APPENDIX F

- Existing + Project Units 1-2 Arterial Synchro Analysis Worksheets
- Existing + Project Units 1-2 Synchro Analysis Worksheets
- Existing + Project Units 1-2 Intersection ILV Analysis

Existing + Project Units 1-2 Arterial Synchro Analysis Worksheets

Arterial Level of Service: EB Otay Mesa Road

Cross Street	Arterial Class	Flow Speed	Running Time	Signal Delay	Travel Time (s)	Dist (mi)	Arterial Speed	Arterial LOS
Heritage Road	II	45	28.4	39.4	67.8	0.27	14.5	E
Cactus Rd	II	45	44.7	16.0	60.7	0.51	30.1	B
Brittania Blvd	II	45	45.5	20.4	65.9	0.52	28.2	B
La Media	II	45	83.0	10.3	93.3	1.04	40.1	A
Piper Ranch Rd	II	45	44.3	9.4	53.7	0.50	33.8	B
	II	45	25.6	11.9	37.5	0.25	23.6	C
SR125 NB Ramp	II	45	14.8	1.2	16.0	0.14	30.5	B
SR905	II	45	15.0	33.3	48.3	0.14	10.3	F
Sanyo Ave	II	45	27.8	7.5	35.3	0.27	27.3	C
Enrico Fermi Dr	II	45	62.8	247.5	310.3	0.78	9.1	F
Total	II		391.9	396.9	788.8	4.41	20.1	D

Arterial Level of Service: WB Otay Mesa Road

Cross Street	Arterial Class	Flow Speed	Running Time	Signal Delay	Travel Time (s)	Dist (mi)	Arterial Speed	Arterial LOS
Enrico Fermi Dr	II	45	43.2	3.1	46.3	0.49	38.2	A
Sanyo Ave	II	45	62.8	2.2	65.0	0.78	43.4	A
SR905	II	45	27.8	7.3	35.1	0.27	27.4	C
SR125 NB Ramp	II	45	15.0	9.3	24.3	0.14	20.4	D
SR125 SB	II	45	14.8	9.2	24.0	0.14	20.3	D
Piper Ranch Rd	II	45	25.6	2.7	28.3	0.25	31.3	B
La Media	II	45	44.3	11.6	55.9	0.50	32.4	B
Brittania Blvd	II	45	83.0	3.0	86.0	1.04	43.5	A
Cactus Rd	II	45	45.5	2.2	47.7	0.52	39.0	A
Heritage Road	II	45	44.7	13.2	57.9	0.51	31.6	B
Total	II		406.7	63.8	470.5	4.63	35.4	A

Arterial Level of Service: EB Otay Mesa Road

Cross Street	Arterial Class	Flow Speed	Running Time	Signal Delay	Travel Time (s)	Dist (mi)	Arterial Speed	Arterial LOS
Heritage Road	II	45	28.4	18.3	46.7	0.27	21.0	D
Cactus Rd	II	45	44.7	15.0	59.7	0.51	30.6	B
Brittania Blvd	II	45	45.5	9.1	54.6	0.52	34.1	B
La Media	II	45	83.0	25.8	108.8	1.04	34.3	B
Piper Ranch Rd	II	45	43.8	4.5	48.3	0.50	37.1	A
	II	45	26.2	1.8	28.0	0.25	32.4	B
SR125 NB Ramp	II	45	14.7	0.1	14.8	0.14	32.9	B
SR905	II	45	15.0	13.7	28.7	0.14	17.3	D
Sanyo Ave	II	45	27.8	12.0	39.8	0.27	24.2	C
Enrico Fermi Rd	II	45	62.8	19.3	82.1	0.78	34.4	B
Total	II		391.9	119.6	511.5	4.41	31.0	B

Arterial Level of Service: WB Otay Mesa Road

Cross Street	Arterial Class	Flow Speed	Running Time	Signal Delay	Travel Time (s)	Dist (mi)	Arterial Speed	Arterial LOS
Enrico Fermi Rd	II	45	43.2	6.4	49.6	0.49	35.6	A
Sanyo Ave	II	45	62.8	207.9	270.7	0.78	10.4	F
SR905	II	45	27.8	119.4	147.2	0.27	6.5	F
SR125 NB Ramp	II	45	15.0	5.0	20.0	0.14	24.8	C
SR125 SB	II	45	14.7	1.6	16.3	0.14	29.9	B
Piper Ranch Rd	II	45	26.2	2.8	29.0	0.25	31.3	B
La Media	II	45	43.8	30.0	73.8	0.50	24.3	C
Brittania Blvd	II	45	83.0	19.5	102.5	1.04	36.5	A
Cactus Rd	II	45	45.5	6.4	51.9	0.52	35.9	A
Heritage Road	II	45	44.7	37.5	82.2	0.51	22.2	C
Total	II		406.7	436.5	843.2	4.63	19.8	D

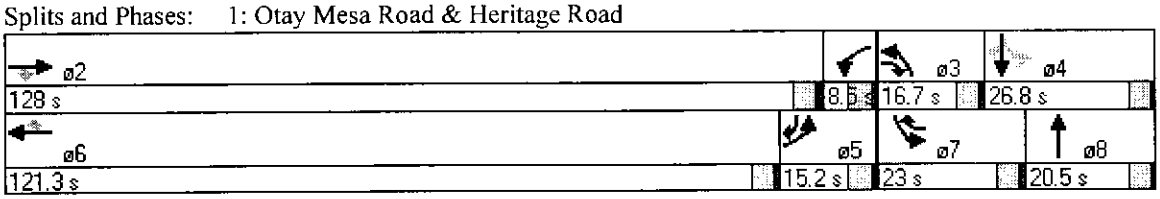
Existing + Project Units 1-2 Synchro Analysis Worksheets

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Total Lost Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	0.97	0.91	1.00	0.97	0.91	1.00	1.00	1.00	1.00	1.00	1.00	0.88
Frt			0.850			0.850		0.886				0.850
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	3433	4803	1583	3433	4803	1583	1770	1650	0	1770	1863	2787
Flt Permitted	0.950			0.950			0.950			0.352		
Satd. Flow (perm)	3433	4803	1583	3433	4803	1583	1770	1650	0	656	1863	2787
Satd. Flow (RTOR)			158			83		42				58
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Volume (vph)	105	3065	194	42	1120	74	54	22	70	247	37	52
Adj. Flow (vph)	118	3444	218	47	1258	83	61	25	79	278	42	58
Lane Group Flow (vph)	118	3444	218	47	1258	83	61	104	0	278	42	58
Turn Type	Prot		pm+ov	Prot		pm+ov	Prot			pm+pt		pm+ov
Protected Phases	5	2	3	1	6	7	3	8		7	4	5
Permitted Phases			2			6				4		4
Total Split (s)	15.2	128.0	16.7	8.5	121.3	23.0	16.7	20.5	0.0	23.0	26.8	15.2
Act Effct Green (s)	10.7	129.5	141.3	4.5	121.6	141.1	11.0	12.2		35.7	20.7	31.4
Actuated g/C Ratio	0.06	0.72	0.78	0.02	0.68	0.78	0.06	0.07		0.20	0.12	0.17
v/c Ratio	0.58	1.00	0.17	0.55	0.39	0.07	0.56	0.69		1.11	0.20	0.11
Control Delay	93.8	39.4	1.2	106.4	13.2	0.6	101.4	70.7		149.3	74.2	10.2
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0
Total Delay	93.8	39.4	1.2	106.4	13.2	0.6	101.4	70.7		149.3	74.2	10.2
LOS	F	D	A	F	B	A	F	E		F	E	B
Approach Delay		38.9			15.6			82.0			119.6	
Approach LOS		D			B			F			F	

