

TECHNICAL APPENDICES
PALOMAR COMMUNITY COLLEGE DISTRICT
SOUTH EDUCATION CENTER
San Diego, California
March 24, 2016

LLG Ref. 3-15-2464

APPENDICES

APPENDIX

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APPENDIX A
**INTERSECTION AND SEGMENT MANUAL COUNT SHEETS,
CALTRANS DATA**

Turn Count Summary

Accurate Video Counts Inc
info@accuratevideocounts.com
(619) 987-5136



Location: Rancho Bernardo Road @ Camino San Bernardo

Date of Count: Tuesday, May 19, 2015

Analysts: LV/CD

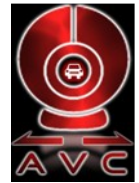
Weather: Sunny

AVC Proj No: 15-0351



Vehicular Count

Accurate Video Counts Inc
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(619) 987-5136



Location: Rancho Bernardo Road @ Camino San Bernardo

AM Period (7:00 AM - 9:00 AM)													
	Southbound			Westbound			Northbound			Eastbound			TOTAL
	Right	Thru	Left	Right	Thru	Left	Right	Thru	Left	Right	Thru	Left	
7:00 AM	0	0	0	0	112	106	35	0	10	31	162	0	456
7:15 AM	0	0	0	1	153	87	36	1	2	28	154	0	462
7:30 AM	0	0	1	0	155	105	56	0	6	48	180	0	551
7:45 AM	0	0	0	0	262	81	33	0	7	38	211	0	632
8:00 AM	0	0	1	0	204	105	35	0	11	30	254	0	640
8:15 AM	0	0	1	0	119	96	58	0	7	49	191	0	521
8:30 AM	0	0	2	1	107	118	47	0	12	54	214	0	555
8:45 AM	0	0	1	1	154	111	53	0	10	57	176	0	563
Total	0	0	6	3	1,266	809	353	1	65	335	1,542	0	4,380

AM Intersection Peak Hour : **7:45 AM - 8:45 AM**

Intersection PHF : **0.92**

	Southbound			Westbound			Northbound			Eastbound			TOTAL
	Right	Thru	Left	Right	Thru	Left	Right	Thru	Left	Right	Thru	Left	
Volume	0	0	4	1	692	400	173	0	37	171	870	0	2,348
PHF	#####	#####	0.50	0.25	0.66	0.85	0.75	#####	0.77	0.79	0.86	#####	0.92
Movement PHF		0.50			0.80			0.81			0.92		0.92

PM Period (4:00 PM - 6:00 PM)													
	Southbound			Westbound			Northbound			Eastbound			TOTAL
	Right	Thru	Left	Right	Thru	Left	Right	Thru	Left	Right	Thru	Left	
4:00 PM	0	0	2	0	174	42	101	0	34	33	170	0	556
4:15 PM	0	0	2	0	189	48	109	0	39	36	150	0	573
4:30 PM	0	0	1	0	133	99	50	0	12	32	229	0	556
4:45 PM	0	0	1	0	145	97	56	0	6	47	182	0	534
5:00 PM	0	0	1	0	151	104	38	0	11	42	290	0	637
5:15 PM	0	0	1	0	202	92	82	0	26	56	208	0	667
5:30 PM	0	0	1	0	139	98	63	0	15	64	248	0	628
5:45 PM	0	0	0	0	209	43	127	0	57	46	153	1	636
Total	0	0	9	0	1,342	623	626	0	200	356	1,630	1	4,787

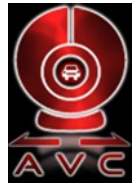
PM Intersection Peak Hour : **5:00 PM - 6:00 PM**

Intersection PHF : **0.96**

	Southbound			Westbound			Northbound			Eastbound			TOTAL
	Right	Thru	Left	Right	Thru	Left	Right	Thru	Left	Right	Thru	Left	
Volume	0	0	3	0	701	337	310	0	109	208	899	1	2568
PHF	#####	#####	0.75	#####	0.839	0.81	0.61	#####	0.478	0.813	0.775	0.25	0.96
Movement PHF		0.75			0.88			0.57			0.83		0.96

Turn Count Summary

Accurate Video Counts Inc
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(619) 987-5136



Location: Rancho Bernardo Road @ Via Del Campo

Date of Count: Tuesday, May 19, 2015

Analysts: LV/CD

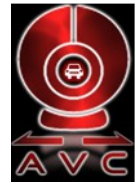
Weather: Sunny

AVC Proj No: 15-0351



Vehicular Count

Accurate Video Counts Inc
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(619) 987-5136



Location: Rancho Bernardo Road @ Via Del Campo

AM Period (7:00 AM - 9:00 AM)													
	Southbound			Westbound			Northbound			Eastbound			TOTAL
	Right	Thru	Left	Right	Thru	Left	Right	Thru	Left	Right	Thru	Left	
7:00 AM	0	1	2	0	236	114	4	1	9	43	157	0	567
7:15 AM	0	0	0	0	255	151	2	0	11	94	226	2	741
7:30 AM	0	0	0	0	275	145	3	0	10	46	194	1	674
7:45 AM	0	0	1	0	409	148	3	0	15	70	207	0	853
8:00 AM	0	0	0	0	269	152	9	0	23	92	231	1	777
8:15 AM	0	0	0	0	231	101	17	0	17	72	192	0	630
8:30 AM	0	0	0	0	225	112	6	0	16	64	199	1	623
8:45 AM	0	0	2	1	256	125	1	0	17	75	174	0	651
Total	0	1	5	1	2,156	1,048	45	1	118	556	1,580	5	5,516

AM Intersection Peak Hour : **7:15 AM - 8:15 AM**

Intersection PHF : **0.89**

	Southbound			Westbound			Northbound			Eastbound			TOTAL
	Right	Thru	Left	Right	Thru	Left	Right	Thru	Left	Right	Thru	Left	
Volume	0	0	1	0	1,208	596	17	0	59	302	858	4	3,045
PHF	#####	#####	0.25	#####	0.74	0.98	0.47	#####	0.64	0.80	0.93	0.50	0.89
Movement PHF		0.25			0.81			0.59			0.90		0.89

PM Period (4:00 PM - 6:00 PM)													
	Southbound			Westbound			Northbound			Eastbound			TOTAL
	Right	Thru	Left	Right	Thru	Left	Right	Thru	Left	Right	Thru	Left	
4:00 PM	0	0	0	0	199	9	83	1	31	25	260	1	609
4:15 PM	0	0	0	1	219	6	67	1	48	19	255	1	617
4:30 PM	0	1	0	0	211	3	103	0	57	20	273	1	669
4:45 PM	0	0	0	0	183	7	81	1	67	20	222	1	582
5:00 PM	0	0	0	0	214	4	112	0	92	10	348	4	784
5:15 PM	0	0	1	1	270	5	79	0	56	11	310	2	735
5:30 PM	0	0	0	0	181	4	88	0	69	15	306	0	663
5:45 PM	0	0	0	0	209	5	62	0	59	13	316	0	664
Total	0	1	1	2	1,686	43	675	3	479	133	2,290	10	5,323

PM Intersection Peak Hour : **5:00 PM - 6:00 PM**

Intersection PHF : **0.91**

	Southbound			Westbound			Northbound			Eastbound			TOTAL
	Right	Thru	Left	Right	Thru	Left	Right	Thru	Left	Right	Thru	Left	
Volume	0	0	1	1	874	18	341	0	276	49	1280	6	2846
PHF	#####	#####	0.25	0.25	0.809	0.9	0.761	#####	0.75	0.817	0.92	0.375	0.91
Movement PHF		0.25			0.81			0.76			0.92		0.91

Turn Count Summary

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Location: Rancho Bernardo Road @ Matinal Road

Date of Count: Tuesday, May 19, 2015

Analysts: LV/CD

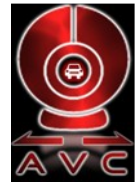
Weather: Sunny

AVC Proj No: 15-0351



Vehicular Count

Accurate Video Counts Inc
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(619) 987-5136



Location: Rancho Bernardo Road @ Matinal Road

AM Period (7:00 AM - 9:00 AM)													
	Southbound			Westbound			Northbound			Eastbound			TOTAL
	Right	Thru	Left	Right	Thru	Left	Right	Thru	Left	Right	Thru	Left	
7:00 AM	32	0	28	2	300	0	0	0	0	0	162	2	526
7:15 AM	34	0	20	2	357	0	0	0	0	0	192	10	615
7:30 AM	35	0	15	10	362	0	0	0	0	0	158	10	590
7:45 AM	33	0	17	2	497	0	0	0	0	0	181	9	739
8:00 AM	39	0	30	2	356	0	0	0	0	0	211	4	642
8:15 AM	32	0	12	10	277	0	0	0	0	0	170	11	512
8:30 AM	34	0	9	7	316	1	0	0	0	0	172	6	545
8:45 AM	38	0	7	10	339	1	0	0	0	0	167	7	569
Total	277	0	138	45	2,804	2	0	0	0	0	1,413	59	4,738

AM Intersection Peak Hour : **7:15 AM - 8:15 AM**

Intersection PHF : **0.87**

	Southbound			Westbound			Northbound			Eastbound			TOTAL
	Right	Thru	Left	Right	Thru	Left	Right	Thru	Left	Right	Thru	Left	
Volume	141	0	82	16	1,572	0	0	0	0	0	742	33	2,586
PHF	0.90	#####	0.68	0.40	0.79	#####	#####	#####	#####	#####	0.88	0.83	0.87
Movement PHF		0.81			0.80		#DIV/0!				0.90		0.87

PM Period (4:00 PM - 6:00 PM)													
	Southbound			Westbound			Northbound			Eastbound			TOTAL
	Right	Thru	Left	Right	Thru	Left	Right	Thru	Left	Right	Thru	Left	
4:00 PM	17	0	8	9	185	0	0	0	0	0	317	30	566
4:15 PM	36	0	11	7	223	1	0	0	0	0	290	9	577
4:30 PM	43	0	28	2	195	0	0	0	0	0	349	2	619
4:45 PM	37	0	17	3	172	0	0	0	0	0	262	11	502
5:00 PM	26	0	12	10	219	0	0	0	0	0	417	19	703
5:15 PM	18	0	8	8	233	0	0	0	0	0	340	28	635
5:30 PM	37	0	15	11	174	1	0	0	0	0	355	14	607
5:45 PM	24	0	5	16	183	0	0	0	0	0	321	48	597
Total	238	0	104	66	1,584	2	0	0	0	0	2,651	161	4,806

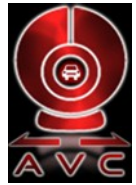
PM Intersection Peak Hour : **5:00 PM - 6:00 PM**

Intersection PHF : **0.90**

	Southbound			Westbound			Northbound			Eastbound			TOTAL
	Right	Thru	Left	Right	Thru	Left	Right	Thru	Left	Right	Thru	Left	
Volume	105	0	40	45	809	1	0	0	0	0	1433	109	2542
PHF	0.71	#####	0.667	0.703	0.868	0.25	#####	#####	#####	#####	0.859	0.568	0.90
Movement PHF		0.70			0.89		#DIV/0!				0.88		0.90

Turn Count Summary

Accurate Video Counts Inc
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(619) 987-5136



Location: Rancho Bernardo Road @ Olmeda Way

Date of Count: Tuesday, May 19, 2015

Analysts: LV/CD

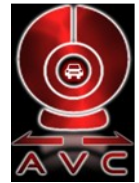
Weather: Sunny

AVC Proj No: 15-0351



Vehicular Count

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Location: Rancho Bernardo Road @ Olmeda Way

AM Period (7:00 AM - 9:00 AM)								
	Southbound		Westbound			Eastbound		TOTAL
	Right	Left	Right	Thru		Thru	Left	
7:00 AM	8	10	3	294		187	2	504
7:15 AM	1	5	3	358		210	2	579
7:30 AM	5	3	3	367		172	1	551
7:45 AM	5	4	1	494		197	1	702
8:00 AM	5	6	5	353		238	3	610
8:15 AM	1	5	6	286		180	2	480
8:30 AM	0	7	3	324		180	1	515
8:45 AM	3	5	2	347		173	1	531
Total	28	45	26	2,823		1,537	13	4,472

AM Intersection Peak Hour : **7:15 AM - 8:15 AM**

Intersection PHF : **0.87**

	Southbound		Westbound			Eastbound		TOTAL
	Right	Left	Right	Thru		Thru	Left	
Volume	16	18	12	1,572		817	7	2,442
PHF	0.80	0.75	0.60	0.80		0.86	0.58	0.87
Movement PHF	0.77		0.80			0.85		0.87

PM Period (4:00 PM - 6:00 PM)								
	Southbound		Westbound			Eastbound		TOTAL
	Right	Left	Right	Thru		Thru	Left	
4:00 PM	0	0	4	194		316	9	523
4:15 PM	3	3	4	228		289	12	539
4:30 PM	3	2	9	194		362	15	585
4:45 PM	1	1	5	174		264	15	460
5:00 PM	1	1	9	228		404	25	668
5:15 PM	3	2	4	238		329	19	595
5:30 PM	0	2	8	186		346	24	566
5:45 PM	2	0	11	197		321	5	536
Total	13	11	54	1,639		2,631	124	4,472

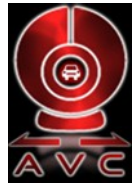
PM Intersection Peak Hour : **5:00 PM - 6:00 PM**

Intersection PHF : **0.89**

	Southbound		Westbound			Eastbound		TOTAL
	Right	Left	Right	Thru		Thru	Left	
Volume	6	5	32	849		1400	73	2365
PHF	0.50	0.625	0.727	0.892		0.866	0.73	0.89
Movement PHF	0.55		0.91			0.86		0.89

Turn Count Summary

Accurate Video Counts Inc
info@accuratevideocounts.com
(619) 987-5136



Location: Rancho Bernardo Road @ West Bernardo Drive

Date of Count: Tuesday, May 19, 2015

Analysts: LV/CD

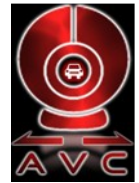
Weather: Sunny

AVC Proj No: 15-0351



Vehicular Count

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Location: Rancho Bernardo Road @ West Bernardo Drive

AM Period (7:00 AM - 9:00 AM)													
	Southbound			Westbound			Northbound			Eastbound			TOTAL
	Right	Thru	Left	Right	Thru	Left	Right	Thru	Left	Right	Thru	Left	
7:00 AM	29	72	182	30	294	147	47	3	12	17	141	6	980
7:15 AM	26	77	171	61	338	135	21	13	31	12	145	9	1,039
7:30 AM	49	62	157	69	360	108	29	19	25	16	165	13	1,072
7:45 AM	26	78	170	72	394	146	21	13	31	12	125	9	1,097
8:00 AM	32	82	155	63	339	134	25	20	26	16	155	9	1,056
8:15 AM	57	87	161	67	364	111	32	33	23	16	164	11	1,126
8:30 AM	28	88	165	71	342	143	23	21	30	12	95	9	1,027
8:45 AM	30	65	104	42	338	151	31	9	17	11	212	20	1,030
Total	277	611	1,265	475	2,769	1,075	229	131	195	112	1,202	86	8,427

AM Intersection Peak Hour : **7:30 AM - 8:30 AM**

Intersection PHF : **0.97**

	Southbound			Westbound			Northbound			Eastbound			TOTAL
	Right	Thru	Left	Right	Thru	Left	Right	Thru	Left	Right	Thru	Left	
Volume	164	309	643	271	1,457	499	107	85	105	60	609	42	4,351
PHF	0.72	0.89	0.95	0.94	0.92	0.85	0.84	0.64	0.85	0.94	0.92	0.81	0.97
Movement PHF		0.91			0.91			0.84			0.92		0.97

PM Period (4:00 PM - 6:00 PM)													
	Southbound			Westbound			Northbound			Eastbound			TOTAL
	Right	Thru	Left	Right	Thru	Left	Right	Thru	Left	Right	Thru	Left	
4:00 PM	13	19	82	100	173	42	151	74	24	7	327	38	1,050
4:15 PM	15	19	73	88	170	57	115	84	24	7	318	33	1,003
4:30 PM	13	10	64	102	173	55	141	79	34	12	342	42	1,067
4:45 PM	18	29	89	104	193	56	125	91	22	5	283	38	1,053
5:00 PM	18	15	86	112	195	37	118	79	23	4	401	35	1,123
5:15 PM	11	19	69	97	211	43	162	75	25	7	347	45	1,111
5:30 PM	16	20	90	112	213	32	118	86	27	3	317	37	1,071
5:45 PM	20	10	80	156	210	20	129	78	36	7	309	37	1,092
Total	124	141	633	871	1,538	342	1,059	646	215	52	2,644	305	8,570

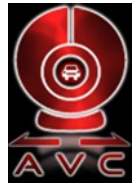
PM Intersection Peak Hour : **5:00 PM - 6:00 PM**

Intersection PHF : **0.98**

	Southbound			Westbound			Northbound			Eastbound			TOTAL
	Right	Thru	Left	Right	Thru	Left	Right	Thru	Left	Right	Thru	Left	
Volume	65	64	325	477	829	132	527	318	111	21	1374	154	4397
PHF	0.81	0.8	0.903	0.764	0.973	0.767	0.813	0.924	0.771	0.75	0.857	0.856	0.98
Movement PHF		0.90			0.93			0.91			0.88		0.98

Turn Count Summary

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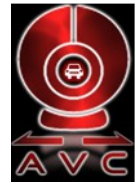


Location: Rancho Bernardo Road @ I-15 Southbound Ramps
Date of Count: Tuesday, May 19, 2015
Analysts: LV/CD
Weather: Sunny
AVC Proj No: 15-0351



Vehicular Count

Accurate Video Counts Inc
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(619) 987-5136



Location: Rancho Bernardo Road @ I-15 Southbound Ramps

AM Period (7:00 AM - 9:00 AM)													
	Southbound			Westbound			Northbound			Eastbound			TOTAL
	Right	Thru	Left	Right	Thru	Left	Right	Thru	Left	Right	Thru	Left	
7:00 AM	240	0	117	162	231	0	0	0	0	177	193	0	1,120
7:15 AM	223	0	97	113	311	0	0	0	0	174	163	0	1,081
7:30 AM	196	0	125	60	341	0	0	0	0	140	211	0	1,073
7:45 AM	287	0	175	67	325	0	0	0	0	137	179	0	1,170
8:00 AM	270	0	146	143	266	0	0	0	0	143	192	0	1,160
8:15 AM	228	0	180	152	314	0	0	0	0	143	214	0	1,231
8:30 AM	301	0	150	134	255	0	0	0	0	132	151	0	1,123
8:45 AM	221	0	165	113	310	0	0	0	0	142	205	0	1,156
Total	1,966	0	1,155	944	2,353	0	0	0	0	1,188	1,508	0	9,114

AM Intersection Peak Hour : **7:45 AM - 8:45 AM**

Intersection PHF : **0.95**

	Southbound			Westbound			Northbound			Eastbound			TOTAL
	Right	Thru	Left	Right	Thru	Left	Right	Thru	Left	Right	Thru	Left	
Volume	1,086	0	651	496	1,160	0	0	0	0	555	736	0	4,684
PHF	0.90	#####	0.90	0.82	0.89	#####	#####	#####	#####	0.97	0.86	#####	0.95
Movement PHF		0.94			0.89		#DIV/0!				0.90		0.95

PM Period (4:00 PM - 6:00 PM)													
	Southbound			Westbound			Northbound			Eastbound			TOTAL
	Right	Thru	Left	Right	Thru	Left	Right	Thru	Left	Right	Thru	Left	
4:00 PM	93	0	86	105	222	0	0	0	0	207	353	0	1,066
4:15 PM	94	0	110	174	221	0	0	0	0	206	300	0	1,105
4:30 PM	90	0	100	190	240	0	0	0	0	191	356	0	1,167
4:45 PM	103	0	109	120	250	0	0	0	0	171	326	0	1,079
5:00 PM	109	0	82	163	235	0	0	0	0	228	377	0	1,194
5:15 PM	71	0	118	86	280	0	0	0	0	185	393	0	1,133
5:30 PM	91	0	86	150	266	0	0	0	0	183	342	0	1,118
5:45 PM	95	0	94	82	291	0	0	0	0	169	349	0	1,080
Total	746	0	785	1,070	2,005	0	0	0	0	1,540	2,796	0	8,942

PM Intersection Peak Hour : **4:30 PM - 5:30 PM**

Intersection PHF : **0.96**

	Southbound			Westbound			Northbound			Eastbound			TOTAL
	Right	Thru	Left	Right	Thru	Left	Right	Thru	Left	Right	Thru	Left	
Volume	373	0	409	559	1005	0	0	0	0	775	1452	0	4573
PHF	0.86	#####	0.867	0.736	0.897	#####	#####	#####	#####	0.85	0.924	#####	0.96
Movement PHF		0.92			0.91		#DIV/0!				0.92		0.96

Turn Count Summary

Accurate Video Counts Inc
info@accuratevideocounts.com
(619) 987-5136



Location: Rancho Bernardo Road @ I-15 Northbound Ramps

Date of Count: Tuesday, May 19, 2015

Analysts: LV/CD

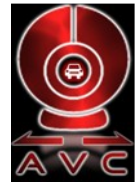
Weather: Sunny

AVC Proj No: 15-0351



Vehicular Count

Accurate Video Counts Inc
info@accuratevideocounts.com
(619) 987-5136



Location: Rancho Bernardo Road @ I-15 Northbound Ramps

AM Period (7:00 AM - 9:00 AM)													
	Southbound			Westbound			Northbound			Eastbound			TOTAL
	Right	Thru	Left	Right	Thru	Left	Right	Thru	Left	Right	Thru	Left	
7:00 AM	0	0	0	57	268	0	89	0	125	146	164	0	849
7:15 AM	0	0	0	56	265	0	83	0	159	100	160	0	823
7:30 AM	0	0	0	74	240	0	117	0	161	133	203	0	928
7:45 AM	0	0	0	73	267	0	90	0	125	173	181	0	909
8:00 AM	0	0	0	63	296	0	92	0	113	141	197	0	902
8:15 AM	0	0	0	61	272	0	97	0	194	215	179	0	1,018
8:30 AM	0	0	0	96	237	0	116	0	152	83	218	0	902
8:45 AM	0	0	0	65	266	0	128	0	157	140	230	0	986
Total	0	0	0	545	2,111	0	812	0	1,186	1,131	1,532	0	7,317

AM Intersection Peak Hour : **8:00 AM - 9:00 AM**

Intersection PHF : **0.94**

	Southbound			Westbound			Northbound			Eastbound			TOTAL
	Right	Thru	Left	Right	Thru	Left	Right	Thru	Left	Right	Thru	Left	
Volume	0	0	0	285	1,071	0	433	0	616	579	824	0	3,808
PHF	#####	#####	#####	0.74	0.90	#####	0.85	#####	0.79	0.67	0.90	#####	0.94
Movement PHF	#DIV/0!			0.94			0.90			0.89			0.94

PM Period (4:00 PM - 6:00 PM)													
	Southbound			Westbound			Northbound			Eastbound			TOTAL
	Right	Thru	Left	Right	Thru	Left	Right	Thru	Left	Right	Thru	Left	
4:00 PM	0	0	0	130	201	0	140	0	126	219	220	0	1,036
4:15 PM	0	0	0	123	254	0	105	0	141	206	204	0	1,033
4:30 PM	0	0	0	113	242	0	99	0	188	284	172	0	1,098
4:45 PM	0	0	0	125	230	0	119	0	140	217	218	0	1,049
5:00 PM	0	0	0	127	269	0	100	0	129	233	226	0	1,084
5:15 PM	0	0	0	122	216	0	114	0	150	277	234	0	1,113
5:30 PM	0	0	0	116	264	0	123	0	152	224	204	0	1,083
5:45 PM	0	0	0	87	212	0	154	0	161	225	218	0	1,057
Total	0	0	0	943	1,888	0	954	0	1,187	1,885	1,696	0	8,553

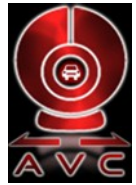
PM Intersection Peak Hour : **4:30 PM - 5:30 PM**

Intersection PHF : **0.98**

	Southbound			Westbound			Northbound			Eastbound			TOTAL
	Right	Thru	Left	Right	Thru	Left	Right	Thru	Left	Right	Thru	Left	
Volume	0	0	0	487	957	0	432	0	607	1011	850	0	4344
PHF	#####	#####	#####	0.959	0.889	#####	0.908	#####	0.807	0.89	0.908	#####	0.98
Movement PHF	#DIV/0!			0.91			0.91			0.91			0.98

Turn Count Summary

Accurate Video Counts Inc
info@accuratevideocounts.com
(619) 987-5136



Location: Rancho Bernardo Road @ Bernardo Center Drive

Date of Count: Tuesday, May 19, 2015

Analysts: LV/CD

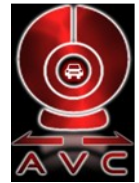
Weather: Sunny

AVC Proj No: 15-0351



Vehicular Count

Accurate Video Counts Inc
info@accuratevideocounts.com
(619) 987-5136



Location: Rancho Bernardo Road @ Bernardo Center Drive

AM Period (7:00 AM - 9:00 AM)													
	Southbound			Westbound			Northbound			Eastbound			TOTAL
	Right	Thru	Left	Right	Thru	Left	Right	Thru	Left	Right	Thru	Left	
7:00 AM	29	103	26	14	181	24	16	26	30	75	130	29	683
7:15 AM	25	73	25	18	233	30	14	45	60	63	121	34	741
7:30 AM	28	75	27	21	212	30	17	55	57	66	181	49	818
7:45 AM	33	95	26	30	222	51	24	40	66	80	142	44	853
8:00 AM	28	90	40	2	181	29	21	37	51	85	128	66	758
8:15 AM	23	54	37	20	185	43	30	72	85	64	137	76	826
8:30 AM	28	41	58	31	236	35	23	48	56	75	146	89	866
8:45 AM	29	62	50	32	202	56	35	31	64	75	171	88	895
Total	223	593	289	168	1,652	298	180	354	469	583	1,156	475	6,440

AM Intersection Peak Hour : **8:00 AM - 9:00 AM**

Intersection PHF : **0.93**

	Southbound			Westbound			Northbound			Eastbound			TOTAL
	Right	Thru	Left	Right	Thru	Left	Right	Thru	Left	Right	Thru	Left	
Volume	108	247	185	85	804	163	109	188	256	299	582	319	3,345
PHF	0.93	0.69	0.80	0.66	0.85	0.73	0.78	0.65	0.75	0.88	0.85	0.90	0.93
Movement PHF	0.85			0.87			0.74			0.90			0.93

PM Period (4:00 PM - 6:00 PM)													
	Southbound			Westbound			Northbound			Eastbound			TOTAL
	Right	Thru	Left	Right	Thru	Left	Right	Thru	Left	Right	Thru	Left	
4:00 PM	18	79	44	28	164	21	55	111	106	79	174	66	945
4:15 PM	17	72	40	36	151	31	51	100	109	64	146	57	874
4:30 PM	28	73	44	43	166	44	71	122	98	71	157	69	986
4:45 PM	34	52	45	38	127	27	70	132	117	81	163	54	940
5:00 PM	20	55	37	29	99	24	43	95	102	51	163	66	784
5:15 PM	25	62	47	47	134	23	62	124	120	65	164	89	962
5:30 PM	24	64	33	53	136	26	78	96	110	55	158	79	912
5:45 PM	19	64	51	24	92	21	57	99	83	58	211	71	850
Total	185	521	341	298	1,069	217	487	879	845	524	1,336	551	7,253

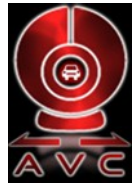
PM Intersection Peak Hour : **4:00 PM - 5:00 PM**

Intersection PHF : **0.95**

	Southbound			Westbound			Northbound			Eastbound			TOTAL
	Right	Thru	Left	Right	Thru	Left	Right	Thru	Left	Right	Thru	Left	
Volume	97	276	173	145	608	123	247	465	430	295	640	246	3745
PHF	0.71	0.873	0.961	0.843	0.916	0.699	0.87	0.881	0.919	0.91	0.92	0.891	0.95
Movement PHF	0.94			0.87			0.89			0.93			0.95

Turn Count Summary

Accurate Video Counts Inc
info@accuratevideocounts.com
(619) 987-5136



Location: Duenda Road @ West Bernardo Drive

Date of Count: Tuesday, May 19, 2015

Analysts: LV/CD

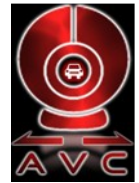
Weather: Sunny

AVC Proj No: 15-0351



Vehicular Count

Accurate Video Counts Inc
info@accuratevideocounts.com
(619) 987-5136



Location: Duenda Road @ West Bernardo Drive

AM Period (7:00 AM - 9:00 AM)													
	Southbound			Westbound			Northbound			Eastbound			TOTAL
	Right	Thru	Left	Right	Thru	Left	Right	Thru	Left	Right	Thru	Left	
7:00 AM	0	41	21	8	7	18	21	21	6	41	64	6	254
7:15 AM	1	49	23	11	11	18	12	19	5	26	21	4	200
7:30 AM	8	66	24	10	23	43	21	21	10	33	26	2	287
7:45 AM	1	59	29	13	13	21	17	27	6	35	38	5	264
8:00 AM	1	49	21	12	7	22	16	33	8	38	47	8	262
8:15 AM	0	44	23	5	8	16	20	19	6	42	59	5	247
8:30 AM	1	47	23	11	10	16	12	19	5	25	18	3	190
8:45 AM	1	38	16	7	6	14	11	23	6	24	17	6	169
Total	13	393	180	77	85	168	130	182	52	264	290	39	1,873

AM Intersection Peak Hour : **7:30 AM - 8:30 AM**

Intersection PHF : **0.92**

	Southbound			Westbound			Northbound			Eastbound			TOTAL
	Right	Thru	Left	Right	Thru	Left	Right	Thru	Left	Right	Thru	Left	
Volume	10	218	97	40	51	102	74	100	30	148	170	20	1,060
PHF	0.31	0.83	0.84	0.77	0.55	0.59	0.88	0.76	0.75	0.88	0.72	0.63	0.92
Movement PHF		0.83			0.63			0.89			0.80		0.92

PM Period (4:00 PM - 6:00 PM)													
	Southbound			Westbound			Northbound			Eastbound			TOTAL
	Right	Thru	Left	Right	Thru	Left	Right	Thru	Left	Right	Thru	Left	
4:00 PM	6	16	28	32	17	16	26	78	15	10	19	4	267
4:15 PM	5	63	32	20	14	25	17	30	8	37	29	6	286
4:30 PM	5	68	20	10	22	39	21	17	7	27	26	4	266
4:45 PM	1	48	25	11	12	18	12	27	6	31	32	3	226
5:00 PM	0	44	23	5	8	16	20	19	6	42	59	5	247
5:15 PM	1	66	31	16	11	23	23	26	9	37	30	5	278
5:30 PM	3	66	31	13	15	23	12	35	7	37	23	8	273
5:45 PM	8	25	21	29	36	11	35	67	44	14	19	3	312
Total	29	396	211	136	135	171	166	299	102	235	237	38	2,155

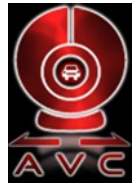
PM Intersection Peak Hour : **5:00 PM - 6:00 PM**

Intersection PHF : **0.89**

	Southbound			Westbound			Northbound			Eastbound			TOTAL
	Right	Thru	Left	Right	Thru	Left	Right	Thru	Left	Right	Thru	Left	
Volume	12	201	106	63	70	73	90	147	66	130	131	21	1110
PHF	0.38	0.761	0.855	0.543	0.486	0.793	0.643	0.549	0.375	0.774	0.555	0.656	0.89
Movement PHF		0.80			0.68			0.52			0.67		0.89

Turn Count Summary

Accurate Video Counts Inc
info@accuratevideocounts.com
(619) 987-5136



Location: West Bernardo Drive @ Via Del Campo

Date of Count: Tuesday, May 19, 2015

Analysts: LV/CD

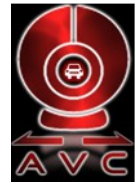
Weather: Sunny

AVC Proj No: 15-0351



Vehicular Count

Accurate Video Counts Inc
info@accuratevideocounts.com
(619) 987-5136



Location: West Bernardo Drive @ Via Del Campo

AM Period (7:00 AM - 9:00 AM)								
	Southbound		Westbound			Eastbound		TOTAL
	Right	Left	Right	Thru		Thru	Left	
7:00 AM	7	7	18	50		71	47	200
7:15 AM	7	13	18	69		113	50	270
7:30 AM	9	9	32	72		93	74	289
7:45 AM	9	12	39	97		157	91	405
8:00 AM	13	14	44	61		131	112	375
8:15 AM	14	12	35	41		125	88	315
8:30 AM	5	13	43	46		97	76	280
8:45 AM	6	20	50	54		102	84	316
Total	70	100	279	490		889	622	2,450

AM Intersection Peak Hour : **7:30 AM - 8:30 AM**

Intersection PHF : **0.85**

	Southbound		Westbound			Eastbound		TOTAL
	Right	Left	Right	Thru		Thru	Left	
Volume	45	47	150	271		506	365	1,384
PHF	0.80	0.84	0.85	0.70		0.81	0.81	0.85
Movement PHF	0.85		0.77			0.88		0.85

PM Period (4:00 PM - 6:00 PM)								
	Southbound		Westbound			Eastbound		TOTAL
	Right	Left	Right	Thru		Thru	Left	
4:00 PM	56	28	10	78		81	6	259
4:15 PM	65	29	9	75		103	10	291
4:30 PM	66	38	9	89		80	10	292
4:45 PM	68	27	10	102		103	8	318
5:00 PM	113	52	6	132		89	10	402
5:15 PM	98	29	8	90		105	10	340
5:30 PM	67	40	14	102		98	4	325
5:45 PM	55	36	6	71		61	7	236
Total	588	279	72	739		720	65	2,463

PM Intersection Peak Hour : **4:45 PM - 5:45 PM**

Intersection PHF : **0.86**

	Southbound		Westbound			Eastbound		TOTAL
	Right	Left	Right	Thru		Thru	Left	
Volume	346	148	38	426		395	32	1385
PHF	0.77	0.712	0.679	0.807		0.94	0.8	0.86
Movement PHF	0.75		0.84			0.93		0.86

Turn Count Summary

Accurate Video Counts Inc
info@accuratevideocounts.com
(619) 987-5136



Location: West Bernardo Drive @ Bernardo Center Drive

Date of Count: Tuesday, May 19, 2015

Analysts: LV/CD

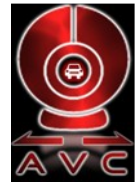
Weather: Sunny

AVC Proj No: 15-0351



Vehicular Count

Accurate Video Counts Inc
info@accuratevideocounts.com
(619) 987-5136



Location: West Bernardo Drive @ Bernardo Center Drive

AM Period (7:00 AM - 9:00 AM)								
	Southbound			Northbound		Eastbound		TOTAL
	Right	Thru		Thru	Left	Right	Left	
7:00 AM	97	132		89	112	42	12	484
7:15 AM	130	97		89	103	47	10	476
7:30 AM	150	111		128	132	46	12	579
7:45 AM	134	113		94	113	53	15	522
8:00 AM	109	147		109	122	47	14	548
8:15 AM	154	111		126	145	42	12	590
8:30 AM	195	133		108	119	60	11	626
8:45 AM	224	93		107	215	37	18	694
Total	1,193	937		850	1,061	374	104	4,519

AM Intersection Peak Hour : **8:00 AM - 9:00 AM**

Intersection PHF : **0.89**

	Southbound			Northbound		Eastbound		TOTAL
	Right	Thru		Thru	Left	Right	Left	
Volume	682	484		450	601	186	55	2,458
PHF	0.76	0.82		0.89	0.70	0.78	0.76	0.89
Movement PHF		0.89		0.82		0.85		0.89

PM Period (4:00 PM - 6:00 PM)								
	Southbound			Northbound		Eastbound		TOTAL
	Right	Thru		Thru	Left	Right	Left	
4:00 PM	19	75		124	50	115	141	524
4:15 PM	97	135		93	112	66	73	576
4:30 PM	95	115		81	92	119	90	592
4:45 PM	129	103		88	108	96	42	566
5:00 PM	97	112		85	92	112	66	564
5:15 PM	110	93		84	142	96	54	579
5:30 PM	126	67		97	113	95	57	555
5:45 PM	16	97		119	61	166	152	611
Total	689	797		771	770	865	675	4,567

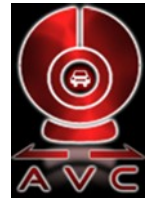
PM Intersection Peak Hour : **5:00 PM - 6:00 PM**

Intersection PHF : **0.94**

	Southbound			Northbound		Eastbound		TOTAL
	Right	Thru		Thru	Left	Right	Left	
Volume	349	369		385	408	469	329	2309
PHF	0.69	0.824		0.809	0.718	0.706	0.541	0.94
Movement PHF		0.86		0.88		0.63		0.94

24 Hour Segment Count

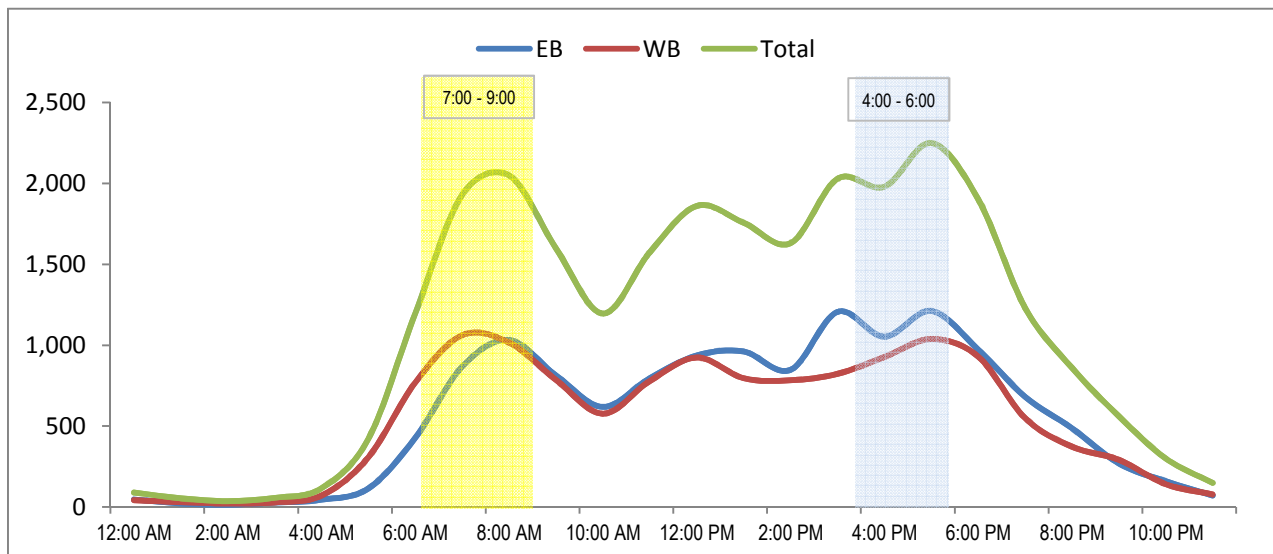
Accurate Video Counts Inc
info@accuratevideocounts.com
(619) 987-5136



Location: 1.Rancho Bernardo Road, Camino San Bernardo to Via Del Campo
Orientation: East-West
Date of Count: Tuesday, May 19, 2015
Analysts: DASH
Weather: Sunny
AVC Proj. No: 15-0351

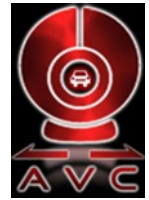
24 Hour Segment Volume					26,836				
Time	Hourly Volume			Time	Hourly Volume				
	EB	WB	Total		EB	WB	Total		
12:00 AM - 1:00 AM	47	43	90	12:00 PM - 1:00 PM	937	924	1,861		
1:00 AM - 2:00 AM	23	31	54	1:00 PM - 2:00 PM	961	796	1,757		
2:00 AM - 3:00 AM	14	22	36	2:00 PM - 3:00 PM	848	783	1,631		
3:00 AM - 4:00 AM	28	29	57	3:00 PM - 4:00 PM	1,206	823	2,029		
4:00 AM - 5:00 AM	45	71	116	4:00 PM - 5:00 PM	1,053	927	1,980		
5:00 AM - 6:00 AM	115	308	423	5:00 PM - 6:00 PM	1,212	1,038	2,250		
6:00 AM - 7:00 AM	428	770	1,198	6:00 PM - 7:00 PM	973	930	1,903		
7:00 AM - 8:00 AM	868	1,062	1,930	7:00 PM - 8:00 PM	682	550	1,232		
8:00 AM - 9:00 AM	1,033	1,016	2,049	8:00 PM - 9:00 PM	487	373	860		
9:00 AM - 10:00 AM	813	786	1,599	9:00 PM - 10:00 PM	269	292	561		
10:00 AM - 11:00 AM	619	577	1,196	10:00 PM - 11:00 PM	159	141	300		
11:00 AM - 12:00 PM	796	779	1,575	11:00 PM - 12:00 AM	71	78	149		
Total	4,829	5,494	10,323	Total	8,858	7,655	16,513		

24-Hour EB Volume 13,687 **24-Hour WB Volume 13,149**



24 Hour Segment Count

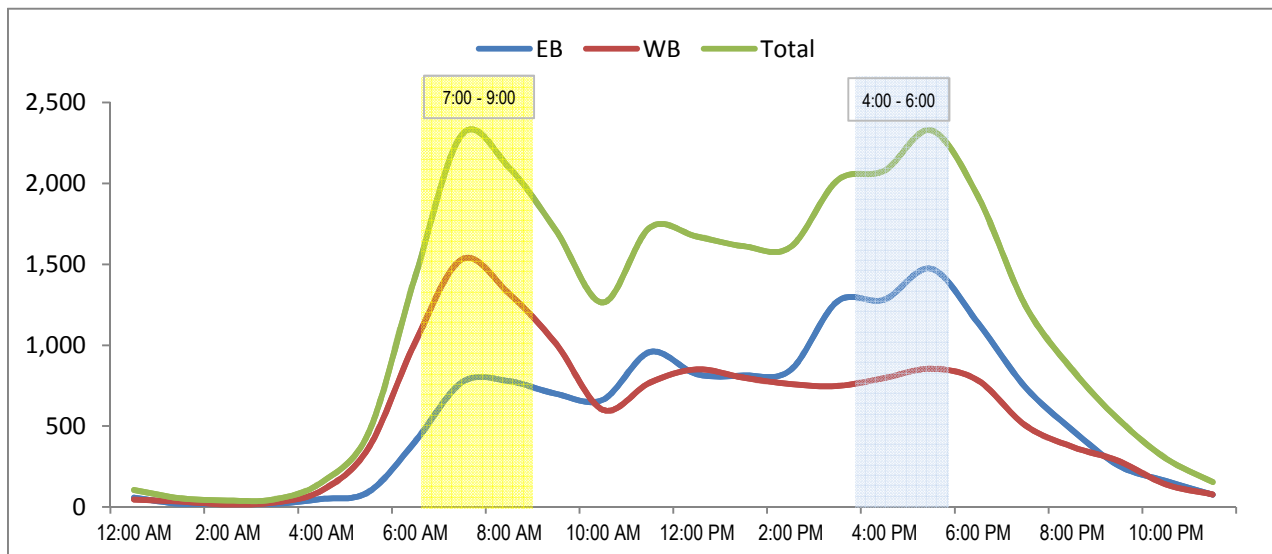
Accurate Video Counts Inc
info@accuratevideocounts.com
(619) 987-5136



Location: 2.Rancho Bernardo Road, Via Del Campo to Olmeda Way
Orientation: East-West
Date of Count: Tuesday, May 19, 2015
Analysts: DASH
Weather: Sunny
AVC Proj. No: 15-0351

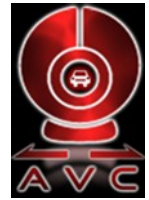
24 Hour Segment Volume					27,713				
Time	Hourly Volume			Time	Hourly Volume				
	EB	WB	Total		EB	WB	Total		
12:00 AM - 1:00 AM	58	47	105	12:00 PM - 1:00 PM	821	851	1,672		
1:00 AM - 2:00 AM	20	34	54	1:00 PM - 2:00 PM	813	799	1,612		
2:00 AM - 3:00 AM	24	16	40	2:00 PM - 3:00 PM	847	760	1,607		
3:00 AM - 4:00 AM	20	28	48	3:00 PM - 4:00 PM	1,271	748	2,019		
4:00 AM - 5:00 AM	50	102	152	4:00 PM - 5:00 PM	1,282	797	2,079		
5:00 AM - 6:00 AM	93	364	457	5:00 PM - 6:00 PM	1,473	855	2,328		
6:00 AM - 7:00 AM	406	1,021	1,427	6:00 PM - 7:00 PM	1,136	782	1,918		
7:00 AM - 8:00 AM	772	1,532	2,304	7:00 PM - 8:00 PM	743	506	1,249		
8:00 AM - 9:00 AM	778	1,319	2,097	8:00 PM - 9:00 PM	478	373	851		
9:00 AM - 10:00 AM	700	1,009	1,709	9:00 PM - 10:00 PM	255	284	539		
10:00 AM - 11:00 AM	663	601	1,264	10:00 PM - 11:00 PM	161	140	301		
11:00 AM - 12:00 PM	958	769	1,727	11:00 PM - 12:00 AM	76	78	154		
Total	4,542	6,842	11,384	Total	9,356	6,973	16,329		

24-Hour EB Volume 13,898 **24-Hour WB Volume 13,815**



24 Hour Segment Count

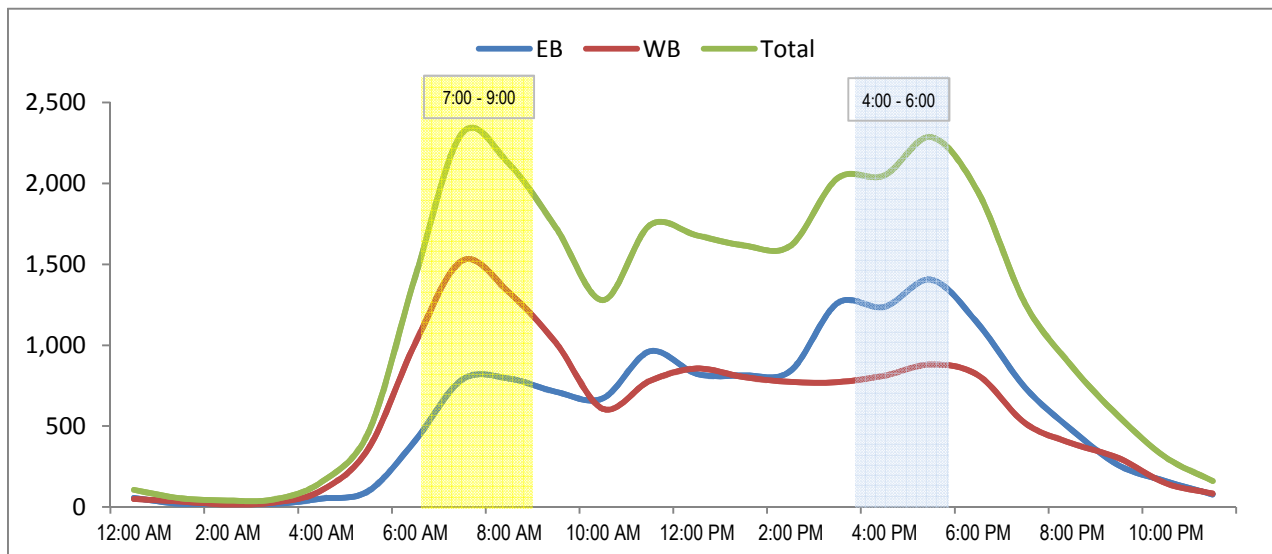
Accurate Video Counts Inc
info@accuratevideocounts.com
(619) 987-5136



Location: 3.Rancho Bernardo Road, Olmeda Way to West Bernardo Drive
Orientation: East-West
Date of Count: Tuesday, May 19, 2015
Analysts: DASH
Weather: Sunny
AVC Proj. No: 15-0351

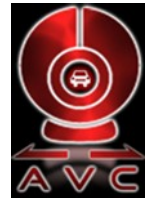
24 Hour Segment Volume					27,846				
Time	Hourly Volume			Time	Hourly Volume				
	EB	WB	Total		EB	WB	Total		
12:00 AM - 1:00 AM	57	49	106	12:00 PM - 1:00 PM	823	856	1,679		
1:00 AM - 2:00 AM	20	34	54	1:00 PM - 2:00 PM	814	803	1,617		
2:00 AM - 3:00 AM	24	16	40	2:00 PM - 3:00 PM	842	773	1,615		
3:00 AM - 4:00 AM	20	28	48	3:00 PM - 4:00 PM	1,260	772	2,032		
4:00 AM - 5:00 AM	52	103	155	4:00 PM - 5:00 PM	1,237	812	2,049		
5:00 AM - 6:00 AM	99	362	461	5:00 PM - 6:00 PM	1,405	881	2,286		
6:00 AM - 7:00 AM	412	1,014	1,426	6:00 PM - 7:00 PM	1,132	814	1,946		
7:00 AM - 8:00 AM	788	1,523	2,311	7:00 PM - 8:00 PM	739	519	1,258		
8:00 AM - 9:00 AM	794	1,326	2,120	8:00 PM - 9:00 PM	476	393	869		
9:00 AM - 10:00 AM	712	1,014	1,726	9:00 PM - 10:00 PM	257	302	559		
10:00 AM - 11:00 AM	672	607	1,279	10:00 PM - 11:00 PM	160	147	307		
11:00 AM - 12:00 PM	962	780	1,742	11:00 PM - 12:00 AM	78	83	161		
Total	4,612	6,856	11,468	Total	9,223	7,155	16,378		

24-Hour EB Volume 13,835 **24-Hour WB Volume 14,011**



24 Hour Segment Count

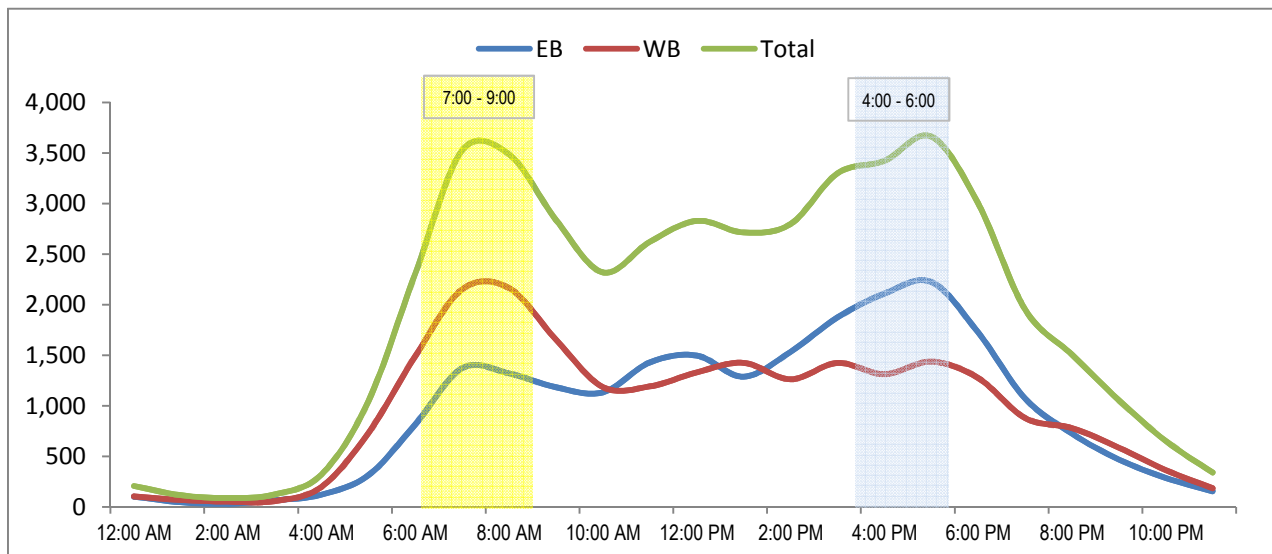
Accurate Video Counts Inc
info@accuratevideocounts.com
(619) 987-5136



Location: 4.Rancho Bernardo Road, West Bernardo Drive to the I-15 Southbound Ramps
Orientation: East-West
Date of Count: Tuesday, May 19, 2015
Analysts: DASH
Weather: Sunny
AVC Proj. No: 15-0351

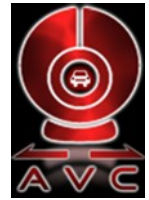
24 Hour Segment Volume					46,260			
Time	Hourly Volume			Time	Hourly Volume			
	EB	WB	Total		EB	WB	Total	
12:00 AM - 1:00 AM	103	105	208	12:00 PM - 1:00 PM	1,498	1,332	2,830	
1:00 AM - 2:00 AM	47	70	117	1:00 PM - 2:00 PM	1,289	1,426	2,715	
2:00 AM - 3:00 AM	34	54	88	2:00 PM - 3:00 PM	1,535	1,263	2,798	
3:00 AM - 4:00 AM	66	59	125	3:00 PM - 4:00 PM	1,875	1,425	3,300	
4:00 AM - 5:00 AM	123	200	323	4:00 PM - 5:00 PM	2,110	1,313	3,423	
5:00 AM - 6:00 AM	315	732	1,047	5:00 PM - 6:00 PM	2,226	1,438	3,664	
6:00 AM - 7:00 AM	818	1,493	2,311	6:00 PM - 7:00 PM	1,726	1,276	3,002	
7:00 AM - 8:00 AM	1,374	2,154	3,528	7:00 PM - 8:00 PM	1,074	880	1,954	
8:00 AM - 9:00 AM	1,322	2,165	3,487	8:00 PM - 9:00 PM	726	781	1,507	
9:00 AM - 10:00 AM	1,184	1,655	2,839	9:00 PM - 10:00 PM	470	587	1,057	
10:00 AM - 11:00 AM	1,134	1,186	2,320	10:00 PM - 11:00 PM	288	365	653	
11:00 AM - 12:00 PM	1,430	1,193	2,623	11:00 PM - 12:00 AM	156	185	341	
Total	7,950	11,066	19,016	Total	14,973	12,271	27,244	

24-Hour EB Volume 22,923 **24-Hour WB Volume 23,337**



24 Hour Segment Count

Accurate Video Counts Inc
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(619) 987-5136



Location: 5.Rancho Bernardo Road, I-15 Northbound Ramps to Bernardo Center Drive

Orientation: East-West

Date of Count: Tuesday, May 19, 2015

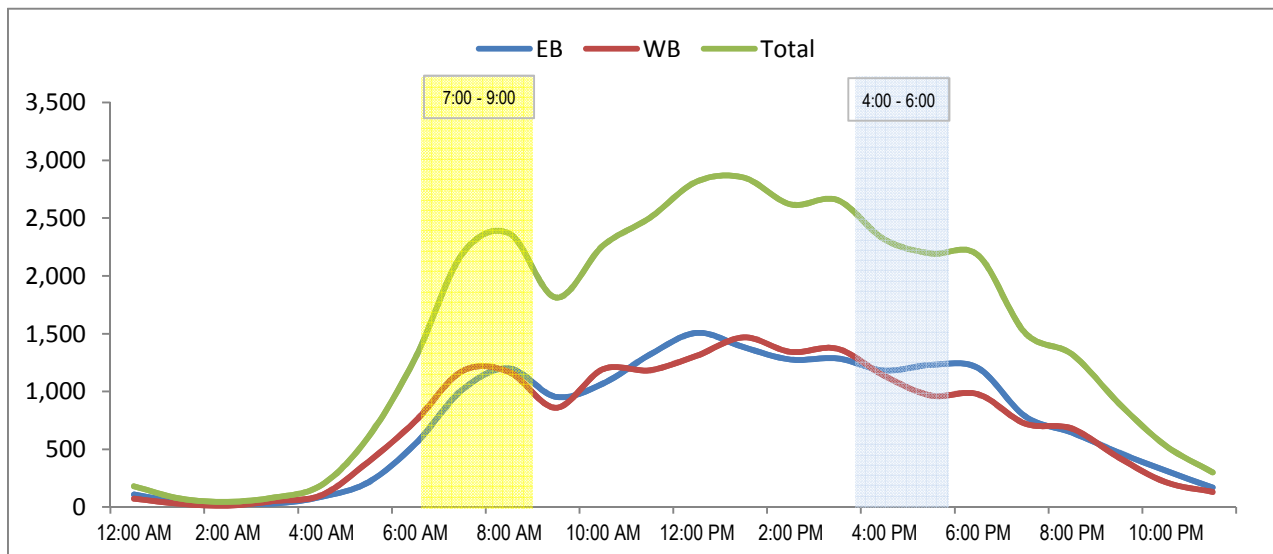
Analysts: DASH

Weather: Sunny

AVC Proj. No: 15-0351

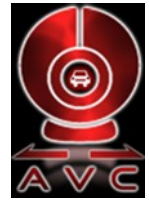
24 Hour Segment Volume					35,789			
Time	Hourly Volume			Time	Hourly Volume			
	EB	WB	Total		EB	WB	Total	
12:00 AM - 1:00 AM	108	72	180	12:00 PM - 1:00 PM	1,507	1,309	2,816	
1:00 AM - 2:00 AM	44	28	72	1:00 PM - 2:00 PM	1,383	1,468	2,851	
2:00 AM - 3:00 AM	33	13	46	2:00 PM - 3:00 PM	1,276	1,342	2,618	
3:00 AM - 4:00 AM	31	52	83	3:00 PM - 4:00 PM	1,286	1,370	2,656	
4:00 AM - 5:00 AM	88	103	191	4:00 PM - 5:00 PM	1,181	1,135	2,316	
5:00 AM - 6:00 AM	215	392	607	5:00 PM - 6:00 PM	1,230	964	2,194	
6:00 AM - 7:00 AM	547	743	1,290	6:00 PM - 7:00 PM	1,202	976	2,178	
7:00 AM - 8:00 AM	1,014	1,176	2,190	7:00 PM - 8:00 PM	786	722	1,508	
8:00 AM - 9:00 AM	1,200	1,168	2,368	8:00 PM - 9:00 PM	643	679	1,322	
9:00 AM - 10:00 AM	953	859	1,812	9:00 PM - 10:00 PM	470	427	897	
10:00 AM - 11:00 AM	1,068	1,193	2,261	10:00 PM - 11:00 PM	315	215	530	
11:00 AM - 12:00 PM	1,319	1,184	2,503	11:00 PM - 12:00 AM	169	131	300	
Total	6,620	6,983	13,603	Total	11,448	10,738	22,186	

24-Hour EB Volume 18,068 **24-Hour WB Volume 17,721**



24 Hour Segment Count

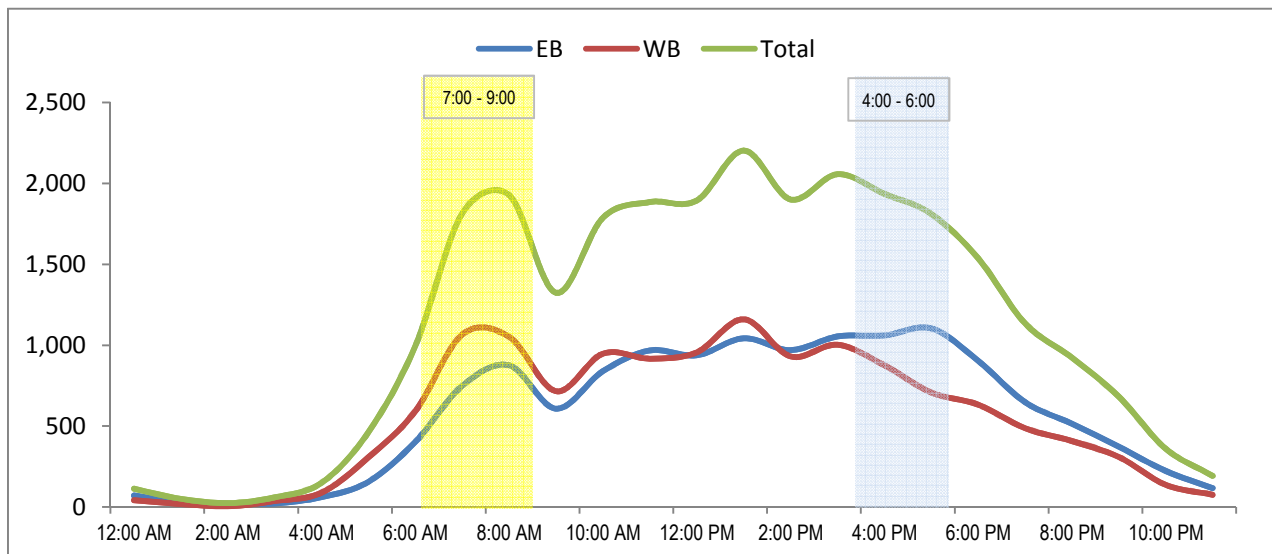
Accurate Video Counts Inc
info@accuratevideocounts.com
(619) 987-5136



Location: 6.Rancho Bernardo Road, Bernardo Center Drive to Bernardo Oaks Drive
Orientation: East-West
Date of Count: Tuesday, May 19, 2015
Analysts: DASH
Weather: Sunny
AVC Proj. No: 15-0351

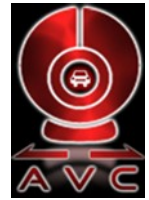
24 Hour Segment Volume					27,230				
Time	Hourly Volume			Time	Hourly Volume				
	EB	WB	Total		EB	WB	Total		
12:00 AM - 1:00 AM	71	42	113	12:00 PM - 1:00 PM	938	956	1,894		
1:00 AM - 2:00 AM	32	19	51	1:00 PM - 2:00 PM	1,043	1,160	2,203		
2:00 AM - 3:00 AM	20	4	24	2:00 PM - 3:00 PM	970	931	1,901		
3:00 AM - 4:00 AM	23	37	60	3:00 PM - 4:00 PM	1,054	1,003	2,057		
4:00 AM - 5:00 AM	61	89	150	4:00 PM - 5:00 PM	1,060	876	1,936		
5:00 AM - 6:00 AM	156	307	463	5:00 PM - 6:00 PM	1,104	708	1,812		
6:00 AM - 7:00 AM	403	593	996	6:00 PM - 7:00 PM	904	633	1,537		
7:00 AM - 8:00 AM	749	1,066	1,815	7:00 PM - 8:00 PM	648	487	1,135		
8:00 AM - 9:00 AM	876	1,052	1,928	8:00 PM - 9:00 PM	515	408	923		
9:00 AM - 10:00 AM	608	716	1,324	9:00 PM - 10:00 PM	373	309	682		
10:00 AM - 11:00 AM	840	948	1,788	10:00 PM - 11:00 PM	223	137	360		
11:00 AM - 12:00 PM	968	917	1885	11:00 PM - 12:00 AM	117	76	193		
Total	4,807	5,790	10,597	Total	8,949	7,684	16,633		

24-Hour EB Volume 13,756 **24-Hour WB Volume 13,474**



24 Hour Segment Count

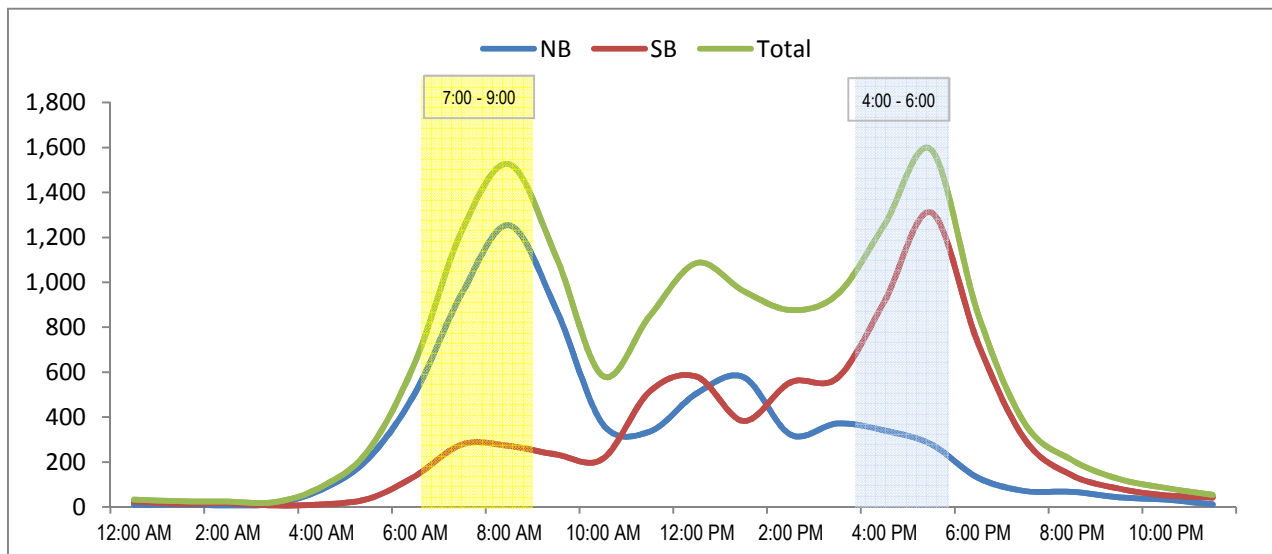
Accurate Video Counts Inc
info@accuratevideocounts.com
(619) 987-5136



Location: 7. W. Bernardo Dr, btwn Via Frontera and Technology Dr
Orientation: North-South
Date of Count: Tuesday, June 09, 2015
Analysts: DASH
Weather: Sunny
AVC Proj. No: 15-0364

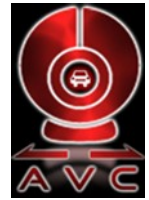
24 Hour Segment Volume					14,822				
Time	Hourly Volume			Time	Hourly Volume				
	NB	SB	Total		NB	SB	Total		
12:00 AM - 1:00 AM	9	24	33	12:00 PM - 1:00 PM	506	580	1,086		
1:00 AM - 2:00 AM	11	15	26	1:00 PM - 2:00 PM	578	383	961		
2:00 AM - 3:00 AM	7	17	24	2:00 PM - 3:00 PM	322	555	877		
3:00 AM - 4:00 AM	15	7	22	3:00 PM - 4:00 PM	372	575	947		
4:00 AM - 5:00 AM	78	12	90	4:00 PM - 5:00 PM	341	915	1,256		
5:00 AM - 6:00 AM	216	37	253	5:00 PM - 6:00 PM	279	1,311	1,590		
6:00 AM - 7:00 AM	510	138	648	6:00 PM - 7:00 PM	130	728	858		
7:00 AM - 8:00 AM	954	279	1,233	7:00 PM - 8:00 PM	71	299	370		
8:00 AM - 9:00 AM	1,254	272	1,526	8:00 PM - 9:00 PM	68	141	209		
9:00 AM - 10:00 AM	881	234	1,115	9:00 PM - 10:00 PM	43	82	125		
10:00 AM - 11:00 AM	368	215	583	10:00 PM - 11:00 PM	33	52	85		
11:00 AM - 12:00 PM	336	515	851	11:00 PM - 12:00 AM	12	42	54		
Total	4,639	1,765	6,404	Total	2,755	5,663	8,418		

24-Hour NB Volume 7,394 **24-Hour SB Volume 7,428**



24 Hour Segment Count

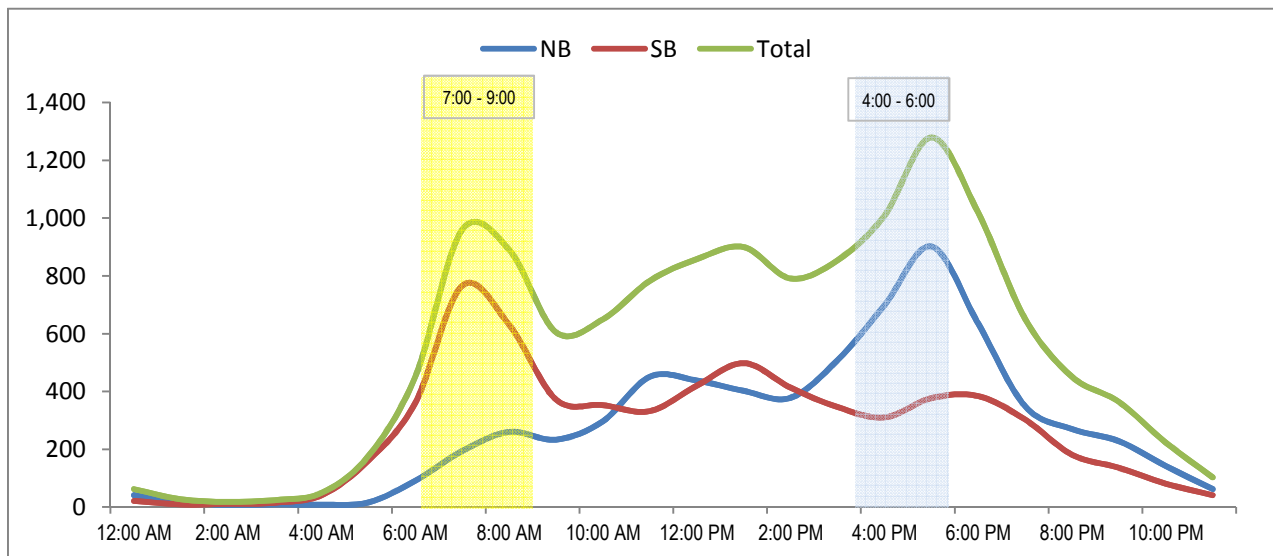
Accurate Video Counts Inc
info@accuratevideocounts.com
(619) 987-5136



Location: 8. W. Bernardo Dr: between Matinal Rd & W. Rancho Bernardo Dr
Orientation: North-South
Date of Count: Tuesday, June 09, 2015
Analysts: DASH
Weather: Sunny
AVC Proj. No: 15-0364

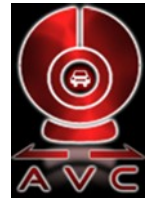
24 Hour Segment Volume					13,200			
Time	Hourly Volume			Time	Hourly Volume			
	NB	SB	Total		NB	SB	Total	
12:00 AM - 1:00 AM	41	21	62	12:00 PM - 1:00 PM	438	420	858	
1:00 AM - 2:00 AM	18	9	27	1:00 PM - 2:00 PM	402	498	900	
2:00 AM - 3:00 AM	7	11	18	2:00 PM - 3:00 PM	378	413	791	
3:00 AM - 4:00 AM	9	15	24	3:00 PM - 4:00 PM	508	346	854	
4:00 AM - 5:00 AM	8	41	49	4:00 PM - 5:00 PM	698	310	1,008	
5:00 AM - 6:00 AM	16	161	177	5:00 PM - 6:00 PM	902	377	1,279	
6:00 AM - 7:00 AM	91	361	452	6:00 PM - 7:00 PM	635	384	1,019	
7:00 AM - 8:00 AM	194	766	960	7:00 PM - 8:00 PM	349	303	652	
8:00 AM - 9:00 AM	260	631	891	8:00 PM - 9:00 PM	270	181	451	
9:00 AM - 10:00 AM	233	372	605	9:00 PM - 10:00 PM	228	136	364	
10:00 AM - 11:00 AM	297	353	650	10:00 PM - 11:00 PM	142	81	223	
11:00 AM - 12:00 PM	451	332	783	11:00 PM - 12:00 AM	62	41	103	
Total	1,625	3,073	4,698	Total	5,012	3,490	8,502	

24-Hour NB Volume 6,637 **24-Hour SB Volume 6,563**



24 Hour Segment Count

Accurate Video Counts Inc
info@accuratevideocounts.com
(619) 987-5136



Location: 9. Via Del Campo: between Via del Campo Ct & Via Esprillo

Orientation: North-South

Date of Count: Tuesday, June 09, 2015

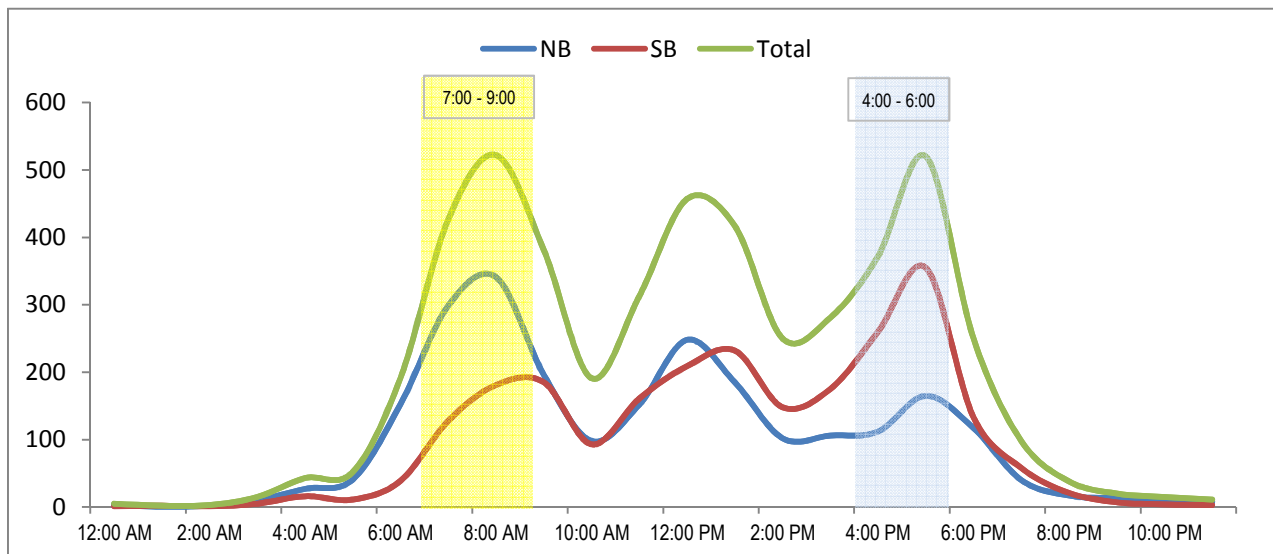
Analysts: DASH

Weather: Sunny

AVC Proj. No: 15-0364

24 Hour Segment Volume					4,875			
Time	Hourly Volume			Time	Hourly Volume			
	NB	SB	Total		NB	SB	Total	
12:00 AM - 1:00 AM	4	1	5	12:00 PM - 1:00 PM	248	209	457	
1:00 AM - 2:00 AM	0	2	2	1:00 PM - 2:00 PM	185	232	417	
2:00 AM - 3:00 AM	2	1	3	2:00 PM - 3:00 PM	102	148	250	
3:00 AM - 4:00 AM	10	5	15	3:00 PM - 4:00 PM	106	175	281	
4:00 AM - 5:00 AM	27	16	43	4:00 PM - 5:00 PM	112	260	372	
5:00 AM - 6:00 AM	41	11	52	5:00 PM - 6:00 PM	165	355	520	
6:00 AM - 7:00 AM	153	39	192	6:00 PM - 7:00 PM	117	133	250	
7:00 AM - 8:00 AM	299	128	427	7:00 PM - 8:00 PM	40	58	98	
8:00 AM - 9:00 AM	341	181	522	8:00 PM - 9:00 PM	17	21	38	
9:00 AM - 10:00 AM	196	185	381	9:00 PM - 10:00 PM	13	7	20	
10:00 AM - 11:00 AM	98	93	191	10:00 PM - 11:00 PM	11	4	15	
11:00 AM - 12:00 PM	152	161	313	11:00 PM - 12:00 AM	8	3	11	
Total	1,323	823	2,146	Total	1,124	1,605	2,729	

24-Hour NB Volume 2,447 **24-Hour SB Volume 2,428**



2013 Traffic Volumes Book

Dist	Route	County	Postmile	Description	Back	Back		Ahead	Ahead	
					Peak	Peak	Back	Peak	Peak	Ahead
					Hour	Month	AADT	Hour	AADT	AADT
11	15	SD	R 9.995	CLAIREMONT MESA BOULEVARD	13100	171000	169000	13200	154000	151000
11	15	SD	R 10.58	JCT. RTE. 52	13200	154000	151000	13800	180000	178000
11	15	SD	VI 12.002	ROUTE 15S HOV LANES	13800	180000	178000	13300	173000	172000
11	15	SD	VI 12.124	JCT. RTE. 163	13300	173000	172000	25500	302000	292000
11	15	SD	VI 13.334	SAN DIEGO, MIRAMAR WAY	25500	302000	292000	23700	297000	289000
11	15	SD	VI 14.285	SAN DIEGO, MIRAMAR/ POMERADO ROADS	23700	297000	289000	22200	278000	272000
11	15	SD	VI 15	CARROLL CANYON ROAD	22200	278000	272000	21900	266000	258000
11	15	SD	VI 15.924	MIRA MESA BOULEVARD	21900	266000	258000	19600	258000	249000
11	15	SD	VI 17.311	SAN DIEGO, MERCY ROAD	19600	258000	249000	18800	247000	236000
11	15	SD	VI 18.176	SAN DIEGO, POWAY ROAD	18800	247000	236000	16900	222000	207000
11	15	SD	VI 19.468	JCT. RTE. 56	16900	222000	207000	18800	237000	229000
11	15	SD	VI 20.574	CARMEL MOUNTAIN ROAD	19000	240000	229000	16100	227000	218000
11	15	SD	VI 21.915	SAN DIEGO, CAMINO DEL NORTE	16100	227000	218000	16000	227000	213000
11	15	SD	VI 22.935	SAN DIEGO, BERNARDO CENTER DRIVE	16000	227000	213000	15600	219000	204000
11	15	SD	VI 23.687	SAN DIEGO, RANCHO BERNARDO ROAD	15600	219000	204000	16400	207000	196000
11	15	SD	VI 26.026	POMERADO ROAD	16400	207000	196000	17600	218000	202000
11	15	SD	VI 26.97	ESCONDIDO, FELICITA RD, VIA RANCHO PARKWAY	17600	218000	202000	15400	203000	194000
11	15	SD	VI 27.65	ESCONDIDO, S JCT. OF CENTRE CITY PARKWAY	15400	203000	194000	17300	213000	206000
11	15	SD	R 28.765	CITRACADO PARKWAY	17300	213000	206000	17300	228000	216000
11	15	SD	R 30.09	ESCONDIDO, 9TH AVENUE	17300	228000	216000	17400	211000	202000
11	15	SD	R 30.627	VALLEY PARKWAY	17400	211000	202000	17100	218000	217000
11	15	SD	R 31.517	JCT. RTE. 78	17100	218000	217000	11300	139000	131000
11	15	SD	R 32.861	ESCONDIDO, EL NORTE PARKWAY	11300	139000	131000	8900	119000	115000
11	15	SD	R 33.922	CENTRE CITY PARKWAY	8900	119000	115000	9400	126000	121000
11	15	SD	R 36.636	DEER SPRINGS ROAD	9400	126000	121000	10700	127000	122000
11	15	SD	R 40.842	GOPHER CANYON ROAD	10900	127000	122000	9100	124000	115000
11	15	SD	R 43.279	ESCONDIDO HIGHWAY	9100	124000	115000	10300	117000	117000
11	15	SD	R 46.491	JCT. RTE. 76	10300	117000	117000	10800	130000	126000
11	15	SD	R 50.585	MISSION ROAD	10800	130000	126000	10700	142000	134000
11	15	SD	R 54.07	RAINBOW VALLEY BOULEVARD	10700	142000	134000	10800	142000	133000
11	15	SD	R 54.258	SAN DIEGO/RIVERSIDE COUNTY LINE	10800	142000	133000			

APPENDIX B

CITY OF SAN DIEGO ROADWAY CLASSIFICATION TABLES

TABLE 2
Roadway Classifications, Levels of Service (LOS)
and Average Daily Traffic (ADT)

STREET CLASSIFICATION	LANES	CROSS SECTIONS	LEVEL OF SERVICE				
			A	B	C	D	E
Freeway	8 lanes		60,000	84,000	120,000	140,000	150,000
Freeway	6 lanes		45,000	63,000	90,000	110,000	120,000
Freeway	4 lanes		30,000	42,000	60,000	70,000	80,000
Expressway	6 lanes	102/122	30,000	42,000	60,000	70,000	80,000
Primary Arterial	6 lanes	102/122	25,000	35,000	50,000	55,000	60,000
Major Arterial	6 lanes	102/122	20,000	28,000	40,000	45,000	50,000
Major Arterial	4 lanes	78/98	15,000	21,000	30,000	35,000	40,000
Collector	4 lanes	72/92	10,000	14,000	20,000	25,000	30,000
Collector (no center lane) continuous left-turn lane)	4 lanes 2 lanes	64/84 50/70	5,000	7,000	10,000	13,000	15,000
Collector (no fronting property)	2 lanes	40/60	4,000	5,500	7,500	9,000	10,000
Collector (commercial-industrial fronting)	2 lanes	50/70	2,500	3,500	5,000	6,500	8,000
Collector (multifamily)	2 lanes	40/60	2,500	3,500	5,000	6,500	8,000
Sub-Collector (single-family)	2 lanes	36/56	—	—	2,200	—	—

LEGEND:

XXX/XXX = Curb to curb width (feet)/right-of-way width (feet): based on the City of San Diego Street Design Manual

XX/XXX= Approximate recommended ADT based on the City of San Diego Street Design Manual.

