. The final environmental document for the I-5/SR-56 Interchange project was completed in the fall of 2013.

Attachment 25 shows the proposed lane configuration of Del Mar Heights Road / I-5 NB ramps assuming the additional eastbound lane is constructed. Based on the proposed lane configuration in **Attachment 25**, the intersection is projected to operate at LOS D in both the AM and PM peak hour in the horizon year.

IV. DEL MAR HEIGHTS ROAD ARTERIAL ANALYSIS

Given the amount of questions that have arisen regarding the operations of Del Mar Heights Road during peak periods, a peak hour arterial analysis was conducted on Del Mar Heights Road between I-5 and Carmel Canyon Road. The analysis indicates the average peak period speeds along this roadway that would be expected during the various time frames in both the eastbound and westbound directions.

Attachment 26 shows the results of the Highway Capacity Manual arterial corridor analysis along Del Mar Heights Road. As shown, both the eastbound and westbound directions would be expected to operate at LOS D in both the AM and PM peak hours in the Existing Plus Project (Buildout), Near Term Plus Project (Buildout), and the Year 2030 Plus Project (Buildout) scenarios. For comparison, Del Mar Heights Road was analyzed in the Existing, Near Term, and Year 2030 scenarios without the project and mitigation. Attachment 26 shows that in the Year 2030 scenario during the AM peak hour, with the addition of project traffic along with mitigation measures, Del Mar Heights Road operates better than without Project traffic and no mitigation.

V. DEL MAR HEIGHTS ROAD QUEUING ANALYSIS

As part of the updated Revised Project analysis, a queuing analysis was conducted along Del Mar Heights Road between the I-5 Northbound ramps and El Camino Real. **Attachments 27 and 28** provide the 95th percentile queue as well as storage length for the Year 2030 with Project scenario for the AM peak hour and PM peak hour, respectively. The queuing analysis shows that the proposed turn pocket lengths in the eastbound and westbound directions provide adequate vehicle storage at the project access points (First and Third Ave.) during both peak hours. Existing signal timing was not used in the Year 2030 scenario to determine queuing since traffic volumes and patterns change in the future. However, a consistent coordinated cycle length of 120 seconds along Del Mar Heights Road was used in both the AM and PM peak hours.

VI. ADDITIONAL STREET SEGMENT ANALYSIS

Based on public comments to the Draft EIR, five additional street segments outside, but adjacent to the study area have been analyzed. From Existing to Year 2030 with Project, each phase has been analyzed to determine if the five (5) additional segments are significantly impacted as a result of the Revised Project. As shown in **Attachments 29 – 38**, all street segments are projected to operate at acceptable levels of service D or better. Comparison tables with and without the project for each scenario and phase to determine significance are provided in **Attachments 39 – 45**. Since all five (5) segments are projected to operate at acceptable levels of service, no significant project impacts occur and therefore, no mitigation is required.

VII. SANDAG FORECAST MODEL COMPARISON TABLE

The long term Year 2030 traffic volumes utilized in both the original project and revised project analysis were obtained from the SANDAG Series 10 Model for 9 of the 10 segments, I-5 / SR 56 Interchange Study (Model Run G). Due to the age of this model, it is not possible to ascertain whether the Pacific Highlands Ranch and Del Mar Highlands Town Center project are specifically included in this model exactly as proposed. Therefore, a traffic model run was completed using a SANDAG Series 11 Model with buildout of the Pacific Highlands Ranch and Del Mar Highlands Town Center projects specifically coded in the model. **Attachment 46** shows a comparison among Year 2030 traffic volumes utilized in the original traffic study and the revised project traffic study analysis and the January 2013 Series 11 model volumes which include build-out of Pacific Highlands Ranch and Del Mar Highlands Town Center. As can be seen in the table, the volumes utilized in both the original traffic study and the revised project traffic study are more than those obtained from the Series 11 Model for most of the segments listed.

VIII. CONCLUSION

The purpose of this analysis was to respond to public input on the DEIR and to provide a more conservative analysis by modifying certain assumptions such as traffic signal timing and retail trip generation rates for Phase 1 of the project. Based on these more conservative assumptions, this updated analysis shows that the street segments, freeway segments, and ramp meter analysis results did not change compared to the Revised Project analysis. As shown in the intersection summary tables for the Existing with Project (Phase 1) and Near Term with Project (Phase 1) scenarios, three (3) intersections Del Mar Heights Road / High Bluff Drive, Del Mar Heights Road / El Camino Real, and Carmel Creek Road / Del Mar Trail were found to be significantly impacted in an earlier phase. No new intersection impacts were calculated. Since mitigation at these impacted intersections are already proposed to be implemented in Phase 1 of the FEIR (despite the impact occurring in a later phase), there is no change to the mitigation proposed in the approved Revised Project Traffic Study. In addition, the arterial level of service is acceptable on Del Mar Heights Road with the proposed mitigation and the provided storage lengths on Del Mar Heights Road at First and Third Avenue are adequate.

Appendix A: Existing + Project (Phase 1) Synchro Worksheets

Appendix B: Near Term + Project (Phase 1) Synchro Worksheets

Appendix C: Existing / Existing + Project (Phase 1&2) / Existing + Project (Build-out) Synchro Worksheets

Appendix D: Near Term / Near Term + Project (Phase 1&2) / Near Term + Project (Build-out) Synchro Worksheets

Appendix E: Year 2030 / Year 2030 + Project (Build-out) Synchro Worksheets

Appendix F: Year 2030 + Project (Build-out) With Mitigation Synchro Worksheets

Appendix G: Near Term + Project (Build-out) and Year 2030 + Project (Build-out) Arterial Level of Service Worksheets

Appendix H: Year 2030 + Project (Build-out) AM and PM Queuing Worksheets

Appendix I: Caltrans Advanced Planning Study

Appendix J: Existing Count Data & Signal Timing Sheets

ATTACHMENT 1

One Paseo (Revised Project) Project Trip Generation

Driveway Rates

Proposed Project - Phase 1 (Blocks D & E)

Use	Amount	Trip*	ADT	AM Peak Hour					PM Peak Hour				
				%*	#	In	Out	In	Out	%*	#	In	Out
Corporate Office	237,750 SF	10 /KSF	2,378	15%	357	9 : 1	321	36	15%	357	1 : 9	36	321
Multi-Tenant Office	259,590 SF	$\frac{\ln(T) = 0.756}{\ln(x) + 3.95}$	3,473	13%	451	9 : 1	406	45	14%	486	2 : 8	97	389
Retail	100,650 SF	70 /KSF	7,046	3%	211	6 : 4	127	85	10%	705	5 : 5	352	352
Cinema	1,200 seats	1.8 /seat	2,160	0.3%	6	3 : 7	2	5	8%	173	7 : 3	121	52
TOTAL			15,056		1,026		856	170		1,720		606	1,114

Mixed Use Reductions

Use	Amount	Trip*	ADT	AM Peak Hour					PM Peak Hour				
				%*	#	In	Out	In	Out	%*	#	In	Out
Corporate Office	237,750 SF	10 /KSF	2,378	15%	357	9 : 1	321	36	15%	357	1 : 9	36	321
Multi-Tenant Office	259,590 SF	$\frac{\ln(T) = 0.756}{\ln(x) + 3.95}$	3,473	13%	451	9 : 1	406	45	14%	486	2 : 8	97	389
Commercial Office Reduction %			3%		5%		5%	5%		4%		4%	4%
Sub-Total Commercial Office Reduction			176		40		36	4		34		5	28
Retail	100,650 SF	70 /KSF	7,046	3%	211	6 : 4	127	85	10%	705	5 : 5	352	352
Cinema	1,200 seats	1.8 /seat	2,160	0.3%	6	3 : 7	2	5	8%	173	7 : 3	121	52
Sub-Total Commercial Retail Reduction			176		40		36	4		34		5	28
TOTAL REDUCTION			351		81		73	8		67		11	57

NET NEW TRIPS

Condition	ADT	AM Peak Hour			PM Peak Hour		
		#	In	Out	#	In	Out
Proposed Project	15,056	1,026	856	170	1,720	606	1,114
Mixed-Use Reductions	351	81	73	8	67	11	57
NET NEW TRIPS	14,705	945	783	162	1,653	596	1,057

Notes:

* = Source: City of San Diego Trip Generation Manual, May 2003

KSF = 1,000 Square Foot

ATTACHMENT 2

Existing with Project (Phase 1) Street Segment Levels of Service

Road	Segment	Jurisd.	Class.	Cap.	Volume	V/C	LOS
Del Mar Heights Rd.	Mango Drive to Portofino Drive	SD	5-M	45,000	22,637	0.50	B
	Portofino Drive to I-5 Southbound Ramps	SD	5-PA	50,000	37,851	0.76	C
	I-5 Southbound Ramps and I-5 Northbound Ramps	SD	5-PA	50,000	43,178	0.86	D
	I-5 Northbound Ramps to High Bluff Drive	SD	PA	60,000	57,360	0.96	E
	High Bluff Drive to Third Avenue	SD	PA	60,000	44,527	0.74	C
	Third Avenue to First Avenue	SD	PA	60,000	43,057	0.72	C
	First Avenue to El Camino Real	SD	PA	60,000	41,586	0.69	C
	El Camino Real to Carmel Country Road	SD	PA	60,000	36,644	0.61	C
	Carmel Country Road to Torrey Ridge Road	SD	PA	60,000	23,570	0.39	A
	Torrey Ridge Road to Lansdale Drive	SD	PA	60,000	20,394	0.34	A
	Lansdale Drive to Carmel Canyon Road	SD	PA	60,000	15,923	0.27	A
El Camino Real	Via de la Valle to San Dieguito Road	SD	2-Ca	15,000	16,020	1.07	F
	San Dieguito Road to Derby Downs Road	SD	4-M	40,000	14,503	0.36	A
	Derby Downs Road to Half Mile Drive	SD	4-M	40,000	15,921	0.40	B
	Half Mile Drive to Quarter Mile Drive	SD	4-M	40,000	14,251	0.36	A
	Quarter Mile Drive to Del Mar Heights Road	SD	4-M	40,000	15,807	0.40	B
	Del Mar Heights Road to Townsgate Drive	SD	6-M	50,000	16,937	0.34	A
	Townsgate Drive to High Bluff Drive	SD	6-M	50,000	17,337	0.35	A
	High Bluff Drive to Valley Centre Drive	SD	6-M	50,000	20,687	0.41	B
	Valley Centre Drive to Carmel Valley Road	SD	5-M	45,000	28,471	0.63	C
Carmel Country Road	Del Mar Heights Road to Townsgate Drive	SD	4-M	40,000	17,403	0.44	B
	Townsgate Drive to Carmel Creek Road	SD	4-M	40,000	15,054	0.38	B
	Carmel Creek Road to Carmel Canyon Road	SD	4-M	40,000	13,872	0.35	A
	Carmel Canyon Road to SR-56 Westbound Ramps	SD	4-M	40,000	21,141	0.53	C
Carmel Canyon Road	Del Mar Heights Road to Carmel Country Road	SD	4-M	40,000	12,518	0.31	A
Carmel Creek Road	Carmel Country Road to Carmel Grove Road	SD	4-M	40,000	11,647	0.29	A
	Carmel Grove Road to SR-56 Westbound Ramps	SD	4-M	40,000	15,303	0.38	B
Valley Centre Drive	Carmel View Road to Carmel Creek Road	SD	4-C	30,000	11,022	0.37	B
Carmel Valley Road	I-5 Northbound Ramps to El Camino Real	SD	PA	60,000	43,669	0.73	C
High Bluff Drive	Del Mar Heights Road to El Camino Real	SD	2-Ca	15,000	10,283	0.69	D
Via de la Valle	San Andres Drive to El Camino Real (West)	SD	2-Cb	10,000	24,694	2.47	F

Legend:

SD= City of San Diego
 Cap.= Capacity
 Class.= Classification
 LOS= Level of Service
 V/C= Volume to Capacity Ratio

PA = 6 lane Prime Arterial
 6-M = 6 lane Major
 4-M=4 lane Major
 2-Ca=2 lane collector
 2-Cb=2 lane collector with no fronting property
 5-M = 5 lane Major with LOS E capacity of 45,000 ADT
 5-PA = 5 lane Prime Arterial with LOS E capacity of 50,000 ADT

E+P (Phase 1)

ATTACHMENT 3

Existing + Project (Phase 1) Intersection Levels of Service

Number	Intersection	Control	AM Peak Hour		PM Peak Hour	
			Delay	LOS	Delay	LOS
1	El Camino Real / Via de la Valle	Signalized	30.7	C	37.3	D
2	El Camino Real / San Dieguito Road	Signalized	17.6	B	26.3	C
3	El Camino Real / Derby Downs Road	Signalized	4.9	A	5.7	A
4	El Camino Real / Half Mile Drive	Signalized	22	C	20.8	C
5	El Camino Real / Quarter Mile Drive	Signalized	20.6	C	15.4	B
6	Del Mar Heights Road / Mango Drive	Signalized	45	D	50.9	D
7	Del Mar Heights Road / Portofino Drive	Minor Street	9.5	A	9.3	A
8	Del Mar Heights Road / I-5 SB Ramps	Signalized	24.1	C	23.2	C
9	Del Mar Heights Road / I-5 NB Ramps	Signalized	38	D	44.6	D
10	Del Mar Heights Road / High Bluff Drive	Signalized	29.2	C	78.1	E
11	Del Mar Heights Road / Third Avenue	Signalized	10.5	B	12	B
12	Del Mar Heights Road / First Avenue	Signalized	21.5	C	27.4	C
13	Del Mar Heights Road / El Camino Real	Signalized	38.9	D	36.9	D
14	Del Mar Heights Road / Carmel Country Rd	Signalized	36.1	D	32.7	C
15	Del Mar Heights Road / Torrey Ridge Drive	Signalized	31.9	C	18.2	B
16	Del Mar Heights Road / Lansdale Drive	Signalized	32.8	C	28.9	C
17	Del Mar Heights Road / Carmel Canyon Rd	Signalized	26.9	C	22.8	C
18	El Camino Real / Del Mar Highlands Town Ctr.	Signalized	16.7	B	26.4	C
19	Carmel Country Road / Townsgate Drive	Signalized	29.9	C	26.2	C
20	El Camino Real / Townsgate Drive	Signalized	23.7	C	19.3	B
21	Carmel Country Road / Carmel Creek Rd	Signalized	53.7	D	28.6	C
22	El Camino Real / High Bluff Drive	Signalized	27.3	C	34	C
23	Carmel View Road / High Bluff Drive	All Way Stop	8.6	A	9.4	A
24	Carmel Creek Road / Carmel Grove Rd	Signalized	27.3	C	20.2	C
25	Carmel Valley Road / I-5 SB Ramps	Signalized	20.9	C	28.4	C
26	Carmel Valley Road / I-5 NB Ramps	Signalized	14.9	B	22.3	C
27	El Camino Real / Valley Centre Drive	Signalized	25.2	C	23.8	C
28	El Camino Real / Carmel Valley Rd	Signalized	20	B	26.1	C
29	El Camino Real / SR-56 EB On Ramp	Signalized	18.2	B	30.8	C
30	Carmel View Road / Valley Centre Drive	Signalized	7.7	A	6.7	A
31	Carmel Creek Road / SR-56 WB Ramp	Signalized	53.5	D	33.2	C
32	Carmel Creek Road / SR-56 EB Ramps	Signalized	14.5	B	22.3	C
33	Carmel Country Road / Carmel Canyon Rd	Signalized	37.2	D	28.9	C
34	Carmel Country Road / SR-56 WB Ramps	Signalized	17.4	B	11.7	B
35	Carmel Country Road / SR-56 EB Ramps	Signalized	15.8	B	14.1	B
36	Carmel Creek Road / Del Mar Trail	All Way Stop	43.8	E	21.5	C

Notes:

LOS = Level of Service

ATTACHMENT 4

Existing With Project (Phase 1) Freeway Segment LOS Summary

Segment	Lanes	Dir.	Cap.	ADT	Peak Hour %	Dir. Split	Truck Factor	PHV	V/C	LOS
I-5										
Lomas Santa Fe Drive/Via De La Valle	4-GP+1-AX+1-HOV	NB	12,800	223,029	0.068	0.53	0.98	8,126	0.635	C
Lomas Santa Fe Drive/Via De La Valle	4-GP+1-AX+1-HOV	SB	12,800	223,029	0.067	0.55	0.98	8,388	0.655	C
Via De La Valle/Del Mar Heights Rd.	5-GP+1-M	NB	13,450	239,323	0.068	0.53	0.98	8,720	0.648	C
Via De La Valle/Del Mar Heights Rd.	5-GP+1-M	SB	13,450	239,323	0.067	0.55	0.98	9,001	0.669	C
Del Mar Heights Rd./ SR-56	6-GP+1-M	NB	15,780	243,647	0.068	0.53	0.98	8,878	0.563	B
Del Mar Heights Rd./ SR-56	6-GP+1-M	SB	15,780	243,647	0.067	0.55	0.98	9,164	0.581	B
SR-56/ Carmel Mountain Road	9-GP+1-M	NB	22,830	289,471	0.079	0.57	0.98	13,185	0.578	B
SR-56/ Carmel Mountain Road	8-GP+1-M	SB	20,480	289,471	0.080	0.55	0.98	12,948	0.632	C
Carmel Mountain Road/ I-805 Merge	10	NB	23,500	289,176	0.079	0.57	0.98	13,171	0.560	B
Carmel Mountain Road/ I-805 Merge	10	SB	23,500	289,176	0.080	0.55	0.98	12,935	0.550	B
SR-56										
El Camino Real / Carmel Creek Rd.	2-GP + 1-AX	EB	6,500	81,294	0.093	0.69	0.98	5,313	0.817	D
El Camino Real / Carmel Creek Rd.	2-GP + 1-AX	WB	6,500	81,294	0.094	0.70	0.98	5,448	0.838	D
Carmel Creek Rd. / Carmel Country Rd.	2-GP + 1-AX	EB	6,500	76,294	0.093	0.69	0.98	4,986	0.767	C
Carmel Creek Rd. / Carmel Country Rd.	2-GP + 1-AX	WB	6,500	76,294	0.094	0.70	0.98	5,113	0.787	C

Legend:

Dir.= Direction

Cap. = Capacity

ADT= Average Daily Traffic

V/C= Volume to Capacity Ratio

LOS= Level of Service

PHV= Peak Hour Volume

#-GP= # of General Purpose Lanes

#-M=# of Managed Lanes (Capacity for LOS "C" assumed at 1680 veh/hr/ln taken from Caltrans Guide, December 2002)

#-HOV = # of High Occupancy Vehicle lane with LOS E capacity of 1,600 veh/hr/ln

Note:

Capacity for LOS "E" roadway is 2,350 veh/hr/ln.

Taken from Transition between LOS "C" and LOS "D" criteria for Basic Freeway Segments @ 65 mi/hr in "Caltrans Guide for the Preparation of Traffic Impact Studies", December 2002

AX = Auxiliary lane with LOS E capacity of 1,800 veh/hr/ln

Peak Hour % and Dir. Split taken from Caltrans internet posted Traffic Volumes

ATTACHMENT 5

Existing with Project Ramp Meter Analysis (Phase 1)

Most Restrictive Meter Rate

Location		Demand (Veh/Hr)	Meter Rate (Veh/Hr)	Excess Demand (Veh/Hr)	Delay (Min)	Queue (Feet)
Del Mar Heights Rd. / I-5 SB on Ramp (Westbound)	AM	421	368	52.5	8.56	1,523
	PM	337	368	0	0	0
Del Mar Heights Rd. / I-5 SB on Ramp (Eastbound)	AM	360	499	0	0	0
	PM	204	499	0	0	0
Del Mar Heights Rd. / I-5 NB on Ramp	AM	N/A	Meter is not turned on			
	PM	563	593	0	0	0

NOTE:

Meter rate is based on the most restrictive meter rate provided by Caltrans

Delay = (Demand - Meter Rate) / Meter Rate * 60 minutes/hour

Queue = Excess Demand * 29 feet/vehicle

ATTACHMENT 6

Near Term with Project (Phase 1) Street Segment Levels of Service

Road	Segment	Jurisd.	Functional Class.	Capacity at LOS E	Volume	V/C	LOS
Del Mar Heights Rd.	Mango Drive to Portofino Drive	SD	5-M	45,000	23,277	0.52	B
	Portofino Drive to I-5 Southbound Ramps	SD	5-PA	50,000	38,933	0.78	C
	I-5 Southbound Ramps and I-5 Northbound Ramps	SD	5-PA	50,000	44,301	0.89	D
	I-5 Northbound Ramps to High Bluff Drive	SD	PA	60,000	60,510	1.01	F
	High Bluff Drive to Third Avenue	SD	PA	60,000	47,266	0.79	C
	Third Avenue to First Avenue	SD	PA	60,000	45,795	0.76	C
	First Avenue to El Camino Real	SD	PA	60,000	44,325	0.74	C
	El Camino Real to Carmel Country Road	SD	PA	60,000	37,625	0.63	C
	Carmel Country Road to Torrey Ridge Road	SD	PA	60,000	24,219	0.40	A
	Torrey Ridge Road to Lansdale Drive	SD	PA	60,000	20,967	0.35	A
	Lansdale Drive to Carmel Canyon Road	SD	PA	60,000	16,379	0.27	A
El Camino Real	Via de la Valle to San Dieguito Road	SD	2-Ca	15,000	16,677	1.11	F
	San Dieguito Road to Derby Downs Road	SD	4-M	40,000	14,921	0.37	A
	Derby Downs Road to Half Mile Drive	SD	4-M	40,000	16,381	0.41	B
	Half Mile Drive to Quarter Mile Drive	SD	4-M	40,000	14,657	0.37	A
	Quarter Mile Drive to Del Mar Heights Road	SD	4-M	40,000	16,255	0.41	B
	Del Mar Heights Road to Townsgate Drive	SD	6-M	50,000	19,220	0.38	A
	Townsgate Drive to High Bluff Drive	SD	6-M	50,000	18,573	0.37	A
	High Bluff Drive to Valley Centre Drive	SD	6-M	50,000	22,358	0.45	B
	Valley Centre Drive to Carmel Valley Road	SD	5-M	45,000	31,013	0.69	C
Carmel Country Road	Del Mar Heights Road to Townsgate Drive	SD	4-M	40,000	17,880	0.45	B
	Townsgate Drive to Carmel Creek Road	SD	4-M	40,000	15,471	0.39	B
	Carmel Creek Road to Carmel Canyon Road	SD	4-M	40,000	14,266	0.36	A
	Carmel Canyon Road to SR-56 Westbound Ramps	SD	4-M	40,000	21,758	0.54	C
Carmel Canyon Road	Del Mar Heights Road to Carmel Country Road	SD	4-M	40,000	12,885	0.32	A
Carmel Creek Road	Carmel Country Road to Carmel Grove Road	SD	4-M	40,000	11,983	0.30	A
	Carmel Grove Road to SR-56 Westbound Ramps	SD	4-M	40,000	16,374	0.41	B
Valley Centre Drive	Carmel View Road to Carmel Creek Road	SD	4-C	30,000	11,973	0.40	B
Carmel Valley Road	I-5 Northbound Ramps to El Camino Real	SD	PA	60,000	46,262	0.77	C
High Bluff Drive	Del Mar Heights Road to El Camino Real	SD	2-Ca	15,000	10,578	0.71	D
Via de la Valle	San Andres Drive to El Camino Real (West)	SD	2-Cb	10,000	27,026	2.70	F

Legend:

SD= City of San Diego	PA = 6 lane Primary Arterial
Cap.= Capacity	6-M = 6 lane Major
Class.= Classification	4-M=4 lane Major
LOS= Level of Service	2-Ca=2 lane collector
V/C= Volume to Capacity Ratio	2-Cb = 2 lane Collector with no fronting property
	5-M = 5 lane Major with LOS E capacity of 45,000 ADT
	5-PA = 5 lane Primary Arterial with LOS E capacity of 50,000 ADT

NT+P (Phase 1)

ATTACHMENT 7

Near Term + Project (Project Phase 1) Intersection Levels of Service

Number	Intersection	Control	AM Peak Hour		PM Peak Hour	
			Delay	LOS	Delay	LOS
1	El Camino Real / Via de la Valle	Signalized	34.1	C	44.4	D
2	El Camino Real / San Dieguito Road	Signalized	18	B	27	C
3	El Camino Real / Derby Downs Road	Signalized	4.9	A	5.8	A
4	El Camino Real / Half Mile Drive	Signalized	23.4	C	19.1	B
5	El Camino Real / Quarter Mile Drive	Signalized	20.8	C	16.2	B
6	Del Mar Heights Road / Mango Drive	Signalized	46.4	D	62.1	E
7	Del Mar Heights Road / Portofino Drive	Minor Street	9.6	A	9.5	A
8	Del Mar Heights Road / I-5 SB Ramps	Signalized	29.8	C	25.8	C
9	Del Mar Heights Road / I-5 NB Ramps	Signalized	49.4	D	47.1	D
10	Del Mar Heights Road / High Bluff Drive	Signalized	31.3	C	106.7	F
11	Del Mar Heights Road / Third Avenue	Signalized	11.2	B	10.9	B
12	Del Mar Heights Road / First Avenue	Signalized	24.3	C	26.5	C
13	Del Mar Heights Road / El Camino Real	Signalized	41.3	D	67.5	E
14	Del Mar Heights Road / Carmel Country Rd	Signalized	37.4	D	34	C
15	Del Mar Heights Road / Torrey Ridge Drive	Signalized	33.3	C	18.5	B
16	Del Mar Heights Road / Lansdale Drive	Signalized	34.4	C	29.4	C
17	Del Mar Heights Road / Carmel Canyon Rd	Signalized	27	C	24.0	C
18	El Camino Real / Del Mar Highlands Town Ctr.	Signalized	17.1	B	28.4	C
19	Carmel Country Road / Townsgate Drive	Signalized	31	C	27.9	C
20	Carmel Country Road / Townsgate Drive	Signalized	24.5	C	25.4	C
21	Carmel Country Road / Carmel Creek Rd	Signalized	63.1	E	29.5	C
22	El Camino Real / High Bluff Drive	Signalized	27.6	C	34.9	C
23	Carmel View Road / High Bluff Drive	All Way Stop	8.6	A	9.6	A
24	Carmel Creek Road / Carmel Grove Rd	Signalized	28.3	C	20.6	C
25	Carmel Valley Road / I-5 SB Ramps	Signalized	23.3	C	34.6	C
26	Carmel Valley Road / I-5 NB Ramps	Signalized	15.9	B	26.3	C
27	El Camino Real / Valley Centre Drive	Signalized	29	C	33.3	C
28	El Camino Real / Carmel Valley Rd	Signalized	22.5	C	35.6	D
29	El Camino Real / SR-56 EB On Ramp	Signalized	20.5	C	49.9	D
30	Carmel View Road / Valley Centre Drive	Signalized	7.7	A	6.7	A
31	Carmel Creek Road / SR-56 WB Ramp	Signalized	54.9	D	37.9	D
32	Carmel Creek Road / SR-56 EB Ramps	Signalized	16.0	B	32.3	C
33	Carmel Country Road / Carmel Canyon Rd	Signalized	40.0	D	29.6	C
34	Carmel Country Road / SR-56 WB Ramps	Signalized	17.9	B	12	B
35	Carmel Country Road / SR-56 EB Ramps	Signalized	16.1	B	14.3	B
36	Carmel Creek Road / Del Mar Trail	All Way Stop	51.0	F	23.4	C

Notes:

LOS = Level of Service

Orange indicates unacceptable level of service.

Intersection #36 reports the worst approach delay and level of service.

ATTACHMENT 8

Near Term With Project (Phase 1) Freeway Segment LOS Summary

Segment	Lanes	Dir.	Cap.	ADT	Peak Hour %	Dir. Split	Truck Factor	PHV	V/C	LOS
I-5										
Lomas Santa Fe Drive/Via De La Valle	4-GP+1-AX+1-HOV	NB	12,800	224,255	0.068	0.53	0.98	8,171	0.638	C
Lomas Santa Fe Drive/Via De La Valle	4-GP+1-AX+1-HOV	SB	12,800	224,208	0.067	0.55	0.98	8,433	0.659	C
Via De La Valle/Del Mar Heights Rd.	5-GP+1-M	NB	13,450	240,549	0.068	0.53	0.98	8,765	0.652	C
Via De La Valle/Del Mar Heights Rd.	5-GP+1-M	SB	13,450	240,502	0.067	0.55	0.98	9,045	0.673	C
Del Mar Heights Rd./ SR-56	6-GP+1-M	NB	15,780	244,980	0.068	0.53	0.98	8,926	0.566	B
Del Mar Heights Rd./ SR-56	6-GP+1-M	SB	15,780	244,922	0.067	0.55	0.98	9,212	0.584	B
SR-56/ Carmel Mountain Road	9-GP+1-M	NB	22,830	291,076	0.079	0.57	0.98	13,258	0.581	B
SR-56/ Carmel Mountain Road	8-GP+1-M	SB	20,480	291,076	0.080	0.55	0.98	13,020	0.636	C
Carmel Mountain Road/ I-805 Merge	10	NB	23,500	290,781	0.079	0.57	0.98	13,244	0.564	B
Carmel Mountain Road/ I-805 Merge	10	SB	23,500	290,781	0.080	0.55	0.98	13,007	0.553	B
SR-56										
El Camino Real / Carmel Creek Rd.	2-GP + 1-AX	EB	6,500	84,442	0.093	0.69	0.98	5,519	0.849	D
El Camino Real / Carmel Creek Rd.	2-GP + 1-AX	WB	6,500	84,442	0.094	0.70	0.98	5,659	0.871	D
Carmel Creek Rd. / Carmel Country Rd.	2-GP + 1-AX	EB	6,500	78,675	0.093	0.69	0.98	5,142	0.791	D
Carmel Creek Rd. / Carmel Country Rd.	2-GP + 1-AX	WB	6,500	78,675	0.094	0.70	0.98	5,273	0.811	D

Legend:

Dir.= Direction

Cap. = Capacity

ADT= Average Daily Traffic

V/C= Volume to Capacity Ratio

LOS= Level of Service

PHV= Peak Hour Volume

#-GP= # of General Purpose Lanes

#-M=# of Managed Lanes (Capacity for LOS "C" assumed at 1680 vphpl taken from Caltrans Guide, December 2002)

HOV = High Occupancy Vehicle lane with LOS"E" capacity of 1,600 vphpl

Note:

Capacity for LOS "E" roadway is 2,350 vphpl.