Intersection Summary

Cycle Length: 180
Actuated Cycle Length: 180
Offset: 0 (0%), Referenced to phase 2:EBT and 6:WBT, Start of Green, Master Intersection
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 1.11
Intersection Signal Delay: 39.8 — Intersection LOS: D
Intersection Capacity Utilization 86.2% — ICU Level of Service E
Analysis Period (min) 15

Splits and Phases: 1: Otay Mesa Road & Heritage Road

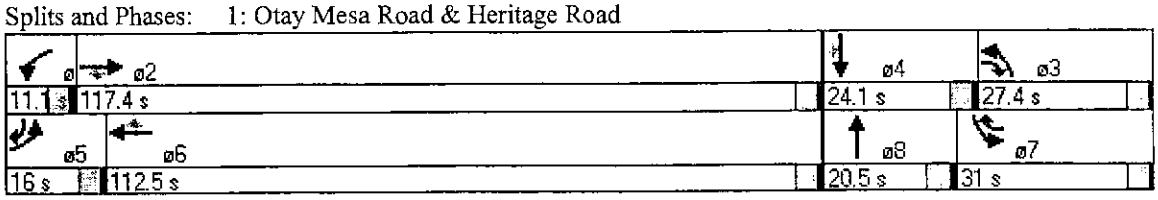


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Total Lost Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	0.97	0.91	1.00	0.97	0.91	1.00	1.00	1.00	1.00	1.00	1.00	0.88
Frt			0.850			0.850		0.918				0.850
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	3433	4803	1583	3433	4803	1583	1770	1710	0	1770	1863	2787
Flt Permitted	0.950			0.950			0.950			0.950		
Satd. Flow (perm)	3433	4803	1583	3433	4803	1583	1770	1710	0	1770	1863	2787
Satd. Flow (RTOR)			157			217		27				88
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Volume (vph)	189	1683	152	59	2601	232	133	58	71	222	65	220
Adj. Flow (vph)	195	1735	157	61	2681	239	137	60	73	229	67	227
Lane Group Flow (vph)	195	1735	157	61	2681	239	137	133	0	229	67	227
Turn Type	Prot		pm+ov	Prot		pm+ov	Prot			Prot		pm+ov
Protected Phases	5	2	3	1	6	7	3	8		7	4	5
Permitted Phases			2			6						4
Total Split (s)	16.0	117.4	27.4	11.1	112.5	31.0	27.4	20.5	0.0	31.0	24.1	16.0
Act Effct Green (s)	11.8	109.1	137.3	7.0	101.5	126.2	27.1	14.3		24.7	11.9	23.7
Actuated g/C Ratio	0.07	0.65	0.81	0.04	0.60	0.75	0.16	0.08		0.15	0.07	0.14
v/c Ratio	0.81	0.56	0.12	0.44	0.93	0.19	0.48	0.78		0.88	0.51	0.49
Control Delay	103.9	18.3	0.5	93.8	37.5	0.8	73.3	91.4		104.3	92.6	30.1
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0
Total Delay	103.9	18.3	0.5	93.8	37.5	0.8	73.3	91.4		104.3	92.6	30.1
LOS	F	B	A	F	D	A	E	F		F	F	C
Approach Delay		25.0			35.7			82.2			70.6	
Approach LOS		C			D			F			E	

Intersection Summary

Cycle Length: 180
Actuated Cycle Length: 168.7
Control Type: Actuated-Uncoordinated
Maximum v/c Ratio: 0.93
Intersection Signal Delay: 37.1 — Intersection LOS: D
Intersection Capacity Utilization 88.7% — ICU Level of Service E
Analysis Period (min) 15

Splits and Phases: 1: Otay Mesa Road & Heritage Road

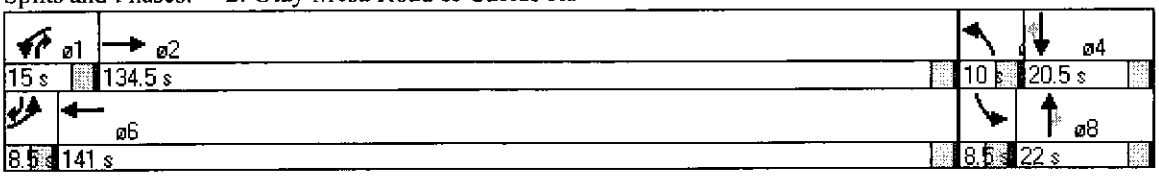


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Total Lost Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	1.00	0.91	0.91	1.00	0.91	0.91	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.998			0.999				0.850			0.850
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1770	4797	0	1770	4799	0	1770	1863	1583	1770	1863	1583
Flt Permitted	0.950			0.950			0.950			0.950		
Satd. Flow (perm)	1770	4797	0	1770	4799	0	1770	1863	1583	1770	1863	1583
Satd. Flow (RTOR)		3			1				28			97
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Volume (vph)	8	3579	58	56	1317	5	22	1	112	3	0	5
Adj. Flow (vph)	9	3933	64	62	1447	5	24	1	123	3	0	5
Lane Group Flow (vph)	9	3997	0	62	1452	0	24	1	123	3	0	5
Turn Type	Prot			Prot			Prot		pm+ov	Prot		pm+ov
Protected Phases	5	2		1	6		3	8	1	7	4	5
Permitted Phases									8			4
Total Split (s)	8.5	134.5	0.0	15.0	141.0	0.0	10.0	22.0	15.0	8.5	20.5	8.5
Act Effct Green (s)	7.0	150.6		13.6	164.9		7.9	6.2	19.7	4.5		7.0
Actuated g/C Ratio	0.04	0.84		0.08	0.92		0.04	0.03	0.11	0.02		0.04
v/c Ratio	0.13	1.00		0.47	0.33		0.31	0.02	0.62	0.07		0.03
Control Delay	79.5	16.0		90.4	2.2		92.4	84.0	70.9	89.0		0.4
Queue Delay	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0		0.0
Total Delay	79.5	16.0		90.4	2.2		92.4	84.0	70.9	89.0		0.4
LOS	E	B		F	A		F	F	E	F		A
Approach Delay		16.1			5.8			74.5				
Approach LOS		B			A			E				

Intersection Summary

Cycle Length: 180
Actuated Cycle Length: 180
Offset: 26 (14%), Referenced to phase 2:EBT and 6:WBT, Start of Green
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 1.00
Intersection Signal Delay: 14.9 — Intersection LOS: B
Intersection Capacity Utilization 90.7% — ICU Level of Service E
Analysis Period (min) 15