NOTES:

1. The volumes and the average daily level of service listed above are only intended as a general planning guideline.
2. Levels of service are not applied to residential streets since their primary purpose is to serve abutting lots, not carry through traffic. Levels of service normally apply to roads carrying through traffic between major trip generators and attractors.




















APPENDIX C

PEAK HOUR INTERSECTION ANALYSIS WORKSHEETS EXISTING

HCM 2010 Signalized Intersection Summary

1: Camino San Bernardo & Rancho Bernardo Rd




















3/24/2016

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	870	171	400	692	1	37	0	173	4	0	0
Future Volume (veh/h)	0	870	171	400	692	1	37	0	173	4	0	0
Number	5	2	12	1	6	16	3	8	18	7	4	14
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.98	1.00		1.00	1.00		0.98	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1900	1863	1863	1900	1863	1863	1900	1900	1863	1900
Adj Flow Rate, veh/h	0	946	186	435	752	1	40	0	188	4	0	0
Adj No. of Lanes	1	2	0	2	2	0	1	2	0	0	1	0
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	3	1252	246	558	2391	3	392	294	259	176	0	0
Arrive On Green	0.00	0.43	0.43	0.16	0.66	0.66	0.17	0.00	0.17	0.17	0.00	0.00
Sat Flow, veh/h	1774	2942	578	3442	3627	5	1412	1770	1557	371	0	0
Grp Volume(v), veh/h	0	569	563	435	367	386	40	0	188	4	0	0
Grp Sat Flow(s),veh/h/ln	1774	1770	1750	1721	1770	1862	1412	1770	1557	371	0	0
Q Serve(g_s), s	0.0	17.2	17.2	7.6	5.6	5.6	0.0	0.0	7.2	0.2	0.0	0.0
Cycle Q Clear(g_c), s	0.0	17.2	17.2	7.6	5.6	5.6	1.2	0.0	7.2	7.4	0.0	0.0
Prop In Lane	1.00		0.33	1.00		0.00	1.00		1.00	1.00		0.00
Lane Grp Cap(c), veh/h	3	753	745	558	1167	1228	392	294	259	176	0	0
V/C Ratio(X)	0.00	0.75	0.76	0.78	0.31	0.31	0.10	0.00	0.73	0.02	0.00	0.00
Avail Cap(c_a), veh/h	141	897	887	736	1167	1228	806	813	716	525	0	0
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00	0.00
Uniform Delay (d), s/veh	0.0	15.3	15.3	25.3	4.6	4.6	22.4	0.0	24.9	28.5	0.0	0.0
Incr Delay (d2), s/veh	0.0	3.0	3.1	3.9	0.2	0.1	0.1	0.0	3.8	0.1	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.0	9.0	8.9	3.9	2.7	2.8	0.6	0.0	3.4	0.1	0.0	0.0
LnGrp Delay(d),s/veh	0.0	18.4	18.5	29.3	4.8	4.8	22.5	0.0	28.8	28.5	0.0	0.0
LnGrp LOS		B	B	C	A	A	C		C	C		
Approach Vol, veh/h		1132			1188			228				4
Approach Delay, s/veh		18.4			13.7			27.7				28.5
Approach LOS		B			B			C				C
Timer	1	2	3	4	5	6	7	8				
Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	14.7	32.9		15.5	0.0	47.6		15.5				
Change Period (Y+Rc), s	4.5	6.0		5.0	4.5	6.0		5.0				
Max Green Setting (Gmax), s	13.5	32.0		29.0	5.0	40.5		29.0				
Max Q Clear Time (g_c+I1), s	9.6	19.2		9.4	0.0	7.6		9.2				
Green Ext Time (p_c), s	0.6	7.6		1.1	0.0	14.3		1.1				
Intersection Summary												
HCM 2010 Ctrl Delay				17.1								
HCM 2010 LOS				B								

HCM 2010 Signalized Intersection Summary




















2: Via Del Campo & Rancho Bernardo Rd

3/24/2016

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	4	858	302	596	1208	0	59	0	17	1	0	0
Future Volume (veh/h)	4	858	302	596	1208	0	59	0	17	1	0	0
Number	5	2	12	1	6	16	3	8	18	7	4	14
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.98	1.00		1.00	1.00		0.98	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1900	1863	1863	1900	1900	1863	1863	1900	1863	1900
Adj Flow Rate, veh/h	4	964	339	670	1357	0	66	0	19	1	0	0
Adj No. of Lanes	1	2	0	1	2	0	0	1	1	0	1	0
Peak Hour Factor	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	7	1030	359	666	2738	0	172	0	92	107	0	0
Arrive On Green	0.00	0.40	0.40	0.38	0.77	0.00	0.06	0.00	0.06	0.06	0.00	0.00
Sat Flow, veh/h	1774	2558	893	1774	3632	0	1635	0	1558	526	0	0
Grp Volume(v), veh/h	4	665	638	670	1357	0	66	0	19	1	0	0
Grp Sat Flow(s),veh/h/ln	1774	1770	1681	1774	1770	0	1635	0	1558	526	0	0
Q Serve(g_s), s	0.2	34.1	34.7	35.6	13.4	0.0	0.0	0.0	1.1	0.1	0.0	0.0
Cycle Q Clear(g_c), s	0.2	34.1	34.7	35.6	13.4	0.0	3.5	0.0	1.1	3.5	0.0	0.0
Prop In Lane	1.00		0.53	1.00		0.00	1.00		1.00	1.00		0.00
Lane Grp Cap(c), veh/h	7	712	677	666	2738	0	172	0	92	107	0	0
V/C Ratio(X)	0.53	0.93	0.94	1.01	0.50	0.00	0.38	0.00	0.21	0.01	0.00	0.00
Avail Cap(c_a), veh/h	75	744	707	666	2738	0	519	0	476	454	0	0
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	0.00	1.00	0.00	1.00	1.00	0.00	0.00
Uniform Delay (d), s/veh	47.1	27.1	27.3	29.6	3.9	0.0	43.7	0.0	42.5	45.4	0.0	0.0
Incr Delay (d2), s/veh	48.5	18.2	20.7	36.5	0.1	0.0	1.4	0.0	1.1	0.0	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.2	20.2	19.9	23.9	6.5	0.0	1.8	0.0	0.5	0.0	0.0	0.0
LnGrp Delay(d),s/veh	95.6	45.3	48.0	66.2	4.1	0.0	45.1	0.0	43.6	45.4	0.0	0.0
LnGrp LOS	F	D	D	F	A		D		D	D		
Approach Vol, veh/h		1307			2027			85				1
Approach Delay, s/veh		46.8			24.6			44.7				45.4
Approach LOS		D			C			D				D
Timer	1	2	3	4	5	6	7	8				
Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	40.0	44.1		10.8	4.8	79.3		10.8				
Change Period (Y+Rc), s	4.4	5.9		* 5.2	4.4	* 5.9		5.2				
Max Green Setting (Gmax), s	35.6	39.9		* 29	4.0	* 72		29.0				
Max Q Clear Time (g_c+I1), s	37.6	36.7		5.5	2.2	15.4		5.5				
Green Ext Time (p_c), s	0.0	1.5		0.3	0.0	33.4		0.3				
Intersection Summary												
HCM 2010 Ctrl Delay				33.6								
HCM 2010 LOS				C								
Notes												
























HCM 2010 Signalized Intersection Summary
 3: Project Dwy/Matinal Rd & Rancho Bernardo Rd

3/24/2016

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	33	742	0	0	1572	16	0	0	0	82	0	141
Future Volume (veh/h)	33	742	0	0	1572	16	0	0	0	82	0	141
Number	5	2	12	1	6	16	3	8	18	7	4	14
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		0.98
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1900	1863	1863	1900	1863	1863	1900	1900	1863	1900
Adj Flow Rate, veh/h	38	853	0	0	1807	18	0	0	0	94	0	162
Adj No. of Lanes	1	2	0	1	2	0	1	1	0	0	1	0
Peak Hour Factor	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	48	2455	0	2	2254	22	70	360	0	144	12	186
Arrive On Green	0.03	0.69	0.00	0.00	0.63	0.63	0.00	0.00	0.00	0.19	0.00	0.19
Sat Flow, veh/h	1774	3632	0	1774	3590	36	1219	1863	0	495	62	960
Grp Volume(v), veh/h	38	853	0	0	889	936	0	0	0	256	0	0
Grp Sat Flow(s),veh/h/ln	1774	1770	0	1774	1770	1856	1219	1863	0	1517	0	0
Q Serve(g_s), s	2.2	10.0	0.0	0.0	38.6	38.8	0.0	0.0	0.0	14.8	0.0	0.0
Cycle Q Clear(g_c), s	2.2	10.0	0.0	0.0	38.6	38.8	0.0	0.0	0.0	16.8	0.0	0.0
Prop In Lane	1.00		0.00	1.00		0.02	1.00		0.00	0.37		0.63
Lane Grp Cap(c), veh/h	48	2455	0	2	1111	1165	70	360	0	341	0	0
V/C Ratio(X)	0.79	0.35	0.00	0.00	0.80	0.80	0.00	0.00	0.00	0.75	0.00	0.00
Avail Cap(c_a), veh/h	69	2471	0	69	1253	1314	182	532	0	471	0	0
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	0.00	0.00	1.00	1.00	0.00	0.00	0.00	1.00	0.00	0.00
Uniform Delay (d), s/veh	49.7	6.3	0.0	0.0	14.3	14.3	0.0	0.0	0.0	40.1	0.0	0.0
Incr Delay (d2), s/veh	31.7	0.1	0.0	0.0	3.4	3.3	0.0	0.0	0.0	4.3	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.5	4.9	0.0	0.0	19.6	20.8	0.0	0.0	0.0	7.5	0.0	0.0
LnGrp Delay(d),s/veh	81.4	6.4	0.0	0.0	17.7	17.7	0.0	0.0	0.0	44.4	0.0	0.0
LnGrp LOS	F	A			B	B				D		
Approach Vol, veh/h		891			1825			0			256	
Approach Delay, s/veh		9.6			17.7			0.0			44.4	
Approach LOS		A			B						D	
Timer	1	2	3	4	5	6	7	8				
Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	0.0	78.2		24.5	6.8	71.5		24.5				
Change Period (Y+Rc), s	4.0	7.0		4.6	4.0	* 7		* 4.6				
Max Green Setting (Gmax), s	4.0	71.7		28.7	4.0	* 73		* 29				
Max Q Clear Time (g_c+I1), s	0.0	12.0		18.8	4.2	40.8		0.0				
Green Ext Time (p_c), s	0.0	35.8		1.1	0.0	23.6		0.0				
Intersection Summary												
HCM 2010 Ctrl Delay				17.6								
HCM 2010 LOS				B								
Notes												



















HCM 2010 Signalized Intersection Summary
4: West Bernardo Dr & Rancho Bernardo Rd

3/24/2016

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	42	609	60	499	1457	271	105	85	107	643	309	164
Future Volume (veh/h)	42	609	60	499	1457	271	105	85	107	643	309	164
Number	5	2	12	1	6	16	3	8	18	7	4	14
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		0.99	1.00		0.99	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1900	1863	1863	1863	1863	1863	1863	1863	1863	1900
Adj Flow Rate, veh/h	43	628	62	514	1502	279	108	88	110	663	319	169
Adj No. of Lanes	2	3	0	2	2	1	2	2	1	2	2	0
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	94	871	85	943	1579	697	183	395	608	766	633	328
Arrive On Green	0.03	0.19	0.19	0.27	0.45	0.45	0.05	0.11	0.11	0.22	0.28	0.28
Sat Flow, veh/h	3442	4711	461	3442	3539	1562	3442	3539	1561	3442	2253	1167
Grp Volume(v), veh/h	43	450	240	514	1502	279	108	88	110	663	249	239
Grp Sat Flow(s),veh/h/ln	1721	1695	1781	1721	1770	1562	1721	1770	1561	1721	1770	1651
Q Serve(g_s), s	1.3	12.9	13.1	13.2	42.2	12.5	3.2	2.3	2.1	19.2	12.2	12.6
Cycle Q Clear(g_c), s	1.3	12.9	13.1	13.2	42.2	12.5	3.2	2.3	2.1	19.2	12.2	12.6
Prop In Lane	1.00		0.26	1.00		1.00	1.00		1.00	1.00		0.71
Lane Grp Cap(c), veh/h	94	627	330	943	1579	697	183	395	608	766	497	464
V/C Ratio(X)	0.46	0.72	0.73	0.54	0.95	0.40	0.59	0.22	0.18	0.87	0.50	0.52
Avail Cap(c_a), veh/h	133	1006	529	943	1605	708	1135	1338	1024	1002	601	560
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	49.5	39.6	39.7	32.0	27.6	19.3	47.9	41.9	7.2	38.7	31.1	31.3
Incr Delay (d2), s/veh	3.4	1.6	3.1	0.7	12.7	0.4	3.0	0.3	0.1	6.4	0.8	0.9
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.6	6.2	6.7	6.4	23.2	5.4	1.6	1.2	1.2	9.8	6.1	5.8
LnGrp Delay(d),s/veh	52.9	41.2	42.7	32.7	40.2	19.7	50.9	42.1	7.3	45.2	31.9	32.2
LnGrp LOS	D	D	D	C	D	B	D	D	A	D	C	C
Approach Vol, veh/h		733			2295			306			1151	
Approach Delay, s/veh		42.4			36.1			32.7			39.6	
Approach LOS		D			D			C			D	
Timer	1	2	3	4	5	6	7	8				
Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	34.0	25.0	9.9	34.4	7.2	51.8	27.4	16.9				
Change Period (Y+Rc), s	5.7	* 5.9	4.4	5.4	4.4	5.7	4.4	5.4				
Max Green Setting (Gmax), s	20.0	* 31	34.1	35.1	4.0	46.9	30.1	39.1				
Max Q Clear Time (g_c+I1), s	15.2	15.1	5.2	14.6	3.3	44.2	21.2	4.3				
Green Ext Time (p_c), s	4.2	4.0	0.3	4.0	0.0	1.9	1.8	4.4				
Intersection Summary												
HCM 2010 Ctrl Delay				37.8								
HCM 2010 LOS				D								
Notes												

HCM 2010 Signalized Intersection Summary
 5: I-15 SB Ramps & Rancho Bernardo Rd



















3/24/2016

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	744	555	0	1182	505	0	0	0	659	0	1086
Future Volume (veh/h)	0	744	555	0	1182	505	0	0	0	659	0	1086
Number	5	2	12	1	6	16				7	4	14
Initial Q (Qb), veh	0	0	0	0	0	0				0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00				1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00				1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	0	1863	1863	0	1863	1863				1863	0	1863
Adj Flow Rate, veh/h	0	764	596	0	1244	0				694	0	1143
Adj No. of Lanes	0	2	2	0	3	1				2	0	2
Peak Hour Factor	0.92	0.95	0.95	0.92	0.95	0.95				0.95	0.92	0.95
Percent Heavy Veh, %	0	2	2	0	2	2				2	0	2
Cap, veh/h	0	1710	1453	0	2565	727				1555	0	1259
Arrive On Green	0.00	0.46	0.46	0.00	0.61	0.00				0.45	0.00	0.45
Sat Flow, veh/h	0	3725	3167	0	5588	1583				3442	0	2787
Grp Volume(v), veh/h	0	764	596	0	1244	0				694	0	1143
Grp Sat Flow(s),veh/h/ln	0	1863	1583	0	1863	1583				1721	0	1393
Q Serve(g_s), s	0.0	19.5	17.6	0.0	17.2	0.0				19.4	0.0	53.4
Cycle Q Clear(g_c), s	0.0	19.5	17.6	0.0	17.2	0.0				19.4	0.0	53.4
Prop In Lane	0.00		1.00	0.00		1.00				1.00		1.00
Lane Grp Cap(c), veh/h	0	1710	1453	0	2565	727				1555	0	1259
V/C Ratio(X)	0.00	0.45	0.41	0.00	0.49	0.00				0.45	0.00	0.91
Avail Cap(c_a), veh/h	0	1710	1453	0	2565	727				1768	0	1431
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.33	1.33				1.00	1.00	1.00
Upstream Filter(I)	0.00	0.68	0.68	0.00	0.86	0.00				1.00	0.00	1.00
Uniform Delay (d), s/veh	0.0	25.8	25.2	0.0	18.1	0.0				26.4	0.0	35.7
Incr Delay (d2), s/veh	0.0	0.6	0.6	0.0	0.6	0.0				0.2	0.0	8.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0				0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.0	10.2	7.8	0.0	8.9	0.0				9.2	0.0	21.9
LnGrp Delay(d),s/veh	0.0	26.3	25.8	0.0	18.7	0.0				26.6	0.0	43.8
LnGrp LOS		C	C		B					C		D
Approach Vol, veh/h		1360			1244						1837	
Approach Delay, s/veh		26.1			18.7						37.3	
Approach LOS		C			B						D	
Timer	1	2	3	4	5	6	7	8				
Assigned Phs		2		4		6						
Phs Duration (G+Y+Rc), s		70.7		69.3		70.7						
Change Period (Y+Rc), s		6.4		6.1		6.4						
Max Green Setting (Gmax), s		55.6		71.9		55.6						
Max Q Clear Time (g_c+I1), s		21.5		55.4		19.2						
Green Ext Time (p_c), s		22.7		7.9		23.7						
Intersection Summary												
HCM 2010 Ctrl Delay			28.6									
HCM 2010 LOS			C									
Notes												

HCM 2010 Signalized Intersection Summary























6: I-15 NB Ramps & Rancho Bernardo Rd

3/24/2016

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	824	579	0	1071	285	616	0	433	0	0	0
Future Volume (veh/h)	0	824	579	0	1071	285	616	0	433	0	0	0
Number	5	2	12	1	6	16	3	8	18			
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0			
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00			
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00			
Adj Sat Flow, veh/h/ln	0	1863	1863	0	1863	1863	1863	0	1863			
Adj Flow Rate, veh/h	0	877	0	0	1139	303	655	0	461			
Adj No. of Lanes	0	3	1	0	3	1	2	0	2			
Peak Hour Factor	0.92	0.94	0.94	0.92	0.94	0.94	0.94	0.92	0.94			
Percent Heavy Veh, %	0	2	2	0	2	2	2	0	2			
Cap, veh/h	0	3804	1078	0	3461	1078	792	0	641			
Arrive On Green	0.00	1.00	0.00	0.00	0.68	0.68	0.23	0.00	0.23			
Sat Flow, veh/h	0	5588	1583	0	5253	1583	3442	0	2787			
Grp Volume(v), veh/h	0	877	0	0	1139	303	655	0	461			
Grp Sat Flow(s),veh/h/ln	0	1863	1583	0	1695	1583	1721	0	1393			
Q Serve(g_s), s	0.0	0.0	0.0	0.0	12.9	10.6	25.3	0.0	21.4			
Cycle Q Clear(g_c), s	0.0	0.0	0.0	0.0	12.9	10.6	25.3	0.0	21.4			
Prop In Lane	0.00		1.00	0.00		1.00	1.00		1.00			
Lane Grp Cap(c), veh/h	0	3804	1078	0	3461	1078	792	0	641			
V/C Ratio(X)	0.00	0.23	0.00	0.00	0.33	0.28	0.83	0.00	0.72			
Avail Cap(c_a), veh/h	0	3804	1078	0	3461	1078	1399	0	1133			
HCM Platoon Ratio	1.00	2.00	2.00	1.00	1.00	1.00	1.00	1.00	1.00			
Upstream Filter(I)	0.00	0.87	0.00	0.00	1.00	1.00	1.00	0.00	1.00			
Uniform Delay (d), s/veh	0.0	0.0	0.0	0.0	9.2	8.8	51.3	0.0	49.7			
Incr Delay (d2), s/veh	0.0	0.1	0.0	0.0	0.3	0.7	2.3	0.0	1.5			
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0			
%ile BackOfQ(50%),veh/ln	0.0	0.0	0.0	0.0	6.1	4.8	12.3	0.0	8.3			
LnGrp Delay(d),s/veh	0.0	0.1	0.0	0.0	9.5	9.5	53.5	0.0	51.3			
LnGrp LOS		A			A	A	D		D			
Approach Vol, veh/h		877			1442			1116				
Approach Delay, s/veh		0.1			9.5			52.6				
Approach LOS		A			A			D				
Timer	1	2	3	4	5	6	7	8				
Assigned Phs		2				6		8				
Phs Duration (G+Y+Rc), s		101.7				101.7		38.3				
Change Period (Y+Rc), s		6.4				6.4		6.1				
Max Green Setting (Gmax), s		70.6				70.6		56.9				
Max Q Clear Time (g_c+I1), s		2.0				14.9		27.3				
Green Ext Time (p_c), s		28.3				26.2		4.9				
Intersection Summary												
HCM 2010 Ctrl Delay			21.1									
HCM 2010 LOS			C									
Notes												






















HCM 2010 Signalized Intersection Summary
 7: Bernardo Center Dr & Rancho Bernardo Rd

3/24/2016

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	319	582	299	163	804	85	256	188	109	185	247	108
Future Volume (veh/h)	319	582	299	163	804	85	256	188	109	185	247	108
Number	5	2	12	1	6	16	3	8	18	7	4	14
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		0.98	1.00		0.99	1.00		0.99
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1863	1863	1863	1900	1863	1863	1900	1863	1863	1863
Adj Flow Rate, veh/h	343	635	316	175	865	91	275	202	117	199	266	116
Adj No. of Lanes	2	2	1	2	2	0	2	2	0	2	2	1
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	436	1540	654	257	1178	124	357	397	220	284	566	444
Arrive On Green	0.12	0.41	0.41	0.07	0.37	0.37	0.10	0.18	0.18	0.08	0.16	0.16
Sat Flow, veh/h	3548	3725	1583	3442	3227	339	3442	2193	1214	3442	3539	1560
Grp Volume(v), veh/h	343	635	316	175	474	482	275	161	158	199	266	116
Grp Sat Flow(s),veh/h/ln	1774	1863	1583	1721	1770	1797	1721	1770	1637	1721	1770	1560
Q Serve(g_s), s	7.9	10.1	12.3	4.2	19.6	19.6	6.6	6.9	7.4	4.7	5.7	4.8
Cycle Q Clear(g_c), s	7.9	10.1	12.3	4.2	19.6	19.6	6.6	6.9	7.4	4.7	5.7	4.8
Prop In Lane	1.00		1.00	1.00		0.19	1.00		0.74	1.00		1.00
Lane Grp Cap(c), veh/h	436	1540	654	257	646	656	357	321	296	284	566	444
V/C Ratio(X)	0.79	0.41	0.48	0.68	0.73	0.73	0.77	0.50	0.53	0.70	0.47	0.26
Avail Cap(c_a), veh/h	573	1655	703	454	753	764	433	818	756	503	1682	936
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	35.9	17.5	18.1	38.0	23.2	23.2	36.7	31.1	31.2	37.6	32.1	23.4
Incr Delay (d2), s/veh	5.4	0.2	0.6	3.2	3.1	3.1	6.8	1.2	1.5	3.1	0.6	0.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	4.2	5.2	5.5	2.1	10.1	10.2	3.4	3.5	3.5	2.4	2.9	2.1
LnGrp Delay(d),s/veh	41.2	17.6	18.7	41.1	26.3	26.3	43.5	32.3	32.7	40.7	32.7	23.7
LnGrp LOS	D	B	B	D	C	C	D	C	C	D	C	C
Approach Vol, veh/h		1294			1131			594			581	
Approach Delay, s/veh		24.1			28.6			37.6			33.7	
Approach LOS		C			C			D			C	
Timer	1	2	3	4	5	6	7	8				
Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	10.7	41.0	13.1	19.4	14.7	36.9	11.4	21.1				
Change Period (Y+Rc), s	4.4	6.2	4.4	5.9	4.4	* 6.2	4.4	* 5.9				
Max Green Setting (Gmax), s	11.1	37.4	10.6	40.0	13.6	* 36	12.3	* 39				
Max Q Clear Time (g_c+I1), s	6.2	14.3	8.6	7.7	9.9	21.6	6.7	9.4				
Green Ext Time (p_c), s	0.2	12.3	0.2	4.1	0.4	9.1	0.3	4.0				
Intersection Summary												
HCM 2010 Ctrl Delay			29.3									
HCM 2010 LOS			C									
Notes												

HCM 2010 Signalized Intersection Summary
 8: West Bernardo Dr & Duenda Rd

3/24/2016

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	20	170	148	102	51	40	30	100	74	97	218	10
Future Volume (veh/h)	20	170	148	102	51	40	30	100	74	97	218	10
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.99	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1900	1863	1863	1863	1863	1863	1900	1863	1863	1900
Adj Flow Rate, veh/h	22	185	161	111	55	43	33	109	80	105	237	11
Adj No. of Lanes	1	1	0	1	1	1	1	2	0	1	2	0
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	468	241	210	187	197	167	53	278	189	136	636	29
Arrive On Green	0.26	0.26	0.26	0.11	0.11	0.11	0.03	0.14	0.14	0.08	0.18	0.18
Sat Flow, veh/h	1774	913	795	1774	1863	1583	1774	2018	1372	1774	3445	159
Grp Volume(v), veh/h	22	0	346	111	55	43	33	94	95	105	121	127
Grp Sat Flow(s),veh/h/ln	1774	0	1708	1774	1863	1583	1774	1770	1621	1774	1770	1835
Q Serve(g_s), s	0.4	0.0	9.0	2.9	1.3	1.2	0.9	2.3	2.6	2.8	2.9	2.9
Cycle Q Clear(g_c), s	0.4	0.0	9.0	2.9	1.3	1.2	0.9	2.3	2.6	2.8	2.9	2.9
Prop In Lane	1.00		0.47	1.00		1.00	1.00		0.85	1.00		0.09
Lane Grp Cap(c), veh/h	468	0	451	187	197	167	53	244	223	136	327	339
V/C Ratio(X)	0.05	0.00	0.77	0.59	0.28	0.26	0.63	0.39	0.42	0.77	0.37	0.37
Avail Cap(c_a), veh/h	813	0	783	665	698	594	185	737	675	369	921	955
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	13.2	0.0	16.3	20.5	19.8	19.7	23.0	18.9	19.0	21.8	17.1	17.2
Incr Delay (d2), s/veh	0.0	0.0	2.8	3.0	0.8	0.8	11.6	1.0	1.3	9.0	0.7	0.7
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.2	0.0	4.6	1.5	0.7	0.6	0.6	1.2	1.2	1.7	1.5	1.5
LnGrp Delay(d),s/veh	13.2	0.0	19.1	23.5	20.6	20.6	34.7	19.9	20.2	30.7	17.8	17.8
LnGrp LOS	B		B	C	C	C	C	B	C	C	B	B
Approach Vol, veh/h		368			209			222			353	
Approach Delay, s/veh		18.7			22.1			22.2			21.7	
Approach LOS		B			C			C			C	
Timer	1	2	3	4	5	6	7	8				
Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	8.7	11.6		17.7	6.4	13.9		10.1				
Change Period (Y+Rc), s	5.0	5.0		5.0	5.0	5.0		5.0				
Max Green Setting (Gmax), s	10.0	20.0		22.0	5.0	25.0		18.0				
Max Q Clear Time (g_c+I1), s	4.8	4.6		11.0	2.9	4.9		4.9				
Green Ext Time (p_c), s	0.1	2.1		1.7	0.0	2.3		0.5				
Intersection Summary												
HCM 2010 Ctrl Delay			20.9									
HCM 2010 LOS			C									

HCM 2010 Signalized Intersection Summary

9: West Bernardo Dr & Via Del Campo

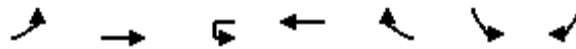
3/24/2016



Movement	EBL	EBT	WBT	WBR	SBL	SBR		
Lane Configurations								
Traffic Volume (veh/h)	365	506	271	150	47	45		
Future Volume (veh/h)	365	506	271	150	47	45		
Number	5	2	6	16	7	14		
Initial Q (Qb), veh	0	0	0	0	0	0		
Ped-Bike Adj(A_pbT)	1.00			1.00	1.00	1.00		
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00		
Adj Sat Flow, veh/h/ln	1863	1863	1863	1900	1863	1863		
Adj Flow Rate, veh/h	429	595	319	176	55	53		
Adj No. of Lanes	1	2	2	0	1	1		
Peak Hour Factor	0.85	0.85	0.85	0.85	0.85	0.85		
Percent Heavy Veh, %	2	2	2	2	2	2		
Cap, veh/h	948	2838	425	229	100	89		
Arrive On Green	0.53	0.80	0.19	0.19	0.06	0.06		
Sat Flow, veh/h	1774	3632	2313	1198	1774	1583		
Grp Volume(v), veh/h	429	595	253	242	55	53		
Grp Sat Flow(s),veh/h/ln	1774	1770	1770	1648	1774	1583		
Q Serve(g_s), s	10.7	2.9	9.7	10.0	2.2	2.4		
Cycle Q Clear(g_c), s	10.7	2.9	9.7	10.0	2.2	2.4		
Prop In Lane	1.00			0.73	1.00	1.00		
Lane Grp Cap(c), veh/h	948	2838	339	315	100	89		
V/C Ratio(X)	0.45	0.21	0.75	0.77	0.55	0.59		
Avail Cap(c_a), veh/h	948	2838	484	451	545	486		
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00		
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00		
Uniform Delay (d), s/veh	10.3	1.7	27.5	27.6	33.1	33.1		
Incr Delay (d2), s/veh	0.3	0.2	3.8	4.9	4.6	6.2		
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0		
%ile BackOfQ(50%),veh/ln	5.2	1.4	5.1	5.0	1.2	2.2		
LnGrp Delay(d),s/veh	10.6	1.9	31.3	32.5	37.7	39.3		
LnGrp LOS	B	A	C	C	D	D		
Approach Vol, veh/h		1024	495		108			
Approach Delay, s/veh		5.5	31.9		38.5			
Approach LOS		A	C		D			
Timer	1	2	3	4	5	6	7	8
Assigned Phs		2		4	5	6		
Phs Duration (G+Y+Rc), s		63.2		8.8	43.9	19.3		
Change Period (Y+Rc), s		5.5		* 4.7	5.5	* 5.5		
Max Green Setting (Gmax), s		57.7		* 22	33.6	* 20		
Max Q Clear Time (g_c+I1), s		4.9		4.4	12.7	12.0		
Green Ext Time (p_c), s		5.9		0.2	5.2	1.7		
Intersection Summary								
HCM 2010 Ctrl Delay			15.7					
HCM 2010 LOS			B					
Notes								

HCM 2010 Signalized Intersection Summary
 10: Bernardo Center Dr & West Bernardo Dr




















3/24/2016



Movement	EBL	EBT	WBU	WBT	WBR	SBL	SBR	
Lane Configurations	↔↔	↑↑	↔	↑	↔↔	↔	↔	
Traffic Volume (veh/h)	601	450	0	484	682	55	186	
Future Volume (veh/h)	601	450	0	484	682	55	186	
Number	1	6		2	12	3	18	
Initial Q (Qb), veh	0	0		0	0	0	0	
Ped-Bike Adj(A_pbT)	1.00				0.97	1.00	1.00	
Parking Bus, Adj	1.00	1.00		1.00	1.00	1.00	1.00	
Adj Sat Flow, veh/h/ln	1863	1863		1863	1863	1863	1863	
Adj Flow Rate, veh/h	675	506		544	766	62	209	
Adj No. of Lanes	2	2		1	2	1	1	
Peak Hour Factor	0.89	0.89		0.89	0.89	0.89	0.89	
Percent Heavy Veh, %	2	2		2	2	2	2	
Cap, veh/h	834	2581		793	1528	237	595	
Arrive On Green	0.24	0.73		0.43	0.43	0.13	0.13	
Sat Flow, veh/h	3442	3632		1863	2716	1774	1583	
Grp Volume(v), veh/h	675	506		544	766	62	209	
Grp Sat Flow(s),veh/h/ln	1721	1770		1863	1358	1774	1583	
Q Serve(g_s), s	13.3	3.3		17.1	12.5	2.3	6.8	
Cycle Q Clear(g_c), s	13.3	3.3		17.1	12.5	2.3	6.8	
Prop In Lane	1.00				1.00	1.00	1.00	
Lane Grp Cap(c), veh/h	834	2581		793	1528	237	595	
V/C Ratio(X)	0.81	0.20		0.69	0.50	0.26	0.35	
Avail Cap(c_a), veh/h	1367	3405		1141	2035	813	1109	
HCM Platoon Ratio	1.00	1.00		1.00	1.00	1.00	1.00	
Upstream Filter(I)	1.00	1.00		1.00	1.00	1.00	1.00	
Uniform Delay (d), s/veh	25.7	3.1		16.8	9.8	28.0	16.2	
Incr Delay (d2), s/veh	1.9	0.0		1.1	0.3	0.6	0.4	
Initial Q Delay(d3),s/veh	0.0	0.0		0.0	0.0	0.0	0.0	
%ile BackOfQ(50%),veh/ln	6.5	1.6		9.0	4.7	1.1	3.0	
LnGrp Delay(d),s/veh	27.6	3.1		17.8	10.0	28.6	16.5	
LnGrp LOS	C	A		B	B	C	B	
Approach Vol, veh/h		1181		1310		271		
Approach Delay, s/veh		17.1		13.3		19.3		
Approach LOS		B		B		B		
Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2				6		8
Phs Duration (G+Y+Rc), s	21.9	36.2				58.0		14.0
Change Period (Y+Rc), s	4.4	5.5				* 5.5		4.4
Max Green Setting (Gmax), s	28.6	44.1				* 69		33.0
Max Q Clear Time (g_c+I1), s	15.3	19.1				5.3		8.8
Green Ext Time (p_c), s	2.1	11.6				15.1		0.8
Intersection Summary								
HCM 2010 Ctrl Delay				15.5				
HCM 2010 LOS				B				
Notes								

HCM 2010 Signalized Intersection Summary
 1: Camino San Bernardo & Rancho Bernardo Rd




















3/24/2016

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	1	899	208	337	701	0	109	0	310	3	0	0
Future Volume (veh/h)	1	899	208	337	701	0	109	0	310	3	0	0
Number	5	2	12	1	6	16	3	8	18	7	4	14
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.99	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1900	1863	1863	1900	1863	1863	1900	1900	1863	1900
Adj Flow Rate, veh/h	1	936	217	351	730	0	114	0	323	3	0	0
Adj No. of Lanes	1	2	0	2	2	0	1	2	0	0	1	0
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	2	1199	278	450	1949	0	521	441	394	158	0	0
Arrive On Green	0.00	0.42	0.42	0.13	0.55	0.00	0.25	0.00	0.25	0.25	0.00	0.00
Sat Flow, veh/h	1774	2846	659	3442	3632	0	1412	1770	1581	239	0	0
Grp Volume(v), veh/h	1	582	571	351	730	0	114	0	323	3	0	0
Grp Sat Flow(s),veh/h/ln	1774	1770	1735	1721	1770	0	1412	1770	1581	239	0	0
Q Serve(g_s), s	0.0	20.7	20.8	7.2	8.5	0.0	0.0	0.0	14.1	0.2	0.0	0.0
Cycle Q Clear(g_c), s	0.0	20.7	20.8	7.2	8.5	0.0	3.8	0.0	14.1	14.3	0.0	0.0
Prop In Lane	1.00		0.38	1.00		0.00	1.00		1.00	1.00		0.00
Lane Grp Cap(c), veh/h	2	746	731	450	1949	0	521	441	394	158	0	0
V/C Ratio(X)	0.41	0.78	0.78	0.78	0.37	0.00	0.22	0.00	0.82	0.02	0.00	0.00
Avail Cap(c_a), veh/h	121	836	820	566	2011	0	730	703	628	314	0	0
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	0.00	1.00	0.00	1.00	1.00	0.00	0.00
Uniform Delay (d), s/veh	36.4	18.2	18.2	30.7	9.3	0.0	22.0	0.0	25.9	32.6	0.0	0.0
Incr Delay (d2), s/veh	84.1	4.3	4.4	5.4	0.1	0.0	0.2	0.0	4.7	0.0	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.1	10.9	10.7	3.8	4.2	0.0	1.9	0.0	6.6	0.1	0.0	0.0
LnGrp Delay(d),s/veh	120.6	22.5	22.7	36.2	9.4	0.0	22.2	0.0	30.5	32.6	0.0	0.0
LnGrp LOS	F	C	C	D	A		C		C	C		
Approach Vol, veh/h		1154			1081			437				3
Approach Delay, s/veh		22.7			18.1			28.4				32.6
Approach LOS		C			B			C				C
Timer	1	2	3	4	5	6	7	8				
Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	13.5	36.3		23.2	4.1	45.7		23.2				
Change Period (Y+Rc), s	4.0	5.5		5.0	4.0	5.5		5.0				
Max Green Setting (Gmax), s	12.0	34.5		29.0	5.0	41.5		29.0				
Max Q Clear Time (g_c+I1), s	9.2	22.8		16.3	2.0	10.5		16.1				
Green Ext Time (p_c), s	0.3	8.0		1.8	0.0	14.7		1.8				
Intersection Summary												
HCM 2010 Ctrl Delay				21.8								
HCM 2010 LOS				C								

HCM 2010 Signalized Intersection Summary




















2: Via Del Campo & Rancho Bernardo Rd

3/24/2016

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	6	1280	49	18	874	1	276	0	341	1	0	0
Future Volume (veh/h)	6	1280	49	18	874	1	276	0	341	1	0	0
Number	5	2	12	1	6	16	3	8	18	7	4	14
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		0.98	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1900	1863	1863	1900	1900	1863	1863	1900	1863	1900
Adj Flow Rate, veh/h	7	1407	54	20	960	1	303	0	375	1	0	0
Adj No. of Lanes	1	2	0	1	2	0	0	1	1	0	1	0
Peak Hour Factor	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	13	1732	66	32	1847	2	547	0	442	229	0	0
Arrive On Green	0.01	0.50	0.50	0.02	0.51	0.51	0.28	0.00	0.28	0.28	0.00	0.00
Sat Flow, veh/h	1774	3476	133	1774	3628	4	1602	0	1558	481	0	0
Grp Volume(v), veh/h	7	715	746	20	468	493	303	0	375	1	0	0
Grp Sat Flow(s),veh/h/ln	1774	1770	1839	1774	1770	1862	1602	0	1558	481	0	0
Q Serve(g_s), s	0.3	26.3	26.5	0.9	13.7	13.7	0.0	0.0	17.6	0.1	0.0	0.0
Cycle Q Clear(g_c), s	0.3	26.3	26.5	0.9	13.7	13.7	11.4	0.0	17.6	11.5	0.0	0.0
Prop In Lane	1.00		0.07	1.00		0.00	1.00		1.00	1.00		0.00
Lane Grp Cap(c), veh/h	13	882	916	32	901	948	547	0	442	229	0	0
V/C Ratio(X)	0.55	0.81	0.81	0.62	0.52	0.52	0.55	0.00	0.85	0.00	0.00	0.00
Avail Cap(c_a), veh/h	92	943	980	94	949	999	680	0	588	328	0	0
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00	0.00
Uniform Delay (d), s/veh	38.3	16.3	16.4	37.7	12.7	12.7	24.0	0.0	26.2	28.9	0.0	0.0
Incr Delay (d2), s/veh	31.7	5.1	5.1	18.2	0.5	0.4	0.9	0.0	8.8	0.0	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.3	14.0	14.5	0.6	6.8	7.1	5.7	0.0	8.6	0.0	0.0	0.0
LnGrp Delay(d),s/veh	69.9	21.5	21.4	55.9	13.1	13.1	24.8	0.0	34.9	28.9	0.0	0.0
LnGrp LOS	E	C	C	E	B	B	C		C	C		
Approach Vol, veh/h		1468			981			678			1	
Approach Delay, s/veh		21.7			14.0			30.4			28.9	
Approach LOS		C			B			C			C	
Timer	1	2	3	4	5	6	7	8				
Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	5.8	44.4		27.1	5.0	45.3		27.1				
Change Period (Y+Rc), s	4.4	5.9		* 5.2	4.4	* 5.9		5.2				
Max Green Setting (Gmax), s	4.1	41.2		* 30	4.0	* 42		29.2				
Max Q Clear Time (g_c+I1), s	2.9	28.5		13.5	2.3	15.7		19.6				
Green Ext Time (p_c), s	0.0	10.1		3.0	0.0	17.3		2.3				
Intersection Summary												
HCM 2010 Ctrl Delay			21.2									
HCM 2010 LOS			C									
Notes												

HCM 2010 Signalized Intersection Summary
 3: Project Dwy/Matinal Rd & Rancho Bernardo Rd





























3/24/2016

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	109	1433	0	1	809	45	0	0	0	40	0	105
Future Volume (veh/h)	109	1433	0	1	809	45	0	0	0	40	0	105
Number	5	2	12	1	6	16	3	8	18	7	4	14
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		0.98
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1900	1863	1863	1900	1863	1863	1900	1900	1863	1900
Adj Flow Rate, veh/h	121	1592	0	1	899	50	0	0	0	44	0	117
Adj No. of Lanes	1	2	0	1	2	0	1	1	0	0	1	0
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	157	2157	0	3	1780	99	116	256	0	117	15	154
Arrive On Green	0.09	0.61	0.00	0.00	0.52	0.52	0.00	0.00	0.00	0.14	0.00	0.14
Sat Flow, veh/h	1774	3632	0	1774	3409	190	1270	1863	0	310	112	1123
Grp Volume(v), veh/h	121	1592	0	1	467	482	0	0	0	161	0	0
Grp Sat Flow(s),veh/h/ln	1774	1770	0	1774	1770	1829	1270	1863	0	1545	0	0
Q Serve(g_s), s	4.1	19.8	0.0	0.0	10.6	10.6	0.0	0.0	0.0	4.0	0.0	0.0
Cycle Q Clear(g_c), s	4.1	19.8	0.0	0.0	10.6	10.6	0.0	0.0	0.0	6.2	0.0	0.0
Prop In Lane	1.00		0.00	1.00		0.10	1.00		0.00	0.27		0.73
Lane Grp Cap(c), veh/h	157	2157	0	3	924	955	116	256	0	286	0	0
V/C Ratio(X)	0.77	0.74	0.00	0.35	0.51	0.51	0.00	0.00	0.00	0.56	0.00	0.00
Avail Cap(c_a), veh/h	344	2426	0	115	1013	1047	529	861	0	764	0	0
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	0.00	1.00	1.00	1.00	0.00	0.00	0.00	1.00	0.00	0.00
Uniform Delay (d), s/veh	27.6	8.6	0.0	30.9	9.6	9.6	0.0	0.0	0.0	25.6	0.0	0.0
Incr Delay (d2), s/veh	7.8	1.1	0.0	60.2	0.4	0.4	0.0	0.0	0.0	1.7	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.4	9.8	0.0	0.1	5.2	5.3	0.0	0.0	0.0	2.8	0.0	0.0
LnGrp Delay(d),s/veh	35.4	9.7	0.0	91.1	10.0	10.0	0.0	0.0	0.0	27.4	0.0	0.0
LnGrp LOS	D	A		F	B	B				C		
Approach Vol, veh/h		1713			950			0				161
Approach Delay, s/veh		11.5			10.1			0.0				27.4
Approach LOS		B			B							C
Timer	1	2	3	4	5	6	7	8				
Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	4.1	44.7		13.1	9.5	39.3		13.1				
Change Period (Y+Rc), s	4.0	7.0		4.6	4.0	* 7		* 4.6				
Max Green Setting (Gmax), s	4.0	42.4		28.0	12.0	* 35		* 29				
Max Q Clear Time (g_c+I1), s	2.0	21.8		8.2	6.1	12.6		0.0				
Green Ext Time (p_c), s	0.0	15.9		0.9	0.1	17.2		0.0				
Intersection Summary												
HCM 2010 Ctrl Delay				11.9								
HCM 2010 LOS				B								
Notes												

HCM 2010 Signalized Intersection Summary



















4: West Bernardo Dr & Rancho Bernardo Rd

3/24/2016

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	 	 		 	 		 	 		 		
Traffic Volume (veh/h)	154	1374	21	132	829	477	111	318	527	325	64	65
Future Volume (veh/h)	154	1374	21	132	829	477	111	318	527	325	64	65
Number	5	2	12	1	6	16	3	8	18	7	4	14
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1900	1863	1863	1863	1863	1863	1863	1863	1863	1900
Adj Flow Rate, veh/h	157	1402	21	135	846	487	113	324	538	332	65	66
Adj No. of Lanes	2	3	0	2	2	1	2	2	1	2	2	0
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	219	1707	26	359	1363	608	185	871	553	420	556	498
Arrive On Green	0.06	0.33	0.33	0.10	0.39	0.39	0.05	0.25	0.25	0.12	0.31	0.31
Sat Flow, veh/h	3442	5162	77	3442	3539	1580	3442	3539	1578	3442	1770	1583
Grp Volume(v), veh/h	157	921	502	135	846	487	113	324	538	332	65	66
Grp Sat Flow(s),veh/h/ln	1721	1695	1849	1721	1770	1580	1721	1770	1578	1721	1770	1583
Q Serve(g_s), s	4.9	27.1	27.1	4.0	21.0	29.8	3.5	8.3	19.4	10.2	2.8	3.2
Cycle Q Clear(g_c), s	4.9	27.1	27.1	4.0	21.0	29.8	3.5	8.3	19.4	10.2	2.8	3.2
Prop In Lane	1.00		0.04	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	219	1121	611	359	1363	608	185	871	553	420	556	498
V/C Ratio(X)	0.72	0.82	0.82	0.38	0.62	0.80	0.61	0.37	0.97	0.79	0.12	0.13
Avail Cap(c_a), veh/h	291	1251	682	494	1521	679	1080	1273	733	953	572	511
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	49.9	33.4	33.4	45.4	27.0	29.7	50.3	34.0	19.3	46.4	26.5	26.6
Incr Delay (d2), s/veh	5.6	4.1	7.3	0.7	0.7	6.2	3.2	0.3	23.3	3.4	0.1	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.5	13.3	15.0	1.9	10.3	14.0	1.7	4.1	15.7	5.0	1.4	1.4
LnGrp Delay(d),s/veh	55.5	37.5	40.7	46.0	27.6	35.9	53.5	34.3	42.5	49.7	26.6	26.8
LnGrp LOS	E	D	D	D	C	D	D	C	D	D	C	C
Approach Vol, veh/h		1580			1468			975			463	
Approach Delay, s/veh		40.3			32.1			41.1			43.2	
Approach LOS		D			C			D			D	
Timer	1	2	3	4	5	6	7	8				
Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	17.0	41.8	10.2	39.6	11.3	47.6	17.7	32.2				
Change Period (Y+Rc), s	5.7	* 5.9	4.4	5.4	4.4	5.7	4.4	5.4				
Max Green Setting (Gmax), s	15.6	* 40	34.1	35.1	9.2	46.7	30.1	39.1				
Max Q Clear Time (g_c+I1), s	6.0	29.1	5.5	5.2	6.9	31.8	12.2	21.4				
Green Ext Time (p_c), s	5.5	6.8	0.3	5.6	0.1	7.4	1.1	4.9				
Intersection Summary												
HCM 2010 Ctrl Delay			38.1									
HCM 2010 LOS			D									
Notes												



















HCM 2010 Signalized Intersection Summary
 5: I-15 SB Ramps & Rancho Bernardo Rd

3/24/2016

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	1452	775	0	1005	559	0	0	0	409	0	373
Future Volume (veh/h)	0	1452	775	0	1005	559	0	0	0	409	0	373
Number	5	2	12	1	6	16				7	4	14
Initial Q (Qb), veh	0	0	0	0	0	0				0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00				1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00				1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	0	1863	1863	0	1863	1863				1863	0	1863
Adj Flow Rate, veh/h	0	1853	580	0	1047	0				426	0	389
Adj No. of Lanes	0	3	1	0	3	1				2	0	2
Peak Hour Factor	0.92	0.96	0.96	0.92	0.96	0.96				0.96	0.92	0.96
Percent Heavy Veh, %	0	2	2	0	2	2				2	0	2
Cap, veh/h	0	4149	1175	0	4149	1175				579	0	469
Arrive On Green	0.00	0.74	0.74	0.00	1.00	0.00				0.17	0.00	0.17
Sat Flow, veh/h	0	5588	1583	0	5588	1583				3442	0	2787
Grp Volume(v), veh/h	0	1853	580	0	1047	0				426	0	389
Grp Sat Flow(s),veh/h/ln	0	1863	1583	0	1863	1583				1721	0	1393
Q Serve(g_s), s	0.0	17.9	20.8	0.0	0.0	0.0				16.4	0.0	18.9
Cycle Q Clear(g_c), s	0.0	17.9	20.8	0.0	0.0	0.0				16.4	0.0	18.9
Prop In Lane	0.00		1.00	0.00		1.00				1.00		1.00
Lane Grp Cap(c), veh/h	0	4149	1175	0	4149	1175				579	0	469
V/C Ratio(X)	0.00	0.45	0.49	0.00	0.25	0.00				0.74	0.00	0.83
Avail Cap(c_a), veh/h	0	4149	1175	0	4149	1175				809	0	655
HCM Platoon Ratio	1.00	1.00	1.00	1.00	2.00	2.00				1.00	1.00	1.00
Upstream Filter(I)	0.00	0.50	0.50	0.00	0.87	0.00				1.00	0.00	1.00
Uniform Delay (d), s/veh	0.0	6.9	7.3	0.0	0.0	0.0				55.3	0.0	56.3
Incr Delay (d2), s/veh	0.0	0.2	0.7	0.0	0.1	0.0				2.2	0.0	6.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0				0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.0	9.2	9.3	0.0	0.0	0.0				8.0	0.0	7.7
LnGrp Delay(d),s/veh	0.0	7.1	8.1	0.0	0.1	0.0				57.5	0.0	62.5
LnGrp LOS		A	A		A					E		E
Approach Vol, veh/h		2433			1047						815	
Approach Delay, s/veh		7.3			0.1						59.9	
Approach LOS		A			A						E	
Timer	1	2	3	4	5	6	7	8				
Assigned Phs		2		4		6						
Phs Duration (G+Y+Rc), s		110.3		29.7		110.3						
Change Period (Y+Rc), s		6.4		6.1		6.4						
Max Green Setting (Gmax), s		94.6		32.9		94.6						
Max Q Clear Time (g_c+I1), s		22.8		20.9		2.0						
Green Ext Time (p_c), s		54.3		2.7		65.2						
Intersection Summary												
HCM 2010 Ctrl Delay			15.6									
HCM 2010 LOS			B									
Notes												























HCM 2010 Signalized Intersection Summary
 6: I-15 NB Ramps & Rancho Bernardo Rd

3/24/2016

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	850	1011	0	957	487	607	0	432	0	0	0
Future Volume (veh/h)	0	850	1011	0	957	487	607	0	432	0	0	0
Number	5	2	12	1	6	16	3	8	18			
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0			
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00			
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00			
Adj Sat Flow, veh/h/ln	0	1863	1863	0	1863	1863	1863	0	1863			
Adj Flow Rate, veh/h	0	904	0	0	1018	518	646	0	460			
Adj No. of Lanes	0	3	1	0	3	1	2	0	2			
Peak Hour Factor	0.92	0.94	0.94	0.92	0.94	0.94	0.94	0.92	0.94			
Percent Heavy Veh, %	0	2	2	0	2	2	2	0	2			
Cap, veh/h	0	3826	1084	0	3481	1084	778	0	630			
Arrive On Green	0.00	1.00	0.00	0.00	0.68	0.68	0.23	0.00	0.23			
Sat Flow, veh/h	0	5588	1583	0	5253	1583	3442	0	2787			
Grp Volume(v), veh/h	0	904	0	0	1018	518	646	0	460			
Grp Sat Flow(s),veh/h/ln	0	1863	1583	0	1695	1583	1721	0	1393			
Q Serve(g_s), s	0.0	0.0	0.0	0.0	11.1	21.5	25.0	0.0	21.4			
Cycle Q Clear(g_c), s	0.0	0.0	0.0	0.0	11.1	21.5	25.0	0.0	21.4			
Prop In Lane	0.00		1.00	0.00		1.00	1.00		1.00			
Lane Grp Cap(c), veh/h	0	3826	1084	0	3481	1084	778	0	630			
V/C Ratio(X)	0.00	0.24	0.00	0.00	0.29	0.48	0.83	0.00	0.73			
Avail Cap(c_a), veh/h	0	3826	1084	0	3481	1084	1227	0	993			
HCM Platoon Ratio	1.00	1.67	1.67	1.00	1.00	1.00	1.00	1.00	1.00			
Upstream Filter(I)	0.00	0.81	0.00	0.00	1.00	1.00	1.00	0.00	1.00			
Uniform Delay (d), s/veh	0.0	0.0	0.0	0.0	8.7	10.3	51.6	0.0	50.2			
Incr Delay (d2), s/veh	0.0	0.1	0.0	0.0	0.2	1.5	2.8	0.0	1.6			
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0			
%ile BackOfQ(50%),veh/ln	0.0	0.0	0.0	0.0	5.3	9.8	12.2	0.0	8.4			
LnGrp Delay(d),s/veh	0.0	0.1	0.0	0.0	8.9	11.9	54.4	0.0	51.9			
LnGrp LOS		A			A	B	D		D			
Approach Vol, veh/h		904			1536			1106				
Approach Delay, s/veh		0.1			9.9			53.4				
Approach LOS		A			A			D				
Timer	1	2	3	4	5	6	7	8				
Assigned Phs		2				6		8				
Phs Duration (G+Y+Rc), s		102.2				102.2		37.8				
Change Period (Y+Rc), s		6.4				6.4		6.1				
Max Green Setting (Gmax), s		77.6				77.6		49.9				
Max Q Clear Time (g_c+I1), s		2.0				23.5		27.0				
Green Ext Time (p_c), s		30.2				26.7		4.6				
Intersection Summary												
HCM 2010 Ctrl Delay			21.0									
HCM 2010 LOS			C									
Notes												






















HCM 2010 Signalized Intersection Summary
 7: Bernardo Center Dr & Rancho Bernardo Rd

3/24/2016

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	246	640	295	123	608	145	430	465	247	173	276	97
Future Volume (veh/h)	246	640	295	123	608	145	430	465	247	173	276	97
Number	5	2	12	1	6	16	3	8	18	7	4	14
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.99	1.00		0.99	1.00		1.00	1.00		0.98
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1863	1863	1863	1900	1863	1863	1900	1863	1863	1863
Adj Flow Rate, veh/h	259	674	311	129	640	153	453	489	260	182	291	102
Adj No. of Lanes	2	2	1	2	2	0	2	2	0	2	2	1
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	334	1284	539	195	868	207	534	669	354	257	775	488
Arrive On Green	0.09	0.34	0.34	0.06	0.31	0.31	0.16	0.30	0.30	0.07	0.22	0.22
Sat Flow, veh/h	3548	3725	1563	3442	2827	675	3442	2236	1183	3442	3539	1549
Grp Volume(v), veh/h	259	674	311	129	400	393	453	386	363	182	291	102
Grp Sat Flow(s),veh/h/ln	1774	1863	1563	1721	1770	1733	1721	1770	1650	1721	1770	1549
Q Serve(g_s), s	6.6	13.5	15.1	3.4	18.8	18.9	11.9	18.2	18.4	4.8	6.5	4.5
Cycle Q Clear(g_c), s	6.6	13.5	15.1	3.4	18.8	18.9	11.9	18.2	18.4	4.8	6.5	4.5
Prop In Lane	1.00		1.00	1.00		0.39	1.00		0.72	1.00		1.00
Lane Grp Cap(c), veh/h	334	1284	539	195	543	532	534	530	494	257	775	488
V/C Ratio(X)	0.78	0.52	0.58	0.66	0.74	0.74	0.85	0.73	0.73	0.71	0.38	0.21
Avail Cap(c_a), veh/h	385	1417	595	255	630	616	621	875	816	422	1521	815
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	41.2	24.4	24.9	43.0	28.9	28.9	38.3	29.2	29.3	42.0	30.9	23.5
Incr Delay (d2), s/veh	8.4	0.3	1.1	4.0	3.8	4.0	9.6	2.0	2.1	3.6	0.3	0.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	3.6	7.0	6.6	1.7	9.8	9.6	6.4	9.2	8.7	2.4	3.2	2.0
LnGrp Delay(d),s/veh	49.5	24.7	26.1	47.0	32.7	32.9	47.8	31.2	31.4	45.6	31.2	23.7
LnGrp LOS	D	C	C	D	C	C	D	C	C	D	C	C
Approach Vol, veh/h		1244			922			1202			575	
Approach Delay, s/veh		30.2			34.8			37.5			34.4	
Approach LOS		C			C			D			C	
Timer	1	2	3	4	5	6	7	8				
Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	9.7	38.3	18.8	26.3	13.2	34.8	11.4	33.8				
Change Period (Y+Rc), s	4.4	6.2	4.4	5.9	4.4	* 6.2	4.4	* 5.9				
Max Green Setting (Gmax), s	6.9	35.4	16.8	40.0	10.1	* 33	11.4	* 46				
Max Q Clear Time (g_c+I1), s	5.4	17.1	13.9	8.5	8.6	20.9	6.8	20.4				
Green Ext Time (p_c), s	0.0	10.0	0.5	7.7	0.1	7.7	0.2	7.3				
Intersection Summary												
HCM 2010 Ctrl Delay			34.1									
HCM 2010 LOS			C									
Notes												

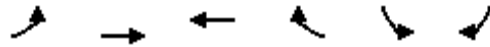
HCM 2010 Signalized Intersection Summary
 8: West Bernardo Dr & Duenda Rd

3/24/2016

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	21	131	130	73	70	63	66	147	90	106	201	12
Future Volume (veh/h)	21	131	130	73	70	63	66	147	90	106	201	12
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.98	1.00		1.00	1.00		1.00	1.00		0.98
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1900	1863	1863	1863	1863	1863	1900	1863	1863	1900
Adj Flow Rate, veh/h	24	147	146	82	79	71	74	165	101	119	226	13
Adj No. of Lanes	1	1	0	1	1	1	1	2	0	1	2	0
Peak Hour Factor	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	414	198	197	169	177	151	93	350	203	155	670	38
Arrive On Green	0.23	0.23	0.23	0.10	0.10	0.10	0.05	0.16	0.16	0.09	0.20	0.20
Sat Flow, veh/h	1774	851	846	1774	1863	1583	1774	2158	1253	1774	3399	194
Grp Volume(v), veh/h	24	0	293	82	79	71	74	134	132	119	117	122
Grp Sat Flow(s),veh/h/ln	1774	0	1697	1774	1863	1583	1774	1770	1642	1774	1770	1823
Q Serve(g_s), s	0.5	0.0	7.6	2.1	1.9	2.0	2.0	3.2	3.5	3.1	2.7	2.7
Cycle Q Clear(g_c), s	0.5	0.0	7.6	2.1	1.9	2.0	2.0	3.2	3.5	3.1	2.7	2.7
Prop In Lane	1.00		0.50	1.00		1.00	1.00		0.76	1.00		0.11
Lane Grp Cap(c), veh/h	414	0	396	169	177	151	93	287	266	155	349	360
V/C Ratio(X)	0.06	0.00	0.74	0.49	0.45	0.47	0.79	0.47	0.50	0.77	0.34	0.34
Avail Cap(c_a), veh/h	823	0	787	674	707	601	337	672	623	449	784	808
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	14.1	0.0	16.9	20.3	20.3	20.3	22.2	18.0	18.1	21.2	16.4	16.4
Incr Delay (d2), s/veh	0.1	0.0	2.7	2.2	1.7	2.3	13.9	1.2	1.4	7.6	0.6	0.6
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.2	0.0	3.8	1.1	1.1	1.0	1.3	1.7	1.7	1.9	1.4	1.4
LnGrp Delay(d),s/veh	14.2	0.0	19.6	22.5	22.0	22.6	36.1	19.2	19.5	28.8	16.9	16.9
LnGrp LOS	B		B	C	C	C	D	B	B	C	B	B
Approach Vol, veh/h		317			232			340			358	
Approach Delay, s/veh		19.2			22.4			23.0			20.9	
Approach LOS		B			C			C			C	
Timer	1	2	3	4	5	6	7	8				
Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	9.2	12.7		16.1	7.5	14.3		9.5				
Change Period (Y+Rc), s	5.0	5.0		5.0	5.0	5.0		5.0				
Max Green Setting (Gmax), s	12.0	18.0		22.0	9.0	21.0		18.0				
Max Q Clear Time (g_c+I1), s	5.1	5.5		9.6	4.0	4.7		4.1				
Green Ext Time (p_c), s	0.1	2.2		1.5	0.1	2.5		0.7				
Intersection Summary												
HCM 2010 Ctrl Delay			21.3									
HCM 2010 LOS			C									

HCM 2010 Signalized Intersection Summary
 9: West Bernardo Dr & Via Del Campo

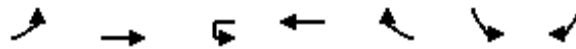
3/24/2016



Movement	EBL	EBT	WBT	WBR	SBL	SBR		
Lane Configurations								
Traffic Volume (veh/h)	32	395	426	38	148	346		
Future Volume (veh/h)	32	395	426	38	148	346		
Number	5	2	6	16	7	14		
Initial Q (Qb), veh	0	0	0	0	0	0		
Ped-Bike Adj(A_pbT)	1.00			1.00	1.00	1.00		
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00		
Adj Sat Flow, veh/h/ln	1863	1863	1863	1900	1863	1863		
Adj Flow Rate, veh/h	37	459	495	44	172	402		
Adj No. of Lanes	1	2	2	0	1	1		
Peak Hour Factor	0.86	0.86	0.86	0.86	0.86	0.86		
Percent Heavy Veh, %	2	2	2	2	2	2		
Cap, veh/h	50	2056	1633	145	513	458		
Arrive On Green	0.03	0.58	0.50	0.50	0.29	0.29		
Sat Flow, veh/h	1774	3632	3383	292	1774	1583		
Grp Volume(v), veh/h	37	459	266	273	172	402		
Grp Sat Flow(s),veh/h/ln	1774	1770	1770	1811	1774	1583		
Q Serve(g_s), s	1.6	4.9	7.0	7.0	6.0	19.0		
Cycle Q Clear(g_c), s	1.6	4.9	7.0	7.0	6.0	19.0		
Prop In Lane	1.00			0.16	1.00	1.00		
Lane Grp Cap(c), veh/h	50	2056	878	899	513	458		
V/C Ratio(X)	0.74	0.22	0.30	0.30	0.34	0.88		
Avail Cap(c_a), veh/h	263	2056	878	899	777	693		
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00		
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00		
Uniform Delay (d), s/veh	37.8	7.9	11.7	11.7	21.9	26.5		
Incr Delay (d2), s/veh	18.9	0.3	0.9	0.9	0.4	8.4		
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0		
%ile BackOfQ(50%),veh/ln	1.1	2.4	3.6	3.7	3.0	16.0		
LnGrp Delay(d),s/veh	56.7	8.2	12.6	12.6	22.3	35.0		
LnGrp LOS	E	A	B	B	C	C		
Approach Vol, veh/h		496	539		574			
Approach Delay, s/veh		11.8	12.6		31.2			
Approach LOS		B	B		C			
Timer	1	2	3	4	5	6	7	8
Assigned Phs		2		4	5	6		
Phs Duration (G+Y+Rc), s		51.0		27.3	6.6	44.4		
Change Period (Y+Rc), s		5.5		* 4.7	4.4	5.5		
Max Green Setting (Gmax), s		45.5		* 34	11.6	29.5		
Max Q Clear Time (g_c+I1), s		6.9		21.0	3.6	9.0		
Green Ext Time (p_c), s		7.0		1.7	0.0	6.0		
Intersection Summary								
HCM 2010 Ctrl Delay			19.0					
HCM 2010 LOS			B					
Notes								

HCM 2010 Signalized Intersection Summary
 10: Bernardo Center Dr & West Bernardo Dr

3/24/2016



Movement	EBL	EBT	WBU	WBT	WBR	SBL	SBR	
Lane Configurations								
Traffic Volume (veh/h)	408	385	0	369	349	329	469	
Future Volume (veh/h)	408	385	0	369	349	329	469	
Number	1	6		2	12	3	18	
Initial Q (Qb), veh	0	0		0	0	0	0	
Ped-Bike Adj(A_pbT)	1.00				1.00	1.00	1.00	
Parking Bus, Adj	1.00	1.00		1.00	1.00	1.00	1.00	
Adj Sat Flow, veh/h/ln	1863	1863		1863	1863	1863	1863	
Adj Flow Rate, veh/h	434	410		393	371	350	499	
Adj No. of Lanes	2	2		1	2	1	1	
Peak Hour Factor	0.94	0.94		0.94	0.94	0.94	0.94	
Percent Heavy Veh, %	2	2		2	2	2	2	
Cap, veh/h	579	1937		588	1742	550	757	
Arrive On Green	0.17	0.55		0.32	0.32	0.31	0.31	
Sat Flow, veh/h	3442	3632		1863	2782	1774	1583	
Grp Volume(v), veh/h	434	410		393	371	350	499	
Grp Sat Flow(s),veh/h/ln	1721	1770		1863	1391	1774	1583	
Q Serve(g_s), s	8.3	4.1		12.7	4.0	11.8	16.6	
Cycle Q Clear(g_c), s	8.3	4.1		12.7	4.0	11.8	16.6	
Prop In Lane	1.00				1.00	1.00	1.00	
Lane Grp Cap(c), veh/h	579	1937		588	1742	550	757	
V/C Ratio(X)	0.75	0.21		0.67	0.21	0.64	0.66	
Avail Cap(c_a), veh/h	1271	3303		1142	2569	962	1125	
HCM Platoon Ratio	1.00	1.00		1.00	1.00	1.00	1.00	
Upstream Filter(I)	1.00	1.00		1.00	1.00	1.00	1.00	
Uniform Delay (d), s/veh	27.4	8.0		20.6	5.6	20.6	13.8	
Incr Delay (d2), s/veh	2.0	0.1		1.3	0.1	1.2	1.0	
Initial Q Delay(d3),s/veh	0.0	0.0		0.0	0.0	0.0	0.0	
%ile BackOfQ(50%),veh/ln	4.1	2.0		6.7	1.5	5.9	7.4	
LnGrp Delay(d),s/veh	29.4	8.1		21.9	5.7	21.8	14.8	
LnGrp LOS	C	A		C	A	C	B	
Approach Vol, veh/h		844		764		849		
Approach Delay, s/veh		19.1		14.0		17.7		
Approach LOS		B		B		B		
Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2				6		8
Phs Duration (G+Y+Rc), s	16.1	27.4				43.4		25.9
Change Period (Y+Rc), s	4.4	5.5				* 5.5		4.4
Max Green Setting (Gmax), s	25.6	42.5				* 65		37.6
Max Q Clear Time (g_c+I1), s	10.3	14.7				6.1		18.6
Green Ext Time (p_c), s	1.3	7.1				7.8		2.8
Intersection Summary								
HCM 2010 Ctrl Delay				17.0				
HCM 2010 LOS				B				
Notes								

APPENDIX D

SANDAG SELECT ZONE ASSIGNMENT & YEAR 2035 TRAFFIC VOLUMES AND LAND USE DATA

SANDAG
Series 11 2030re

Select Zone Plot
TAZ 1471

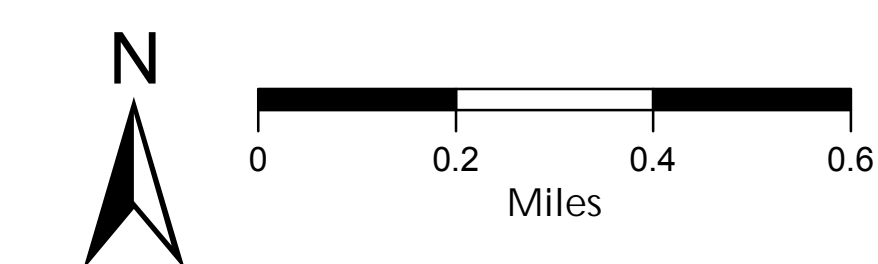
 Traffic Analysis Zones

Selz Volumes & Percentage

Unadjusted ADT(x1000)

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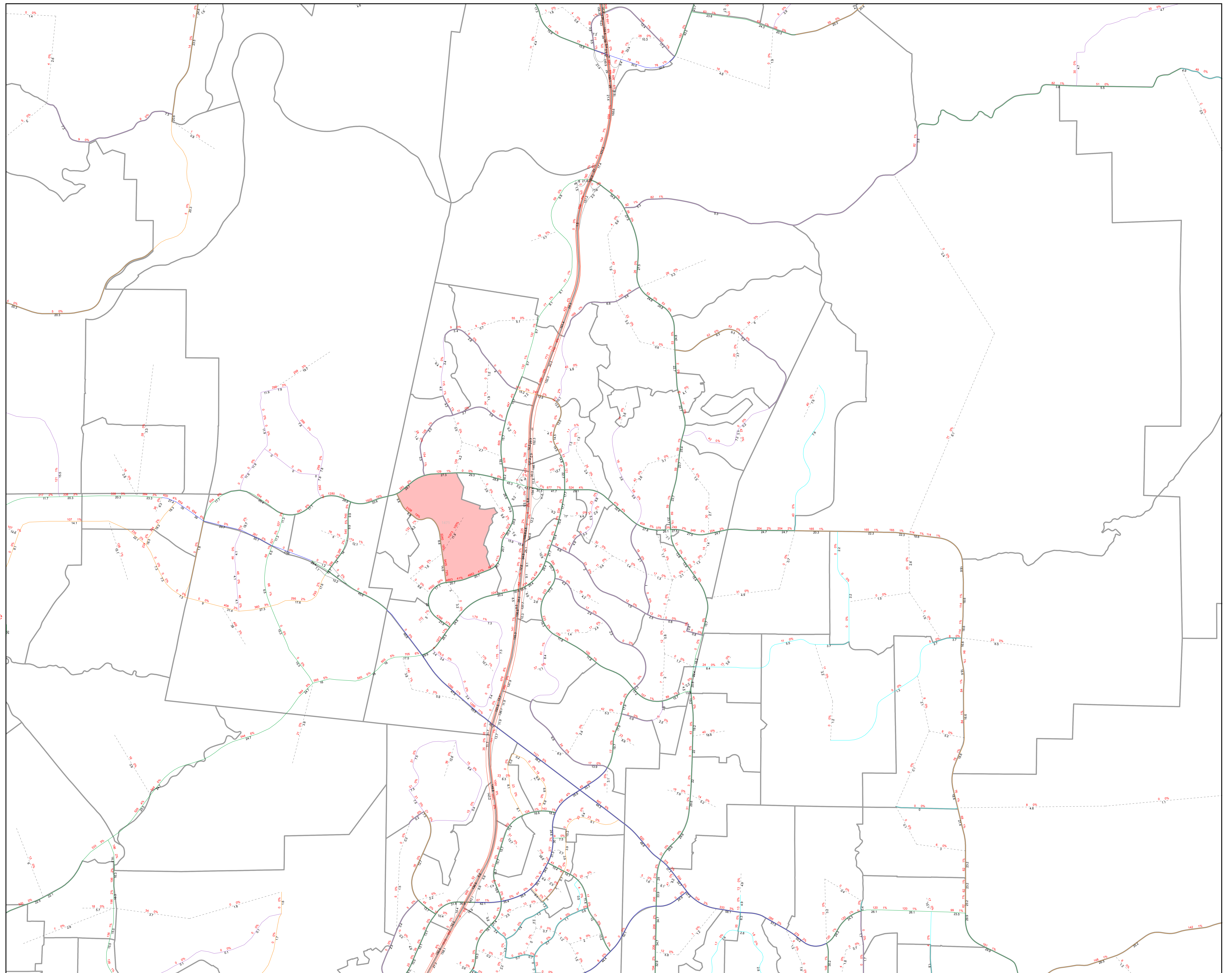
SAN DIEGO ASSOCIATION OF GOVERNMENTS
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SANDAG

 servicebureau

Date: August 9, 2012





Final 2050 Regional Transportation Plan
San Diego Regional Traffic Forecast Information Center
Trip Generation and Land Use by Zone - Year: 2035
Traffic Analysis Zone: 1,575

Land Use Code	Description	Type	Amount	Person Trips	Vehicle Trips
1501	LOW-RISE HOTEL OR MOTEL	acre	3.7	1,381	863
2101	INDUSTRIAL PARK	acre	21.3	3,203	2,645
2103	LIGHT INDUSTRY	acre	0	0	0
4112	RIGHT-OF-WAY	acre	14.9	0	0
5008	SERVICE STATION	acre	0	0	0
6002	LOW RISE OFFICE	acre	61.2	18,475	14,271
6509	OTHER HEALTH CARE	acre	5	2,326	1,717
9101	INACTIVE USE	acre	27	0	0
TOTAL				25,385	19,496
LOADED VEHICLE TRIPS					19,481

Disclaimer: Reported person and vehicle trips are only estimates. The difference between estimated and loaded vehicle trips can be attributed to regional trip balancing, the mode choice model, and / or intrazonal trips.




