Taken from Transition between LOS"C" and LOS "D" criteria for Basic Freeway Segments @ 65 mi/hr in "Caltrans Guide for the Preparation of Traffic Impact Studies", December 2002

AX = Auxiliary Lane with LOS "E" capacity of 1,800 vphpl

Peak Hour % and Dir. Split taken from Caltrans internet posted Traffic Volumes

ATTACHMENT 9

Near Term with Project Ramp Meter Analysis (Project Phase 1)

Most Restrictive Meter Rate

Location		Demand (Veh/Hr)	Meter Rate (Veh/Hr)	Excess Demand (Veh/Hr)	Delay (Min)	Queue (Feet)
Del Mar Heights Rd. / I-5 SB on Ramp (Westbound)	AM	440	368	71.5	11.66	2,074
	PM	405	368	37	6.03	1,073
Del Mar Heights Rd. / I-5 SB on Ramp (Eastbound)	AM	371	499	0	0	0
	PM	216	499	0	0	0
Del Mar Heights Rd. / I-5 NB on Ramp	AM	N/A	Meter is not turned on			
	PM	614	593	20.5	2	595

NOTE:

Meter rate is based on the most restrictive meter rate provided by Caltrans, see **Appendix C**

Delay = (Demand - Meter Rate) / Meter Rate * 60 minutes/hour

Queue = Excess Demand * 29 feet/vehicle

ATTACHMENT 10

Existing & Existing With Project (Phase 1) Street Segment Comparison

Road	Segment	Class.	Existing			Existing + Project (Phase 1)			$\Delta V/C$	Is this impact Significant?
			LOS	Volume	V/C	LOS	Volume	V/C		
Del Mar Heights Rd.	Mango Drive to Portofino Drive	5-M	B	21,314	0.474	B	22,637	0.503	0.029	NO
	Portofino Drive to I-5 Southbound Ramps	5-PA	C	36,086	0.722	C	37,851	0.757	0.035	NO
	I-5 Southbound Ramps and I-5 Northbound Ramps	5-PA	D	40,090	0.802	D	43,178	0.864	0.062	NO
	I-5 Northbound Ramps to High Bluff Drive	PA	D	51,625	0.860	E	57,360	0.956	0.096	YES
	High Bluff Drive to Third Avenue	PA	C	37,910	0.632	C	44,527	0.742	0.110	NO
	Third Avenue to First Avenue	PA	C	37,910	0.632	C	43,057	0.718	0.086	NO
	First Avenue to El Camino Real	PA	C	37,910	0.632	C	41,586	0.693	0.061	NO
	El Camino Real to Carmel Country Road	PA	B	32,674	0.545	C	36,644	0.611	0.066	NO
	Carmel Country Road to Torrey Ridge Road	PA	A	21,658	0.361	A	23,570	0.393	0.032	NO
	Torrey Ridge Road to Lansdale Drive	PA	A	19,071	0.318	A	20,394	0.340	0.022	NO
	Lansdale Drive to Carmel Canyon Road	PA	A	15,188	0.253	A	15,923	0.265	0.012	NO
El Camino Real	Via de la Valle to San Dieguito Road	2-Ca	F	15,579	1.039	F	16,020	1.068	0.029	YES
	San Dieguito Road to Derby Downs Road	4-M	A	13,915	0.348	A	14,503	0.363	0.015	NO
	Derby Downs Road to Half Mile Drive	4-M	B	15,333	0.383	B	15,921	0.398	0.015	NO
	Half Mile Drive to Quarter Mile Drive	4-M	A	13,516	0.338	A	14,251	0.356	0.018	NO
	Quarter Mile Drive to Del Mar Heights Road	4-M	A	14,925	0.373	B	15,807	0.395	0.022	NO
	Del Mar Heights Road to Townsgate Drive	6-M	A	14,731	0.295	A	16,937	0.339	0.044	NO
	Townsgate Drive to High Bluff Drive	6-M	A	15,425	0.309	A	17,337	0.347	0.038	NO
	High Bluff Drive to Valley Centre Drive	6-M	A	19,364	0.387	B	20,687	0.414	0.026	NO
	Valley Centre Drive to Carmel Valley Road	5-M	C	27,589	0.613	C	28,471	0.633	0.020	NO
Carmel Country Road	Del Mar Heights Road to Townsgate Drive	4-M	B	15,932	0.398	B	17,403	0.435	0.037	NO
	Townsgate Drive to Carmel Creek Road	4-M	A	13,878	0.347	B	15,054	0.376	0.029	NO
	Carmel Creek Road to Carmel Canyon Road	4-M	A	13,137	0.328	A	13,872	0.347	0.018	NO
	Carmel Canyon Road to SR-56 Westbound Ramps	4-M	B	20,553	0.514	C	21,141	0.529	0.015	NO
Carmel Canyon Road	Del Mar Heights Road to Carmel Country Road	4-M	A	12,224	0.306	A	12,518	0.313	0.007	NO
Carmel Creek Road	Carmel Country Road to Carmel Grove Road	4-M	A	11,206	0.280	A	11,647	0.291	0.011	NO
	Carmel Grove Road to SR-56 Westbound Ramps	4-M	A	14,862	0.372	B	15,303	0.383	0.011	NO
Valley Centre Drive	Carmel View Road to Carmel Creek Road	4-C	B	10,875	0.363	B	11,022	0.367	0.005	NO
Carmel Valley Road	I-5 Northbound Ramps to El Camino Real	PA	C	43,375	0.723	C	43,669	0.728	0.005	NO
High Bluff Drive	Del Mar Heights Road to El Camino Real	2-Ca	C	9,842	0.656	D	10,283	0.686	0.029	NO
Via de la Valle	San Andres Drive to El Camino Real (West)	2-Cb	F	24,400	2.440	F	24,694	2.469	0.029	YES

Legend:

LOS= Level of Service

V/C= Volume to Capacity Ratio

$\Delta V/C$ = Change in V/C ratio

ATTACHMENT 11

Existing & Existing + Project (Phase 1) Intersection Summary

#	Intersection	Existing				Existing + Project (Phase 1)							
		AM Peak Hour		PM Peak Hour		AM Peak Hour		Δ	S ?	PM Peak Hour		Δ	S ?
		D	LOS	D	LOS	D	LOS			D	LOS		
1	El Camino Real / Via de la Valle	30.3	C	37.3	D	30.7	C	0.4	No	37.3	D	0.0	No
2	El Camino Real / San Dieguito Road	17.4	B	25.4	C	17.6	B	0.2	No	26.3	C	0.9	No
3	El Camino Real / Derby Downs Road	4.9	A	5.5	A	4.9	A	0.0	No	5.7	A	0.2	No
4	El Camino Real / Half Mile Drive	21.6	C	18.3	B	22.0	C	0.4	No	20.8	C	2.5	No
5	El Camino Real / Quarter Mile Drive	20.4	C	14.1	B	20.6	C	0.2	No	15.4	B	1.3	No
6	Del Mar Heights Road / Mango Drive	35.2	D	45.1	D	45.0	D	9.8	No	50.9	D	5.8	No
7	Del Mar Heights Road / Portofino Drive	9.4	A	9.2	A	9.5	A	0.1	No	9.3	A	0.1	No
8	Del Mar Heights Road / I-5 SB Ramps	20.4	C	20.3	C	24.1	C	3.7	No	23.2	C	2.9	No
9	Del Mar Heights Road / I-5 NB Ramps	31.1	C	44.2	D	38.0	D	6.9	No	44.6	D	0.4	No
10	Del Mar Heights Road / High Bluff Drive	28.8	C	39.2	D	29.2	C	0.4	No	78.1	E	38.9	Yes
11	Del Mar Heights Road / Third Avenue	DNE	DNE	DNE	DNE	10.5	B	N/A	No	12.0	B	N/A	No
12	Del Mar Heights Road / First Avenue	DNE	DNE	DNE	DNE	21.5	C	N/A	No	27.4	C	N/A	No
13	Del Mar Heights Road / El Camino Real	31.4	C	29.1	C	38.9	D	7.5	No	36.9	D	7.8	No
14	Del Mar Heights Road / Carmel Country Rd	28.6	C	25.0	C	36.1	D	7.5	No	32.7	C	7.7	No
15	Del Mar Heights Road / Torrey Ridge Drive	25.8	C	9.8	A	31.9	C	6.1	No	18.2	B	8.4	No
16	Del Mar Heights Road / Lansdale Drive	23.9	C	17.1	B	32.8	C	8.9	No	28.9	C	11.8	No
17	Del Mar Heights Road / Carmel Canyon Rd	15.9	B	11.3	B	26.9	C	11.0	No	22.8	C	11.5	No
18	El Camino Real / Del Mar Highlands Town Ctr.	8.3	A	14.8	B	16.7	B	8.4	No	26.4	C	11.6	No
19	Carmel Country Road / Townsgate Drive	28.9	C	25.5	C	29.9	C	1.0	No	26.2	C	0.7	No
20	El Camino Real / Townsgate Drive	22.9	C	18.5	B	23.7	C	0.8	No	19.3	B	0.8	No
21	Carmel Country Road / Carmel Creek Rd	51.7	D	28.3	C	53.7	D	2.0	No	28.6	C	0.3	No
22	El Camino Real / High Bluff Drive	27.0	C	32.5	C	27.3	C	0.3	No	34.0	C	1.5	No
23	Carmel View Road / High Bluff Drive	8.3	A	9.0	A	8.6	A	0.3	No	9.4	A	0.4	No
24	Carmel Creek Road / Carmel Grove Rd	27.3	C	20.1	C	27.3	C	0.0	No	20.2	C	0.1	No
25	Carmel Valley Road / I-5 SB Ramps	20.4	C	27.9	C	20.9	C	0.5	No	28.4	C	0.5	No
26	Carmel Valley Road / I-5 NB Ramps	14.8	B	22.0	C	14.9	B	0.1	No	22.3	C	0.3	No
27	El Camino Real / Valley Centre Drive	25.1	C	23.2	C	25.2	C	0.1	No	23.8	C	0.6	No
28	El Camino Real / Carmel Valley Rd	19.9	B	25.4	C	20.0	B	0.1	No	26.1	C	0.7	No
29	El Camino Real / SR-56 EB On Ramp	17.9	B	28.8	C	18.2	B	0.3	No	30.8	C	2.0	No
30	Carmel View Road / Valley Centre Drive	7.6	A	6.7	A	7.7	A	0.1	No	6.7	A	0.0	No
31	Carmel Creek Road / SR-56 WB Ramp	52.5	D	27.3	C	53.5	D	1.0	No	33.2	C	5.9	No
32	Carmel Creek Road / SR-56 EB Ramps	14.4	B	22.1	C	14.5	B	0.1	No	22.3	C	0.2	No
33	Carmel Country Road / Carmel Canyon Rd	37.2	D	28.5	C	37.2	D	0.0	No	28.9	C	0.4	No
34	Carmel Country Road / SR-56 WB Ramps	17.4	B	11.5	B	17.4	B	0.0	No	11.7	B	0.1	No
35	Carmel Country Road / SR-56 EB Ramps	15.8	B	13.9	B	15.8	B	0.0	No	14.1	B	0.2	No
36	Carmel Creek Road / Del Mar Trail	41.6	E	20.1	C	43.8	E	2.2	Yes	21.5	C	1.4	No

Notes:

LOS = Level of Service

Δ = Change

S = Significant

D = Delay

DNE = Does Not Exist

N/A = Not Applicable

ATTACHMENT 12

Existing & Existing With Project (Phase 1)

Freeway Level of Service Summary

Segment	Lanes	Capacity	Dir.	Existing		Existing + Project (Phase 1)		Δ	Sig.?
				V/C	LOS	V/C	LOS		
I-5									
Lomas Santa Fe Drive/Via De La Valle	4-GP+1-AX+1-HOV	12,800	NB	0.6319	C	0.6349	C	0.0029	NO
Lomas Santa Fe Drive/Via De La Valle	4-GP+1-AX+1-HOV	12,800	SB	0.6523	C	0.6553	C	0.0030	NO
Via De La Valle/Del Mar Heights Rd.	5-GP+1-M	13,450	NB	0.6447	C	0.6483	C	0.0036	NO
Via De La Valle/Del Mar Heights Rd.	5-GP+1-M	13,450	SB	0.6655	C	0.6692	C	0.0037	NO
Del Mar Heights Rd./ SR-56	6-GP+1-M	15,780	NB	0.5565	B	0.5626	B	0.0061	NO
Del Mar Heights Rd./ SR-56	6-GP+1-M	15,780	SB	0.5744	B	0.5807	B	0.0063	NO
SR-56/ Carmel Mountain Road	9-GP+1-M	22,830	NB	0.5746	B	0.5775	B	0.0029	NO
SR-56/ Carmel Mountain Road	8-GP+1-M	20,480	SB	0.6290	C	0.6322	C	0.0032	NO
Carmel Mountain Road/ I-805 Merge	10	23,500	NB	0.5582	B	0.5605	B	0.0023	NO
Carmel Mountain Road/ I-805 Merge	10	23,500	SB	0.5482	B	0.5504	B	0.0022	NO
SR-56									
El Camino Real / Carmel Creek Rd.	2-GP + 1-AX	6,500	EB	0.8144	D	0.8174	D	0.0030	NO
El Camino Real / Carmel Creek Rd.	2-GP + 1-AX	6,500	WB	0.8352	D	0.8382	D	0.0030	NO
Carmel Creek Rd. / Carmel Country Rd.	2-GP + 1-AX	6,500	EB	0.7641	C	0.7671	C	0.0030	NO
Carmel Creek Rd. / Carmel Country Rd.	2-GP + 1-AX	6,500	WB	0.7836	C	0.7866	C	0.0030	NO

Legend:

Dir.= Direction

V/C= Volume to Capacity Ratio

LOS= Level of Service

Sig.?= Is this significant?

#-GP = # of General Purpose Lanes with LOS E capacity of 2,350 veh/hr/ln

#-M = # of Managed Lanes (Capacity for LOS "C" assumed at 1680 veh/hr/ln taken from Caltrans Guide, December 2002)

#-AX = # of Auxiliary lane with LOS E capacity of 1,800 veh/hr/ln

#-HOV = # of High Occupancy Vehicle lane with LOS E capacity of 1,600 veh/hr/ln

ATTACHMENT 13

Existing & Existing With Project Ramp Meter Comparison

(Phase 1)

Most Restrictive Meter Rate

Location		Existing		Existing + Project (Phase 1)		V	S
		Delay (Min)	Queue (Ft)	Delay (Min)	Queue (Ft)		
Del Mar Heights Rd. / I-5 SB on Ramp (Westbound Loop)	AM	6.20	1,102	8.56	1,523	2.36	NO
	PM	0.00	0	0.00	0	0.00	NO
Del Mar Heights Rd. / I-5 SB on Ramp (Eastbound)	AM	0.00	0	0.00	0	0.00	NO
	PM	0.00	0	0.00	0	0.00	NO
Del Mar Heights Rd. / I-5 NB on Ramp	AM	Meter is not turned on				0.00	NO
	PM	0.00	0	0.00	0	0.00	NO

Notes:

Δ = Change in Delay (minutes)

S = Significant, the allowable increase in delay at a ramp meter with more than 15 minutes delay and freeway LOS E is 2 min.

S = Significant, the allowable increase in delay at a ramp meter with more than 15 minutes delay and freeway LOS F is 1 min.

Meter rate is based on the most restrictive meter rate provided by Caltrans, see **Appendix C**.