Splits and Phases: 2: Otay Mesa Road & Cactus Rd

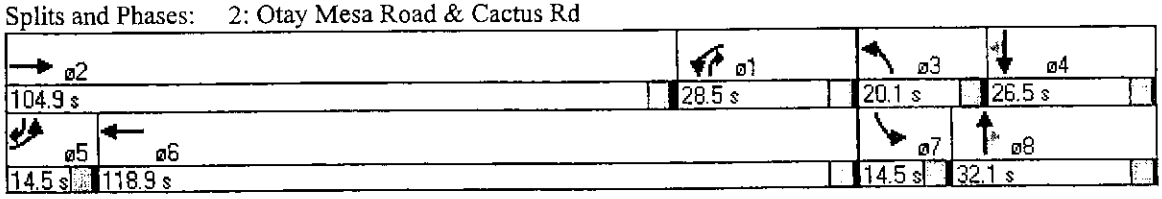


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Total Lost Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	1.00	0.91	0.91	1.00	0.91	0.91	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.996			0.999				0.850			0.850
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1770	4790	0	1770	4799	0	1770	1863	1583	1770	1863	1583
Flt Permitted	0.950			0.950			0.950			0.950		
Satd. Flow (perm)	1770	4790	0	1770	4799	0	1770	1863	1583	1770	1863	1583
Satd. Flow (RTOR)		3			1				98			54
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Volume (vph)	6	2222	58	113	3242	16	43	1	117	4	0	15
Adj. Flow (vph)	6	2267	59	115	3308	16	44	1	119	4	0	15
Lane Group Flow (vph)	6	2326	0	115	3324	0	44	1	119	4	0	15
Turn Type	Prot			Prot			Prot		pm+ov	Prot		pm+ov
Protected Phases	5	2		1	6		3	8	1	7	4	5
Permitted Phases									8			4
Total Split (s)	14.5	104.9	0.0	28.5	118.9	0.0	20.1	32.1	28.5	14.5	26.5	14.5
Act Effct Green (s)	6.7	129.9		29.2	157.1		11.1	8.7	39.1	6.5		6.7
Actuated g/C Ratio	0.04	0.72		0.16	0.87		0.06	0.05	0.22	0.04		0.04
v/c Ratio	0.09	0.67		0.40	0.79		0.40	0.01	0.28	0.06		0.14
Control Delay	86.2	15.0		65.3	6.4		90.7	82.0	15.5	85.5		2.5
Queue Delay	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0		0.0
Total Delay	86.2	15.0		65.3	6.4		90.7	82.0	15.5	85.5		2.5
LOS	F	B		E	A		F	F	B	F		A
Approach Delay		15.2			8.3			36.1				
Approach LOS		B			A			D				

Intersection Summary

Cycle Length: 180
Actuated Cycle Length: 180
Offset: 139 (77%), Referenced to phase 2:EBT and 6:WBT, Start of Green
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 0.79
Intersection Signal Delay: 11.8 — Intersection LOS: B
Intersection Capacity Utilization 85.4% — ICU Level of Service E
Analysis Period (min) 15

Splits and Phases: 2: Otay Mesa Road & Cactus Rd

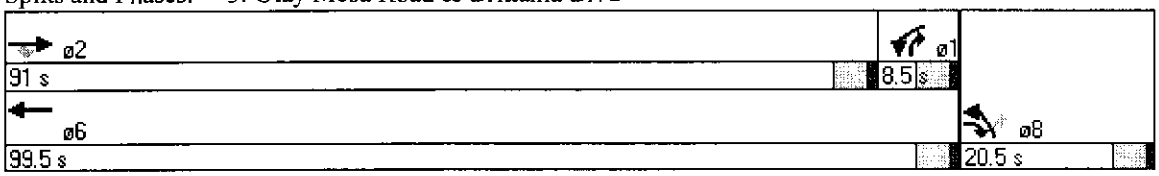


Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↑↑↑	↱	↰	↑↑↑	↰↰	↱
Total Lost Time (s)	4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	0.91	1.00	1.00	0.91	0.97	1.00
Frt		0.850				0.850
Flt Protected			0.950		0.950	
Satd. Flow (prot)	4803	1583	1770	4803	3433	1583
Flt Permitted			0.950		0.950	
Satd. Flow (perm)	4803	1583	1770	4803	3433	1583
Satd. Flow (RTOR)		163				2
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Volume (vph)	2871	669	46	1208	176	41
Adj. Flow (vph)	3378	787	54	1421	207	48
Lane Group Flow (vph)	3378	787	54	1421	207	48
Turn Type		pm+ov	Prot			pm+ov
Protected Phases	2	8	1	6	8	1
Permitted Phases		2				8
Total Split (s)	91.0	20.5	8.5	99.5	20.5	8.5
Act Effct Green (s)	90.1	110.0	4.5	96.9	15.1	23.6
Actuated g/C Ratio	0.75	0.92	0.04	0.81	0.13	0.20
v/c Ratio	0.94	0.54	0.82	0.37	0.48	0.15
Control Delay	20.4	2.3	114.1	3.0	52.3	39.1
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	20.4	2.3	114.1	3.0	52.3	39.1
LOS	C	A	F	A	D	D
Approach Delay	17.0			7.1	49.8	
Approach LOS	B			A	D	

Intersection Summary

Cycle Length: 120
Actuated Cycle Length: 120
Offset: 100 (83%), Referenced to phase 2:EBT and 6:WBT, Start of Green
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 0.94
Intersection Signal Delay: 15.9 — Intersection LOS: B
Intersection Capacity Utilization 67.2% — ICU Level of Service C
Analysis Period (min) 15

Splits and Phases: 3: Otay Mesa Road & Brittania Blvd

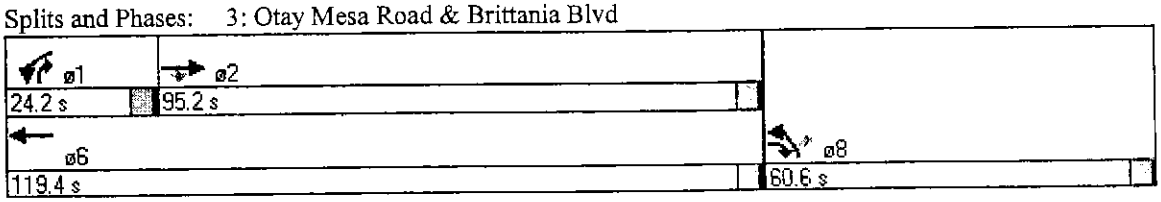


Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↑↑↑	↱	↰	↑↑↑	↰↰	↱
Total Lost Time (s)	4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	0.91	1.00	1.00	0.91	0.97	1.00
Frt		0.850				0.850
Flt Protected			0.950		0.950	
Satd. Flow (prot)	4803	1583	1770	4803	3433	1583
Flt Permitted			0.950		0.950	
Satd. Flow (perm)	4803	1583	1770	4803	3433	1583
Satd. Flow (RTOR)		309				4
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Volume (vph)	1901	287	52	2749	587	46
Adj. Flow (vph)	2044	309	56	2956	631	49
Lane Group Flow (vph)	2044	309	56	2956	631	49
Turn Type		pm+ov	Prot			pm+ov
Protected Phases	2	8	1	6	8	1
Permitted Phases		2				8
Total Split (s)	95.2	60.6	24.2	119.4	60.6	24.2
Act Effct Green (s)	117.5	160.6	11.4	132.9	39.1	54.5
Actuated g/C Ratio	0.65	0.89	0.06	0.74	0.22	0.30
v/c Ratio	0.65	0.21	0.50	0.83	0.85	0.10
Control Delay	9.1	0.8	95.8	19.5	78.8	39.4
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	9.1	0.8	95.8	19.5	78.8	39.4
LOS	A	A	F	B	E	D
Approach Delay	8.0			20.9	76.0	
Approach LOS	A			C	E	

Intersection Summary

Cycle Length: 180
Actuated Cycle Length: 180
Offset: 170 (94%), Referenced to phase 2:EBT and 6:WBT, Start of Green
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 0.85
Intersection Signal Delay: 22.1 — Intersection LOS: C
Intersection Capacity Utilization 76.5% — ICU Level of Service D
Analysis Period (min) 15