Source: San Diego Association of Governments Traffic Forecast, October 2011

APPENDIX E

PEAK HOUR INTERSECTION ANALYSIS WORKSHEETS OPENING DAY WITHOUT PROJECT

HCM 2010 Signalized Intersection Summary
 1: Camino San Bernardo & Rancho Bernardo Rd




















3/24/2016

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	907	171	401	721	1	37	0	178	4	0	0
Future Volume (veh/h)	0	907	171	401	721	1	37	0	178	4	0	0
Number	5	2	12	1	6	16	3	8	18	7	4	14
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.98	1.00		1.00	1.00		0.98	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1900	1863	1863	1900	1863	1863	1900	1900	1863	1900
Adj Flow Rate, veh/h	0	986	186	436	784	1	40	0	193	4	0	0
Adj No. of Lanes	1	2	0	2	2	0	1	2	0	0	1	0
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	3	1272	240	551	2392	3	395	300	264	173	0	0
Arrive On Green	0.00	0.43	0.43	0.16	0.66	0.66	0.17	0.00	0.17	0.17	0.00	0.00
Sat Flow, veh/h	1774	2965	558	3442	3627	5	1412	1770	1557	362	0	0
Grp Volume(v), veh/h	0	588	584	436	383	402	40	0	193	4	0	0
Grp Sat Flow(s),veh/h/ln	1774	1770	1754	1721	1770	1862	1412	1770	1557	362	0	0
Q Serve(g_s), s	0.0	18.2	18.3	7.8	6.0	6.0	0.0	0.0	7.5	0.2	0.0	0.0
Cycle Q Clear(g_c), s	0.0	18.2	18.3	7.8	6.0	6.0	1.2	0.0	7.5	7.8	0.0	0.0
Prop In Lane	1.00		0.32	1.00		0.00	1.00		1.00	1.00		0.00
Lane Grp Cap(c), veh/h	3	759	753	551	1167	1228	395	300	264	173	0	0
V/C Ratio(X)	0.00	0.77	0.78	0.79	0.33	0.33	0.10	0.00	0.73	0.02	0.00	0.00
Avail Cap(c_a), veh/h	138	904	896	681	1167	1228	793	799	703	508	0	0
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00	0.00
Uniform Delay (d), s/veh	0.0	15.7	15.7	25.9	4.8	4.8	22.7	0.0	25.3	29.0	0.0	0.0
Incr Delay (d2), s/veh	0.0	3.6	3.6	5.1	0.2	0.2	0.1	0.0	3.9	0.1	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.0	9.6	9.5	4.1	2.9	3.1	0.6	0.0	3.5	0.1	0.0	0.0
LnGrp Delay(d),s/veh	0.0	19.2	19.3	31.0	4.9	4.9	22.8	0.0	29.2	29.0	0.0	0.0
LnGrp LOS		B	B	C	A	A	C		C	C		
Approach Vol, veh/h		1172			1221			233				4
Approach Delay, s/veh		19.3			14.2			28.1				29.0
Approach LOS		B			B			C				C
Timer	1	2	3	4	5	6	7	8				
Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	14.8	33.6		15.9	0.0	48.4		15.9				
Change Period (Y+Rc), s	4.5	6.0		5.0	4.5	6.0		5.0				
Max Green Setting (Gmax), s	12.7	32.8		29.0	5.0	40.5		29.0				
Max Q Clear Time (g_c+I1), s	9.8	20.3		9.8	0.0	8.0		9.5				
Green Ext Time (p_c), s	0.5	7.2		1.1	0.0	15.0		1.1				
Intersection Summary												
HCM 2010 Ctrl Delay				17.7								
HCM 2010 LOS				B								

HCM 2010 Signalized Intersection Summary





















2: Via Del Campo & Rancho Bernardo Rd

3/24/2016

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	4	900	302	596	1238	0	59	0	17	1	0	0
Future Volume (veh/h)	4	900	302	596	1238	0	59	0	17	1	0	0
Number	5	2	12	1	6	16	3	8	18	7	4	14
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.98	1.00		1.00	1.00		0.98	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1900	1863	1863	1900	1900	1863	1863	1900	1863	1900
Adj Flow Rate, veh/h	4	1011	339	670	1391	0	66	0	19	1	0	0
Adj No. of Lanes	1	2	0	1	2	0	0	1	1	0	1	0
Peak Hour Factor	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	7	1076	357	645	2740	0	172	0	92	107	0	0
Arrive On Green	0.00	0.41	0.41	0.36	0.77	0.00	0.06	0.00	0.06	0.06	0.00	0.00
Sat Flow, veh/h	1774	2595	862	1774	3632	0	1635	0	1558	526	0	0
Grp Volume(v), veh/h	4	686	664	670	1391	0	66	0	19	1	0	0
Grp Sat Flow(s),veh/h/ln	1774	1770	1687	1774	1770	0	1635	0	1558	526	0	0
Q Serve(g_s), s	0.2	35.3	36.1	34.6	13.9	0.0	0.0	0.0	1.1	0.1	0.0	0.0
Cycle Q Clear(g_c), s	0.2	35.3	36.1	34.6	13.9	0.0	3.5	0.0	1.1	3.5	0.0	0.0
Prop In Lane	1.00		0.51	1.00		0.00	1.00		1.00	1.00		0.00
Lane Grp Cap(c), veh/h	7	734	699	645	2740	0	172	0	92	107	0	0
V/C Ratio(X)	0.53	0.94	0.95	1.04	0.51	0.00	0.38	0.00	0.21	0.01	0.00	0.00
Avail Cap(c_a), veh/h	75	761	725	645	2740	0	518	0	475	452	0	0
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	0.00	1.00	0.00	1.00	1.00	0.00	0.00
Uniform Delay (d), s/veh	47.3	26.6	26.9	30.3	4.0	0.0	43.8	0.0	42.7	45.5	0.0	0.0
Incr Delay (d2), s/veh	48.5	18.4	21.4	45.8	0.2	0.0	1.4	0.0	1.1	0.0	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.2	20.9	20.9	25.0	6.6	0.0	1.8	0.0	0.5	0.0	0.0	0.0
LnGrp Delay(d),s/veh	95.8	45.0	48.3	76.0	4.2	0.0	45.2	0.0	43.8	45.5	0.0	0.0
LnGrp LOS	F	D	D	F	A		D		D	D		
Approach Vol, veh/h		1354			2061			85				1
Approach Delay, s/veh		46.8			27.5			44.9				45.5
Approach LOS		D			C			D				D
Timer	1	2	3	4	5	6	7	8				
Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	39.0	45.3		10.8	4.8	79.5		10.8				
Change Period (Y+Rc), s	4.4	5.9		* 5.2	4.4	* 5.9		5.2				
Max Green Setting (Gmax), s	34.6	40.9		* 29	4.0	* 72		29.0				
Max Q Clear Time (g_c+I1), s	36.6	38.1		5.5	2.2	15.9		5.5				
Green Ext Time (p_c), s	0.0	1.3		0.3	0.0	34.8		0.3				
Intersection Summary												
HCM 2010 Ctrl Delay				35.4								
HCM 2010 LOS				D								
Notes												

HCM 2010 Signalized Intersection Summary
 3: Project Dwy/Matinal Rd & Rancho Bernardo Rd
























3/24/2016

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	33	784	0	0	1602	17	0	0	0	84	0	141
Future Volume (veh/h)	33	784	0	0	1602	17	0	0	0	84	0	141
Number	5	2	12	1	6	16	3	8	18	7	4	14
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		0.98
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1900	1863	1863	1900	1863	1863	1900	1900	1863	1900
Adj Flow Rate, veh/h	38	901	0	0	1841	20	0	0	0	97	0	162
Adj No. of Lanes	1	2	0	1	2	0	1	1	0	0	1	0
Peak Hour Factor	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	48	2456	0	2	2255	24	69	363	0	147	11	185
Arrive On Green	0.03	0.69	0.00	0.00	0.63	0.63	0.00	0.00	0.00	0.19	0.00	0.19
Sat Flow, veh/h	1774	3632	0	1774	3587	39	1219	1863	0	509	58	948
Grp Volume(v), veh/h	38	901	0	0	907	954	0	0	0	259	0	0
Grp Sat Flow(s),veh/h/ln	1774	1770	0	1774	1770	1856	1219	1863	0	1515	0	0
Q Serve(g_s), s	2.2	10.9	0.0	0.0	40.8	41.1	0.0	0.0	0.0	15.4	0.0	0.0
Cycle Q Clear(g_c), s	2.2	10.9	0.0	0.0	40.8	41.1	0.0	0.0	0.0	17.3	0.0	0.0
Prop In Lane	1.00		0.00	1.00		0.02	1.00		0.00	0.37		0.63
Lane Grp Cap(c), veh/h	48	2456	0	2	1113	1167	69	363	0	343	0	0
V/C Ratio(X)	0.79	0.37	0.00	0.00	0.82	0.82	0.00	0.00	0.00	0.76	0.00	0.00
Avail Cap(c_a), veh/h	68	2456	0	68	1231	1291	173	522	0	462	0	0
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	0.00	0.00	1.00	1.00	0.00	0.00	0.00	1.00	0.00	0.00
Uniform Delay (d), s/veh	50.6	6.6	0.0	0.0	14.8	14.8	0.0	0.0	0.0	40.8	0.0	0.0
Incr Delay (d2), s/veh	32.9	0.1	0.0	0.0	4.0	3.9	0.0	0.0	0.0	4.8	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.5	5.3	0.0	0.0	20.9	21.9	0.0	0.0	0.0	7.7	0.0	0.0
LnGrp Delay(d),s/veh	83.5	6.7	0.0	0.0	18.8	18.7	0.0	0.0	0.0	45.6	0.0	0.0
LnGrp LOS	F	A			B	B				D		
Approach Vol, veh/h		939			1861			0				259
Approach Delay, s/veh		9.8			18.7			0.0				45.6
Approach LOS		A			B							D
Timer	1	2	3	4	5	6	7	8				
Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	0.0	79.6		25.0	6.8	72.7		25.0				
Change Period (Y+Rc), s	4.0	7.0		4.6	4.0	* 7		* 4.6				
Max Green Setting (Gmax), s	4.0	71.7		28.7	4.0	* 73		* 29				
Max Q Clear Time (g_c+I1), s	0.0	12.9		19.3	4.2	43.1		0.0				
Green Ext Time (p_c), s	0.0	37.3		1.1	0.0	22.7		0.0				
Intersection Summary												
HCM 2010 Ctrl Delay				18.3								
HCM 2010 LOS				B								
Notes												

HCM 2010 Signalized Intersection Summary



















4: West Bernardo Dr & Rancho Bernardo Rd

3/24/2016

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	42	635	76	566	1483	271	110	86	124	643	312	164
Future Volume (veh/h)	42	635	76	566	1483	271	110	86	124	643	312	164
Number	5	2	12	1	6	16	3	8	18	7	4	14
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		0.99	1.00		0.99	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1900	1863	1863	1863	1863	1863	1863	1863	1863	1900
Adj Flow Rate, veh/h	43	655	78	584	1529	279	113	89	128	663	322	169
Adj No. of Lanes	2	3	0	2	2	1	2	2	1	2	2	0
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	94	916	108	902	1585	700	188	393	588	765	630	323
Arrive On Green	0.03	0.20	0.20	0.26	0.45	0.45	0.05	0.11	0.11	0.22	0.28	0.28
Sat Flow, veh/h	3442	4613	544	3442	3539	1562	3442	3539	1561	3442	2261	1161
Grp Volume(v), veh/h	43	480	253	584	1529	279	113	89	128	663	250	241
Grp Sat Flow(s),veh/h/ln	1721	1695	1767	1721	1770	1562	1721	1770	1561	1721	1770	1652
Q Serve(g_s), s	1.3	13.7	13.9	15.7	43.6	12.5	3.3	2.4	2.5	19.3	12.4	12.8
Cycle Q Clear(g_c), s	1.3	13.7	13.9	15.7	43.6	12.5	3.3	2.4	2.5	19.3	12.4	12.8
Prop In Lane	1.00		0.31	1.00		1.00	1.00		1.00	1.00		0.70
Lane Grp Cap(c), veh/h	94	673	351	902	1585	700	188	393	588	765	493	460
V/C Ratio(X)	0.46	0.71	0.72	0.65	0.96	0.40	0.60	0.23	0.22	0.87	0.51	0.52
Avail Cap(c_a), veh/h	132	1145	597	902	1597	705	1129	1332	1002	997	598	558
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	49.8	38.9	39.0	34.1	27.9	19.3	48.0	42.1	7.7	38.9	31.5	31.7
Incr Delay (d2), s/veh	3.4	1.4	2.8	1.6	14.9	0.4	3.0	0.3	0.2	6.6	0.8	0.9
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.7	6.5	7.1	7.7	24.5	5.4	1.7	1.2	1.3	9.8	6.2	5.9
LnGrp Delay(d),s/veh	53.2	40.3	41.8	35.7	42.8	19.7	51.1	42.4	7.8	45.5	32.3	32.6
LnGrp LOS	D	D	D	D	D	B	D	D	A	D	C	C
Approach Vol, veh/h		776			2392			330			1154	
Approach Delay, s/veh		41.5			38.4			32.0			39.9	
Approach LOS		D			D			C			D	
Timer	1	2	3	4	5	6	7	8				
Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	32.9	26.5	10.1	34.4	7.2	52.2	27.5	16.9				
Change Period (Y+Rc), s	5.7	* 5.9	4.4	5.4	4.4	5.7	4.4	5.4				
Max Green Setting (Gmax), s	15.6	* 35	34.1	35.1	4.0	46.9	30.1	39.1				
Max Q Clear Time (g_c+I1), s	17.7	15.9	5.3	14.8	3.3	45.6	21.3	4.5				
Green Ext Time (p_c), s	0.0	4.7	0.4	4.0	0.0	0.9	1.8	4.5				
Intersection Summary												
HCM 2010 Ctrl Delay			38.8									
HCM 2010 LOS			D									
Notes												



















HCM 2010 Signalized Intersection Summary
 5: I-15 SB Ramps & Rancho Bernardo Rd

3/24/2016

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	771	573	0	1246	505	0	0	0	659	0	1119
Future Volume (veh/h)	0	771	573	0	1246	505	0	0	0	659	0	1119
Number	5	2	12	1	6	16				7	4	14
Initial Q (Qb), veh	0	0	0	0	0	0				0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00				1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00				1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	0	1863	1863	0	1863	1863				1863	0	1863
Adj Flow Rate, veh/h	0	791	617	0	1312	0				694	0	1178
Adj No. of Lanes	0	2	2	0	3	1				2	0	2
Peak Hour Factor	0.92	0.95	0.95	0.92	0.95	0.95				0.95	0.92	0.95
Percent Heavy Veh, %	0	2	2	0	2	2				2	0	2
Cap, veh/h	0	1666	1416	0	2499	708				1595	0	1292
Arrive On Green	0.00	0.45	0.45	0.00	0.59	0.00				0.46	0.00	0.46
Sat Flow, veh/h	0	3725	3167	0	5588	1583				3442	0	2787
Grp Volume(v), veh/h	0	791	617	0	1312	0				694	0	1178
Grp Sat Flow(s),veh/h/ln	0	1863	1583	0	1863	1583				1721	0	1393
Q Serve(g_s), s	0.0	20.9	18.7	0.0	19.4	0.0				19.0	0.0	55.0
Cycle Q Clear(g_c), s	0.0	20.9	18.7	0.0	19.4	0.0				19.0	0.0	55.0
Prop In Lane	0.00		1.00	0.00		1.00				1.00		1.00
Lane Grp Cap(c), veh/h	0	1666	1416	0	2499	708				1595	0	1292
V/C Ratio(X)	0.00	0.47	0.44	0.00	0.52	0.00				0.44	0.00	0.91
Avail Cap(c_a), veh/h	0	1666	1416	0	2499	708				1792	0	1451
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.33	1.33				1.00	1.00	1.00
Upstream Filter(I)	0.00	0.64	0.64	0.00	0.85	0.00				1.00	0.00	1.00
Uniform Delay (d), s/veh	0.0	27.2	26.6	0.0	19.6	0.0				25.2	0.0	34.9
Incr Delay (d2), s/veh	0.0	0.6	0.6	0.0	0.7	0.0				0.2	0.0	8.4
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0				0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.0	10.8	8.3	0.0	10.1	0.0				9.0	0.0	22.6
LnGrp Delay(d),s/veh	0.0	27.8	27.2	0.0	20.3	0.0				25.4	0.0	43.3
LnGrp LOS		C	C		C					C		D
Approach Vol, veh/h		1408			1312						1872	
Approach Delay, s/veh		27.5			20.3						36.7	
Approach LOS		C			C						D	
Timer	1	2	3	4	5	6	7	8				
Assigned Phs		2		4		6						
Phs Duration (G+Y+Rc), s		69.0		71.0		69.0						
Change Period (Y+Rc), s		6.4		6.1		6.4						
Max Green Setting (Gmax), s		54.6		72.9		54.6						
Max Q Clear Time (g_c+I1), s		22.9		57.0		21.4						
Green Ext Time (p_c), s		22.6		7.9		23.4						
Intersection Summary												
HCM 2010 Ctrl Delay			29.2									
HCM 2010 LOS			C									
Notes												























HCM 2010 Signalized Intersection Summary
 6: I-15 NB Ramps & Rancho Bernardo Rd

3/24/2016

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	838	593	0	1093	285	658	0	433	0	0	0
Future Volume (veh/h)	0	838	593	0	1093	285	658	0	433	0	0	0
Number	5	2	12	1	6	16	3	8	18			
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0			
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00			
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00			
Adj Sat Flow, veh/h/ln	0	1863	1863	0	1863	1863	1863	0	1863			
Adj Flow Rate, veh/h	0	891	0	0	1163	303	700	0	461			
Adj No. of Lanes	0	3	1	0	3	1	2	0	2			
Peak Hour Factor	0.92	0.94	0.94	0.92	0.94	0.94	0.94	0.92	0.94			
Percent Heavy Veh, %	0	2	2	0	2	2	2	0	2			
Cap, veh/h	0	3727	1056	0	3392	1056	839	0	679			
Arrive On Green	0.00	1.00	0.00	0.00	0.67	0.67	0.24	0.00	0.24			
Sat Flow, veh/h	0	5588	1583	0	5253	1583	3442	0	2787			
Grp Volume(v), veh/h	0	891	0	0	1163	303	700	0	461			
Grp Sat Flow(s),veh/h/ln	0	1863	1583	0	1695	1583	1721	0	1393			
Q Serve(g_s), s	0.0	0.0	0.0	0.0	13.8	11.0	27.0	0.0	21.0			
Cycle Q Clear(g_c), s	0.0	0.0	0.0	0.0	13.8	11.0	27.0	0.0	21.0			
Prop In Lane	0.00		1.00	0.00		1.00	1.00		1.00			
Lane Grp Cap(c), veh/h	0	3727	1056	0	3392	1056	839	0	679			
V/C Ratio(X)	0.00	0.24	0.00	0.00	0.34	0.29	0.83	0.00	0.68			
Avail Cap(c_a), veh/h	0	3727	1056	0	3392	1056	1423	0	1152			
HCM Platoon Ratio	1.00	2.00	2.00	1.00	1.00	1.00	1.00	1.00	1.00			
Upstream Filter(I)	0.00	0.86	0.00	0.00	1.00	1.00	1.00	0.00	1.00			
Uniform Delay (d), s/veh	0.0	0.0	0.0	0.0	10.1	9.6	50.3	0.0	48.0			
Incr Delay (d2), s/veh	0.0	0.1	0.0	0.0	0.3	0.7	2.3	0.0	1.2			
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0			
%ile BackOfQ(50%),veh/ln	0.0	0.0	0.0	0.0	6.5	5.0	13.1	0.0	8.2			
LnGrp Delay(d),s/veh	0.0	0.1	0.0	0.0	10.3	10.3	52.5	0.0	49.2			
LnGrp LOS		A			B	B	D		D			
Approach Vol, veh/h		891			1466			1161				
Approach Delay, s/veh		0.1			10.3			51.2				
Approach LOS		A			B			D				
Timer	1	2	3	4	5	6	7	8				
Assigned Phs		2				6		8				
Phs Duration (G+Y+Rc), s		99.8				99.8		40.2				
Change Period (Y+Rc), s		6.4				6.4		6.1				
Max Green Setting (Gmax), s		69.6				69.6		57.9				
Max Q Clear Time (g_c+I1), s		2.0				15.8		29.0				
Green Ext Time (p_c), s		29.0				26.5		5.1				
Intersection Summary												
HCM 2010 Ctrl Delay			21.2									
HCM 2010 LOS			C									
Notes												






















HCM 2010 Signalized Intersection Summary
 7: Bernardo Center Dr & Rancho Bernardo Rd

3/24/2016

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	320	595	300	163	821	85	258	188	109	185	247	111
Future Volume (veh/h)	320	595	300	163	821	85	258	188	109	185	247	111
Number	5	2	12	1	6	16	3	8	18	7	4	14
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		0.99	1.00		0.99	1.00		0.99
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1863	1863	1863	1900	1863	1863	1900	1863	1863	1863
Adj Flow Rate, veh/h	344	643	321	175	883	91	277	202	117	199	266	119
Adj No. of Lanes	2	2	1	2	2	0	2	2	0	2	2	1
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	434	1549	658	256	1190	123	359	397	220	284	564	442
Arrive On Green	0.12	0.42	0.42	0.07	0.37	0.37	0.10	0.18	0.18	0.08	0.16	0.16
Sat Flow, veh/h	3548	3725	1583	3442	3234	333	3442	2193	1214	3442	3539	1560
Grp Volume(v), veh/h	344	643	321	175	483	491	277	161	158	199	266	119
Grp Sat Flow(s),veh/h/ln	1774	1863	1583	1721	1770	1798	1721	1770	1637	1721	1770	1560
Q Serve(g_s), s	8.0	10.4	12.6	4.2	20.2	20.2	6.7	7.0	7.4	4.8	5.8	5.0
Cycle Q Clear(g_c), s	8.0	10.4	12.6	4.2	20.2	20.2	6.7	7.0	7.4	4.8	5.8	5.0
Prop In Lane	1.00		1.00	1.00		0.19	1.00		0.74	1.00		1.00
Lane Grp Cap(c), veh/h	434	1549	658	256	651	662	359	321	297	284	564	442
V/C Ratio(X)	0.79	0.42	0.49	0.68	0.74	0.74	0.77	0.50	0.53	0.70	0.47	0.27
Avail Cap(c_a), veh/h	551	1631	693	450	750	762	438	814	753	498	1666	928
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	36.2	17.5	18.2	38.3	23.3	23.3	37.1	31.3	31.5	38.0	32.4	23.7
Incr Delay (d2), s/veh	6.1	0.2	0.6	3.2	3.4	3.4	6.8	1.2	1.5	3.1	0.6	0.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	4.3	5.3	5.6	2.1	10.4	10.6	3.5	3.5	3.5	2.4	2.9	2.2
LnGrp Delay(d),s/veh	42.4	17.7	18.7	41.5	26.8	26.7	43.9	32.5	33.0	41.1	33.1	24.0
LnGrp LOS	D	B	B	D	C	C	D	C	C	D	C	C
Approach Vol, veh/h		1308			1149			596			584	
Approach Delay, s/veh		24.4			29.0			37.9			34.0	
Approach LOS		C			C			D			C	
Timer	1	2	3	4	5	6	7	8				
Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	10.7	41.5	13.3	19.4	14.8	37.5	11.4	21.3				
Change Period (Y+Rc), s	4.4	6.2	4.4	5.9	4.4	* 6.2	4.4	* 5.9				
Max Green Setting (Gmax), s	11.1	37.2	10.8	40.0	13.2	* 36	12.3	* 39				
Max Q Clear Time (g_c+I1), s	6.2	14.6	8.7	7.8	10.0	22.2	6.8	9.4				
Green Ext Time (p_c), s	0.2	12.4	0.2	4.1	0.4	9.0	0.3	4.1				
Intersection Summary												
HCM 2010 Ctrl Delay			29.6									
HCM 2010 LOS			C									
Notes												

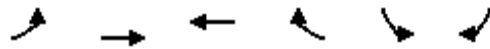
HCM 2010 Signalized Intersection Summary
 8: West Bernardo Dr & Duenda Rd

3/24/2016

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	20	170	149	102	51	40	30	100	74	97	218	10
Future Volume (veh/h)	20	170	149	102	51	40	30	100	74	97	218	10
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.99	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1900	1863	1863	1863	1863	1863	1900	1863	1863	1900
Adj Flow Rate, veh/h	22	185	162	111	55	43	33	109	80	105	237	11
Adj No. of Lanes	1	1	0	1	1	1	1	2	0	1	2	0
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	460	236	207	189	199	169	53	279	189	136	637	29
Arrive On Green	0.26	0.26	0.26	0.11	0.11	0.11	0.03	0.14	0.14	0.08	0.18	0.18
Sat Flow, veh/h	1774	911	797	1774	1863	1583	1774	2018	1372	1774	3445	159
Grp Volume(v), veh/h	22	0	347	111	55	43	33	94	95	105	121	127
Grp Sat Flow(s),veh/h/ln	1774	0	1708	1774	1863	1583	1774	1770	1621	1774	1770	1835
Q Serve(g_s), s	0.4	0.0	9.0	2.8	1.3	1.2	0.9	2.3	2.5	2.8	2.9	2.9
Cycle Q Clear(g_c), s	0.4	0.0	9.0	2.8	1.3	1.2	0.9	2.3	2.5	2.8	2.9	2.9
Prop In Lane	1.00		0.47	1.00		1.00	1.00		0.85	1.00		0.09
Lane Grp Cap(c), veh/h	460	0	443	189	199	169	53	244	224	136	327	339
V/C Ratio(X)	0.05	0.00	0.78	0.59	0.28	0.25	0.63	0.39	0.42	0.77	0.37	0.37
Avail Cap(c_a), veh/h	706	0	680	781	820	697	186	742	679	372	927	961
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	13.2	0.0	16.4	20.3	19.6	19.6	22.9	18.7	18.8	21.6	17.0	17.0
Incr Delay (d2), s/veh	0.0	0.0	3.3	2.9	0.7	0.8	11.6	1.0	1.3	9.0	0.7	0.7
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.2	0.0	4.6	1.5	0.7	0.6	0.6	1.2	1.2	1.7	1.4	1.5
LnGrp Delay(d),s/veh	13.3	0.0	19.7	23.2	20.4	20.4	34.5	19.7	20.1	30.6	17.7	17.7
LnGrp LOS	B		B	C	C	C	C	B	C	C	B	B
Approach Vol, veh/h		369			209			222			353	
Approach Delay, s/veh		19.3			21.9			22.1			21.5	
Approach LOS		B			C			C			C	
Timer	1	2	3	4	5	6	7	8				
Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	8.7	11.6		17.4	6.4	13.8		10.1				
Change Period (Y+Rc), s	5.0	5.0		5.0	5.0	5.0		5.0				
Max Green Setting (Gmax), s	10.0	20.0		19.0	5.0	25.0		21.0				
Max Q Clear Time (g_c+I1), s	4.8	4.5		11.0	2.9	4.9		4.8				
Green Ext Time (p_c), s	0.1	2.1		1.4	0.0	2.3		0.6				
Intersection Summary												
HCM 2010 Ctrl Delay			21.0									
HCM 2010 LOS			C									

HCM 2010 Signalized Intersection Summary
 9: West Bernardo Dr & Via Del Campo

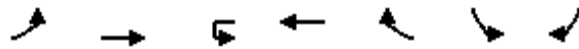
3/24/2016



Movement	EBL	EBT	WBT	WBR	SBL	SBR		
Lane Configurations								
Traffic Volume (veh/h)	365	514	273	150	47	45		
Future Volume (veh/h)	365	514	273	150	47	45		
Number	5	2	6	16	7	14		
Initial Q (Qb), veh	0	0	0	0	0	0		
Ped-Bike Adj(A_pbT)	1.00			1.00	1.00	1.00		
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00		
Adj Sat Flow, veh/h/ln	1863	1863	1863	1900	1863	1863		
Adj Flow Rate, veh/h	429	605	321	176	55	53		
Adj No. of Lanes	1	2	2	0	1	1		
Peak Hour Factor	0.85	0.85	0.85	0.85	0.85	0.85		
Percent Heavy Veh, %	2	2	2	2	2	2		
Cap, veh/h	943	2830	424	227	100	90		
Arrive On Green	0.53	0.80	0.19	0.19	0.06	0.06		
Sat Flow, veh/h	1774	3632	2318	1193	1774	1583		
Grp Volume(v), veh/h	429	605	254	243	55	53		
Grp Sat Flow(s),veh/h/ln	1774	1770	1770	1648	1774	1583		
Q Serve(g_s), s	10.6	2.9	9.6	9.9	2.1	2.3		
Cycle Q Clear(g_c), s	10.6	2.9	9.6	9.9	2.1	2.3		
Prop In Lane	1.00			0.72	1.00	1.00		
Lane Grp Cap(c), veh/h	943	2830	337	314	100	90		
V/C Ratio(X)	0.45	0.21	0.75	0.77	0.55	0.59		
Avail Cap(c_a), veh/h	943	2830	462	430	578	516		
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00		
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00		
Uniform Delay (d), s/veh	10.3	1.7	27.1	27.3	32.6	32.6		
Incr Delay (d2), s/veh	0.3	0.2	4.6	5.9	4.6	6.1		
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0		
%ile BackOfQ(50%),veh/ln	5.2	1.5	5.1	5.0	1.2	2.2		
LnGrp Delay(d),s/veh	10.6	1.9	31.7	33.2	37.1	38.7		
LnGrp LOS	B	A	C	C	D	D		
Approach Vol, veh/h		1034	497		108			
Approach Delay, s/veh		5.5	32.4		37.9			
Approach LOS		A	C		D			
Timer	1	2	3	4	5	6	7	8
Assigned Phs		2		4	5	6		
Phs Duration (G+Y+Rc), s		62.2		8.7	43.2	19.0		
Change Period (Y+Rc), s		5.5		* 4.7	5.5	* 5.5		
Max Green Setting (Gmax), s		56.7		* 23	33.8	* 19		
Max Q Clear Time (g_c+I1), s		4.9		4.3	12.6	11.9		
Green Ext Time (p_c), s		6.0		0.2	5.3	1.5		
Intersection Summary								
HCM 2010 Ctrl Delay			15.8					
HCM 2010 LOS			B					
Notes								

HCM 2010 Signalized Intersection Summary
 10: Bernardo Center Dr & West Bernardo Dr




















3/24/2016



Movement	EBL	EBT	WBU	WBT	WBR	SBL	SBR	
Lane Configurations								
Traffic Volume (veh/h)	605	450	0	484	686	56	187	
Future Volume (veh/h)	605	450	0	484	686	56	187	
Number	1	6		2	12	3	18	
Initial Q (Qb), veh	0	0		0	0	0	0	
Ped-Bike Adj(A_pbT)	1.00				0.97	1.00	1.00	
Parking Bus, Adj	1.00	1.00		1.00	1.00	1.00	1.00	
Adj Sat Flow, veh/h/ln	1863	1863		1863	1863	1863	1863	
Adj Flow Rate, veh/h	680	506		544	771	63	210	
Adj No. of Lanes	2	2		1	2	1	1	
Peak Hour Factor	0.89	0.89		0.89	0.89	0.89	0.89	
Percent Heavy Veh, %	2	2		2	2	2	2	
Cap, veh/h	839	2582		792	1527	237	597	
Arrive On Green	0.24	0.73		0.43	0.43	0.13	0.13	
Sat Flow, veh/h	3442	3632		1863	2716	1774	1583	
Grp Volume(v), veh/h	680	506		544	771	63	210	
Grp Sat Flow(s),veh/h/ln	1721	1770		1863	1358	1774	1583	
Q Serve(g_s), s	13.5	3.3		17.2	12.7	2.3	6.9	
Cycle Q Clear(g_c), s	13.5	3.3		17.2	12.7	2.3	6.9	
Prop In Lane	1.00				1.00	1.00	1.00	
Lane Grp Cap(c), veh/h	839	2582		792	1527	237	597	
V/C Ratio(X)	0.81	0.20		0.69	0.50	0.27	0.35	
Avail Cap(c_a), veh/h	1360	3389		1135	2028	809	1108	
HCM Platoon Ratio	1.00	1.00		1.00	1.00	1.00	1.00	
Upstream Filter(I)	1.00	1.00		1.00	1.00	1.00	1.00	
Uniform Delay (d), s/veh	25.8	3.1		16.9	9.8	28.2	16.2	
Incr Delay (d2), s/veh	1.9	0.0		1.1	0.3	0.6	0.4	
Initial Q Delay(d3),s/veh	0.0	0.0		0.0	0.0	0.0	0.0	
%ile BackOfQ(50%),veh/ln	6.6	1.6		9.0	4.8	1.2	3.0	
LnGrp Delay(d),s/veh	27.7	3.1		18.0	10.1	28.8	16.5	
LnGrp LOS	C	A		B	B	C	B	
Approach Vol, veh/h		1186		1315		273		
Approach Delay, s/veh		17.2		13.4		19.3		
Approach LOS		B		B		B		
Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2				6		8
Phs Duration (G+Y+Rc), s	22.0	36.3				58.3		14.1
Change Period (Y+Rc), s	4.4	5.5				* 5.5		4.4
Max Green Setting (Gmax), s	28.6	44.1				* 69		33.0
Max Q Clear Time (g_c+I1), s	15.5	19.2				5.3		8.9
Green Ext Time (p_c), s	2.2	11.6				15.1		0.8
Intersection Summary								
HCM 2010 Ctrl Delay				15.6				
HCM 2010 LOS				B				
Notes								

HCM 2010 Signalized Intersection Summary
 1: Camino San Bernardo & Rancho Bernardo Rd




















3/24/2016

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	1	940	208	344	746	0	109	0	313	3	0	0
Future Volume (veh/h)	1	940	208	344	746	0	109	0	313	3	0	0
Number	5	2	12	1	6	16	3	8	18	7	4	14
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.99	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1900	1863	1863	1900	1863	1863	1900	1900	1863	1900
Adj Flow Rate, veh/h	1	979	217	358	777	0	114	0	326	3	0	0
Adj No. of Lanes	1	2	0	2	2	0	1	2	0	0	1	0
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	2	1228	272	448	1969	0	520	442	395	153	0	0
Arrive On Green	0.00	0.43	0.43	0.13	0.56	0.00	0.25	0.00	0.25	0.25	0.00	0.00
Sat Flow, veh/h	1774	2874	636	3442	3632	0	1412	1770	1581	230	0	0
Grp Volume(v), veh/h	1	602	594	358	777	0	114	0	326	3	0	0
Grp Sat Flow(s),veh/h/ln	1774	1770	1740	1721	1770	0	1412	1770	1581	230	0	0
Q Serve(g_s), s	0.0	22.2	22.3	7.6	9.4	0.0	0.0	0.0	14.7	0.2	0.0	0.0
Cycle Q Clear(g_c), s	0.0	22.2	22.3	7.6	9.4	0.0	3.9	0.0	14.7	14.9	0.0	0.0
Prop In Lane	1.00		0.37	1.00		0.00	1.00		1.00	1.00		0.00
Lane Grp Cap(c), veh/h	2	756	744	448	1969	0	520	442	395	153	0	0
V/C Ratio(X)	0.41	0.80	0.80	0.80	0.39	0.00	0.22	0.00	0.83	0.02	0.00	0.00
Avail Cap(c_a), veh/h	118	836	821	504	1969	0	712	683	610	296	0	0
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	0.00	1.00	0.00	1.00	1.00	0.00	0.00
Uniform Delay (d), s/veh	37.5	18.7	18.7	31.7	9.5	0.0	22.6	0.0	26.7	33.7	0.0	0.0
Incr Delay (d2), s/veh	84.2	4.9	5.1	8.0	0.1	0.0	0.2	0.0	5.5	0.1	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.1	11.7	11.6	4.1	4.6	0.0	1.9	0.0	6.9	0.1	0.0	0.0
LnGrp Delay(d),s/veh	121.7	23.6	23.9	39.8	9.6	0.0	22.8	0.0	32.1	33.7	0.0	0.0
LnGrp LOS	F	C	C	D	A		C		C	C		
Approach Vol, veh/h		1197			1135			440				3
Approach Delay, s/veh		23.8			19.1			29.7				33.7
Approach LOS		C			B			C				C
Timer	1	2	3	4	5	6	7	8				
Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	13.8	37.6		23.8	4.1	47.3		23.8				
Change Period (Y+Rc), s	4.0	5.5		5.0	4.0	5.5		5.0				
Max Green Setting (Gmax), s	11.0	35.5		29.0	5.0	41.5		29.0				
Max Q Clear Time (g_c+I1), s	9.6	24.3		16.9	2.0	11.4		16.7				
Green Ext Time (p_c), s	0.2	7.8		1.8	0.0	15.4		1.8				
Intersection Summary												
HCM 2010 Ctrl Delay				22.8								
HCM 2010 LOS				C								

HCM 2010 Signalized Intersection Summary




















2: Via Del Campo & Rancho Bernardo Rd

3/24/2016

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	6	1324	49	18	927	1	276	0	341	1	0	0
Future Volume (veh/h)	6	1324	49	18	927	1	276	0	341	1	0	0
Number	5	2	12	1	6	16	3	8	18	7	4	14
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		0.98	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1900	1863	1863	1900	1900	1863	1863	1900	1863	1900
Adj Flow Rate, veh/h	7	1455	54	20	1019	1	303	0	375	1	0	0
Adj No. of Lanes	1	2	0	1	2	0	0	1	1	0	1	0
Peak Hour Factor	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	13	1746	65	32	1860	2	545	0	440	227	0	0
Arrive On Green	0.01	0.50	0.50	0.02	0.51	0.51	0.28	0.00	0.28	0.28	0.00	0.00
Sat Flow, veh/h	1774	3481	129	1774	3628	4	1602	0	1558	478	0	0
Grp Volume(v), veh/h	7	738	771	20	497	523	303	0	375	1	0	0
Grp Sat Flow(s),veh/h/ln	1774	1770	1840	1774	1770	1862	1602	0	1558	478	0	0
Q Serve(g_s), s	0.3	28.0	28.1	0.9	14.9	14.9	0.0	0.0	17.8	0.1	0.0	0.0
Cycle Q Clear(g_c), s	0.3	28.0	28.1	0.9	14.9	14.9	11.6	0.0	17.8	11.6	0.0	0.0
Prop In Lane	1.00		0.07	1.00		0.00	1.00		1.00	1.00		0.00
Lane Grp Cap(c), veh/h	13	888	923	32	907	954	545	0	440	227	0	0
V/C Ratio(X)	0.55	0.83	0.83	0.63	0.55	0.55	0.56	0.00	0.85	0.00	0.00	0.00
Avail Cap(c_a), veh/h	91	930	967	93	937	986	672	0	581	321	0	0
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00	0.00
Uniform Delay (d), s/veh	38.8	16.7	16.7	38.2	12.9	12.9	24.3	0.0	26.6	29.3	0.0	0.0
Incr Delay (d2), s/veh	31.7	6.3	6.2	18.3	0.6	0.6	0.9	0.0	9.2	0.0	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.3	15.1	15.7	0.6	7.3	7.7	5.8	0.0	8.8	0.0	0.0	0.0
LnGrp Delay(d),s/veh	70.5	23.0	22.9	56.6	13.6	13.5	25.2	0.0	35.8	29.3	0.0	0.0
LnGrp LOS	E	C	C	E	B	B	C		D	C		
Approach Vol, veh/h		1516			1040			678				1
Approach Delay, s/veh		23.2			14.4			31.1				29.3
Approach LOS		C			B			C				C
Timer	1	2	3	4	5	6	7	8				
Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	5.8	45.2		27.3	5.0	46.1		27.3				
Change Period (Y+Rc), s	4.4	5.9		* 5.2	4.4	* 5.9		5.2				
Max Green Setting (Gmax), s	4.1	41.2		* 30	4.0	* 42		29.2				
Max Q Clear Time (g_c+I1), s	2.9	30.1		13.6	2.3	16.9		19.8				
Green Ext Time (p_c), s	0.0	9.2		2.9	0.0	17.5		2.3				
Intersection Summary												
HCM 2010 Ctrl Delay				22.0								
HCM 2010 LOS				C								
Notes												































HCM 2010 Signalized Intersection Summary
 3: Project Dwy/Matinal Rd & Rancho Bernardo Rd

3/24/2016

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	109	1477	0	1	862	48	0	0	0	41	0	105
Future Volume (veh/h)	109	1477	0	1	862	48	0	0	0	41	0	105
Number	5	2	12	1	6	16	3	8	18	7	4	14
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		0.98
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1900	1863	1863	1900	1863	1863	1900	1900	1863	1900
Adj Flow Rate, veh/h	121	1641	0	1	958	53	0	0	0	46	0	117
Adj No. of Lanes	1	2	0	1	2	0	1	1	0	0	1	0
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	157	2170	0	3	1793	99	114	258	0	118	16	154
Arrive On Green	0.09	0.61	0.00	0.00	0.53	0.53	0.00	0.00	0.00	0.14	0.00	0.14
Sat Flow, veh/h	1774	3632	0	1774	3410	189	1270	1863	0	323	112	1108
Grp Volume(v), veh/h	121	1641	0	1	497	514	0	0	0	163	0	0
Grp Sat Flow(s),veh/h/ln	1774	1770	0	1774	1770	1829	1270	1863	0	1544	0	0
Q Serve(g_s), s	4.2	21.1	0.0	0.0	11.7	11.7	0.0	0.0	0.0	4.2	0.0	0.0
Cycle Q Clear(g_c), s	4.2	21.1	0.0	0.0	11.7	11.7	0.0	0.0	0.0	6.4	0.0	0.0
Prop In Lane	1.00		0.00	1.00		0.10	1.00		0.00	0.28		0.72
Lane Grp Cap(c), veh/h	157	2170	0	3	931	962	114	258	0	287	0	0
V/C Ratio(X)	0.77	0.76	0.00	0.36	0.53	0.53	0.00	0.00	0.00	0.57	0.00	0.00
Avail Cap(c_a), veh/h	337	2378	0	112	993	1026	514	844	0	749	0	0
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	0.00	1.00	1.00	1.00	0.00	0.00	0.00	1.00	0.00	0.00
Uniform Delay (d), s/veh	28.1	8.8	0.0	31.5	9.9	9.9	0.0	0.0	0.0	26.1	0.0	0.0
Incr Delay (d2), s/veh	7.8	1.3	0.0	62.8	0.5	0.5	0.0	0.0	0.0	1.8	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.4	10.4	0.0	0.1	5.8	6.0	0.0	0.0	0.0	2.9	0.0	0.0
LnGrp Delay(d),s/veh	36.0	10.1	0.0	94.3	10.3	10.3	0.0	0.0	0.0	27.9	0.0	0.0
LnGrp LOS	D	B		F	B	B				C		
Approach Vol, veh/h		1762			1012			0				163
Approach Delay, s/veh		11.9			10.4			0.0				27.9
Approach LOS		B			B							C
Timer	1	2	3	4	5	6	7	8				
Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	4.1	45.7		13.3	9.6	40.2		13.3				
Change Period (Y+Rc), s	4.0	7.0		4.6	4.0	* 7		* 4.6				
Max Green Setting (Gmax), s	4.0	42.4		28.0	12.0	* 35		* 29				
Max Q Clear Time (g_c+I1), s	2.0	23.1		8.4	6.2	13.7		0.0				
Green Ext Time (p_c), s	0.0	15.6		0.9	0.1	17.2		0.0				
Intersection Summary												
HCM 2010 Ctrl Delay				12.3								
HCM 2010 LOS				B								
Notes												



















HCM 2010 Signalized Intersection Summary
4: West Bernardo Dr & Rancho Bernardo Rd

3/24/2016

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	 	 		 	 		 	 		 	 	
Traffic Volume (veh/h)	154	1408	31	176	858	477	138	322	629	327	66	65
Future Volume (veh/h)	154	1408	31	176	858	477	138	322	629	327	66	65
Number	5	2	12	1	6	16	3	8	18	7	4	14
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1900	1863	1863	1863	1863	1863	1863	1863	1863	1900
Adj Flow Rate, veh/h	157	1437	32	180	876	487	141	329	642	334	67	66
Adj No. of Lanes	2	3	0	2	2	1	2	2	1	2	2	0
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	215	1625	36	395	1354	604	210	932	597	416	578	507
Arrive On Green	0.06	0.32	0.32	0.11	0.38	0.38	0.06	0.26	0.26	0.12	0.32	0.32
Sat Flow, veh/h	3442	5119	114	3442	3539	1580	3442	3539	1578	3442	1788	1568
Grp Volume(v), veh/h	157	952	517	180	876	487	141	329	642	334	66	67
Grp Sat Flow(s),veh/h/ln	1721	1695	1843	1721	1770	1580	1721	1770	1578	1721	1770	1586
Q Serve(g_s), s	5.2	31.0	31.0	5.7	23.7	32.1	4.7	8.8	23.9	11.0	3.1	3.5
Cycle Q Clear(g_c), s	5.2	31.0	31.0	5.7	23.7	32.1	4.7	8.8	23.9	11.0	3.1	3.5
Prop In Lane	1.00		0.06	1.00		1.00	1.00		1.00	1.00		0.99
Lane Grp Cap(c), veh/h	215	1076	585	395	1354	604	210	932	597	416	572	513
V/C Ratio(X)	0.73	0.88	0.88	0.46	0.65	0.81	0.67	0.35	1.08	0.80	0.12	0.13
Avail Cap(c_a), veh/h	272	1120	609	508	1418	633	1007	1187	711	889	572	513
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	53.7	37.7	37.7	48.2	29.5	32.1	53.6	34.9	20.4	49.9	27.7	27.9
Incr Delay (d2), s/veh	7.3	8.4	14.1	0.8	1.0	7.3	3.7	0.2	55.9	3.7	0.1	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.7	15.8	18.1	2.7	11.7	15.1	2.3	4.3	23.4	5.5	1.5	1.5
LnGrp Delay(d),s/veh	61.0	46.2	51.9	49.0	30.5	39.4	57.2	35.1	76.3	53.6	27.8	28.0
LnGrp LOS	E	D	D	D	C	D	E	D	F	D	C	C
Approach Vol, veh/h		1626			1543			1112			467	
Approach Delay, s/veh		49.4			35.5			61.7			46.2	
Approach LOS		D			D			E			D	
Timer	1	2	3	4	5	6	7	8				
Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	19.1	42.9	11.5	43.1	11.7	50.3	18.5	36.1				
Change Period (Y+Rc), s	5.7	* 5.9	4.4	5.4	4.4	5.7	4.4	5.4				
Max Green Setting (Gmax), s	17.2	* 39	34.1	35.1	9.2	46.7	30.1	39.1				
Max Q Clear Time (g_c+I1), s	7.7	33.0	6.7	5.5	7.2	34.1	13.0	25.9				
Green Ext Time (p_c), s	5.7	4.0	0.4	6.3	0.1	6.9	1.1	4.5				
Intersection Summary												
HCM 2010 Ctrl Delay			47.4									
HCM 2010 LOS			D									
Notes												

HCM 2010 Signalized Intersection Summary
 5: I-15 SB Ramps & Rancho Bernardo Rd



















3/24/2016

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	1528	834	0	1069	559	0	0	0	409	0	404
Future Volume (veh/h)	0	1528	834	0	1069	559	0	0	0	409	0	404
Number	5	2	12	1	6	16				7	4	14
Initial Q (Qb), veh	0	0	0	0	0	0				0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00				1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00				1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	0	1863	1863	0	1863	1863				1863	0	1863
Adj Flow Rate, veh/h	0	1973	615	0	1114	0				426	0	421
Adj No. of Lanes	0	3	1	0	3	1				2	0	2
Peak Hour Factor	0.92	0.96	0.96	0.92	0.96	0.96				0.96	0.92	0.96
Percent Heavy Veh, %	0	2	2	0	2	2				2	0	2
Cap, veh/h	0	4093	1160	0	4093	1160				614	0	497
Arrive On Green	0.00	0.73	0.73	0.00	1.00	0.00				0.18	0.00	0.18
Sat Flow, veh/h	0	5588	1583	0	5588	1583				3442	0	2787
Grp Volume(v), veh/h	0	1973	615	0	1114	0				426	0	421
Grp Sat Flow(s),veh/h/ln	0	1863	1583	0	1863	1583				1721	0	1393
Q Serve(g_s), s	0.0	20.4	23.8	0.0	0.0	0.0				16.3	0.0	20.5
Cycle Q Clear(g_c), s	0.0	20.4	23.8	0.0	0.0	0.0				16.3	0.0	20.5
Prop In Lane	0.00		1.00	0.00		1.00				1.00		1.00
Lane Grp Cap(c), veh/h	0	4093	1160	0	4093	1160				614	0	497
V/C Ratio(X)	0.00	0.48	0.53	0.00	0.27	0.00				0.69	0.00	0.85
Avail Cap(c_a), veh/h	0	4093	1160	0	4093	1160				784	0	635
HCM Platoon Ratio	1.00	1.00	1.00	1.00	2.00	2.00				1.00	1.00	1.00
Upstream Filter(I)	0.00	0.35	0.35	0.00	0.86	0.00				1.00	0.00	1.00
Uniform Delay (d), s/veh	0.0	7.7	8.2	0.0	0.0	0.0				53.9	0.0	55.7
Incr Delay (d2), s/veh	0.0	0.1	0.6	0.0	0.1	0.0				1.9	0.0	8.5
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0				0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.0	10.5	10.4	0.0	0.1	0.0				7.9	0.0	8.5
LnGrp Delay(d),s/veh	0.0	7.9	8.8	0.0	0.1	0.0				55.8	0.0	64.1
LnGrp LOS		A	A		A					E		E
Approach Vol, veh/h		2588			1114						847	
Approach Delay, s/veh		8.1			0.1						59.9	
Approach LOS		A			A						E	
Timer	1	2	3	4	5	6	7	8				
Assigned Phs		2		4		6						
Phs Duration (G+Y+Rc), s		108.9		31.1		108.9						
Change Period (Y+Rc), s		6.4		6.1		6.4						
Max Green Setting (Gmax), s		95.6		31.9		95.6						
Max Q Clear Time (g_c+I1), s		25.8		22.5		2.0						
Green Ext Time (p_c), s		56.8		2.5		71.4						
Intersection Summary												
HCM 2010 Ctrl Delay			15.8									
HCM 2010 LOS			B									
Notes												

HCM 2010 Signalized Intersection Summary























6: I-15 NB Ramps & Rancho Bernardo Rd

3/24/2016

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	879	1058	0	983	487	645	0	432	0	0	0
Future Volume (veh/h)	0	879	1058	0	983	487	645	0	432	0	0	0
Number	5	2	12	1	6	16	3	8	18			
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0			
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00			
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00			
Adj Sat Flow, veh/h/ln	0	1863	1863	0	1863	1863	1863	0	1863			
Adj Flow Rate, veh/h	0	935	0	0	1046	518	686	0	460			
Adj No. of Lanes	0	3	1	0	3	1	2	0	2			
Peak Hour Factor	0.92	0.94	0.94	0.92	0.94	0.94	0.94	0.92	0.94			
Percent Heavy Veh, %	0	2	2	0	2	2	2	0	2			
Cap, veh/h	0	3758	1065	0	3420	1065	820	0	664			
Arrive On Green	0.00	1.00	0.00	0.00	0.67	0.67	0.24	0.00	0.24			
Sat Flow, veh/h	0	5588	1583	0	5253	1583	3442	0	2787			
Grp Volume(v), veh/h	0	935	0	0	1046	518	686	0	460			
Grp Sat Flow(s),veh/h/ln	0	1863	1583	0	1695	1583	1721	0	1393			
Q Serve(g_s), s	0.0	0.0	0.0	0.0	11.9	22.3	26.6	0.0	21.1			
Cycle Q Clear(g_c), s	0.0	0.0	0.0	0.0	11.9	22.3	26.6	0.0	21.1			
Prop In Lane	0.00		1.00	0.00		1.00	1.00		1.00			
Lane Grp Cap(c), veh/h	0	3758	1065	0	3420	1065	820	0	664			
V/C Ratio(X)	0.00	0.25	0.00	0.00	0.31	0.49	0.84	0.00	0.69			
Avail Cap(c_a), veh/h	0	3758	1065	0	3420	1065	1251	0	1013			
HCM Platoon Ratio	1.00	1.67	1.67	1.00	1.00	1.00	1.00	1.00	1.00			
Upstream Filter(I)	0.00	0.79	0.00	0.00	1.00	1.00	1.00	0.00	1.00			
Uniform Delay (d), s/veh	0.0	0.0	0.0	0.0	9.5	11.2	50.7	0.0	48.7			
Incr Delay (d2), s/veh	0.0	0.1	0.0	0.0	0.2	1.6	3.2	0.0	1.3			
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0			
%ile BackOfQ(50%),veh/ln	0.0	0.0	0.0	0.0	5.6	10.1	13.0	0.0	8.2			
LnGrp Delay(d),s/veh	0.0	0.1	0.0	0.0	9.7	12.7	53.9	0.0	50.0			
LnGrp LOS		A			A	B	D		D			
Approach Vol, veh/h		935			1564			1146				
Approach Delay, s/veh		0.1			10.7			52.3				
Approach LOS		A			B			D				
Timer	1	2	3	4	5	6	7	8				
Assigned Phs		2				6		8				
Phs Duration (G+Y+Rc), s		100.6				100.6		39.4				
Change Period (Y+Rc), s		6.4				6.4		6.1				
Max Green Setting (Gmax), s		76.6				76.6		50.9				
Max Q Clear Time (g_c+I1), s		2.0				24.3		28.6				
Green Ext Time (p_c), s		31.6				27.3		4.8				
Intersection Summary												
HCM 2010 Ctrl Delay			21.1									
HCM 2010 LOS			C									
Notes												






















HCM 2010 Signalized Intersection Summary
 7: Bernardo Center Dr & Rancho Bernardo Rd

3/24/2016

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	249	663	298	123	631	145	431	465	247	173	276	99
Future Volume (veh/h)	249	663	298	123	631	145	431	465	247	173	276	99
Number	5	2	12	1	6	16	3	8	18	7	4	14
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.99	1.00		0.99	1.00		1.00	1.00		0.98
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1863	1863	1863	1900	1863	1863	1900	1863	1863	1863
Adj Flow Rate, veh/h	262	698	314	129	664	153	454	489	260	182	291	104
Adj No. of Lanes	2	2	1	2	2	0	2	2	0	2	2	1
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	334	1304	547	194	890	205	531	666	352	256	771	486
Arrive On Green	0.09	0.35	0.35	0.06	0.31	0.31	0.15	0.30	0.30	0.07	0.22	0.22
Sat Flow, veh/h	3548	3725	1563	3442	2850	656	3442	2236	1183	3442	3539	1549
Grp Volume(v), veh/h	262	698	314	129	412	405	454	386	363	182	291	104
Grp Sat Flow(s),veh/h/ln	1774	1863	1563	1721	1770	1736	1721	1770	1650	1721	1770	1549
Q Serve(g_s), s	6.8	14.2	15.4	3.5	19.7	19.8	12.1	18.5	18.7	4.9	6.6	4.7
Cycle Q Clear(g_c), s	6.8	14.2	15.4	3.5	19.7	19.8	12.1	18.5	18.7	4.9	6.6	4.7
Prop In Lane	1.00		1.00	1.00		0.38	1.00		0.72	1.00		1.00
Lane Grp Cap(c), veh/h	334	1304	547	194	553	542	531	527	491	256	771	486
V/C Ratio(X)	0.78	0.54	0.57	0.66	0.75	0.75	0.85	0.73	0.74	0.71	0.38	0.21
Avail Cap(c_a), veh/h	364	1404	589	251	631	620	605	858	800	415	1499	805
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	41.8	24.5	25.0	43.7	29.1	29.1	38.9	29.8	29.9	42.7	31.5	24.0
Incr Delay (d2), s/veh	9.9	0.3	1.2	4.2	4.2	4.3	10.4	2.0	2.2	3.6	0.3	0.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	3.8	7.3	6.8	1.8	10.3	10.1	6.5	9.3	8.8	2.5	3.3	2.0
LnGrp Delay(d),s/veh	51.8	24.9	26.1	47.9	33.3	33.4	49.3	31.8	32.0	46.3	31.8	24.2
LnGrp LOS	D	C	C	D	C	C	D	C	C	D	C	C
Approach Vol, veh/h		1274			946			1203			577	
Approach Delay, s/veh		30.7			35.3			38.5			35.0	
Approach LOS		C			D			D			D	
Timer	1	2	3	4	5	6	7	8				
Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	9.7	39.3	19.0	26.5	13.3	35.7	11.4	34.0				
Change Period (Y+Rc), s	4.4	6.2	4.4	5.9	4.4	* 6.2	4.4	* 5.9				
Max Green Setting (Gmax), s	6.9	35.6	16.6	40.0	9.7	* 34	11.4	* 46				
Max Q Clear Time (g_c+I1), s	5.5	17.4	14.1	8.6	8.8	21.8	6.9	20.7				
Green Ext Time (p_c), s	0.0	10.3	0.4	7.7	0.1	7.8	0.2	7.3				
Intersection Summary												
HCM 2010 Ctrl Delay			34.8									
HCM 2010 LOS			C									
Notes												

HCM 2010 Signalized Intersection Summary
 8: West Bernardo Dr & Duenda Rd

3/24/2016

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	21	131	132	73	70	63	67	147	90	106	202	12
Future Volume (veh/h)	21	131	132	73	70	63	67	147	90	106	202	12
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.98	1.00		1.00	1.00		1.00	1.00		0.98
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1900	1863	1863	1863	1863	1863	1900	1863	1863	1900
Adj Flow Rate, veh/h	24	147	148	82	79	71	75	165	101	119	227	13
Adj No. of Lanes	1	1	0	1	1	1	1	2	0	1	2	0
Peak Hour Factor	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	418	199	200	169	177	151	95	350	203	155	666	38
Arrive On Green	0.24	0.24	0.24	0.10	0.10	0.10	0.05	0.16	0.16	0.09	0.20	0.20
Sat Flow, veh/h	1774	845	851	1774	1863	1583	1774	2158	1253	1774	3400	193
Grp Volume(v), veh/h	24	0	295	82	79	71	75	134	132	119	117	123
Grp Sat Flow(s),veh/h/ln	1774	0	1696	1774	1863	1583	1774	1770	1642	1774	1770	1824
Q Serve(g_s), s	0.5	0.0	7.7	2.1	1.9	2.0	2.0	3.3	3.5	3.1	2.7	2.8
Cycle Q Clear(g_c), s	0.5	0.0	7.7	2.1	1.9	2.0	2.0	3.3	3.5	3.1	2.7	2.8
Prop In Lane	1.00		0.50	1.00		1.00	1.00		0.76	1.00		0.11
Lane Grp Cap(c), veh/h	418	0	399	169	177	151	95	287	266	155	347	357
V/C Ratio(X)	0.06	0.00	0.74	0.49	0.45	0.47	0.79	0.47	0.50	0.77	0.34	0.34
Avail Cap(c_a), veh/h	857	0	820	671	704	599	335	669	621	410	744	766
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	14.1	0.0	16.8	20.4	20.4	20.4	22.3	18.1	18.2	21.2	16.5	16.5
Incr Delay (d2), s/veh	0.1	0.0	2.7	2.2	1.8	2.3	13.6	1.2	1.4	7.7	0.6	0.6
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.2	0.0	3.8	1.1	1.1	1.0	1.3	1.7	1.7	1.9	1.4	1.4
LnGrp Delay(d),s/veh	14.2	0.0	19.5	22.6	22.1	22.7	35.9	19.3	19.6	29.0	17.1	17.1
LnGrp LOS	B		B	C	C	C	D	B	B	C	B	B
Approach Vol, veh/h		319			232			341			359	
Approach Delay, s/veh		19.1			22.5			23.1			21.0	
Approach LOS		B			C			C			C	
Timer	1	2	3	4	5	6	7	8				
Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	9.2	12.7		16.2	7.5	14.3		9.5				
Change Period (Y+Rc), s	5.0	5.0		5.0	5.0	5.0		5.0				
Max Green Setting (Gmax), s	11.0	18.0		23.0	9.0	20.0		18.0				
Max Q Clear Time (g_c+I1), s	5.1	5.5		9.7	4.0	4.8		4.1				
Green Ext Time (p_c), s	0.1	2.2		1.6	0.1	2.4		0.7				
Intersection Summary												
HCM 2010 Ctrl Delay			21.4									
HCM 2010 LOS			C									

HCM 2010 Signalized Intersection Summary

9: West Bernardo Dr & Via Del Campo

3/24/2016



Movement	EBL	EBT	WBT	WBR	SBL	SBR		
Lane Configurations								
Traffic Volume (veh/h)	32	402	438	38	148	346		
Future Volume (veh/h)	32	402	438	38	148	346		
Number	5	2	6	16	7	14		
Initial Q (Qb), veh	0	0	0	0	0	0		
Ped-Bike Adj(A_pbT)	1.00			1.00	1.00	1.00		
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00		
Adj Sat Flow, veh/h/ln	1863	1863	1863	1900	1863	1863		
Adj Flow Rate, veh/h	37	467	509	44	172	402		
Adj No. of Lanes	1	2	2	0	1	1		
Peak Hour Factor	0.86	0.86	0.86	0.86	0.86	0.86		
Percent Heavy Veh, %	2	2	2	2	2	2		
Cap, veh/h	50	2067	1651	142	511	456		
Arrive On Green	0.03	0.58	0.50	0.50	0.29	0.29		
Sat Flow, veh/h	1774	3632	3391	284	1774	1583		
Grp Volume(v), veh/h	37	467	272	281	172	402		
Grp Sat Flow(s),veh/h/ln	1774	1770	1770	1813	1774	1583		
Q Serve(g_s), s	1.6	5.0	7.2	7.3	6.1	19.3		
Cycle Q Clear(g_c), s	1.6	5.0	7.2	7.3	6.1	19.3		
Prop In Lane	1.00			0.16	1.00	1.00		
Lane Grp Cap(c), veh/h	50	2067	886	908	511	456		
V/C Ratio(X)	0.74	0.23	0.31	0.31	0.34	0.88		
Avail Cap(c_a), veh/h	281	2067	886	908	742	662		
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00		
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00		
Uniform Delay (d), s/veh	38.4	7.9	11.7	11.7	22.4	27.1		
Incr Delay (d2), s/veh	19.3	0.3	0.9	0.9	0.4	9.6		
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0		
%ile BackOfQ(50%),veh/ln	1.1	2.5	3.7	3.8	3.0	16.4		
LnGrp Delay(d),s/veh	57.7	8.2	12.6	12.6	22.7	36.7		
LnGrp LOS	E	A	B	B	C	D		
Approach Vol, veh/h		504	553		574			
Approach Delay, s/veh		11.8	12.6		32.5			
Approach LOS		B	B		C			
Timer	1	2	3	4	5	6	7	8
Assigned Phs		2		4	5	6		
Phs Duration (G+Y+Rc), s		52.0		27.6	6.6	45.4		
Change Period (Y+Rc), s		5.5		* 4.7	4.4	5.5		
Max Green Setting (Gmax), s		46.5		* 33	12.6	29.5		
Max Q Clear Time (g_c+I1), s		7.0		21.3	3.6	9.3		
Green Ext Time (p_c), s		7.2		1.6	0.0	6.1		
Intersection Summary								
HCM 2010 Ctrl Delay			19.4					
HCM 2010 LOS			B					
Notes								