ATTACHMENT 14

Near Term With & Without Project (Phase 1) Street Segment Comparison

Road	Segment	Class.	Near Term			Near Term + Project (Phase 1)			$\Delta V/C$	Is this impact Significant?
			LOS	Volume	V/C	LOS	Volume	V/C		
Del Mar Heights Rd.	Mango Drive to Portofino Drive	5-M	B	21,953	0.488	B	23,277	0.517	0.029	NO
	Portofino Drive to I-5 Southbound Ramps	5-PA	C	37,169	0.743	C	38,933	0.779	0.035	NO
	I-5 SB Ramps and I-5 NB Ramps	5-PA	D	41,213	0.824	D	44,301	0.886	0.062	NO
	I-5 Northbound Ramps to High Bluff Drive	PA	D	54,775	0.913	F	60,510	1.008	0.096	YES
	High Bluff Drive to Third Avenue	PA	C	40,648	0.677	C	47,266	0.788	0.110	NO
	Thirth Avenue to First Avenue	PA	C	40,648	0.677	C	45,795	0.763	0.086	NO
	First Avenue to El Camino Real	PA	C	40,648	0.677	C	44,325	0.739	0.061	NO
	El Camino Real to Carmel Country Road	PA	B	33,654	0.561	C	37,625	0.627	0.066	NO
	Carmel Country Road to Torrey Ridge Road	PA	A	22,308	0.372	A	24,219	0.404	0.032	NO
	Torrey Ridge Road to Lansdale Drive	PA	A	19,643	0.327	A	20,967	0.349	0.022	NO
	Lansdale Drive to Carmel Canyon Road	PA	A	15,644	0.261	A	16,379	0.273	0.012	NO
El Camino Real	Via de la Valle to San Dieguito Road	2-Ca	F	16,235	1.082	F	16,677	1.112	0.029	YES
	San Dieguito Road to Derby Downs Road	4-M	A	14,332	0.358	A	14,921	0.373	0.015	NO
	Derby Downs Road to Half Mile Drive	4-M	B	15,793	0.395	B	16,381	0.410	0.015	NO
	Half Mile Drive to Quarter Mile Drive	4-M	A	13,921	0.348	A	14,657	0.366	0.018	NO
	Quarter Mile Drive to Del Mar Heights Road	4-M	B	15,373	0.384	B	16,255	0.406	0.022	NO
	Del Mar Heights Road to Townsgate Drive	6-M	A	17,014	0.340	A	19,220	0.384	0.044	NO
	Townsgate Drive to High Bluff Drive	6-M	A	16,662	0.333	A	18,573	0.371	0.038	NO
	High Bluff Drive to Valley Centre Drive	6-M	B	21,035	0.421	B	22,358	0.447	0.026	NO
	Valley Centre Drive to Carmel Valley Road	5-M	C	30,131	0.670	C	31,013	0.689	0.020	NO
Carmel Country Road	Del Mar Heights Road to Townsgate Drive	4-M	B	16,410	0.410	B	17,880	0.447	0.037	NO
	Townsgate Drive to Carmel Creek Road	4-M	A	14,294	0.357	B	15,471	0.387	0.029	NO
	Carmel Creek Road to Carmel Canyon Road	4-M	A	13,531	0.338	A	14,266	0.357	0.018	NO
	Carmel Canyon Road to SR-56 WB Ramps	4-M	C	21,170	0.529	C	21,758	0.544	0.015	NO
Carmel Canyon Road	Del Mar Heights Road to Carmel Country Rd.	4-M	A	12,591	0.315	A	12,885	0.322	0.007	NO
Carmel Creek Road	Carmel Country Road to Carmel Grove Road	4-M	A	11,542	0.289	A	11,983	0.300	0.011	NO
	Carmel Grove Road to SR-56 WB Ramps	4-M	B	15,933	0.398	B	16,374	0.409	0.011	NO
Valley Centre Drive	Carmel View Road to Carmel Creek Road	4-C	B	11,826	0.394	B	11,973	0.399	0.005	NO
Carmel Valley Road	I-5 Northbound Ramps to El Camino Real	PA	C	45,968	0.766	C	46,262	0.771	0.005	NO
High Bluff Drive	Del Mar Heights Road to El Camino Real	2-Ca	D	10,137	0.676	D	10,578	0.705	0.029	NO
Via de la Valle	San Andres Drive to El Camino Real (West)	2-Cb	F	26,732	2.673	F	27,026	2.703	0.029	YES

Legend:

LOS= Level of Service

V/C= Volume to Capacity Ratio

$\Delta V/C$ = Change in V/C ratio

5-M = 5 lane Major with LOS E capacity of 45,000 ADT

5-PA = 5 lane Primary Arterial with LOS E capacity of 50,000 ADT

4-M=4 lane Major

PA = 6 lane Primary Arterial

2-Ca=2 lane collector

6-M = 6 lane Major

2-Cb = 2 lane Collector with no fronting property

ATTACHMENT 15

Near Term With & Without Project (Phase 1) Intersection Summary

#	Intersection	Near Term				Near Term + Project (Phase 1)							
		AM Peak Hour		PM Peak Hour		AM Peak Hour		Δ	S ?	PM Peak Hour		Δ	S ?
		D	LOS	D	LOS	D	LOS			D	LOS		
1	El Camino Real / Via de la Valle	33.6	C	43.8	D	34.1	C	0.5	N	44.4	D	0.6	N
2	El Camino Real / San Dieguito Road	17.8	B	26.4	C	18	B	0.2	N	27	C	0.6	N
3	El Camino Real / Derby Downs Road	4.9	A	5.5	A	4.9	A	0.0	N	5.8	A	0.3	N
4	El Camino Real / Half Mile Drive	18.5	B	17.6	B	23.4	C	4.9	N	19.1	B	1.5	N
5	El Camino Real / Quarter Mile Drive	20.6	C	15.5	B	20.8	C	0.2	N	16.2	B	0.7	N
6	Del Mar Heights Road / Mango Drive	45.4	D	61.2	E	46.4	D	1.0	N	62.1	E	0.9	N
7	Del Mar Heights Road / Portofino Drive	9.4	A	9.3	A	9.6	A	0.2	N	9.5	A	0.2	N
8	Del Mar Heights Road / I-5 SB Ramps	23.9	C	22.5	C	29.8	C	5.9	N	25.8	C	3.3	N
9	Del Mar Heights Road / I-5 NB Ramps	38.7	D	46.8	D	49.4	D	10.7	N	47.1	D	0.3	N
10	Del Mar Heights Road / High Bluff Drive	30.9	C	90	F	31.3	C	0.4	N	106.7	F	16.7	Y
11	Del Mar Heights Road / Third Avenue	DNE	DNE	DNE	DNE	11.2	B	0.0	N	10.9	B	0.0	N
12	Del Mar Heights Road / First Avenue	DNE	DNE	DNE	DNE	24.3	C	0.0	N	26.5	C	0.0	N
13	Del Mar Heights Road / El Camino Real	35.2	D	46	D	41.3	D	6.1	N	67.5	E	21.5	Y
14	Del Mar Heights Road / Carmel Country Rd	35.2	D	29.8	C	37.4	D	2.2	N	34	C	4.2	N
15	Del Mar Heights Road / Torrey Ridge Drive	31.2	C	16.4	B	33.3	C	2.1	N	18.5	B	2.1	N
16	Del Mar Heights Road / Lansdale Drive	32.2	C	27.3	C	34.4	C	2.2	N	29.4	C	2.1	N
17	Del Mar Heights Road / Carmel Canyon Rd	26.8	C	23.2	C	27	C	0.2	N	24.0	C	0.8	N
18	El Camino Real / Del Mar Highlands Town Ctr.	8.4	A	16.0	B	17.1	B	8.7	N	28.4	C	12.4	N
19	Carmel Country Road / Townsgate Drive	30.3	C	26.1	C	31	C	0.7	N	27.9	C	1.8	N
20	El Camino Real / Townsgate Drive	24.4	C	22	C	24.5	C	0.1	N	25.4	C	3.4	N
21	Carmel Country Road / Carmel Creek Rd	62.3	E	29.2	C	63.1	E	0.8	N	29.5	C	0.3	N
22	El Camino Real / High Bluff Drive	27.4	C	33.4	C	27.6	C	0.2	N	34.9	C	1.5	N
23	Carmel View Road / High Bluff Drive	8.4	A	9.1	A	8.6	A	0.2	N	9.6	A	0.5	N
24	Carmel Creek Road / Carmel Grove Rd	28.3	C	20.4	C	28.3	C	0.0	N	20.6	C	0.2	N
25	Carmel Valley Road / I-5 SB Ramps	22.7	C	33.6	C	23.3	C	0.6	N	34.6	C	1.0	N
26	Carmel Valley Road / I-5 NB Ramps	15.8	B	25.6	C	15.9	B	0.1	N	26.3	C	0.7	N
27	El Camino Real / Valley Centre Drive	28.9	C	28.8	C	29	C	0.1	N	33.3	C	4.5	N
28	El Camino Real / Carmel Valley Rd	22.4	C	34.4	C	22.5	C	0.1	N	35.6	D	1.2	N
29	El Camino Real / SR-56 EB On Ramp	20.4	C	47.8	D	20.5	C	0.1	N	49.9	D	2.1	N
30	Carmel View Road / Valley Centre Drive	7.7	A	6.7	A	7.7	A	0.0	N	6.7	A	0.0	N
31	Carmel Creek Road / SR-56 WB Ramp	52.4	D	28.8	C	54.9	D	2.5	N	37.9	D	9.1	N
32	Carmel Creek Road / SR-56 EB Ramps	15.9	B	32.1	C	16.0	B	0.1	N	32.3	C	0.2	N
33	Carmel Country Road / Carmel Canyon Rd	40	D	29.3	C	40.0	D	0.0	N	29.6	C	0.3	N
34	Carmel Country Road / SR-56 WB Ramps	17.9	B	11.9	B	17.9	B	0.0	N	12	B	0.1	N
35	Carmel Country Road / SR-56 EB Ramps	16.1	B	14.1	B	16.1	B	0.0	N	14.3	B	0.2	N
36	Carmel Creek Road / Del Mar Trail	47.9	E	21.7	C	51.0	F	3.1	Y	23.4	C	1.7	N

Notes:

LOS = Level of Service

Δ = Change

S = Significant

D = Delay

DNE = Does not Exist

For Intersection #36, the worst approach delay and level of service was reported.

ATTACHMENT 16

Near Term With & Without Project (Phase 1)

Freeway Level of Service Summary

Segment	Lanes	Capacity	Dir.	Near Term		Near Term with Project (Phase 1)		Δ	Sig.?
				V/C	LOS	V/C	LOS		
I-5									
Lomas Santa Fe Drive/Via De La Valle	4-GP+1-AX+1-HOV	12,800	NB	0.6354	C	0.6384	C	0.0029	NO
Lomas Santa Fe Drive/Via De La Valle	4-GP+1-AX+1-HOV	12,800	SB	0.6558	C	0.6588	C	0.0030	NO
Via De La Valle/Del Mar Heights Rd.	5-GP+1-M	13,450	NB	0.6481	C	0.6517	C	0.0036	NO
Via De La Valle/Del Mar Heights Rd.	5-GP+1-M	13,450	SB	0.6688	C	0.6725	C	0.0037	NO
Del Mar Heights Rd./ SR-56	6-GP+1-M	15,780	NB	0.5596	B	0.5657	B	0.0061	NO
Del Mar Heights Rd./ SR-56	6-GP+1-M	15,780	SB	0.5774	B	0.5838	B	0.0063	NO
SR-56/ Carmel Mountain Road	9-GP+1-M	22,830	NB	0.5778	B	0.5807	B	0.0029	NO
SR-56/ Carmel Mountain Road	8-GP+1-M	20,480	SB	0.6325	C	0.6357	C	0.0032	NO
Carmel Mountain Road/ I-805 Merge	10	23,500	NB	0.5613	B	0.5636	B	0.0023	NO
Carmel Mountain Road/ I-805 Merge	10	23,500	SB	0.5512	B	0.5535	B	0.0022	NO
SR-56									
El Camino Real / Carmel Creek Rd.	2-GP + 1-AX	6,500	EB	0.8461	D	0.8490	D	0.0030	NO
El Camino Real / Carmel Creek Rd.	2-GP + 1-AX	6,500	WB	0.8676	D	0.8707	D	0.0030	NO
Carmel Creek Rd. / Carmel Country Rd.	2-GP + 1-AX	6,500	EB	0.7881	C	0.7910	D	0.0030	NO
Carmel Creek Rd. / Carmel Country Rd.	2-GP + 1-AX	6,500	WB	0.8082	D	0.8112	D	0.0030	NO

Legend:

Dir.= Direction

V/C= Volume to Capacity Ratio

LOS= Level of Service

Sig.? = Is this significant?

#-GP= # of General Purpose Lanes with LOS E capacity of 2,350 veh/hr/ln.

#-M=# of Managed Lanes (Capacity for LOS "C" assumed at 1,680 veh/hr/ln taken from Caltrans Guide, December 2002)

AX = Auxiliary Lane with LOS "E" capacity of 1,800 veh/hr/ln.

HOV = High Occupancy Vehicle lane with LOS"E" capacity of 1,600 veh/hr/ln.

ATTACHMENT 17

Near Term With & Without Project Ramp Meter Analysis

(Project Phase 1)

Most Restrictive Meter Rate

Location		Near Term		Near Term + Project (Phase 1)		V	S
		Delay (Min)	Queue (Ft)	Delay (Min)	Queue (Ft)		
Del Mar Heights Rd. / I-5 SB on Ramp (Westbound Loop)	AM	9.29	1,653	11.66	2,074	2.36	NO
	PM	0.00	0	6.03	1,073	6.03	NO
Del Mar Heights Rd. / I-5 SB on Ramp (Eastbound)	AM	0.00	0	0.00	0	0.00	NO
	PM	0.00	0	0.00	0	0.00	NO
Del Mar Heights Rd. / I-5 NB on Ramp	AM	Meter is not turned on				0.00	NO
	PM	0.00	0	2.07	595	2.07	NO

Notes:

Δ = Change in Delay (minutes)

S = Significant, the allowable increase in delay at a ramp meter with more than 15 minutes delay and freeway LOS E is 2 min.

S = Significant, the allowable increase in delay at a ramp meter with more than 15 minutes delay and freeway LOS F is 1 min.

Meter rates are based on the most restrictive meter rate provided by Caltrans, see Appendix C

ATTACHMENT 18

Existing & Existing + Project (Phase 1 & 2) Intersection Summary

#	Intersection	Existing				Existing + Project (Phase 1 & 2)							
		AM Peak Hour		PM Peak Hour		AM Peak Hour		Δ	S ?	PM Peak Hour		Δ	S ?
		D	LOS	D	LOS	D	LOS			D	LOS		
1	El Camino Real / Via de la Valle	30.3	C	37.3	D	30.8	C	0.5	No	39.6	D	2.3	No
2	El Camino Real / San Dieguito Road	17.4	B	25.4	C	17.7	B	0.3	No	27.0	C	1.6	No
3	El Camino Real / Derby Downs Road	4.9	A	5.5	A	4.9	A	0.0	No	5.5	A	0.0	No
4	El Camino Real / Half Mile Drive	21.6	C	18.3	B	22.0	C	0.4	No	21.7	C	3.4	No
5	El Camino Real / Quarter Mile Drive	20.4	C	14.1	B	20.6	C	0.2	No	15.6	B	1.5	No
6	Del Mar Heights Road / Mango Drive	35.2	D	45.1	D	45.2	D	10.0	No	52.4	D	7.3	No
7	Del Mar Heights Road / Portofino Drive	9.4	A	9.2	A	9.5	A	0.1	No	9.3	A	0.1	No
8	Del Mar Heights Road / I-5 SB Ramps	20.4	C	20.3	C	24.8	C	4.4	No	24.6	C	4.3	No
9	Del Mar Heights Road / I-5 NB Ramps	31.1	C	44.2	D	39.2	D	8.1	No	44.9	D	0.7	No
10	Del Mar Heights Road / High Bluff Drive	28.8	C	39.2	D	30.0	C	1.2	No	91.0	F	51.8	Yes
11	Del Mar Heights Road / Third Avenue	DNE	DNE	DNE	DNE	11.5	B	N/A	No	12.4	B	N/A	No
12	Del Mar Heights Road / First Avenue	DNE	DNE	DNE	DNE	22.1	C	N/A	No	29.0	C	N/A	No
13	Del Mar Heights Road / El Camino Real	31.4	C	29.1	C	37.4	D	6.0	No	53.4	D	24.3	No
14	Del Mar Heights Road / Carmel Country Rd	28.6	C	25.0	C	36.7	D	8.1	No	34.9	C	9.9	No
15	Del Mar Heights Road / Torrey Ridge Drive	25.8	C	9.8	A	32.0	C	6.2	No	18.8	B	9.0	No
16	Del Mar Heights Road / Lansdale Drive	23.9	C	17.1	B	33.2	C	9.3	No	29.6	C	12.5	No
17	Del Mar Heights Road / Carmel Canyon Rd	15.9	B	11.3	B	26.9	C	11.0	No	23.0	C	11.7	No
18	El Camino Real / Del Mar Highlands Town Ctr.	8.3	A	14.8	B	18.2	B	9.9	No	29.7	C	14.9	No
19	Carmel Country Road / Townsgate Drive	28.9	C	25.5	C	30.1	C	1.2	No	27.8	C	2.3	No
20	El Camino Real / Townsgate Drive	22.9	C	18.5	B	23.8	C	0.9	No	19.5	B	1.0	No
21	Carmel Country Road / Carmel Creek Rd	51.7	D	28.3	C	53.9	D	2.2	No	30.5	C	2.2	No
22	El Camino Real / High Bluff Drive	27.0	C	32.5	C	27.4	C	0.4	No	34.5	C	2.0	No
23	Carmel View Road / High Bluff Drive	8.3	A	9.0	A	8.6	A	0.3	No	9.6	A	0.6	No
24	Carmel Creek Road / Carmel Grove Rd	27.3	C	20.1	C	27.3	C	0.0	No	20.3	C	0.2	No
25	Carmel Valley Road / I-5 SB Ramps	20.4	C	27.9	C	20.9	C	0.5	No	28.7	C	0.8	No
26	Carmel Valley Road / I-5 NB Ramps	14.8	B	22.0	C	14.9	B	0.1	No	22.4	C	0.4	No
27	El Camino Real / Valley Centre Drive	25.1	C	23.2	C	25.2	C	0.1	No	23.9	C	0.7	No
28	El Camino Real / Carmel Valley Rd	19.9	B	25.4	C	20.0	B	0.1	No	26.2	C	0.8	No
29	El Camino Real / SR-56 EB On Ramp	17.9	B	28.8	C	18.3	B	0.4	No	31.2	C	2.4	No
30	Carmel View Road / Valley Centre Drive	7.6	A	6.7	A	7.6	A	0.0	No	6.7	A	0.0	No
31	Carmel Creek Road / SR-56 WB Ramp	52.5	D	27.3	C	53.6	D	1.1	No	27.4	C	0.1	No
32	Carmel Creek Road / SR-56 EB Ramps	14.4	B	22.1	C	14.5	B	0.1	No	22.4	C	0.3	No
33	Carmel Country Road / Carmel Canyon Rd	37.2	D	28.5	C	37.3	D	0.1	No	29.0	C	0.5	No
34	Carmel Country Road / SR-56 WB Ramps	17.4	B	11.6	B	17.4	B	0.0	No	11.7	B	0.1	No
35	Carmel Country Road / SR-56 EB Ramps	15.8	B	13.9	B	15.8	B	0.0	No	14.1	B	0.2	No
36	Carmel Creek Road / Del Mar Trail	41.6	E	20.1	C	44.5	E	2.9	Yes	22.0	C	1.9	No