Splits and Phases: 3: Otay Mesa Road & Brittania Blvd

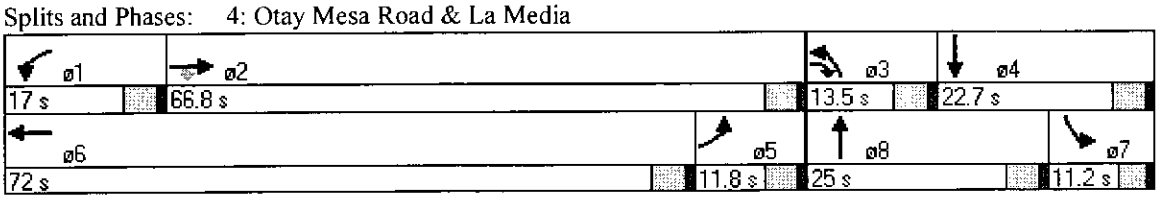


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Total Lost Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	1.00	0.91	1.00	1.00	0.91	0.91	1.00	1.00	1.00	0.97	1.00	1.00
Frt			0.850		0.994			0.939			0.913	
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1770	4803	1583	1770	4784	0	1770	1690	0	3433	1659	0
Flt Permitted	0.950			0.950			0.950			0.950		
Satd. Flow (perm)	1770	4803	1583	1770	4784	0	1770	1690	0	3433	1659	0
Satd. Flow (RTOR)			245		8			17			48	
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Volume (vph)	71	2284	233	87	1147	44	75	24	16	73	52	71
Adj. Flow (vph)	75	2404	245	92	1207	46	79	25	17	77	55	75
Lane Group Flow (vph)	75	2404	245	92	1253	0	79	42	0	77	130	0
Turn Type	Prot		pm+ov	Prot			Prot			Prot		
Protected Phases	5	2	3	1	6		3	8		7	4	
Permitted Phases			2									
Total Split (s)	11.8	66.8	13.5	17.0	72.0	0.0	13.5	25.0	0.0	11.2	22.7	0.0
Act Effct Green (s)	7.7	71.6	84.6	11.6	77.7		9.0	10.1		12.6	11.8	
Actuated g/C Ratio	0.06	0.60	0.70	0.10	0.65		0.08	0.08		0.10	0.10	
v/c Ratio	0.66	0.84	0.21	0.54	0.40		0.59	0.27		0.21	0.63	
Control Delay	52.6	10.3	1.1	62.9	11.6		72.1	39.9		49.1	45.3	
Queue Delay	0.0	0.0	0.0	0.0	0.0		0.0	0.0		0.0	0.0	
Total Delay	52.6	10.3	1.1	62.9	11.6		72.1	39.9		49.1	45.3	
LOS	D	B	A	E	B		E	D		D	D	
Approach Delay		10.7			15.1			60.9			46.7	
Approach LOS		B			B			E			D	

Intersection Summary

Cycle Length: 120
Actuated Cycle Length: 120
Offset: 87 (73%), Referenced to phase 2:EBT and 6:WBT, Start of Green
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 0.84
Intersection Signal Delay: 15.1 — Intersection LOS: B
Intersection Capacity Utilization 73.5% — ICU Level of Service D
Analysis Period (min) 15

Splits and Phases: 4: Otay Mesa Road & La Media

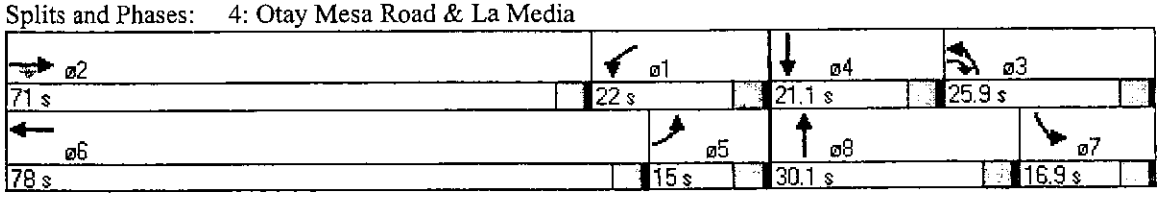


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Total Lost Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	1.00	0.91	1.00	1.00	0.91	0.91	1.00	1.00	1.00	0.97	1.00	1.00
Frt			0.850		0.997			0.922			0.903	
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1770	4803	1583	1770	4793	0	1770	1670	0	3433	1648	0
Flt Permitted	0.950			0.950			0.950			0.950		
Satd. Flow (perm)	1770	4803	1583	1770	4793	0	1770	1670	0	3433	1648	0
Satd. Flow (RTOR)			249		3			25			54	
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Volume (vph)	70	1674	239	55	2321	44	158	22	24	67	63	116
Adj. Flow (vph)	73	1744	249	57	2418	46	165	23	25	70	66	121
Lane Group Flow (vph)	73	1744	249	57	2464	0	165	48	0	70	187	0
Turn Type	Prot		pm+ov	Prot			Prot			Prot		
Protected Phases	5	2	3	1	6		3	8		7	4	
Permitted Phases			2									
Total Split (s)	15.0	71.0	25.9	22.0	78.0	0.0	25.9	30.1	0.0	16.9	21.1	0.0
Act Effct Green (s)	9.9	77.5	99.4	15.4	83.1		17.9	12.1		23.1	15.2	
Actuated g/C Ratio	0.07	0.55	0.71	0.11	0.59		0.13	0.09		0.16	0.11	
v/c Ratio	0.58	0.66	0.21	0.29	0.87		0.73	0.29		0.12	0.82	
Control Delay	81.2	25.8	1.4	59.7	30.0		76.8	39.8		47.6	70.1	
Queue Delay	0.0	0.0	0.0	0.0	0.0		0.0	0.0		0.0	0.0	
Total Delay	81.2	25.8	1.4	59.7	30.0		76.8	39.8		47.6	70.1	
LOS	F	C	A	E	C		E	D		D	E	
Approach Delay		24.8			30.7			68.5			64.0	
Approach LOS		C			C			E			E	

Intersection Summary

Cycle Length: 140
Actuated Cycle Length: 140
Offset: 0 (0%), Referenced to phase 2:EBT and 6:WBT, Start of Green
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 0.87
Intersection Signal Delay: 31.6 — Intersection LOS: C
Intersection Capacity Utilization 82.2% — ICU Level of Service E
Analysis Period (min) 15

Splits and Phases: 4: Otay Mesa Road & La Media

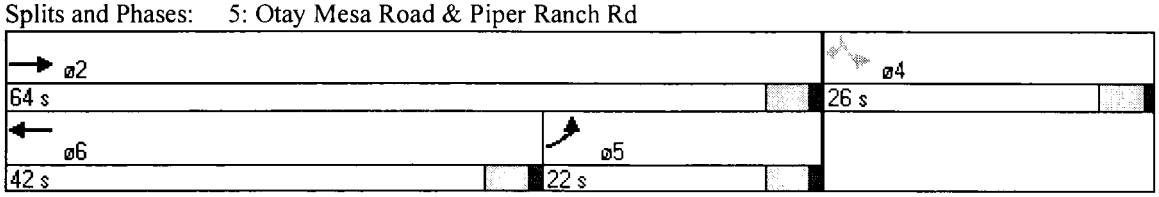


Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Total Lost Time (s)	4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	1.00	0.95	0.91	0.91	0.97	0.91
Frt			0.996		0.972	0.850
Flt Protected	0.950				0.961	
Satd. Flow (prot)	1770	3539	5065	0	3376	1441
Flt Permitted	0.950				0.961	
Satd. Flow (perm)	1770	3539	5065	0	3376	1441
Satd. Flow (RTOR)			5		6	14
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Volume (vph)	106	2308	1261	30	23	18
Adj. Flow (vph)	119	2593	1417	34	26	20
Lane Group Flow (vph)	119	2593	1451	0	32	14
Turn Type	Prot					custom
Protected Phases	5	2	6			
Permitted Phases					4	4
Total Split (s)	22.0	64.0	42.0	0.0	26.0	26.0
Act Effct Green (s)	15.8	75.3	57.7		6.7	6.7
Actuated g/C Ratio	0.18	0.84	0.64		0.07	0.07
v/c Ratio	0.38	0.88	0.45		0.12	0.12
Control Delay	35.5	9.4	2.7		34.3	20.8
Queue Delay	0.0	0.0	0.0		0.0	0.0
Total Delay	35.5	9.4	2.7		34.3	20.8
LOS	D	A	A		C	C
Approach Delay		10.5	2.7		30.2	
Approach LOS		B	A		C	