HCM 2010 Signalized Intersection Summary
 10: Bernardo Center Dr & West Bernardo Dr

3/24/2016






















Movement	EBL	EBT	WBU	WBT	WBR	SBL	SBR	
Lane Configurations								
Traffic Volume (veh/h)	413	385	0	369	352	335	475	
Future Volume (veh/h)	413	385	0	369	352	335	475	
Number	1	6		2	12	3	18	
Initial Q (Qb), veh	0	0		0	0	0	0	
Ped-Bike Adj(A_pbT)	1.00				1.00	1.00	1.00	
Parking Bus, Adj	1.00	1.00		1.00	1.00	1.00	1.00	
Adj Sat Flow, veh/h/ln	1863	1863		1863	1863	1863	1863	
Adj Flow Rate, veh/h	439	410		393	374	356	505	
Adj No. of Lanes	2	2		1	2	1	1	
Peak Hour Factor	0.94	0.94		0.94	0.94	0.94	0.94	
Percent Heavy Veh, %	2	2		2	2	2	2	
Cap, veh/h	583	1934		586	1745	554	763	
Arrive On Green	0.17	0.55		0.31	0.31	0.31	0.31	
Sat Flow, veh/h	3442	3632		1863	2782	1774	1583	
Grp Volume(v), veh/h	439	410		393	374	356	505	
Grp Sat Flow(s),veh/h/ln	1721	1770		1863	1391	1774	1583	
Q Serve(g_s), s	8.5	4.2		12.9	4.1	12.1	17.0	
Cycle Q Clear(g_c), s	8.5	4.2		12.9	4.1	12.1	17.0	
Prop In Lane	1.00				1.00	1.00	1.00	
Lane Grp Cap(c), veh/h	583	1934		586	1745	554	763	
V/C Ratio(X)	0.75	0.21		0.67	0.21	0.64	0.66	
Avail Cap(c_a), veh/h	1257	3266		1129	2557	951	1117	
HCM Platoon Ratio	1.00	1.00		1.00	1.00	1.00	1.00	
Upstream Filter(I)	1.00	1.00		1.00	1.00	1.00	1.00	
Uniform Delay (d), s/veh	27.7	8.2		20.9	5.6	20.7	13.8	
Incr Delay (d2), s/veh	2.0	0.1		1.3	0.1	1.3	1.0	
Initial Q Delay(d3),s/veh	0.0	0.0		0.0	0.0	0.0	0.0	
%ile BackOfQ(50%),veh/ln	4.2	2.0		6.8	1.5	6.1	7.6	
LnGrp Delay(d),s/veh	29.7	8.2		22.2	5.7	22.0	14.8	
LnGrp LOS	C	A		C	A	C	B	
Approach Vol, veh/h		849		767		861		
Approach Delay, s/veh		19.3		14.2		17.8		
Approach LOS		B		B		B		
Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2				6		8
Phs Duration (G+Y+Rc), s	16.3	27.5				43.8		26.3
Change Period (Y+Rc), s	4.4	5.5				* 5.5		4.4
Max Green Setting (Gmax), s	25.6	42.5				* 65		37.6
Max Q Clear Time (g_c+I1), s	10.5	14.9				6.2		19.0
Green Ext Time (p_c), s	1.4	7.1				7.8		2.9
Intersection Summary								
HCM 2010 Ctrl Delay				17.2				
HCM 2010 LOS				B				
Notes								

APPENDIX F

PEAK HOUR INTERSECTION ANALYSIS WORKSHEETS OPENING DAY WITH PROJECT

HCM 2010 Signalized Intersection Summary
 1: Camino San Bernardo & Rancho Bernardo Rd





















3/24/2016

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	943	171	405	730	1	37	0	194	4	0	0
Future Volume (veh/h)	0	943	171	405	730	1	37	0	194	4	0	0
Number	5	2	12	1	6	16	3	8	18	7	4	14
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.98	1.00		1.00	1.00		0.98	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1900	1863	1863	1900	1863	1863	1900	1900	1863	1900
Adj Flow Rate, veh/h	0	1025	186	440	793	1	40	0	211	4	0	0
Adj No. of Lanes	1	2	0	2	2	0	1	2	0	0	1	0
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	3	1259	228	556	2364	3	413	320	282	171	0	0
Arrive On Green	0.00	0.42	0.42	0.16	0.65	0.65	0.18	0.00	0.18	0.18	0.00	0.00
Sat Flow, veh/h	1774	2986	541	3442	3627	5	1412	1770	1558	339	0	0
Grp Volume(v), veh/h	0	607	604	440	387	407	40	0	211	4	0	0
Grp Sat Flow(s),veh/h/ln	1774	1770	1757	1721	1770	1862	1412	1770	1558	339	0	0
Q Serve(g_s), s	0.0	19.8	19.9	8.1	6.4	6.4	0.0	0.0	8.4	0.2	0.0	0.0
Cycle Q Clear(g_c), s	0.0	19.8	19.9	8.1	6.4	6.4	1.2	0.0	8.4	8.7	0.0	0.0
Prop In Lane	1.00		0.31	1.00		0.00	1.00		1.00	1.00		0.00
Lane Grp Cap(c), veh/h	3	746	741	556	1153	1214	413	320	282	171	0	0
V/C Ratio(X)	0.00	0.81	0.82	0.79	0.34	0.34	0.10	0.00	0.75	0.02	0.00	0.00
Avail Cap(c_a), veh/h	135	861	855	706	1153	1214	780	780	687	474	0	0
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00	0.00
Uniform Delay (d), s/veh	0.0	16.7	16.8	26.5	5.1	5.1	22.6	0.0	25.5	29.6	0.0	0.0
Incr Delay (d2), s/veh	0.0	5.3	5.5	4.8	0.2	0.2	0.1	0.0	4.0	0.1	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.0	10.7	10.7	4.2	3.2	3.3	0.6	0.0	3.9	0.1	0.0	0.0
LnGrp Delay(d),s/veh	0.0	22.0	22.2	31.3	5.3	5.3	22.7	0.0	29.5	29.7	0.0	0.0
LnGrp LOS		C	C	C	A	A	C		C	C		
Approach Vol, veh/h		1211			1234			251				4
Approach Delay, s/veh		22.1			14.5			28.4				29.7
Approach LOS		C			B			C				C
Timer	1	2	3	4	5	6	7	8				
Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	15.1	33.7		16.9	0.0	48.9		16.9				
Change Period (Y+Rc), s	4.5	6.0		5.0	4.5	6.0		5.0				
Max Green Setting (Gmax), s	13.5	32.0		29.0	5.0	40.5		29.0				
Max Q Clear Time (g_c+I1), s	10.1	21.9		10.7	0.0	8.4		10.4				
Green Ext Time (p_c), s	0.5	5.8		1.2	0.0	15.5		1.2				
Intersection Summary												
HCM 2010 Ctrl Delay				19.3								
HCM 2010 LOS				B								

HCM 2010 Signalized Intersection Summary




















2: Via Del Campo & Rancho Bernardo Rd

3/24/2016

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	4	952	302	602	1251	0	59	0	43	1	0	0
Future Volume (veh/h)	4	952	302	602	1251	0	59	0	43	1	0	0
Number	5	2	12	1	6	16	3	8	18	7	4	14
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.98	1.00		1.00	1.00		0.98	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1900	1863	1863	1900	1900	1863	1863	1900	1863	1900
Adj Flow Rate, veh/h	4	1070	339	676	1406	0	66	0	48	1	0	0
Adj No. of Lanes	1	2	0	1	2	0	0	1	1	0	1	0
Peak Hour Factor	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	7	1084	339	650	2737	0	176	0	98	110	0	0
Arrive On Green	0.00	0.41	0.41	0.37	0.77	0.00	0.06	0.00	0.06	0.06	0.00	0.00
Sat Flow, veh/h	1774	2638	826	1774	3632	0	1620	0	1559	569	0	0
Grp Volume(v), veh/h	4	713	696	676	1406	0	66	0	48	1	0	0
Grp Sat Flow(s),veh/h/ln	1774	1770	1694	1774	1770	0	1620	0	1559	569	0	0
Q Serve(g_s), s	0.2	38.6	39.8	35.6	14.5	0.0	0.0	0.0	2.9	0.1	0.0	0.0
Cycle Q Clear(g_c), s	0.2	38.6	39.8	35.6	14.5	0.0	3.5	0.0	2.9	3.6	0.0	0.0
Prop In Lane	1.00		0.49	1.00		0.00	1.00		1.00	1.00		0.00
Lane Grp Cap(c), veh/h	7	727	696	650	2737	0	176	0	98	110	0	0
V/C Ratio(X)	0.54	0.98	1.00	1.04	0.51	0.00	0.38	0.00	0.49	0.01	0.00	0.00
Avail Cap(c_a), veh/h	73	727	696	650	2737	0	508	0	466	433	0	0
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	0.00	1.00	0.00	1.00	1.00	0.00	0.00
Uniform Delay (d), s/veh	48.2	28.2	28.6	30.7	4.1	0.0	44.3	0.0	44.0	46.0	0.0	0.0
Incr Delay (d2), s/veh	48.6	28.5	33.8	45.9	0.2	0.0	1.3	0.0	3.8	0.0	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.2	24.6	25.1	25.6	6.9	0.0	1.8	0.0	1.3	0.0	0.0	0.0
LnGrp Delay(d),s/veh	96.9	56.8	62.4	76.6	4.3	0.0	45.6	0.0	47.8	46.1	0.0	0.0
LnGrp LOS	F	E	E	F	A		D		D	D		
Approach Vol, veh/h		1413			2082			114				1
Approach Delay, s/veh		59.7			27.8			46.5				46.1
Approach LOS		E			C			D				D
Timer	1	2	3	4	5	6	7	8				
Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	40.0	45.8		11.3	4.8	81.0		11.3				
Change Period (Y+Rc), s	4.4	5.9		* 5.2	4.4	* 5.9		5.2				
Max Green Setting (Gmax), s	35.6	39.9		* 29	4.0	* 72		29.0				
Max Q Clear Time (g_c+I1), s	37.6	41.8		5.6	2.2	16.5		5.5				
Green Ext Time (p_c), s	0.0	0.0		0.4	0.0	36.0		0.4				
Intersection Summary												
HCM 2010 Ctrl Delay				40.9								
HCM 2010 LOS				D								
Notes												
























HCM 2010 Signalized Intersection Summary
 3: Project Dwy/Matinal Rd & Rancho Bernardo Rd

3/24/2016

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	33	784	78	240	1602	17	19	2	60	84	6	141
Future Volume (veh/h)	33	784	78	240	1602	17	19	2	60	84	6	141
Number	5	2	12	1	6	16	3	8	18	7	4	14
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		0.98
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1900	1863	1863	1900	1863	1863	1900	1900	1863	1900
Adj Flow Rate, veh/h	38	901	90	276	1841	20	22	2	69	97	7	162
Adj No. of Lanes	1	2	0	1	2	0	1	1	0	0	1	0
Peak Hour Factor	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	48	1577	158	276	2201	24	239	10	335	141	21	183
Arrive On Green	0.03	0.49	0.49	0.16	0.61	0.61	0.22	0.22	0.22	0.22	0.22	0.22
Sat Flow, veh/h	1774	3250	325	1774	3587	39	1211	45	1545	446	97	844
Grp Volume(v), veh/h	38	491	500	276	907	954	22	0	71	266	0	0
Grp Sat Flow(s),veh/h/ln	1774	1770	1805	1774	1770	1856	1211	0	1590	1386	0	0
Q Serve(g_s), s	2.3	21.6	21.6	17.0	44.4	44.7	0.0	0.0	4.0	16.6	0.0	0.0
Cycle Q Clear(g_c), s	2.3	21.6	21.6	17.0	44.4	44.7	2.6	0.0	4.0	20.6	0.0	0.0
Prop In Lane	1.00		0.18	1.00		0.02	1.00		0.97	0.36		0.61
Lane Grp Cap(c), veh/h	48	859	876	276	1086	1139	239	0	344	345	0	0
V/C Ratio(X)	0.79	0.57	0.57	1.00	0.84	0.84	0.09	0.00	0.21	0.77	0.00	0.00
Avail Cap(c_a), veh/h	81	955	974	276	1166	1222	297	0	422	409	0	0
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00	0.00
Uniform Delay (d), s/veh	52.9	20.0	20.0	46.2	16.7	16.8	34.6	0.0	35.1	42.1	0.0	0.0
Incr Delay (d2), s/veh	24.2	0.7	0.6	54.3	5.1	5.0	0.2	0.0	0.3	7.4	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.5	10.6	10.9	12.4	23.0	24.1	0.5	0.0	1.8	8.5	0.0	0.0
LnGrp Delay(d),s/veh	77.1	20.7	20.7	100.5	21.9	21.8	34.7	0.0	35.4	49.4	0.0	0.0
LnGrp LOS	E	C	C	F	C	C	C		D	D		
Approach Vol, veh/h		1029			2137			93			266	
Approach Delay, s/veh		22.8			32.0			35.2			49.4	
Approach LOS		C			C			D			D	
Timer	1	2	3	4	5	6	7	8				
Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	21.0	60.0		28.3	7.0	74.1		28.3				
Change Period (Y+Rc), s	4.0	7.0		4.6	4.0	* 7		* 4.6				
Max Green Setting (Gmax), s	17.0	59.0		28.4	5.0	* 72		* 29				
Max Q Clear Time (g_c+I1), s	19.0	23.6		22.6	4.3	46.7		6.0				
Green Ext Time (p_c), s	0.0	26.6		1.1	0.0	20.4		2.4				
Intersection Summary												
HCM 2010 Ctrl Delay				30.7								
HCM 2010 LOS				C								
Notes												



















HCM 2010 Signalized Intersection Summary
 4: West Bernardo Dr & Rancho Bernardo Rd

3/24/2016

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	44	688	81	566	1697	271	126	86	124	643	312	174
Future Volume (veh/h)	44	688	81	566	1697	271	126	86	124	643	312	174
Number	5	2	12	1	6	16	3	8	18	7	4	14
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		0.99	1.00		0.99	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1900	1863	1863	1863	1863	1863	1863	1863	1863	1900
Adj Flow Rate, veh/h	45	709	84	584	1749	279	130	89	128	663	322	179
Adj No. of Lanes	2	3	0	2	2	1	2	2	1	2	2	0
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	96	988	116	855	1589	701	206	391	566	764	603	328
Arrive On Green	0.03	0.21	0.21	0.25	0.45	0.45	0.06	0.11	0.11	0.22	0.27	0.27
Sat Flow, veh/h	3442	4615	542	3442	3539	1562	3442	3539	1561	3442	2212	1202
Grp Volume(v), veh/h	45	519	274	584	1749	279	130	89	128	663	256	245
Grp Sat Flow(s),veh/h/ln	1721	1695	1767	1721	1770	1562	1721	1770	1561	1721	1770	1644
Q Serve(g_s), s	1.3	14.8	15.0	16.0	46.9	12.5	3.9	2.4	2.5	19.4	12.9	13.3
Cycle Q Clear(g_c), s	1.3	14.8	15.0	16.0	46.9	12.5	3.9	2.4	2.5	19.4	12.9	13.3
Prop In Lane	1.00		0.31	1.00		1.00	1.00		1.00	1.00		0.73
Lane Grp Cap(c), veh/h	96	726	378	855	1589	701	206	391	566	764	482	448
V/C Ratio(X)	0.47	0.72	0.72	0.68	1.10	0.40	0.63	0.23	0.23	0.87	0.53	0.55
Avail Cap(c_a), veh/h	132	1237	645	855	1589	701	1124	1325	978	992	595	553
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	50.0	38.1	38.2	35.5	28.8	19.3	48.0	42.4	8.1	39.2	32.3	32.5
Incr Delay (d2), s/veh	3.5	1.3	2.6	2.2	55.4	0.4	3.1	0.3	0.2	6.7	0.9	1.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.7	7.1	7.6	7.9	35.0	5.5	1.9	1.2	1.4	9.9	6.4	6.2
LnGrp Delay(d),s/veh	53.5	39.4	40.8	37.8	84.2	19.7	51.1	42.7	8.3	45.8	33.2	33.5
LnGrp LOS	D	D	D	D	F	B	D	D	A	D	C	C
Approach Vol, veh/h		838			2612			347			1164	
Approach Delay, s/veh		40.6			66.9			33.2			40.5	
Approach LOS		D			E			C			D	
Timer	1	2	3	4	5	6	7	8				
Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	31.6	28.3	10.7	33.9	7.3	52.6	27.6	17.0				
Change Period (Y+Rc), s	5.7	* 5.9	4.4	5.4	4.4	5.7	4.4	5.4				
Max Green Setting (Gmax), s	12.6	* 38	34.1	35.1	4.0	46.9	30.1	39.1				
Max Q Clear Time (g_c+I1), s	18.0	17.0	5.9	15.3	3.3	48.9	21.4	4.5				
Green Ext Time (p_c), s	0.0	5.3	0.4	4.1	0.0	0.0	1.8	4.6				
Intersection Summary												
HCM 2010 Ctrl Delay			53.9									
HCM 2010 LOS			D									
Notes												



















HCM 2010 Signalized Intersection Summary
 5: I-15 SB Ramps & Rancho Bernardo Rd

3/24/2016

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	799	598	0	1379	505	0	0	0	659	0	1200
Future Volume (veh/h)	0	799	598	0	1379	505	0	0	0	659	0	1200
Number	5	2	12	1	6	16				7	4	14
Initial Q (Qb), veh	0	0	0	0	0	0				0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00				1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00				1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	0	1863	1863	0	1863	1863				1863	0	1863
Adj Flow Rate, veh/h	0	822	642	0	1452	0				694	0	1263
Adj No. of Lanes	0	2	2	0	3	1				2	0	2
Peak Hour Factor	0.92	0.95	0.95	0.92	0.95	0.95				0.95	0.92	0.95
Percent Heavy Veh, %	0	2	2	0	2	2				2	0	2
Cap, veh/h	0	1584	1347	0	2376	673				1671	0	1353
Arrive On Green	0.00	0.43	0.43	0.00	0.57	0.00				0.49	0.00	0.49
Sat Flow, veh/h	0	3725	3167	0	5588	1583				3442	0	2787
Grp Volume(v), veh/h	0	822	642	0	1452	0				694	0	1263
Grp Sat Flow(s),veh/h/ln	0	1863	1583	0	1863	1583				1721	0	1393
Q Serve(g_s), s	0.0	22.8	20.5	0.0	24.1	0.0				18.2	0.0	59.7
Cycle Q Clear(g_c), s	0.0	22.8	20.5	0.0	24.1	0.0				18.2	0.0	59.7
Prop In Lane	0.00		1.00	0.00		1.00				1.00		1.00
Lane Grp Cap(c), veh/h	0	1584	1347	0	2376	673				1671	0	1353
V/C Ratio(X)	0.00	0.52	0.48	0.00	0.61	0.00				0.42	0.00	0.93
Avail Cap(c_a), veh/h	0	1584	1347	0	2376	673				1768	0	1431
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.33	1.33				1.00	1.00	1.00
Upstream Filter(I)	0.00	0.63	0.63	0.00	0.82	0.00				1.00	0.00	1.00
Uniform Delay (d), s/veh	0.0	29.7	29.0	0.0	22.7	0.0				23.2	0.0	33.9
Incr Delay (d2), s/veh	0.0	0.8	0.8	0.0	1.0	0.0				0.2	0.0	11.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0				0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.0	11.9	9.1	0.0	12.6	0.0				8.7	0.0	25.1
LnGrp Delay(d),s/veh	0.0	30.4	29.8	0.0	23.7	0.0				23.4	0.0	45.0
LnGrp LOS		C	C		C					C		D
Approach Vol, veh/h		1464			1452						1957	
Approach Delay, s/veh		30.1			23.7						37.3	
Approach LOS		C			C						D	
Timer	1	2	3	4	5	6	7	8				
Assigned Phs		2		4		6						
Phs Duration (G+Y+Rc), s		65.9		74.1		65.9						
Change Period (Y+Rc), s		6.4		6.1		6.4						
Max Green Setting (Gmax), s		55.6		71.9		55.6						
Max Q Clear Time (g_c+I1), s		24.8		61.7		26.1						
Green Ext Time (p_c), s		23.7		6.2		22.9						
Intersection Summary												
HCM 2010 Ctrl Delay			31.1									
HCM 2010 LOS			C									
Notes												























HCM 2010 Signalized Intersection Summary
 6: I-15 NB Ramps & Rancho Bernardo Rd

3/24/2016

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	846	613	0	1126	285	758	0	433	0	0	0
Future Volume (veh/h)	0	846	613	0	1126	285	758	0	433	0	0	0
Number	5	2	12	1	6	16	3	8	18			
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0			
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00			
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00			
Adj Sat Flow, veh/h/ln	0	1863	1863	0	1863	1863	1863	0	1863			
Adj Flow Rate, veh/h	0	900	0	0	1198	303	806	0	461			
Adj No. of Lanes	0	3	1	0	3	1	2	0	2			
Peak Hour Factor	0.92	0.94	0.94	0.92	0.94	0.94	0.94	0.92	0.94			
Percent Heavy Veh, %	0	2	2	0	2	2	2	0	2			
Cap, veh/h	0	3551	1006	0	3232	1006	947	0	767			
Arrive On Green	0.00	1.00	0.00	0.00	0.64	0.64	0.28	0.00	0.28			
Sat Flow, veh/h	0	5588	1583	0	5253	1583	3442	0	2787			
Grp Volume(v), veh/h	0	900	0	0	1198	303	806	0	461			
Grp Sat Flow(s),veh/h/ln	0	1863	1583	0	1695	1583	1721	0	1393			
Q Serve(g_s), s	0.0	0.0	0.0	0.0	15.7	12.1	31.0	0.0	20.1			
Cycle Q Clear(g_c), s	0.0	0.0	0.0	0.0	15.7	12.1	31.0	0.0	20.1			
Prop In Lane	0.00		1.00	0.00		1.00	1.00		1.00			
Lane Grp Cap(c), veh/h	0	3551	1006	0	3232	1006	947	0	767			
V/C Ratio(X)	0.00	0.25	0.00	0.00	0.37	0.30	0.85	0.00	0.60			
Avail Cap(c_a), veh/h	0	3551	1006	0	3232	1006	1399	0	1133			
HCM Platoon Ratio	1.00	2.00	2.00	1.00	1.00	1.00	1.00	1.00	1.00			
Upstream Filter(I)	0.00	0.84	0.00	0.00	1.00	1.00	1.00	0.00	1.00			
Uniform Delay (d), s/veh	0.0	0.0	0.0	0.0	12.2	11.5	48.0	0.0	44.1			
Incr Delay (d2), s/veh	0.0	0.1	0.0	0.0	0.3	0.8	3.5	0.0	0.8			
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0			
%ile BackOfQ(50%),veh/ln	0.0	0.0	0.0	0.0	7.4	5.4	15.2	0.0	7.8			
LnGrp Delay(d),s/veh	0.0	0.1	0.0	0.0	12.5	12.3	51.5	0.0	44.8			
LnGrp LOS		A			B	B	D		D			
Approach Vol, veh/h		900			1501			1267				
Approach Delay, s/veh		0.1			12.5			49.1				
Approach LOS		A			B			D				
Timer	1	2	3	4	5	6	7	8				
Assigned Phs		2				6		8				
Phs Duration (G+Y+Rc), s		95.4				95.4		44.6				
Change Period (Y+Rc), s		6.4				6.4		6.1				
Max Green Setting (Gmax), s		70.6				70.6		56.9				
Max Q Clear Time (g_c+I1), s		2.0				17.7		33.0				
Green Ext Time (p_c), s		30.3				27.2		5.5				
Intersection Summary												
HCM 2010 Ctrl Delay			22.1									
HCM 2010 LOS			C									
Notes												






















HCM 2010 Signalized Intersection Summary
 7: Bernardo Center Dr & Rancho Bernardo Rd

3/24/2016

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	321	600	302	163	841	85	265	188	109	185	247	117
Future Volume (veh/h)	321	600	302	163	841	85	265	188	109	185	247	117
Number	5	2	12	1	6	16	3	8	18	7	4	14
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		0.99	1.00		0.99	1.00		0.99
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1863	1863	1863	1900	1863	1863	1900	1863	1863	1863
Adj Flow Rate, veh/h	345	648	323	175	904	91	285	202	117	199	266	126
Adj No. of Lanes	2	2	1	2	2	0	2	2	0	2	2	1
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	435	1555	661	255	1196	120	364	401	222	283	563	442
Arrive On Green	0.12	0.42	0.42	0.07	0.37	0.37	0.11	0.18	0.18	0.08	0.16	0.16
Sat Flow, veh/h	3548	3725	1583	3442	3243	326	3442	2193	1214	3442	3539	1560
Grp Volume(v), veh/h	345	648	323	175	493	502	285	161	158	199	266	126
Grp Sat Flow(s),veh/h/ln	1774	1863	1583	1721	1770	1799	1721	1770	1637	1721	1770	1560
Q Serve(g_s), s	8.1	10.5	12.8	4.3	20.9	20.9	6.9	7.0	7.5	4.8	5.9	5.4
Cycle Q Clear(g_c), s	8.1	10.5	12.8	4.3	20.9	20.9	6.9	7.0	7.5	4.8	5.9	5.4
Prop In Lane	1.00		1.00	1.00		0.18	1.00		0.74	1.00		1.00
Lane Grp Cap(c), veh/h	435	1555	661	255	653	664	364	323	299	283	563	442
V/C Ratio(X)	0.79	0.42	0.49	0.69	0.76	0.76	0.78	0.50	0.53	0.70	0.47	0.28
Avail Cap(c_a), veh/h	562	1623	690	445	738	751	425	802	742	493	1649	921
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	36.6	17.6	18.3	38.8	23.7	23.7	37.4	31.5	31.7	38.4	32.8	24.1
Incr Delay (d2), s/veh	5.9	0.2	0.6	3.2	4.0	3.9	7.9	1.2	1.4	3.2	0.6	0.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	4.3	5.4	5.7	2.1	10.9	11.0	3.7	3.6	3.5	2.4	2.9	2.4
LnGrp Delay(d),s/veh	42.5	17.8	18.9	42.0	27.6	27.6	45.3	32.7	33.2	41.6	33.4	24.4
LnGrp LOS	D	B	B	D	C	C	D	C	C	D	C	C
Approach Vol, veh/h		1316			1170			604			591	
Approach Delay, s/veh		24.5			29.8			38.8			34.3	
Approach LOS		C			C			D			C	
Timer	1	2	3	4	5	6	7	8				
Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	10.8	42.0	13.5	19.5	14.9	37.9	11.5	21.6				
Change Period (Y+Rc), s	4.4	6.2	4.4	5.9	4.4	* 6.2	4.4	* 5.9				
Max Green Setting (Gmax), s	11.1	37.4	10.6	40.0	13.6	* 36	12.3	* 39				
Max Q Clear Time (g_c+I1), s	6.3	14.8	8.9	7.9	10.1	22.9	6.8	9.5				
Green Ext Time (p_c), s	0.2	12.6	0.2	4.1	0.4	8.7	0.3	4.1				
Intersection Summary												
HCM 2010 Ctrl Delay			30.1									
HCM 2010 LOS			C									
Notes												

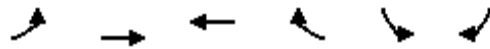
HCM 2010 Signalized Intersection Summary
 8: West Bernardo Dr & Duenda Rd

3/24/2016

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	20	170	152	102	51	40	31	100	74	97	218	10
Future Volume (veh/h)	20	170	152	102	51	40	31	100	74	97	218	10
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.99	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1900	1863	1863	1863	1863	1863	1900	1863	1863	1900
Adj Flow Rate, veh/h	22	185	165	111	55	43	34	109	80	105	237	11
Adj No. of Lanes	1	1	0	1	1	1	1	2	0	1	2	0
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	463	236	210	189	198	169	54	278	189	136	634	29
Arrive On Green	0.26	0.26	0.26	0.11	0.11	0.11	0.03	0.14	0.14	0.08	0.18	0.18
Sat Flow, veh/h	1774	902	805	1774	1863	1583	1774	2018	1372	1774	3445	159
Grp Volume(v), veh/h	22	0	350	111	55	43	34	94	95	105	121	127
Grp Sat Flow(s),veh/h/ln	1774	0	1707	1774	1863	1583	1774	1770	1621	1774	1770	1835
Q Serve(g_s), s	0.4	0.0	9.1	2.9	1.3	1.2	0.9	2.3	2.6	2.8	2.9	2.9
Cycle Q Clear(g_c), s	0.4	0.0	9.1	2.9	1.3	1.2	0.9	2.3	2.6	2.8	2.9	2.9
Prop In Lane	1.00		0.47	1.00		1.00	1.00		0.85	1.00		0.09
Lane Grp Cap(c), veh/h	463	0	446	189	198	169	54	244	223	136	326	338
V/C Ratio(X)	0.05	0.00	0.79	0.59	0.28	0.25	0.63	0.39	0.42	0.77	0.37	0.38
Avail Cap(c_a), veh/h	704	0	677	778	817	695	185	739	677	371	924	958
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	13.2	0.0	16.4	20.4	19.7	19.6	22.9	18.8	18.9	21.7	17.1	17.1
Incr Delay (d2), s/veh	0.0	0.0	3.5	2.9	0.7	0.8	11.5	1.0	1.3	9.0	0.7	0.7
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.2	0.0	4.7	1.5	0.7	0.6	0.6	1.2	1.2	1.7	1.4	1.5
LnGrp Delay(d),s/veh	13.3	0.0	19.9	23.3	20.4	20.4	34.5	19.8	20.2	30.7	17.8	17.8
LnGrp LOS	B		B	C	C	C	C	B	C	C	B	B
Approach Vol, veh/h		372			209			223			353	
Approach Delay, s/veh		19.5			21.9			22.2			21.6	
Approach LOS		B			C			C			C	
Timer	1	2	3	4	5	6	7	8				
Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	8.7	11.6		17.5	6.5	13.8		10.1				
Change Period (Y+Rc), s	5.0	5.0		5.0	5.0	5.0		5.0				
Max Green Setting (Gmax), s	10.0	20.0		19.0	5.0	25.0		21.0				
Max Q Clear Time (g_c+I1), s	4.8	4.6		11.1	2.9	4.9		4.9				
Green Ext Time (p_c), s	0.1	2.1		1.4	0.0	2.3		0.6				
Intersection Summary												
HCM 2010 Ctrl Delay				21.1								
HCM 2010 LOS				C								

HCM 2010 Signalized Intersection Summary
 9: West Bernardo Dr & Via Del Campo

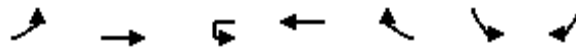
3/24/2016



Movement	EBL	EBT	WBT	WBR	SBL	SBR		
Lane Configurations								
Traffic Volume (veh/h)	391	514	273	150	47	51		
Future Volume (veh/h)	391	514	273	150	47	51		
Number	5	2	6	16	7	14		
Initial Q (Qb), veh	0	0	0	0	0	0		
Ped-Bike Adj(A_pbT)	1.00			1.00	1.00	1.00		
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00		
Adj Sat Flow, veh/h/ln	1863	1863	1863	1900	1863	1863		
Adj Flow Rate, veh/h	460	605	321	176	55	60		
Adj No. of Lanes	1	2	2	0	1	1		
Peak Hour Factor	0.85	0.85	0.85	0.85	0.85	0.85		
Percent Heavy Veh, %	2	2	2	2	2	2		
Cap, veh/h	940	2823	426	228	109	97		
Arrive On Green	0.53	0.80	0.19	0.19	0.06	0.06		
Sat Flow, veh/h	1774	3632	2318	1193	1774	1583		
Grp Volume(v), veh/h	460	605	254	243	55	60		
Grp Sat Flow(s),veh/h/ln	1774	1770	1770	1649	1774	1583		
Q Serve(g_s), s	11.9	3.0	9.8	10.1	2.2	2.7		
Cycle Q Clear(g_c), s	11.9	3.0	9.8	10.1	2.2	2.7		
Prop In Lane	1.00			0.72	1.00	1.00		
Lane Grp Cap(c), veh/h	940	2823	339	316	109	97		
V/C Ratio(X)	0.49	0.21	0.75	0.77	0.51	0.62		
Avail Cap(c_a), veh/h	940	2823	482	449	542	484		
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00		
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00		
Uniform Delay (d), s/veh	10.8	1.8	27.6	27.7	32.9	33.1		
Incr Delay (d2), s/veh	0.4	0.2	4.0	5.1	3.6	6.2		
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0		
%ile BackOfQ(50%),veh/ln	5.9	1.5	5.2	5.0	1.2	2.5		
LnGrp Delay(d),s/veh	11.2	2.0	31.6	32.9	36.5	39.4		
LnGrp LOS	B	A	C	C	D	D		
Approach Vol, veh/h		1065	497		115			
Approach Delay, s/veh		5.9	32.2		38.0			
Approach LOS		A	C		D			
Timer	1	2	3	4	5	6	7	8
Assigned Phs		2		4	5	6		
Phs Duration (G+Y+Rc), s		63.2		9.1	43.8	19.4		
Change Period (Y+Rc), s		5.5		* 4.7	5.5	* 5.5		
Max Green Setting (Gmax), s		57.7		* 22	33.6	* 20		
Max Q Clear Time (g_c+I1), s		5.0		4.7	13.9	12.1		
Green Ext Time (p_c), s		6.1		0.3	5.3	1.7		
Intersection Summary								
HCM 2010 Ctrl Delay			15.9					
HCM 2010 LOS			B					
Notes								

HCM 2010 Signalized Intersection Summary
 10: Bernardo Center Dr & West Bernardo Dr




















3/24/2016



Movement	EBL	EBT	WBU	WBT	WBR	SBL	SBR	
Lane Configurations								
Traffic Volume (veh/h)	618	450	0	484	699	59	190	
Future Volume (veh/h)	618	450	0	484	699	59	190	
Number	1	6		2	12	3	18	
Initial Q (Qb), veh	0	0		0	0	0	0	
Ped-Bike Adj(A_pbT)	1.00				0.97	1.00	1.00	
Parking Bus, Adj	1.00	1.00		1.00	1.00	1.00	1.00	
Adj Sat Flow, veh/h/ln	1863	1863		1863	1863	1863	1863	
Adj Flow Rate, veh/h	694	506		544	785	66	213	
Adj No. of Lanes	2	2		1	2	1	1	
Peak Hour Factor	0.89	0.89		0.89	0.89	0.89	0.89	
Percent Heavy Veh, %	2	2		2	2	2	2	
Cap, veh/h	851	2586		789	1525	238	604	
Arrive On Green	0.25	0.73		0.42	0.42	0.13	0.13	
Sat Flow, veh/h	3442	3632		1863	2716	1774	1583	
Grp Volume(v), veh/h	694	506		544	785	66	213	
Grp Sat Flow(s),veh/h/ln	1721	1770		1863	1358	1774	1583	
Q Serve(g_s), s	14.0	3.3		17.4	13.2	2.5	7.1	
Cycle Q Clear(g_c), s	14.0	3.3		17.4	13.2	2.5	7.1	
Prop In Lane	1.00				1.00	1.00	1.00	
Lane Grp Cap(c), veh/h	851	2586		789	1525	238	604	
V/C Ratio(X)	0.82	0.20		0.69	0.51	0.28	0.35	
Avail Cap(c_a), veh/h	1342	3343		1120	2007	798	1103	
HCM Platoon Ratio	1.00	1.00		1.00	1.00	1.00	1.00	
Upstream Filter(I)	1.00	1.00		1.00	1.00	1.00	1.00	
Uniform Delay (d), s/veh	26.0	3.1		17.2	10.1	28.5	16.2	
Incr Delay (d2), s/veh	2.2	0.0		1.1	0.3	0.6	0.4	
Initial Q Delay(d3),s/veh	0.0	0.0		0.0	0.0	0.0	0.0	
%ile BackOfQ(50%),veh/ln	6.9	1.6		9.2	4.9	1.3	3.1	
LnGrp Delay(d),s/veh	28.3	3.1		18.3	10.4	29.2	16.6	
LnGrp LOS	C	A		B	B	C	B	
Approach Vol, veh/h		1200		1329		279		
Approach Delay, s/veh		17.7		13.6		19.5		
Approach LOS		B		B		B		
Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2				6		8
Phs Duration (G+Y+Rc), s	22.5	36.6				59.1		14.3
Change Period (Y+Rc), s	4.4	5.5				* 5.5		4.4
Max Green Setting (Gmax), s	28.6	44.1				* 69		33.0
Max Q Clear Time (g_c+I1), s	16.0	19.4				5.3		9.1
Green Ext Time (p_c), s	2.2	11.6				15.3		0.8
Intersection Summary								
HCM 2010 Ctrl Delay				15.9				
HCM 2010 LOS				B				
Notes								




















HCM 2010 Signalized Intersection Summary
 1: Camino San Bernardo & Rancho Bernardo Rd

3/24/2016

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	1	960	208	350	759	0	109	0	322	3	0	0
Future Volume (veh/h)	1	960	208	350	759	0	109	0	322	3	0	0
Number	5	2	12	1	6	16	3	8	18	7	4	14
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.99	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1900	1863	1863	1900	1863	1863	1900	1900	1863	1900
Adj Flow Rate, veh/h	1	1000	217	365	791	0	114	0	335	3	0	0
Adj No. of Lanes	1	2	0	2	2	0	1	2	0	0	1	0
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	2	1216	263	458	1957	0	528	451	403	151	0	0
Arrive On Green	0.00	0.42	0.42	0.13	0.55	0.00	0.25	0.00	0.25	0.25	0.00	0.00
Sat Flow, veh/h	1774	2886	625	3442	3632	0	1412	1770	1581	222	0	0
Grp Volume(v), veh/h	1	612	605	365	791	0	114	0	335	3	0	0
Grp Sat Flow(s),veh/h/ln	1774	1770	1742	1721	1770	0	1412	1770	1581	222	0	0
Q Serve(g_s), s	0.0	23.2	23.4	7.8	9.8	0.0	0.0	0.0	15.2	0.2	0.0	0.0
Cycle Q Clear(g_c), s	0.0	23.2	23.4	7.8	9.8	0.0	3.9	0.0	15.2	15.4	0.0	0.0
Prop In Lane	1.00		0.36	1.00		0.00	1.00		1.00	1.00		0.00
Lane Grp Cap(c), veh/h	2	746	734	458	1957	0	528	451	403	151	0	0
V/C Ratio(X)	0.41	0.82	0.82	0.80	0.40	0.00	0.22	0.00	0.83	0.02	0.00	0.00
Avail Cap(c_a), veh/h	117	804	792	544	1957	0	708	676	604	284	0	0
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	0.00	1.00	0.00	1.00	1.00	0.00	0.00
Uniform Delay (d), s/veh	37.9	19.4	19.5	31.9	9.8	0.0	22.5	0.0	26.8	34.0	0.0	0.0
Incr Delay (d2), s/veh	84.2	6.4	6.7	6.9	0.1	0.0	0.2	0.0	6.2	0.1	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.1	12.6	12.5	4.1	4.8	0.0	1.9	0.0	7.3	0.1	0.0	0.0
LnGrp Delay(d),s/veh	122.1	25.8	26.2	38.8	9.9	0.0	22.7	0.0	32.9	34.1	0.0	0.0
LnGrp LOS	F	C	C	D	A		C		C	C		
Approach Vol, veh/h		1218			1156			449			3	
Approach Delay, s/veh		26.1			19.0			30.3			34.1	
Approach LOS		C			B			C			C	
Timer	1	2	3	4	5	6	7	8				
Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	14.1	37.5		24.3	4.1	47.5		24.3				
Change Period (Y+Rc), s	4.0	5.5		5.0	4.0	5.5		5.0				
Max Green Setting (Gmax), s	12.0	34.5		29.0	5.0	41.5		29.0				
Max Q Clear Time (g_c+I1), s	9.8	25.4		17.4	2.0	11.8		17.2				
Green Ext Time (p_c), s	0.3	6.6		1.8	0.0	15.7		1.8				
Intersection Summary												
HCM 2010 Ctrl Delay				23.9								
HCM 2010 LOS				C								




















HCM 2010 Signalized Intersection Summary
 2: Via Del Campo & Rancho Bernardo Rd

3/24/2016

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	6	1353	49	28	946	1	276	0	356	1	0	0
Future Volume (veh/h)	6	1353	49	28	946	1	276	0	356	1	0	0
Number	5	2	12	1	6	16	3	8	18	7	4	14
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		0.98	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1900	1863	1863	1900	1900	1863	1863	1900	1863	1900
Adj Flow Rate, veh/h	7	1487	54	31	1040	1	303	0	391	1	0	0
Adj No. of Lanes	1	2	0	1	2	0	0	1	1	0	1	0
Peak Hour Factor	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	13	1723	62	44	1858	2	551	0	451	230	0	0
Arrive On Green	0.01	0.49	0.49	0.02	0.51	0.51	0.29	0.00	0.29	0.29	0.00	0.00
Sat Flow, veh/h	1774	3484	126	1774	3628	3	1596	0	1558	488	0	0
Grp Volume(v), veh/h	7	754	787	31	507	534	303	0	391	1	0	0
Grp Sat Flow(s),veh/h/ln	1774	1770	1840	1774	1770	1862	1596	0	1558	488	0	0
Q Serve(g_s), s	0.3	30.4	30.6	1.4	15.9	15.9	0.0	0.0	19.3	0.1	0.0	0.0
Cycle Q Clear(g_c), s	0.3	30.4	30.6	1.4	15.9	15.9	11.9	0.0	19.3	11.9	0.0	0.0
Prop In Lane	1.00		0.07	1.00		0.00	1.00		1.00	1.00		0.00
Lane Grp Cap(c), veh/h	13	875	910	44	906	954	551	0	451	230	0	0
V/C Ratio(X)	0.55	0.86	0.87	0.70	0.56	0.56	0.55	0.00	0.87	0.00	0.00	0.00
Avail Cap(c_a), veh/h	88	901	937	90	907	955	652	0	562	305	0	0
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00	0.00
Uniform Delay (d), s/veh	40.1	18.0	18.1	39.2	13.5	13.5	24.7	0.0	27.3	29.7	0.0	0.0
Incr Delay (d2), s/veh	32.0	8.4	8.4	18.5	0.8	0.7	0.9	0.0	11.5	0.0	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.3	16.7	17.4	0.9	7.8	8.2	5.9	0.0	9.6	0.0	0.0	0.0
LnGrp Delay(d),s/veh	72.0	26.4	26.4	57.7	14.3	14.2	25.5	0.0	38.8	29.7	0.0	0.0
LnGrp LOS	E	C	C	E	B	B	C		D	C		
Approach Vol, veh/h		1548			1072			694				1
Approach Delay, s/veh		26.6			15.5			33.0				29.7
Approach LOS		C			B			C				C
Timer	1	2	3	4	5	6	7	8				
Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	6.4	45.9		28.6	5.0	47.3		28.6				
Change Period (Y+Rc), s	4.4	5.9		* 5.2	4.4	* 5.9		5.2				
Max Green Setting (Gmax), s	4.1	41.2		* 30	4.0	* 42		29.2				
Max Q Clear Time (g_c+I1), s	3.4	32.6		13.9	2.3	17.9		21.3				
Green Ext Time (p_c), s	0.0	7.4		3.0	0.0	17.3		2.1				
Intersection Summary												
HCM 2010 Ctrl Delay			24.4									
HCM 2010 LOS			C									
Notes												
































HCM 2010 Signalized Intersection Summary
 3: Project Dwy/Matinal Rd & Rancho Bernardo Rd

3/24/2016

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	109	1477	44	135	862	48	29	2	91	41	4	105
Future Volume (veh/h)	109	1477	44	135	862	48	29	2	91	41	4	105
Number	5	2	12	1	6	16	3	8	18	7	4	14
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		0.99
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1900	1863	1863	1900	1863	1863	1900	1900	1863	1900
Adj Flow Rate, veh/h	121	1641	49	150	958	53	32	2	101	46	4	117
Adj No. of Lanes	1	2	0	1	2	0	1	1	0	0	1	0
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	156	1816	54	174	1800	100	279	5	258	108	26	165
Arrive On Green	0.09	0.52	0.52	0.10	0.53	0.53	0.17	0.17	0.17	0.17	0.17	0.17
Sat Flow, veh/h	1774	3509	105	1774	3410	189	1265	31	1557	265	158	991
Grp Volume(v), veh/h	121	825	865	150	497	514	32	0	103	167	0	0
Grp Sat Flow(s),veh/h/ln	1774	1770	1844	1774	1770	1829	1265	0	1588	1415	0	0
Q Serve(g_s), s	4.8	30.1	30.4	5.9	13.2	13.2	0.0	0.0	4.1	4.0	0.0	0.0
Cycle Q Clear(g_c), s	4.8	30.1	30.4	5.9	13.2	13.2	2.0	0.0	4.1	8.2	0.0	0.0
Prop In Lane	1.00		0.06	1.00		0.10	1.00		0.98	0.28		0.70
Lane Grp Cap(c), veh/h	156	916	954	174	934	965	279	0	264	299	0	0
V/C Ratio(X)	0.78	0.90	0.91	0.86	0.53	0.53	0.11	0.00	0.39	0.56	0.00	0.00
Avail Cap(c_a), veh/h	323	977	1018	174	934	965	576	0	636	634	0	0
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00	0.00
Uniform Delay (d), s/veh	31.9	15.6	15.6	31.7	11.1	11.1	25.7	0.0	26.6	28.2	0.0	0.0
Incr Delay (d2), s/veh	8.1	10.9	11.0	33.1	0.6	0.6	0.2	0.0	0.9	1.6	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.7	17.2	18.3	4.5	6.5	6.7	0.6	0.0	1.9	3.2	0.0	0.0
LnGrp Delay(d),s/veh	39.9	26.5	26.7	64.9	11.7	11.6	25.8	0.0	27.5	29.8	0.0	0.0
LnGrp LOS	D	C	C	E	B	B	C		C	C		
Approach Vol, veh/h		1811			1161			135			167	
Approach Delay, s/veh		27.5			18.5			27.1			29.8	
Approach LOS		C			B			C			C	
Timer	1	2	3	4	5	6	7	8				
Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	11.0	43.9		16.4	10.3	44.7		16.4				
Change Period (Y+Rc), s	4.0	7.0		4.6	4.0	* 7		* 4.6				
Max Green Setting (Gmax), s	7.0	39.4		28.0	13.0	* 34		* 29				
Max Q Clear Time (g_c+I1), s	7.9	32.4		10.2	6.8	15.2		6.1				
Green Ext Time (p_c), s	0.0	4.5		1.7	0.1	15.4		1.9				
Intersection Summary												
HCM 2010 Ctrl Delay			24.4									
HCM 2010 LOS			C									
Notes												



















HCM 2010 Signalized Intersection Summary
4: West Bernardo Dr & Rancho Bernardo Rd

3/24/2016

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	 	  		 	 		 	 		 	 	
Traffic Volume (veh/h)	158	1489	37	176	978	477	147	322	629	327	66	70
Future Volume (veh/h)	158	1489	37	176	978	477	147	322	629	327	66	70
Number	5	2	12	1	6	16	3	8	18	7	4	14
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1900	1863	1863	1863	1863	1863	1863	1863	1863	1900
Adj Flow Rate, veh/h	161	1519	38	180	998	487	150	329	642	334	67	71
Adj No. of Lanes	2	3	0	2	2	1	2	2	1	2	2	0
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	215	1699	43	361	1373	613	218	931	581	414	566	506
Arrive On Green	0.06	0.33	0.33	0.10	0.39	0.39	0.06	0.26	0.26	0.12	0.32	0.32
Sat Flow, veh/h	3442	5103	128	3442	3539	1580	3442	3539	1578	3442	1770	1583
Grp Volume(v), veh/h	161	1009	548	180	998	487	150	329	642	334	67	71
Grp Sat Flow(s),veh/h/ln	1721	1695	1840	1721	1770	1580	1721	1770	1578	1721	1770	1583
Q Serve(g_s), s	5.5	33.8	33.8	5.9	28.7	32.6	5.1	9.0	25.0	11.3	3.2	3.8
Cycle Q Clear(g_c), s	5.5	33.8	33.8	5.9	28.7	32.6	5.1	9.0	25.0	11.3	3.2	3.8
Prop In Lane	1.00		0.07	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	215	1129	613	361	1373	613	218	931	581	414	566	506
V/C Ratio(X)	0.75	0.89	0.89	0.50	0.73	0.79	0.69	0.35	1.11	0.81	0.12	0.14
Avail Cap(c_a), veh/h	227	1165	633	420	1421	634	982	1157	682	866	566	506
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	55.1	37.9	37.9	50.5	31.2	32.4	54.8	35.8	22.1	51.2	28.8	29.0
Incr Delay (d2), s/veh	12.1	8.9	14.9	1.1	1.8	6.8	3.8	0.2	67.9	3.8	0.1	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	3.0	17.2	19.7	2.9	14.3	15.4	2.6	4.5	25.0	5.6	1.6	1.7
LnGrp Delay(d),s/veh	67.2	46.8	52.8	51.6	33.0	39.1	58.6	36.0	90.0	55.0	28.8	29.1
LnGrp LOS	E	D	D	D	C	D	E	D	F	E	C	C
Approach Vol, veh/h		1718			1665			1121			472	
Approach Delay, s/veh		50.6			36.8			70.0			47.4	
Approach LOS		D			D			E			D	
Timer	1	2	3	4	5	6	7	8				
Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	18.2	45.7	12.0	43.6	11.9	52.1	18.8	36.8				
Change Period (Y+Rc), s	5.7	* 5.9	4.4	5.4	4.4	5.7	4.4	5.4				
Max Green Setting (Gmax), s	14.6	* 41	34.1	35.1	7.9	48.0	30.1	39.1				
Max Q Clear Time (g_c+1), s	7.9	35.8	7.1	5.8	7.5	34.6	13.3	27.0				
Green Ext Time (p_c), s	4.7	4.0	0.5	6.3	0.0	7.9	1.1	4.2				
Intersection Summary												
HCM 2010 Ctrl Delay			50.1									
HCM 2010 LOS			D									
Notes												



















HCM 2010 Signalized Intersection Summary
 5: I-15 SB Ramps & Rancho Bernardo Rd

3/24/2016

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	1571	872	0	1143	559	0	0	0	409	0	450
Future Volume (veh/h)	0	1571	872	0	1143	559	0	0	0	409	0	450
Number	5	2	12	1	6	16				7	4	14
Initial Q (Qb), veh	0	0	0	0	0	0				0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00				1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00				1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	0	1863	1863	0	1863	1863				1863	0	1863
Adj Flow Rate, veh/h	0	2044	636	0	1191	0				426	0	469
Adj No. of Lanes	0	3	1	0	3	1				2	0	2
Peak Hour Factor	0.92	0.96	0.96	0.92	0.96	0.96				0.96	0.92	0.96
Percent Heavy Veh, %	0	2	2	0	2	2				2	0	2
Cap, veh/h	0	4002	1134	0	4002	1134				670	0	542
Arrive On Green	0.00	0.72	0.72	0.00	1.00	0.00				0.19	0.00	0.19
Sat Flow, veh/h	0	5588	1583	0	5588	1583				3442	0	2787
Grp Volume(v), veh/h	0	2044	636	0	1191	0				426	0	469
Grp Sat Flow(s),veh/h/ln	0	1863	1583	0	1863	1583				1721	0	1393
Q Serve(g_s), s	0.0	22.9	26.7	0.0	0.0	0.0				15.9	0.0	22.8
Cycle Q Clear(g_c), s	0.0	22.9	26.7	0.0	0.0	0.0				15.9	0.0	22.8
Prop In Lane	0.00		1.00	0.00		1.00				1.00		1.00
Lane Grp Cap(c), veh/h	0	4002	1134	0	4002	1134				670	0	542
V/C Ratio(X)	0.00	0.51	0.56	0.00	0.30	0.00				0.64	0.00	0.86
Avail Cap(c_a), veh/h	0	4002	1134	0	4002	1134				809	0	655
HCM Platoon Ratio	1.00	1.00	1.00	1.00	2.00	2.00				1.00	1.00	1.00
Upstream Filter(I)	0.00	0.33	0.33	0.00	0.84	0.00				1.00	0.00	1.00
Uniform Delay (d), s/veh	0.0	8.9	9.4	0.0	0.0	0.0				51.8	0.0	54.6
Incr Delay (d2), s/veh	0.0	0.2	0.7	0.0	0.2	0.0				1.2	0.0	10.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0				0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.0	11.8	11.7	0.0	0.1	0.0				7.7	0.0	9.6
LnGrp Delay(d),s/veh	0.0	9.0	10.1	0.0	0.2	0.0				53.0	0.0	64.7
LnGrp LOS		A	B		A					D		E
Approach Vol, veh/h		2680			1191						895	
Approach Delay, s/veh		9.3			0.2						59.1	
Approach LOS		A			A						E	
Timer	1	2	3	4	5	6	7	8				
Assigned Phs		2		4		6						
Phs Duration (G+Y+Rc), s		106.7		33.3		106.7						
Change Period (Y+Rc), s		6.4		6.1		6.4						
Max Green Setting (Gmax), s		94.6		32.9		94.6						
Max Q Clear Time (g_c+I1), s		28.7		24.8		2.0						
Green Ext Time (p_c), s		56.3		2.4		74.6						
Intersection Summary												
HCM 2010 Ctrl Delay			16.4									
HCM 2010 LOS			B									
Notes												























HCM 2010 Signalized Intersection Summary
 6: I-15 NB Ramps & Rancho Bernardo Rd

3/24/2016

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	891	1089	0	1001	487	701	0	432	0	0	0
Future Volume (veh/h)	0	891	1089	0	1001	487	701	0	432	0	0	0
Number	5	2	12	1	6	16	3	8	18			
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0			
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00			
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00			
Adj Sat Flow, veh/h/ln	0	1863	1863	0	1863	1863	1863	0	1863			
Adj Flow Rate, veh/h	0	948	0	0	1065	518	746	0	460			
Adj No. of Lanes	0	3	1	0	3	1	2	0	2			
Peak Hour Factor	0.92	0.94	0.94	0.92	0.94	0.94	0.94	0.92	0.94			
Percent Heavy Veh, %	0	2	2	0	2	2	2	0	2			
Cap, veh/h	0	3663	1038	0	3333	1038	879	0	711			
Arrive On Green	0.00	1.00	0.00	0.00	0.66	0.66	0.26	0.00	0.26			
Sat Flow, veh/h	0	5588	1583	0	5253	1583	3442	0	2787			
Grp Volume(v), veh/h	0	948	0	0	1065	518	746	0	460			
Grp Sat Flow(s),veh/h/ln	0	1863	1583	0	1695	1583	1721	0	1393			
Q Serve(g_s), s	0.0	0.0	0.0	0.0	12.8	23.5	28.9	0.0	20.6			
Cycle Q Clear(g_c), s	0.0	0.0	0.0	0.0	12.8	23.5	28.9	0.0	20.6			
Prop In Lane	0.00		1.00	0.00		1.00	1.00		1.00			
Lane Grp Cap(c), veh/h	0	3663	1038	0	3333	1038	879	0	711			
V/C Ratio(X)	0.00	0.26	0.00	0.00	0.32	0.50	0.85	0.00	0.65			
Avail Cap(c_a), veh/h	0	3663	1038	0	3333	1038	1227	0	993			
HCM Platoon Ratio	1.00	1.67	1.67	1.00	1.00	1.00	1.00	1.00	1.00			
Upstream Filter(I)	0.00	0.77	0.00	0.00	1.00	1.00	1.00	0.00	1.00			
Uniform Delay (d), s/veh	0.0	0.0	0.0	0.0	10.5	12.4	49.6	0.0	46.5			
Incr Delay (d2), s/veh	0.0	0.1	0.0	0.0	0.3	1.7	4.2	0.0	1.0			
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0			
%ile BackOfQ(50%),veh/ln	0.0	0.0	0.0	0.0	6.0	10.7	14.2	0.0	8.0			
LnGrp Delay(d),s/veh	0.0	0.1	0.0	0.0	10.8	14.1	53.7	0.0	47.5			
LnGrp LOS		A			B	B	D		D			
Approach Vol, veh/h		948			1583			1206				
Approach Delay, s/veh		0.1			11.8			51.4				
Approach LOS		A			B			D				
Timer	1	2	3	4	5	6	7	8				
Assigned Phs		2				6		8				
Phs Duration (G+Y+Rc), s		98.2				98.2		41.8				
Change Period (Y+Rc), s		6.4				6.4		6.1				
Max Green Setting (Gmax), s		77.6				77.6		49.9				
Max Q Clear Time (g_c+I1), s		2.0				25.5		30.9				
Green Ext Time (p_c), s		32.6				27.9		4.9				
Intersection Summary												
HCM 2010 Ctrl Delay			21.6									
HCM 2010 LOS			C									
Notes												






















HCM 2010 Signalized Intersection Summary
 7: Bernardo Center Dr & Rancho Bernardo Rd

3/24/2016

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	251	670	301	123	642	145	434	465	247	173	276	103
Future Volume (veh/h)	251	670	301	123	642	145	434	465	247	173	276	103
Number	5	2	12	1	6	16	3	8	18	7	4	14
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.99	1.00		0.99	1.00		1.00	1.00		0.98
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1863	1863	1863	1900	1863	1863	1900	1863	1863	1863
Adj Flow Rate, veh/h	264	705	317	129	676	153	457	489	260	182	291	108
Adj No. of Lanes	2	2	1	2	2	0	2	2	0	2	2	1
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	337	1305	548	194	892	202	535	666	352	256	768	486
Arrive On Green	0.10	0.35	0.35	0.06	0.31	0.31	0.16	0.30	0.30	0.07	0.22	0.22
Sat Flow, veh/h	3548	3725	1563	3442	2861	647	3442	2236	1183	3442	3539	1549
Grp Volume(v), veh/h	264	705	317	129	418	411	457	386	363	182	291	108
Grp Sat Flow(s),veh/h/ln	1774	1863	1563	1721	1770	1738	1721	1770	1650	1721	1770	1549
Q Serve(g_s), s	6.9	14.3	15.6	3.5	20.1	20.2	12.2	18.6	18.7	4.9	6.6	4.9
Cycle Q Clear(g_c), s	6.9	14.3	15.6	3.5	20.1	20.2	12.2	18.6	18.7	4.9	6.6	4.9
Prop In Lane	1.00		1.00	1.00		0.37	1.00		0.72	1.00		1.00
Lane Grp Cap(c), veh/h	337	1305	548	194	552	542	535	527	491	256	768	486
V/C Ratio(X)	0.78	0.54	0.58	0.66	0.76	0.76	0.85	0.73	0.74	0.71	0.38	0.22
Avail Cap(c_a), veh/h	379	1394	585	251	619	608	611	860	802	415	1496	805
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	41.9	24.6	25.0	43.8	29.3	29.3	38.9	29.8	29.9	42.8	31.6	24.1
Incr Delay (d2), s/veh	9.2	0.4	1.3	4.3	4.8	4.9	10.3	2.0	2.2	3.6	0.3	0.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	3.8	7.4	6.9	1.8	10.6	10.4	6.6	9.3	8.8	2.5	3.3	2.1
LnGrp Delay(d),s/veh	51.1	25.0	26.3	48.0	34.1	34.3	49.2	31.8	32.1	46.4	31.9	24.3
LnGrp LOS	D	C	C	D	C	C	D	C	C	D	C	C
Approach Vol, veh/h		1286			958			1206			581	
Approach Delay, s/veh		30.7			36.0			38.5			35.0	
Approach LOS		C			D			D			D	
Timer	1	2	3	4	5	6	7	8				
Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	9.7	39.3	19.1	26.4	13.4	35.7	11.4	34.1				
Change Period (Y+Rc), s	4.4	6.2	4.4	5.9	4.4	* 6.2	4.4	* 5.9				
Max Green Setting (Gmax), s	6.9	35.4	16.8	40.0	10.1	* 33	11.4	* 46				
Max Q Clear Time (g_c+I1), s	5.5	17.6	14.2	8.6	8.9	22.2	6.9	20.7				
Green Ext Time (p_c), s	0.0	10.3	0.5	7.8	0.1	7.3	0.2	7.3				
Intersection Summary												
HCM 2010 Ctrl Delay			34.9									
HCM 2010 LOS			C									
Notes												

HCM 2010 Signalized Intersection Summary
 8: West Bernardo Dr & Duenda Rd

3/24/2016

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	21	131	134	73	70	63	68	147	90	106	202	12
Future Volume (veh/h)	21	131	134	73	70	63	68	147	90	106	202	12
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.98	1.00		1.00	1.00		1.00	1.00		0.98
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1900	1863	1863	1863	1863	1863	1900	1863	1863	1900
Adj Flow Rate, veh/h	24	147	151	82	79	71	76	165	101	119	227	13
Adj No. of Lanes	1	1	0	1	1	1	1	2	0	1	2	0
Peak Hour Factor	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	421	198	204	168	177	150	96	349	203	155	662	38
Arrive On Green	0.24	0.24	0.24	0.09	0.09	0.09	0.05	0.16	0.16	0.09	0.19	0.19
Sat Flow, veh/h	1774	836	859	1774	1863	1583	1774	2158	1253	1774	3400	193
Grp Volume(v), veh/h	24	0	298	82	79	71	76	134	132	119	117	123
Grp Sat Flow(s),veh/h/ln	1774	0	1694	1774	1863	1583	1774	1770	1642	1774	1770	1824
Q Serve(g_s), s	0.5	0.0	7.8	2.1	1.9	2.0	2.0	3.3	3.5	3.1	2.7	2.8
Cycle Q Clear(g_c), s	0.5	0.0	7.8	2.1	1.9	2.0	2.0	3.3	3.5	3.1	2.7	2.8
Prop In Lane	1.00		0.51	1.00		1.00	1.00		0.76	1.00		0.11
Lane Grp Cap(c), veh/h	421	0	402	168	177	150	96	286	265	155	345	355
V/C Ratio(X)	0.06	0.00	0.74	0.49	0.45	0.47	0.79	0.47	0.50	0.77	0.34	0.34
Avail Cap(c_a), veh/h	854	0	816	669	702	597	334	667	619	409	741	764
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	14.1	0.0	16.9	20.5	20.4	20.5	22.3	18.2	18.3	21.3	16.6	16.6
Incr Delay (d2), s/veh	0.1	0.0	2.7	2.2	1.8	2.3	13.4	1.2	1.4	7.7	0.6	0.6
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.2	0.0	3.9	1.1	1.1	1.0	1.3	1.7	1.7	1.9	1.4	1.5
LnGrp Delay(d),s/veh	14.1	0.0	19.6	22.7	22.2	22.8	35.7	19.3	19.7	29.1	17.2	17.2
LnGrp LOS	B		B	C	C	C	D	B	B	C	B	B
Approach Vol, veh/h		322			232			342			359	
Approach Delay, s/veh		19.2			22.5			23.1			21.1	
Approach LOS		B			C			C			C	
Timer	1	2	3	4	5	6	7	8				
Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	9.2	12.7		16.3	7.6	14.3		9.5				
Change Period (Y+Rc), s	5.0	5.0		5.0	5.0	5.0		5.0				
Max Green Setting (Gmax), s	11.0	18.0		23.0	9.0	20.0		18.0				
Max Q Clear Time (g_c+I1), s	5.1	5.5		9.8	4.0	4.8		4.1				
Green Ext Time (p_c), s	0.1	2.2		1.6	0.1	2.4		0.7				
Intersection Summary												
HCM 2010 Ctrl Delay			21.4									
HCM 2010 LOS			C									

HCM 2010 Signalized Intersection Summary

9: West Bernardo Dr & Via Del Campo

3/24/2016

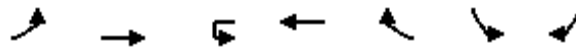


Movement	EBL	EBT	WBT	WBR	SBL	SBR		
Lane Configurations								
Traffic Volume (veh/h)	47	402	438	38	148	356		
Future Volume (veh/h)	47	402	438	38	148	356		
Number	5	2	6	16	7	14		
Initial Q (Qb), veh	0	0	0	0	0	0		
Ped-Bike Adj(A_pbT)	1.00			1.00	1.00	1.00		
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00		
Adj Sat Flow, veh/h/ln	1863	1863	1863	1900	1863	1863		
Adj Flow Rate, veh/h	55	467	509	44	172	414		
Adj No. of Lanes	1	2	2	0	1	1		
Peak Hour Factor	0.86	0.86	0.86	0.86	0.86	0.86		
Percent Heavy Veh, %	2	2	2	2	2	2		
Cap, veh/h	70	2036	1582	136	525	469		
Arrive On Green	0.04	0.58	0.48	0.48	0.30	0.30		
Sat Flow, veh/h	1774	3632	3391	284	1774	1583		
Grp Volume(v), veh/h	55	467	272	281	172	414		
Grp Sat Flow(s),veh/h/ln	1774	1770	1770	1813	1774	1583		
Q Serve(g_s), s	2.4	5.1	7.5	7.5	6.0	19.7		
Cycle Q Clear(g_c), s	2.4	5.1	7.5	7.5	6.0	19.7		
Prop In Lane	1.00			0.16	1.00	1.00		
Lane Grp Cap(c), veh/h	70	2036	849	870	525	469		
V/C Ratio(X)	0.78	0.23	0.32	0.32	0.33	0.88		
Avail Cap(c_a), veh/h	260	2036	849	870	769	686		
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00		
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00		
Uniform Delay (d), s/veh	37.6	8.2	12.7	12.7	21.7	26.6		
Incr Delay (d2), s/veh	16.9	0.3	1.0	1.0	0.4	9.3		
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0		
%ile BackOfQ(50%),veh/ln	1.5	2.5	3.9	4.0	3.0	16.7		
LnGrp Delay(d),s/veh	54.5	8.5	13.6	13.6	22.1	35.9		
LnGrp LOS	D	A	B	B	C	D		
Approach Vol, veh/h		522	553		586			
Approach Delay, s/veh		13.3	13.6		31.8			
Approach LOS		B	B		C			
Timer	1	2	3	4	5	6	7	8
Assigned Phs		2		4	5	6		
Phs Duration (G+Y+Rc), s		51.0		28.1	7.5	43.5		
Change Period (Y+Rc), s		5.5		* 4.7	4.4	5.5		
Max Green Setting (Gmax), s		45.5		* 34	11.6	29.5		
Max Q Clear Time (g_c+I1), s		7.1		21.7	4.4	9.5		
Green Ext Time (p_c), s		7.2		1.7	0.0	6.1		
Intersection Summary								
HCM 2010 Ctrl Delay			20.0					
HCM 2010 LOS			B					
Notes								

HCM 2010 Signalized Intersection Summary

10: Bernardo Center Dr & West Bernardo Dr

3/24/2016



Movement	EBL	EBT	WBU	WBT	WBR	SBL	SBR	
Lane Configurations								
Traffic Volume (veh/h)	420	385	0	369	360	340	480	
Future Volume (veh/h)	420	385	0	369	360	340	480	
Number	1	6		2	12	3	18	
Initial Q (Qb), veh	0	0		0	0	0	0	
Ped-Bike Adj(A_pbT)	1.00				1.00	1.00	1.00	
Parking Bus, Adj	1.00	1.00		1.00	1.00	1.00	1.00	
Adj Sat Flow, veh/h/ln	1863	1863		1863	1863	1863	1863	
Adj Flow Rate, veh/h	447	410		393	383	362	511	
Adj No. of Lanes	2	2		1	2	1	1	
Peak Hour Factor	0.94	0.94		0.94	0.94	0.94	0.94	
Percent Heavy Veh, %	2	2		2	2	2	2	
Cap, veh/h	589	1934		584	1748	557	769	
Arrive On Green	0.17	0.55		0.31	0.31	0.31	0.31	
Sat Flow, veh/h	3442	3632		1863	2782	1774	1583	
Grp Volume(v), veh/h	447	410		393	383	362	511	
Grp Sat Flow(s),veh/h/ln	1721	1770		1863	1391	1774	1583	
Q Serve(g_s), s	8.8	4.2		13.1	4.2	12.5	17.4	
Cycle Q Clear(g_c), s	8.8	4.2		13.1	4.2	12.5	17.4	
Prop In Lane	1.00				1.00	1.00	1.00	
Lane Grp Cap(c), veh/h	589	1934		584	1748	557	769	
V/C Ratio(X)	0.76	0.21		0.67	0.22	0.65	0.66	
Avail Cap(c_a), veh/h	1239	3221		1113	2539	938	1108	
HCM Platoon Ratio	1.00	1.00		1.00	1.00	1.00	1.00	
Upstream Filter(I)	1.00	1.00		1.00	1.00	1.00	1.00	
Uniform Delay (d), s/veh	28.1	8.3		21.2	5.7	21.0	13.9	
Incr Delay (d2), s/veh	2.0	0.1		1.4	0.1	1.3	1.0	
Initial Q Delay(d3),s/veh	0.0	0.0		0.0	0.0	0.0	0.0	
%ile BackOfQ(50%),veh/ln	4.3	2.1		6.9	1.6	6.3	7.7	
LnGrp Delay(d),s/veh	30.1	8.3		22.6	5.8	22.3	14.9	
LnGrp LOS	C	A		C	A	C	B	
Approach Vol, veh/h		857		776		873		
Approach Delay, s/veh		19.7		14.3		18.0		
Approach LOS		B		B		B		
Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2				6		8
Phs Duration (G+Y+Rc), s	16.6	27.8				44.4		26.7
Change Period (Y+Rc), s	4.4	5.5				* 5.5		4.4
Max Green Setting (Gmax), s	25.6	42.5				* 65		37.6
Max Q Clear Time (g_c+I1), s	10.8	15.1				6.2		19.4
Green Ext Time (p_c), s	1.4	7.2				7.9		2.9
Intersection Summary								
HCM 2010 Ctrl Delay				17.4				
HCM 2010 LOS				B				
Notes								

APPENDIX G

RANCHO BERNARDO AND BLACK MOUNTAIN RANCH PUBLIC FACILITIES FINANCING PLANS EXCERPTS

CITY OF SAN DIEGO FACILITIES FINANCING PROGRAM

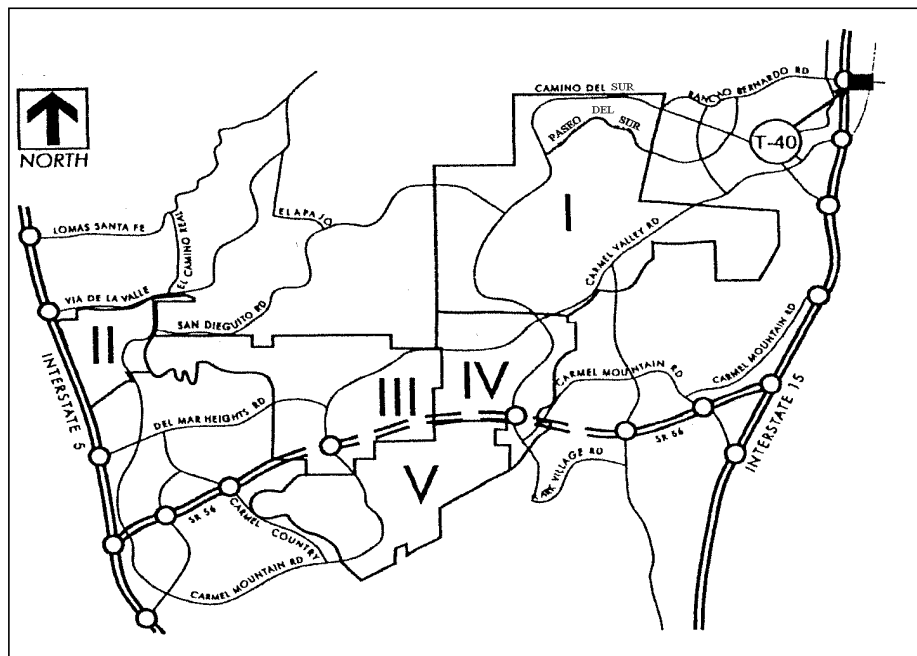
TITLE: RANCHO BERNARDO RD WIDENING (I-15 TO BERNARDO CENTER DR)- ADD 2 LNS

DEPARTMENT: TRANSPORTATION & STORM WATER
CIP or JO #: N/A

PROJECT: T-40
COUNCIL DISTRICT: 5
COMMUNITY PLAN: BMR

SOURCE	FUNDING:	EXPEN/ENCUM	CONT APPROP	FY 2015	FY 2016	FY 2017	FY 2018	FY 2019
FBA-BMR	\$1,055,000				\$309,000	\$746,000		
FBA-PHR								
FBA-TH								
FBA-DMM								
COUNTY								
STATE								
DEV/SUBD								
PRIVATE								
MTDB								
OTHER								
UNIDENT								
TOTAL	\$1,055,000	\$0	\$0	\$0	\$309,000	\$746,000	\$0	\$0

SOURCE	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024	FY 2025	FY 2026	FY 2027
FBA-BMR								
FBA-PHR								
FBA-TH								
FBA-DMM								
COUNTY								
STATE								
DEV/SUBD								
PRIVATE								
MTDB								
OTHER								
UNIDENT								
TOTAL	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0



CITY OF SAN DIEGO
FACILITIES FINANCING PROGRAM

TITLE: RANCHO BERNARDO RD WIDENING (I-15 TO BERNARDO CENTER DR)- ADD 2 LNS

DEPARTMENT: TRANSPORTATION & STORM WATER
CIP or JO #: N/A

PROJECT: T-40
COUNCIL DISTRICT: 5
COMMUNITY PLAN: BMR

DESCRIPTION:

DESIGN AND CONSTRUCT THE ADDITION OF TWO LANES TO THE EXISTING FOUR-LANES PORTION OF RANCHO BERNARDO ROAD BETWEEN THE I-15 NORTHBOUND RAMPS AND BERNARDO CENTER DRIVE TO ATTAIN THE SIX-LANE MAJOR CROSS SECTION IDENTIFIED IN THE ADOPTED SUBAREA PLAN.