Notes:

LOS = Level of Service

Δ = Change

S = Significant

D = Delay

DNE = Does Not Exist

N/A = Not Applicable

ATTACHMENT 19

Existing & Existing + Project (Buildout) Intersection Summary

#	Intersection	Existing				Existing + Project (Buildout)							
		AM Peak Hour		PM Peak Hour		AM Peak Hour		Δ	S ?	PM Peak Hour		Δ	S ?
		D	LOS	D	LOS	D	LOS			D	LOS		
1	El Camino Real / Via de la Valle	30.3	C	37.3	D	31.1	C	0.8	No	40.0	D	2.7	No
2	El Camino Real / San Dieguito Road	17.4	B	25.4	C	17.7	B	0.3	No	27.2	C	1.8	No
3	El Camino Real / Derby Downs Road	4.9	A	5.5	A	4.9	A	0.0	No	5.5	A	0.0	No
4	El Camino Real / Half Mile Drive	21.6	C	18.3	B	22.0	C	0.4	No	18.4	B	0.1	No
5	El Camino Real / Quarter Mile Drive	20.4	C	14.1	B	20.6	C	0.2	No	15.6	B	1.5	No
6	Del Mar Heights Road / Mango Drive	44.0	D	45.1	D	45.5	D	1.5	No	53.6	D	8.5	No
7	Del Mar Heights Road / Portofino Drive	9.3	A	9.2	D	9.5	A	0.2	No	9.5	A	0.3	No
8	Del Mar Heights Road / I-5 SB Ramps	20.4	C	20.3	D	25.3	C	4.9	No	26.3	C	6.0	No
9	Del Mar Heights Road / I-5 NB Ramps	35.7	D	44.2	D	39.2	D	3.5	No	45.3	D	1.1	No
10	Del Mar Heights Road / High Bluff Drive	28.0	C	74.5	D	31.6	C	3.6	No	101.7	F	27.2	Yes
11	Del Mar Heights Road / Third Avenue	DNE	DNE	DNE	D	13.6	B	N/A	No	14.0	B	N/A	No
12	Del Mar Heights Road / First Avenue	DNE	DNE	DNE	D	23.1	C	N/A	No	32.5	C	N/A	No
13	Del Mar Heights Road / El Camino Real	34.1	C	31.7	D	38.7	D	4.6	No	64.1	E	32.4	Yes
14	Del Mar Heights Road / Carmel Country Rd	34.4	C	28.3	D	37.2	D	2.8	No	37.9	D	9.6	No
15	Del Mar Heights Road / Torrey Ridge Drive	30.0	C	15.9	D	32.4	C	2.4	No	17.8	B	1.9	No
16	Del Mar Heights Road / Lansdale Drive	31.6	C	27.0	D	33.4	C	1.8	No	28.8	C	1.8	No
17	Del Mar Heights Road / Carmel Canyon Rd	26.7	C	22.7	D	27.0	C	0.3	No	24.4	C	1.7	No
18	El Camino Real / Del Mar Highlands Town Ctr.	8.3	A	14.8	B	20.3	C	12.0	No	31.2	C	16.4	No
19	Carmel Country Road / Townsgate Drive	28.9	C	25.5	C	30.3	C	1.4	No	28.3	C	2.8	No
20	El Camino Real / Townsgate Drive	22.9	C	18.5	B	23.8	C	0.9	No	19.7	B	1.2	No
21	Carmel Country Road / Carmel Creek Rd	51.7	D	28.3	C	54.5	D	2.8	No	30.9	C	2.6	No
22	El Camino Real / High Bluff Drive	27.0	C	32.5	C	27.5	C	0.5	No	35.0	C	2.5	No
23	Carmel View Road / High Bluff Drive	8.3	A	9.0	A	8.7	A	0.4	No	9.7	A	0.7	No
24	Carmel Creek Road / Carmel Grove Rd	27.3	C	20.1	C	27.4	C	0.1	No	20.3	C	0.2	No
25	Carmel Valley Road / I-5 SB Ramps	20.4	C	27.9	C	20.9	C	0.5	No	28.9	C	1.0	No
26	Carmel Valley Road / I-5 NB Ramps	14.8	B	22.0	C	14.9	B	0.1	No	22.6	C	0.6	No
27	El Camino Real / Valley Centre Drive	25.1	C	23.2	C	25.3	C	0.2	No	24.0	C	0.8	No
28	El Camino Real / Carmel Valley Rd	19.9	B	25.4	C	20.1	C	0.2	No	26.3	C	0.9	No
29	El Camino Real / SR-56 EB On Ramp	17.9	B	28.8	C	18.4	B	0.5	No	32.1	C	3.3	No
30	Carmel View Road / Valley Centre Drive	7.6	A	6.7	A	7.6	A	0.0	No	6.7	A	0.0	No
31	Carmel Creek Road / SR-56 WB Ramp	52.5	D	27.3	C	54.5	D	2.0	No	27.7	C	0.4	No
32	Carmel Creek Road / SR-56 EB Ramps	14.4	B	22.1	C	14.5	B	0.1	No	22.4	C	0.3	No
33	Carmel Country Road / Carmel Canyon Rd	37.2	D	28.5	C	37.4	D	0.2	No	28.7	C	0.2	No
34	Carmel Country Road / SR-56 WB Ramps	17.4	B	11.6	B	17.5	B	0.1	No	11.8	B	0.2	No
35	Carmel Country Road / SR-56 EB Ramps	15.8	B	13.9	B	15.9	B	0.1	No	14.1	B	0.2	No
36	Carmel Creek Road / Del Mar Trail	41.6	E	20.1	C	45.7	E	4.1	Yes	22.5	C	2.4	No

Notes:

LOS = Level of Service

Δ = Change

S = Significant

D = Delay

N/A = Not Applicable

DNE = Does Not Exist

ATTACHMENT 20

Near Term With & Without Project (Phase 1 & 2) Intersection Summary

#	Intersection	Near Term				Near Term + Project (Phase 1 & 2)							
		AM Peak Hour		PM Peak Hour		AM Peak Hour		Δ	S ?	PM Peak Hour		Δ	S ?
		D	LOS	D	LOS	D	LOS			D	LOS		
1	El Camino Real / Via de la Valle	33.6	C	43.8	D	34.1	C	0.5	N	46.8	D	3.0	N
2	El Camino Real / San Dieguito Road	17.8	B	26.4	C	18.1	B	0.3	N	28	C	1.6	N
3	El Camino Real / Derby Downs Road	4.9	A	5.5	A	4.9	A	0.0	N	5.6	A	0.1	N
4	El Camino Real / Half Mile Drive	18.5	B	17.6	B	18.7	B	0.2	N	19.8	B	2.2	N
5	El Camino Real / Quarter Mile Drive	20.6	C	15.5	B	20.8	C	0.2	N	15.9	B	0.4	N
6	Del Mar Heights Road / Mango Drive	45.4	D	61.2	E	46.6	D	1.2	N	62.6	E	1.4	N
7	Del Mar Heights Road / Portofino Drive	9.4	A	9.3	A	9.6	A	0.2	N	9.5	A	0.2	N
8	Del Mar Heights Road / I-5 SB Ramps	23.9	C	22.5	C	30.6	C	6.7	N	27.7	C	5.2	N
9	Del Mar Heights Road / I-5 NB Ramps	38.7	D	46.8	D	51.2	D	12.5	N	49.2	D	2.4	N
10	Del Mar Heights Road / High Bluff Drive	30.9	C	90	F	32.4	C	1.5	N	117.1	F	27.1	Y
11	Del Mar Heights Road / Third Avenue	DNE	DNE	DNE	DNE	11.9	B	0.0	N	12.1	B	0.0	N
12	Del Mar Heights Road / First Avenue	DNE	DNE	DNE	DNE	25.4	C	0.0	N	28.2	C	0.0	N
13	Del Mar Heights Road / El Camino Real	35.2	D	46	D	42.2	D	7.0	N	91.9	F	45.9	Y
14	Del Mar Heights Road / Carmel Country Rd	35.2	D	29.8	C	37.5	D	2.3	N	35.9	D	6.1	N
15	Del Mar Heights Road / Torrey Ridge Drive	31.2	C	16.4	B	33.4	C	2.2	N	19.2	B	2.8	N
16	Del Mar Heights Road / Lansdale Drive	32.2	C	27.3	C	34.7	C	2.5	N	29.9	C	2.6	N
17	Del Mar Heights Road / Carmel Canyon Rd	26.8	C	23.2	C	27.0	C	0.2	N	24	C	0.8	N
18	El Camino Real / Del Mar Highlands Town Ctr.	8.4	A	16.0	B	19.5	B	11.1	N	32.1	C	16.1	N
19	Carmel Country Road / Townsgate Drive	30.3	C	26.1	C	31.1	C	0.8	N	27.1	C	1.0	N
20	El Camino Real / Townsgate Drive	24.4	C	22	C	24.6	C	0.2	N	25.8	C	3.8	N
21	Carmel Country Road / Carmel Creek Rd	62.3	E	29.2	C	62.7	E	0.4	N	31.5	C	2.3	N
22	El Camino Real / High Bluff Drive	27.4	C	33.4	C	27.8	C	0.4	N	35.6	D	2.2	N
23	Carmel View Road / High Bluff Drive	8.4	A	9.1	A	8.7	A	0.3	N	9.7	A	0.6	N
24	Carmel Creek Road / Carmel Grove Rd	28.3	C	20.4	C	28.3	C	0.0	N	20.7	C	0.3	N
25	Carmel Valley Road / I-5 SB Ramps	22.7	C	33.6	C	23.4	C	0.7	N	35	D	1.4	N
26	Carmel Valley Road / I-5 NB Ramps	15.8	B	25.6	C	15.9	B	0.1	N	26.6	C	1.0	N
27	El Camino Real / Valley Centre Drive	28.9	C	28.8	C	29	C	0.1	N	31.2	C	2.4	N
28	El Camino Real / Carmel Valley Rd	22.4	C	34.4	C	22.5	C	0.1	N	36	D	1.6	N
29	El Camino Real / SR-56 EB On Ramp	20.4	C	47.8	D	20.6	C	0.2	N	50.7	D	2.9	N
30	Carmel View Road / Valley Centre Drive	7.7	A	6.7	A	7.7	A	0.0	N	6.7	A	0.0	N
31	Carmel Creek Road / SR-56 WB Ramp	52.4	D	28.8	C	54.2	D	1.8	N	29.3	C	0.5	N
32	Carmel Creek Road / SR-56 EB Ramps	15.9	B	32.1	C	16	B	0.1	N	32.4	C	0.3	N
33	Carmel Country Road / Carmel Canyon Rd	40	D	29.3	C	40.3	D	0.3	N	30.1	C	0.8	N
34	Carmel Country Road / SR-56 WB Ramps	17.9	B	11.9	B	18	B	0.1	N	11.9	B	0.0	N
35	Carmel Country Road / SR-56 EB Ramps	16.1	B	14.1	B	16.2	B	0.1	N	14.3	B	0.2	N
36	Carmel Creek Road / Del Mar Trail	47.9	E	21.7	C	51.9	F	4.0	Y	23.8	C	2.1	N

Notes:

LOS = Level of Service

Δ = Change

S = Significant

D= Delay

DNE = Does not Exist

For Intersection #36, the worst approach delay and level of service is reported.