Intersection Summary

Cycle Length: 90
Actuated Cycle Length: 90
Offset: 9 (10%), Referenced to phase 2:EBT and 6:WBT, Start of Green
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 0.88
Intersection Signal Delay: 8.0 — Intersection LOS: A
Intersection Capacity Utilization 73.8% — ICU Level of Service D
Analysis Period (min) 15

Splits and Phases: 5: Otay Mesa Road & Piper Ranch Rd

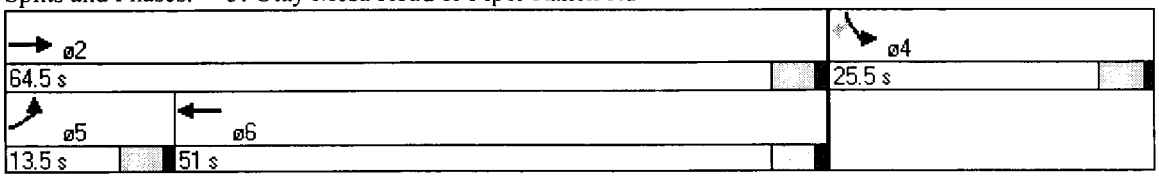


Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Total Lost Time (s)	4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	1.00	0.95	0.91	0.91	0.97	0.91
Frt			0.999		0.927	0.850
Flt Protected	0.950				0.975	
Satd. Flow (prot)	1770	3539	5080	0	3266	1441
Flt Permitted	0.950				0.975	
Satd. Flow (perm)	1770	3539	5080	0	3266	1441
Satd. Flow (RTOR)			2		51	51
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Volume (vph)	17	1813	2324	22	50	94
Adj. Flow (vph)	18	1971	2526	24	54	102
Lane Group Flow (vph)	18	1971	2550	0	105	51
Turn Type	Prot					Perm
Protected Phases	5	2	6		4	
Permitted Phases						4
Total Split (s)	13.5	64.5	51.0	0.0	25.5	25.5
Act Effct Green (s)	6.9	74.5	69.7		7.5	7.5
Actuated g/C Ratio	0.08	0.83	0.77		0.08	0.08
v/c Ratio	0.13	0.67	0.65		0.33	0.31
Control Delay	40.4	4.5	2.8		24.5	16.5
Queue Delay	0.0	0.0	0.0		0.0	0.0
Total Delay	40.4	4.5	2.8		24.5	16.5
LOS	D	A	A		C	B
Approach Delay		4.9	2.8		21.9	
Approach LOS		A	A		C	

Intersection Summary

Cycle Length: 90
Actuated Cycle Length: 90
Offset: 0 (0%), Referenced to phase 2:EBT and 6:WBT, Start of Green
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 0.67
Intersection Signal Delay: 4.3 Intersection LOS: A
Intersection Capacity Utilization 60.1% ICU Level of Service B
Analysis Period (min) 15

Splits and Phases: 5: Otay Mesa Road & Piper Ranch Rd

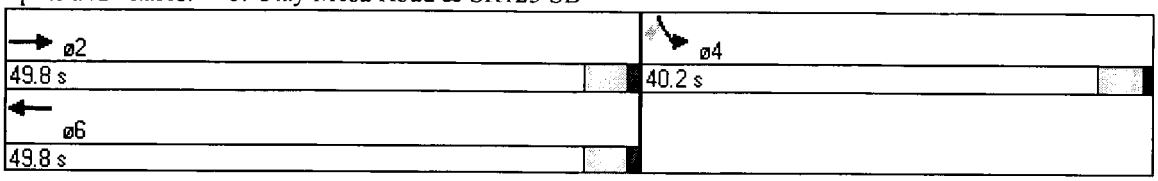


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↑↑↑	↱		↑↑↑					↰↰		↱
Total Lost Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	1.00	0.86	0.86	1.00	0.91	1.00	1.00	1.00	1.00	0.97	1.00	1.00
Frt		0.984	0.850									0.850
Flt Protected										0.950		
Satd. Flow (prot)	0	4729	1362	0	5085	0	0	0	0	3433	0	1583
Flt Permitted										0.950		
Satd. Flow (perm)	0	4729	1362	0	5085	0	0	0	0	3433	0	1583
Satd. Flow (RTOR)		30	863									38
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Volume (vph)	0	1265	931	0	1087	0	0	0	0	676	0	145
Adj. Flow (vph)	0	1471	1083	0	1264	0	0	0	0	786	0	169
Lane Group Flow (vph)	0	1644	910	0	1264	0	0	0	0	786	0	169
Turn Type			Free							Prot		custom
Protected Phases		2			6					4		
Permitted Phases			Free									4
Total Split (s)	0.0	49.8	0.0	0.0	49.8	0.0	0.0	0.0	0.0	40.2	0.0	40.2
Act Effct Green (s)		55.4	90.0		55.4					26.6		26.6
Actuated g/C Ratio		0.62	1.00		0.62					0.30		0.30
v/c Ratio		0.56	0.67		0.40					0.77		0.34
Control Delay		11.9	1.4		9.2					34.2		19.7
Queue Delay		0.0	0.0		0.0					0.0		0.0
Total Delay		11.9	1.4		9.2					34.2		19.7
LOS		B	A		A					C		B
Approach Delay		8.2			9.2							
Approach LOS		A			A							

Intersection Summary

Cycle Length: 90
Actuated Cycle Length: 90
Offset: 2 (2%), Referenced to phase 2:EBT and 6:WBT, Start of Green
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 0.77
Intersection Signal Delay: 13.1 — Intersection LOS: B
Intersection Capacity Utilization 57.3% — ICU Level of Service B
Analysis Period (min) 15

Splits and Phases: 6: Otay Mesa Road & SR125 SB

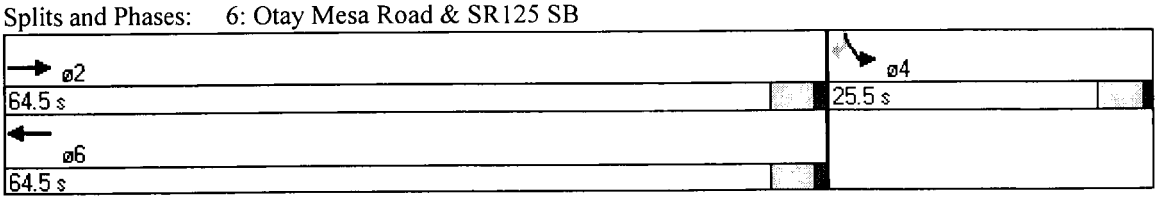


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Total Lost Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	1.00	0.86	0.86	1.00	0.91	1.00	1.00	1.00	1.00	0.97	1.00	1.00
Frt		0.925	0.850									0.850
Flt Protected										0.950		
Satd. Flow (prot)	0	4445	1362	0	5085	0	0	0	0	3433	0	1583
Flt Permitted										0.950		
Satd. Flow (perm)	0	4445	1362	0	5085	0	0	0	0	3433	0	1583
Satd. Flow (RTOR)		612	663									5
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Volume (vph)	0	607	1219	0	2361	0	0	0	0	216	0	40
Adj. Flow (vph)	0	660	1325	0	2566	0	0	0	0	235	0	43
Lane Group Flow (vph)	0	1322	663	0	2566	0	0	0	0	235	0	43
Turn Type			Free							Prot		custom
Protected Phases		2			6					4		
Permitted Phases			Free									4
Total Split (s)	0.0	64.5	0.0	0.0	64.5	0.0	0.0	0.0	0.0	25.5	0.0	25.5
Act Effct Green (s)		70.4	90.0		70.4					11.6		11.6
Actuated g/C Ratio		0.78	1.00		0.78					0.13		0.13
v/c Ratio		0.37	0.49		0.65					0.53		0.21
Control Delay		1.8	0.9		1.6					40.8		33.3
Queue Delay		0.0	0.0		0.1					0.0		0.0
Total Delay		1.8	0.9		1.8					40.8		33.3
LOS		A	A		A					D		C
Approach Delay		1.5			1.8							
Approach LOS		A			A							