JUSTIFICATION:

THIS FACILITY IMPLEMENTS THE BLACK MOUNTAIN RANCH SUBAREA PLAN AND IS NEEDED TO SERVE THE COMMUNITY.

FUNDING:

A DEVELOPER (BMR LLC) WILL ADVANCE THE FUNDING AND CONSTRUCT THIS PROJECT UNDER THE TERMS OF A REIMBURSEMENT AGREEMENT, AND WILL BE REIMBURSED FROM THE BLACK MOUNTAIN RANCH FACILITIES BENEFIT ASSESSMENT (FBA) AS FUNDING BECOMES AVAILABLE.

NOTES:

SCHEDULE:

DESIGN IS UNDERWAY AND CONSTRUCTION IS ANTICIPATED IN FY 2016/2017.

**CITY OF SAN DIEGO
FACILITIES FINANCING PROGRAM**

**RANCHO BERNARDO ROAD WIDENING (I-15 EAST TO BERNARDO CENTER DRIVE -
ADD TWO LANES)**

TITLE:

DEPARTMENT: TRANSPORTATION & STORM WATER

PROJECT: T-6

COUNCIL DISTRICT: 5

CIP NO.:

COMMUNITY PLAN: RANCHO BERNARDO

DESCRIPTION:

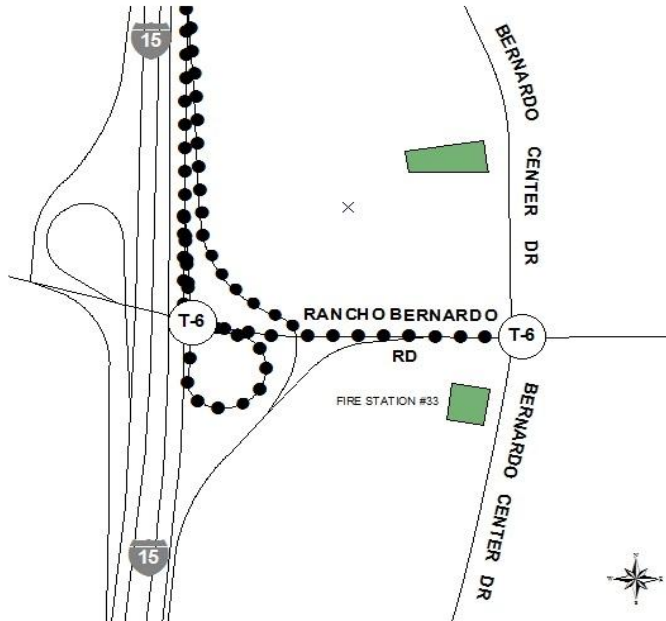
THIS PROJECT WILL DESIGN AND CONSTRUCT THE ADDITION OF TWO LANES TO THE EXISTING FOUR-LANE PORTION OF RANCHO BERNARDO ROAD BETWEEN THE I-15 NORTHBOUND RAMPS AND BERNARDO CENTER DRIVE TO ATTAIN THE SIX LANE MAJOR CROSS SECTION IDENTIFIED IN THE ADOPTED COMMUNITY PLAN.

JUSTIFICATION:

THIS PROJECT IS CONSISTENT WITH THE RANCHO BERNARDO COMMUNITY PLAN AND GENERAL PLAN GUIDELINES AND IS NEEDED TO SERVE THE COMMUNITY AT FULL BUILDOUT.

SCHEDULE:

CONSTRUCTION IS ANTICIPATED IN FY 2014 PER THE FY 2013 BMR PFFP (PROJECT NO. T-40).*



FUNDING:	SOURCE	EXPEN/ENCUM	CONT APPR	FY 2014	FY 2015	FY 2016	FY 2017	FY 2018	FY 2019
\$ 1,327,008	BMR*								
\$1,327,008	TOTAL	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0

*BLACK MOUNTAIN RANCH PFFP PROJECT T-40

CITY OF SAN DIEGO FACILITIES FINANCING PROGRAM

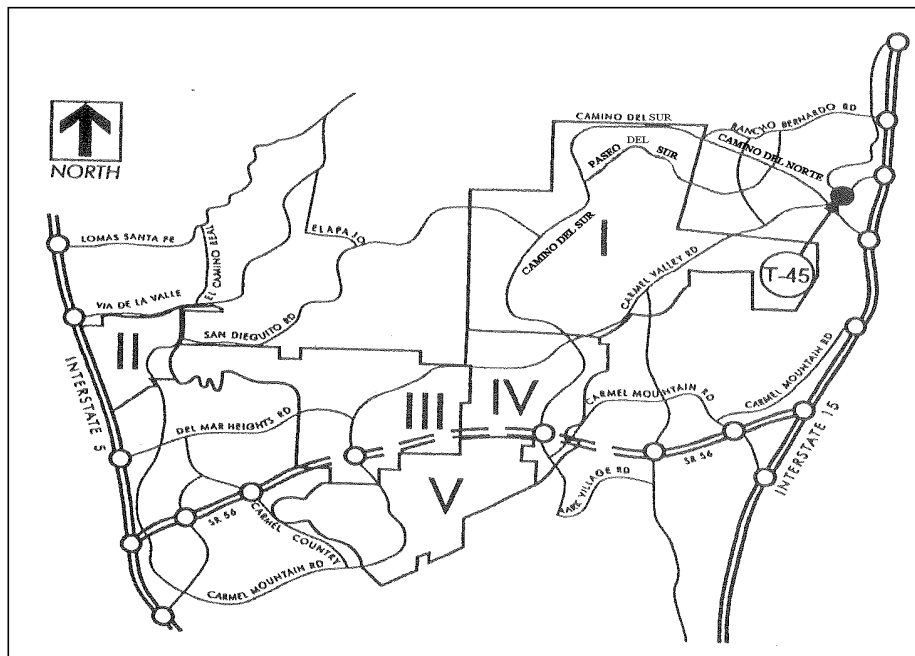
TITLE: WEST BERNARDO DR AT BERNARDO CENTER DR INTERSECTION IMPROVEMENTS

DEPARTMENT: TRANSPORTATION & STORM WATER
CIP or JO #: N/A

PROJECT: T-45
COUNCIL DISTRICT: 5
COMMUNITY PLAN: BMR

SOURCE	FUNDING:	EXPEN/ENCUM	CONT APPROP	FY 2015	FY 2016	FY 2017	FY 2018	FY 2019
FBA-BMR	\$565,000				\$565,000			
FBA-PHR								
FBA-TH								
FBA-DMM								
COUNTY								
STATE								
DEV/SUBD								
PRIVATE								
MTDB								
OTHER								
UNIDENT								
TOTAL	\$565,000	\$0	\$0	\$0	\$565,000	\$0	\$0	\$0

SOURCE	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024	FY 2025	FY 2026	FY 2027
FBA-BMR								
FBA-PHR								
FBA-TH								
FBA-DMM								
COUNTY								
STATE								
DEV/SUBD								
PRIVATE								
MTDB								
OTHER								
UNIDENT								
TOTAL	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0



CITY OF SAN DIEGO
FACILITIES FINANCING PROGRAM

TITLE: WEST BERNARDO DR AT BERNARDO CENTER DR INTERSECTION IMPROVEMENTS

DEPARTMENT: TRANSPORTATION & STORM WATER
CIP or JO #: N/A

PROJECT: T-45
COUNCIL DISTRICT: 5
COMMUNITY PLAN: BMR

DESCRIPTION:

DESIGN AND CONSTRUCT INTERSECTION IMPROVEMENTS TO PROVIDE ADDITIONAL RIGHT TURNS FROM BERNARDO CENTER DRIVE TO WEST BERNARDO DRIVE, INCLUDING A MINOR WIDENING.

JUSTIFICATION:

THIS FACILITY IMPLEMENTS THE BLACK MOUNTAIN RANCH SUBAREA PLAN AND IS NEEDED TO SERVE THE COMMUNITY.

FUNDING:

A DEVELOPER (BMR LLC) WILL ADVANCE THE FUNDING AND CONSTRUCT THIS PROJECT UNDER THE TERMS OF A REIMBURSEMENT AGREEMENT, AND WILL BE REIMBURSED FROM THE BLACK MOUNTAIN RANCH FACILITIES BENEFIT ASSESSMENT (FBA) AS FUNDING BECOMES AVAILABLE.

NOTES:

SCHEDULE:




















PROJECT HAS BEEN DESIGNED AND PERMITTED. CONSTRUCTION ANTICIPATED IN FY 2016.

APPENDIX H

PEAK HOUR INTERSECTION ANALYSIS WORKSHEETS YEAR 2035 WITHOUT PROJECT




















HCM 2010 Signalized Intersection Summary
 1: Camino San Bernardo & Rancho Bernardo Rd

Year 2035 AM
 3/24/2016

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	30	990	190	480	780	80	40	10	190	20	10	10
Future Volume (veh/h)	30	990	190	480	780	80	40	10	190	20	10	10
Number	5	2	12	1	6	16	3	8	18	7	4	14
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.98	1.00		1.00	1.00		0.98	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1900	1863	1863	1900	1863	1863	1900	1900	1863	1900
Adj Flow Rate, veh/h	33	1076	207	522	848	87	43	11	207	22	11	11
Adj No. of Lanes	1	2	0	2	2	0	1	2	0	0	1	0
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	58	1324	254	623	1933	198	294	310	273	102	50	28
Arrive On Green	0.03	0.45	0.45	0.18	0.60	0.60	0.18	0.18	0.18	0.18	0.18	0.18
Sat Flow, veh/h	1774	2955	566	3442	3241	333	1384	1770	1558	192	287	160
Grp Volume(v), veh/h	33	643	640	522	463	472	43	11	207	44	0	0
Grp Sat Flow(s),veh/h/ln	1774	1770	1752	1721	1770	1804	1384	1770	1558	640	0	0
Q Serve(g_s), s	1.5	24.9	25.2	11.6	11.3	11.3	0.0	0.4	10.0	0.3	0.0	0.0
Cycle Q Clear(g_c), s	1.5	24.9	25.2	11.6	11.3	11.3	2.7	0.4	10.0	10.3	0.0	0.0
Prop In Lane	1.00		0.32	1.00		0.18	1.00		1.00	0.50		0.25
Lane Grp Cap(c), veh/h	58	793	785	623	1056	1076	294	310	273	180	0	0
V/C Ratio(X)	0.57	0.81	0.82	0.84	0.44	0.44	0.15	0.04	0.76	0.24	0.00	0.00
Avail Cap(c_a), veh/h	137	849	841	760	1104	1125	558	648	570	444	0	0
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	0.00
Uniform Delay (d), s/veh	37.8	19.0	19.0	31.3	8.7	8.7	28.1	27.1	31.1	28.0	0.0	0.0
Incr Delay (d2), s/veh	8.6	5.6	5.9	6.9	0.3	0.3	0.2	0.0	4.3	0.7	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.9	13.4	13.4	6.1	5.5	5.6	0.8	0.2	4.6	0.9	0.0	0.0
LnGrp Delay(d),s/veh	46.3	24.6	25.0	38.2	9.0	9.0	28.3	27.2	35.4	28.7	0.0	0.0
LnGrp LOS	D	C	C	D	A	A	C	C	D	C		
Approach Vol, veh/h		1316			1457			261			44	
Approach Delay, s/veh		25.3			19.5			33.9			28.7	
Approach LOS		C			B			C			C	
Timer	1	2	3	4	5	6	7	8				
Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	18.8	41.5		18.9	7.1	53.2		18.9				
Change Period (Y+Rc), s	4.5	6.0		5.0	4.5	6.0		5.0				
Max Green Setting (Gmax), s	17.5	38.0		29.0	6.1	49.4		29.0				
Max Q Clear Time (g_c+I1), s	13.6	27.2		12.3	3.5	13.3		12.0				
Green Ext Time (p_c), s	0.8	8.3		1.4	0.0	19.0		1.5				
Intersection Summary												
HCM 2010 Ctrl Delay				23.3								
HCM 2010 LOS				C								




















HCM 2010 Signalized Intersection Summary
2: Via Del Campo & Rancho Bernardo Rd

Year 2035 AM
3/24/2016

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	10	1010	390	700	1330	10	80	10	25	10	10	10
Future Volume (veh/h)	10	1010	390	700	1330	10	80	10	25	10	10	10
Number	5	2	12	1	6	16	3	8	18	7	4	14
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.98	1.00		0.98	1.00		0.99	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1900	1863	1863	1900	1900	1863	1863	1900	1863	1900
Adj Flow Rate, veh/h	11	1098	424	761	1446	11	87	11	27	11	11	11
Adj No. of Lanes	1	2	0	1	2	0	0	1	1	0	1	0
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	18	1009	381	612	2660	20	155	17	220	45	44	27
Arrive On Green	0.01	0.40	0.40	0.34	0.74	0.74	0.14	0.14	0.14	0.14	0.14	0.14
Sat Flow, veh/h	1774	2498	942	1774	3599	27	760	120	1562	77	309	193
Grp Volume(v), veh/h	11	770	752	761	711	746	98	0	27	33	0	0
Grp Sat Flow(s),veh/h/ln	1774	1770	1671	1774	1770	1857	880	0	1562	579	0	0
Q Serve(g_s), s	0.9	56.9	56.9	48.6	24.7	24.7	0.0	0.0	2.1	0.3	0.0	0.0
Cycle Q Clear(g_c), s	0.9	56.9	56.9	48.6	24.7	24.7	17.0	0.0	2.1	17.2	0.0	0.0
Prop In Lane	1.00		0.56	1.00		0.01	0.89		1.00	0.33		0.33
Lane Grp Cap(c), veh/h	18	715	675	612	1308	1372	172	0	220	116	0	0
V/C Ratio(X)	0.62	1.08	1.11	1.24	0.54	0.54	0.57	0.00	0.12	0.29	0.00	0.00
Avail Cap(c_a), veh/h	50	715	675	612	1308	1372	265	0	322	221	0	0
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00	0.00
Uniform Delay (d), s/veh	69.5	42.0	42.0	46.1	8.0	8.0	59.1	0.0	52.9	53.6	0.0	0.0
Incr Delay (d2), s/veh	31.0	56.5	70.4	122.9	0.5	0.4	2.9	0.0	0.2	1.3	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.6	38.8	39.2	44.5	12.0	12.6	3.9	0.0	0.9	1.2	0.0	0.0
LnGrp Delay(d),s/veh	100.5	98.5	112.4	169.1	8.5	8.5	62.0	0.0	53.1	54.9	0.0	0.0
LnGrp LOS	F	F	F	F	A	A	E		D	D		
Approach Vol, veh/h		1533			2218			125			33	
Approach Delay, s/veh		105.3			63.6			60.1			54.9	
Approach LOS		F			E			E			D	
Timer	1	2	3	4	5	6	7	8				
Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	53.0	62.8		25.1	5.8	110.0		25.1				
Change Period (Y+Rc), s	4.4	5.9		* 5.2	4.4	* 5.9		5.2				
Max Green Setting (Gmax), s	48.6	56.9		* 29	4.0	* 1E2		29.0				
Max Q Clear Time (g_c+I1), s	50.6	58.9		19.2	2.9	26.7		19.0				
Green Ext Time (p_c), s	0.0	0.0		0.5	0.0	45.5		0.5				
Intersection Summary												
HCM 2010 Ctrl Delay				79.8								
HCM 2010 LOS				E								
Notes												























HCM 2010 Signalized Intersection Summary
 3: Project Dwy/Matinal Rd & Rancho Bernardo Rd

Year 2035 AM
 3/24/2016

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	40	920	0	0	1770	20	0	0	0	90	0	150
Future Volume (veh/h)	40	920	0	0	1770	20	0	0	0	90	0	150
Number	5	2	12	1	6	16	3	8	18	7	4	14
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		0.98
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1900	1863	1863	1900	1863	1863	1900	1900	1863	1900
Adj Flow Rate, veh/h	43	1000	0	0	1924	22	0	0	0	98	0	163
Adj No. of Lanes	1	2	0	1	2	0	1	1	0	0	1	0
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	54	1200	0	447	2135	24	84	378	0	159	15	192
Arrive On Green	0.03	0.34	0.00	0.00	0.60	0.60	0.00	0.00	0.00	0.20	0.00	0.20
Sat Flow, veh/h	1774	3632	0	1774	3584	41	1218	1863	0	498	73	949
Grp Volume(v), veh/h	43	1000	0	0	948	998	0	0	0	261	0	0
Grp Sat Flow(s),veh/h/ln	1774	1770	0	1774	1770	1856	1218	1863	0	1519	0	0
Q Serve(g_s), s	2.1	22.2	0.0	0.0	39.8	40.1	0.0	0.0	0.0	12.0	0.0	0.0
Cycle Q Clear(g_c), s	2.1	22.2	0.0	0.0	39.8	40.1	0.0	0.0	0.0	14.1	0.0	0.0
Prop In Lane	1.00		0.00	1.00		0.02	1.00		0.00	0.38		0.62
Lane Grp Cap(c), veh/h	54	1200	0	447	1054	1105	84	378	0	366	0	0
V/C Ratio(X)	0.80	0.83	0.00	0.00	0.90	0.90	0.00	0.00	0.00	0.71	0.00	0.00
Avail Cap(c_a), veh/h	83	1470	0	447	1109	1162	246	625	0	555	0	0
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	0.00	0.00	1.00	1.00	0.00	0.00	0.00	1.00	0.00	0.00
Uniform Delay (d), s/veh	41.1	26.0	0.0	0.0	15.0	15.1	0.0	0.0	0.0	32.6	0.0	0.0
Incr Delay (d2), s/veh	25.0	3.6	0.0	0.0	9.7	9.7	0.0	0.0	0.0	2.6	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.4	11.4	0.0	0.0	22.1	23.2	0.0	0.0	0.0	6.1	0.0	0.0
LnGrp Delay(d),s/veh	66.1	29.5	0.0	0.0	24.7	24.7	0.0	0.0	0.0	35.2	0.0	0.0
LnGrp LOS	E	C			C	C				D		
Approach Vol, veh/h		1043			1946			0			261	
Approach Delay, s/veh		31.0			24.7			0.0			35.2	
Approach LOS		C			C						D	
Timer	1	2	3	4	5	6	7	8				
Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	27.5	35.9		21.9	6.6	56.8		21.9				
Change Period (Y+Rc), s	6.0	* 7		4.6	4.0	6.0		* 4.6				
Max Green Setting (Gmax), s	21.0	* 35		28.0	4.0	53.4		* 29				
Max Q Clear Time (g_c+I1), s	0.0	24.2		16.1	4.1	42.1		0.0				
Green Ext Time (p_c), s	0.0	4.7		1.3	0.0	8.7		0.0				
Intersection Summary												
HCM 2010 Ctrl Delay				27.6								
HCM 2010 LOS				C								
Notes												



















HCM 2010 Signalized Intersection Summary
4: West Bernardo Dr & Rancho Bernardo Rd

Year 2035 AM
3/24/2016

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	60	730	100	610	1650	300	140	90	180	680	370	170
Future Volume (veh/h)	60	730	100	610	1650	300	140	90	180	680	370	170
Number	5	2	12	1	6	16	3	8	18	7	4	14
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		0.99	1.00		0.99	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1900	1863	1863	1863	1863	1863	1863	1863	1863	1900
Adj Flow Rate, veh/h	62	753	103	629	1701	309	144	93	186	701	381	175
Adj No. of Lanes	2	3	0	2	2	1	2	2	1	2	2	0
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	104	962	131	891	1607	709	215	403	588	784	661	299
Arrive On Green	0.03	0.21	0.21	0.26	0.45	0.45	0.06	0.11	0.11	0.23	0.28	0.28
Sat Flow, veh/h	3442	4529	615	3442	3539	1562	3442	3539	1561	3442	2366	1071
Grp Volume(v), veh/h	62	562	294	629	1701	309	144	93	186	701	284	272
Grp Sat Flow(s),veh/h/ln	1721	1695	1754	1721	1770	1562	1721	1770	1561	1721	1770	1668
Q Serve(g_s), s	2.0	17.9	18.1	18.9	51.9	15.4	4.7	2.7	4.1	22.6	15.7	16.1
Cycle Q Clear(g_c), s	2.0	17.9	18.1	18.9	51.9	15.4	4.7	2.7	4.1	22.6	15.7	16.1
Prop In Lane	1.00		0.35	1.00		1.00	1.00		1.00	1.00		0.64
Lane Grp Cap(c), veh/h	104	720	372	891	1607	709	215	403	588	784	494	466
V/C Ratio(X)	0.59	0.78	0.79	0.71	1.06	0.44	0.67	0.23	0.32	0.89	0.57	0.59
Avail Cap(c_a), veh/h	120	913	473	891	1607	709	1027	1210	944	906	543	512
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	54.7	42.5	42.6	38.4	31.2	21.2	52.4	46.1	9.1	42.8	35.4	35.5
Incr Delay (d2), s/veh	5.8	3.4	6.9	2.6	39.8	0.4	3.6	0.3	0.3	10.3	1.2	1.4
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.0	8.7	9.5	9.3	34.1	6.7	2.3	1.4	2.1	11.8	7.9	7.6
LnGrp Delay(d),s/veh	60.6	45.9	49.5	41.0	71.0	21.7	56.0	46.4	9.4	53.1	36.6	36.9
LnGrp LOS	E	D	D	D	F	C	E	D	A	D	D	D
Approach Vol, veh/h		918			2639			423			1257	
Approach Delay, s/veh		48.1			58.1			33.4			45.9	
Approach LOS		D			E			C			D	
Timer	1	2	3	4	5	6	7	8				
Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	35.3	30.2	11.5	37.3	7.9	57.6	30.4	18.4				
Change Period (Y+Rc), s	5.7	* 5.9	4.4	5.4	4.4	5.7	4.4	5.4				
Max Green Setting (Gmax), s	24.9	* 31	34.1	35.1	4.0	51.9	30.1	39.1				
Max Q Clear Time (g_c+I1), s	20.9	20.1	6.7	18.1	4.0	53.9	24.6	6.1				
Green Ext Time (p_c), s	3.7	4.2	0.5	4.5	0.0	0.0	1.4	5.3				
Intersection Summary												
HCM 2010 Ctrl Delay			51.4									
HCM 2010 LOS			D									
Notes												



















HCM 2010 Signalized Intersection Summary
 5: I-15 SB Ramps & Rancho Bernardo Rd

Year 2035 AM
 3/24/2016

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	860	700	0	1370	560	0	0	0	760	0	1170
Future Volume (veh/h)	0	860	700	0	1370	560	0	0	0	760	0	1170
Number	5	2	12	1	6	16				7	4	14
Initial Q (Qb), veh	0	0	0	0	0	0				0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00				1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00				1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	0	1863	1863	0	1863	1863				1863	0	1863
Adj Flow Rate, veh/h	0	905	737	0	1442	0				800	0	1232
Adj No. of Lanes	0	2	2	0	3	1				2	0	2
Peak Hour Factor	0.92	0.95	0.95	0.92	0.95	0.95				0.95	0.92	0.95
Percent Heavy Veh, %	0	2	2	0	2	2				2	0	2
Cap, veh/h	0	1499	1274	0	2249	637				1627	0	1317
Arrive On Green	0.00	0.40	0.40	0.00	0.80	0.00				0.47	0.00	0.47
Sat Flow, veh/h	0	3725	3167	0	5588	1583				3442	0	2787
Grp Volume(v), veh/h	0	905	737	0	1442	0				800	0	1232
Grp Sat Flow(s),veh/h/ln	0	1863	1583	0	1863	1583				1721	0	1393
Q Serve(g_s), s	0.0	19.2	18.1	0.0	10.4	0.0				16.0	0.0	41.8
Cycle Q Clear(g_c), s	0.0	19.2	18.1	0.0	10.4	0.0				16.0	0.0	41.8
Prop In Lane	0.00		1.00	0.00		1.00				1.00		1.00
Lane Grp Cap(c), veh/h	0	1499	1274	0	2249	637				1627	0	1317
V/C Ratio(X)	0.00	0.60	0.58	0.00	0.64	0.00				0.49	0.00	0.94
Avail Cap(c_a), veh/h	0	1499	1274	0	2249	637				1669	0	1352
HCM Platoon Ratio	1.00	1.00	1.00	1.00	2.00	2.00				1.00	1.00	1.00
Upstream Filter(I)	0.00	0.60	0.60	0.00	0.81	0.00				1.00	0.00	1.00
Uniform Delay (d), s/veh	0.0	23.6	23.3	0.0	6.8	0.0				18.1	0.0	24.9
Incr Delay (d2), s/veh	0.0	1.1	1.2	0.0	1.2	0.0				0.2	0.0	12.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0				0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.0	10.0	8.1	0.0	5.3	0.0				7.6	0.0	18.1
LnGrp Delay(d),s/veh	0.0	24.7	24.4	0.0	8.0	0.0				18.4	0.0	37.0
LnGrp LOS		C	C		A					B		D
Approach Vol, veh/h		1642			1442						2032	
Approach Delay, s/veh		24.6			8.0						29.7	
Approach LOS		C			A						C	
Timer	1	2	3	4	5	6	7	8				
Assigned Phs		2		4		6						
Phs Duration (G+Y+Rc), s		46.6		53.4		46.6						
Change Period (Y+Rc), s		6.4		6.1		6.4						
Max Green Setting (Gmax), s		39.0		48.5		39.0						
Max Q Clear Time (g_c+I1), s		21.2		43.8		12.4						
Green Ext Time (p_c), s		15.5		3.5		21.8						
Intersection Summary												
HCM 2010 Ctrl Delay			21.9									
HCM 2010 LOS			C									
Notes												























HCM 2010 Signalized Intersection Summary
 6: I-15 NB Ramps & Rancho Bernardo Rd

Year 2035 AM
 3/24/2016

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	950	670	0	1200	320	730	0	510	0	0	0
Future Volume (veh/h)	0	950	670	0	1200	320	730	0	510	0	0	0
Number	5	2	12	1	6	16	3	8	18			
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0			
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00			
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00			
Adj Sat Flow, veh/h/ln	0	1863	1863	0	1863	1863	1863	0	1863			
Adj Flow Rate, veh/h	0	1011	0	0	1277	340	777	0	543			
Adj No. of Lanes	0	3	1	0	3	1	2	0	2			
Peak Hour Factor	0.92	0.94	0.94	0.92	0.94	0.94	0.94	0.92	0.94			
Percent Heavy Veh, %	0	2	2	0	2	2	2	0	2			
Cap, veh/h	0	3320	941	0	3021	941	967	0	783			
Arrive On Green	0.00	1.00	0.00	0.00	0.59	0.59	0.28	0.00	0.28			
Sat Flow, veh/h	0	5588	1583	0	5253	1583	3442	0	2787			
Grp Volume(v), veh/h	0	1011	0	0	1277	340	777	0	543			
Grp Sat Flow(s),veh/h/ln	0	1863	1583	0	1695	1583	1721	0	1393			
Q Serve(g_s), s	0.0	0.0	0.0	0.0	13.6	11.1	21.0	0.0	17.4			
Cycle Q Clear(g_c), s	0.0	0.0	0.0	0.0	13.6	11.1	21.0	0.0	17.4			
Prop In Lane	0.00		1.00	0.00		1.00	1.00		1.00			
Lane Grp Cap(c), veh/h	0	3320	941	0	3021	941	967	0	783			
V/C Ratio(X)	0.00	0.30	0.00	0.00	0.42	0.36	0.80	0.00	0.69			
Avail Cap(c_a), veh/h	0	3320	941	0	3021	941	1339	0	1084			
HCM Platoon Ratio	1.00	2.00	2.00	1.00	1.00	1.00	1.00	1.00	1.00			
Upstream Filter(I)	0.00	0.76	0.00	0.00	1.00	1.00	1.00	0.00	1.00			
Uniform Delay (d), s/veh	0.0	0.0	0.0	0.0	11.0	10.5	33.4	0.0	32.1			
Incr Delay (d2), s/veh	0.0	0.2	0.0	0.0	0.4	1.1	2.5	0.0	1.1			
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0			
%ile BackOfQ(50%),veh/ln	0.0	0.1	0.0	0.0	6.4	5.1	10.3	0.0	6.8			
LnGrp Delay(d),s/veh	0.0	0.2	0.0	0.0	11.4	11.6	35.9	0.0	33.2			
LnGrp LOS		A			B	B	D		C			
Approach Vol, veh/h		1011			1617			1320				
Approach Delay, s/veh		0.2			11.5			34.8				
Approach LOS		A			B			C				
Timer	1	2	3	4	5	6	7	8				
Assigned Phs		2				6		8				
Phs Duration (G+Y+Rc), s		65.8				65.8		34.2				
Change Period (Y+Rc), s		6.4				6.4		6.1				
Max Green Setting (Gmax), s		48.6				48.6		38.9				
Max Q Clear Time (g_c+I1), s		2.0				15.6		23.0				
Green Ext Time (p_c), s		28.8				23.0		5.1				
Intersection Summary												
HCM 2010 Ctrl Delay			16.4									
HCM 2010 LOS			B									
Notes												























HCM 2010 Signalized Intersection Summary
 7: Bernardo Center Dr & Rancho Bernardo Rd

Year 2035 AM
 3/24/2016

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	360	650	350	180	870	100	270	200	120	230	310	130
Future Volume (veh/h)	360	650	350	180	870	100	270	200	120	230	310	130
Number	5	2	12	1	6	16	3	8	18	7	4	14
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		0.98	1.00		0.99	1.00		0.99
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1863	1863	1863	1900	1863	1863	1900	1863	1863	1863
Adj Flow Rate, veh/h	387	726	358	194	935	108	290	215	129	247	333	140
Adj No. of Lanes	2	2	1	2	2	0	2	2	0	2	2	1
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	466	1544	656	267	1151	133	362	402	231	329	626	484
Arrive On Green	0.13	0.41	0.41	0.08	0.36	0.36	0.11	0.19	0.19	0.10	0.18	0.18
Sat Flow, veh/h	3548	3725	1583	3442	3192	369	3442	2160	1241	3442	3539	1560
Grp Volume(v), veh/h	387	726	358	194	518	525	290	174	170	247	333	140
Grp Sat Flow(s),veh/h/ln	1774	1863	1583	1721	1770	1791	1721	1770	1632	1721	1770	1560
Q Serve(g_s), s	9.8	13.1	15.8	5.1	24.5	24.5	7.6	8.2	8.7	6.5	7.9	6.3
Cycle Q Clear(g_c), s	9.8	13.1	15.8	5.1	24.5	24.5	7.6	8.2	8.7	6.5	7.9	6.3
Prop In Lane	1.00		1.00	1.00		0.21	1.00		0.76	1.00		1.00
Lane Grp Cap(c), veh/h	466	1544	656	267	638	646	362	330	304	329	626	484
V/C Ratio(X)	0.83	0.47	0.55	0.73	0.81	0.81	0.80	0.53	0.56	0.75	0.53	0.29
Avail Cap(c_a), veh/h	537	1575	669	350	677	686	394	706	651	532	1531	883
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	39.2	19.7	20.5	41.7	26.7	26.7	40.4	34.0	34.2	40.7	34.6	24.3
Incr Delay (d2), s/veh	9.4	0.2	0.9	5.2	7.1	7.0	10.5	1.3	1.6	3.4	0.7	0.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	5.4	6.8	7.0	2.6	13.2	13.4	4.2	4.1	4.0	3.2	3.9	2.8
LnGrp Delay(d),s/veh	48.6	19.9	21.4	46.9	33.8	33.8	51.0	35.3	35.8	44.2	35.3	24.6
LnGrp LOS	D	B	C	D	C	C	D	D	D	D	D	C
Approach Vol, veh/h		1471			1237			634			720	
Approach Delay, s/veh		27.8			35.9			42.6			36.3	
Approach LOS		C			D			D			D	
Timer	1	2	3	4	5	6	7	8				
Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	11.6	44.5	14.1	22.3	16.6	39.6	13.2	23.1				
Change Period (Y+Rc), s	4.4	6.2	4.4	5.9	4.4	* 6.2	4.4	* 5.9				
Max Green Setting (Gmax), s	9.4	39.1	10.6	40.0	14.0	* 35	14.3	* 37				
Max Q Clear Time (g_c+I1), s	7.1	17.8	9.6	9.9	11.8	26.5	8.5	10.7				
Green Ext Time (p_c), s	0.1	13.2	0.1	4.8	0.3	6.9	0.4	4.7				
Intersection Summary												
HCM 2010 Ctrl Delay			34.1									
HCM 2010 LOS			C									
Notes												

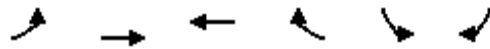
HCM 2010 Signalized Intersection Summary
8: West Bernardo Dr & Duenda Rd

Year 2035 AM
3/24/2016

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	30	180	160	120	50	60	40	140	90	120	250	20
Future Volume (veh/h)	30	180	160	120	50	60	40	140	90	120	250	20
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.99	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1900	1863	1863	1863	1863	1863	1900	1863	1863	1900
Adj Flow Rate, veh/h	33	196	174	130	54	65	43	152	98	130	272	22
Adj No. of Lanes	1	1	0	1	1	1	1	2	0	1	2	0
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	482	246	218	205	215	183	62	318	194	169	698	56
Arrive On Green	0.27	0.27	0.27	0.12	0.12	0.12	0.04	0.15	0.15	0.10	0.21	0.21
Sat Flow, veh/h	1774	904	803	1774	1863	1583	1774	2117	1288	1774	3319	267
Grp Volume(v), veh/h	33	0	370	130	54	65	43	126	124	130	144	150
Grp Sat Flow(s),veh/h/ln	1774	0	1707	1774	1863	1583	1774	1770	1635	1774	1770	1816
Q Serve(g_s), s	0.8	0.0	11.0	3.8	1.4	2.1	1.3	3.5	3.8	3.9	3.8	3.9
Cycle Q Clear(g_c), s	0.8	0.0	11.0	3.8	1.4	2.1	1.3	3.5	3.8	3.9	3.8	3.9
Prop In Lane	1.00		0.47	1.00		1.00	1.00		0.79	1.00		0.15
Lane Grp Cap(c), veh/h	482	0	464	205	215	183	62	266	246	169	372	382
V/C Ratio(X)	0.07	0.00	0.80	0.63	0.25	0.36	0.69	0.47	0.51	0.77	0.39	0.39
Avail Cap(c_a), veh/h	750	0	722	587	616	524	196	585	541	359	748	768
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	14.7	0.0	18.4	23.0	21.9	22.2	26.0	21.1	21.3	24.0	18.5	18.5
Incr Delay (d2), s/veh	0.1	0.0	3.5	3.2	0.6	1.2	12.7	1.3	1.6	7.2	0.7	0.7
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.4	0.0	5.6	2.0	0.8	1.0	0.9	1.8	1.8	2.3	1.9	2.0
LnGrp Delay(d),s/veh	14.8	0.0	21.9	26.2	22.5	23.4	38.7	22.4	22.9	31.3	19.1	19.2
LnGrp LOS	B		C	C	C	C	D	C	C	C	B	B
Approach Vol, veh/h		403			249			293			424	
Approach Delay, s/veh		21.3			24.7			25.0			22.9	
Approach LOS		C			C			C			C	
Timer	1	2	3	4	5	6	7	8				
Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	10.2	13.2		19.8	6.9	16.4		11.3				
Change Period (Y+Rc), s	5.0	5.0		5.0	5.0	5.0		5.0				
Max Green Setting (Gmax), s	11.0	18.0		23.0	6.0	23.0		18.0				
Max Q Clear Time (g_c+I1), s	5.9	5.8		13.0	3.3	5.9		5.8				
Green Ext Time (p_c), s	0.1	2.4		1.8	0.0	2.7		0.6				
Intersection Summary												
HCM 2010 Ctrl Delay			23.2									
HCM 2010 LOS			C									

HCM 2010 Signalized Intersection Summary
 9: West Bernardo Dr & Via Del Campo

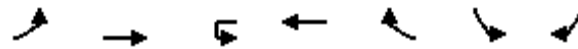
Year 2035 AM
 3/24/2016



Movement	EBL	EBT	WBT	WBR	SBL	SBR		
Lane Configurations								
Traffic Volume (veh/h)	430	620	360	200	130	110		
Future Volume (veh/h)	430	620	360	200	130	110		
Number	5	2	6	16	7	14		
Initial Q (Qb), veh	0	0	0	0	0	0		
Ped-Bike Adj(A_pbT)	1.00			1.00	1.00	1.00		
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00		
Adj Sat Flow, veh/h/ln	1863	1863	1863	1900	1863	1863		
Adj Flow Rate, veh/h	467	674	391	217	141	120		
Adj No. of Lanes	1	2	2	0	1	1		
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92		
Percent Heavy Veh, %	2	2	2	2	2	2		
Cap, veh/h	877	2747	483	265	190	169		
Arrive On Green	0.49	0.78	0.22	0.22	0.11	0.11		
Sat Flow, veh/h	1774	3632	2300	1209	1774	1583		
Grp Volume(v), veh/h	467	674	312	296	141	120		
Grp Sat Flow(s),veh/h/ln	1774	1770	1770	1646	1774	1583		
Q Serve(g_s), s	15.8	4.6	14.6	14.9	6.7	6.4		
Cycle Q Clear(g_c), s	15.8	4.6	14.6	14.9	6.7	6.4		
Prop In Lane	1.00			0.73	1.00	1.00		
Lane Grp Cap(c), veh/h	877	2747	387	360	190	169		
V/C Ratio(X)	0.53	0.25	0.81	0.82	0.74	0.71		
Avail Cap(c_a), veh/h	877	2747	501	466	449	401		
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00		
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00		
Uniform Delay (d), s/veh	15.1	2.7	32.3	32.4	37.8	37.6		
Incr Delay (d2), s/veh	0.6	0.2	7.3	8.8	5.6	5.3		
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0		
%ile BackOfQ(50%),veh/ln	7.8	2.2	7.9	7.6	3.6	5.7		
LnGrp Delay(d),s/veh	15.8	2.9	39.7	41.2	43.4	43.0		
LnGrp LOS	B	A	D	D	D	D		
Approach Vol, veh/h		1141	608		261			
Approach Delay, s/veh		8.2	40.4		43.2			
Approach LOS		A	D		D			
Timer	1	2	3	4	5	6	7	8
Assigned Phs		2		4	5	6		
Phs Duration (G+Y+Rc), s		73.2		14.0	48.6	24.6		
Change Period (Y+Rc), s		5.5		* 4.7	5.5	* 5.5		
Max Green Setting (Gmax), s		67.7		* 22	38.6	* 25		
Max Q Clear Time (g_c+I1), s		6.6		8.7	17.8	16.9		
Green Ext Time (p_c), s		6.9		0.6	5.9	2.2		
Intersection Summary								
HCM 2010 Ctrl Delay			22.5					
HCM 2010 LOS			C					
Notes								

HCM 2010 Signalized Intersection Summary
 10: Bernardo Center Dr & West Bernardo Dr




















Year 2035 AM
 3/24/2016



Movement	EBL	EBT	WBU	WBT	WBR	SBL	SBR	
Lane Configurations	↶↷	↶↶	↶	↶↶	↶↶	↶	↶	
Traffic Volume (veh/h)	690	580	0	610	800	90	240	
Future Volume (veh/h)	690	580	0	610	800	90	240	
Number	1	6		2	12	3	18	
Initial Q (Qb), veh	0	0		0	0	0	0	
Ped-Bike Adj(A_pbT)	1.00				0.97	1.00	1.00	
Parking Bus, Adj	1.00	1.00		1.00	1.00	1.00	1.00	
Adj Sat Flow, veh/h/ln	1863	1863		1863	1863	1863	1863	
Adj Flow Rate, veh/h	750	630		663	870	98	261	
Adj No. of Lanes	2	2		2	2	1	1	
Peak Hour Factor	0.92	0.92		0.92	0.92	0.92	0.92	
Percent Heavy Veh, %	2	2		2	2	2	2	
Cap, veh/h	890	2475		1337	1469	282	661	
Arrive On Green	0.26	0.70		0.38	0.38	0.16	0.16	
Sat Flow, veh/h	3442	3632		3632	2715	1774	1583	
Grp Volume(v), veh/h	750	630		663	870	98	261	
Grp Sat Flow(s),veh/h/ln	1721	1770		1770	1357	1774	1583	
Q Serve(g_s), s	14.4	4.6		10.0	15.3	3.4	8.0	
Cycle Q Clear(g_c), s	14.4	4.6		10.0	15.3	3.4	8.0	
Prop In Lane	1.00				1.00	1.00	1.00	
Lane Grp Cap(c), veh/h	890	2475		1337	1469	282	661	
V/C Ratio(X)	0.84	0.25		0.50	0.59	0.35	0.39	
Avail Cap(c_a), veh/h	1112	2496		1524	1612	837	1157	
HCM Platoon Ratio	1.00	1.00		1.00	1.00	1.00	1.00	
Upstream Filter(I)	1.00	1.00		1.00	1.00	1.00	1.00	
Uniform Delay (d), s/veh	24.6	3.8		16.7	11.0	26.2	14.2	
Incr Delay (d2), s/veh	5.0	0.1		0.3	0.5	0.7	0.4	
Initial Q Delay(d3),s/veh	0.0	0.0		0.0	0.0	0.0	0.0	
%ile BackOfQ(50%),veh/ln	7.5	2.2		4.9	5.7	1.7	3.5	
LnGrp Delay(d),s/veh	29.5	3.9		16.9	11.5	26.9	14.6	
LnGrp LOS	C	A		B	B	C	B	
Approach Vol, veh/h		1380		1533		359		
Approach Delay, s/veh		17.8		13.9		17.9		
Approach LOS		B		B		B		
Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2				6		8
Phs Duration (G+Y+Rc), s	22.5	31.9				54.4		15.5
Change Period (Y+Rc), s	4.4	5.5				* 5.5		4.4
Max Green Setting (Gmax), s	22.6	30.1				* 49		33.0
Max Q Clear Time (g_c+I1), s	16.4	17.3				6.6		10.0
Green Ext Time (p_c), s	1.6	9.1				18.8		1.1
Intersection Summary								
HCM 2010 Ctrl Delay			16.0					
HCM 2010 LOS			B					
Notes								

HCM 2010 Signalized Intersection Summary
 1: Camino San Bernardo & Rancho Bernardo Rd




















3/24/2016

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	10	960	230	390	800	10	120	10	370	70	20	30
Future Volume (veh/h)	10	960	230	390	800	10	120	10	370	70	20	30
Number	5	2	12	1	6	16	3	8	18	7	4	14
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.99	1.00		1.00	1.00		1.00	1.00		0.99
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1900	1863	1863	1900	1863	1863	1900	1900	1863	1900
Adj Flow Rate, veh/h	10	1000	240	406	833	10	125	10	385	73	21	31
Adj No. of Lanes	1	2	0	2	2	0	1	2	0	0	1	0
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	22	1068	256	467	1796	22	440	571	510	137	42	38
Arrive On Green	0.01	0.38	0.38	0.14	0.50	0.50	0.32	0.32	0.32	0.32	0.32	0.32
Sat Flow, veh/h	1774	2825	676	3442	3582	43	1347	1770	1582	225	131	118
Grp Volume(v), veh/h	10	625	615	406	412	431	125	10	385	125	0	0
Grp Sat Flow(s),veh/h/ln	1774	1770	1731	1721	1770	1855	1347	1770	1582	474	0	0
Q Serve(g_s), s	0.5	30.1	30.3	10.2	13.4	13.4	0.0	0.3	19.3	6.9	0.0	0.0
Cycle Q Clear(g_c), s	0.5	30.1	30.3	10.2	13.4	13.4	7.8	0.3	19.3	26.2	0.0	0.0
Prop In Lane	1.00		0.39	1.00		0.02	1.00		1.00	0.58		0.25
Lane Grp Cap(c), veh/h	22	669	655	467	887	930	440	571	510	217	0	0
V/C Ratio(X)	0.46	0.93	0.94	0.87	0.46	0.46	0.28	0.02	0.75	0.58	0.00	0.00
Avail Cap(c_a), veh/h	100	690	675	467	887	930	446	580	518	223	0	0
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	0.00
Uniform Delay (d), s/veh	43.4	26.5	26.5	37.5	14.3	14.3	22.9	20.4	26.8	33.5	0.0	0.0
Incr Delay (d2), s/veh	14.2	19.6	20.8	16.1	0.4	0.4	0.4	0.0	6.1	3.4	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.3	18.2	18.1	5.9	6.6	6.9	2.4	0.2	9.2	3.2	0.0	0.0
LnGrp Delay(d),s/veh	57.6	46.1	47.3	53.6	14.7	14.7	23.3	20.4	33.0	37.0	0.0	0.0
LnGrp LOS	E	D	D	D	B	B	C	C	C	D		
Approach Vol, veh/h		1250			1249			520			125	
Approach Delay, s/veh		46.8			27.4			30.4			37.0	
Approach LOS		D			C			C			D	
Timer	1	2	3	4	5	6	7	8				
Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	16.0	39.0		33.5	5.1	49.9		33.5				
Change Period (Y+Rc), s	4.0	5.5		5.0	4.0	5.5		5.0				
Max Green Setting (Gmax), s	12.0	34.5		29.0	5.0	41.5		29.0				
Max Q Clear Time (g_c+I1), s	12.2	32.3		28.2	2.5	15.4		21.3				
Green Ext Time (p_c), s	0.0	1.1		0.3	0.0	14.7		2.3				
Intersection Summary												
HCM 2010 Ctrl Delay				36.0								
HCM 2010 LOS				D								

HCM 2010 Signalized Intersection Summary




















2: Via Del Campo & Rancho Bernardo Rd

3/24/2016

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	20	1430	60	30	1030	10	350	10	420	10	10	10
Future Volume (veh/h)	20	1430	60	30	1030	10	350	10	420	10	10	10
Number	5	2	12	1	6	16	3	8	18	7	4	14
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		0.98	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1900	1863	1863	1900	1900	1863	1863	1900	1863	1900
Adj Flow Rate, veh/h	22	1554	65	33	1120	11	380	11	457	11	11	11
Adj No. of Lanes	1	2	0	1	2	0	0	1	1	0	1	0
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	29	1749	73	42	1841	18	274	7	569	33	32	16
Arrive On Green	0.02	0.51	0.51	0.02	0.51	0.51	0.36	0.36	0.36	0.36	0.36	0.36
Sat Flow, veh/h	1774	3462	144	1774	3591	35	616	18	1560	0	88	44
Grp Volume(v), veh/h	22	792	827	33	552	579	391	0	457	33	0	0
Grp Sat Flow(s),veh/h/ln	1774	1770	1837	1774	1770	1856	634	0	1560	132	0	0
Q Serve(g_s), s	1.8	58.5	59.2	2.7	32.3	32.3	0.0	0.0	38.4	0.0	0.0	0.0
Cycle Q Clear(g_c), s	1.8	58.5	59.2	2.7	32.3	32.3	53.3	0.0	38.4	53.3	0.0	0.0
Prop In Lane	1.00		0.08	1.00		0.02	0.97		1.00	0.33		0.33
Lane Grp Cap(c), veh/h	29	894	928	42	907	952	280	0	569	81	0	0
V/C Ratio(X)	0.77	0.89	0.89	0.78	0.61	0.61	1.40	0.00	0.80	0.41	0.00	0.00
Avail Cap(c_a), veh/h	75	923	959	64	915	960	280	0	569	81	0	0
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00	0.00
Uniform Delay (d), s/veh	71.6	32.4	32.5	70.9	25.2	25.2	51.0	0.0	41.7	38.3	0.0	0.0
Incr Delay (d2), s/veh	33.8	10.1	10.3	28.2	1.2	1.1	198.5	0.0	8.2	3.3	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.2	31.1	32.5	1.7	16.1	16.9	26.7	0.0	17.9	0.9	0.0	0.0
LnGrp Delay(d),s/veh	105.3	42.5	42.8	99.1	26.4	26.3	249.5	0.0	49.8	41.6	0.0	0.0
LnGrp LOS	F	D	D	F	C	C	F		D	D		
Approach Vol, veh/h		1641			1164			848				33
Approach Delay, s/veh		43.5			28.4			141.9				41.6
Approach LOS		D			C			F				D
Timer	1	2	3	4	5	6	7	8				
Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	7.9	79.7		58.5	6.8	80.8		58.5				
Change Period (Y+Rc), s	4.4	5.9		* 5.2	4.4	* 5.9		5.2				
Max Green Setting (Gmax), s	5.3	76.2		* 53	6.2	* 76		53.0				
Max Q Clear Time (g_c+I1), s	4.7	61.2		55.3	3.8	34.3		55.3				
Green Ext Time (p_c), s	0.0	12.6		0.0	0.0	27.6		0.0				
Intersection Summary												
HCM 2010 Ctrl Delay				61.3								
HCM 2010 LOS				E								
Notes												

HCM 2010 Signalized Intersection Summary
 3: Project Dwy/Matinal Rd & Rancho Bernardo Rd

































3/24/2016

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	110	1600	0	0	990	60	0	0	0	50	0	120
Future Volume (veh/h)	110	1600	0	0	990	60	0	0	0	50	0	120
Number	5	2	12	1	6	16	3	8	18	7	4	14
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		0.99
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1900	1863	1863	1900	1863	1863	1900	1900	1863	1900
Adj Flow Rate, veh/h	120	1739	0	0	1076	65	0	0	0	54	0	130
Adj No. of Lanes	1	2	0	1	2	0	1	1	0	0	1	0
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	154	2429	0	2	1843	111	100	284	0	117	16	166
Arrive On Green	0.09	0.69	0.00	0.00	0.54	0.54	0.00	0.00	0.00	0.15	0.00	0.15
Sat Flow, veh/h	1774	3632	0	1774	3391	205	1255	1863	0	345	107	1089
Grp Volume(v), veh/h	120	1739	0	0	561	580	0	0	0	184	0	0
Grp Sat Flow(s),veh/h/ln	1774	1770	0	1774	1770	1827	1255	1863	0	1541	0	0
Q Serve(g_s), s	4.8	21.8	0.0	0.0	15.2	15.2	0.0	0.0	0.0	5.8	0.0	0.0
Cycle Q Clear(g_c), s	4.8	21.8	0.0	0.0	15.2	15.2	0.0	0.0	0.0	8.2	0.0	0.0
Prop In Lane	1.00		0.00	1.00		0.11	1.00		0.00	0.29		0.71
Lane Grp Cap(c), veh/h	154	2429	0	2	962	993	100	284	0	299	0	0
V/C Ratio(X)	0.78	0.72	0.00	0.00	0.58	0.58	0.00	0.00	0.00	0.61	0.00	0.00
Avail Cap(c_a), veh/h	321	2522	0	123	1089	1124	412	747	0	663	0	0
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	0.00	0.00	1.00	1.00	0.00	0.00	0.00	1.00	0.00	0.00
Uniform Delay (d), s/veh	32.1	6.9	0.0	0.0	11.0	11.0	0.0	0.0	0.0	29.2	0.0	0.0
Incr Delay (d2), s/veh	8.1	1.0	0.0	0.0	0.6	0.6	0.0	0.0	0.0	2.0	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.7	10.7	0.0	0.0	7.5	7.7	0.0	0.0	0.0	3.7	0.0	0.0
LnGrp Delay(d),s/veh	40.2	7.9	0.0	0.0	11.6	11.6	0.0	0.0	0.0	31.3	0.0	0.0
LnGrp LOS	D	A			B	B				C		
Approach Vol, veh/h		1859			1141			0				184
Approach Delay, s/veh		10.0			11.6			0.0				31.3
Approach LOS		A			B							C
Timer	1	2	3	4	5	6	7	8				
Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	0.0	56.3		15.5	10.3	46.1		15.5				
Change Period (Y+Rc), s	4.0	7.0		4.6	4.0	* 7		* 4.6				
Max Green Setting (Gmax), s	5.0	51.2		28.2	13.0	* 44		* 29				
Max Q Clear Time (g_c+I1), s	0.0	23.8		10.2	6.8	17.2		0.0				
Green Ext Time (p_c), s	0.0	22.1		1.0	0.1	21.8		0.0				
Intersection Summary												
HCM 2010 Ctrl Delay				11.8								
HCM 2010 LOS				B								
Notes												

HCM 2010 Signalized Intersection Summary

4: West Bernardo Dr & Rancho Bernardo Rd



















3/24/2016

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	 	 		 	 		 	 		 	 	 
Traffic Volume (veh/h)	160	1580	50	200	990	510	180	360	700	350	90	70
Future Volume (veh/h)	160	1580	50	200	990	510	180	360	700	350	90	70
Number	5	2	12	1	6	16	3	8	18	7	4	14
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1900	1863	1863	1863	1863	1863	1863	1863	1863	1900
Adj Flow Rate, veh/h	163	1612	51	204	1010	520	184	367	714	357	92	71
Adj No. of Lanes	2	3	0	2	2	1	2	2	1	2	2	0
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	233	1736	55	271	1258	561	254	1012	576	437	672	476
Arrive On Green	0.07	0.34	0.34	0.08	0.36	0.36	0.07	0.29	0.29	0.13	0.34	0.34
Sat Flow, veh/h	3442	5064	160	3442	3539	1579	3442	3539	1578	3442	1981	1403
Grp Volume(v), veh/h	163	1079	584	204	1010	520	184	367	714	357	81	82
Grp Sat Flow(s),veh/h/ln	1721	1695	1834	1721	1770	1579	1721	1770	1578	1721	1770	1615
Q Serve(g_s), s	5.6	37.2	37.2	7.0	31.2	25.9	6.3	10.0	29.1	12.3	3.9	4.3
Cycle Q Clear(g_c), s	5.6	37.2	37.2	7.0	31.2	25.9	6.3	10.0	29.1	12.3	3.9	4.3
Prop In Lane	1.00		0.09	1.00		1.00	1.00		1.00	1.00		0.87
Lane Grp Cap(c), veh/h	233	1162	629	271	1258	561	254	1012	576	437	600	548
V/C Ratio(X)	0.70	0.93	0.93	0.75	0.80	0.93	0.72	0.36	1.24	0.82	0.14	0.15
Avail Cap(c_a), veh/h	233	1176	636	528	1584	707	967	1140	633	854	600	548
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	55.3	38.4	38.4	54.8	35.3	17.1	55.0	34.5	25.1	51.6	27.8	27.9
Incr Delay (d2), s/veh	8.8	12.6	20.0	4.2	2.5	16.0	3.9	0.2	122.1	3.8	0.1	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	3.0	19.4	22.3	3.5	15.7	13.7	3.2	4.9	33.1	6.1	1.9	1.9
LnGrp Delay(d),s/veh	64.2	51.0	58.4	59.0	37.7	33.1	58.9	34.7	147.2	55.4	27.9	28.0
LnGrp LOS	E	D	E	E	D	C	E	C	F	E	C	C
Approach Vol, veh/h		1826			1734			1265			520	
Approach Delay, s/veh		54.5			38.8			101.7			46.8	
Approach LOS		D			D			F			D	
Timer	1	2	3	4	5	6	7	8				
Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	13.9	47.5	13.4	46.6	12.6	48.8	19.8	40.1				
Change Period (Y+Rc), s	4.4	5.9	4.4	5.4	4.4	5.7	4.4	5.4				
Max Green Setting (Gmax), s	18.6	42.1	34.1	35.1	6.6	54.3	30.1	39.1				
Max Q Clear Time (g_c+I1), s	9.0	39.2	8.3	6.3	7.6	33.2	14.3	31.1				
Green Ext Time (p_c), s	0.5	2.4	0.6	7.4	0.0	9.9	1.1	3.5				
Intersection Summary												
HCM 2010 Ctrl Delay			59.9									
HCM 2010 LOS			E									

HCM 2010 Signalized Intersection Summary

5: I-15 SB Ramps & Rancho Bernardo Rd



















3/24/2016

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	1680	940	0	1220	600	0	0	0	460	0	460
Future Volume (veh/h)	0	1680	940	0	1220	600	0	0	0	460	0	460
Number	5	2	12	1	6	16				7	4	14
Initial Q (Qb), veh	0	0	0	0	0	0				0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00				1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00				1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	0	1863	1863	0	1863	1863				1863	0	1863
Adj Flow Rate, veh/h	0	2195	682	0	1271	0				479	0	479
Adj No. of Lanes	0	3	1	0	3	1				2	0	2
Peak Hour Factor	0.92	0.96	0.96	0.92	0.96	0.96				0.96	0.92	0.96
Percent Heavy Veh, %	0	2	2	0	2	2				2	0	2
Cap, veh/h	0	3767	1067	0	3767	1067				692	0	560
Arrive On Green	0.00	0.67	0.67	0.00	1.00	0.00				0.20	0.00	0.20
Sat Flow, veh/h	0	5588	1583	0	5588	1583				3442	0	2787
Grp Volume(v), veh/h	0	2195	682	0	1271	0				479	0	479
Grp Sat Flow(s),veh/h/ln	0	1863	1583	0	1863	1583				1721	0	1393
Q Serve(g_s), s	0.0	21.1	24.7	0.0	0.0	0.0				12.9	0.0	16.6
Cycle Q Clear(g_c), s	0.0	21.1	24.7	0.0	0.0	0.0				12.9	0.0	16.6
Prop In Lane	0.00		1.00	0.00		1.00				1.00		1.00
Lane Grp Cap(c), veh/h	0	3767	1067	0	3767	1067				692	0	560
V/C Ratio(X)	0.00	0.58	0.64	0.00	0.34	0.00				0.69	0.00	0.86
Avail Cap(c_a), veh/h	0	3767	1067	0	3767	1067				767	0	621
HCM Platoon Ratio	1.00	1.00	1.00	1.00	2.00	2.00				1.00	1.00	1.00
Upstream Filter(I)	0.00	0.12	0.12	0.00	0.83	0.00				1.00	0.00	1.00
Uniform Delay (d), s/veh	0.0	8.7	9.3	0.0	0.0	0.0				37.1	0.0	38.6
Incr Delay (d2), s/veh	0.0	0.1	0.4	0.0	0.2	0.0				2.4	0.0	10.5
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0				0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.0	10.8	10.7	0.0	0.1	0.0				6.3	0.0	7.2
LnGrp Delay(d),s/veh	0.0	8.8	9.7	0.0	0.2	0.0				39.5	0.0	49.0
LnGrp LOS		A	A		A					D		D
Approach Vol, veh/h		2877			1271						958	
Approach Delay, s/veh		9.0			0.2						44.2	
Approach LOS		A			A						D	
Timer	1	2	3	4	5	6	7	8				
Assigned Phs		2		4		6						
Phs Duration (G+Y+Rc), s		73.8		26.2		73.8						
Change Period (Y+Rc), s		6.4		6.1		6.4						
Max Green Setting (Gmax), s		65.2		22.3		65.2						
Max Q Clear Time (g_c+I1), s		26.7		18.6		2.0						
Green Ext Time (p_c), s		36.1		1.5		56.9						
Intersection Summary												
HCM 2010 Ctrl Delay			13.4									
HCM 2010 LOS			B									
Notes												

HCM 2010 Signalized Intersection Summary























6: I-15 NB Ramps & Rancho Bernardo Rd

3/24/2016

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	990	1150	0	1110	510	710	0	490	0	0	0
Future Volume (veh/h)	0	990	1150	0	1110	510	710	0	490	0	0	0
Number	5	2	12	1	6	16	3	8	18			
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0			
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00			
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00			
Adj Sat Flow, veh/h/ln	0	1863	1863	0	1863	1863	1863	0	1863			
Adj Flow Rate, veh/h	0	1053	0	0	1181	543	755	0	521			
Adj No. of Lanes	0	3	1	0	3	1	2	0	2			
Peak Hour Factor	0.92	0.94	0.94	0.92	0.94	0.94	0.94	0.92	0.94			
Percent Heavy Veh, %	0	2	2	0	2	2	2	0	2			
Cap, veh/h	0	3393	961	0	3087	961	922	0	747			
Arrive On Green	0.00	1.00	0.00	0.00	0.61	0.61	0.27	0.00	0.27			
Sat Flow, veh/h	0	5588	1583	0	5253	1583	3442	0	2787			
Grp Volume(v), veh/h	0	1053	0	0	1181	543	755	0	521			
Grp Sat Flow(s),veh/h/ln	0	1863	1583	0	1695	1583	1721	0	1393			
Q Serve(g_s), s	0.0	0.0	0.0	0.0	11.9	20.5	20.6	0.0	16.8			
Cycle Q Clear(g_c), s	0.0	0.0	0.0	0.0	11.9	20.5	20.6	0.0	16.8			
Prop In Lane	0.00		1.00	0.00		1.00	1.00		1.00			
Lane Grp Cap(c), veh/h	0	3393	961	0	3087	961	922	0	747			
V/C Ratio(X)	0.00	0.31	0.00	0.00	0.38	0.56	0.82	0.00	0.70			
Avail Cap(c_a), veh/h	0	3393	961	0	3087	961	1167	0	945			
HCM Platoon Ratio	1.00	1.67	1.67	1.00	1.00	1.00	1.00	1.00	1.00			
Upstream Filter(I)	0.00	0.68	0.00	0.00	1.00	1.00	1.00	0.00	1.00			
Uniform Delay (d), s/veh	0.0	0.0	0.0	0.0	10.1	11.7	34.3	0.0	33.0			
Incr Delay (d2), s/veh	0.0	0.2	0.0	0.0	0.4	2.4	3.8	0.0	1.6			
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0			
%ile BackOfQ(50%),veh/ln	0.0	0.1	0.0	0.0	5.6	9.5	10.2	0.0	6.6			
LnGrp Delay(d),s/veh	0.0	0.2	0.0	0.0	10.4	14.1	38.1	0.0	34.6			
LnGrp LOS		A			B	B	D		C			
Approach Vol, veh/h		1053			1724			1276				
Approach Delay, s/veh		0.2			11.6			36.7				
Approach LOS		A			B			D				
Timer	1	2	3	4	5	6	7	8				
Assigned Phs		2				6		8				
Phs Duration (G+Y+Rc), s		67.1				67.1		32.9				
Change Period (Y+Rc), s		6.4				6.4		6.1				
Max Green Setting (Gmax), s		53.6				53.6		33.9				
Max Q Clear Time (g_c+I1), s		2.0				22.5		22.6				
Green Ext Time (p_c), s		31.9				22.7		4.2				
Intersection Summary												
HCM 2010 Ctrl Delay			16.5									
HCM 2010 LOS			B									
Notes												























HCM 2010 Signalized Intersection Summary
 7: Bernardo Center Dr & Rancho Bernardo Rd

3/24/2016

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	280	730	370	150	760	170	460	520	280	200	310	120
Future Volume (veh/h)	280	730	370	150	760	170	460	520	280	200	310	120
Number	5	2	12	1	6	16	3	8	18	7	4	14
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.99	1.00		0.99	1.00		1.00	1.00		0.98
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1863	1863	1863	1900	1863	1863	1900	1863	1863	1863
Adj Flow Rate, veh/h	295	773	386	158	800	179	484	547	295	211	326	126
Adj No. of Lanes	2	2	1	2	2	0	2	2	0	2	2	1
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	355	1314	552	218	906	203	542	694	373	277	833	523
Arrive On Green	0.10	0.35	0.35	0.06	0.32	0.32	0.16	0.31	0.31	0.08	0.24	0.24
Sat Flow, veh/h	3548	3725	1563	3442	2867	642	3442	2221	1196	3442	3539	1550
Grp Volume(v), veh/h	295	773	386	158	494	485	484	436	406	211	326	126
Grp Sat Flow(s),veh/h/ln	1774	1863	1563	1721	1770	1739	1721	1770	1648	1721	1770	1550
Q Serve(g_s), s	8.9	18.5	23.2	4.9	29.0	29.0	15.1	24.6	24.6	6.6	8.5	6.4
Cycle Q Clear(g_c), s	8.9	18.5	23.2	4.9	29.0	29.0	15.1	24.6	24.6	6.6	8.5	6.4
Prop In Lane	1.00		1.00	1.00		0.37	1.00		0.73	1.00		1.00
Lane Grp Cap(c), veh/h	355	1314	552	218	559	550	542	553	514	277	833	523
V/C Ratio(X)	0.83	0.59	0.70	0.72	0.88	0.88	0.89	0.79	0.79	0.76	0.39	0.24
Avail Cap(c_a), veh/h	363	1314	552	258	582	572	560	733	682	412	1294	725
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	48.3	28.9	30.4	50.3	35.5	35.5	45.2	34.3	34.3	49.3	35.2	26.3
Incr Delay (d2), s/veh	14.7	0.7	3.9	8.0	14.5	14.7	16.2	4.2	4.6	4.6	0.3	0.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	5.1	9.7	10.6	2.6	16.4	16.1	8.4	12.6	11.8	3.3	4.2	2.8
LnGrp Delay(d),s/veh	63.0	29.6	34.3	58.3	50.0	50.2	61.4	38.6	38.9	53.9	35.5	26.5
LnGrp LOS	E	C	C	E	D	D	E	D	D	D	D	C
Approach Vol, veh/h		1454			1137			1326			663	
Approach Delay, s/veh		37.6			51.3			47.0			39.7	
Approach LOS		D			D			D			D	
Timer	1	2	3	4	5	6	7	8				
Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	11.3	44.8	21.6	31.6	15.4	40.8	13.2	40.1				
Change Period (Y+Rc), s	4.4	6.2	4.4	5.9	4.4	* 6.2	4.4	* 5.9				
Max Green Setting (Gmax), s	8.2	38.1	17.8	40.0	11.2	* 36	13.1	* 45				
Max Q Clear Time (g_c+I1), s	6.9	25.2	17.1	10.5	10.9	31.0	8.6	26.6				
Green Ext Time (p_c), s	0.1	9.3	0.2	8.9	0.0	3.6	0.3	7.5				
Intersection Summary												
HCM 2010 Ctrl Delay			44.0									
HCM 2010 LOS			D									
Notes												

HCM 2010 Signalized Intersection Summary
 8: West Bernardo Dr & Duenda Rd

3/24/2016

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	30	140	140	90	90	80	70	170	110	130	230	20
Future Volume (veh/h)	30	140	140	90	90	80	70	170	110	130	230	20
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.98	1.00		1.00	1.00		1.00	1.00		0.98
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1900	1863	1863	1863	1863	1863	1900	1863	1863	1900
Adj Flow Rate, veh/h	33	152	152	98	98	87	76	185	120	141	250	22
Adj No. of Lanes	1	1	0	1	1	1	1	2	0	1	2	0
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	413	197	197	186	195	166	97	366	226	183	733	64
Arrive On Green	0.23	0.23	0.23	0.10	0.10	0.10	0.05	0.17	0.17	0.10	0.22	0.22
Sat Flow, veh/h	1774	848	848	1774	1863	1583	1774	2105	1299	1774	3287	287
Grp Volume(v), veh/h	33	0	304	98	98	87	76	154	151	141	134	138
Grp Sat Flow(s),veh/h/ln	1774	0	1696	1774	1863	1583	1774	1770	1634	1774	1770	1805
Q Serve(g_s), s	0.8	0.0	8.7	2.7	2.6	2.7	2.2	4.1	4.4	4.0	3.3	3.4
Cycle Q Clear(g_c), s	0.8	0.0	8.7	2.7	2.6	2.7	2.2	4.1	4.4	4.0	3.3	3.4
Prop In Lane	1.00		0.50	1.00		1.00	1.00		0.79	1.00		0.16
Lane Grp Cap(c), veh/h	413	0	395	186	195	166	97	308	284	183	395	402
V/C Ratio(X)	0.08	0.00	0.77	0.53	0.50	0.52	0.79	0.50	0.53	0.77	0.34	0.34
Avail Cap(c_a), veh/h	683	0	653	615	646	549	307	681	629	410	784	799
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	15.6	0.0	18.6	22.0	22.0	22.0	24.3	19.4	19.5	22.7	17.0	17.0
Incr Delay (d2), s/veh	0.1	0.0	3.2	2.3	2.0	2.5	13.0	1.3	1.5	6.6	0.5	0.5
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.4	0.0	4.4	1.5	1.4	1.3	1.4	2.1	2.1	2.3	1.7	1.7
LnGrp Delay(d),s/veh	15.7	0.0	21.8	24.3	23.9	24.6	37.3	20.7	21.1	29.3	17.5	17.5
LnGrp LOS	B		C	C	C	C	D	C	C	C	B	B
Approach Vol, veh/h		337			283			381			413	
Approach Delay, s/veh		21.2			24.3			24.1			21.5	
Approach LOS		C			C			C			C	
Timer	1	2	3	4	5	6	7	8				
Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	10.4	14.0		17.1	7.8	16.6		10.4				
Change Period (Y+Rc), s	5.0	5.0		5.0	5.0	5.0		5.0				
Max Green Setting (Gmax), s	12.0	20.0		20.0	9.0	23.0		18.0				
Max Q Clear Time (g_c+I1), s	6.0	6.4		10.7	4.2	5.4		4.7				
Green Ext Time (p_c), s	0.2	2.7		1.4	0.1	3.0		0.8				
Intersection Summary												
HCM 2010 Ctrl Delay				22.7								
HCM 2010 LOS				C								

HCM 2010 Signalized Intersection Summary

9: West Bernardo Dr & Via Del Campo

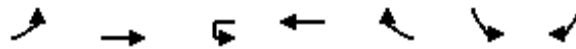
3/24/2016



Movement	EBL	EBT	WBT	WBR	SBL	SBR		
Lane Configurations								
Traffic Volume (veh/h)	60	540	580	50	200	410		
Future Volume (veh/h)	60	540	580	50	200	410		
Number	5	2	6	16	7	14		
Initial Q (Qb), veh	0	0	0	0	0	0		
Ped-Bike Adj(A_pbT)	1.00			1.00	1.00	1.00		
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00		
Adj Sat Flow, veh/h/ln	1863	1863	1863	1900	1863	1863		
Adj Flow Rate, veh/h	65	587	630	54	217	446		
Adj No. of Lanes	1	2	2	0	1	1		
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92		
Percent Heavy Veh, %	2	2	2	2	2	2		
Cap, veh/h	84	2020	1563	134	557	497		
Arrive On Green	0.05	0.57	0.47	0.47	0.31	0.31		
Sat Flow, veh/h	1774	3632	3393	282	1774	1583		
Grp Volume(v), veh/h	65	587	337	347	217	446		
Grp Sat Flow(s),veh/h/ln	1774	1770	1770	1813	1774	1583		
Q Serve(g_s), s	3.2	7.6	11.0	11.0	8.5	23.8		
Cycle Q Clear(g_c), s	3.2	7.6	11.0	11.0	8.5	23.8		
Prop In Lane	1.00			0.16	1.00	1.00		
Lane Grp Cap(c), veh/h	84	2020	838	858	557	497		
V/C Ratio(X)	0.77	0.29	0.40	0.40	0.39	0.90		
Avail Cap(c_a), veh/h	233	2020	838	858	788	703		
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00		
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00		
Uniform Delay (d), s/veh	41.7	9.8	15.2	15.2	23.7	29.0		
Incr Delay (d2), s/veh	13.9	0.4	1.4	1.4	0.4	10.9		
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0		
%ile BackOfQ(50%),veh/ln	1.9	3.8	5.7	5.8	4.2	19.9		
LnGrp Delay(d),s/veh	55.6	10.1	16.6	16.6	24.2	39.9		
LnGrp LOS	E	B	B	B	C	D		
Approach Vol, veh/h		652	684		663			
Approach Delay, s/veh		14.7	16.6		34.7			
Approach LOS		B	B		C			
Timer	1	2	3	4	5	6	7	8
Assigned Phs		2		4	5	6		
Phs Duration (G+Y+Rc), s		56.0		32.5	8.6	47.4		
Change Period (Y+Rc), s		5.5		* 4.7	4.4	5.5		
Max Green Setting (Gmax), s		50.5		* 39	11.6	34.5		
Max Q Clear Time (g_c+I1), s		9.6		25.8	5.2	13.0		
Green Ext Time (p_c), s		9.8		2.0	0.1	8.1		
Intersection Summary								
HCM 2010 Ctrl Delay			22.0					
HCM 2010 LOS			C					
Notes								