ATTACHMENT 21

Near Term With & Without Project (Build-out) Intersection Summary

#	Intersection	Near Term				Near Term + Project (Build-out)							
		AM Peak Hour		PM Peak Hour		AM Peak Hour		Δ	S ?	PM Peak Hour		Δ	S ?
		D	LOS	D	LOS	D	LOS			D	LOS		
1	El Camino Real / Via de la Valle	33.6	C	43.8	D	34.4	C	0.8	N	47.4	D	3.6	N
2	El Camino Real / San Dieguito Road	17.8	B	26.4	C	18.2	B	0.4	N	28.4	C	2.0	N
3	El Camino Real / Derby Downs Road	4.9	A	5.5	A	4.9	A	0.0	N	5.6	A	0.1	N
4	El Camino Real / Half Mile Drive	18.5	B	17.6	B	18.7	B	0.2	N	18.2	B	0.6	N
5	El Camino Real / Quarter Mile Drive	20.6	C	15.5	B	20.9	C	0.3	N	16.2	B	0.7	N
6	Del Mar Heights Road / Mango Drive	45.4	D	61.2	E	47	D	1.6	N	62.7	E	1.5	N
7	Del Mar Heights Road / Portofino Drive	9.4	A	9.3	A	9.6	A	0.2	N	9.6	A	0.3	N
8	Del Mar Heights Road / I-5 SB Ramps	23.9	C	22.5	C	29.7	C	5.8	N	29.6	C	7.1	N
9	Del Mar Heights Road / I-5 NB Ramps	38.7	D	46.8	D	53.5	D	14.8	N	55.5	E	8.7	Y
10	Del Mar Heights Road / High Bluff Drive	30.9	C	90	F	35.6	D	4.7	N	129.5	F	39.5	Y
11	Del Mar Heights Road / Third Avenue	DNE	DNE	DNE	DNE	14	B	0.0	N	16	B	0.0	N
12	Del Mar Heights Road / First Avenue	DNE	DNE	DNE	DNE	25.8	C	0.0	N	29.6	C	0.0	N
13	Del Mar Heights Road / El Camino Real	35.2	D	46	D	42.1	D	6.9	N	105.4	F	59.4	Y
14	Del Mar Heights Road / Carmel Country Rd	35.2	D	29.8	C	37.9	D	2.7	N	38.9	D	9.1	N
15	Del Mar Heights Road / Torrey Ridge Drive	31.2	C	16.4	B	33.7	C	2.5	N	18	B	1.6	N
16	Del Mar Heights Road / Lansdale Drive	32.2	C	27.3	C	35	C	2.8	N	29.1	C	1.8	N
17	Del Mar Heights Road / Carmel Canyon Rd	26.8	C	23.2	C	27	C	0.2	N	24.8	C	1.6	N
18	El Camino Real / Del Mar Highlands Town Ctr.	8.4	A	16.0	B	21.1	C	12.7	N	33.6	C	17.6	N
19	Carmel Country Road / Townsgate Drive	30.3	C	26.1	C	31.4	C	1.1	N	27.5	C	1.4	N
20	El Camino Real / Townsgate Drive	24.4	C	22	C	24.8	C	0.4	N	26.2	C	4.2	N
21	Carmel Country Road / Carmel Creek Rd	62.3	E	29.2	C	63.6	E	1.3	N	31.9	C	2.7	N
22	El Camino Real / High Bluff Drive	27.4	C	33.4	C	27.9	C	0.5	N	35.9	D	2.5	N
23	Carmel View Road / High Bluff Drive	8.4	A	9.1	A	8.7	A	0.3	N	9.9	A	0.8	N
24	Carmel Creek Road / Carmel Grove Rd	28.3	C	20.4	C	28.4	C	0.1	N	20.7	C	0.3	N
25	Carmel Valley Road / I-5 SB Ramps	22.7	C	33.6	C	23.4	C	0.7	N	35.5	D	1.9	N
26	Carmel Valley Road / I-5 NB Ramps	15.8	B	25.6	C	15.9	B	0.1	N	26.9	C	1.3	N
27	El Camino Real / Valley Centre Drive	28.9	C	28.8	C	29.2	C	0.3	N	31.7	C	2.9	N
28	El Camino Real / Carmel Valley Rd	22.4	C	34.4	C	22.7	C	0.3	N	36.1	D	1.7	N
29	El Camino Real / SR-56 EB On Ramp	20.4	C	47.8	D	20.7	C	0.3	N	51.7	D	3.9	N
30	Carmel View Road / Valley Centre Drive	7.7	A	6.7	A	7.7	A	0.0	N	6.7	A	0.0	N
31	Carmel Creek Road / SR-56 WB Ramp	52.4	D	28.8	C	54.2	D	1.8	N	29.4	C	0.6	N
32	Carmel Creek Road / SR-56 EB Ramps	15.9	B	32.1	C	16	B	0.1	N	32.5	C	0.4	N
33	Carmel Country Road / Carmel Canyon Rd	40	D	29.3	C	40.4	D	0.4	N	29.4	C	0.1	N
34	Carmel Country Road / SR-56 WB Ramps	17.9	B	11.9	B	18	B	0.1	N	12.1	B	0.2	N
35	Carmel Country Road / SR-56 EB Ramps	16.1	B	14.1	B	16.3	B	0.2	N	14.3	B	0.2	N
36	Carmel Creek Road / Del Mar Trail	47.9	E	21.7	C	53	F	5.1	Y	24.5	C	2.8	N

Notes:

LOS = Level of Service

Δ = Change

S = Significant

D = Delay

DNE = Does not Exist

For Intersection #36, the worst approach delay and level of service is reported.

ATTACHMENT 22

Year 2030 With & Without Project (Buildout) Intersection Summary

#	Intersection	Year 2030				Year 2030 + Project (Buildout)							
		AM Peak Hour		PM Peak Hour		AM Peak Hour		Δ	S ?	PM Peak Hour		Δ	S ?
		D	LOS	D	LOS	D	LOS			D	LOS		
1	El Camino Real / Via de la Valle	27.1	C	23	C	28	C	0.9	No	23.6	C	0.6	No
2	El Camino Real / San Dieguito Road	27.6	C	48.1	D	28.6	C	1.0	No	52.2	D	4.1	No
3	El Camino Real / Derby Downs Road	5.0	A	5.8	A	5.7	A	0.7	No	5.8	A	0.0	No
4	El Camino Real / Half Mile Drive	18.7	B	17.4	B	18.7	B	0.0	No	18.6	B	1.2	No
5	El Camino Real / Quarter Mile Drive	21.1	C	16.3	B	21.5	C	0.4	No	16.6	B	0.3	No
6	Del Mar Heights Road / Mango Drive	72.2	E	57.0	E	72.9	E	0.7	No	58.8	E	1.8	No
7	Del Mar Heights Road / Portofino Drive	9.9	A	9.7	A	10.1	B	0.2	No	10.0	A	0.3	No
8	Del Mar Heights Road / I-5 SB Ramps	29.6	C	21.8	C	35	D	5.4	No	26.1	C	4.3	No
9	Del Mar Heights Road / I-5 NB Ramps	61.5	E	55.8	E	97.5	F	36.0	Yes	91.9	F	36.1	Yes
10	Del Mar Heights Road / High Bluff Drive	43.2	D	57.6	E	45	D	1.8	No	114.3	F	56.7	Yes
11	Del Mar Heights Road / Third Avenue	DNE	DNE	DNE	DNE	10.9	B	0.0	No	14.8	B	0.0	No
12	Del Mar Heights Road / First Avenue	DNE	DNE	DNE	DNE	15.3	B	0.0	No	24.1	C	0.0	No
13	Del Mar Heights Road / El Camino Real	49.5	D	50.8	D	64	E	14.5	Yes	101.0	F	50.2	Yes
14	Del Mar Heights Road / Carmel Country Rd	49.2	D	57.7	E	53.9	D	4.7	No	59.1	E	1.4	No
15	Del Mar Heights Road / Torrey Ridge Drive	34.8	C	12.2	B	36.3	D	1.5	No	12.4	B	0.2	No
16	Del Mar Heights Road / Lansdale Drive	46.7	D	29.7	C	53.5	D	6.8	No	34.2	C	4.5	No
17	Del Mar Heights Road / Carmel Canyon Rd	37.3	D	22.2	C	39.3	D	2.0	No	23.5	C	1.3	No
18	El Camino Real / Del Mar Highlands Town Ctr.	9.1	A	16.6	B	21.6	C	12.5	No	36.5	D	19.9	No
19	Carmel Country Road / Townsgate Drive	34.4	C	32.8	C	36.3	D	1.9	No	35.1	D	2.3	No
20	El Camino Real / Townsgate Drive	26.9	C	29.3	C	28.1	C	1.2	No	33.1	C	3.8	No
21	Carmel Country Road / Carmel Creek Rd	49.3	D	25.3	C	53.4	D	4.1	No	27.7	C	2.4	No
22	El Camino Real / High Bluff Drive	29.0	C	38.5	D	29.5	C	0.5	No	45.1	D	6.6	No
23	Carmel View Road / High Bluff Drive	8.9	A	9.8	A	9.3	A	0.4	No	10.7	B	0.9	No
24	Carmel Creek Road / Carmel Grove Rd	27.6	C	20.2	C	27.6	C	0.0	No	20.4	C	0.2	No
25	Carmel Valley Road / I-5 SB Ramps	24.8	C	29.7	C	26.3	C	1.5	No	30.3	C	0.6	No
26	Carmel Valley Road / I-5 NB Ramps	30.2	C	26.4	C	30.3	C	0.1	No	26.7	C	0.3	No
27	El Camino Real / Valley Centre Drive	30.1	C	40.1	D	30.2	C	0.1	No	42.3	D	2.2	No
28	El Camino Real / Carmel Valley Rd	23.5	C	20.4	C	23.9	C	0.4	No	22.3	C	1.9	No
29	El Camino Real / SR-56 EB On Ramp	27.2	C	88.5	F	27.7	C	0.5	No	94.9	F	6.4	Yes
30	Carmel View Road / Valley Centre Drive	8.0	A	6.5	A	8.0	A	0.0	No	6.5	A	0.0	No
31	Carmel Creek Road / SR-56 WB Ramp	48.2	D	49	D	48.5	D	0.3	No	49.6	D	0.6	No
32	Carmel Creek Road / SR-56 EB Ramps	18.1	B	25.2	C	18.3	B	0.2	No	25.5	C	0.3	No
33	Carmel Country Road / Carmel Canyon Rd	47.7	D	42	D	49.5	D	1.8	No	42.1	D	0.1	No
34	Carmel Country Road / SR-56 WB Ramps	20.9	C	13.8	B	21.1	C	0.2	No	13.8	B	0.0	No
35	Carmel Country Road / SR-56 EB Ramps	21.4	C	21.0	C	21.7	C	0.3	No	21.6	C	0.6	No
36	Carmel Creek Road / Del Mar Trail	43.3	E	20.6	C	47.7	E	4.4	Yes	23.2	C	2.6	No

Notes:

LOS = Level of Service

Δ = Change

S = Significant

D= Delay

DNE = Does not exist

For Intersection #36, the worst approach delay and level of service is reported.

ATTACHMENT 23

Street Segments Levels of Service With Mitigation (Revised Project)

Existing + Project (Phase 1)

Road	Segment	Jurisd.	Class.	Cap.	Volume	V/C	LOS
Del Mar Heights Rd.	I-5 Northbound Ramps to High Bluff Drive*	SD	PA	60,000	57,360	0.96	E
El Camino Real	Via de la Valle to San Dieguito Road	SD	4-M	40,000	16,020	0.40	B
Via de la Valle	San Andres Drive to El Camino Real (West)	SD	4-M	40,000	24,694	0.62	C

Near Term + Project (Phase 1)

Road	Segment	Jurisd.	Class.	Cap.	Volume	V/C	LOS
Del Mar Heights Rd.	I-5 Northbound Ramps to High Bluff Drive*	SD	PA	60,000	60,510	1.01	F
El Camino Real	Via de la Valle to San Dieguito Road	SD	4-M	40,000	16,677	0.42	B
Via de la Valle	San Andres Drive to El Camino Real (West)	SD	4-M	40,000	27,026	0.68	C

Legend:

* Arterial corridor analysis shows Del Mar Heights Road operates at LOS D.

SD= City of San Diego

Cap.= Capacity

PA = 6 lane Prime Arterial

Class.= Classification

4-M=4 lane Major

LOS= Level of Service

V/C= Volume to Capacity Ratio

ATTACHMENT 24

Intersection Levels of Service With & Without Mitigation (Revised Project)

Year 2030 + Project (Build-out)

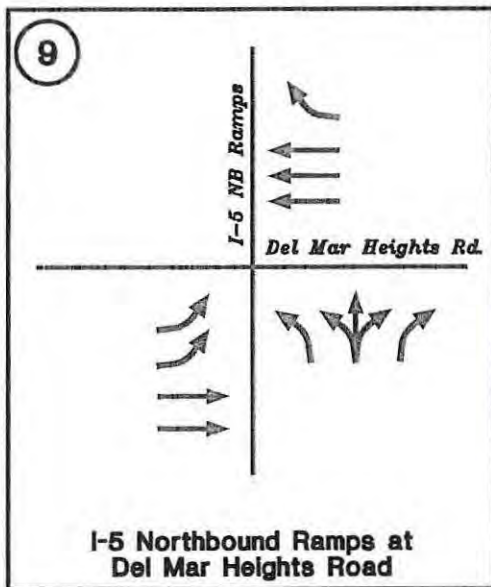
Number	Intersection	Control	Without Mitigation				With Mitigation			
			AM Peak Hour		PM Peak Hour		AM Peak Hour		PM Peak Hour	
			Delay	LOS	Delay	LOS	Delay	LOS	Delay	LOS
9	Del Mar Heights Road / I-5 NB Ramps*	Signalized	97.5	F	91.9	F	53.5	D	54.7	D
10	Del Mar Heights Road / High Bluff Drive*	Signalized	45.0	D	114.3	F	37.7	D	43.3	D
13	Del Mar Heights Road / El Camino Real*	Signalized	64.0	E	101.0	F	44.3	D	45.0	D

Notes:

LOS = Level of Service

* = Signals are coordinated.

Orange indicates unacceptable level of service.



EXISTING

**Year 2030 + Project
(Without Mitigation)**

AM Peak Hour

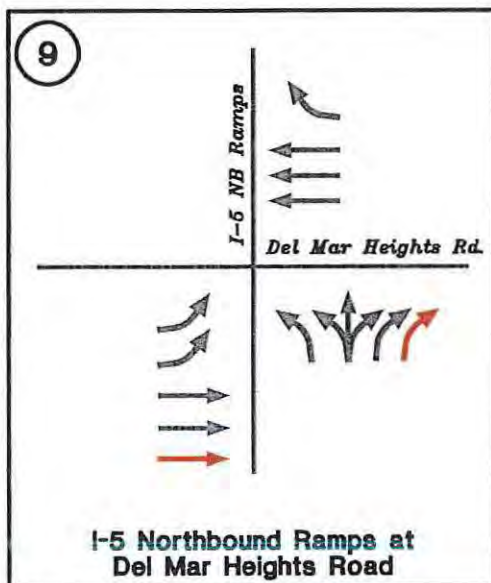
PM Peak Hour

Delay 97.5

Delay 91.9

LOS F

LOS F



**PROPOSED
(With Mitigation)**

**Year 2030 + Project
(With Mitigation)**

AM Peak Hour

PM Peak Hour

Delay 53.5

Delay 54.7

LOS D

LOS D

LOS	Control Delay (seconds)
A	< 10.0
B	10.0 - 20.0
C	20.0 - 35.0
D	35.0 - 55.0
E	55.0 - 80.0
F	> 80.0



Attachment 25
I-5 NB Ramps at Del Mar Heights Road

ATTACHMENT 26

Existing + Project (Buildout) Arterial Analysis & Near Term + Project (Buildout) Arterial Analysis & Year 2030 + Project (Buildout) Arterial Analysis With Mitigation

Roadway	Segment	Class.	Direction	Existing + Project (Buildout)				Near Term + Project (Buildout)				Year 2030 + Project (Buildout)			
				AM		PM		AM		PM		AM		PM	
				Speed	LOS	Speed	LOS	Speed	LOS	Speed	LOS	Speed	LOS	Speed	LOS
Del Mar Heights Road	I-5 Northbound Ramps to Carmel Canyon Road	PA	Eastbound	15.3	D	15.1	D	16.2	D	16.2	D	14.1	D	14.6	D
			Westbound	16.4	D	17.5	D	16.5	D	17.5	D	15.0	D	15.2	D

Legend:

LOS= Level of Service

PA = 6 lane Prime Arterial

ATTACHMENT 27

ONE PASEO - YEAR 2030 + PROJECT - REVISED PROJECT												
Del Mar Heights Road Queuing Analysis Worksheet - Coordinated AM Peak Hour												
INTERSECTION	Eastbound						Westbound					
	Left		Through		Right		Left		Through		Right	
	95th % Queue Per Lane (ft)	Storage Length Per Lane (ft)	95th % Queue Per Lane (ft)	Storage Length Per Lane (ft)	95th % Queue Per Lane (ft)	Storage Length Per Lane (ft)	95th % Queue Per Lane (ft)	Storage Length Per Lane (ft)	95th % Queue Per Lane (ft)	Storage Length Per Lane (ft)	95th % Queue Per Lane (ft)	Storage Length Per Lane (ft)
Del Mar Heights Rd. / I-5 NB Ramps	280	450	439	584	N/A	N/A	N/A	N/A	645	1,026	100	850
Del Mar Heights Rd. / High Bluff Dr.	79	250	530	1,026	227	250	163	225	493	555	N/A	N/A
Del Mar Heights Rd. / Third Ave.	N/A	N/A	45	555	0	200*	195	250*	25	473	N/A	N/A
Del Mar Heights Rd. / First Ave.	N/A	N/A	15	473	0	200*	109	420*	450	549	N/A	N/A
Del Mar Heights Rd. / El Camino Real	178	250	305	549	348	365*	227	275	608	631	N/A	N/A

Notes:

N/A = Not Applicable

* Proposed improvements along project frontage when project access is constructed.