Intersection Summary

Cycle Length: 90
Actuated Cycle Length: 90
Offset: 56 (62%), Referenced to phase 2:EBT and 6:WBT, Start of Green
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 0.65
Intersection Signal Delay: 3.8 — Intersection LOS: A
Intersection Capacity Utilization 73.1% — ICU Level of Service D
Analysis Period (min) 15

Splits and Phases: 6: Otay Mesa Road & SR125 SB

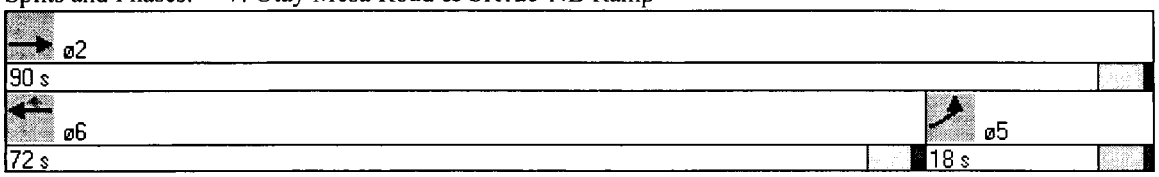


Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Total Lost Time (s)	4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	0.97	0.95	0.95	0.88	1.00	1.00
Frt				0.850		
Flt Protected	0.950					
Satd. Flow (prot)	3433	3539	3539	2787	0	0
Flt Permitted	0.950					
Satd. Flow (perm)	3433	3539	3539	2787	0	0
Satd. Flow (RTOR)				167		
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Volume (vph)	29	1912	1041	145	0	0
Adj. Flow (vph)	33	2198	1197	167	0	0
Lane Group Flow (vph)	33	2198	1197	167	0	0
Turn Type	Prot			Perm		
Protected Phases	5	2	6			
Permitted Phases				6		
Total Split (s)	18.0	90.0	72.0	72.0	0.0	0.0
Act Effct Green (s)	23.5	90.0	64.2	64.2		
Actuated g/C Ratio	0.26	1.00	0.71	0.71		
v/c Ratio	0.04	0.62	0.47	0.08		
Control Delay	18.6	1.2	9.3	1.3		
Queue Delay	0.0	0.0	0.0	0.0		
Total Delay	18.6	1.2	9.3	1.3		
LOS	B	A	A	A		
Approach Delay		1.5	8.3			
Approach LOS		A	A			

Intersection Summary

Cycle Length: 90
Actuated Cycle Length: 90
Offset: 62 (69%), Referenced to phase 2:EBT and 6:WBT, Start of Green
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 0.62
Intersection Signal Delay: 4.1 Intersection LOS: A
Intersection Capacity Utilization 57.3% ICU Level of Service B
Analysis Period (min) 15

Splits and Phases: 7: Otay Mesa Road & SR125 NB Ramp

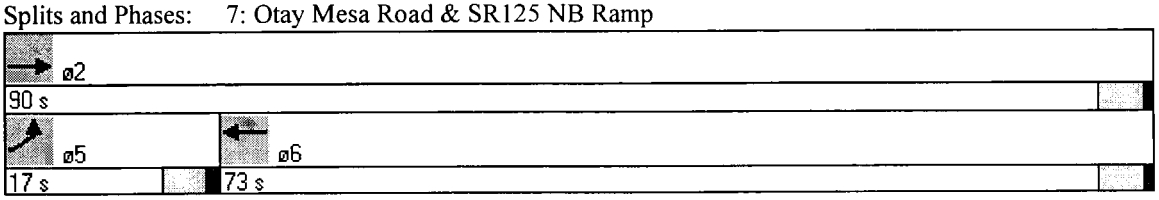


Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Total Lost Time (s)	4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	0.97	0.95	0.95	0.88	1.00	1.00
Frt				0.850		
Flt Protected	0.950					
Satd. Flow (prot)	3433	3539	3539	2787	0	0
Flt Permitted	0.950					
Satd. Flow (perm)	3433	3539	3539	2787	0	0
Satd. Flow (RTOR)				633		
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Volume (vph)	113	607	2282	643	0	0
Adj. Flow (vph)	124	667	2508	707	0	0
Lane Group Flow (vph)	124	667	2508	707	0	0
Turn Type	Prot			Perm		
Protected Phases	5	2	6			
Permitted Phases				6		
Total Split (s)	17.0	90.0	73.0	73.0	0.0	0.0
Act Effct Green (s)	9.0	90.0	73.0	73.0		
Actuated g/C Ratio	0.10	1.00	0.81	0.81		
v/c Ratio	0.36	0.19	0.87	0.30		
Control Delay	44.7	0.1	5.0	0.1		
Queue Delay	0.0	0.0	2.0	0.0		
Total Delay	44.7	0.1	6.9	0.1		
LOS	D	A	A	A		
Approach Delay		7.1	5.4			
Approach LOS		A	A			

Intersection Summary

Cycle Length: 90
Actuated Cycle Length: 90
Offset: 33 (37%), Referenced to phase 2:EBT and 6:WBT, Start of Green
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 0.87
Intersection Signal Delay: 5.8 Intersection LOS: A
Intersection Capacity Utilization 73.1% ICU Level of Service D
Analysis Period (min) 15

Splits and Phases: 7: Otay Mesa Road & SR125 NB Ramp

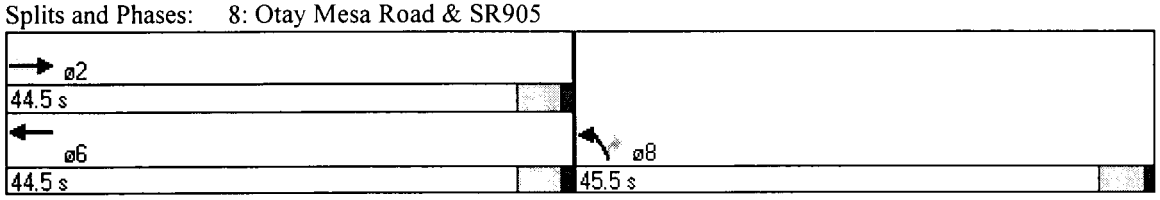


Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↑↑			↑↑	↰↰	↱
Total Lost Time (s)	4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	0.95	1.00	1.00	0.95	0.97	1.00
Frt						0.850
Flt Protected					0.950	
Satd. Flow (prot)	3539	0	0	3539	3433	1583
Flt Permitted					0.950	
Satd. Flow (perm)	3539	0	0	3539	3433	1583
Satd. Flow (RTOR)						1
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Volume (vph)	1929	0	0	518	689	15
Adj. Flow (vph)	2243	0	0	602	801	17
Lane Group Flow (vph)	2243	0	0	602	801	17
Turn Type						Perm
Protected Phases	2			6	8	
Permitted Phases						8
Total Split (s)	44.5	0.0	0.0	44.5	45.5	45.5
Act Effct Green (s)	57.2			57.2	24.8	24.8
Actuated g/C Ratio	0.64			0.64	0.28	0.28
v/c Ratio	1.00			0.27	0.85	0.04
Control Delay	33.3			7.3	42.4	16.8
Queue Delay	0.0			0.0	0.0	0.0
Total Delay	33.3			7.3	42.4	16.8
LOS	C			A	D	B
Approach Delay	33.3			7.3	41.9	
Approach LOS	C			A	D	