HCM 2010 Signalized Intersection Summary
 10: Bernardo Center Dr & West Bernardo Dr

3/24/2016



Movement	EBL	EBT	WBU	WBT	WBR	SBL	SBR	
Lane Configurations								
Traffic Volume (veh/h)	490	500	0	480	470	420	570	
Future Volume (veh/h)	490	500	0	480	470	420	570	
Number	1	6		2	12	3	18	
Initial Q (Qb), veh	0	0		0	0	0	0	
Ped-Bike Adj(A_pbT)	1.00				1.00	1.00	1.00	
Parking Bus, Adj	1.00	1.00		1.00	1.00	1.00	1.00	
Adj Sat Flow, veh/h/ln	1863	1863		1863	1863	1863	1863	
Adj Flow Rate, veh/h	521	532		511	500	447	606	
Adj No. of Lanes	2	2		2	2	1	1	
Peak Hour Factor	0.94	0.94		0.94	0.94	0.94	0.94	
Percent Heavy Veh, %	2	2		2	2	2	2	
Cap, veh/h	646	1835		965	1734	621	851	
Arrive On Green	0.19	0.52		0.27	0.27	0.35	0.35	
Sat Flow, veh/h	3442	3632		3632	2782	1774	1583	
Grp Volume(v), veh/h	521	532		511	500	447	606	
Grp Sat Flow(s),veh/h/ln	1721	1770		1770	1391	1774	1583	
Q Serve(g_s), s	10.9	6.4		9.3	6.2	16.5	21.6	
Cycle Q Clear(g_c), s	10.9	6.4		9.3	6.2	16.5	21.6	
Prop In Lane	1.00				1.00	1.00	1.00	
Lane Grp Cap(c), veh/h	646	1835		965	1734	621	851	
V/C Ratio(X)	0.81	0.29		0.53	0.29	0.72	0.71	
Avail Cap(c_a), veh/h	940	2333		1526	2175	767	982	
HCM Platoon Ratio	1.00	1.00		1.00	1.00	1.00	1.00	
Upstream Filter(I)	1.00	1.00		1.00	1.00	1.00	1.00	
Uniform Delay (d), s/veh	29.3	10.3		23.3	6.5	21.3	13.0	
Incr Delay (d2), s/veh	3.4	0.1		0.5	0.1	2.5	2.1	
Initial Q Delay(d3),s/veh	0.0	0.0		0.0	0.0	0.0	0.0	
%ile BackOfQ(50%),veh/ln	5.5	3.1		4.5	2.4	8.5	9.7	
LnGrp Delay(d),s/veh	32.7	10.4		23.8	6.6	23.8	15.1	
LnGrp LOS	C	B		C	A	C	B	
Approach Vol, veh/h		1053		1011		1053		
Approach Delay, s/veh		21.4		15.3		18.8		
Approach LOS		C		B		B		
Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2				6		8
Phs Duration (G+Y+Rc), s	18.5	26.1				44.6		30.8
Change Period (Y+Rc), s	4.4	5.5				* 5.5		4.4
Max Green Setting (Gmax), s	20.6	32.5				* 50		32.6
Max Q Clear Time (g_c+I1), s	12.9	11.3				8.4		23.6
Green Ext Time (p_c), s	1.2	9.2				11.5		2.8
Intersection Summary								
HCM 2010 Ctrl Delay			18.5					
HCM 2010 LOS			B					
Notes								




















APPENDIX I

PEAK HOUR INTERSECTION ANALYSIS WORKSHEETS YEAR 2035 WITH PROJECT

HCM 2010 Signalized Intersection Summary
 1: Camino San Bernardo & Rancho Bernardo Rd




















Year 2035 + Project AM

3/24/2016

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	30	1061	190	488	798	80	40	10	223	20	10	10
Future Volume (veh/h)	30	1061	190	488	798	80	40	10	223	20	10	10
Number	5	2	12	1	6	16	3	8	18	7	4	14
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.98	1.00		1.00	1.00		0.98	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1900	1863	1863	1900	1863	1863	1900	1900	1863	1900
Adj Flow Rate, veh/h	33	1153	207	530	867	87	43	11	242	22	11	11
Adj No. of Lanes	1	2	0	2	2	0	1	2	0	0	1	0
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	57	1326	237	613	1914	192	300	346	305	96	48	27
Arrive On Green	0.03	0.44	0.44	0.18	0.59	0.59	0.20	0.20	0.20	0.20	0.20	0.20
Sat Flow, veh/h	1774	2993	535	3442	3249	326	1384	1770	1558	166	244	136
Grp Volume(v), veh/h	33	679	681	530	472	482	43	11	242	44	0	0
Grp Sat Flow(s),veh/h/ln	1774	1770	1758	1721	1770	1805	1384	1770	1558	546	0	0
Q Serve(g_s), s	1.6	29.4	29.8	12.7	12.7	12.7	0.0	0.4	12.5	0.4	0.0	0.0
Cycle Q Clear(g_c), s	1.6	29.4	29.8	12.7	12.7	12.7	3.0	0.4	12.5	12.9	0.0	0.0
Prop In Lane	1.00		0.30	1.00		0.18	1.00		1.00	0.50		0.25
Lane Grp Cap(c), veh/h	57	784	779	613	1043	1064	300	346	305	171	0	0
V/C Ratio(X)	0.58	0.87	0.87	0.86	0.45	0.45	0.14	0.03	0.79	0.26	0.00	0.00
Avail Cap(c_a), veh/h	128	816	810	671	1043	1064	504	606	534	370	0	0
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	0.00
Uniform Delay (d), s/veh	40.4	21.3	21.4	33.8	9.7	9.7	28.6	27.5	32.4	28.7	0.0	0.0
Incr Delay (d2), s/veh	9.2	9.5	10.2	10.7	0.3	0.3	0.2	0.0	4.7	0.8	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.9	16.2	16.6	6.9	6.3	6.4	0.9	0.2	5.8	0.9	0.0	0.0
LnGrp Delay(d),s/veh	49.6	30.8	31.6	44.5	10.0	10.0	28.8	27.6	37.1	29.5	0.0	0.0
LnGrp LOS	D	C	C	D	B	B	C	C	D	C		
Approach Vol, veh/h		1393			1484			296			44	
Approach Delay, s/veh		31.6			22.3			35.5			29.5	
Approach LOS		C			C			D			C	
Timer	1	2	3	4	5	6	7	8				
Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	19.6	43.5		21.6	7.2	55.9		21.6				
Change Period (Y+Rc), s	4.5	6.0		5.0	4.5	6.0		5.0				
Max Green Setting (Gmax), s	16.5	39.0		29.0	6.1	49.4		29.0				
Max Q Clear Time (g_c+I1), s	14.7	31.8		14.9	3.6	14.7		14.5				
Green Ext Time (p_c), s	0.4	5.7		1.5	0.0	19.8		1.6				
Intersection Summary												
HCM 2010 Ctrl Delay				27.7								
HCM 2010 LOS				C								




















HCM 2010 Signalized Intersection Summary
2: Via Del Campo & Rancho Bernardo Rd

Year 2035 + Project AM
3/24/2016

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	10	1114	390	713	1356	10	80	10	77	10	10	10
Future Volume (veh/h)	10	1114	390	713	1356	10	80	10	77	10	10	10
Number	5	2	12	1	6	16	3	8	18	7	4	14
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.98	1.00		0.98	1.00		0.99	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1900	1863	1863	1900	1900	1863	1863	1900	1863	1900
Adj Flow Rate, veh/h	11	1211	424	775	1474	11	87	11	84	11	11	11
Adj No. of Lanes	1	2	0	1	2	0	0	1	1	0	1	0
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	18	1040	353	611	2656	20	157	17	222	45	44	28
Arrive On Green	0.01	0.40	0.40	0.34	0.74	0.74	0.14	0.14	0.14	0.14	0.14	0.14
Sat Flow, veh/h	1774	2579	875	1774	3600	27	765	120	1562	80	309	195
Grp Volume(v), veh/h	11	819	816	775	724	761	98	0	84	33	0	0
Grp Sat Flow(s),veh/h/ln	1774	1770	1684	1774	1770	1857	885	0	1562	584	0	0
Q Serve(g_s), s	0.9	56.9	56.9	48.6	25.6	25.7	0.0	0.0	6.9	0.3	0.0	0.0
Cycle Q Clear(g_c), s	0.9	56.9	56.9	48.6	25.6	25.7	17.0	0.0	6.9	17.3	0.0	0.0
Prop In Lane	1.00		0.52	1.00		0.01	0.89		1.00	0.33		0.33
Lane Grp Cap(c), veh/h	18	714	679	611	1306	1370	174	0	222	117	0	0
V/C Ratio(X)	0.62	1.15	1.20	1.27	0.55	0.56	0.56	0.00	0.38	0.28	0.00	0.00
Avail Cap(c_a), veh/h	50	714	679	611	1306	1370	264	0	321	218	0	0
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00	0.00
Uniform Delay (d), s/veh	69.6	42.1	42.1	46.2	8.2	8.2	59.0	0.0	54.8	53.5	0.0	0.0
Incr Delay (d2), s/veh	31.0	82.3	104.2	133.3	0.5	0.5	2.8	0.0	1.1	1.3	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.6	44.1	46.1	46.4	12.5	13.1	3.9	0.0	3.0	1.2	0.0	0.0
LnGrp Delay(d),s/veh	100.6	124.4	146.3	179.6	8.7	8.7	61.8	0.0	55.9	54.8	0.0	0.0
LnGrp LOS	F	F	F	F	A	A	E		E	D		
Approach Vol, veh/h		1646			2260			182			33	
Approach Delay, s/veh		135.1			67.3			59.1			54.8	
Approach LOS		F			E			E			D	
Timer	1	2	3	4	5	6	7	8				
Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	53.0	62.8		25.3	5.8	110.0		25.3				
Change Period (Y+Rc), s	4.4	5.9		* 5.2	4.4	* 5.9		5.2				
Max Green Setting (Gmax), s	48.6	56.9		* 29	4.0	* 1E2		29.0				
Max Q Clear Time (g_c+I1), s	50.6	58.9		19.3	2.9	27.7		19.0				
Green Ext Time (p_c), s	0.0	0.0		0.7	0.0	49.1		0.7				
Intersection Summary												
HCM 2010 Ctrl Delay			93.9									
HCM 2010 LOS			F									
Notes												























HCM 2010 Signalized Intersection Summary
 3: Project Dwy/Matinal Rd & Rancho Bernardo Rd

Year 2035 + Project AM
 3/24/2016

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	40	920	156	479	1770	20	39	3	120	90	13	150
Future Volume (veh/h)	40	920	156	479	1770	20	39	3	120	90	13	150
Number	5	2	12	1	6	16	3	8	18	7	4	14
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		0.99
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1900	1863	1863	1900	1863	1863	1900	1900	1863	1900
Adj Flow Rate, veh/h	43	1000	170	521	1924	22	42	3	130	98	14	163
Adj No. of Lanes	1	2	0	1	2	0	1	1	0	0	1	0
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	54	933	158	467	2048	23	267	9	388	143	34	185
Arrive On Green	0.03	0.31	0.31	0.26	0.57	0.57	0.25	0.25	0.25	0.25	0.25	0.25
Sat Flow, veh/h	1774	3028	514	1774	3584	41	1203	36	1553	374	135	741
Grp Volume(v), veh/h	43	584	586	521	948	998	42	0	133	275	0	0
Grp Sat Flow(s),veh/h/ln	1774	1770	1772	1774	1770	1856	1203	0	1589	1251	0	0
Q Serve(g_s), s	2.4	30.4	30.4	26.0	48.8	49.2	0.0	0.0	6.8	14.7	0.0	0.0
Cycle Q Clear(g_c), s	2.4	30.4	30.4	26.0	48.8	49.2	4.6	0.0	6.8	21.5	0.0	0.0
Prop In Lane	1.00		0.29	1.00		0.02	1.00		0.98	0.36		0.59
Lane Grp Cap(c), veh/h	54	545	546	467	1011	1060	267	0	397	362	0	0
V/C Ratio(X)	0.79	1.07	1.07	1.11	0.94	0.94	0.16	0.00	0.33	0.76	0.00	0.00
Avail Cap(c_a), veh/h	72	545	546	467	1011	1060	315	0	461	411	0	0
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00	0.00
Uniform Delay (d), s/veh	47.5	34.1	34.1	36.3	19.5	19.6	29.5	0.0	30.3	36.8	0.0	0.0
Incr Delay (d2), s/veh	33.8	59.0	59.7	76.7	15.6	15.6	0.3	0.0	0.5	7.1	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.7	23.6	23.8	22.6	27.8	29.5	0.9	0.0	3.0	8.0	0.0	0.0
LnGrp Delay(d),s/veh	81.3	93.1	93.8	113.0	35.1	35.2	29.8	0.0	30.8	43.9	0.0	0.0
LnGrp LOS	F	F	F	F	D	D	C		C	D		
Approach Vol, veh/h		1213			2467			175			275	
Approach Delay, s/veh		93.0			51.6			30.5			43.9	
Approach LOS		F			D			C			D	
Timer	1	2	3	4	5	6	7	8				
Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	32.0	37.4		29.3	7.0	62.4		29.3				
Change Period (Y+Rc), s	6.0	* 7		4.6	4.0	6.0		* 4.6				
Max Green Setting (Gmax), s	26.0	* 30		28.0	4.0	53.4		* 29				
Max Q Clear Time (g_c+I1), s	28.0	32.4		23.5	4.4	51.2		8.8				
Green Ext Time (p_c), s	0.0	0.0		1.2	0.0	2.0		2.9				
Intersection Summary												
HCM 2010 Ctrl Delay				62.4								
HCM 2010 LOS				E								
Notes												



















HCM 2010 Signalized Intersection Summary
4: West Bernardo Dr & Rancho Bernardo Rd

Year 2035 + Project AM
3/24/2016

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	65	837	108	610	2078	300	172	90	180	680	370	189
Future Volume (veh/h)	65	837	108	610	2078	300	172	90	180	680	370	189
Number	5	2	12	1	6	16	3	8	18	7	4	14
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		0.99	1.00		0.99	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1900	1863	1863	1863	1863	1863	1863	1863	1863	1900
Adj Flow Rate, veh/h	67	863	111	629	2142	309	177	93	186	701	381	195
Adj No. of Lanes	2	3	0	2	2	1	2	2	1	2	2	0
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	111	1058	135	824	1599	706	250	408	559	783	614	310
Arrive On Green	0.03	0.23	0.23	0.24	0.45	0.45	0.07	0.12	0.12	0.23	0.27	0.27
Sat Flow, veh/h	3442	4565	585	3442	3539	1562	3442	3539	1561	3442	2276	1148
Grp Volume(v), veh/h	67	640	334	629	2142	309	177	93	186	701	295	281
Grp Sat Flow(s),veh/h/ln	1721	1695	1760	1721	1770	1562	1721	1770	1561	1721	1770	1654
Q Serve(g_s), s	2.2	20.5	20.7	19.5	51.9	15.5	5.8	2.7	4.1	22.7	16.8	17.2
Cycle Q Clear(g_c), s	2.2	20.5	20.7	19.5	51.9	15.5	5.8	2.7	4.1	22.7	16.8	17.2
Prop In Lane	1.00		0.33	1.00		1.00	1.00		1.00	1.00		0.69
Lane Grp Cap(c), veh/h	111	785	408	824	1599	706	250	408	559	783	478	446
V/C Ratio(X)	0.60	0.81	0.82	0.76	1.34	0.44	0.71	0.23	0.33	0.90	0.62	0.63
Avail Cap(c_a), veh/h	120	909	472	824	1599	706	1022	1205	911	902	541	506
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	54.8	41.8	41.9	40.6	31.5	21.5	52.1	46.2	9.8	43.0	36.7	36.9
Incr Delay (d2), s/veh	7.3	5.1	9.7	4.3	157.0	0.4	3.7	0.3	0.3	10.5	1.7	2.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.2	10.2	11.1	9.7	60.0	6.8	2.9	1.4	2.1	11.9	8.4	8.1
LnGrp Delay(d),s/veh	62.1	46.9	51.6	44.9	188.5	21.9	55.7	46.5	10.2	53.5	38.5	38.9
LnGrp LOS	E	D	D	D	F	C	E	D	B	D	D	D
Approach Vol, veh/h		1041			3080			456			1277	
Approach Delay, s/veh		49.4			142.5			35.2			46.8	
Approach LOS		D			F			D			D	
Timer	1	2	3	4	5	6	7	8				
Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	33.2	32.5	12.8	36.4	8.1	57.6	30.5	18.6				
Change Period (Y+Rc), s	5.7	* 5.9	4.4	5.4	4.4	5.7	4.4	5.4				
Max Green Setting (Gmax), s	24.9	* 31	34.1	35.1	4.0	51.9	30.1	39.1				
Max Q Clear Time (g_c+I1), s	21.5	22.7	7.8	19.2	4.2	53.9	24.7	6.1				
Green Ext Time (p_c), s	3.3	3.9	0.6	4.5	0.0	0.0	1.4	5.5				
Intersection Summary												
HCM 2010 Ctrl Delay			96.7									
HCM 2010 LOS			F									
Notes												



















HCM 2010 Signalized Intersection Summary
 5: I-15 SB Ramps & Rancho Bernardo Rd

Year 2035 + Project AM
 3/24/2016

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	917	750	0	1636	560	0	0	0	760	0	1332
Future Volume (veh/h)	0	917	750	0	1636	560	0	0	0	760	0	1332
Number	5	2	12	1	6	16				7	4	14
Initial Q (Qb), veh	0	0	0	0	0	0				0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00				1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00				1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	0	1863	1863	0	1863	1863				1863	0	1863
Adj Flow Rate, veh/h	0	965	789	0	1722	0				800	0	1402
Adj No. of Lanes	0	2	2	0	3	1				2	0	2
Peak Hour Factor	0.92	0.95	0.95	0.92	0.95	0.95				0.95	0.92	0.95
Percent Heavy Veh, %	0	2	2	0	2	2				2	0	2
Cap, veh/h	0	1475	1254	0	2213	627				1649	0	1335
Arrive On Green	0.00	0.40	0.40	0.00	0.79	0.00				0.48	0.00	0.48
Sat Flow, veh/h	0	3725	3167	0	5588	1583				3442	0	2787
Grp Volume(v), veh/h	0	965	789	0	1722	0				800	0	1402
Grp Sat Flow(s),veh/h/ln	0	1863	1583	0	1863	1583				1721	0	1393
Q Serve(g_s), s	0.0	21.1	20.0	0.0	16.7	0.0				15.8	0.0	47.9
Cycle Q Clear(g_c), s	0.0	21.1	20.0	0.0	16.7	0.0				15.8	0.0	47.9
Prop In Lane	0.00		1.00	0.00		1.00				1.00		1.00
Lane Grp Cap(c), veh/h	0	1475	1254	0	2213	627				1649	0	1335
V/C Ratio(X)	0.00	0.65	0.63	0.00	0.78	0.00				0.49	0.00	1.05
Avail Cap(c_a), veh/h	0	1475	1254	0	2213	627				1649	0	1335
HCM Platoon Ratio	1.00	1.00	1.00	1.00	2.00	2.00				1.00	1.00	1.00
Upstream Filter(I)	0.00	0.57	0.57	0.00	0.73	0.00				1.00	0.00	1.00
Uniform Delay (d), s/veh	0.0	24.6	24.3	0.0	8.0	0.0				17.7	0.0	26.1
Incr Delay (d2), s/veh	0.0	1.3	1.4	0.0	2.0	0.0				0.2	0.0	39.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0				0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.0	11.1	9.0	0.0	8.4	0.0				7.5	0.0	25.6
LnGrp Delay(d),s/veh	0.0	25.9	25.7	0.0	10.1	0.0				17.9	0.0	65.0
LnGrp LOS		C	C		B					B		F
Approach Vol, veh/h		1754			1722						2202	
Approach Delay, s/veh		25.8			10.1						47.9	
Approach LOS		C			B						D	
Timer	1	2	3	4	5	6	7	8				
Assigned Phs		2		4		6						
Phs Duration (G+Y+Rc), s		46.0		54.0		46.0						
Change Period (Y+Rc), s		6.4		6.1		6.4						
Max Green Setting (Gmax), s		39.6		47.9		39.6						
Max Q Clear Time (g_c+I1), s		23.1		49.9		18.7						
Green Ext Time (p_c), s		15.2		0.0		18.9						
Intersection Summary												
HCM 2010 Ctrl Delay			29.6									
HCM 2010 LOS			C									
Notes												























HCM 2010 Signalized Intersection Summary
6: I-15 NB Ramps & Rancho Bernardo Rd

Year 2035 + Project AM
3/24/2016

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	966	741	0	1265	320	931	0	510	0	0	0
Future Volume (veh/h)	0	966	741	0	1265	320	931	0	510	0	0	0
Number	5	2	12	1	6	16	3	8	18			
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0			
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00			
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00			
Adj Sat Flow, veh/h/ln	0	1863	1863	0	1863	1863	1863	0	1863			
Adj Flow Rate, veh/h	0	1028	0	0	1346	340	990	0	543			
Adj No. of Lanes	0	3	1	0	3	1	2	0	2			
Peak Hour Factor	0.92	0.94	0.94	0.92	0.94	0.94	0.94	0.92	0.94			
Percent Heavy Veh, %	0	2	2	0	2	2	2	0	2			
Cap, veh/h	0	2971	842	0	2704	842	1182	0	957			
Arrive On Green	0.00	1.00	0.00	0.00	0.53	0.53	0.34	0.00	0.34			
Sat Flow, veh/h	0	5588	1583	0	5253	1583	3442	0	2787			
Grp Volume(v), veh/h	0	1028	0	0	1346	340	990	0	543			
Grp Sat Flow(s),veh/h/ln	0	1863	1583	0	1695	1583	1721	0	1393			
Q Serve(g_s), s	0.0	0.0	0.0	0.0	16.9	12.8	26.5	0.0	15.9			
Cycle Q Clear(g_c), s	0.0	0.0	0.0	0.0	16.9	12.8	26.5	0.0	15.9			
Prop In Lane	0.00		1.00	0.00		1.00	1.00		1.00			
Lane Grp Cap(c), veh/h	0	2971	842	0	2704	842	1182	0	957			
V/C Ratio(X)	0.00	0.35	0.00	0.00	0.50	0.40	0.84	0.00	0.57			
Avail Cap(c_a), veh/h	0	2971	842	0	2704	842	1476	0	1195			
HCM Platoon Ratio	1.00	2.00	2.00	1.00	1.00	1.00	1.00	1.00	1.00			
Upstream Filter(I)	0.00	0.72	0.00	0.00	1.00	1.00	1.00	0.00	1.00			
Uniform Delay (d), s/veh	0.0	0.0	0.0	0.0	14.9	14.0	30.3	0.0	26.8			
Incr Delay (d2), s/veh	0.0	0.2	0.0	0.0	0.7	1.4	3.6	0.0	0.5			
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0			
%ile BackOfQ(50%),veh/ln	0.0	0.1	0.0	0.0	8.0	5.9	13.1	0.0	6.2			
LnGrp Delay(d),s/veh	0.0	0.2	0.0	0.0	15.6	15.4	33.9	0.0	27.3			
LnGrp LOS		A			B	B	C		C			
Approach Vol, veh/h		1028			1686			1533				
Approach Delay, s/veh		0.2			15.5			31.6				
Approach LOS		A			B			C				
Timer	1	2	3	4	5	6	7	8				
Assigned Phs		2				6		8				
Phs Duration (G+Y+Rc), s		59.6				59.6		40.4				
Change Period (Y+Rc), s		6.4				6.4		6.1				
Max Green Setting (Gmax), s		44.6				44.6		42.9				
Max Q Clear Time (g_c+I1), s		2.0				18.9		28.5				
Green Ext Time (p_c), s		28.4				19.7		5.8				
Intersection Summary												
HCM 2010 Ctrl Delay			17.6									
HCM 2010 LOS			B									
Notes												






















HCM 2010 Signalized Intersection Summary
7: Bernardo Center Dr & Rancho Bernardo Rd

Year 2035 + Project AM
3/24/2016

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	363	660	353	180	909	100	283	200	120	230	310	143
Future Volume (veh/h)	363	660	353	180	909	100	283	200	120	230	310	143
Number	5	2	12	1	6	16	3	8	18	7	4	14
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		0.98	1.00		0.99	1.00		0.99
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1863	1863	1863	1900	1863	1863	1900	1863	1863	1863
Adj Flow Rate, veh/h	390	735	363	194	977	108	304	215	129	247	333	154
Adj No. of Lanes	2	2	1	2	2	0	2	2	0	2	2	1
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	465	1552	660	266	1164	129	372	408	235	328	623	482
Arrive On Green	0.13	0.42	0.42	0.08	0.36	0.36	0.11	0.19	0.19	0.10	0.18	0.18
Sat Flow, veh/h	3548	3725	1583	3442	3209	355	3442	2160	1241	3442	3539	1560
Grp Volume(v), veh/h	390	735	363	194	539	546	304	174	170	247	333	154
Grp Sat Flow(s),veh/h/ln	1774	1863	1583	1721	1770	1794	1721	1770	1632	1721	1770	1560
Q Serve(g_s), s	10.1	13.5	16.3	5.2	26.3	26.3	8.1	8.4	8.9	6.6	8.1	7.1
Cycle Q Clear(g_c), s	10.1	13.5	16.3	5.2	26.3	26.3	8.1	8.4	8.9	6.6	8.1	7.1
Prop In Lane	1.00		1.00	1.00		0.20	1.00		0.76	1.00		1.00
Lane Grp Cap(c), veh/h	465	1552	660	266	642	651	372	334	308	328	623	482
V/C Ratio(X)	0.84	0.47	0.55	0.73	0.84	0.84	0.82	0.52	0.55	0.75	0.53	0.32
Avail Cap(c_a), veh/h	512	1552	660	344	673	682	387	693	639	523	1503	870
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	39.9	20.0	20.8	42.5	27.5	27.5	41.1	34.4	34.6	41.5	35.3	25.1
Incr Delay (d2), s/veh	10.9	0.2	1.0	5.6	8.9	8.9	12.4	1.3	1.5	3.5	0.7	0.4
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	5.6	7.0	7.3	2.7	14.3	14.5	4.5	4.2	4.1	3.3	4.0	3.1
LnGrp Delay(d),s/veh	50.9	20.2	21.8	48.1	36.4	36.3	53.5	35.6	36.1	45.1	36.0	25.5
LnGrp LOS	D	C	C	D	D	D	D	D	D	D	D	C
Approach Vol, veh/h		1488			1279			648			734	
Approach Delay, s/veh		28.6			38.2			44.1			36.8	
Approach LOS		C			D			D			D	
Timer	1	2	3	4	5	6	7	8				
Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	11.7	45.4	14.6	22.5	16.7	40.4	13.4	23.7				
Change Period (Y+Rc), s	4.4	6.2	4.4	5.9	4.4	* 6.2	4.4	* 5.9				
Max Green Setting (Gmax), s	9.4	39.1	10.6	40.0	13.6	* 36	14.3	* 37				
Max Q Clear Time (g_c+I1), s	7.2	18.3	10.1	10.1	12.1	28.3	8.6	10.9				
Green Ext Time (p_c), s	0.1	13.4	0.1	4.9	0.2	5.9	0.4	4.8				
Intersection Summary												
HCM 2010 Ctrl Delay			35.4									
HCM 2010 LOS			D									
Notes												

HCM 2010 Signalized Intersection Summary
 8: West Bernardo Dr & Duenda Rd

Year 2035 + Project AM
 3/24/2016

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	30	180	166	120	50	60	42	140	90	120	250	20
Future Volume (veh/h)	30	180	166	120	50	60	42	140	90	120	250	20
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.99	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1900	1863	1863	1863	1863	1863	1900	1863	1863	1900
Adj Flow Rate, veh/h	33	196	180	130	54	65	46	152	98	130	272	22
Adj No. of Lanes	1	1	0	1	1	1	1	2	0	1	2	0
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	488	244	224	204	215	182	65	317	193	169	690	55
Arrive On Green	0.27	0.27	0.27	0.12	0.12	0.12	0.04	0.15	0.15	0.10	0.21	0.21
Sat Flow, veh/h	1774	888	816	1774	1863	1583	1774	2117	1288	1774	3319	267
Grp Volume(v), veh/h	33	0	376	130	54	65	46	126	124	130	144	150
Grp Sat Flow(s),veh/h/ln	1774	0	1704	1774	1863	1583	1774	1770	1635	1774	1770	1816
Q Serve(g_s), s	0.8	0.0	11.2	3.8	1.4	2.1	1.4	3.6	3.8	3.9	3.8	3.9
Cycle Q Clear(g_c), s	0.8	0.0	11.2	3.8	1.4	2.1	1.4	3.6	3.8	3.9	3.8	3.9
Prop In Lane	1.00		0.48	1.00		1.00	1.00		0.79	1.00		0.15
Lane Grp Cap(c), veh/h	488	0	469	204	215	182	65	265	245	169	368	378
V/C Ratio(X)	0.07	0.00	0.80	0.64	0.25	0.36	0.71	0.47	0.51	0.77	0.39	0.40
Avail Cap(c_a), veh/h	745	0	716	583	612	520	194	582	537	356	743	762
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	14.7	0.0	18.5	23.1	22.1	22.4	26.1	21.3	21.4	24.2	18.7	18.7
Incr Delay (d2), s/veh	0.1	0.0	3.8	3.3	0.6	1.2	13.0	1.3	1.6	7.3	0.7	0.7
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.4	0.0	5.7	2.1	0.8	1.0	0.9	1.8	1.8	2.3	2.0	2.0
LnGrp Delay(d),s/veh	14.7	0.0	22.3	26.4	22.7	23.5	39.1	22.6	23.1	31.5	19.4	19.4
LnGrp LOS	B		C	C	C	C	D	C	C	C	B	B
Approach Vol, veh/h		409			249			296			424	
Approach Delay, s/veh		21.7			24.8			25.4			23.1	
Approach LOS		C			C			C			C	
Timer	1	2	3	4	5	6	7	8				
Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	10.2	13.2		20.1	7.0	16.4		11.3				
Change Period (Y+Rc), s	5.0	5.0		5.0	5.0	5.0		5.0				
Max Green Setting (Gmax), s	11.0	18.0		23.0	6.0	23.0		18.0				
Max Q Clear Time (g_c+I1), s	5.9	5.8		13.2	3.4	5.9		5.8				
Green Ext Time (p_c), s	0.1	2.4		1.8	0.0	2.7		0.6				
Intersection Summary												
HCM 2010 Ctrl Delay			23.5									
HCM 2010 LOS			C									

HCM 2010 Signalized Intersection Summary
 9: West Bernardo Dr & Via Del Campo

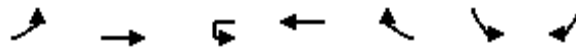
Year 2035 + Project AM
 3/24/2016



Movement	EBL	EBT	WBT	WBR	SBL	SBR		
Lane Configurations								
Traffic Volume (veh/h)	482	620	360	200	130	123		
Future Volume (veh/h)	482	620	360	200	130	123		
Number	5	2	6	16	7	14		
Initial Q (Qb), veh	0	0	0	0	0	0		
Ped-Bike Adj(A_pbT)	1.00			1.00	1.00	1.00		
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00		
Adj Sat Flow, veh/h/ln	1863	1863	1863	1900	1863	1863		
Adj Flow Rate, veh/h	524	674	391	217	141	134		
Adj No. of Lanes	1	2	2	0	1	1		
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92		
Percent Heavy Veh, %	2	2	2	2	2	2		
Cap, veh/h	870	2730	482	264	199	178		
Arrive On Green	0.49	0.77	0.22	0.22	0.11	0.11		
Sat Flow, veh/h	1774	3632	2300	1209	1774	1583		
Grp Volume(v), veh/h	524	674	312	296	141	134		
Grp Sat Flow(s),veh/h/ln	1774	1770	1770	1646	1774	1583		
Q Serve(g_s), s	18.7	4.7	14.7	15.0	6.7	7.2		
Cycle Q Clear(g_c), s	18.7	4.7	14.7	15.0	6.7	7.2		
Prop In Lane	1.00			0.73	1.00	1.00		
Lane Grp Cap(c), veh/h	870	2730	387	360	199	178		
V/C Ratio(X)	0.60	0.25	0.81	0.82	0.71	0.75		
Avail Cap(c_a), veh/h	870	2730	498	463	447	399		
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00		
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00		
Uniform Delay (d), s/veh	16.2	2.8	32.5	32.7	37.6	37.8		
Incr Delay (d2), s/veh	1.2	0.2	7.5	9.0	4.6	6.3		
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0		
%ile BackOfQ(50%),veh/ln	9.5	2.3	8.0	7.7	3.5	6.5		
LnGrp Delay(d),s/veh	17.3	3.0	40.1	41.6	42.1	44.1		
LnGrp LOS	B	A	D	D	D	D		
Approach Vol, veh/h		1198	608		275			
Approach Delay, s/veh		9.3	40.8		43.1			
Approach LOS		A	D		D			
Timer	1	2	3	4	5	6	7	8
Assigned Phs		2		4	5	6		
Phs Duration (G+Y+Rc), s		73.2		14.6	48.5	24.7		
Change Period (Y+Rc), s		5.5		* 4.7	5.5	* 5.5		
Max Green Setting (Gmax), s		67.7		* 22	38.6	* 25		
Max Q Clear Time (g_c+I1), s		6.7		9.2	20.7	17.0		
Green Ext Time (p_c), s		7.2		0.7	5.8	2.2		
Intersection Summary								
HCM 2010 Ctrl Delay			23.0					
HCM 2010 LOS			C					
Notes								

HCM 2010 Signalized Intersection Summary
 10: Bernardo Center Dr & West Bernardo Dr




















Year 2035 + Project AM
 3/24/2016



Movement	EBL	EBT	WBU	WBT	WBR	SBL	SBR	
Lane Configurations	↶↷	↶↷	↶	↶↷	↶↷	↶	↶	
Traffic Volume (veh/h)	716	580	5	610	826	97	246	
Future Volume (veh/h)	716	580	5	610	826	97	246	
Number	1	6		2	12	3	18	
Initial Q (Qb), veh	0	0		0	0	0	0	
Ped-Bike Adj(A_pbT)	1.00				0.97	1.00	1.00	
Parking Bus, Adj	1.00	1.00		1.00	1.00	1.00	1.00	
Adj Sat Flow, veh/h/ln	1863	1863		1863	1863	1863	1863	
Adj Flow Rate, veh/h	778	630		663	898	105	267	
Adj No. of Lanes	2	2		2	2	1	1	
Peak Hour Factor	0.92	0.92		0.92	0.92	0.92	0.92	
Percent Heavy Veh, %	2	2		2	2	2	2	
Cap, veh/h	910	2480		1325	1464	285	673	
Arrive On Green	0.26	0.70		0.37	0.37	0.16	0.16	
Sat Flow, veh/h	3442	3632		3632	2714	1774	1583	
Grp Volume(v), veh/h	778	630		663	898	105	267	
Grp Sat Flow(s),veh/h/ln	1721	1770		1770	1357	1774	1583	
Q Serve(g_s), s	15.3	4.6		10.3	16.4	3.8	8.3	
Cycle Q Clear(g_c), s	15.3	4.6		10.3	16.4	3.8	8.3	
Prop In Lane	1.00				1.00	1.00	1.00	
Lane Grp Cap(c), veh/h	910	2480		1325	1464	285	673	
V/C Ratio(X)	0.86	0.25		0.50	0.61	0.37	0.40	
Avail Cap(c_a), veh/h	1091	2480		1494	1593	821	1151	
HCM Platoon Ratio	1.00	1.00		1.00	1.00	1.00	1.00	
Upstream Filter(I)	1.00	1.00		1.00	1.00	1.00	1.00	
Uniform Delay (d), s/veh	24.9	3.9		17.2	11.5	26.7	14.2	
Incr Delay (d2), s/veh	5.9	0.1		0.3	0.6	0.8	0.4	
Initial Q Delay(d3),s/veh	0.0	0.0		0.0	0.0	0.0	0.0	
%ile BackOfQ(50%),veh/ln	8.0	2.2		5.0	6.1	1.9	3.7	
LnGrp Delay(d),s/veh	30.8	3.9		17.5	12.1	27.5	14.6	
LnGrp LOS	C	A		B	B	C	B	
Approach Vol, veh/h		1408		1561		372		
Approach Delay, s/veh		18.8		14.4		18.2		
Approach LOS		B		B		B		
Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2				6		8
Phs Duration (G+Y+Rc), s	23.3	32.2				55.5		15.9
Change Period (Y+Rc), s	4.4	5.5				* 5.5		4.4
Max Green Setting (Gmax), s	22.6	30.1				* 49		33.0
Max Q Clear Time (g_c+I1), s	17.3	18.4				6.6		10.3
Green Ext Time (p_c), s	1.5	8.3				19.1		1.1
Intersection Summary								
HCM 2010 Ctrl Delay				16.7				
HCM 2010 LOS				B				
Notes								




















HCM 2010 Signalized Intersection Summary
 1: Camino San Bernardo & Rancho Bernardo Rd

3/24/2016

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	10	1000	230	402	827	10	120	10	388	70	20	30
Future Volume (veh/h)	10	1000	230	402	827	10	120	10	388	70	20	30
Number	5	2	12	1	6	16	3	8	18	7	4	14
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.99	1.00		1.00	1.00		1.00	1.00		0.99
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1900	1863	1863	1900	1863	1863	1900	1900	1863	1900
Adj Flow Rate, veh/h	10	1042	240	419	861	10	125	10	404	73	21	31
Adj No. of Lanes	1	2	0	2	2	0	1	2	0	0	1	0
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	22	1090	250	460	1805	21	434	571	511	125	39	33
Arrive On Green	0.01	0.38	0.38	0.13	0.50	0.50	0.32	0.32	0.32	0.32	0.32	0.32
Sat Flow, veh/h	1774	2851	654	3442	3583	42	1347	1770	1582	192	121	103
Grp Volume(v), veh/h	10	645	637	419	425	446	125	10	404	125	0	0
Grp Sat Flow(s),veh/h/ln	1774	1770	1736	1721	1770	1855	1347	1770	1582	416	0	0
Q Serve(g_s), s	0.5	31.8	32.2	10.8	14.1	14.1	0.0	0.3	20.9	7.3	0.0	0.0
Cycle Q Clear(g_c), s	0.5	31.8	32.2	10.8	14.1	14.1	7.9	0.3	20.9	28.2	0.0	0.0
Prop In Lane	1.00		0.38	1.00		0.02	1.00		1.00	0.58		0.25
Lane Grp Cap(c), veh/h	22	677	664	460	891	934	434	571	511	198	0	0
V/C Ratio(X)	0.46	0.95	0.96	0.91	0.48	0.48	0.29	0.02	0.79	0.63	0.00	0.00
Avail Cap(c_a), veh/h	99	679	666	460	891	934	434	571	511	198	0	0
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	0.00
Uniform Delay (d), s/veh	44.1	27.0	27.1	38.4	14.6	14.6	23.3	20.7	27.7	35.1	0.0	0.0
Incr Delay (d2), s/veh	14.3	23.6	25.2	22.3	0.4	0.4	0.4	0.0	8.3	6.4	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.3	19.8	20.0	6.5	6.9	7.3	2.4	0.2	10.3	3.4	0.0	0.0
LnGrp Delay(d),s/veh	58.4	50.5	52.3	60.7	15.0	15.0	23.6	20.7	35.9	41.5	0.0	0.0
LnGrp LOS	E	D	D	E	B	B	C	C	D	D		
Approach Vol, veh/h		1292			1290			539			125	
Approach Delay, s/veh		51.5			29.8			32.8			41.5	
Approach LOS		D			C			C			D	
Timer	1	2	3	4	5	6	7	8				
Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	16.0	39.9		34.0	5.1	50.8		34.0				
Change Period (Y+Rc), s	4.0	5.5		5.0	4.0	5.5		5.0				
Max Green Setting (Gmax), s	12.0	34.5		29.0	5.0	41.5		29.0				
Max Q Clear Time (g_c+I1), s	12.8	34.2		30.2	2.5	16.1		22.9				
Green Ext Time (p_c), s	0.0	0.2		0.0	0.0	15.0		2.0				
Intersection Summary												
HCM 2010 Ctrl Delay				39.4								
HCM 2010 LOS				D								




















HCM 2010 Signalized Intersection Summary
 2: Via Del Campo & Rancho Bernardo Rd

3/24/2016

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	20	1488	60	49	1069	10	350	10	449	10	10	10
Future Volume (veh/h)	20	1488	60	49	1069	10	350	10	449	10	10	10
Number	5	2	12	1	6	16	3	8	18	7	4	14
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		0.98	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1900	1863	1863	1900	1900	1863	1863	1900	1863	1900
Adj Flow Rate, veh/h	22	1617	65	53	1162	11	380	11	488	11	11	11
Adj No. of Lanes	1	2	0	1	2	0	0	1	1	0	1	0
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	29	1770	71	68	1912	18	262	6	540	33	32	16
Arrive On Green	0.02	0.51	0.51	0.04	0.53	0.53	0.35	0.35	0.35	0.35	0.35	0.35
Sat Flow, veh/h	1774	3469	139	1774	3592	34	617	18	1559	0	92	46
Grp Volume(v), veh/h	22	822	860	53	572	601	391	0	488	33	0	0
Grp Sat Flow(s),veh/h/ln	1774	1770	1838	1774	1770	1857	635	0	1559	138	0	0
Q Serve(g_s), s	1.8	62.7	63.5	4.4	33.0	33.0	0.0	0.0	43.9	0.0	0.0	0.0
Cycle Q Clear(g_c), s	1.8	62.7	63.5	4.4	33.0	33.0	51.1	0.0	43.9	51.1	0.0	0.0
Prop In Lane	1.00		0.08	1.00		0.02	0.97		1.00	0.33		0.33
Lane Grp Cap(c), veh/h	29	903	938	68	942	988	268	0	540	80	0	0
V/C Ratio(X)	0.77	0.91	0.92	0.78	0.61	0.61	1.46	0.00	0.90	0.41	0.00	0.00
Avail Cap(c_a), veh/h	75	925	961	79	942	988	268	0	540	80	0	0
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00	0.00
Uniform Delay (d), s/veh	72.3	33.0	33.2	70.3	23.8	23.8	52.8	0.0	45.8	39.6	0.0	0.0
Incr Delay (d2), s/veh	34.2	12.7	13.1	33.7	1.1	1.1	225.8	0.0	18.5	3.3	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.2	33.8	35.4	2.8	16.4	17.1	27.7	0.0	21.7	1.0	0.0	0.0
LnGrp Delay(d),s/veh	106.5	45.8	46.4	104.0	25.0	24.9	278.6	0.0	64.3	43.0	0.0	0.0
LnGrp LOS	F	D	D	F	C	C	F		E	D		
Approach Vol, veh/h		1704			1226			879			33	
Approach Delay, s/veh		46.9			28.4			159.6			43.0	
Approach LOS		D			C			F			D	
Timer	1	2	3	4	5	6	7	8				
Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	10.0	81.1		56.3	6.8	84.4		56.3				
Change Period (Y+Rc), s	4.4	5.9		* 5.2	4.4	* 5.9		5.2				
Max Green Setting (Gmax), s	6.6	77.1		* 51	6.2	* 78		50.8				
Max Q Clear Time (g_c+I1), s	6.4	65.5		53.1	3.8	35.0		53.1				
Green Ext Time (p_c), s	0.0	9.7		0.0	0.0	29.7		0.0				
Intersection Summary												
HCM 2010 Ctrl Delay			66.7									
HCM 2010 LOS			E									
Notes												

































HCM 2010 Signalized Intersection Summary
 3: Project Dwy/Matinal Rd & Rancho Bernardo Rd

3/24/2016

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	110	1600	87	268	990	60	58	5	180	50	7	120
Future Volume (veh/h)	110	1600	87	268	990	60	58	5	180	50	7	120
Number	5	2	12	1	6	16	3	8	18	7	4	14
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		0.99
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1900	1863	1863	1900	1863	1863	1900	1900	1863	1900
Adj Flow Rate, veh/h	120	1739	95	291	1076	65	63	5	196	54	8	130
Adj No. of Lanes	1	2	0	1	2	0	1	1	0	0	1	0
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	151	1601	87	249	1778	107	251	9	344	94	35	166
Arrive On Green	0.09	0.47	0.47	0.14	0.52	0.52	0.22	0.22	0.22	0.22	0.22	0.22
Sat Flow, veh/h	1774	3414	185	1774	3391	205	1246	40	1550	200	157	748
Grp Volume(v), veh/h	120	895	939	291	561	580	63	0	201	192	0	0
Grp Sat Flow(s),veh/h/ln	1774	1770	1830	1774	1770	1827	1246	0	1589	1105	0	0
Q Serve(g_s), s	6.1	43.4	43.4	13.0	20.5	20.5	0.0	0.0	10.4	6.2	0.0	0.0
Cycle Q Clear(g_c), s	6.1	43.4	43.4	13.0	20.5	20.5	7.5	0.0	10.4	16.6	0.0	0.0
Prop In Lane	1.00		0.10	1.00		0.11	1.00		0.98	0.28		0.68
Lane Grp Cap(c), veh/h	151	830	858	249	928	958	251	0	353	295	0	0
V/C Ratio(X)	0.80	1.08	1.09	1.17	0.61	0.61	0.25	0.00	0.57	0.65	0.00	0.00
Avail Cap(c_a), veh/h	249	830	858	249	928	958	360	0	491	411	0	0
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00	0.00
Uniform Delay (d), s/veh	41.6	24.6	24.6	39.8	15.3	15.3	30.9	0.0	32.1	34.4	0.0	0.0
Incr Delay (d2), s/veh	9.1	54.8	59.7	110.1	1.1	1.1	0.5	0.0	1.4	2.4	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	3.4	33.6	35.9	13.9	10.3	10.6	1.4	0.0	4.7	4.9	0.0	0.0
LnGrp Delay(d),s/veh	50.7	79.4	84.2	149.9	16.5	16.4	31.4	0.0	33.5	36.8	0.0	0.0
LnGrp LOS	D	F	F	F	B	B	C		C	D		
Approach Vol, veh/h		1954			1432			264			192	
Approach Delay, s/veh		80.0			43.6			33.0			36.8	
Approach LOS		E			D			C			D	
Timer	1	2	3	4	5	6	7	8				
Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	17.0	50.4		25.2	11.9	55.5		25.2				
Change Period (Y+Rc), s	4.0	7.0		4.6	4.0	* 7		* 4.6				
Max Green Setting (Gmax), s	13.0	43.4		28.0	13.0	* 44		* 29				
Max Q Clear Time (g_c+I1), s	15.0	45.4		18.6	8.1	22.5		12.4				
Green Ext Time (p_c), s	0.0	0.0		2.0	0.1	18.5		2.6				
Intersection Summary												
HCM 2010 Ctrl Delay				61.0								
HCM 2010 LOS				E								
Notes												

HCM 2010 Signalized Intersection Summary
4: West Bernardo Dr & Rancho Bernardo Rd



















3/24/2016

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	 	  		 	 		 	 		 	 	
Traffic Volume (veh/h)	167	1741	62	200	1229	510	198	360	700	350	90	81
Future Volume (veh/h)	167	1741	62	200	1229	510	198	360	700	350	90	81
Number	5	2	12	1	6	16	3	8	18	7	4	14
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1900	1863	1863	1863	1863	1863	1863	1863	1863	1900
Adj Flow Rate, veh/h	170	1777	63	204	1254	520	202	367	714	357	92	83
Adj No. of Lanes	2	3	0	2	2	1	2	2	1	2	2	0
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	208	1759	62	358	1395	623	269	943	585	431	580	475
Arrive On Green	0.06	0.35	0.35	0.10	0.39	0.39	0.08	0.27	0.27	0.13	0.31	0.31
Sat Flow, veh/h	3442	5043	179	3442	3539	1580	3442	3539	1578	3442	1850	1515
Grp Volume(v), veh/h	170	1194	646	204	1254	520	202	367	714	357	88	87
Grp Sat Flow(s),veh/h/ln	1721	1695	1831	1721	1770	1580	1721	1770	1578	1721	1770	1595
Q Serve(g_s), s	6.3	45.1	45.1	7.3	43.0	25.5	7.4	11.0	28.7	13.1	4.6	5.1
Cycle Q Clear(g_c), s	6.3	45.1	45.1	7.3	43.0	25.5	7.4	11.0	28.7	13.1	4.6	5.1
Prop In Lane	1.00		0.10	1.00		1.00	1.00		1.00	1.00		0.95
Lane Grp Cap(c), veh/h	208	1182	639	358	1395	623	269	943	585	431	555	500
V/C Ratio(X)	0.82	1.01	1.01	0.57	0.90	0.84	0.75	0.39	1.22	0.83	0.16	0.17
Avail Cap(c_a), veh/h	208	1182	639	415	1453	649	908	1070	642	801	555	500
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	60.1	42.1	42.1	55.2	36.8	15.6	58.4	38.8	25.7	55.2	32.0	32.2
Incr Delay (d2), s/veh	22.1	28.6	38.4	1.4	7.7	9.0	4.2	0.3	113.9	4.1	0.1	0.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	3.6	25.7	29.5	3.6	22.4	12.7	3.7	5.4	33.6	6.5	2.3	2.3
LnGrp Delay(d),s/veh	82.1	70.8	80.5	56.6	44.5	24.6	62.6	39.1	139.5	59.3	32.2	32.4
LnGrp LOS	F	F	F	E	D	C	E	D	F	E	C	C
Approach Vol, veh/h		2010			1978			1283			532	
Approach Delay, s/veh		74.9			40.5			98.7			50.4	
Approach LOS		E			D			F			D	
Timer	1	2	3	4	5	6	7	8				
Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	17.9	51.0	14.5	46.0	12.2	56.7	20.6	39.8				
Change Period (Y+Rc), s	4.4	5.9	4.4	5.4	4.4	5.7	4.4	5.4				
Max Green Setting (Gmax), s	15.6	45.1	34.1	35.1	7.8	53.1	30.1	39.1				
Max Q Clear Time (g_c+I1), s	9.3	47.1	9.4	7.1	8.3	45.0	15.1	30.7				
Green Ext Time (p_c), s	0.7	0.0	0.7	7.5	0.0	6.0	1.1	3.7				
Intersection Summary												
HCM 2010 Ctrl Delay			66.2									
HCM 2010 LOS			E									

HCM 2010 Signalized Intersection Summary

5: I-15 SB Ramps & Rancho Bernardo Rd



















3/24/2016

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	1765	1016	0	1368	600	0	0	0	460	0	551
Future Volume (veh/h)	0	1765	1016	0	1368	600	0	0	0	460	0	551
Number	5	2	12	1	6	16				7	4	14
Initial Q (Qb), veh	0	0	0	0	0	0				0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00				1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00				1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	0	1863	1863	0	1863	1863				1863	0	1863
Adj Flow Rate, veh/h	0	2340	724	0	1425	0				479	0	574
Adj No. of Lanes	0	3	1	0	3	1				2	0	2
Peak Hour Factor	0.92	0.96	0.96	0.92	0.96	0.96				0.96	0.92	0.96
Percent Heavy Veh, %	0	2	2	0	2	2				2	0	2
Cap, veh/h	0	3647	1033	0	3647	1033				765	0	620
Arrive On Green	0.00	0.65	0.65	0.00	1.00	0.00				0.22	0.00	0.22
Sat Flow, veh/h	0	5588	1583	0	5588	1583				3442	0	2787
Grp Volume(v), veh/h	0	2340	724	0	1425	0				479	0	574
Grp Sat Flow(s),veh/h/ln	0	1863	1583	0	1863	1583				1721	0	1393
Q Serve(g_s), s	0.0	25.0	29.3	0.0	0.0	0.0				12.6	0.0	20.2
Cycle Q Clear(g_c), s	0.0	25.0	29.3	0.0	0.0	0.0				12.6	0.0	20.2
Prop In Lane	0.00		1.00	0.00		1.00				1.00		1.00
Lane Grp Cap(c), veh/h	0	3647	1033	0	3647	1033				765	0	620
V/C Ratio(X)	0.00	0.64	0.70	0.00	0.39	0.00				0.63	0.00	0.93
Avail Cap(c_a), veh/h	0	3647	1033	0	3647	1033				767	0	621
HCM Platoon Ratio	1.00	1.00	1.00	1.00	2.00	2.00				1.00	1.00	1.00
Upstream Filter(I)	0.00	0.09	0.09	0.00	0.77	0.00				1.00	0.00	1.00
Uniform Delay (d), s/veh	0.0	10.4	11.1	0.0	0.0	0.0				35.1	0.0	38.1
Incr Delay (d2), s/veh	0.0	0.1	0.4	0.0	0.2	0.0				1.6	0.0	20.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0				0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.0	12.8	12.8	0.0	0.1	0.0				6.2	0.0	9.5
LnGrp Delay(d),s/veh	0.0	10.5	11.5	0.0	0.2	0.0				36.7	0.0	58.1
LnGrp LOS		B	B		A					D		E
Approach Vol, veh/h		3064			1425						1053	
Approach Delay, s/veh		10.7			0.2						48.4	
Approach LOS		B			A						D	
Timer	1	2	3	4	5	6	7	8				
Assigned Phs		2		4		6						
Phs Duration (G+Y+Rc), s		71.7		28.3		71.7						
Change Period (Y+Rc), s		6.4		6.1		6.4						
Max Green Setting (Gmax), s		65.2		22.3		65.2						
Max Q Clear Time (g_c+I1), s		31.3		22.2		2.0						
Green Ext Time (p_c), s		32.7		0.1		59.2						
Intersection Summary												
HCM 2010 Ctrl Delay			15.2									
HCM 2010 LOS			B									
Notes												

HCM 2010 Signalized Intersection Summary























6: I-15 NB Ramps & Rancho Bernardo Rd

3/24/2016

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	1014	1231	0	1206	510	822	0	490	0	0	0
Future Volume (veh/h)	0	1014	1231	0	1206	510	822	0	490	0	0	0
Number	5	2	12	1	6	16	3	8	18			
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0			
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00			
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00			
Adj Sat Flow, veh/h/ln	0	1863	1863	0	1863	1863	1863	0	1863			
Adj Flow Rate, veh/h	0	1079	0	0	1283	543	874	0	521			
Adj No. of Lanes	0	3	1	0	3	1	2	0	2			
Peak Hour Factor	0.92	0.94	0.94	0.92	0.94	0.94	0.94	0.92	0.94			
Percent Heavy Veh, %	0	2	2	0	2	2	2	0	2			
Cap, veh/h	0	3231	915	0	2940	915	1022	0	827			
Arrive On Green	0.00	0.97	0.00	0.00	0.58	0.58	0.30	0.00	0.30			
Sat Flow, veh/h	0	5588	1583	0	5253	1583	3442	0	2787			
Grp Volume(v), veh/h	0	1079	0	0	1283	543	874	0	521			
Grp Sat Flow(s),veh/h/ln	0	1863	1583	0	1695	1583	1721	0	1393			
Q Serve(g_s), s	0.0	1.0	0.0	0.0	14.2	22.0	23.9	0.0	16.2			
Cycle Q Clear(g_c), s	0.0	1.0	0.0	0.0	14.2	22.0	23.9	0.0	16.2			
Prop In Lane	0.00		1.00	0.00		1.00	1.00		1.00			
Lane Grp Cap(c), veh/h	0	3231	915	0	2940	915	1022	0	827			
V/C Ratio(X)	0.00	0.33	0.00	0.00	0.44	0.59	0.86	0.00	0.63			
Avail Cap(c_a), veh/h	0	3231	915	0	2940	915	1167	0	945			
HCM Platoon Ratio	1.00	1.67	1.67	1.00	1.00	1.00	1.00	1.00	1.00			
Upstream Filter(I)	0.00	0.64	0.00	0.00	1.00	1.00	1.00	0.00	1.00			
Uniform Delay (d), s/veh	0.0	0.7	0.0	0.0	11.9	13.5	33.1	0.0	30.4			
Incr Delay (d2), s/veh	0.0	0.2	0.0	0.0	0.5	2.8	5.8	0.0	1.1			
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0			
%ile BackOfQ(50%),veh/ln	0.0	0.4	0.0	0.0	6.8	10.2	12.2	0.0	6.3			
LnGrp Delay(d),s/veh	0.0	0.9	0.0	0.0	12.4	16.4	38.9	0.0	31.5			
LnGrp LOS		A			B	B	D		C			
Approach Vol, veh/h		1079			1826			1395				
Approach Delay, s/veh		0.9			13.6			36.2				
Approach LOS		A			B			D				
Timer	1	2	3	4	5	6	7	8				
Assigned Phs		2				6		8				
Phs Duration (G+Y+Rc), s		64.2				64.2		35.8				
Change Period (Y+Rc), s		6.4				6.4		6.1				
Max Green Setting (Gmax), s		53.6				53.6		33.9				
Max Q Clear Time (g_c+I1), s		3.0				24.0		25.9				
Green Ext Time (p_c), s		33.5				22.8		3.8				
Intersection Summary												
HCM 2010 Ctrl Delay				17.7								
HCM 2010 LOS				B								
Notes												























HCM 2010 Signalized Intersection Summary
 7: Bernardo Center Dr & Rancho Bernardo Rd

3/24/2016

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	285	744	375	150	782	170	467	520	280	200	310	127
Future Volume (veh/h)	285	744	375	150	782	170	467	520	280	200	310	127
Number	5	2	12	1	6	16	3	8	18	7	4	14
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.99	1.00		0.99	1.00		1.00	1.00		0.98
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1863	1863	1863	1900	1863	1863	1900	1863	1863	1863
Adj Flow Rate, veh/h	300	787	393	158	823	179	492	547	295	211	326	134
Adj No. of Lanes	2	2	1	2	2	0	2	2	0	2	2	1
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	360	1312	551	218	906	197	550	695	374	277	827	523
Arrive On Green	0.10	0.35	0.35	0.06	0.31	0.31	0.16	0.31	0.31	0.08	0.23	0.23
Sat Flow, veh/h	3548	3725	1563	3442	2884	627	3442	2221	1196	3442	3539	1550
Grp Volume(v), veh/h	300	787	393	158	505	497	492	436	406	211	326	134
Grp Sat Flow(s),veh/h/ln	1774	1863	1563	1721	1770	1742	1721	1770	1648	1721	1770	1550
Q Serve(g_s), s	9.1	19.0	23.8	4.9	30.0	30.0	15.3	24.6	24.6	6.6	8.5	6.9
Cycle Q Clear(g_c), s	9.1	19.0	23.8	4.9	30.0	30.0	15.3	24.6	24.6	6.6	8.5	6.9
Prop In Lane	1.00		1.00	1.00		0.36	1.00		0.73	1.00		1.00
Lane Grp Cap(c), veh/h	360	1312	551	218	556	547	550	553	515	277	827	523
V/C Ratio(X)	0.83	0.60	0.71	0.72	0.91	0.91	0.89	0.79	0.79	0.76	0.39	0.26
Avail Cap(c_a), veh/h	370	1312	551	258	576	567	566	736	685	412	1294	727
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	48.2	29.1	30.7	50.3	36.0	36.0	45.1	34.3	34.3	49.3	35.4	26.5
Incr Delay (d2), s/veh	14.6	0.8	4.3	8.0	18.1	18.3	16.4	4.1	4.5	4.6	0.3	0.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	5.2	9.9	10.9	2.6	17.4	17.1	8.6	12.6	11.8	3.3	4.2	3.0
LnGrp Delay(d),s/veh	62.9	29.9	35.0	58.3	54.1	54.3	61.5	38.4	38.8	53.9	35.7	26.7
LnGrp LOS	E	C	C	E	D	D	E	D	D	D	D	C
Approach Vol, veh/h		1480			1160			1334			671	
Approach Delay, s/veh		37.9			54.8			47.0			39.6	
Approach LOS		D			D			D			D	
Timer	1	2	3	4	5	6	7	8				
Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	11.3	44.7	21.9	31.5	15.5	40.6	13.2	40.1				
Change Period (Y+Rc), s	4.4	6.2	4.4	5.9	4.4	* 6.2	4.4	* 5.9				
Max Green Setting (Gmax), s	8.2	37.9	18.0	40.0	11.4	* 36	13.1	* 46				
Max Q Clear Time (g_c+I1), s	6.9	25.8	17.3	10.5	11.1	32.0	8.6	26.6				
Green Ext Time (p_c), s	0.1	9.0	0.1	9.0	0.0	2.4	0.3	7.6				
Intersection Summary												
HCM 2010 Ctrl Delay			45.0									
HCM 2010 LOS			D									
Notes												

HCM 2010 Signalized Intersection Summary
 8: West Bernardo Dr & Duenda Rd

3/24/2016

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	30	140	144	90	90	80	72	170	110	130	230	20
Future Volume (veh/h)	30	140	144	90	90	80	72	170	110	130	230	20
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.98	1.00		1.00	1.00		1.00	1.00		0.98
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1900	1863	1863	1863	1863	1863	1900	1863	1863	1900
Adj Flow Rate, veh/h	33	152	157	98	98	87	78	185	120	141	250	22
Adj No. of Lanes	1	1	0	1	1	1	1	2	0	1	2	0
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	418	196	203	186	195	166	99	365	225	183	726	63
Arrive On Green	0.24	0.24	0.24	0.10	0.10	0.10	0.06	0.17	0.17	0.10	0.22	0.22
Sat Flow, veh/h	1774	833	861	1774	1863	1583	1774	2105	1299	1774	3287	287
Grp Volume(v), veh/h	33	0	309	98	98	87	78	154	151	141	134	138
Grp Sat Flow(s),veh/h/ln	1774	0	1694	1774	1863	1583	1774	1770	1634	1774	1770	1805
Q Serve(g_s), s	0.8	0.0	8.9	2.7	2.6	2.7	2.3	4.1	4.4	4.0	3.3	3.4
Cycle Q Clear(g_c), s	0.8	0.0	8.9	2.7	2.6	2.7	2.3	4.1	4.4	4.0	3.3	3.4
Prop In Lane	1.00		0.51	1.00		1.00	1.00		0.79	1.00		0.16
Lane Grp Cap(c), veh/h	418	0	399	186	195	166	99	307	284	183	391	399
V/C Ratio(X)	0.08	0.00	0.77	0.53	0.50	0.53	0.78	0.50	0.53	0.77	0.34	0.35
Avail Cap(c_a), veh/h	679	0	649	611	642	546	306	678	626	408	779	795
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	15.6	0.0	18.7	22.2	22.1	22.2	24.3	19.5	19.7	22.8	17.1	17.2
Incr Delay (d2), s/veh	0.1	0.0	3.2	2.3	2.0	2.6	12.6	1.3	1.5	6.6	0.5	0.5
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.4	0.0	4.5	1.5	1.4	1.3	1.5	2.1	2.1	2.3	1.7	1.7
LnGrp Delay(d),s/veh	15.6	0.0	21.9	24.5	24.1	24.7	36.9	20.8	21.2	29.4	17.7	17.7
LnGrp LOS	B		C	C	C	C	D	C	C	C	B	B
Approach Vol, veh/h		342			283			383			413	
Approach Delay, s/veh		21.3			24.4			24.2			21.7	
Approach LOS		C			C			C			C	
Timer	1	2	3	4	5	6	7	8				
Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	10.4	14.1		17.3	7.9	16.5		10.5				
Change Period (Y+Rc), s	5.0	5.0		5.0	5.0	5.0		5.0				
Max Green Setting (Gmax), s	12.0	20.0		20.0	9.0	23.0		18.0				
Max Q Clear Time (g_c+I1), s	6.0	6.4		10.9	4.3	5.4		4.7				
Green Ext Time (p_c), s	0.2	2.7		1.4	0.1	3.0		0.8				
Intersection Summary												
HCM 2010 Ctrl Delay			22.8									
HCM 2010 LOS			C									

HCM 2010 Signalized Intersection Summary

9: West Bernardo Dr & Via Del Campo

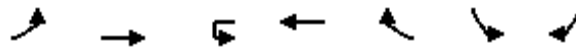
3/24/2016



Movement	EBL	EBT	WBT	WBR	SBL	SBR		
Lane Configurations								
Traffic Volume (veh/h)	89	540	580	50	200	429		
Future Volume (veh/h)	89	540	580	50	200	429		
Number	5	2	6	16	7	14		
Initial Q (Qb), veh	0	0	0	0	0	0		
Ped-Bike Adj(A_pbT)	1.00			1.00	1.00	1.00		
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00		
Adj Sat Flow, veh/h/ln	1863	1863	1863	1900	1863	1863		
Adj Flow Rate, veh/h	97	587	630	54	217	466		
Adj No. of Lanes	1	2	2	0	1	1		
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92		
Percent Heavy Veh, %	2	2	2	2	2	2		
Cap, veh/h	124	1986	1459	125	578	515		
Arrive On Green	0.07	0.56	0.44	0.44	0.33	0.33		
Sat Flow, veh/h	1774	3632	3393	282	1774	1583		
Grp Volume(v), veh/h	97	587	337	347	217	466		
Grp Sat Flow(s),veh/h/ln	1774	1770	1770	1813	1774	1583		
Q Serve(g_s), s	4.8	7.9	11.8	11.9	8.5	25.3		
Cycle Q Clear(g_c), s	4.8	7.9	11.8	11.9	8.5	25.3		
Prop In Lane	1.00			0.16	1.00	1.00		
Lane Grp Cap(c), veh/h	124	1986	782	802	578	515		
V/C Ratio(X)	0.78	0.30	0.43	0.43	0.38	0.90		
Avail Cap(c_a), veh/h	229	1986	782	802	775	691		
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00		
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00		
Uniform Delay (d), s/veh	41.2	10.4	17.3	17.3	23.3	29.0		
Incr Delay (d2), s/veh	10.1	0.4	1.7	1.7	0.4	12.5		
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0		
%ile BackOfQ(50%),veh/ln	2.7	3.9	6.1	6.3	4.2	21.2		
LnGrp Delay(d),s/veh	51.3	10.8	19.0	19.0	23.7	41.5		
LnGrp LOS	D	B	B	B	C	D		
Approach Vol, veh/h		684	684		683			
Approach Delay, s/veh		16.5	19.0		35.8			
Approach LOS		B	B		D			
Timer	1	2	3	4	5	6	7	8
Assigned Phs		2		4	5	6		
Phs Duration (G+Y+Rc), s		56.0		34.0	10.7	45.3		
Change Period (Y+Rc), s		5.5		* 4.7	4.4	5.5		
Max Green Setting (Gmax), s		50.5		* 39	11.6	34.5		
Max Q Clear Time (g_c+I1), s		9.9		27.3	6.8	13.9		
Green Ext Time (p_c), s		9.8		2.0	0.1	8.0		
Intersection Summary								
HCM 2010 Ctrl Delay			23.8					
HCM 2010 LOS			C					
Notes								

HCM 2010 Signalized Intersection Summary
 10: Bernardo Center Dr & West Bernardo Dr

3/24/2016






















Movement	EBL	EBT	WBU	WBT	WBR	SBL	SBR	
Lane Configurations								
Traffic Volume (veh/h)	504	500	5	480	485	430	579	
Future Volume (veh/h)	504	500	5	480	485	430	579	
Number	1	6		2	12	3	18	
Initial Q (Qb), veh	0	0		0	0	0	0	
Ped-Bike Adj(A_pbT)	1.00				1.00	1.00	1.00	
Parking Bus, Adj	1.00	1.00		1.00	1.00	1.00	1.00	
Adj Sat Flow, veh/h/ln	1863	1863		1863	1863	1863	1863	
Adj Flow Rate, veh/h	536	532		511	516	457	616	
Adj No. of Lanes	2	2		2	2	1	1	
Peak Hour Factor	0.94	0.94		0.94	0.94	0.94	0.94	
Percent Heavy Veh, %	2	2		2	2	2	2	
Cap, veh/h	657	1837		958	1734	625	860	
Arrive On Green	0.19	0.52		0.27	0.27	0.35	0.35	
Sat Flow, veh/h	3442	3632		3632	2782	1774	1583	
Grp Volume(v), veh/h	536	532		511	516	457	616	
Grp Sat Flow(s),veh/h/ln	1721	1770		1770	1391	1774	1583	
Q Serve(g_s), s	11.5	6.5		9.5	6.6	17.3	22.3	
Cycle Q Clear(g_c), s	11.5	6.5		9.5	6.6	17.3	22.3	
Prop In Lane	1.00				1.00	1.00	1.00	
Lane Grp Cap(c), veh/h	657	1837		958	1734	625	860	
V/C Ratio(X)	0.82	0.29		0.53	0.30	0.73	0.72	
Avail Cap(c_a), veh/h	923	2289		1497	2158	753	974	
HCM Platoon Ratio	1.00	1.00		1.00	1.00	1.00	1.00	
Upstream Filter(I)	1.00	1.00		1.00	1.00	1.00	1.00	
Uniform Delay (d), s/veh	29.8	10.5		23.9	6.7	21.7	13.1	
Incr Delay (d2), s/veh	4.0	0.1		0.5	0.1	2.9	2.2	
Initial Q Delay(d3),s/veh	0.0	0.0		0.0	0.0	0.0	0.0	
%ile BackOfQ(50%),veh/ln	5.8	3.2		4.7	2.5	8.9	10.1	
LnGrp Delay(d),s/veh	33.7	10.6		24.3	6.8	24.7	15.3	
LnGrp LOS	C	B		C	A	C	B	
Approach Vol, veh/h		1068		1027		1073		
Approach Delay, s/veh		22.2		15.5		19.3		
Approach LOS		C		B		B		
Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2				6		8
Phs Duration (G+Y+Rc), s	19.1	26.3				45.4		31.5
Change Period (Y+Rc), s	4.4	5.5				* 5.5		4.4
Max Green Setting (Gmax), s	20.6	32.5				* 50		32.6
Max Q Clear Time (g_c+I1), s	13.5	11.5				8.5		24.3
Green Ext Time (p_c), s	1.2	9.2				11.6		2.7
Intersection Summary								
HCM 2010 Ctrl Delay				19.0				
HCM 2010 LOS				B				
Notes								

APPENDIX J

ENTITLED OFFICE DEVELOPMENT TRAFFIC VOLUMES AND PEAK HOUR INTERSECTION ANALYSIS WORKSHEETS

HCM 2010 Signalized Intersection Summary
 1: Camino San Bernardo & Rancho Bernardo Rd




