ATTACHMENT 28

ONE PASEO - YEAR 2030 + PROJECT - REVISED PROJECT												
Del Mar Heights Road Queuing Analysis Worksheet - Coordinated PM Peak Hour												
INTERSECTION	Eastbound						Westbound					
	Left		Through		Right		Left		Through		Right	
	95th % Queue Per Lane (ft)	Storage Length Per Lane (ft)	95th % Queue Per Lane (ft)	Storage Length Per Lane (ft)	95th % Queue Per Lane (ft)	Storage Length Per Lane (ft)	95th % Queue Per Lane (ft)	Storage Length Per Lane (ft)	95th % Queue Per Lane (ft)	Storage Length Per Lane (ft)	95th % Queue Per Lane (ft)	Storage Length Per Lane (ft)
Del Mar Heights Rd. / I-5 NB Ramps	426	450	401	584	N/A	N/A	N/A	N/A	862	1,026	651	850
Del Mar Heights Rd. / High Bluff Dr.	222	250	961	1,026	25	250	47	225	349	555	N/A	N/A
Del Mar Heights Rd. / Third Ave.	N/A	N/A	197	555	7	200*	206	250*	102	473	N/A	N/A
Del Mar Heights Rd. / First Ave.	N/A	N/A	230	473	17	200*	88	420*	184	549	N/A	N/A
Del Mar Heights Rd. / El Camino Real	243	250	503	549	208	365*	139	275	485	574	N/A	N/A

Notes:

N/A = Not Applicable

* Proposed improvements along project frontage when project access is constructed.

ATTACHMENT 29

Existing Street Segment Levels of Service

Road	Segment	Jurisd.	Functional Class.	Capacity at LOS E	Volume	V/C	LOS
Del Mar Heights Rd.	Crest Way to Mango Drive	SD	4-M	40,000	21,385	0.53	C
High Bluff Drive	Del Mar Heights Road to Seahorn Circle	SD	2-Cb	10,000	6,509	0.65	C
Portofino Drive	Del Mar Heights Road to Ruelle Parc	SD	2-Cd	8,000	1,538	0.19	A
Mango Drive	Del Mar Heights Road to Calais Drive	SD	2-Cd	8,000	2,602	0.33	B
	Del Mar Heights Road to Lozana Road*	SD	2-Cd	9,000	6,058	0.67	D

Legend:

SD= City of San Diego

Cap.= Capacity 4-M=4 lane Major

Class.= Classification 2-Cd=2 lane multi-family collector

LOS= Level of Service 2-Cb = 2 lane Collector with no fronting property

V/C= Volume to Capacity Ratio

* Mango Drive just north of Del Mar Heights Road has limited access and therefore has a higher LOS E capacity of 9,000 ADT.

The LOS E capacity 9,000 ADT is an average of the City's LOS E capacities of 10,000 and 8,000 ADT for two lane collectors.

Notes:

Counts Conducted September 2012 by Transportation Studies, Inc.

Existing

ATTACHMENT 30

Existing with Project (Phase 1) Street Segment Levels of Service

Road	Segment	Jurisd.	Class.	Cap.	Volume	V/C	LOS
Del Mar Heights Rd.	Crest Way to Mango Drive	SD	4-M	40,000	21,826	0.55	C
High Bluff Drive	Del Mar Heights Road to Seahorn Circle	SD	2-Cb	10,000	6,950	0.70	C
Portofino Drive	Del Mar Heights Road to Ruelle Parc	SD	2-Cd	8,000	1,979	0.25	A
Mango Drive	Del Mar Heights Road to Calais Drive	SD	2-Cd	8,000	3,043	0.38	B
	Del Mar Heights Road to Lozana Road*	SD	2-Cd	9,000	6,499	0.72	D

Legend:

SD= City of San Diego

Cap.= Capacity 4-M=4 lane Major

Class.= Classification 2-Cd=2 lane multi-family collector

LOS= Level of Service 2-Cb = 2 lane Collector with no fronting property

V/C= Volume to Capacity Ratio

* Mango Drive just north of Del Mar Heights Road has limited access and therefore has a higher LOS E capacity of 9,000 ADT.

The LOS E capacity 9,000 ADT is an average of the City's LOS E capacities of 10,000 and 8,000 ADT for two lane collectors.

ATTACHMENT 31

Existing with Project (Phase 1 & 2) Street Segment Levels of Service

Road	Segment	Jurisd.	Class.	Cap.	Volume	V/C	LOS
Del Mar Heights Rd.	Crest Way to Mango Drive	SD	4-M	40,000	21,969	0.55	C
High Bluff Drive	Del Mar Heights Road to Seahorn Circle	SD	2-Cb	10,000	7,093	0.71	C
Portofino Drive	Del Mar Heights Road to Ruelle Parc	SD	2-Cd	8,000	2,122	0.27	A
Mango Drive	Del Mar Heights Road to Calais Drive	SD	2-Cd	8,000	3,186	0.40	B
	Del Mar Heights Road to Lozana Road*	SD	2-Cd	9,000	6,642	0.74	D

Legend:

SD= City of San Diego

Cap.= Capacity 4-M=4 lane Major

Class.= Classification 2-Cd=2 lane multi-family collector

LOS= Level of Service 2-Cb = 2 lane Collector with no fronting property

V/C= Volume to Capacity Ratio

* Mango Drive just north of Del Mar Heights Road has limited access and therefore has a higher LOS E capacity of 9,000 ADT.

The LOS E capacity 9,000 ADT is an average of the City's LOS E capacities of 10,000 and 8,000 ADT for two lane collectors.

ATTACHMENT 32

Existing with Project (Project Buildout) Street Segment Levels of Service

Road	Segment	Jurisd.	Class.	Cap.	Volume	V/C	LOS
Del Mar Heights Rd.	Crest Way to Mango Drive	SD	4-M	40,000	22,101	0.55	C
High Bluff Drive	Del Mar Heights Road to Seahorn Circle	SD	2-Cb	10,000	7,225	0.72	C
Portofino Drive	Del Mar Heights Road to Ruelle Parc	SD	2-Cd	8,000	2,254	0.28	A
Mango Drive	Del Mar Heights Road to Calais Drive	SD	2-Cd	8,000	3,318	0.41	B
	Del Mar Heights Road to Lozana Road*	SD	2-Cd	9,000	6,774	0.75	D

Legend:

SD= City of San Diego

Cap.= Capacity

4-M=4 lane Major

Class.= Classification

2-Cd=2 lane multi-family collector

LOS= Level of Service

2-Cb = 2 lane Collector with no fronting property

V/C= Volume to Capacity Ratio

* Mango Drive just north of Del Mar Heights Road has limited access and therefore has a higher LOS E capacity of 9,000 ADT.

The LOS E capacity 9,000 ADT is an average of the City's LOS E capacities of 10,000 and 8,000 ADT for two lane collectors.

ATTACHMENT 33

Near Term Without Project Street Segment Levels of Service

Road	Segment	Jurisd.	Functional Class.	Capacity at LOS E	Volume	V/C	LOS
Del Mar Heights Rd.	Crest Way to Mango Drive	SD	4-M	40,000	22,027	0.55	C
High Bluff Drive	Del Mar Heights Road to Seahorn Circle	SD	2-Cb	10,000	6,704	0.67	C
Portofino Drive	Del Mar Heights Road to Ruelle Parc	SD	2-Cd	8,000	1,584	0.20	A
Mango Drive	Del Mar Heights Road to Calais Drive	SD	2-Cd	8,000	2,680	0.34	B
	Del Mar Heights Road to Lozana Road*	SD	2-Cd	9,000	6,240	0.69	D

Legend:

SD= City of San Diego

Cap.= Capacity

4-M=4 lane Major

Class.= Classification

2-Cd=2 lane multi-family collector

LOS= Level of Service

2-Cb = 2 lane Collector with no fronting property

V/C= Volume to Capacity Ratio

* Mango Drive just north of Del Mar Heights Road has limited access and therefore has a higher LOS E capacity of 9,000 ADT.

The LOS E capacity 9,000 ADT is an average of the City's LOS E capacities of 10,000 and 8,000 ADT for two lane collectors.

ATTACHMENT 34

Near Term with Project (Phase 1) Street Segment Levels of Service

Road	Segment	Jurisd.	Functional Class.	Capacity at LOS E	Volume	V/C	LOS
Del Mar Heights Rd.	Crest Way to Mango Drive	SD	4-M	40,000	22,468	0.56	C
High Bluff Drive	Del Mar Heights Road to Seahorn Circle	SD	2-Cb	10,000	7,145	0.71	C
Portofino Drive	Del Mar Heights Road to Ruelle Parc	SD	2-Cd	8,000	2,025	0.25	A
Mango Drive	Del Mar Heights Road to Calais Drive	SD	2-Cd	8,000	3,121	0.39	B
	Del Mar Heights Road to Lozana Road*	SD	2-Cd	9,000	6,681	0.74	D

Legend:

SD= City of San Diego

Cap.= Capacity 4-M=4 lane Major

Class.= Classification 2-Cd=2 lane multi-family collector

LOS= Level of Service 2-Cb = 2 lane Collector with no fronting property

* Mango Drive just north of Del Mar Heights Road has limited access and therefore has a higher LOS E capacity of 9,000 ADT.

The LOS E capacity 9,000 ADT is an average of the City's LOS E capacities of 10,000 and 8,000 ADT for two lane collectors.

ATTACHMENT 35

Near Term with Project (Phase 1 & 2) Street Segment Levels of Service

Road	Segment	Jurisd.	Functional Class.	Capacity at LOS E	Volume	V/C	LOS
Del Mar Heights Rd.	Crest Way to Mango Drive	SD	4-M	40,000	22,611	0.57	C
High Bluff Drive	Del Mar Heights Road to Seahorn Circle	SD	2-Cb	10,000	7,288	0.73	C
Portofino Drive	Del Mar Heights Road to Ruelle Parc	SD	2-Cd	8,000	2,168	0.27	A
Mango Drive	Del Mar Heights Road to Calais Drive	SD	2-Cd	8,000	3,264	0.41	B
	Del Mar Heights Road to Lozana Road*	SD	2-Cd	9,000	6,824	0.76	D

Legend:

SD= City of San Diego

Cap.= Capacity 4-M=4 lane Major

Class.= Classification 2-Cd=2 lane multi-family collector

LOS= Level of Service 2-Cb = 2 lane Collector with no fronting property

* Mango Drive just north of Del Mar Heights Road has limited access and therefore has a higher LOS E capacity of 9,000 ADT.

The LOS E capacity 9,000 ADT is an average of the City's LOS E capacities of 10,000 and 8,000 ADT for two lane collectors.

ATTACHMENT 36

Near Term + Project (Build-out) Street Segment LOS

Road	Segment	Jurisd.	Functional Class.	Capacity at LOS E	Volume	V/C	LOS
Del Mar Heights Rd.	Crest Way to Mango Drive	SD	4-M	40,000	29,400	0.74	C
High Bluff Drive	Del Mar Heights Road to Seahorn Circle	SD	2-Cb	10,000	7,420	0.74	C
Portofino Drive	Del Mar Heights Road to Ruelle Parc	SD	2-Cd	8,000	2,300	0.29	A
Mango Drive	Del Mar Heights Road to Calais Drive	SD	2-Cd	8,000	3,396	0.42	B
	Del Mar Heights Road to Lozana Road*	SD	2-Cd	9,000	6,955	0.77	D

Legend:

SD= City of San Diego

Cap.= Capacity

Class.= Classification

LOS= Level of Service

4-M=4 lane Major

2-Cd=2 lane multi-family collector

2-Cb = 2 lane Collector with no fronting property

* Mango Drive just north of Del Mar Heights Road has limited access and therefore has a higher LOS E capacity of 9,000 ADT.

The LOS E capacity 9,000 ADT is an average of the City's LOS E capacities of 10,000 and 8,000 ADT for two lane collectors.

ATTACHMENT 37

Year 2030 Without Project Street Segment Levels of Service

Road	Segment	Jurisd.	Functional Class.	Capacity at LOS E	Volume	V/C	LOS
Del Mar Heights Rd.	Crest Way to Mango Drive	SD	4-M	40,000	29,400	0.74	C
High Bluff Drive	Del Mar Heights Road to Seahorn Circle	SD	2-Cb	10,000	7,500	0.75	D
Portofino Drive	Del Mar Heights Road to Ruelle Parc	SD	2-Cd	8,000	3,700	0.46	C
Mango Drive	Del Mar Heights Road to Calais Drive	SD	2-Cd	8,000	4,000	0.50	C
	Del Mar Heights Road to Lozana Road*	SD	2-Cd	9,000	7,000	0.78	D

Legend:

SD= City of San Diego

Cap.= Capacity

4-M=4 lane Major

Class.= Classification

2-Cd=2 lane multi-family collector

LOS= Level of Service

2-Cb = 2 lane Collector with no fronting property

* Mango Drive just north of Del Mar Heights Road has limited access and therefore has a higher LOS E capacity of 9,000 ADT.

The LOS E capacity 9,000 ADT is an average of the City's LOS E capacities of 10,000 and 8,000 ADT for two lane collectors.

Notes:

Year 2030 volumes are based on Sandag Forecast dated Jan. 31, 2013.

ATTACHMENT 38

Year 2030 with Project (Buildout) Street Segment Levels of Service

Road	Segment	Jurisd.	Functional Class.	Capacity at LOS E	Volume	V/C	LOS
Del Mar Heights Rd.	Crest Way to Mango Drive	SD	4-M	40,000	30,116	0.75	D
High Bluff Drive	Del Mar Heights Road to Seahorn Circle	SD	2-Cb	10,000	8,216	0.82	D
Portofino Drive	Del Mar Heights Road to Ruelle Parc	SD	2-Cd	8,000	4,416	0.55	C
Mango Drive	Del Mar Heights Road to Calais Drive	SD	2-Cd	8,000	4,716	0.59	C
	Del Mar Heights Road to Lozana Road*	SD	2-Cd	9,000	7,716	0.86	D

Legend:

SD= City of San Diego

Cap.= Capacity 4-M=4 lane Major

Class.= Classification 2-Cd=2 lane multi-family collector

LOS= Level of Service 2-Cb = 2 lane Collector with no fronting property

* Mango Drive just north of Del Mar Heights Road has limited access and therefore has a higher LOS E capacity of 9,000 ADT.

The LOS E capacity 9,000 ADT is an average of the City's LOS E capacities of 10,000 and 8,000 ADT for two lane collectors.