Intersection Summary

Cycle Length: 90
Actuated Cycle Length: 90
Offset: 82 (91%), Referenced to phase 2:EBT and 6:WBT, Start of Green
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 1.00
Intersection Signal Delay: 31.0 — Intersection LOS: C
Intersection Capacity Utilization 79.6% — ICU Level of Service D
Analysis Period (min) 15

Splits and Phases: 8: Otay Mesa Road & SR905

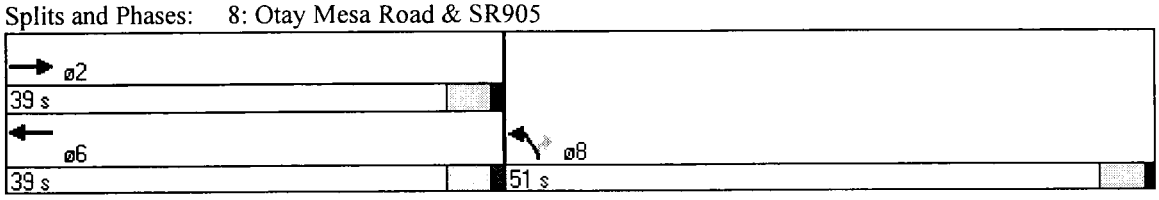


Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↑↑			↑↑	↰↰	↱
Total Lost Time (s)	4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	0.95	1.00	1.00	0.95	0.97	1.00
Frt						0.850
Flt Protected					0.950	
Satd. Flow (prot)	3539	0	0	3539	3433	1583
Flt Permitted					0.950	
Satd. Flow (perm)	3539	0	0	3539	3433	1583
Satd. Flow (RTOR)						9
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Volume (vph)	607	0	0	1796	1168	8
Adj. Flow (vph)	667	0	0	1974	1284	9
Lane Group Flow (vph)	667	0	0	1974	1284	9
Turn Type						Perm
Protected Phases	2			6	8	
Permitted Phases						8
Total Split (s)	39.0	0.0	0.0	39.0	51.0	51.0
Act Effct Green (s)	41.4			41.4	40.6	40.6
Actuated g/C Ratio	0.46			0.46	0.45	0.45
v/c Ratio	0.41			1.21	0.83	0.01
Control Delay	13.7			119.4	23.8	4.9
Queue Delay	0.0			0.0	0.0	0.0
Total Delay	13.7			119.4	23.8	4.9
LOS	B			F	C	A
Approach Delay	13.7			119.4	23.7	
Approach LOS	B			F	C	

Intersection Summary

Cycle Length: 90
Actuated Cycle Length: 90
Offset: 26 (29%), Referenced to phase 2:EBT and 6:WBT, Start of Green
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 1.21
Intersection Signal Delay: 70.0 — Intersection LOS: E
Intersection Capacity Utilization 89.6% — ICU Level of Service E
Analysis Period (min) 15

Splits and Phases: 8: Otay Mesa Road & SR905

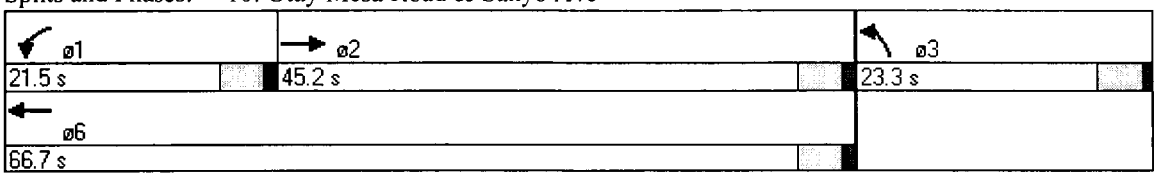


Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Total Lost Time (s)	4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	0.95	0.95	1.00	1.00	0.97	0.95
Frt	0.984				0.965	
Flt Protected			0.950		0.963	
Satd. Flow (prot)	3483	0	1770	1863	3358	0
Flt Permitted			0.950		0.963	
Satd. Flow (perm)	3483	0	1770	1863	3358	0
Satd. Flow (RTOR)	19				12	
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Volume (vph)	1635	200	24	505	32	10
Adj. Flow (vph)	2044	250	30	631	40	12
Lane Group Flow (vph)	2294	0	30	631	52	0
Turn Type			Prot			
Protected Phases	2		1	6	3	
Permitted Phases						
Total Split (s)	45.2	0.0	21.5	66.7	23.3	0.0
Act Effct Green (s)	75.5		7.4	80.7	7.0	
Actuated g/C Ratio	0.84		0.08	0.90	0.08	
v/c Ratio	0.78		0.21	0.38	0.19	
Control Delay	7.5		41.4	2.2	33.1	
Queue Delay	0.0		0.0	0.0	0.0	
Total Delay	7.5		41.4	2.2	33.1	
LOS	A		D	A	C	
Approach Delay	7.5			4.0	33.1	
Approach LOS	A			A	C	

Intersection Summary

Cycle Length: 90
Actuated Cycle Length: 90
Offset: 0 (0%), Referenced to phase 2:EBT and 6:WBT, Start of Green
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 0.78
Intersection Signal Delay: 7.2 Intersection LOS: A
Intersection Capacity Utilization 61.6% ICU Level of Service B
Analysis Period (min) 15

Splits and Phases: 10: Otay Mesa Road & Sanyo Ave

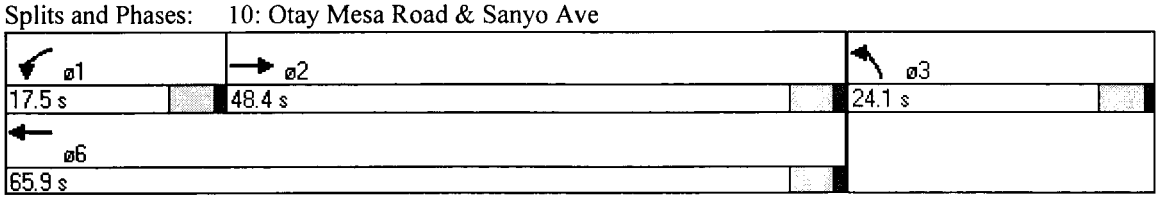


Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Total Lost Time (s)	4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	0.95	0.95	1.00	1.00	0.97	0.95
Frt	0.987				0.996	
Flt Protected			0.950		0.954	
Satd. Flow (prot)	3493	0	1770	1863	3434	0
Flt Permitted			0.950		0.954	
Satd. Flow (perm)	3493	0	1770	1863	3434	0
Satd. Flow (RTOR)	16				3	
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Volume (vph)	559	54	12	1670	185	5
Adj. Flow (vph)	690	67	15	2062	228	6
Lane Group Flow (vph)	757	0	15	2062	234	0
Turn Type			Prot			
Protected Phases	2		1	6	3	
Permitted Phases						
Total Split (s)	48.4	0.0	17.5	65.9	24.1	0.0
Act Effct Green (s)	68.0		6.7	70.4	11.6	
Actuated g/C Ratio	0.76		0.07	0.78	0.13	
v/c Ratio	0.29		0.11	1.41	0.53	
Control Delay	12.0		40.4	207.9	40.2	
Queue Delay	0.0		0.0	0.0	0.0	
Total Delay	12.0		40.4	207.9	40.2	
LOS	B		D	F	D	
Approach Delay	12.0			206.7	40.2	
Approach LOS	B			F	D	