3/7/2016

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	956	171	404	727	1	37	0	200	4	0	0
Future Volume (veh/h)	0	956	171	404	727	1	37	0	200	4	0	0
Number	5	2	12	1	6	16	3	8	18	7	4	14
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.98	1.00		1.00	1.00		0.98	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1900	1863	1863	1900	1863	1863	1900	1900	1863	1900
Adj Flow Rate, veh/h	0	1039	186	439	790	1	40	0	217	4	0	0
Adj No. of Lanes	1	2	0	2	2	0	1	2	0	0	1	0
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	3	1268	226	548	2358	3	418	327	288	169	0	0
Arrive On Green	0.00	0.42	0.42	0.16	0.65	0.65	0.18	0.00	0.18	0.18	0.00	0.00
Sat Flow, veh/h	1774	2993	535	3442	3627	5	1412	1770	1558	331	0	0
Grp Volume(v), veh/h	0	613	612	439	385	406	40	0	217	4	0	0
Grp Sat Flow(s),veh/h/ln	1774	1770	1758	1721	1770	1862	1412	1770	1558	331	0	0
Q Serve(g_s), s	0.0	20.4	20.5	8.2	6.5	6.5	0.0	0.0	8.8	0.2	0.0	0.0
Cycle Q Clear(g_c), s	0.0	20.4	20.5	8.2	6.5	6.5	1.3	0.0	8.8	9.0	0.0	0.0
Prop In Lane	1.00		0.30	1.00		0.00	1.00		1.00	1.00		0.00
Lane Grp Cap(c), veh/h	3	749	745	548	1151	1211	418	327	288	169	0	0
V/C Ratio(X)	0.00	0.82	0.82	0.80	0.33	0.33	0.10	0.00	0.75	0.02	0.00	0.00
Avail Cap(c_a), veh/h	133	871	866	656	1151	1211	772	770	678	459	0	0
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00	0.00
Uniform Delay (d), s/veh	0.0	16.9	17.0	27.0	5.2	5.2	22.7	0.0	25.7	30.0	0.0	0.0
Incr Delay (d2), s/veh	0.0	5.4	5.6	6.0	0.2	0.2	0.1	0.0	4.0	0.1	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.0	11.0	11.0	4.4	3.2	3.3	0.6	0.0	4.1	0.1	0.0	0.0
LnGrp Delay(d),s/veh	0.0	22.4	22.6	33.0	5.4	5.4	22.8	0.0	29.7	30.1	0.0	0.0
LnGrp LOS		C	C	C	A	A	C		C	C		
Approach Vol, veh/h		1225			1230			257				4
Approach Delay, s/veh		22.5			15.2			28.7				30.1
Approach LOS		C			B			C				C
Timer	1	2	3	4	5	6	7	8				
Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	15.1	34.2		17.3	0.0	49.3		17.3				
Change Period (Y+Rc), s	4.5	6.0		5.0	4.5	6.0		5.0				
Max Green Setting (Gmax), s	12.7	32.8		29.0	5.0	40.5		29.0				
Max Q Clear Time (g_c+I1), s	10.2	22.5		11.0	0.0	8.5		10.8				
Green Ext Time (p_c), s	0.4	5.7		1.2	0.0	15.6		1.2				
Intersection Summary												
HCM 2010 Ctrl Delay				19.8								
HCM 2010 LOS				B								

HCM 2010 Signalized Intersection Summary




















2: Via Del Campo & Rancho Bernardo Rd

3/7/2016

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	4	971	302	600	1246	0	59	0	53	1	0	0
Future Volume (veh/h)	4	971	302	600	1246	0	59	0	53	1	0	0
Number	5	2	12	1	6	16	3	8	18	7	4	14
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.98	1.00		1.00	1.00		0.98	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1900	1863	1863	1900	1900	1863	1863	1900	1863	1900
Adj Flow Rate, veh/h	4	1091	339	674	1400	0	66	0	60	1	0	0
Adj No. of Lanes	1	2	0	1	2	0	0	1	1	0	1	0
Peak Hour Factor	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	7	1116	342	631	2733	0	178	0	100	111	0	0
Arrive On Green	0.00	0.42	0.42	0.36	0.77	0.00	0.06	0.00	0.06	0.06	0.00	0.00
Sat Flow, veh/h	1774	2653	814	1774	3632	0	1615	0	1559	582	0	0
Grp Volume(v), veh/h	4	723	707	674	1400	0	66	0	60	1	0	0
Grp Sat Flow(s),veh/h/ln	1774	1770	1697	1774	1770	0	1615	0	1559	582	0	0
Q Serve(g_s), s	0.2	38.9	40.3	34.6	14.5	0.0	0.0	0.0	3.6	0.1	0.0	0.0
Cycle Q Clear(g_c), s	0.2	38.9	40.3	34.6	14.5	0.0	3.5	0.0	3.6	3.6	0.0	0.0
Prop In Lane	1.00		0.48	1.00		0.00	1.00		1.00	1.00		0.00
Lane Grp Cap(c), veh/h	7	744	714	631	2733	0	178	0	100	111	0	0
V/C Ratio(X)	0.54	0.97	0.99	1.07	0.51	0.00	0.37	0.00	0.60	0.01	0.00	0.00
Avail Cap(c_a), veh/h	73	744	714	631	2733	0	507	0	465	428	0	0
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	0.00	1.00	0.00	1.00	1.00	0.00	0.00
Uniform Delay (d), s/veh	48.3	27.6	28.0	31.3	4.2	0.0	44.2	0.0	44.3	46.0	0.0	0.0
Incr Delay (d2), s/veh	48.6	26.0	31.3	55.3	0.2	0.0	1.3	0.0	5.6	0.0	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.2	24.2	24.9	26.5	7.1	0.0	1.8	0.0	1.7	0.0	0.0	0.0
LnGrp Delay(d),s/veh	96.9	53.6	59.3	86.6	4.3	0.0	45.5	0.0	49.9	46.0	0.0	0.0
LnGrp LOS	F	D	E	F	A		D		D	D		
Approach Vol, veh/h		1434			2074			126				1
Approach Delay, s/veh		56.5			31.1			47.6				46.0
Approach LOS		E			C			D				D
Timer	1	2	3	4	5	6	7	8				
Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	39.0	46.8		11.4	4.8	81.0		11.4				
Change Period (Y+Rc), s	4.4	5.9		* 5.2	4.4	* 5.9		5.2				
Max Green Setting (Gmax), s	34.6	40.9		* 29	4.0	* 72		29.0				
Max Q Clear Time (g_c+I1), s	36.6	42.3		5.6	2.2	16.5		5.6				
Green Ext Time (p_c), s	0.0	0.0		0.5	0.0	36.3		0.5				
Intersection Summary												
HCM 2010 Ctrl Delay				41.7								
HCM 2010 LOS				D								
Notes												

































HCM 2010 Signalized Intersection Summary
 3: Project Dwy/Matinal Rd & Rancho Bernardo Rd

3/7/2016

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	33	784	107	329	1602	17	12	1	37	84	9	141
Future Volume (veh/h)	33	784	107	329	1602	17	12	1	37	84	9	141
Number	5	2	12	1	6	16	3	8	18	7	4	14
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		0.98
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1900	1863	1863	1900	1863	1863	1900	1900	1863	1900
Adj Flow Rate, veh/h	38	901	123	378	1841	20	14	1	43	97	10	162
Adj No. of Lanes	1	2	0	1	2	0	1	1	0	0	1	0
Peak Hour Factor	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	48	1300	177	414	2229	24	234	7	319	144	23	184
Arrive On Green	0.03	0.42	0.42	0.23	0.62	0.62	0.21	0.21	0.21	0.21	0.21	0.21
Sat Flow, veh/h	1774	3130	427	1774	3587	39	1208	36	1553	478	113	895
Grp Volume(v), veh/h	38	509	515	378	907	954	14	0	44	269	0	0
Grp Sat Flow(s),veh/h/ln	1774	1770	1787	1774	1770	1856	1208	0	1589	1485	0	0
Q Serve(g_s), s	2.3	25.3	25.3	22.2	42.6	42.9	0.0	0.0	2.4	16.4	0.0	0.0
Cycle Q Clear(g_c), s	2.3	25.3	25.3	22.2	42.6	42.9	1.6	0.0	2.4	18.8	0.0	0.0
Prop In Lane	1.00		0.24	1.00		0.02	1.00		0.98	0.36		0.60
Lane Grp Cap(c), veh/h	48	735	742	414	1100	1154	234	0	327	351	0	0
V/C Ratio(X)	0.79	0.69	0.69	0.91	0.82	0.83	0.06	0.00	0.13	0.77	0.00	0.00
Avail Cap(c_a), veh/h	66	735	742	547	1206	1265	313	0	430	440	0	0
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00	0.00
Uniform Delay (d), s/veh	51.8	25.7	25.7	40.0	15.7	15.8	34.4	0.0	34.7	41.3	0.0	0.0
Incr Delay (d2), s/veh	34.5	2.8	2.8	16.6	4.4	4.3	0.1	0.0	0.2	6.2	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.6	12.9	13.0	12.8	22.0	23.1	0.3	0.0	1.1	8.3	0.0	0.0
LnGrp Delay(d),s/veh	86.3	28.5	28.5	56.6	20.2	20.1	34.5	0.0	34.9	47.4	0.0	0.0
LnGrp LOS	F	C	C	E	C	C	C		C	D		
Approach Vol, veh/h		1062			2239			58			269	
Approach Delay, s/veh		30.6			26.3			34.8			47.4	
Approach LOS		C			C			C			D	
Timer	1	2	3	4	5	6	7	8				
Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	29.0	51.5		26.6	6.9	73.6		26.6				
Change Period (Y+Rc), s	4.0	7.0		4.6	4.0	* 7		* 4.6				
Max Green Setting (Gmax), s	33.0	43.0		28.4	4.0	* 73		* 29				
Max Q Clear Time (g_c+I1), s	24.2	27.3		20.8	4.3	44.9		4.4				
Green Ext Time (p_c), s	0.8	13.6		1.2	0.0	21.7		2.2				
Intersection Summary												
HCM 2010 Ctrl Delay				29.3								
HCM 2010 LOS				C								
Notes												

HCM 2010 Signalized Intersection Summary
4: West Bernardo Dr & Rancho Bernardo Rd



















3/7/2016

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	 	  		 	 		 	 		 	 	
Traffic Volume (veh/h)	44	668	79	566	1777	271	132	86	124	643	312	177
Future Volume (veh/h)	44	668	79	566	1777	271	132	86	124	643	312	177
Number	5	2	12	1	6	16	3	8	18	7	4	14
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		0.99	1.00		0.99	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1900	1863	1863	1863	1863	1863	1863	1863	1863	1900
Adj Flow Rate, veh/h	45	689	81	584	1832	279	136	89	128	663	322	182
Adj No. of Lanes	2	3	0	2	2	1	2	2	1	2	2	0
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	96	954	111	881	1589	701	213	391	578	764	595	329
Arrive On Green	0.03	0.21	0.21	0.26	0.45	0.45	0.06	0.11	0.11	0.22	0.27	0.27
Sat Flow, veh/h	3442	4619	539	3442	3539	1562	3442	3539	1561	3442	2197	1214
Grp Volume(v), veh/h	45	504	266	584	1832	279	136	89	128	663	258	246
Grp Sat Flow(s),veh/h/ln	1721	1695	1768	1721	1770	1562	1721	1770	1561	1721	1770	1642
Q Serve(g_s), s	1.3	14.5	14.7	15.9	46.9	12.5	4.0	2.4	2.5	19.4	13.0	13.4
Cycle Q Clear(g_c), s	1.3	14.5	14.7	15.9	46.9	12.5	4.0	2.4	2.5	19.4	13.0	13.4
Prop In Lane	1.00		0.30	1.00		1.00	1.00		1.00	1.00		0.74
Lane Grp Cap(c), veh/h	96	700	365	881	1589	701	213	391	578	764	479	444
V/C Ratio(X)	0.47	0.72	0.73	0.66	1.15	0.40	0.64	0.23	0.22	0.87	0.54	0.55
Avail Cap(c_a), veh/h	132	1139	594	881	1589	701	1124	1325	990	992	595	552
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	50.0	38.6	38.7	34.8	28.8	19.3	47.9	42.4	7.9	39.2	32.5	32.7
Incr Delay (d2), s/veh	3.5	1.4	2.8	1.9	76.5	0.4	3.2	0.3	0.2	6.7	0.9	1.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.7	6.9	7.4	7.8	39.6	5.5	2.0	1.2	1.4	9.9	6.5	6.2
LnGrp Delay(d),s/veh	53.5	40.0	41.5	36.7	105.2	19.7	51.0	42.7	8.1	45.8	33.5	33.8
LnGrp LOS	D	D	D	D	F	B	D	D	A	D	C	C
Approach Vol, veh/h		815			2695			353			1167	
Approach Delay, s/veh		41.3			81.5			33.3			40.6	
Approach LOS		D			F			C			D	
Timer	1	2	3	4	5	6	7	8				
Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	32.4	27.5	10.9	33.7	7.3	52.6	27.6	17.0				
Change Period (Y+Rc), s	5.7	* 5.9	4.4	5.4	4.4	5.7	4.4	5.4				
Max Green Setting (Gmax), s	15.6	* 35	34.1	35.1	4.0	46.9	30.1	39.1				
Max Q Clear Time (g_c+I1), s	17.9	16.7	6.0	15.4	3.3	48.9	21.4	4.5				
Green Ext Time (p_c), s	0.0	4.9	0.4	4.1	0.0	0.0	1.8	4.6				
Intersection Summary												
HCM 2010 Ctrl Delay			62.1									
HCM 2010 LOS			E									
Notes												

HCM 2010 Signalized Intersection Summary



















5: I-15 SB Ramps & Rancho Bernardo Rd

3/7/2016

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	789	589	0	1428	505	0	0	0	659	0	1230
Future Volume (veh/h)	0	789	589	0	1428	505	0	0	0	659	0	1230
Number	5	2	12	1	6	16				7	4	14
Initial Q (Qb), veh	0	0	0	0	0	0				0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00				1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00				1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	0	1863	1863	0	1863	1863				1863	0	1863
Adj Flow Rate, veh/h	0	811	633	0	1503	0				694	0	1295
Adj No. of Lanes	0	2	2	0	3	1				2	0	2
Peak Hour Factor	0.92	0.95	0.95	0.92	0.95	0.95				0.95	0.92	0.95
Percent Heavy Veh, %	0	2	2	0	2	2				2	0	2
Cap, veh/h	0	1546	1314	0	2320	657				1706	0	1381
Arrive On Green	0.00	0.42	0.42	0.00	0.55	0.00				0.50	0.00	0.50
Sat Flow, veh/h	0	3725	3167	0	5588	1583				3442	0	2787
Grp Volume(v), veh/h	0	811	633	0	1503	0				694	0	1295
Grp Sat Flow(s),veh/h/ln	0	1863	1583	0	1863	1583				1721	0	1393
Q Serve(g_s), s	0.0	22.8	20.5	0.0	26.3	0.0				17.8	0.0	61.3
Cycle Q Clear(g_c), s	0.0	22.8	20.5	0.0	26.3	0.0				17.8	0.0	61.3
Prop In Lane	0.00		1.00	0.00		1.00				1.00		1.00
Lane Grp Cap(c), veh/h	0	1546	1314	0	2320	657				1706	0	1381
V/C Ratio(X)	0.00	0.52	0.48	0.00	0.65	0.00				0.41	0.00	0.94
Avail Cap(c_a), veh/h	0	1546	1314	0	2320	657				1792	0	1451
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.33	1.33				1.00	1.00	1.00
Upstream Filter(I)	0.00	0.63	0.63	0.00	0.81	0.00				1.00	0.00	1.00
Uniform Delay (d), s/veh	0.0	30.6	29.9	0.0	24.2	0.0				22.3	0.0	33.3
Incr Delay (d2), s/veh	0.0	0.8	0.8	0.0	1.1	0.0				0.2	0.0	11.5
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0				0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.0	11.9	9.1	0.0	13.6	0.0				8.5	0.0	25.8
LnGrp Delay(d),s/veh	0.0	31.4	30.7	0.0	25.4	0.0				22.5	0.0	44.8
LnGrp LOS		C	C		C					C		D
Approach Vol, veh/h		1444			1503						1989	
Approach Delay, s/veh		31.1			25.4						37.0	
Approach LOS		C			C						D	
Timer	1	2	3	4	5	6	7	8				
Assigned Phs		2		4		6						
Phs Duration (G+Y+Rc), s		64.5		75.5		64.5						
Change Period (Y+Rc), s		6.4		6.1		6.4						
Max Green Setting (Gmax), s		54.6		72.9		54.6						
Max Q Clear Time (g_c+I1), s		24.8		63.3		28.3						
Green Ext Time (p_c), s		23.3		6.1		21.1						
Intersection Summary												
HCM 2010 Ctrl Delay			31.7									
HCM 2010 LOS			C									
Notes												























HCM 2010 Signalized Intersection Summary
 6: I-15 NB Ramps & Rancho Bernardo Rd

3/7/2016

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	843	606	0	1138	285	796	0	433	0	0	0
Future Volume (veh/h)	0	843	606	0	1138	285	796	0	433	0	0	0
Number	5	2	12	1	6	16	3	8	18			
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0			
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00			
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00			
Adj Sat Flow, veh/h/ln	0	1863	1863	0	1863	1863	1863	0	1863			
Adj Flow Rate, veh/h	0	897	0	0	1211	303	847	0	461			
Adj No. of Lanes	0	3	1	0	3	1	2	0	2			
Peak Hour Factor	0.92	0.94	0.94	0.92	0.94	0.94	0.94	0.92	0.94			
Percent Heavy Veh, %	0	2	2	0	2	2	2	0	2			
Cap, veh/h	0	3482	987	0	3169	987	990	0	801			
Arrive On Green	0.00	1.00	0.00	0.00	0.62	0.62	0.29	0.00	0.29			
Sat Flow, veh/h	0	5588	1583	0	5253	1583	3442	0	2787			
Grp Volume(v), veh/h	0	897	0	0	1211	303	847	0	461			
Grp Sat Flow(s),veh/h/ln	0	1863	1583	0	1695	1583	1721	0	1393			
Q Serve(g_s), s	0.0	0.0	0.0	0.0	16.5	12.5	32.6	0.0	19.8			
Cycle Q Clear(g_c), s	0.0	0.0	0.0	0.0	16.5	12.5	32.6	0.0	19.8			
Prop In Lane	0.00		1.00	0.00		1.00	1.00		1.00			
Lane Grp Cap(c), veh/h	0	3482	987	0	3169	987	990	0	801			
V/C Ratio(X)	0.00	0.26	0.00	0.00	0.38	0.31	0.86	0.00	0.58			
Avail Cap(c_a), veh/h	0	3482	987	0	3169	987	1423	0	1152			
HCM Platoon Ratio	1.00	2.00	2.00	1.00	1.00	1.00	1.00	1.00	1.00			
Upstream Filter(I)	0.00	0.84	0.00	0.00	1.00	1.00	1.00	0.00	1.00			
Uniform Delay (d), s/veh	0.0	0.0	0.0	0.0	13.1	12.3	47.1	0.0	42.6			
Incr Delay (d2), s/veh	0.0	0.2	0.0	0.0	0.4	0.8	3.7	0.0	0.7			
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0			
%ile BackOfQ(50%),veh/ln	0.0	0.0	0.0	0.0	7.7	5.7	16.0	0.0	7.7			
LnGrp Delay(d),s/veh	0.0	0.2	0.0	0.0	13.4	13.1	50.8	0.0	43.2			
LnGrp LOS		A			B	B	D		D			
Approach Vol, veh/h		897			1514			1308				
Approach Delay, s/veh		0.2			13.3			48.2				
Approach LOS		A			B			D				
Timer	1	2	3	4	5	6	7	8				
Assigned Phs		2				6		8				
Phs Duration (G+Y+Rc), s		93.6				93.6		46.4				
Change Period (Y+Rc), s		6.4				6.4		6.1				
Max Green Setting (Gmax), s		69.6				69.6		57.9				
Max Q Clear Time (g_c+I1), s		2.0				18.5		34.6				
Green Ext Time (p_c), s		30.3				26.9		5.7				
Intersection Summary												
HCM 2010 Ctrl Delay			22.4									
HCM 2010 LOS			C									
Notes												






















HCM 2010 Signalized Intersection Summary
 7: Bernardo Center Dr & Rancho Bernardo Rd

3/7/2016

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	321	598	301	163	848	85	267	188	109	185	247	120
Future Volume (veh/h)	321	598	301	163	848	85	267	188	109	185	247	120
Number	5	2	12	1	6	16	3	8	18	7	4	14
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		0.99	1.00		0.99	1.00		0.99
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1863	1863	1863	1900	1863	1863	1900	1863	1863	1863
Adj Flow Rate, veh/h	345	646	322	175	912	91	287	202	117	199	266	129
Adj No. of Lanes	2	2	1	2	2	0	2	2	0	2	2	1
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	433	1558	662	255	1202	120	367	402	222	282	562	441
Arrive On Green	0.12	0.42	0.42	0.07	0.37	0.37	0.11	0.18	0.18	0.08	0.16	0.16
Sat Flow, veh/h	3548	3725	1583	3442	3246	324	3442	2193	1214	3442	3539	1560
Grp Volume(v), veh/h	345	646	322	175	497	506	287	161	158	199	266	129
Grp Sat Flow(s),veh/h/ln	1774	1863	1583	1721	1770	1800	1721	1770	1637	1721	1770	1560
Q Serve(g_s), s	8.2	10.5	12.8	4.3	21.2	21.2	7.0	7.1	7.5	4.9	5.9	5.6
Cycle Q Clear(g_c), s	8.2	10.5	12.8	4.3	21.2	21.2	7.0	7.1	7.5	4.9	5.9	5.6
Prop In Lane	1.00		1.00	1.00		0.18	1.00		0.74	1.00		1.00
Lane Grp Cap(c), veh/h	433	1558	662	255	655	666	367	324	300	282	562	441
V/C Ratio(X)	0.80	0.41	0.49	0.69	0.76	0.76	0.78	0.50	0.53	0.70	0.47	0.29
Avail Cap(c_a), veh/h	543	1607	683	443	739	751	431	803	742	491	1642	917
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	36.8	17.7	18.3	38.9	23.8	23.8	37.5	31.6	31.8	38.6	33.0	24.3
Incr Delay (d2), s/veh	6.5	0.2	0.6	3.3	4.1	4.0	7.8	1.2	1.4	3.2	0.6	0.4
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	4.4	5.4	5.7	2.2	11.1	11.3	3.7	3.6	3.5	2.4	2.9	2.4
LnGrp Delay(d),s/veh	43.3	17.8	18.9	42.2	27.8	27.8	45.4	32.8	33.3	41.8	33.6	24.7
LnGrp LOS	D	B	B	D	C	C	D	C	C	D	C	C
Approach Vol, veh/h		1313			1178			606			594	
Approach Delay, s/veh		24.8			29.9			38.9			34.4	
Approach LOS		C			C			D			C	
Timer	1	2	3	4	5	6	7	8				
Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	10.8	42.3	13.6	19.6	14.9	38.1	11.5	21.7				
Change Period (Y+Rc), s	4.4	6.2	4.4	5.9	4.4	* 6.2	4.4	* 5.9				
Max Green Setting (Gmax), s	11.1	37.2	10.8	40.0	13.2	* 36	12.3	* 39				
Max Q Clear Time (g_c+I1), s	6.3	14.8	9.0	7.9	10.2	23.2	6.9	9.5				
Green Ext Time (p_c), s	0.2	12.6	0.2	4.1	0.4	8.7	0.3	4.1				
Intersection Summary												
HCM 2010 Ctrl Delay			30.3									
HCM 2010 LOS			C									
Notes												

HCM 2010 Signalized Intersection Summary
 8: West Bernardo Dr & Duenda Rd

3/7/2016

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	20	170	153	102	51	40	31	100	74	97	218	10
Future Volume (veh/h)	20	170	153	102	51	40	31	100	74	97	218	10
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.99	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1900	1863	1863	1863	1863	1863	1900	1863	1863	1900
Adj Flow Rate, veh/h	22	185	166	111	55	43	34	109	80	105	237	11
Adj No. of Lanes	1	1	0	1	1	1	1	2	0	1	2	0
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	464	235	211	189	198	169	54	278	189	136	634	29
Arrive On Green	0.26	0.26	0.26	0.11	0.11	0.11	0.03	0.14	0.14	0.08	0.18	0.18
Sat Flow, veh/h	1774	899	807	1774	1863	1583	1774	2018	1372	1774	3445	159
Grp Volume(v), veh/h	22	0	351	111	55	43	34	94	95	105	121	127
Grp Sat Flow(s),veh/h/ln	1774	0	1706	1774	1863	1583	1774	1770	1621	1774	1770	1835
Q Serve(g_s), s	0.4	0.0	9.2	2.9	1.3	1.2	0.9	2.3	2.6	2.8	2.9	2.9
Cycle Q Clear(g_c), s	0.4	0.0	9.2	2.9	1.3	1.2	0.9	2.3	2.6	2.8	2.9	2.9
Prop In Lane	1.00		0.47	1.00		1.00	1.00		0.85	1.00		0.09
Lane Grp Cap(c), veh/h	464	0	447	189	198	169	54	244	223	136	326	338
V/C Ratio(X)	0.05	0.00	0.79	0.59	0.28	0.25	0.63	0.39	0.42	0.77	0.37	0.38
Avail Cap(c_a), veh/h	703	0	676	777	816	694	185	739	676	370	923	957
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	13.2	0.0	16.4	20.4	19.7	19.7	23.0	18.8	18.9	21.7	17.1	17.1
Incr Delay (d2), s/veh	0.0	0.0	3.5	2.9	0.8	0.8	11.5	1.0	1.3	9.0	0.7	0.7
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.2	0.0	4.7	1.5	0.7	0.6	0.6	1.2	1.2	1.7	1.5	1.5
LnGrp Delay(d),s/veh	13.3	0.0	19.9	23.3	20.5	20.5	34.5	19.8	20.2	30.7	17.8	17.8
LnGrp LOS	B		B	C	C	C	C	B	C	C	B	B
Approach Vol, veh/h		373			209			223			353	
Approach Delay, s/veh		19.6			22.0			22.2			21.7	
Approach LOS		B			C			C			C	
Timer	1	2	3	4	5	6	7	8				
Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	8.7	11.6		17.5	6.5	13.8		10.1				
Change Period (Y+Rc), s	5.0	5.0		5.0	5.0	5.0		5.0				
Max Green Setting (Gmax), s	10.0	20.0		19.0	5.0	25.0		21.0				
Max Q Clear Time (g_c+I1), s	4.8	4.6		11.2	2.9	4.9		4.9				
Green Ext Time (p_c), s	0.1	2.1		1.4	0.0	2.3		0.6				
Intersection Summary												
HCM 2010 Ctrl Delay			21.1									
HCM 2010 LOS			C									

HCM 2010 Signalized Intersection Summary

9: West Bernardo Dr & Via Del Campo

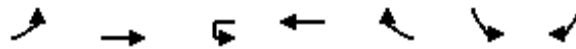
3/7/2016



Movement	EBL	EBT	WBT	WBR	SBL	SBR		
Lane Configurations								
Traffic Volume (veh/h)	401	514	273	150	47	49		
Future Volume (veh/h)	401	514	273	150	47	49		
Number	5	2	6	16	7	14		
Initial Q (Qb), veh	0	0	0	0	0	0		
Ped-Bike Adj(A_pbT)	1.00			1.00	1.00	1.00		
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00		
Adj Sat Flow, veh/h/ln	1863	1863	1863	1900	1863	1863		
Adj Flow Rate, veh/h	472	605	321	176	55	58		
Adj No. of Lanes	1	2	2	0	1	1		
Peak Hour Factor	0.85	0.85	0.85	0.85	0.85	0.85		
Percent Heavy Veh, %	2	2	2	2	2	2		
Cap, veh/h	938	2819	423	227	107	95		
Arrive On Green	0.53	0.80	0.19	0.19	0.06	0.06		
Sat Flow, veh/h	1774	3632	2318	1193	1774	1583		
Grp Volume(v), veh/h	472	605	254	243	55	58		
Grp Sat Flow(s),veh/h/ln	1774	1770	1770	1648	1774	1583		
Q Serve(g_s), s	12.2	3.0	9.7	10.0	2.1	2.5		
Cycle Q Clear(g_c), s	12.2	3.0	9.7	10.0	2.1	2.5		
Prop In Lane	1.00			0.72	1.00	1.00		
Lane Grp Cap(c), veh/h	938	2819	337	314	107	95		
V/C Ratio(X)	0.50	0.21	0.75	0.78	0.51	0.61		
Avail Cap(c_a), veh/h	938	2819	460	428	576	514		
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00		
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00		
Uniform Delay (d), s/veh	10.8	1.8	27.2	27.4	32.4	32.6		
Incr Delay (d2), s/veh	0.4	0.2	4.7	6.0	3.8	6.1		
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0		
%ile BackOfQ(50%),veh/ln	6.0	1.5	5.2	5.0	1.2	2.4		
LnGrp Delay(d),s/veh	11.2	2.0	31.9	33.4	36.2	38.8		
LnGrp LOS	B	A	C	C	D	D		
Approach Vol, veh/h		1077	497		113			
Approach Delay, s/veh		6.0	32.6		37.5			
Approach LOS		A	C		D			
Timer	1	2	3	4	5	6	7	8
Assigned Phs		2		4	5	6		
Phs Duration (G+Y+Rc), s		62.2		9.0	43.2	19.0		
Change Period (Y+Rc), s		5.5		* 4.7	5.5	* 5.5		
Max Green Setting (Gmax), s		56.7		* 23	33.8	* 19		
Max Q Clear Time (g_c+I1), s		5.0		4.5	14.2	12.0		
Green Ext Time (p_c), s		6.2		0.3	5.3	1.5		
Intersection Summary								
HCM 2010 Ctrl Delay			16.0					
HCM 2010 LOS			B					
Notes								

HCM 2010 Signalized Intersection Summary
 10: Bernardo Center Dr & West Bernardo Dr





















3/7/2016



Movement	EBL	EBT	WBU	WBT	WBR	SBL	SBR	
Lane Configurations								
Traffic Volume (veh/h)	623	450	0	484	704	58	189	
Future Volume (veh/h)	623	450	0	484	704	58	189	
Number	1	6		2	12	3	18	
Initial Q (Qb), veh	0	0		0	0	0	0	
Ped-Bike Adj(A_pbT)	1.00				0.97	1.00	1.00	
Parking Bus, Adj	1.00	1.00		1.00	1.00	1.00	1.00	
Adj Sat Flow, veh/h/ln	1863	1863		1863	1863	1863	1863	
Adj Flow Rate, veh/h	700	506		544	791	65	212	
Adj No. of Lanes	2	2		1	2	1	1	
Peak Hour Factor	0.89	0.89		0.89	0.89	0.89	0.89	
Percent Heavy Veh, %	2	2		2	2	2	2	
Cap, veh/h	856	2590		789	1522	237	605	
Arrive On Green	0.25	0.73		0.42	0.42	0.13	0.13	
Sat Flow, veh/h	3442	3632		1863	2716	1774	1583	
Grp Volume(v), veh/h	700	506		544	791	65	212	
Grp Sat Flow(s),veh/h/ln	1721	1770		1863	1358	1774	1583	
Q Serve(g_s), s	14.1	3.3		17.5	13.4	2.4	7.0	
Cycle Q Clear(g_c), s	14.1	3.3		17.5	13.4	2.4	7.0	
Prop In Lane	1.00				1.00	1.00	1.00	
Lane Grp Cap(c), veh/h	856	2590		789	1522	237	605	
V/C Ratio(X)	0.82	0.20		0.69	0.52	0.27	0.35	
Avail Cap(c_a), veh/h	1337	3333		1116	2000	795	1104	
HCM Platoon Ratio	1.00	1.00		1.00	1.00	1.00	1.00	
Upstream Filter(I)	1.00	1.00		1.00	1.00	1.00	1.00	
Uniform Delay (d), s/veh	26.1	3.1		17.3	10.2	28.7	16.2	
Incr Delay (d2), s/veh	2.3	0.0		1.1	0.3	0.6	0.3	
Initial Q Delay(d3),s/veh	0.0	0.0		0.0	0.0	0.0	0.0	
%ile BackOfQ(50%),veh/ln	7.0	1.6		9.2	5.0	1.2	3.1	
LnGrp Delay(d),s/veh	28.4	3.1		18.4	10.5	29.3	16.6	
LnGrp LOS	C	A		B	B	C	B	
Approach Vol, veh/h		1206		1335		277		
Approach Delay, s/veh		17.8		13.7		19.5		
Approach LOS		B		B		B		
Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2				6		8
Phs Duration (G+Y+Rc), s	22.7	36.7				59.4		14.2
Change Period (Y+Rc), s	4.4	5.5				* 5.5		4.4
Max Green Setting (Gmax), s	28.6	44.1				* 69		33.0
Max Q Clear Time (g_c+I1), s	16.1	19.5				5.3		9.0
Green Ext Time (p_c), s	2.2	11.7				15.4		0.8
Intersection Summary								
HCM 2010 Ctrl Delay				16.0				
HCM 2010 LOS				B				
Notes								

HCM 2010 Signalized Intersection Summary
 1: Camino San Bernardo & Rancho Bernardo Rd

3/7/2016

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	1	952	208	365	793	0	109	0	318	3	0	0
Future Volume (veh/h)	1	952	208	365	793	0	109	0	318	3	0	0
Number	5	2	12	1	6	16	3	8	18	7	4	14
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.99	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1900	1863	1863	1900	1863	1863	1900	1900	1863	1900
Adj Flow Rate, veh/h	1	992	217	380	826	0	114	0	331	3	0	0
Adj No. of Lanes	1	2	0	2	2	0	1	2	0	0	1	0
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	2	1219	266	465	1970	0	523	446	398	151	0	0
Arrive On Green	0.00	0.42	0.42	0.14	0.56	0.00	0.25	0.00	0.25	0.25	0.00	0.00
Sat Flow, veh/h	1774	2882	629	3442	3632	0	1412	1770	1581	223	0	0
Grp Volume(v), veh/h	1	608	601	380	826	0	114	0	331	3	0	0
Grp Sat Flow(s),veh/h/ln	1774	1770	1741	1721	1770	0	1412	1770	1581	223	0	0
Q Serve(g_s), s	0.0	23.1	23.2	8.2	10.3	0.0	0.0	0.0	15.1	0.2	0.0	0.0
Cycle Q Clear(g_c), s	0.0	23.1	23.2	8.2	10.3	0.0	3.9	0.0	15.1	15.3	0.0	0.0
Prop In Lane	1.00		0.36	1.00		0.00	1.00		1.00	1.00		0.00
Lane Grp Cap(c), veh/h	2	748	736	465	1970	0	523	446	398	151	0	0
V/C Ratio(X)	0.41	0.81	0.82	0.82	0.42	0.00	0.22	0.00	0.83	0.02	0.00	0.00
Avail Cap(c_a), veh/h	116	824	810	496	1970	0	704	673	601	285	0	0
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	0.00	1.00	0.00	1.00	1.00	0.00	0.00
Uniform Delay (d), s/veh	38.1	19.4	19.4	32.1	9.8	0.0	22.8	0.0	27.0	34.2	0.0	0.0
Incr Delay (d2), s/veh	84.2	5.8	6.0	9.8	0.1	0.0	0.2	0.0	6.1	0.1	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.1	12.4	12.2	4.5	5.0	0.0	1.9	0.0	7.2	0.1	0.0	0.0
LnGrp Delay(d),s/veh	122.3	25.1	25.4	41.8	9.9	0.0	23.0	0.0	33.1	34.3	0.0	0.0
LnGrp LOS	F	C	C	D	A		C		C	C		
Approach Vol, veh/h		1210			1206			445				3
Approach Delay, s/veh		25.3			20.0			30.5				34.3
Approach LOS		C			B			C				C
Timer	1	2	3	4	5	6	7	8				
Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	14.3	37.8		24.2	4.1	48.0		24.2				
Change Period (Y+Rc), s	4.0	5.5		5.0	4.0	5.5		5.0				
Max Green Setting (Gmax), s	11.0	35.5		29.0	5.0	41.5		29.0				
Max Q Clear Time (g_c+I1), s	10.2	25.2		17.3	2.0	12.3		17.1				
Green Ext Time (p_c), s	0.1	7.1		1.8	0.0	15.8		1.8				
Intersection Summary												
HCM 2010 Ctrl Delay				23.9								
HCM 2010 LOS				C								

HCM 2010 Signalized Intersection Summary




















2: Via Del Campo & Rancho Bernardo Rd

3/7/2016

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	6	1341	49	52	995	1	276	0	349	1	0	0
Future Volume (veh/h)	6	1341	49	52	995	1	276	0	349	1	0	0
Number	5	2	12	1	6	16	3	8	18	7	4	14
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		0.98	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1900	1863	1863	1900	1900	1863	1863	1900	1863	1900
Adj Flow Rate, veh/h	7	1474	54	57	1093	1	303	0	384	1	0	0
Adj No. of Lanes	1	2	0	1	2	0	0	1	1	0	1	0
Peak Hour Factor	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	13	1688	62	73	1881	2	544	0	444	225	0	0
Arrive On Green	0.01	0.48	0.48	0.04	0.52	0.52	0.28	0.00	0.28	0.28	0.00	0.00
Sat Flow, veh/h	1774	3483	127	1774	3628	3	1600	0	1558	480	0	0
Grp Volume(v), veh/h	7	748	780	57	533	561	303	0	384	1	0	0
Grp Sat Flow(s),veh/h/ln	1774	1770	1840	1774	1770	1862	1600	0	1558	480	0	0
Q Serve(g_s), s	0.3	30.8	31.0	2.6	17.0	17.0	0.0	0.0	19.1	0.1	0.0	0.0
Cycle Q Clear(g_c), s	0.3	30.8	31.0	2.6	17.0	17.0	12.0	0.0	19.1	12.1	0.0	0.0
Prop In Lane	1.00		0.07	1.00		0.00	1.00		1.00	1.00		0.00
Lane Grp Cap(c), veh/h	13	858	892	73	917	965	544	0	444	225	0	0
V/C Ratio(X)	0.55	0.87	0.88	0.79	0.58	0.58	0.56	0.00	0.87	0.00	0.00	0.00
Avail Cap(c_a), veh/h	87	892	928	89	917	965	646	0	557	301	0	0
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00	0.00
Uniform Delay (d), s/veh	40.4	18.8	18.8	38.8	13.6	13.6	25.2	0.0	27.7	30.4	0.0	0.0
Incr Delay (d2), s/veh	32.0	9.2	9.1	30.3	0.9	0.9	0.9	0.0	11.3	0.0	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.3	17.1	17.9	1.9	8.4	8.8	6.0	0.0	9.5	0.0	0.0	0.0
LnGrp Delay(d),s/veh	72.4	27.9	28.0	69.1	14.5	14.4	26.1	0.0	39.0	30.4	0.0	0.0
LnGrp LOS	E	C	C	E	B	B	C		D	C		
Approach Vol, veh/h		1535			1151			687				1
Approach Delay, s/veh		28.2			17.2			33.3				30.4
Approach LOS		C			B			C				C
Timer	1	2	3	4	5	6	7	8				
Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	7.7	45.5		28.5	5.0	48.2		28.5				
Change Period (Y+Rc), s	4.4	5.9		* 5.2	4.4	* 5.9		5.2				
Max Green Setting (Gmax), s	4.1	41.2		* 30	4.0	* 42		29.2				
Max Q Clear Time (g_c+I1), s	4.6	33.0		14.1	2.3	19.0		21.1				
Green Ext Time (p_c), s	0.0	6.6		3.0	0.0	16.9		2.1				
Intersection Summary												
HCM 2010 Ctrl Delay				25.5								
HCM 2010 LOS				C								
Notes												

HCM 2010 Signalized Intersection Summary
 3: Project Dwy/Matinal Rd & Rancho Bernardo Rd
























3/7/2016

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	109	1477	25	79	862	48	102	9	315	41	2	105
Future Volume (veh/h)	109	1477	25	79	862	48	102	9	315	41	2	105
Number	5	2	12	1	6	16	3	8	18	7	4	14
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		0.99
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1900	1863	1863	1900	1863	1863	1900	1900	1863	1900
Adj Flow Rate, veh/h	121	1641	28	88	958	53	113	10	350	46	2	117
Adj No. of Lanes	1	2	0	1	2	0	1	1	0	0	1	0
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	153	1679	29	101	1510	84	285	13	453	85	29	151
Arrive On Green	0.09	0.47	0.47	0.06	0.44	0.44	0.29	0.29	0.29	0.29	0.29	0.29
Sat Flow, veh/h	1774	3561	61	1774	3410	189	1268	44	1546	112	100	515
Grp Volume(v), veh/h	121	814	855	88	497	514	113	0	360	165	0	0
Grp Sat Flow(s),veh/h/ln	1774	1770	1852	1774	1770	1829	1268	0	1590	726	0	0
Q Serve(g_s), s	5.9	39.4	39.7	4.3	19.1	19.1	0.0	0.0	18.1	4.1	0.0	0.0
Cycle Q Clear(g_c), s	5.9	39.4	39.7	4.3	19.1	19.1	14.4	0.0	18.1	22.2	0.0	0.0
Prop In Lane	1.00		0.03	1.00		0.10	1.00		0.97	0.28		0.71
Lane Grp Cap(c), veh/h	153	835	873	101	783	810	285	0	466	265	0	0
V/C Ratio(X)	0.79	0.98	0.98	0.87	0.63	0.63	0.40	0.00	0.77	0.62	0.00	0.00
Avail Cap(c_a), veh/h	243	835	873	101	783	810	328	0	521	303	0	0
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00	0.00
Uniform Delay (d), s/veh	39.3	22.6	22.7	41.0	18.9	18.9	27.0	0.0	28.3	28.2	0.0	0.0
Incr Delay (d2), s/veh	8.9	25.2	25.2	50.4	1.7	1.6	0.9	0.0	6.4	3.1	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	3.2	24.8	26.3	3.5	9.6	9.9	2.5	0.0	8.7	4.1	0.0	0.0
LnGrp Delay(d),s/veh	48.2	47.8	47.9	91.4	20.6	20.5	27.9	0.0	34.6	31.4	0.0	0.0
LnGrp LOS	D	D	D	F	C	C	C		C	C		
Approach Vol, veh/h		1790			1099			473			165	
Approach Delay, s/veh		47.9			26.2			33.0			31.4	
Approach LOS		D			C			C			C	
Timer	1	2	3	4	5	6	7	8				
Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	9.0	48.3		30.3	11.5	45.8		30.3				
Change Period (Y+Rc), s	4.0	7.0		4.6	4.0	* 7		* 4.6				
Max Green Setting (Gmax), s	5.0	41.3		28.1	12.0	* 35		* 29				
Max Q Clear Time (g_c+I1), s	6.3	41.7		24.2	7.9	21.1		20.1				
Green Ext Time (p_c), s	0.0	0.0		1.5	0.1	11.9		2.7				
Intersection Summary												
HCM 2010 Ctrl Delay			38.4									
HCM 2010 LOS			D									
Notes												

HCM 2010 Signalized Intersection Summary

4: West Bernardo Dr & Rancho Bernardo Rd



















3/7/2016

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	167	1689	52	176	927	477	143	322	629	327	66	68
Future Volume (veh/h)	167	1689	52	176	927	477	143	322	629	327	66	68
Number	5	2	12	1	6	16	3	8	18	7	4	14
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1900	1863	1863	1863	1863	1863	1863	1863	1863	1900
Adj Flow Rate, veh/h	170	1723	53	180	946	487	146	329	642	334	67	69
Adj No. of Lanes	2	3	0	2	2	1	2	2	1	2	2	0
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	226	1643	51	396	1367	610	214	921	593	414	563	504
Arrive On Green	0.07	0.32	0.32	0.12	0.39	0.39	0.06	0.26	0.26	0.12	0.32	0.32
Sat Flow, veh/h	3442	5069	156	3442	3539	1580	3442	3539	1578	3442	1770	1583
Grp Volume(v), veh/h	170	1152	624	180	946	487	146	329	642	334	67	69
Grp Sat Flow(s),veh/h/ln	1721	1695	1835	1721	1770	1580	1721	1770	1578	1721	1770	1583
Q Serve(g_s), s	5.8	38.5	38.5	5.8	26.6	32.5	4.9	9.0	24.2	11.2	3.2	3.7
Cycle Q Clear(g_c), s	5.8	38.5	38.5	5.8	26.6	32.5	4.9	9.0	24.2	11.2	3.2	3.7
Prop In Lane	1.00		0.08	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	226	1099	595	396	1367	610	214	921	593	414	563	504
V/C Ratio(X)	0.75	1.05	1.05	0.45	0.69	0.80	0.68	0.36	1.08	0.81	0.12	0.14
Avail Cap(c_a), veh/h	267	1099	595	498	1391	621	988	1165	702	872	563	504
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	54.5	40.2	40.2	49.1	30.6	32.4	54.5	35.8	21.1	50.9	28.7	28.9
Incr Delay (d2), s/veh	9.6	40.8	50.5	0.8	1.5	7.2	3.8	0.2	58.9	3.8	0.1	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	3.0	24.1	27.7	2.8	13.3	15.4	2.5	4.4	24.0	5.6	1.6	1.6
LnGrp Delay(d),s/veh	64.1	81.0	90.7	49.9	32.0	39.5	58.3	36.1	79.9	54.7	28.8	29.0
LnGrp LOS	E	F	F	D	C	D	E	D	F	D	C	C
Approach Vol, veh/h		1946			1613			1117			470	
Approach Delay, s/veh		82.6			36.3			64.2			47.2	
Approach LOS		F			D			E			D	
Timer	1	2	3	4	5	6	7	8				
Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	19.4	44.4	11.8	43.2	12.2	51.6	18.7	36.3				
Change Period (Y+Rc), s	5.7	* 5.9	4.4	5.4	4.4	5.7	4.4	5.4				
Max Green Setting (Gmax), s	17.2	* 39	34.1	35.1	9.2	46.7	30.1	39.1				
Max Q Clear Time (g_c+I1), s	7.8	40.5	6.9	5.7	7.8	34.5	13.2	26.2				
Green Ext Time (p_c), s	5.9	0.0	0.5	6.3	0.1	7.1	1.1	4.4				
Intersection Summary												
HCM 2010 Ctrl Delay			60.9									
HCM 2010 LOS			E									
Notes												

HCM 2010 Signalized Intersection Summary



















5: I-15 SB Ramps & Rancho Bernardo Rd

3/7/2016

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	1677	966	0	1112	559	0	0	0	409	0	430
Future Volume (veh/h)	0	1677	966	0	1112	559	0	0	0	409	0	430
Number	5	2	12	1	6	16				7	4	14
Initial Q (Qb), veh	0	0	0	0	0	0				0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00				1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00				1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	0	1863	1863	0	1863	1863				1863	0	1863
Adj Flow Rate, veh/h	0	2224	688	0	1158	0				426	0	448
Adj No. of Lanes	0	3	1	0	3	1				2	0	2
Peak Hour Factor	0.92	0.96	0.96	0.92	0.96	0.96				0.96	0.92	0.96
Percent Heavy Veh, %	0	2	2	0	2	2				2	0	2
Cap, veh/h	0	4045	1146	0	4045	1146				643	0	521
Arrive On Green	0.00	0.72	0.72	0.00	1.00	0.00				0.19	0.00	0.19
Sat Flow, veh/h	0	5588	1583	0	5588	1583				3442	0	2787
Grp Volume(v), veh/h	0	2224	688	0	1158	0				426	0	448
Grp Sat Flow(s),veh/h/ln	0	1863	1583	0	1863	1583				1721	0	1393
Q Serve(g_s), s	0.0	25.6	29.7	0.0	0.0	0.0				16.1	0.0	21.8
Cycle Q Clear(g_c), s	0.0	25.6	29.7	0.0	0.0	0.0				16.1	0.0	21.8
Prop In Lane	0.00		1.00	0.00		1.00				1.00		1.00
Lane Grp Cap(c), veh/h	0	4045	1146	0	4045	1146				643	0	521
V/C Ratio(X)	0.00	0.55	0.60	0.00	0.29	0.00				0.66	0.00	0.86
Avail Cap(c_a), veh/h	0	4045	1146	0	4045	1146				784	0	635
HCM Platoon Ratio	1.00	1.00	1.00	1.00	2.00	2.00				1.00	1.00	1.00
Upstream Filter(I)	0.00	0.12	0.12	0.00	0.85	0.00				1.00	0.00	1.00
Uniform Delay (d), s/veh	0.0	8.9	9.4	0.0	0.0	0.0				52.8	0.0	55.1
Incr Delay (d2), s/veh	0.0	0.1	0.3	0.0	0.2	0.0				1.5	0.0	9.9
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0				0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.0	13.0	12.9	0.0	0.1	0.0				7.8	0.0	9.1
LnGrp Delay(d),s/veh	0.0	8.9	9.7	0.0	0.2	0.0				54.4	0.0	65.0
LnGrp LOS		A	A		A					D		E
Approach Vol, veh/h		2912			1158						874	
Approach Delay, s/veh		9.1			0.2						59.8	
Approach LOS		A			A						E	
Timer	1	2	3	4	5	6	7	8				
Assigned Phs		2		4		6						
Phs Duration (G+Y+Rc), s		107.7		32.3		107.7						
Change Period (Y+Rc), s		6.4		6.1		6.4						
Max Green Setting (Gmax), s		95.6		31.9		95.6						
Max Q Clear Time (g_c+I1), s		31.7		23.8		2.0						
Green Ext Time (p_c), s		56.9		2.4		79.3						
Intersection Summary												
HCM 2010 Ctrl Delay			16.0									
HCM 2010 LOS			B									
Notes												























HCM 2010 Signalized Intersection Summary
 6: I-15 NB Ramps & Rancho Bernardo Rd

3/7/2016

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	922	1164	0	994	487	678	0	432	0	0	0
Future Volume (veh/h)	0	922	1164	0	994	487	678	0	432	0	0	0
Number	5	2	12	1	6	16	3	8	18			
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0			
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00			
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00			
Adj Sat Flow, veh/h/ln	0	1863	1863	0	1863	1863	1863	0	1863			
Adj Flow Rate, veh/h	0	981	0	0	1057	518	721	0	460			
Adj No. of Lanes	0	3	1	0	3	1	2	0	2			
Peak Hour Factor	0.92	0.94	0.94	0.92	0.94	0.94	0.94	0.92	0.94			
Percent Heavy Veh, %	0	2	2	0	2	2	2	0	2			
Cap, veh/h	0	3701	1049	0	3368	1049	855	0	692			
Arrive On Green	0.00	1.00	0.00	0.00	0.66	0.66	0.25	0.00	0.25			
Sat Flow, veh/h	0	5588	1583	0	5253	1583	3442	0	2787			
Grp Volume(v), veh/h	0	981	0	0	1057	518	721	0	460			
Grp Sat Flow(s),veh/h/ln	0	1863	1583	0	1695	1583	1721	0	1393			
Q Serve(g_s), s	0.0	0.0	0.0	0.0	12.4	23.0	27.9	0.0	20.8			
Cycle Q Clear(g_c), s	0.0	0.0	0.0	0.0	12.4	23.0	27.9	0.0	20.8			
Prop In Lane	0.00		1.00	0.00		1.00	1.00		1.00			
Lane Grp Cap(c), veh/h	0	3701	1049	0	3368	1049	855	0	692			
V/C Ratio(X)	0.00	0.27	0.00	0.00	0.31	0.49	0.84	0.00	0.66			
Avail Cap(c_a), veh/h	0	3701	1049	0	3368	1049	1251	0	1013			
HCM Platoon Ratio	1.00	1.67	1.67	1.00	1.00	1.00	1.00	1.00	1.00			
Upstream Filter(I)	0.00	0.73	0.00	0.00	1.00	1.00	1.00	0.00	1.00			
Uniform Delay (d), s/veh	0.0	0.0	0.0	0.0	10.1	11.9	50.0	0.0	47.4			
Incr Delay (d2), s/veh	0.0	0.1	0.0	0.0	0.2	1.7	3.6	0.0	1.1			
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0			
%ile BackOfQ(50%),veh/ln	0.0	0.0	0.0	0.0	5.9	10.4	13.6	0.0	8.1			
LnGrp Delay(d),s/veh	0.0	0.1	0.0	0.0	10.3	13.5	53.6	0.0	48.5			
LnGrp LOS		A			B	B	D		D			
Approach Vol, veh/h		981			1575			1181				
Approach Delay, s/veh		0.1			11.4			51.6				
Approach LOS		A			B			D				
Timer	1	2	3	4	5	6	7	8				
Assigned Phs		2				6		8				
Phs Duration (G+Y+Rc), s		99.1				99.1		40.9				
Change Period (Y+Rc), s		6.4				6.4		6.1				
Max Green Setting (Gmax), s		76.6				76.6		50.9				
Max Q Clear Time (g_c+I1), s		2.0				25.0		29.9				
Green Ext Time (p_c), s		33.1				28.2		4.9				
Intersection Summary												
HCM 2010 Ctrl Delay			21.1									
HCM 2010 LOS			C									
Notes												

HCM 2010 Signalized Intersection Summary
 7: Bernardo Center Dr & Rancho Bernardo Rd






















3/7/2016

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	258	689	307	123	637	145	433	465	247	173	276	101
Future Volume (veh/h)	258	689	307	123	637	145	433	465	247	173	276	101
Number	5	2	12	1	6	16	3	8	18	7	4	14
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.99	1.00		0.99	1.00		1.00	1.00		0.98
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1863	1863	1863	1900	1863	1863	1900	1863	1863	1863
Adj Flow Rate, veh/h	272	725	323	129	671	153	456	489	260	182	291	106
Adj No. of Lanes	2	2	1	2	2	0	2	2	0	2	2	1
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	342	1316	552	194	894	204	532	664	351	256	767	488
Arrive On Green	0.10	0.35	0.35	0.06	0.31	0.31	0.15	0.30	0.30	0.07	0.22	0.22
Sat Flow, veh/h	3548	3725	1563	3442	2856	651	3442	2236	1183	3442	3539	1549
Grp Volume(v), veh/h	272	725	323	129	415	409	456	386	363	182	291	106
Grp Sat Flow(s),veh/h/ln	1774	1863	1563	1721	1770	1738	1721	1770	1650	1721	1770	1549
Q Serve(g_s), s	7.2	14.9	16.1	3.5	20.1	20.1	12.3	18.7	18.9	4.9	6.7	4.8
Cycle Q Clear(g_c), s	7.2	14.9	16.1	3.5	20.1	20.1	12.3	18.7	18.9	4.9	6.7	4.8
Prop In Lane	1.00		1.00	1.00		0.37	1.00		0.72	1.00		1.00
Lane Grp Cap(c), veh/h	342	1316	552	194	554	544	532	525	490	256	767	488
V/C Ratio(X)	0.79	0.55	0.58	0.67	0.75	0.75	0.86	0.74	0.74	0.71	0.38	0.22
Avail Cap(c_a), veh/h	361	1391	584	249	626	614	599	850	793	412	1485	803
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	42.1	24.7	25.1	44.1	29.4	29.4	39.3	30.2	30.2	43.1	31.9	24.1
Incr Delay (d2), s/veh	11.1	0.4	1.4	4.4	4.4	4.6	10.9	2.0	2.2	3.7	0.3	0.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	4.0	7.7	7.1	1.8	10.5	10.3	6.6	9.4	8.9	2.5	3.3	2.1
LnGrp Delay(d),s/veh	53.3	25.2	26.5	48.5	33.8	34.0	50.1	32.2	32.4	46.8	32.2	24.4
LnGrp LOS	D	C	C	D	C	C	D	C	C	D	C	C
Approach Vol, veh/h		1320			953			1205			579	
Approach Delay, s/veh		31.3			35.9			39.1			35.3	
Approach LOS		C			D			D			D	
Timer	1	2	3	4	5	6	7	8				
Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	9.8	39.9	19.1	26.5	13.6	36.0	11.5	34.2				
Change Period (Y+Rc), s	4.4	6.2	4.4	5.9	4.4	* 6.2	4.4	* 5.9				
Max Green Setting (Gmax), s	6.9	35.6	16.6	40.0	9.7	* 34	11.4	* 46				
Max Q Clear Time (g_c+I1), s	5.5	18.1	14.3	8.7	9.2	22.1	6.9	20.9				
Green Ext Time (p_c), s	0.0	10.3	0.4	7.8	0.1	7.7	0.2	7.3				
Intersection Summary												
HCM 2010 Ctrl Delay			35.2									
HCM 2010 LOS			D									
Notes												

HCM 2010 Signalized Intersection Summary

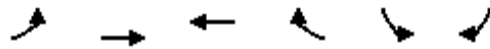
8: West Bernardo Dr & Duenda Rd

3/7/2016

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	21	131	133	73	70	63	71	147	90	106	202	12
Future Volume (veh/h)	21	131	133	73	70	63	71	147	90	106	202	12
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.98	1.00		1.00	1.00		1.00	1.00		0.98
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1900	1863	1863	1863	1863	1863	1900	1863	1863	1900
Adj Flow Rate, veh/h	24	147	149	82	79	71	80	165	101	119	227	13
Adj No. of Lanes	1	1	0	1	1	1	1	2	0	1	2	0
Peak Hour Factor	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	419	199	201	169	177	150	102	349	203	155	653	37
Arrive On Green	0.24	0.24	0.24	0.10	0.10	0.10	0.06	0.16	0.16	0.09	0.19	0.19
Sat Flow, veh/h	1774	842	853	1774	1863	1583	1774	2158	1253	1774	3400	193
Grp Volume(v), veh/h	24	0	296	82	79	71	80	134	132	119	117	123
Grp Sat Flow(s),veh/h/ln	1774	0	1695	1774	1863	1583	1774	1770	1642	1774	1770	1823
Q Serve(g_s), s	0.5	0.0	7.7	2.1	1.9	2.0	2.1	3.3	3.5	3.1	2.7	2.8
Cycle Q Clear(g_c), s	0.5	0.0	7.7	2.1	1.9	2.0	2.1	3.3	3.5	3.1	2.7	2.8
Prop In Lane	1.00		0.50	1.00		1.00	1.00		0.76	1.00		0.11
Lane Grp Cap(c), veh/h	419	0	400	169	177	150	102	286	266	155	340	350
V/C Ratio(X)	0.06	0.00	0.74	0.49	0.45	0.47	0.79	0.47	0.50	0.77	0.35	0.35
Avail Cap(c_a), veh/h	856	0	818	670	704	598	335	668	620	410	743	765
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	14.1	0.0	16.8	20.5	20.4	20.4	22.2	18.1	18.2	21.3	16.7	16.7
Incr Delay (d2), s/veh	0.1	0.0	2.7	2.2	1.8	2.3	12.5	1.2	1.4	7.7	0.6	0.6
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.2	0.0	3.9	1.1	1.1	1.0	1.4	1.7	1.7	1.9	1.4	1.5
LnGrp Delay(d),s/veh	14.2	0.0	19.5	22.6	22.1	22.7	34.7	19.3	19.6	29.0	17.3	17.3
LnGrp LOS	B		B	C	C	C	C	B	B	C	B	B
Approach Vol, veh/h		320			232			346			359	
Approach Delay, s/veh		19.1			22.5			23.0			21.2	
Approach LOS		B			C			C			C	
Timer	1	2	3	4	5	6	7	8				
Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	9.2	12.7		16.2	7.7	14.1		9.5				
Change Period (Y+Rc), s	5.0	5.0		5.0	5.0	5.0		5.0				
Max Green Setting (Gmax), s	11.0	18.0		23.0	9.0	20.0		18.0				
Max Q Clear Time (g_c+I1), s	5.1	5.5		9.7	4.1	4.8		4.1				
Green Ext Time (p_c), s	0.1	2.2		1.6	0.1	2.4		0.7				
Intersection Summary												
HCM 2010 Ctrl Delay			21.4									
HCM 2010 LOS			C									

HCM 2010 Signalized Intersection Summary
 9: West Bernardo Dr & Via Del Campo

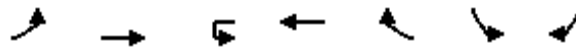
3/7/2016



Movement	EBL	EBT	WBT	WBR	SBL	SBR		
Lane Configurations								
Traffic Volume (veh/h)	40	402	438	38	148	380		
Future Volume (veh/h)	40	402	438	38	148	380		
Number	5	2	6	16	7	14		
Initial Q (Qb), veh	0	0	0	0	0	0		
Ped-Bike Adj(A_pbT)	1.00			1.00	1.00	1.00		
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00		
Adj Sat Flow, veh/h/ln	1863	1863	1863	1900	1863	1863		
Adj Flow Rate, veh/h	47	467	509	44	172	442		
Adj No. of Lanes	1	2	2	0	1	1		
Peak Hour Factor	0.86	0.86	0.86	0.86	0.86	0.86		
Percent Heavy Veh, %	2	2	2	2	2	2		
Cap, veh/h	60	2001	1577	136	551	492		
Arrive On Green	0.03	0.57	0.48	0.48	0.31	0.31		
Sat Flow, veh/h	1774	3632	3391	284	1774	1583		
Grp Volume(v), veh/h	47	467	272	281	172	442		
Grp Sat Flow(s),veh/h/ln	1774	1770	1770	1813	1774	1583		
Q Serve(g_s), s	2.2	5.4	7.8	7.9	6.1	22.0		
Cycle Q Clear(g_c), s	2.2	5.4	7.8	7.9	6.1	22.0		
Prop In Lane	1.00			0.16	1.00	1.00		
Lane Grp Cap(c), veh/h	60	2001	846	867	551	492		
V/C Ratio(X)	0.79	0.23	0.32	0.32	0.31	0.90		
Avail Cap(c_a), veh/h	272	2001	846	867	718	641		
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00		
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00		
Uniform Delay (d), s/veh	39.4	8.9	13.2	13.2	21.6	27.1		
Incr Delay (d2), s/veh	20.0	0.3	1.0	1.0	0.3	13.0		
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0		
%ile BackOfQ(50%),veh/ln	1.4	2.7	4.0	4.1	3.0	18.8		
LnGrp Delay(d),s/veh	59.5	9.2	14.2	14.2	22.0	40.1		
LnGrp LOS	E	A	B	B	C	D		
Approach Vol, veh/h		514	553		614			
Approach Delay, s/veh		13.8	14.2		35.0			
Approach LOS		B	B		D			
Timer	1	2	3	4	5	6	7	8
Assigned Phs		2		4	5	6		
Phs Duration (G+Y+Rc), s		52.0		30.2	7.2	44.8		
Change Period (Y+Rc), s		5.5		* 4.7	4.4	5.5		
Max Green Setting (Gmax), s		46.5		* 33	12.6	29.5		
Max Q Clear Time (g_c+I1), s		7.4		24.0	4.2	9.9		
Green Ext Time (p_c), s		7.2		1.6	0.0	6.0		
Intersection Summary								
HCM 2010 Ctrl Delay			21.7					
HCM 2010 LOS			C					
Notes								

HCM 2010 Signalized Intersection Summary
 10: Bernardo Center Dr & West Bernardo Dr




















3/7/2016



Movement	EBL	EBT	WBU	WBT	WBR	SBL	SBR	
Lane Configurations	↶↷	↶↷	↶	↶↷	↶↷	↶	↶	
Traffic Volume (veh/h)	417	385	0	369	356	352	492	
Future Volume (veh/h)	417	385	0	369	356	352	492	
Number	1	6		2	12	3	18	
Initial Q (Qb), veh	0	0		0	0	0	0	
Ped-Bike Adj(A_pbT)	1.00				1.00	1.00	1.00	
Parking Bus, Adj	1.00	1.00		1.00	1.00	1.00	1.00	
Adj Sat Flow, veh/h/ln	1863	1863		1863	1863	1863	1863	
Adj Flow Rate, veh/h	444	410		393	379	374	523	
Adj No. of Lanes	2	2		1	2	1	1	
Peak Hour Factor	0.94	0.94		0.94	0.94	0.94	0.94	
Percent Heavy Veh, %	2	2		2	2	2	2	
Cap, veh/h	584	1919		580	1760	569	776	
Arrive On Green	0.17	0.54		0.31	0.31	0.32	0.32	
Sat Flow, veh/h	3442	3632		1863	2782	1774	1583	
Grp Volume(v), veh/h	444	410		393	379	374	523	
Grp Sat Flow(s),veh/h/ln	1721	1770		1863	1391	1774	1583	
Q Serve(g_s), s	8.9	4.3		13.3	4.2	13.1	18.1	
Cycle Q Clear(g_c), s	8.9	4.3		13.3	4.2	13.1	18.1	
Prop In Lane	1.00				1.00	1.00	1.00	
Lane Grp Cap(c), veh/h	584	1919		580	1760	569	776	
V/C Ratio(X)	0.76	0.21		0.68	0.22	0.66	0.67	
Avail Cap(c_a), veh/h	1222	3175		1098	2533	925	1094	
HCM Platoon Ratio	1.00	1.00		1.00	1.00	1.00	1.00	
Upstream Filter(I)	1.00	1.00		1.00	1.00	1.00	1.00	
Uniform Delay (d), s/veh	28.5	8.5		21.7	5.7	21.1	14.0	
Incr Delay (d2), s/veh	2.1	0.1		1.4	0.1	1.3	1.0	
Initial Q Delay(d3),s/veh	0.0	0.0		0.0	0.0	0.0	0.0	
%ile BackOfQ(50%),veh/ln	4.4	2.1		7.0	1.6	6.5	8.0	
LnGrp Delay(d),s/veh	30.6	8.6		23.1	5.7	22.4	15.0	
LnGrp LOS	C	A		C	A	C	B	
Approach Vol, veh/h		854		772		897		
Approach Delay, s/veh		20.0		14.5		18.1		
Approach LOS		C		B		B		
Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2				6		8
Phs Duration (G+Y+Rc), s	16.6	28.0				44.6		27.5
Change Period (Y+Rc), s	4.4	5.5				* 5.5		4.4
Max Green Setting (Gmax), s	25.6	42.5				* 65		37.6
Max Q Clear Time (g_c+I1), s	10.9	15.3				6.3		20.1
Green Ext Time (p_c), s	1.4	7.1				7.8		3.0
Intersection Summary								
HCM 2010 Ctrl Delay				17.7				
HCM 2010 LOS				B				
Notes								

HCM 2010 Signalized Intersection Summary
 1: Camino San Bernardo & Rancho Bernardo Rd




















3/17/2016

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	30	1039	190	483	786	80	40	10	212	20	10	10
Future Volume (veh/h)	30	1039	190	483	786	80	40	10	212	20	10	10
Number	5	2	12	1	6	16	3	8	18	7	4	14
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.98	1.00		1.00	1.00		0.98	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1900	1863	1863	1900	1863	1863	1900	1900	1863	1900
Adj Flow Rate, veh/h	33	1129	207	525	854	87	43	11	230	22	11	11
Adj No. of Lanes	1	2	0	2	2	0	1	2	0	0	1	0
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	57	1322	241	619	1917	195	298	334	294	98	49	27
Arrive On Green	0.03	0.44	0.44	0.18	0.59	0.59	0.19	0.19	0.19	0.19	0.19	0.19
Sat Flow, veh/h	1774	2982	544	3442	3244	330	1384	1770	1558	175	258	144
Grp Volume(v), veh/h	33	668	668	525	466	475	43	11	230	44	0	0
Grp Sat Flow(s),veh/h/ln	1774	1770	1756	1721	1770	1804	1384	1770	1558	577	0	0
Q Serve(g_s), s	1.5	27.8	28.2	12.2	12.1	12.1	0.0	0.4	11.6	0.3	0.0	0.0
Cycle Q Clear(g_c), s	1.5	27.8	28.2	12.2	12.1	12.1	2.9	0.4	11.6	11.9	0.0	0.0
Prop In Lane	1.00		0.31	1.00		0.18	1.00		1.00	0.50		0.25
Lane Grp Cap(c), veh/h	57	785	779	619	1046	1067	298	334	294	174	0	0
V/C Ratio(X)	0.58	0.85	0.86	0.85	0.45	0.45	0.14	0.03	0.78	0.25	0.00	0.00
Avail Cap(c_a), veh/h	131	815	809	730	1059	1080	523	622	548	396	0	0
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	0.00
Uniform Delay (d), s/veh	39.4	20.5	20.6	32.7	9.4	9.4	28.3	27.3	31.8	28.4	0.0	0.0
Incr Delay (d2), s/veh	8.9	8.4	8.9	8.1	0.3	0.3	0.2	0.0	4.5	0.8	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.9	15.4	15.5	6.5	5.9	6.0	0.8	0.2	5.4	0.9	0.0	0.0
LnGrp Delay(d),s/veh	48.3	28.9	29.5	40.8	9.7	9.7	28.5	27.4	36.4	29.2	0.0	0.0
LnGrp LOS	D	C	C	D	A	A	C	C	D	C		
Approach Vol, veh/h		1369			1466			284			44	
Approach Delay, s/veh		29.7			20.8			34.8			29.2	
Approach LOS		C			C			C			C	
Timer	1	2	3	4	5	6	7	8				
Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	19.3	42.6		20.6	7.2	54.8		20.6				
Change Period (Y+Rc), s	4.5	6.0		5.0	4.5	6.0		5.0				
Max Green Setting (Gmax), s	17.5	38.0		29.0	6.1	49.4		29.0				
Max Q Clear Time (g_c+I1), s	14.2	30.2		13.9	3.5	14.1		13.6				
Green Ext Time (p_c), s	0.7	6.4		1.5	0.0	19.5		1.5				
Intersection Summary												
HCM 2010 Ctrl Delay			26.0									
HCM 2010 LOS			C									

HCM 2010 Signalized Intersection Summary




















2: Via Del Campo & Rancho Bernardo Rd

3/17/2016

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	10	1081	390	704	1338	10	80	10	61	10	10	10
Future Volume (veh/h)	10	1081	390	704	1338	10	80	10	61	10	10	10
Number	5	2	12	1	6	16	3	8	18	7	4	14
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.98	1.00		0.98	1.00		0.99	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1900	1863	1863	1900	1900	1863	1863	1900	1863	1900
Adj Flow Rate, veh/h	11	1175	424	765	1454	11	87	11	66	11	11	11
Adj No. of Lanes	1	2	0	1	2	0	0	1	1	0	1	0
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	18	1030	361	611	2657	20	157	17	222	45	44	28
Arrive On Green	0.01	0.40	0.40	0.34	0.74	0.74	0.14	0.14	0.14	0.14	0.14	0.14
Sat Flow, veh/h	1774	2554	896	1774	3600	27	764	120	1562	79	309	194
Grp Volume(v), veh/h	11	804	795	765	715	750	98	0	66	33	0	0
Grp Sat Flow(s),veh/h/ln	1774	1770	1680	1774	1770	1857	884	0	1562	583	0	0
Q Serve(g_s), s	0.9	56.9	56.9	48.6	25.0	25.0	0.0	0.0	5.3	0.3	0.0	0.0
Cycle Q Clear(g_c), s	0.9	56.9	56.9	48.6	25.0	25.0	17.0	0.0	5.3	17.2	0.0	0.0
Prop In Lane	1.00		0.53	1.00		0.01	0.89		1.00	0.33		0.33
Lane Grp Cap(c), veh/h	18	714	678	611	1306	1371	174	0	222	117	0	0
V/C Ratio(X)	0.62	1.13	1.17	1.25	0.55	0.55	0.56	0.00	0.30	0.28	0.00	0.00
Avail Cap(c_a), veh/h	50	714	678	611	1306	1371	264	0	321	219	0	0
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00	0.00
Uniform Delay (d), s/veh	69.6	42.1	42.1	46.2	8.1	8.1	59.0	0.0	54.2	53.5	0.0	0.0
Incr Delay (d2), s/veh	31.0	73.8	93.0	126.2	0.5	0.5	2.9	0.0	0.7	1.3	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.6	42.4	43.9	45.2	12.3	12.9	3.9	0.0	2.4	1.2	0.0	0.0
LnGrp Delay(d),s/veh	100.6	115.9	135.1	172.4	8.6	8.6	61.9	0.0	54.9	54.8	0.0	0.0
LnGrp LOS	F	F	F	F	A	A	E		D	D		
Approach Vol, veh/h		1610			2230			164			33	
Approach Delay, s/veh		125.3			64.8			59.1			54.8	
Approach LOS		F			E			E			D	
Timer	1	2	3	4	5	6	7	8				
Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	53.0	62.8		25.2	5.8	110.0		25.2				
Change Period (Y+Rc), s	4.4	5.9		* 5.2	4.4	* 5.9		5.2				
Max Green Setting (Gmax), s	48.6	56.9		* 29	4.0	* 1E2		29.0				
Max Q Clear Time (g_c+I1), s	50.6	58.9		19.2	2.9	27.0		19.0				
Green Ext Time (p_c), s	0.0	0.0		0.6	0.0	47.8		0.6				
Intersection Summary												
HCM 2010 Ctrl Delay			88.6									
HCM 2010 LOS			F									
Notes												

HCM 2010 Signalized Intersection Summary
 3: Project Dwy/Matinal Rd & Rancho Bernardo Rd