ATTACHMENT 39

Existing & Existing With Project (Phase 1) Street Segment Comparison

Road	Segment	Class.	Existing			Existing + Project (Phase 1)			$\Delta V/C$	Is this impact Significant?
			LOS	Volume	V/C	LOS	Volume	V/C		
Del Mar Heights Rd.	Crest Way to Mango Drive	4-M	C	21,385	0.535	C	21,826	0.546	0.011	NO
High Bluff Drive	Del Mar Heights Road to Seahorn Circle	2-Cb	C	6,509	0.651	C	6,950	0.695	0.044	NO
Portofino Drive	Del Mar Heights Road to Ruelle Parc	2-Cd	A	1,538	0.192	A	1,979	0.247	0.055	NO
Mango Drive	Del Mar Heights Road to Calais Drive	2-Cd	B	2,602	0.325	B	3,043	0.380	0.055	NO
	Del Mar Heights Road to Lozana Road	2-Cd	D	6,058	0.673	D	6,499	0.722	0.049	NO

Legend:

LOS= Level of Service

V/C= Volume to Capacity Ratio

$\Delta V/C$ = Change in V/C ratio

ATTACHMENT 40

Existing & Existing With Project (Phase 1 & 2) Street Segment Comparison

Road	Segment	Class.	Existing			Existing + Project (Phase 1 & 2)			$\Delta V/C$	Is this impact Significant?
			LOS	Volume	V/C	LOS	Volume	V/C		
Del Mar Heights Rd.	Crest Way to Mango Drive	4-M	C	21,385	0.535	C	21,969	0.549	0.015	NO
High Bluff Drive	Del Mar Heights Road to Seahorn Circle	2-Cb	C	6,509	0.651	C	7,093	0.709	0.058	NO
Portofinino Drive	Del Mar Heights Road to Ruelle Parc	2-Cd	A	1,538	0.192	A	2,122	0.265	0.073	NO
Mango Drive	Del Mar Heights Road to Calais Drive	2-Cd	B	2,602	0.325	B	3,186	0.398	0.073	NO
	Del Mar Heights Road to Lozana Road	2-Cd	D	6,058	0.673	D	6,642	0.738	0.065	NO

Legend:

LOS= Level of Service

V/C= Volume to Capacity Ratio

$\Delta V/C$ = Change in V/C ratio

ATTACHMENT 41

Existing & Existing With Project (Buildout) Street Segment Comparison

Road	Segment	Class.	Existing			Existing + Project (Buildout)			$\Delta V/C$	Is this impact Significant?
			LOS	Volume	V/C	LOS	Volume	V/C		
Del Mar Heights Rd.	Crest Way to Mango Drive	4-M	C	21,385	0.535	C	22,101	0.553	0.018	<i>NO</i>
High Bluff Drive	Del Mar Heights Road to Seahorn Circle	2-Cb	C	6,509	0.651	C	7,225	0.722	0.072	<i>NO</i>
Portofino Drive	Del Mar Heights Road to Ruelle Parc	2-Cd	A	1,538	0.192	A	2,254	0.282	0.089	<i>NO</i>
Mango Drive	Del Mar Heights Road to Calais Drive	2-Cd	B	2,602	0.325	B	3,318	0.415	0.089	<i>NO</i>
	Del Mar Heights Road to Lozana Road	2-Cd	D	6,058	0.673	D	6,774	0.753	0.080	<i>NO</i>

Legend:

LOS= Level of Service

V/C= Volume to Capacity Ratio

$\Delta V/C$ = Change in V/C ratio

ATTACHMENT 42

Near Term With & Without Project (Phase 1) Street Segment Comparison

Road	Segment	Class.	Near Term			Near Term + Project (Phase 1)			$\Delta V/C$	Is this impact Significant?
			LOS	Volume	V/C	LOS	Volume	V/C		
Del Mar Heights Rd.	Crest Way to Mango Drive	4-M	C	22,027	0.551	C	22,468	0.562	0.011	<i>NO</i>
High Bluff Drive	Del Mar Heights Road to Seahorn Circle	2-Cb	C	6,704	0.670	C	7,145	0.715	0.044	<i>NO</i>
Portofino Drive	Del Mar Heights Road to Ruelle Parc	2-Cd	A	1,584	0.198	A	2,025	0.253	0.055	<i>NO</i>
Mango Drive	Del Mar Heights Road to Calais Drive	2-Cd	B	2,680	0.335	B	3,121	0.390	0.055	<i>NO</i>
	Del Mar Heights Road to Lozana Road	2-Cd	D	6,240	0.693	D	6,681	0.742	0.049	<i>NO</i>

Legend:

LOS= Level of Service

V/C= Volume to Capacity Ratio

$\Delta V/C$ = Change in V/C ratio

ATTACHMENT 43

Near Term With & Without Project (Phase 1 & 2) Street Segment Comparison

Road	Segment	Class.	Near Term			Near Term + Project (Phase 1 & 2)			$\Delta V/C$	Is this impact Significant?
			LOS	Volume	V/C	LOS	Volume	V/C		
Del Mar Heights Rd.	Crest Way to Mango Drive	4-M	C	22,027	0.551	C	22,611	0.565	0.015	NO
High Bluff Drive	Del Mar Heights Road to Seahorn Circle	2-Cb	C	6,704	0.670	C	7,288	0.729	0.058	NO
Portofino Drive	Del Mar Heights Road to Ruelle Parc	2-Cd	A	1,584	0.198	A	2,168	0.271	0.073	NO
Mango Drive	Del Mar Heights Road to Calais Drive	2-Cd	B	2,680	0.335	B	3,264	0.408	0.073	NO
	Del Mar Heights Road to Lozana Road	2-Cd	D	6,240	0.693	D	6,824	0.758	0.065	NO

Legend:

LOS= Level of Service

V/C= Volume to Capacity Ratio

$\Delta V/C$ = Change in V/C ratio

ATTACHMENT 44

Near Term With & Withou Project (Build-out) Street Segment Comparison

Road	Segment	Class.	Near Term			Near Term + Project (Build-out)			$\Delta V/C$	Is this impact Significant?
			LOS	Volume	V/C	LOS	Volume	V/C		
Del Mar Heights Rd.	Crest Way to Mango Drive	4-M	C	22,027	0.551	C	29,400	0.735	0.184	<i>NO</i>
High Bluff Drive	Del Mar Heights Road to Seahorn Circle	2-Cb	C	6,704	0.670	C	7,420	0.742	0.072	<i>NO</i>
Portofino Drive	Del Mar Heights Road to Ruelle Parc	2-Cd	A	1,584	0.198	A	2,300	0.287	0.089	<i>NO</i>
Mango Drive	Del Mar Heights Road to Calais Drive	2-Cd	B	2,680	0.335	B	3,396	0.424	0.089	<i>NO</i>
	Del Mar Heights Road to Lozana Road	2-Cd	D	6,240	0.693	D	6,955	0.773	0.080	<i>NO</i>

Legend:

LOS= Level of Service

V/C= Volume to Capacity Ratio

$\Delta V/C$ = Change in V/C ratio

ATTACHMENT 45

Year 2030 Without & Year 2030 With Project (Buildout) Street Segment Comparison

Road	Segment	Class.	Year 2030			Year 2030 + Project (Buildout)			$\Delta V/C$	Is this impact Significant?
			LOS	Volume	V/C	LOS	Volume	V/C		
Del Mar Heights Rd.	Crest Way to Mango Drive	4-M	C	29,400	0.735	D	30,116	0.753	0.018	<i>NO</i>
High Bluff Drive	Del Mar Heights Road to Seahorn Circle	2-Cb	D	7,500	0.750	D	8,216	0.822	0.072	<i>NO</i>
Portofino Drive	Del Mar Heights Road to Ruelle Parc	2-Cd	C	3,700	0.463	C	4,416	0.552	0.089	<i>NO</i>
Mango Drive	Del Mar Heights Road to Calais Drive	2-Cd	C	4,000	0.500	C	4,716	0.589	0.089	<i>NO</i>
	Del Mar Heights Road to Lozana Road	2-Cd	D	7,000	0.778	D	7,716	0.857	0.080	<i>NO</i>

Legend:

LOS= Level of Service

V/C= Volume to Capacity Ratio

$\Delta V/C$ = Change in V/C ratio

Year 2030 Comp (Buildout)

ATTACHMENT 46

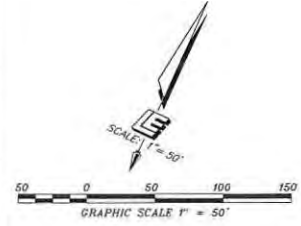
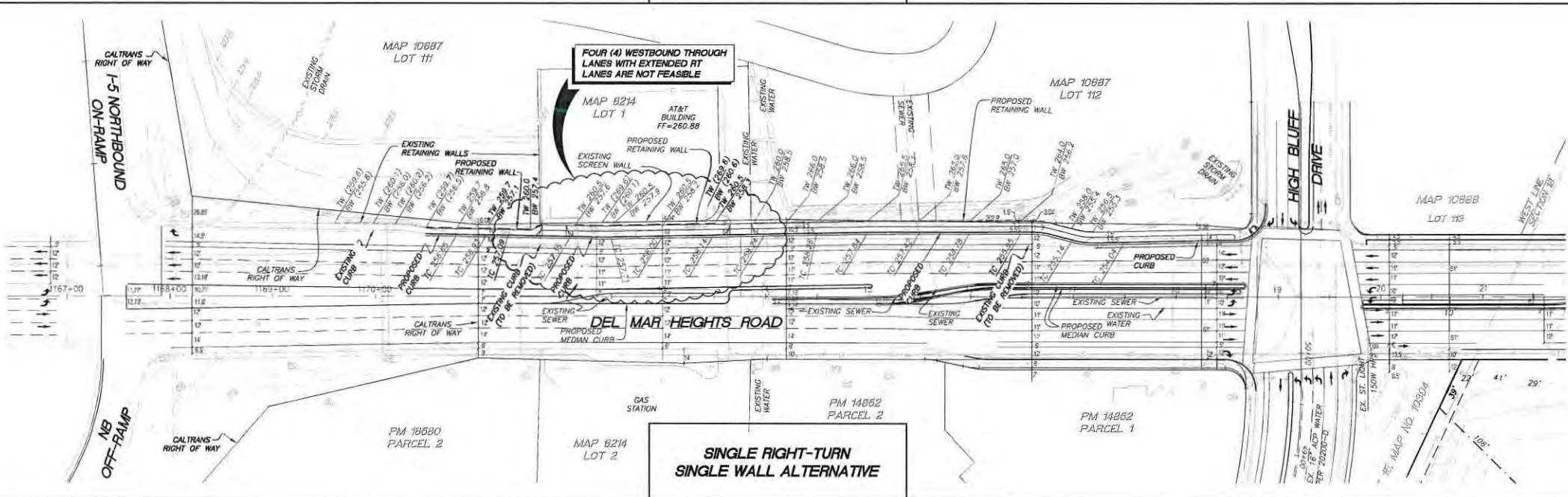
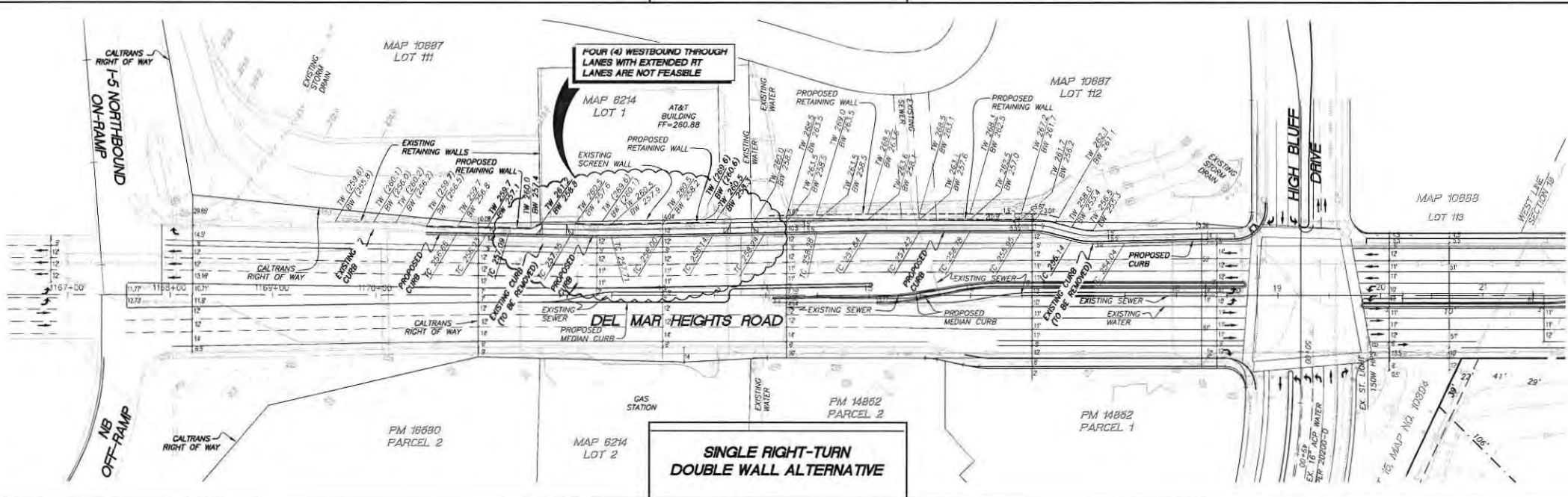
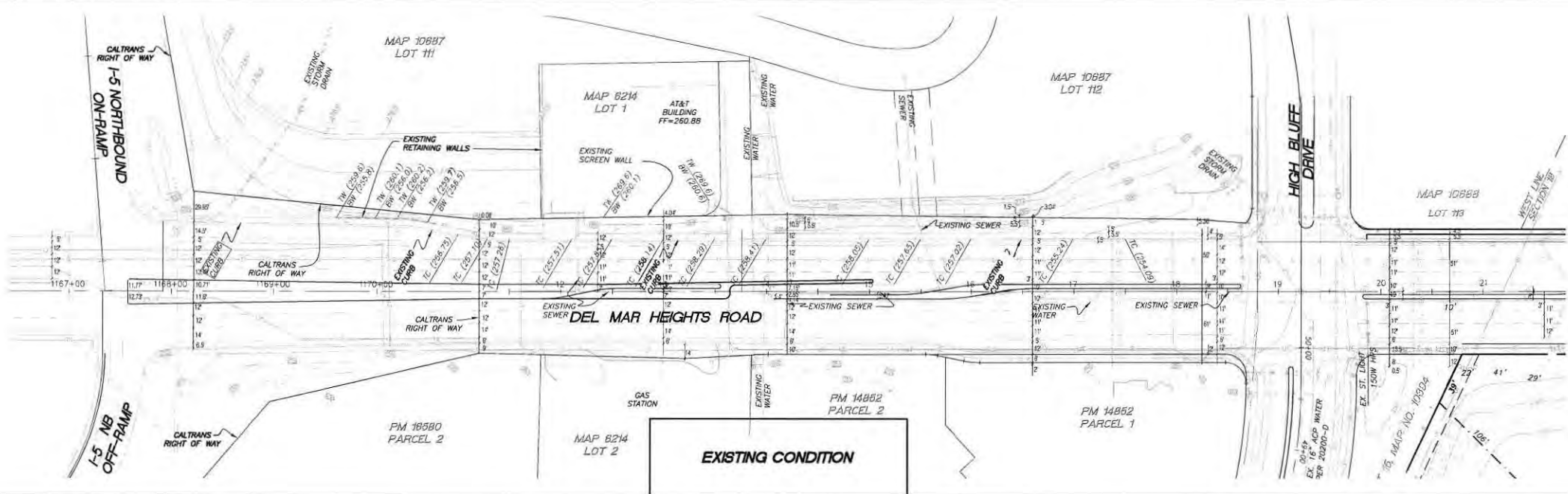
SANDAG FORECAST MODEL COMPARISON TABLE

Del Mar Heights Road Segments	ADT's obtained from Revised Project Traffic Model Series 11 (Year 2030+Project)* Run Dated: Jan. 2013	ADT's utilized in the Approved Revised Project Traffic Study dated Dec. 20, 2012 (Year 2030+Project)**	ADT's utilized in the Approved Original Project Traffic Study dated March 23, 2012 (Year 2030+Project)**
I-5 SB Ramps to I-5 NB Ramps	47,200	42,829	43,482
I-5 NB Ramps to High Bluff Dr.	53,100	61,103	62,315
High Bluff Dr. to Third Ave.	44,300	53,504	54,902
Third Ave. to First Ave.	37,300	52,550	53,824
First Ave. to El Camino Real	38,100	52,550	53,824
El Camino Real to Carmel Country Rd.	31,500	45,288	46,189
Carmel Country Rd. to Torrey Ridge Rd.	23,200	37,501	37,905
El Camino Real Road Segments			
Quarter Mile Dr. to Del Mar Heights Rd.	19,600	30,431	30,618
Del Mar Heights Rd. to Del Mar Highlands Town Ctr.	14,600	27,771	28,392
Del Mar Highlands Town Ctr. to Townsgate Dr.	19,900	27,055	27,583

NOTES:

* Includes additional 27,000 ADT in Pacific Highlands Ranch (PHR) Traffic Analysis Zones based on the Future Urbanizing Subarea III Traffic Study dated June 8, 1998. In addition, 11,000 ADT were added to Del Mar Highlands Town Center Traffic Analysis Zone

**Traffic volumes obtained from the I-5/SR-56 Interchange Traffic Study from the SANDAG Series 10 model prepared by LLG.



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