3/17/2016

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	40	920	107	329	1770	20	12	1	37	90	9	150
Future Volume (veh/h)	40	920	107	329	1770	20	12	1	37	90	9	150
Number	5	2	12	1	6	16	3	8	18	7	4	14
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		0.98
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1900	1863	1863	1900	1863	1863	1900	1900	1863	1900
Adj Flow Rate, veh/h	43	1000	116	358	1924	22	13	1	40	98	10	163
Adj No. of Lanes	1	2	0	1	2	0	1	1	0	0	1	0
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	54	1140	132	416	2130	24	264	8	327	156	27	192
Arrive On Green	0.03	0.36	0.36	0.23	0.59	0.59	0.21	0.21	0.21	0.21	0.21	0.21
Sat Flow, veh/h	1774	3196	371	1774	3584	41	1207	39	1550	476	126	908
Grp Volume(v), veh/h	43	553	563	358	948	998	13	0	41	271	0	0
Grp Sat Flow(s),veh/h/ln	1774	1770	1797	1774	1770	1856	1207	0	1589	1510	0	0
Q Serve(g_s), s	2.1	26.1	26.1	17.2	41.7	42.0	0.0	0.0	1.9	13.1	0.0	0.0
Cycle Q Clear(g_c), s	2.1	26.1	26.1	17.2	41.7	42.0	1.2	0.0	1.9	15.3	0.0	0.0
Prop In Lane	1.00		0.21	1.00		0.02	1.00		0.98	0.36		0.60
Lane Grp Cap(c), veh/h	54	631	641	416	1052	1103	264	0	336	374	0	0
V/C Ratio(X)	0.80	0.88	0.88	0.86	0.90	0.91	0.05	0.00	0.12	0.72	0.00	0.00
Avail Cap(c_a), veh/h	80	704	715	419	1062	1113	397	0	511	528	0	0
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00	0.00
Uniform Delay (d), s/veh	42.9	26.8	26.8	32.7	15.8	15.9	28.2	0.0	28.4	33.6	0.0	0.0
Incr Delay (d2), s/veh	27.6	11.2	11.1	16.5	10.5	10.5	0.1	0.0	0.2	2.9	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.5	14.6	14.8	10.4	23.1	24.6	0.3	0.0	0.8	6.7	0.0	0.0
LnGrp Delay(d),s/veh	70.5	38.0	37.9	49.2	26.3	26.3	28.2	0.0	28.6	36.5	0.0	0.0
LnGrp LOS	E	D	D	D	C	C	C		C	D		
Approach Vol, veh/h		1159			2304			54			271	
Approach Delay, s/veh		39.2			29.9			28.5			36.5	
Approach LOS		D			C			C			D	
Timer	1	2	3	4	5	6	7	8				
Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	26.8	38.8		23.4	6.7	58.9		23.4				
Change Period (Y+Rc), s	6.0	* 7		4.6	4.0	6.0		* 4.6				
Max Green Setting (Gmax), s	21.0	* 35		28.0	4.0	53.4		* 29				
Max Q Clear Time (g_c+I1), s	19.2	28.1		17.3	4.1	44.0		3.9				
Green Ext Time (p_c), s	1.6	3.7		1.5	0.0	7.8		2.2				
Intersection Summary												
HCM 2010 Ctrl Delay			33.2									
HCM 2010 LOS			C									
Notes												

HCM 2010 Signalized Intersection Summary



















4: West Bernardo Dr & Rancho Bernardo Rd

3/17/2016

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	62	763	103	610	1944	300	162	90	180	680	370	183
Future Volume (veh/h)	62	763	103	610	1944	300	162	90	180	680	370	183
Number	5	2	12	1	6	16	3	8	18	7	4	14
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		0.99	1.00		0.99	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1900	1863	1863	1863	1863	1863	1863	1863	1863	1900
Adj Flow Rate, veh/h	64	787	106	629	2004	309	167	93	186	701	381	189
Adj No. of Lanes	2	3	0	2	2	1	2	2	1	2	2	0
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	107	992	133	868	1603	707	240	406	579	783	628	307
Arrive On Green	0.03	0.22	0.22	0.25	0.45	0.45	0.07	0.11	0.11	0.23	0.27	0.27
Sat Flow, veh/h	3442	4538	607	3442	3539	1562	3442	3539	1561	3442	2302	1126
Grp Volume(v), veh/h	64	587	306	629	2004	309	167	93	186	701	292	278
Grp Sat Flow(s),veh/h/ln	1721	1695	1756	1721	1770	1562	1721	1770	1561	1721	1770	1658
Q Serve(g_s), s	2.1	18.7	18.9	19.2	51.9	15.5	5.4	2.7	4.1	22.6	16.4	16.8
Cycle Q Clear(g_c), s	2.1	18.7	18.9	19.2	51.9	15.5	5.4	2.7	4.1	22.6	16.4	16.8
Prop In Lane	1.00		0.35	1.00		1.00	1.00		1.00	1.00		0.68
Lane Grp Cap(c), veh/h	107	741	384	868	1603	707	240	406	579	783	483	452
V/C Ratio(X)	0.60	0.79	0.80	0.72	1.25	0.44	0.70	0.23	0.32	0.90	0.60	0.62
Avail Cap(c_a), veh/h	120	911	472	868	1603	707	1024	1207	932	904	542	508
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	54.8	42.3	42.4	39.2	31.4	21.4	52.1	46.1	9.3	42.9	36.3	36.4
Incr Delay (d2), s/veh	6.4	3.9	7.7	3.0	118.0	0.4	3.6	0.3	0.3	10.4	1.6	1.8
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.1	9.2	10.0	9.5	51.4	6.8	2.7	1.4	2.1	11.9	8.2	8.0
LnGrp Delay(d),s/veh	61.2	46.2	50.1	42.2	149.4	21.8	55.8	46.4	9.7	53.4	37.8	38.3
LnGrp LOS	E	D	D	D	F	C	E	D	A	D	D	D
Approach Vol, veh/h		957			2942			446			1271	
Approach Delay, s/veh		48.5			113.1			34.6			46.5	
Approach LOS		D			F			C			D	
Timer	1	2	3	4	5	6	7	8				
Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	34.6	31.0	12.4	36.7	8.0	57.6	30.5	18.6				
Change Period (Y+Rc), s	5.7	* 5.9	4.4	5.4	4.4	5.7	4.4	5.4				
Max Green Setting (Gmax), s	24.9	* 31	34.1	35.1	4.0	51.9	30.1	39.1				
Max Q Clear Time (g_c+I1), s	21.2	20.9	7.4	18.8	4.1	53.9	24.6	6.1				
Green Ext Time (p_c), s	3.6	4.1	0.5	4.5	0.0	0.0	1.4	5.4				
Intersection Summary												
HCM 2010 Ctrl Delay			80.8									
HCM 2010 LOS			F									
Notes												

HCM 2010 Signalized Intersection Summary
 5: I-15 SB Ramps & Rancho Bernardo Rd



















3/17/2016

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	878	716	0	1552	560	0	0	0	760	0	1281
Future Volume (veh/h)	0	878	716	0	1552	560	0	0	0	760	0	1281
Number	5	2	12	1	6	16				7	4	14
Initial Q (Qb), veh	0	0	0	0	0	0				0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00				1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00				1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	0	1863	1863	0	1863	1863				1863	0	1863
Adj Flow Rate, veh/h	0	924	754	0	1634	0				800	0	1348
Adj No. of Lanes	0	2	2	0	3	1				2	0	2
Peak Hour Factor	0.92	0.95	0.95	0.92	0.95	0.95				0.95	0.92	0.95
Percent Heavy Veh, %	0	2	2	0	2	2				2	0	2
Cap, veh/h	0	1453	1235	0	2179	617				1669	0	1352
Arrive On Green	0.00	0.39	0.39	0.00	0.78	0.00				0.48	0.00	0.48
Sat Flow, veh/h	0	3725	3167	0	5588	1583				3442	0	2787
Grp Volume(v), veh/h	0	924	754	0	1634	0				800	0	1348
Grp Sat Flow(s),veh/h/ln	0	1863	1583	0	1863	1583				1721	0	1393
Q Serve(g_s), s	0.0	20.1	19.1	0.0	15.5	0.0				15.6	0.0	48.3
Cycle Q Clear(g_c), s	0.0	20.1	19.1	0.0	15.5	0.0				15.6	0.0	48.3
Prop In Lane	0.00		1.00	0.00		1.00				1.00		1.00
Lane Grp Cap(c), veh/h	0	1453	1235	0	2179	617				1669	0	1352
V/C Ratio(X)	0.00	0.64	0.61	0.00	0.75	0.00				0.48	0.00	1.00
Avail Cap(c_a), veh/h	0	1453	1235	0	2179	618				1669	0	1352
HCM Platoon Ratio	1.00	1.00	1.00	1.00	2.00	2.00				1.00	1.00	1.00
Upstream Filter(I)	0.00	0.60	0.60	0.00	0.76	0.00				1.00	0.00	1.00
Uniform Delay (d), s/veh	0.0	24.7	24.4	0.0	8.4	0.0				17.3	0.0	25.7
Incr Delay (d2), s/veh	0.0	1.3	1.3	0.0	1.8	0.0				0.2	0.0	23.8
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0				0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.0	10.5	8.5	0.0	7.9	0.0				7.4	0.0	22.8
LnGrp Delay(d),s/veh	0.0	26.0	25.8	0.0	10.3	0.0				17.5	0.0	49.5
LnGrp LOS		C	C		B					B		D
Approach Vol, veh/h		1678			1634						2148	
Approach Delay, s/veh		25.9			10.3						37.6	
Approach LOS		C			B						D	
Timer	1	2	3	4	5	6	7	8				
Assigned Phs		2		4		6						
Phs Duration (G+Y+Rc), s		45.4		54.6		45.4						
Change Period (Y+Rc), s		6.4		6.1		6.4						
Max Green Setting (Gmax), s		39.0		48.5		39.0						
Max Q Clear Time (g_c+I1), s		22.1		50.3		17.5						
Green Ext Time (p_c), s		15.3		0.0		19.0						
Intersection Summary												
HCM 2010 Ctrl Delay			25.8									
HCM 2010 LOS			C									
Notes												

HCM 2010 Signalized Intersection Summary























6: I-15 NB Ramps & Rancho Bernardo Rd

3/17/2016

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	955	683	0	1245	320	868	0	510	0	0	0
Future Volume (veh/h)	0	955	683	0	1245	320	868	0	510	0	0	0
Number	5	2	12	1	6	16	3	8	18			
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0			
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00			
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00			
Adj Sat Flow, veh/h/ln	0	1863	1863	0	1863	1863	1863	0	1863			
Adj Flow Rate, veh/h	0	1016	0	0	1324	340	923	0	543			
Adj No. of Lanes	0	3	1	0	3	1	2	0	2			
Peak Hour Factor	0.92	0.94	0.94	0.92	0.94	0.94	0.94	0.92	0.94			
Percent Heavy Veh, %	0	2	2	0	2	2	2	0	2			
Cap, veh/h	0	3103	879	0	2824	879	1100	0	891			
Arrive On Green	0.00	1.00	0.00	0.00	0.56	0.56	0.32	0.00	0.32			
Sat Flow, veh/h	0	5588	1583	0	5253	1583	3442	0	2787			
Grp Volume(v), veh/h	0	1016	0	0	1324	340	923	0	543			
Grp Sat Flow(s),veh/h/ln	0	1863	1583	0	1695	1583	1721	0	1393			
Q Serve(g_s), s	0.0	0.0	0.0	0.0	15.7	12.2	24.9	0.0	16.5			
Cycle Q Clear(g_c), s	0.0	0.0	0.0	0.0	15.7	12.2	24.9	0.0	16.5			
Prop In Lane	0.00		1.00	0.00		1.00	1.00		1.00			
Lane Grp Cap(c), veh/h	0	3103	879	0	2824	879	1100	0	891			
V/C Ratio(X)	0.00	0.33	0.00	0.00	0.47	0.39	0.84	0.00	0.61			
Avail Cap(c_a), veh/h	0	3103	879	0	2824	879	1339	0	1084			
HCM Platoon Ratio	1.00	2.00	2.00	1.00	1.00	1.00	1.00	1.00	1.00			
Upstream Filter(I)	0.00	0.74	0.00	0.00	1.00	1.00	1.00	0.00	1.00			
Uniform Delay (d), s/veh	0.0	0.0	0.0	0.0	13.4	12.6	31.6	0.0	28.7			
Incr Delay (d2), s/veh	0.0	0.2	0.0	0.0	0.6	1.3	4.1	0.0	0.7			
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0			
%ile BackOfQ(50%),veh/ln	0.0	0.1	0.0	0.0	7.4	5.6	12.4	0.0	6.4			
LnGrp Delay(d),s/veh	0.0	0.2	0.0	0.0	13.9	13.9	35.8	0.0	29.4			
LnGrp LOS		A			B	B	D		C			
Approach Vol, veh/h		1016			1664			1466				
Approach Delay, s/veh		0.2			13.9			33.4				
Approach LOS		A			B			C				
Timer	1	2	3	4	5	6	7	8				
Assigned Phs		2				6		8				
Phs Duration (G+Y+Rc), s		61.9				61.9		38.1				
Change Period (Y+Rc), s		6.4				6.4		6.1				
Max Green Setting (Gmax), s		48.6				48.6		38.9				
Max Q Clear Time (g_c+I1), s		2.0				17.7		26.9				
Green Ext Time (p_c), s		29.6				22.4		5.0				
Intersection Summary												
HCM 2010 Ctrl Delay			17.5									
HCM 2010 LOS			B									
Notes												






















HCM 2010 Signalized Intersection Summary
 7: Bernardo Center Dr & Rancho Bernardo Rd

3/17/2016

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	361	653	351	180	897	100	279	200	120	230	310	139
Future Volume (veh/h)	361	653	351	180	897	100	279	200	120	230	310	139
Number	5	2	12	1	6	16	3	8	18	7	4	14
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		0.98	1.00		0.99	1.00		0.99
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1863	1863	1863	1900	1863	1863	1900	1863	1863	1863
Adj Flow Rate, veh/h	388	728	360	194	965	108	300	215	129	247	333	149
Adj No. of Lanes	2	2	1	2	2	0	2	2	0	2	2	1
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	466	1548	658	266	1159	130	369	407	234	328	624	483
Arrive On Green	0.13	0.42	0.42	0.08	0.36	0.36	0.11	0.19	0.19	0.10	0.18	0.18
Sat Flow, veh/h	3548	3725	1583	3442	3204	359	3442	2160	1241	3442	3539	1560
Grp Volume(v), veh/h	388	728	360	194	533	540	300	174	170	247	333	149
Grp Sat Flow(s),veh/h/ln	1774	1863	1583	1721	1770	1793	1721	1770	1632	1721	1770	1560
Q Serve(g_s), s	10.0	13.3	16.1	5.2	25.7	25.7	8.0	8.3	8.8	6.5	8.0	6.8
Cycle Q Clear(g_c), s	10.0	13.3	16.1	5.2	25.7	25.7	8.0	8.3	8.8	6.5	8.0	6.8
Prop In Lane	1.00		1.00	1.00		0.20	1.00		0.76	1.00		1.00
Lane Grp Cap(c), veh/h	466	1548	658	266	640	648	369	333	307	328	624	483
V/C Ratio(X)	0.83	0.47	0.55	0.73	0.83	0.83	0.81	0.52	0.55	0.75	0.53	0.31
Avail Cap(c_a), veh/h	531	1557	662	346	670	678	390	698	644	526	1513	875
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	39.6	19.9	20.7	42.2	27.3	27.3	40.8	34.2	34.4	41.2	35.0	24.8
Incr Delay (d2), s/veh	9.8	0.2	0.9	5.4	8.5	8.5	11.8	1.3	1.5	3.5	0.7	0.4
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	5.5	6.8	7.1	2.7	14.1	14.3	4.4	4.2	4.1	3.3	4.0	3.0
LnGrp Delay(d),s/veh	49.5	20.1	21.6	47.6	35.8	35.7	52.6	35.5	35.9	44.7	35.7	25.2
LnGrp LOS	D	C	C	D	D	D	D	D	D	D	D	C
Approach Vol, veh/h		1476			1267			644			729	
Approach Delay, s/veh		28.2			37.6			43.6			36.6	
Approach LOS		C			D			D			D	
Timer	1	2	3	4	5	6	7	8				
Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	11.6	45.1	14.4	22.4	16.7	40.0	13.3	23.5				
Change Period (Y+Rc), s	4.4	6.2	4.4	5.9	4.4	* 6.2	4.4	* 5.9				
Max Green Setting (Gmax), s	9.4	39.1	10.6	40.0	14.0	* 35	14.3	* 37				
Max Q Clear Time (g_c+I1), s	7.2	18.1	10.0	10.0	12.0	27.7	8.5	10.8				
Green Ext Time (p_c), s	0.1	13.4	0.1	4.9	0.3	6.1	0.4	4.8				
Intersection Summary												
HCM 2010 Ctrl Delay			35.0									
HCM 2010 LOS			C									
Notes												

HCM 2010 Signalized Intersection Summary
 8: West Bernardo Dr & Duenda Rd

3/17/2016

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	30	180	164	120	50	60	41	140	90	120	250	20
Future Volume (veh/h)	30	180	164	120	50	60	41	140	90	120	250	20
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.99	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1900	1863	1863	1863	1863	1863	1900	1863	1863	1900
Adj Flow Rate, veh/h	33	196	178	130	54	65	45	152	98	130	272	22
Adj No. of Lanes	1	1	0	1	1	1	1	2	0	1	2	0
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	486	245	222	204	215	182	64	317	193	169	693	56
Arrive On Green	0.27	0.27	0.27	0.12	0.12	0.12	0.04	0.15	0.15	0.10	0.21	0.21
Sat Flow, veh/h	1774	894	812	1774	1863	1583	1774	2117	1288	1774	3319	267
Grp Volume(v), veh/h	33	0	374	130	54	65	45	126	124	130	144	150
Grp Sat Flow(s),veh/h/ln	1774	0	1705	1774	1863	1583	1774	1770	1635	1774	1770	1816
Q Serve(g_s), s	0.8	0.0	11.1	3.8	1.4	2.1	1.4	3.5	3.8	3.9	3.8	3.9
Cycle Q Clear(g_c), s	0.8	0.0	11.1	3.8	1.4	2.1	1.4	3.5	3.8	3.9	3.8	3.9
Prop In Lane	1.00		0.48	1.00		1.00	1.00		0.79	1.00		0.15
Lane Grp Cap(c), veh/h	486	0	467	204	215	182	64	265	245	169	369	379
V/C Ratio(X)	0.07	0.00	0.80	0.64	0.25	0.36	0.70	0.47	0.51	0.77	0.39	0.40
Avail Cap(c_a), veh/h	747	0	718	584	614	522	195	583	539	357	745	764
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	14.7	0.0	18.5	23.1	22.0	22.3	26.0	21.3	21.4	24.1	18.6	18.6
Incr Delay (d2), s/veh	0.1	0.0	3.7	3.3	0.6	1.2	12.9	1.3	1.6	7.2	0.7	0.7
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.4	0.0	5.7	2.1	0.8	1.0	0.9	1.8	1.8	2.3	2.0	2.0
LnGrp Delay(d),s/veh	14.7	0.0	22.2	26.3	22.6	23.5	38.9	22.6	23.0	31.4	19.3	19.3
LnGrp LOS	B		C	C	C	C	D	C	C	C	B	B
Approach Vol, veh/h		407			249			295			424	
Approach Delay, s/veh		21.6			24.8			25.2			23.0	
Approach LOS		C			C			C			C	
Timer	1	2	3	4	5	6	7	8				
Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	10.2	13.2		20.0	7.0	16.4		11.3				
Change Period (Y+Rc), s	5.0	5.0		5.0	5.0	5.0		5.0				
Max Green Setting (Gmax), s	11.0	18.0		23.0	6.0	23.0		18.0				
Max Q Clear Time (g_c+I1), s	5.9	5.8		13.1	3.4	5.9		5.8				
Green Ext Time (p_c), s	0.1	2.4		1.8	0.0	2.7		0.6				
Intersection Summary												
HCM 2010 Ctrl Delay			23.4									
HCM 2010 LOS			C									

HCM 2010 Signalized Intersection Summary

9: West Bernardo Dr & Via Del Campo

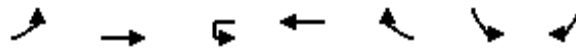
3/17/2016



Movement	EBL	EBT	WBT	WBR	SBL	SBR		
Lane Configurations								
Traffic Volume (veh/h)	466	620	360	200	130	114		
Future Volume (veh/h)	466	620	360	200	130	114		
Number	5	2	6	16	7	14		
Initial Q (Qb), veh	0	0	0	0	0	0		
Ped-Bike Adj(A_pbT)	1.00			1.00	1.00	1.00		
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00		
Adj Sat Flow, veh/h/ln	1863	1863	1863	1900	1863	1863		
Adj Flow Rate, veh/h	507	674	391	217	141	124		
Adj No. of Lanes	1	2	2	0	1	1		
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92		
Percent Heavy Veh, %	2	2	2	2	2	2		
Cap, veh/h	877	2746	483	264	190	170		
Arrive On Green	0.49	0.78	0.22	0.22	0.11	0.11		
Sat Flow, veh/h	1774	3632	2300	1209	1774	1583		
Grp Volume(v), veh/h	507	674	312	296	141	124		
Grp Sat Flow(s),veh/h/ln	1774	1770	1770	1646	1774	1583		
Q Serve(g_s), s	17.7	4.6	14.6	14.9	6.7	6.6		
Cycle Q Clear(g_c), s	17.7	4.6	14.6	14.9	6.7	6.6		
Prop In Lane	1.00			0.73	1.00	1.00		
Lane Grp Cap(c), veh/h	877	2746	387	360	190	170		
V/C Ratio(X)	0.58	0.25	0.81	0.82	0.74	0.73		
Avail Cap(c_a), veh/h	877	2746	501	466	449	401		
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00		
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00		
Uniform Delay (d), s/veh	15.6	2.7	32.3	32.4	37.8	37.7		
Incr Delay (d2), s/veh	1.0	0.2	7.3	8.8	5.6	5.9		
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0		
%ile BackOfQ(50%),veh/ln	8.8	2.2	7.9	7.6	3.6	6.0		
LnGrp Delay(d),s/veh	16.6	2.9	39.7	41.2	43.4	43.7		
LnGrp LOS	B	A	D	D	D	D		
Approach Vol, veh/h		1181	608		265			
Approach Delay, s/veh		8.8	40.4		43.5			
Approach LOS		A	D		D			
Timer	1	2	3	4	5	6	7	8
Assigned Phs		2		4	5	6		
Phs Duration (G+Y+Rc), s		73.2		14.1	48.6	24.6		
Change Period (Y+Rc), s		5.5		* 4.7	5.5	* 5.5		
Max Green Setting (Gmax), s		67.7		* 22	38.6	* 25		
Max Q Clear Time (g_c+I1), s		6.6		8.7	19.7	16.9		
Green Ext Time (p_c), s		7.1		0.6	5.9	2.2		
Intersection Summary								
HCM 2010 Ctrl Delay			22.6					
HCM 2010 LOS			C					
Notes								

HCM 2010 Signalized Intersection Summary
 10: Bernardo Center Dr & West Bernardo Dr




















3/17/2016



Movement	EBL	EBT	WBU	WBT	WBR	SBL	SBR	
Lane Configurations	↶↷	↶↷	↶	↶↷	↶↷	↶	↶	
Traffic Volume (veh/h)	708	580	0	610	818	92	242	
Future Volume (veh/h)	708	580	0	610	818	92	242	
Number	1	6		2	12	3	18	
Initial Q (Qb), veh	0	0		0	0	0	0	
Ped-Bike Adj(A_pbT)	1.00				0.97	1.00	1.00	
Parking Bus, Adj	1.00	1.00		1.00	1.00	1.00	1.00	
Adj Sat Flow, veh/h/ln	1863	1863		1863	1863	1863	1863	
Adj Flow Rate, veh/h	770	630		663	889	100	263	
Adj No. of Lanes	2	2		2	2	1	1	
Peak Hour Factor	0.92	0.92		0.92	0.92	0.92	0.92	
Percent Heavy Veh, %	2	2		2	2	2	2	
Cap, veh/h	905	2482		1332	1465	282	668	
Arrive On Green	0.26	0.70		0.38	0.38	0.16	0.16	
Sat Flow, veh/h	3442	3632		3632	2714	1774	1583	
Grp Volume(v), veh/h	770	630		663	889	100	263	
Grp Sat Flow(s),veh/h/ln	1721	1770		1770	1357	1774	1583	
Q Serve(g_s), s	15.0	4.6		10.2	16.0	3.6	8.2	
Cycle Q Clear(g_c), s	15.0	4.6		10.2	16.0	3.6	8.2	
Prop In Lane	1.00				1.00	1.00	1.00	
Lane Grp Cap(c), veh/h	905	2482		1332	1465	282	668	
V/C Ratio(X)	0.85	0.25		0.50	0.61	0.35	0.39	
Avail Cap(c_a), veh/h	1098	2482		1504	1597	827	1154	
HCM Platoon Ratio	1.00	1.00		1.00	1.00	1.00	1.00	
Upstream Filter(I)	1.00	1.00		1.00	1.00	1.00	1.00	
Uniform Delay (d), s/veh	24.8	3.8		17.0	11.4	26.5	14.2	
Incr Delay (d2), s/veh	5.6	0.1		0.3	0.6	0.8	0.4	
Initial Q Delay(d3),s/veh	0.0	0.0		0.0	0.0	0.0	0.0	
%ile BackOfQ(50%),veh/ln	7.9	2.2		5.0	6.0	1.8	3.6	
LnGrp Delay(d),s/veh	30.4	3.9		17.2	12.0	27.3	14.6	
LnGrp LOS	C	A		B	B	C	B	
Approach Vol, veh/h		1400		1552		363		
Approach Delay, s/veh		18.5		14.2		18.1		
Approach LOS		B		B		B		
Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2				6		8
Phs Duration (G+Y+Rc), s	23.0	32.2				55.2		15.7
Change Period (Y+Rc), s	4.4	5.5				* 5.5		4.4
Max Green Setting (Gmax), s	22.6	30.1				* 49		33.0
Max Q Clear Time (g_c+I1), s	17.0	18.0				6.6		10.2
Green Ext Time (p_c), s	1.6	8.6				19.0		1.1
Intersection Summary								
HCM 2010 Ctrl Delay			16.4					
HCM 2010 LOS			B					
Notes								

HCM 2010 Signalized Intersection Summary
 1: Camino San Bernardo & Rancho Bernardo Rd




















3/17/2016

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	10	972	230	411	847	10	120	10	375	70	20	30
Future Volume (veh/h)	10	972	230	411	847	10	120	10	375	70	20	30
Number	5	2	12	1	6	16	3	8	18	7	4	14
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.99	1.00		1.00	1.00		1.00	1.00		0.99
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1900	1863	1863	1900	1863	1863	1900	1900	1863	1900
Adj Flow Rate, veh/h	10	1012	240	428	882	10	125	10	391	73	21	31
Adj No. of Lanes	1	2	0	2	2	0	1	2	0	0	1	0
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	22	1073	254	463	1796	20	440	574	513	135	42	37
Arrive On Green	0.01	0.38	0.38	0.13	0.50	0.50	0.32	0.32	0.32	0.32	0.32	0.32
Sat Flow, veh/h	1774	2833	669	3442	3585	41	1347	1770	1582	218	129	114
Grp Volume(v), veh/h	10	631	621	428	435	457	125	10	391	125	0	0
Grp Sat Flow(s),veh/h/ln	1774	1770	1733	1721	1770	1856	1347	1770	1582	461	0	0
Q Serve(g_s), s	0.5	30.7	31.0	11.0	14.5	14.5	0.0	0.3	19.8	7.1	0.0	0.0
Cycle Q Clear(g_c), s	0.5	30.7	31.0	11.0	14.5	14.5	7.8	0.3	19.8	26.9	0.0	0.0
Prop In Lane	1.00		0.39	1.00		0.02	1.00		1.00	0.58		0.25
Lane Grp Cap(c), veh/h	22	670	656	463	886	930	440	574	513	213	0	0
V/C Ratio(X)	0.46	0.94	0.95	0.92	0.49	0.49	0.28	0.02	0.76	0.59	0.00	0.00
Avail Cap(c_a), veh/h	99	684	670	463	886	930	441	575	514	215	0	0
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	0.00
Uniform Delay (d), s/veh	43.8	26.8	26.8	38.1	14.7	14.7	23.0	20.5	27.1	34.0	0.0	0.0
Incr Delay (d2), s/veh	14.2	21.0	22.3	24.4	0.4	0.4	0.4	0.0	6.6	4.0	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.3	18.8	18.7	6.8	7.1	7.5	2.4	0.2	9.5	3.2	0.0	0.0
LnGrp Delay(d),s/veh	58.0	47.8	49.2	62.5	15.2	15.1	23.4	20.5	33.7	38.0	0.0	0.0
LnGrp LOS	E	D	D	E	B	B	C	C	C	D		
Approach Vol, veh/h		1262			1320			526			125	
Approach Delay, s/veh		48.5			30.5			31.0			38.0	
Approach LOS		D			C			C			D	
Timer	1	2	3	4	5	6	7	8				
Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	16.0	39.3		33.9	5.1	50.2		33.9				
Change Period (Y+Rc), s	4.0	5.5		5.0	4.0	5.5		5.0				
Max Green Setting (Gmax), s	12.0	34.5		29.0	5.0	41.5		29.0				
Max Q Clear Time (g_c+I1), s	13.0	33.0		28.9	2.5	16.5		21.8				
Green Ext Time (p_c), s	0.0	0.8		0.1	0.0	14.8		2.2				
Intersection Summary												
HCM 2010 Ctrl Delay				37.9								
HCM 2010 LOS				D								

HCM 2010 Signalized Intersection Summary























2: Via Del Campo & Rancho Bernardo Rd

3/17/2016

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	20	1447	60	64	1098	10	350	10	428	10	10	10
Future Volume (veh/h)	20	1447	60	64	1098	10	350	10	428	10	10	10
Number	5	2	12	1	6	16	3	8	18	7	4	14
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		0.98	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1900	1863	1863	1900	1900	1863	1863	1900	1863	1900
Adj Flow Rate, veh/h	22	1573	65	70	1193	11	380	11	465	11	11	11
Adj No. of Lanes	1	2	0	1	2	0	0	1	1	0	1	0
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	29	1729	71	64	1864	17	270	6	562	32	32	16
Arrive On Green	0.02	0.50	0.50	0.04	0.52	0.52	0.36	0.36	0.36	0.36	0.36	0.36
Sat Flow, veh/h	1774	3464	143	1774	3593	33	616	18	1559	0	88	44
Grp Volume(v), veh/h	22	801	837	70	587	617	391	0	465	33	0	0
Grp Sat Flow(s),veh/h/ln	1774	1770	1838	1774	1770	1857	634	0	1559	132	0	0
Q Serve(g_s), s	1.8	61.3	62.0	5.3	35.4	35.4	0.0	0.0	40.2	0.0	0.0	0.0
Cycle Q Clear(g_c), s	1.8	61.3	62.0	5.3	35.4	35.4	53.3	0.0	40.2	53.3	0.0	0.0
Prop In Lane	1.00		0.08	1.00		0.02	0.97		1.00	0.33		0.33
Lane Grp Cap(c), veh/h	29	883	917	64	918	963	277	0	562	80	0	0
V/C Ratio(X)	0.77	0.91	0.91	1.10	0.64	0.64	1.41	0.00	0.83	0.41	0.00	0.00
Avail Cap(c_a), veh/h	74	912	947	64	918	963	277	0	562	80	0	0
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00	0.00
Uniform Delay (d), s/veh	72.5	33.9	34.1	71.3	25.6	25.6	51.9	0.0	43.1	39.1	0.0	0.0
Incr Delay (d2), s/veh	34.4	12.4	12.7	143.4	1.5	1.4	206.3	0.0	9.9	3.4	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	1.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.2	32.9	34.6	5.1	17.7	18.5	27.1	0.0	18.8	1.0	0.0	0.0
LnGrp Delay(d),s/veh	106.9	46.3	46.8	216.0	27.1	27.1	258.2	0.0	53.1	42.4	0.0	0.0
LnGrp LOS	F	D	D	F	C	C	F		D	D		
Approach Vol, veh/h		1660			1274			856			33	
Approach Delay, s/veh		47.4			37.5			146.8			42.4	
Approach LOS		D			D			F			D	
Timer	1	2	3	4	5	6	7	8				
Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	9.7	79.7		58.5	6.8	82.6		58.5				
Change Period (Y+Rc), s	4.4	5.9		* 5.2	4.4	* 5.9		5.2				
Max Green Setting (Gmax), s	5.3	76.2		* 53	6.2	* 76		53.0				
Max Q Clear Time (g_c+I1), s	7.3	64.0		55.3	3.8	37.4		55.3				
Green Ext Time (p_c), s	0.0	9.8		0.0	0.0	27.2		0.0				
Intersection Summary												
HCM 2010 Ctrl Delay	66.3											
HCM 2010 LOS	E											
Notes												























HCM 2010 Signalized Intersection Summary
 3: Project Dwy/Matinal Rd & Rancho Bernardo Rd

3/17/2016

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		 			 						 	
Traffic Volume (veh/h)	110	1600	25	78	990	60	102	9	315	50	2	120
Future Volume (veh/h)	110	1600	25	78	990	60	102	9	315	50	2	120
Number	5	2	12	1	6	16	3	8	18	7	4	14
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		0.99
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1900	1863	1863	1900	1863	1863	1900	1900	1863	1900
Adj Flow Rate, veh/h	120	1739	27	85	1076	65	111	10	342	54	2	130
Adj No. of Lanes	1	2	0	1	2	0	1	1	0	0	1	0
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	150	1808	28	90	1604	97	242	13	440	79	25	134
Arrive On Green	0.08	0.51	0.51	0.05	0.47	0.47	0.28	0.28	0.28	0.28	0.28	0.28
Sat Flow, veh/h	1774	3567	55	1774	3391	205	1253	45	1545	113	89	469
Grp Volume(v), veh/h	120	861	905	85	561	580	111	0	352	186	0	0
Grp Sat Flow(s),veh/h/ln	1774	1770	1853	1774	1770	1827	1253	0	1590	672	0	0
Q Serve(g_s), s	6.6	46.3	46.6	4.7	24.2	24.2	0.0	0.0	20.1	7.6	0.0	0.0
Cycle Q Clear(g_c), s	6.6	46.3	46.6	4.7	24.2	24.2	16.7	0.0	20.1	27.7	0.0	0.0
Prop In Lane	1.00		0.03	1.00		0.11	1.00		0.97	0.29		0.70
Lane Grp Cap(c), veh/h	150	897	939	90	837	864	242	0	453	238	0	0
V/C Ratio(X)	0.80	0.96	0.96	0.95	0.67	0.67	0.46	0.00	0.78	0.78	0.00	0.00
Avail Cap(c_a), veh/h	233	916	959	90	837	864	249	0	463	238	0	0
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00	0.00
Uniform Delay (d), s/veh	44.5	23.4	23.5	46.9	20.1	20.1	31.3	0.0	32.5	35.9	0.0	0.0
Incr Delay (d2), s/veh	10.4	20.5	20.5	77.9	2.1	2.0	1.4	0.0	8.0	15.3	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	3.7	27.6	29.0	4.3	12.2	12.7	2.8	0.0	9.8	6.1	0.0	0.0
LnGrp Delay(d),s/veh	54.9	43.9	44.0	124.7	22.2	22.2	32.6	0.0	40.5	51.2	0.0	0.0
LnGrp LOS	D	D	D	F	C	C	C		D	D		
Approach Vol, veh/h		1886			1226			463			186	
Approach Delay, s/veh		44.7			29.3			38.6			51.2	
Approach LOS		D			C			D			D	
Timer	1	2	3	4	5	6	7	8				
Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	9.0	57.2		32.8	12.3	53.8		32.8				
Change Period (Y+Rc), s	4.0	7.0		4.6	4.0	* 7		* 4.6				
Max Green Setting (Gmax), s	5.0	51.2		28.2	13.0	* 44		* 29				
Max Q Clear Time (g_c+I1), s	6.7	48.6		29.7	8.6	26.2		22.1				
Green Ext Time (p_c), s	0.0	1.6		0.0	0.1	15.3		2.3				
Intersection Summary												
HCM 2010 Ctrl Delay				39.2								
HCM 2010 LOS				D								
Notes												



















HCM 2010 Signalized Intersection Summary
4: West Bernardo Dr & Rancho Bernardo Rd

3/17/2016

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	173	1861	71	200	1059	510	185	360	700	350	90	73
Future Volume (veh/h)	173	1861	71	200	1059	510	185	360	700	350	90	73
Number	5	2	12	1	6	16	3	8	18	7	4	14
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1900	1863	1863	1863	1863	1863	1863	1863	1863	1900
Adj Flow Rate, veh/h	177	1899	72	204	1081	520	189	367	714	357	92	74
Adj No. of Lanes	2	3	0	2	2	1	2	2	1	2	2	0
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	188	1731	66	280	1318	588	259	1004	576	436	652	480
Arrive On Green	0.05	0.34	0.34	0.08	0.37	0.37	0.08	0.28	0.28	0.13	0.34	0.34
Sat Flow, veh/h	3442	5029	190	3442	3539	1580	3442	3539	1578	3442	1947	1433
Grp Volume(v), veh/h	177	1279	692	204	1081	520	189	367	714	357	83	83
Grp Sat Flow(s),veh/h/ln	1721	1695	1829	1721	1770	1580	1721	1770	1578	1721	1770	1610
Q Serve(g_s), s	6.3	42.1	42.1	7.1	33.8	25.1	6.6	10.1	29.1	12.4	4.0	4.4
Cycle Q Clear(g_c), s	6.3	42.1	42.1	7.1	33.8	25.1	6.6	10.1	29.1	12.4	4.0	4.4
Prop In Lane	1.00		0.10	1.00		1.00	1.00		1.00	1.00		0.89
Lane Grp Cap(c), veh/h	188	1167	629	280	1318	588	259	1004	576	436	593	540
V/C Ratio(X)	0.94	1.10	1.10	0.73	0.82	0.88	0.73	0.37	1.24	0.82	0.14	0.15
Avail Cap(c_a), veh/h	188	1167	629	523	1571	701	959	1131	633	847	593	540
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	57.6	40.1	40.1	54.9	34.7	16.0	55.4	35.0	25.2	52.1	28.4	28.5
Incr Delay (d2), s/veh	48.4	56.8	66.0	3.6	3.1	11.4	4.0	0.2	121.7	3.9	0.1	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	4.2	28.8	32.7	3.5	17.1	12.7	3.3	5.0	33.3	6.1	2.0	2.0
LnGrp Delay(d),s/veh	106.0	96.9	106.1	58.5	37.8	27.4	59.3	35.2	147.0	55.9	28.5	28.6
LnGrp LOS	F	F	F	E	D	C	E	D	F	E	C	C
Approach Vol, veh/h		2148			1805			1270			523	
Approach Delay, s/veh		100.6			37.1			101.6			47.2	
Approach LOS		F			D			F			D	
Timer	1	2	3	4	5	6	7	8				
Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	14.3	48.0	13.6	46.4	11.1	51.2	19.9	40.1				
Change Period (Y+Rc), s	4.4	5.9	4.4	5.4	4.4	5.7	4.4	5.4				
Max Green Setting (Gmax), s	18.6	42.1	34.1	35.1	6.6	54.3	30.1	39.1				
Max Q Clear Time (g_c+I1), s	9.1	44.1	8.6	6.4	8.3	35.8	14.4	31.1				
Green Ext Time (p_c), s	0.9	0.0	0.6	7.4	0.0	9.8	1.1	3.5				
Intersection Summary												
HCM 2010 Ctrl Delay			76.0									
HCM 2010 LOS			E									

HCM 2010 Signalized Intersection Summary
 5: I-15 SB Ramps & Rancho Bernardo Rd



















3/17/2016

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	1829	1072	0	1263	600	0	0	0	460	0	486
Future Volume (veh/h)	0	1829	1072	0	1263	600	0	0	0	460	0	486
Number	5	2	12	1	6	16				7	4	14
Initial Q (Qb), veh	0	0	0	0	0	0				0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00				1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00				1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	0	1863	1863	0	1863	1863				1863	0	1863
Adj Flow Rate, veh/h	0	2447	756	0	1316	0				479	0	506
Adj No. of Lanes	0	3	1	0	3	1				2	0	2
Peak Hour Factor	0.92	0.96	0.96	0.92	0.96	0.96				0.96	0.92	0.96
Percent Heavy Veh, %	0	2	2	0	2	2				2	0	2
Cap, veh/h	0	3729	1056	0	3729	1056				715	0	579
Arrive On Green	0.00	0.67	0.67	0.00	1.00	0.00				0.21	0.00	0.21
Sat Flow, veh/h	0	5588	1583	0	5588	1583				3442	0	2787
Grp Volume(v), veh/h	0	2447	756	0	1316	0				479	0	506
Grp Sat Flow(s),veh/h/ln	0	1863	1583	0	1863	1583				1721	0	1393
Q Serve(g_s), s	0.0	25.9	30.4	0.0	0.0	0.0				12.8	0.0	17.6
Cycle Q Clear(g_c), s	0.0	25.9	30.4	0.0	0.0	0.0				12.8	0.0	17.6
Prop In Lane	0.00		1.00	0.00		1.00				1.00		1.00
Lane Grp Cap(c), veh/h	0	3729	1056	0	3729	1056				715	0	579
V/C Ratio(X)	0.00	0.66	0.72	0.00	0.35	0.00				0.67	0.00	0.87
Avail Cap(c_a), veh/h	0	3729	1056	0	3729	1056				767	0	621
HCM Platoon Ratio	1.00	1.00	1.00	1.00	2.00	2.00				1.00	1.00	1.00
Upstream Filter(I)	0.00	0.09	0.09	0.00	0.81	0.00				1.00	0.00	1.00
Uniform Delay (d), s/veh	0.0	9.9	10.6	0.0	0.0	0.0				36.5	0.0	38.3
Incr Delay (d2), s/veh	0.0	0.1	0.4	0.0	0.2	0.0				2.1	0.0	12.5
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0				0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.0	13.2	13.1	0.0	0.1	0.0				6.3	0.0	7.8
LnGrp Delay(d),s/veh	0.0	9.9	11.0	0.0	0.2	0.0				38.5	0.0	50.9
LnGrp LOS		A	B		A					D		D
Approach Vol, veh/h		3203			1316						985	
Approach Delay, s/veh		10.2			0.2						44.9	
Approach LOS		B			A						D	
Timer	1	2	3	4	5	6	7	8				
Assigned Phs		2		4		6						
Phs Duration (G+Y+Rc), s		73.1		26.9		73.1						
Change Period (Y+Rc), s		6.4		6.1		6.4						
Max Green Setting (Gmax), s		65.2		22.3		65.2						
Max Q Clear Time (g_c+I1), s		32.4		19.6		2.0						
Green Ext Time (p_c), s		31.7		1.2		59.5						
Intersection Summary												
HCM 2010 Ctrl Delay			14.0									
HCM 2010 LOS			B									
Notes												

HCM 2010 Signalized Intersection Summary























6: I-15 NB Ramps & Rancho Bernardo Rd

3/17/2016

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	1033	1256	0	1121	510	743	0	490	0	0	0
Future Volume (veh/h)	0	1033	1256	0	1121	510	743	0	490	0	0	0
Number	5	2	12	1	6	16	3	8	18			
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0			
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00			
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00			
Adj Sat Flow, veh/h/ln	0	1863	1863	0	1863	1863	1863	0	1863			
Adj Flow Rate, veh/h	0	1099	0	0	1193	543	790	0	521			
Adj No. of Lanes	0	3	1	0	3	1	2	0	2			
Peak Hour Factor	0.92	0.94	0.94	0.92	0.94	0.94	0.94	0.92	0.94			
Percent Heavy Veh, %	0	2	2	0	2	2	2	0	2			
Cap, veh/h	0	3343	947	0	3042	947	953	0	771			
Arrive On Green	0.00	1.00	0.00	0.00	0.60	0.60	0.28	0.00	0.28			
Sat Flow, veh/h	0	5588	1583	0	5253	1583	3442	0	2787			
Grp Volume(v), veh/h	0	1099	0	0	1193	543	790	0	521			
Grp Sat Flow(s),veh/h/ln	0	1863	1583	0	1695	1583	1721	0	1393			
Q Serve(g_s), s	0.0	0.0	0.0	0.0	12.3	21.0	21.5	0.0	16.6			
Cycle Q Clear(g_c), s	0.0	0.0	0.0	0.0	12.3	21.0	21.5	0.0	16.6			
Prop In Lane	0.00		1.00	0.00		1.00	1.00		1.00			
Lane Grp Cap(c), veh/h	0	3343	947	0	3042	947	953	0	771			
V/C Ratio(X)	0.00	0.33	0.00	0.00	0.39	0.57	0.83	0.00	0.68			
Avail Cap(c_a), veh/h	0	3343	947	0	3042	947	1167	0	945			
HCM Platoon Ratio	1.00	1.67	1.67	1.00	1.00	1.00	1.00	1.00	1.00			
Upstream Filter(I)	0.00	0.60	0.00	0.00	1.00	1.00	1.00	0.00	1.00			
Uniform Delay (d), s/veh	0.0	0.0	0.0	0.0	10.5	12.3	33.9	0.0	32.2			
Incr Delay (d2), s/veh	0.0	0.2	0.0	0.0	0.4	2.5	4.3	0.0	1.4			
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0			
%ile BackOfQ(50%),veh/ln	0.0	0.1	0.0	0.0	5.9	9.7	10.8	0.0	6.5			
LnGrp Delay(d),s/veh	0.0	0.2	0.0	0.0	10.9	14.8	38.2	0.0	33.6			
LnGrp LOS		A			B	B	D		C			
Approach Vol, veh/h		1099			1736			1311				
Approach Delay, s/veh		0.2			12.1			36.4				
Approach LOS		A			B			D				
Timer	1	2	3	4	5	6	7	8				
Assigned Phs		2				6		8				
Phs Duration (G+Y+Rc), s		66.2				66.2		33.8				
Change Period (Y+Rc), s		6.4				6.4		6.1				
Max Green Setting (Gmax), s		53.6				53.6		33.9				
Max Q Clear Time (g_c+I1), s		2.0				23.0		23.5				
Green Ext Time (p_c), s		32.8				22.9		4.1				
Intersection Summary												
HCM 2010 Ctrl Delay			16.6									
HCM 2010 LOS			B									
Notes												






















HCM 2010 Signalized Intersection Summary
 7: Bernardo Center Dr & Rancho Bernardo Rd

3/17/2016

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	289	756	379	150	766	170	462	520	280	200	310	122
Future Volume (veh/h)	289	756	379	150	766	170	462	520	280	200	310	122
Number	5	2	12	1	6	16	3	8	18	7	4	14
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.99	1.00		0.99	1.00		1.00	1.00		0.98
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1863	1863	1863	1900	1863	1863	1900	1863	1863	1863
Adj Flow Rate, veh/h	304	797	398	158	806	179	486	547	295	211	326	128
Adj No. of Lanes	2	2	1	2	2	0	2	2	0	2	2	1
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	362	1317	553	218	903	201	544	693	373	277	831	525
Arrive On Green	0.10	0.35	0.35	0.06	0.31	0.31	0.16	0.31	0.31	0.08	0.23	0.23
Sat Flow, veh/h	3548	3725	1563	3442	2872	638	3442	2221	1196	3442	3539	1550
Grp Volume(v), veh/h	304	797	398	158	497	488	486	436	406	211	326	128
Grp Sat Flow(s),veh/h/ln	1774	1863	1563	1721	1770	1740	1721	1770	1648	1721	1770	1550
Q Serve(g_s), s	9.2	19.3	24.2	4.9	29.3	29.3	15.2	24.6	24.7	6.6	8.5	6.5
Cycle Q Clear(g_c), s	9.2	19.3	24.2	4.9	29.3	29.3	15.2	24.6	24.7	6.6	8.5	6.5
Prop In Lane	1.00		1.00	1.00		0.37	1.00		0.73	1.00		1.00
Lane Grp Cap(c), veh/h	362	1317	553	218	557	547	544	552	514	277	831	525
V/C Ratio(X)	0.84	0.61	0.72	0.73	0.89	0.89	0.89	0.79	0.79	0.76	0.39	0.24
Avail Cap(c_a), veh/h	362	1317	553	257	581	571	559	731	681	411	1291	727
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	48.3	29.2	30.7	50.4	35.8	35.8	45.3	34.4	34.4	49.4	35.4	26.3
Incr Delay (d2), s/veh	15.8	0.8	4.5	8.1	15.6	15.8	16.5	4.3	4.6	4.7	0.3	0.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	5.3	10.0	11.1	2.6	16.8	16.5	8.5	12.6	11.8	3.3	4.2	2.8
LnGrp Delay(d),s/veh	64.2	30.0	35.3	58.5	51.4	51.6	61.8	38.7	39.1	54.1	35.7	26.5
LnGrp LOS	E	C	D	E	D	D	E	D	D	D	D	C
Approach Vol, veh/h		1499			1143			1328			665	
Approach Delay, s/veh		38.3			52.5			47.3			39.7	
Approach LOS		D			D			D			D	
Timer	1	2	3	4	5	6	7	8				
Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	11.3	45.0	21.7	31.6	15.6	40.7	13.2	40.1				
Change Period (Y+Rc), s	4.4	6.2	4.4	5.9	4.4	* 6.2	4.4	* 5.9				
Max Green Setting (Gmax), s	8.2	38.1	17.8	40.0	11.2	* 36	13.1	* 45				
Max Q Clear Time (g_c+I1), s	6.9	26.2	17.2	10.5	11.2	31.3	8.6	26.7				
Green Ext Time (p_c), s	0.1	8.8	0.1	9.0	0.0	3.2	0.3	7.5				
Intersection Summary												
HCM 2010 Ctrl Delay			44.6									
HCM 2010 LOS			D									
Notes												

HCM 2010 Signalized Intersection Summary
 8: West Bernardo Dr & Duenda Rd

3/17/2016

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	30	140	141	90	90	80	74	170	110	130	230	20
Future Volume (veh/h)	30	140	141	90	90	80	74	170	110	130	230	20
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.98	1.00		1.00	1.00		1.00	1.00		0.98
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1900	1863	1863	1863	1863	1863	1900	1863	1863	1900
Adj Flow Rate, veh/h	33	152	153	98	98	87	80	185	120	141	250	22
Adj No. of Lanes	1	1	0	1	1	1	1	2	0	1	2	0
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	414	197	198	186	195	166	102	366	226	183	723	63
Arrive On Green	0.23	0.23	0.23	0.10	0.10	0.10	0.06	0.17	0.17	0.10	0.22	0.22
Sat Flow, veh/h	1774	845	851	1774	1863	1583	1774	2105	1299	1774	3287	287
Grp Volume(v), veh/h	33	0	305	98	98	87	80	154	151	141	134	138
Grp Sat Flow(s),veh/h/ln	1774	0	1696	1774	1863	1583	1774	1770	1634	1774	1770	1805
Q Serve(g_s), s	0.8	0.0	8.7	2.7	2.6	2.7	2.3	4.1	4.4	4.0	3.3	3.4
Cycle Q Clear(g_c), s	0.8	0.0	8.7	2.7	2.6	2.7	2.3	4.1	4.4	4.0	3.3	3.4
Prop In Lane	1.00		0.50	1.00		1.00	1.00		0.79	1.00		0.16
Lane Grp Cap(c), veh/h	414	0	395	186	195	166	102	308	284	183	389	397
V/C Ratio(X)	0.08	0.00	0.77	0.53	0.50	0.52	0.78	0.50	0.53	0.77	0.34	0.35
Avail Cap(c_a), veh/h	682	0	652	614	645	548	307	681	628	409	783	798
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	15.6	0.0	18.6	22.1	22.0	22.0	24.2	19.4	19.5	22.7	17.1	17.1
Incr Delay (d2), s/veh	0.1	0.0	3.2	2.3	2.0	2.5	12.2	1.3	1.5	6.6	0.5	0.5
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.4	0.0	4.4	1.5	1.4	1.3	1.5	2.1	2.1	2.3	1.7	1.7
LnGrp Delay(d),s/veh	15.7	0.0	21.9	24.4	24.0	24.6	36.4	20.7	21.1	29.3	17.6	17.7
LnGrp LOS	B		C	C	C	C	D	C	C	C	B	B
Approach Vol, veh/h		338			283			385			413	
Approach Delay, s/veh		21.3			24.3			24.1			21.6	
Approach LOS		C			C			C			C	
Timer	1	2	3	4	5	6	7	8				
Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	10.4	14.0		17.1	8.0	16.4		10.5				
Change Period (Y+Rc), s	5.0	5.0		5.0	5.0	5.0		5.0				
Max Green Setting (Gmax), s	12.0	20.0		20.0	9.0	23.0		18.0				
Max Q Clear Time (g_c+I1), s	6.0	6.4		10.7	4.3	5.4		4.7				
Green Ext Time (p_c), s	0.2	2.7		1.4	0.1	3.0		0.8				
Intersection Summary												
HCM 2010 Ctrl Delay				22.7								
HCM 2010 LOS				C								

HCM 2010 Signalized Intersection Summary

9: West Bernardo Dr & Via Del Campo

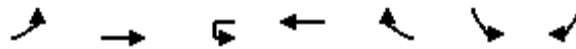
3/17/2016



Movement	EBL	EBT	WBT	WBR	SBL	SBR		
Lane Configurations								
Traffic Volume (veh/h)	68	540	580	50	200	444		
Future Volume (veh/h)	68	540	580	50	200	444		
Number	5	2	6	16	7	14		
Initial Q (Qb), veh	0	0	0	0	0	0		
Ped-Bike Adj(A_pbT)	1.00			1.00	1.00	1.00		
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00		
Adj Sat Flow, veh/h/ln	1863	1863	1863	1900	1863	1863		
Adj Flow Rate, veh/h	74	587	630	54	217	483		
Adj No. of Lanes	1	2	2	0	1	1		
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92		
Percent Heavy Veh, %	2	2	2	2	2	2		
Cap, veh/h	96	1958	1488	127	595	531		
Arrive On Green	0.05	0.55	0.45	0.45	0.34	0.34		
Sat Flow, veh/h	1774	3632	3393	282	1774	1583		
Grp Volume(v), veh/h	74	587	337	347	217	483		
Grp Sat Flow(s),veh/h/ln	1774	1770	1770	1813	1774	1583		
Q Serve(g_s), s	3.8	8.1	11.8	11.8	8.5	26.6		
Cycle Q Clear(g_c), s	3.8	8.1	11.8	11.8	8.5	26.6		
Prop In Lane	1.00			0.16	1.00	1.00		
Lane Grp Cap(c), veh/h	96	1958	798	818	595	531		
V/C Ratio(X)	0.77	0.30	0.42	0.42	0.37	0.91		
Avail Cap(c_a), veh/h	225	1958	798	818	764	682		
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00		
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00		
Uniform Delay (d), s/veh	42.6	10.9	17.0	17.0	23.0	29.0		
Incr Delay (d2), s/veh	12.3	0.4	1.6	1.6	0.4	13.9		
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0		
%ile BackOfQ(50%),veh/ln	2.2	4.0	6.1	6.2	4.2	22.4		
LnGrp Delay(d),s/veh	55.0	11.3	18.6	18.6	23.4	42.9		
LnGrp LOS	D	B	B	B	C	D		
Approach Vol, veh/h		661	684		700			
Approach Delay, s/veh		16.2	18.6		36.9			
Approach LOS		B	B		D			
Timer	1	2	3	4	5	6	7	8
Assigned Phs		2		4	5	6		
Phs Duration (G+Y+Rc), s		56.0		35.3	9.3	46.7		
Change Period (Y+Rc), s		5.5		* 4.7	4.4	5.5		
Max Green Setting (Gmax), s		50.5		* 39	11.6	34.5		
Max Q Clear Time (g_c+I1), s		10.1		28.6	5.8	13.8		
Green Ext Time (p_c), s		9.7		1.9	0.1	8.0		
Intersection Summary								
HCM 2010 Ctrl Delay			24.1					
HCM 2010 LOS			C					
Notes								

HCM 2010 Signalized Intersection Summary
 10: Bernardo Center Dr & West Bernardo Dr





















3/17/2016



Movement	EBL	EBT	WBU	WBT	WBR	SBL	SBR	
Lane Configurations								
Traffic Volume (veh/h)	494	500	0	480	474	437	587	
Future Volume (veh/h)	494	500	0	480	474	437	587	
Number	1	6		2	12	3	18	
Initial Q (Qb), veh	0	0		0	0	0	0	
Ped-Bike Adj(A_pbT)	1.00				1.00	1.00	1.00	
Parking Bus, Adj	1.00	1.00		1.00	1.00	1.00	1.00	
Adj Sat Flow, veh/h/ln	1863	1863		1863	1863	1863	1863	
Adj Flow Rate, veh/h	526	532		511	504	465	624	
Adj No. of Lanes	2	2		2	2	1	1	
Peak Hour Factor	0.94	0.94		0.94	0.94	0.94	0.94	
Percent Heavy Veh, %	2	2		2	2	2	2	
Cap, veh/h	647	1822		954	1744	633	863	
Arrive On Green	0.19	0.51		0.27	0.27	0.36	0.36	
Sat Flow, veh/h	3442	3632		3632	2781	1774	1583	
Grp Volume(v), veh/h	526	532		511	504	465	624	
Grp Sat Flow(s),veh/h/ln	1721	1770		1770	1391	1774	1583	
Q Serve(g_s), s	11.3	6.6		9.5	6.4	17.6	22.8	
Cycle Q Clear(g_c), s	11.3	6.6		9.5	6.4	17.6	22.8	
Prop In Lane	1.00				1.00	1.00	1.00	
Lane Grp Cap(c), veh/h	647	1822		954	1744	633	863	
V/C Ratio(X)	0.81	0.29		0.54	0.29	0.73	0.72	
Avail Cap(c_a), veh/h	921	2284		1493	2168	751	968	
HCM Platoon Ratio	1.00	1.00		1.00	1.00	1.00	1.00	
Upstream Filter(I)	1.00	1.00		1.00	1.00	1.00	1.00	
Uniform Delay (d), s/veh	30.0	10.7		24.0	6.6	21.6	13.2	
Incr Delay (d2), s/veh	3.8	0.1		0.5	0.1	3.1	2.4	
Initial Q Delay(d3),s/veh	0.0	0.0		0.0	0.0	0.0	0.0	
%ile BackOfQ(50%),veh/ln	5.7	3.2		4.7	2.5	9.1	10.5	
LnGrp Delay(d),s/veh	33.8	10.8		24.5	6.7	24.7	15.5	
LnGrp LOS	C	B		C	A	C	B	
Approach Vol, veh/h		1058		1015		1089		
Approach Delay, s/veh		22.2		15.6		19.4		
Approach LOS		C		B		B		
Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2				6		8
Phs Duration (G+Y+Rc), s	18.9	26.3				45.1		31.9
Change Period (Y+Rc), s	4.4	5.5				* 5.5		4.4
Max Green Setting (Gmax), s	20.6	32.5				* 50		32.6
Max Q Clear Time (g_c+I1), s	13.3	11.5				8.6		24.8
Green Ext Time (p_c), s	1.2	9.2				11.5		2.7
Intersection Summary								
HCM 2010 Ctrl Delay				19.1				
HCM 2010 LOS				B				
Notes								

APPENDIX K

PEAK HOUR INTERSECTION ANALYSIS WORKSHEETS POST-MITIGATION





















												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	10	1114	400	713	1356	10	80	10	77	10	10	10
Future Volume (veh/h)	10	1114	400	713	1356	10	80	10	77	10	10	10
Number	5	2	12	1	6	16	3	8	18	7	4	14
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.98	1.00		0.98	1.00		0.99	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1900	1863	1863	1900	1863	1863	1863	1900	1863	1900
Adj Flow Rate, veh/h	11	1211	435	775	1474	11	87	11	84	11	11	11
Adj No. of Lanes	1	2	0	1	2	0	1	1	1	0	1	0
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	18	1108	385	656	2852	21	172	148	124	64	59	43
Arrive On Green	0.01	0.43	0.43	0.37	0.79	0.79	0.08	0.08	0.08	0.08	0.08	0.08
Sat Flow, veh/h	1774	2561	890	1774	3600	27	1379	1863	1560	342	735	539
Grp Volume(v), veh/h	11	824	822	775	724	761	87	11	84	33	0	0
Grp Sat Flow(s),veh/h/ln	1774	1770	1681	1774	1770	1857	1379	1863	1560	1616	0	0
Q Serve(g_s), s	0.8	56.9	56.9	48.6	18.9	18.9	5.1	0.7	6.9	0.0	0.0	0.0
Cycle Q Clear(g_c), s	0.8	56.9	56.9	48.6	18.9	18.9	7.4	0.7	6.9	2.3	0.0	0.0
Prop In Lane	1.00		0.53	1.00		0.01	1.00		1.00	0.33		0.33
Lane Grp Cap(c), veh/h	18	766	728	656	1402	1472	172	148	124	165	0	0
V/C Ratio(X)	0.62	1.08	1.13	1.18	0.52	0.52	0.51	0.07	0.68	0.20	0.00	0.00
Avail Cap(c_a), veh/h	54	766	728	656	1402	1472	366	411	344	386	0	0
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	0.00
Uniform Delay (d), s/veh	64.8	37.3	37.3	41.4	4.8	4.8	58.9	56.0	58.8	56.7	0.0	0.0
Incr Delay (d2), s/veh	29.8	55.1	74.9	96.9	0.3	0.3	2.3	0.2	6.2	0.6	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.5	39.4	41.4	41.3	9.2	9.6	3.2	0.4	3.2	1.2	0.0	0.0
LnGrp Delay(d),s/veh	94.6	92.4	112.2	138.3	5.1	5.1	61.2	56.2	65.1	57.3	0.0	0.0
LnGrp LOS	F	F	F	F	A	A	E	E	E	E		
Approach Vol, veh/h		1657			2260			182			33	
Approach Delay, s/veh		102.2			50.8			62.7			57.3	
Approach LOS		F			D			E			E	
Timer	1	2	3	4	5	6	7	8				
Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	53.0	62.8		15.7	5.7	110.1		15.7				
Change Period (Y+Rc), s	4.4	5.9		* 5.2	4.4	* 5.9		5.2				
Max Green Setting (Gmax), s	48.6	56.9		* 29	4.0	* 1E2		29.0				
Max Q Clear Time (g_c+I1), s	50.6	58.9		4.3	2.8	20.9		9.4				
Green Ext Time (p_c), s	0.0	0.0		0.7	0.0	52.2		0.7				
Intersection Summary												
HCM 2010 Ctrl Delay				72.0								
HCM 2010 LOS				E								
Notes												

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	40	920	156	479	1770	20	39	3	120	90	13	150
Future Volume (veh/h)	40	920	156	479	1770	20	39	3	120	90	13	150
Number	5	2	12	1	6	16	3	8	18	7	4	14
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		0.99
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1900	1863	1863	1900	1900	1863	1863	1900	1863	1900
Adj Flow Rate, veh/h	43	1000	170	521	1924	22	42	3	130	98	14	163
Adj No. of Lanes	1	2	0	1	2	0	0	1	1	0	1	0
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	55	980	166	503	2164	25	235	15	367	140	30	181
Arrive On Green	0.03	0.32	0.32	0.28	0.60	0.60	0.23	0.23	0.23	0.23	0.23	0.23
Sat Flow, veh/h	1774	3028	514	1774	3584	41	739	63	1583	409	128	782
Grp Volume(v), veh/h	43	584	586	521	948	998	45	0	130	275	0	0
Grp Sat Flow(s),veh/h/ln	1774	1770	1772	1774	1770	1856	803	0	1583	1319	0	0
Q Serve(g_s), s	2.6	35.4	35.4	31.0	50.0	50.4	0.0	0.0	7.5	17.3	0.0	0.0
Cycle Q Clear(g_c), s	2.6	35.4	35.4	31.0	50.0	50.4	5.2	0.0	7.5	22.5	0.0	0.0
Prop In Lane	1.00		0.29	1.00		0.02	0.93		1.00	0.36		0.59
Lane Grp Cap(c), veh/h	55	573	574	503	1068	1120	250	0	367	350	0	0
V/C Ratio(X)	0.78	1.02	1.02	1.04	0.89	0.89	0.18	0.00	0.35	0.78	0.00	0.00
Avail Cap(c_a), veh/h	65	573	574	503	1068	1120	286	0	414	386	0	0
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00	0.00
Uniform Delay (d), s/veh	52.6	37.0	37.0	39.2	18.5	18.6	34.2	0.0	35.1	41.6	0.0	0.0
Incr Delay (d2), s/veh	39.9	42.6	43.1	49.7	9.2	9.2	0.3	0.0	0.6	9.4	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.9	24.0	24.1	22.0	27.0	28.4	1.1	0.0	3.3	9.0	0.0	0.0
LnGrp Delay(d),s/veh	92.6	79.6	80.1	88.9	27.7	27.7	34.5	0.0	35.7	51.0	0.0	0.0
LnGrp LOS	F	F	F	F	C	C	C		D	D		
Approach Vol, veh/h		1213			2467			175			275	
Approach Delay, s/veh		80.3			40.6			35.4			51.0	
Approach LOS		F			D			D			D	
Timer	1	2	3	4	5	6	7	8				
Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	37.0	42.4		30.0	7.4	72.0		30.0				
Change Period (Y+Rc), s	6.0	* 7		4.6	4.0	6.0		* 4.6				
Max Green Setting (Gmax), s	31.0	* 35		28.0	4.0	63.4		* 29				
Max Q Clear Time (g_c+I1), s	33.0	37.4		24.5	4.6	52.4		9.5				
Green Ext Time (p_c), s	0.0	0.0		0.9	0.0	9.1		2.5				
Intersection Summary												
HCM 2010 Ctrl Delay			52.8									
HCM 2010 LOS			D									
Notes												

HCM 2010 Signalized Intersection Summary




















2: Via Del Campo & Rancho Bernardo Rd

3/16/2016

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	20	1488	70	49	1069	10	370	10	469	10	10	10
Future Volume (veh/h)	20	1488	70	49	1069	10	370	10	469	10	10	10
Number	5	2	12	1	6	16	3	8	18	7	4	14
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		0.98	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1900	1863	1863	1900	1863	1863	1863	1900	1863	1900
Adj Flow Rate, veh/h	22	1617	76	53	1162	11	402	11	510	11	11	11
Adj No. of Lanes	1	2	0	1	2	0	1	1	1	0	1	0
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	30	1666	78	68	1814	17	510	536	448	14	14	14
Arrive On Green	0.02	0.48	0.48	0.04	0.50	0.50	0.29	0.29	0.29	0.02	0.02	0.02
Sat Flow, veh/h	1774	3443	161	1774	3592	34	1774	1863	1558	577	577	577
Grp Volume(v), veh/h	22	828	865	53	572	601	402	11	510	33	0	0
Grp Sat Flow(s),veh/h/ln	1774	1770	1834	1774	1770	1857	1774	1863	1558	1732	0	0
Q Serve(g_s), s	1.5	55.8	56.7	3.6	29.1	29.1	25.7	0.5	35.4	2.3	0.0	0.0
Cycle Q Clear(g_c), s	1.5	55.8	56.7	3.6	29.1	29.1	25.7	0.5	35.4	2.3	0.0	0.0
Prop In Lane	1.00		0.09	1.00		0.02	1.00		1.00	0.33		0.33
Lane Grp Cap(c), veh/h	30	856	887	68	894	938	510	536	448	42	0	0
V/C Ratio(X)	0.72	0.97	0.98	0.78	0.64	0.64	0.79	0.02	1.14	0.78	0.00	0.00
Avail Cap(c_a), veh/h	88	864	896	72	894	938	510	536	448	410	0	0
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	0.00
Uniform Delay (d), s/veh	60.2	30.8	31.0	58.6	22.3	22.3	40.4	31.4	43.8	59.7	0.0	0.0
Incr Delay (d2), s/veh	27.2	22.7	23.9	39.1	1.6	1.5	8.1	0.0	85.9	26.0	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.0	32.5	34.5	2.5	14.5	15.2	13.8	0.3	25.8	1.4	0.0	0.0
LnGrp Delay(d),s/veh	87.4	53.5	55.0	97.7	23.8	23.8	48.4	31.4	129.7	85.7	0.0	0.0
LnGrp LOS	F	D	D	F	C	C	D	C	F	F		
Approach Vol, veh/h		1715			1226			923			33	
Approach Delay, s/veh		54.7			27.0			93.1			85.7	
Approach LOS		D			C			F			F	
Timer	1	2	3	4	5	6	7	8				
Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	9.1	65.4		7.9	6.5	68.0		40.6				
Change Period (Y+Rc), s	4.4	5.9		4.9	4.4	* 5.9		5.2				
Max Green Setting (Gmax), s	5.0	60.1		29.1	6.1	* 59		35.4				
Max Q Clear Time (g_c+I1), s	5.6	58.7		4.3	3.5	31.1		37.4				
Green Ext Time (p_c), s	0.0	0.8		0.1	0.0	21.9		0.0				
Intersection Summary												
HCM 2010 Ctrl Delay			55.4									
HCM 2010 LOS			E									
Notes												

HCM 2010 Signalized Intersection Summary
 3: Project Dwy/Matinal Rd & Rancho Bernardo Rd

3/16/2016

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	120	1670	87	268	990	60	58	5	180	50	7	120
Future Volume (veh/h)	120	1670	87	268	990	60	58	5	180	50	7	120
Number	5	2	12	1	6	16	3	8	18	7	4	14
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		0.99
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1900	1863	1863	1900	1900	1863	1863	1900	1863	1900
Adj Flow Rate, veh/h	130	1815	95	291	1076	65	63	5	196	54	8	130
Adj No. of Lanes	1	2	0	1	2	0	0	1	1	0	1	0
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	153	1830	95	308	2109	127	150	10	298	66	22	119
Arrive On Green	0.09	0.53	0.53	0.17	0.62	0.62	0.19	0.19	0.19	0.19	0.19	0.19
Sat Flow, veh/h	1774	3423	178	1774	3391	205	551	54	1583	186	117	634
Grp Volume(v), veh/h	130	931	979	291	561	580	68	0	196	192	0	0
Grp Sat Flow(s),veh/h/ln	1774	1770	1831	1774	1770	1827	605	0	1583	937	0	0
Q Serve(g_s), s	10.8	77.5	80.2	24.3	26.3	26.4	0.0	0.0	17.2	12.9	0.0	0.0
Cycle Q Clear(g_c), s	10.8	77.5	80.2	24.3	26.3	26.4	15.3	0.0	17.2	28.2	0.0	0.0
Prop In Lane	1.00		0.10	1.00		0.11	0.93		1.00	0.28		0.68
Lane Grp Cap(c), veh/h	153	946	979	308	1100	1136	160	0	298	207	0	0
V/C Ratio(X)	0.85	0.98	1.00	0.95	0.51	0.51	0.43	0.00	0.66	0.93	0.00	0.00
Avail Cap(c_a), veh/h	225	946	979	308	1100	1136	165	0	304	207	0	0
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00	0.00
Uniform Delay (d), s/veh	67.6	34.3	34.9	61.3	15.7	15.7	55.5	0.0	56.4	63.8	0.0	0.0
Incr Delay (d2), s/veh	18.0	25.3	28.7	37.2	0.4	0.4	1.8	0.0	5.0	42.9	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	6.1	44.4	48.0	15.1	12.9	13.3	2.6	0.0	8.0	10.4	0.0	0.0
LnGrp Delay(d),s/veh	85.6	59.6	63.6	98.5	16.1	16.1	57.3	0.0	61.4	106.7	0.0	0.0
LnGrp LOS	F	E	E	F	B	B	E		E	F		
Approach Vol, veh/h		2040			1432			264			192	
Approach Delay, s/veh		63.2			32.8			60.4			106.7	
Approach LOS		E			C			E			F	
Timer	1	2	3	4	5	6	7	8				
Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	30.0	87.2		32.8	16.9	100.3		32.8				
Change Period (Y+Rc), s	4.0	7.0		4.6	4.0	* 7		* 4.6				
Max Green Setting (Gmax), s	26.0	80.2		28.2	19.0	* 88		* 29				
Max Q Clear Time (g_c+I1), s	26.3	82.2		30.2	12.8	28.4		19.2				
Green Ext Time (p_c), s	0.0	0.0		0.0	0.1	41.9		1.7				
Intersection Summary												
HCM 2010 Ctrl Delay			54.0									
HCM 2010 LOS			D									
Notes												