Intersection Summary

Cycle Length: 90
Actuated Cycle Length: 90
Offset: 0 (0%), Referenced to phase 2:EBT and 6:WBT, Start of Green
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 1.41
Intersection Signal Delay: 146.0 — Intersection LOS: F
Intersection Capacity Utilization 100.0% — ICU Level of Service F
Analysis Period (min) 15

Splits and Phases: 10: Otay Mesa Road & Sanyo Ave

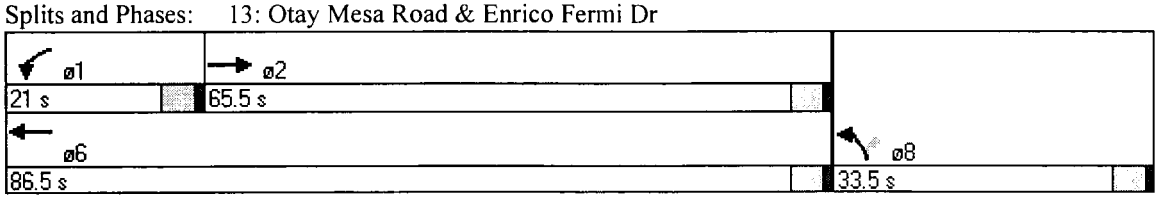


Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Total Lost Time (s)	4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt	0.999					0.850
Flt Protected			0.950		0.950	
Satd. Flow (prot)	1861	0	1770	1863	1770	1583
Flt Permitted			0.950		0.950	
Satd. Flow (perm)	1861	0	1770	1863	1770	1583
Satd. Flow (RTOR)						215
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Volume (vph)	1679	11	43	392	55	183
Adj. Flow (vph)	1975	13	51	461	65	215
Lane Group Flow (vph)	1988	0	51	461	65	215
Turn Type			Prot			Perm
Protected Phases	2		1	6	8	
Permitted Phases						8
Total Split (s)	65.5	0.0	21.0	86.5	33.5	33.5
Act Effct Green (s)	62.3		8.5	70.0	9.3	9.3
Actuated g/C Ratio	0.71		0.09	0.80	0.11	0.11
v/c Ratio	1.50		0.31	0.31	0.34	0.60
Control Delay	247.5		44.5	3.1	43.1	13.1
Queue Delay	0.0		0.0	0.0	0.0	0.0
Total Delay	247.5		44.5	3.1	43.1	13.1
LOS	F		D	A	D	B
Approach Delay	247.5			7.2	20.1	
Approach LOS	F			A	C	

Intersection Summary

Cycle Length: 120
Actuated Cycle Length: 87.4
Control Type: Actuated-Uncoordinated
Maximum v/c Ratio: 1.50
Intersection Signal Delay: 180.3 — Intersection LOS: F
Intersection Capacity Utilization 107.0% — ICU Level of Service G
Analysis Period (min) 15

Splits and Phases: 13: Otay Mesa Road & Enrico Fermi Dr

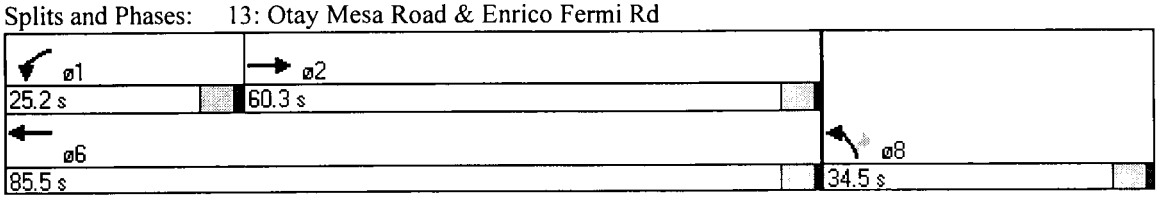


Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Total Lost Time (s)	4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt	0.999					0.850
Flt Protected			0.950		0.950	
Satd. Flow (prot)	1861	0	1770	1863	1770	1583
Flt Permitted			0.950		0.950	
Satd. Flow (perm)	1861	0	1770	1863	1770	1583
Satd. Flow (RTOR)						87
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Volume (vph)	543	4	167	709	36	80
Adj. Flow (vph)	590	4	182	771	39	87
Lane Group Flow (vph)	594	0	182	771	39	87
Turn Type			Prot			Perm
Protected Phases	2		1	6	8	
Permitted Phases						8
Total Split (s)	60.3	0.0	25.2	85.5	34.5	34.5
Act Effct Green (s)	23.3		11.5	35.5	8.2	8.2
Actuated g/C Ratio	0.44		0.21	0.67	0.15	0.15
v/c Ratio	0.73		0.49	0.62	0.14	0.27
Control Delay	19.3		26.9	6.4	28.3	10.6
Queue Delay	0.0		0.0	0.0	0.0	0.0
Total Delay	19.3		26.9	6.4	28.3	10.6
LOS	B		C	A	C	B
Approach Delay	19.3			10.3	16.1	
Approach LOS	B			B	B	

Intersection Summary

Cycle Length: 120
Actuated Cycle Length: 53
Control Type: Actuated-Uncoordinated
Maximum v/c Ratio: 0.73
Intersection Signal Delay: 13.9 — Intersection LOS: B
Intersection Capacity Utilization 51.4% — ICU Level of Service A
Analysis Period (min) 15

Splits and Phases: 13: Otay Mesa Road & Enrico Fermi Rd



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Sign Control		Stop			Stop			Stop			Stop	
Volume (vph)	652	731	625	0	193	0	154	1	0	0	4	168
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
Hourly flow rate (vph)	709	795	679	0	210	0	167	1	0	0	4	183

Direction, Lane #	EB 1	WB 1	NB 1	SB 1
Volume Total (vph)	2183	210	168	187
Volume Left (vph)	709	0	167	0
Volume Right (vph)	679	0	0	183
Hadj (s)	-0.09	0.03	0.23	-0.55
Departure Headway (s)	5.4	6.3	7.0	6.2
Degree Utilization, x	3.30	0.36	0.33	0.32
Capacity (veh/h)	666	539	490	547
Control Delay (s)	1050.8	12.8	13.4	12.2
Approach Delay (s)	1050.8	12.8	13.4	12.2
Approach LOS	F	B	B	B

Intersection Summary			
Delay	837.3		
HCM Level of Service	F		
Intersection Capacity Utilization	155.4%	ICU Level of Service	H
Analysis Period (min)	15		

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Sign Control		Stop			Stop			Stop			Stop	
Volume (vph)	101	295	251	0	723	0	552	0	0	0	1	726
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
Hourly flow rate (vph)	116	339	289	0	831	0	634	0	0	0	1	834

Direction, Lane #	EB 1	WB 1	NB 1	SB 1
Volume Total (vph)	744	831	634	836
Volume Left (vph)	116	0	634	0
Volume Right (vph)	289	0	0	834
Hadj (s)	-0.17	0.03	0.23	-0.57
Departure Headway (s)	9.4	9.6	9.8	9.0
Degree Utilization, x	1.94	2.22	1.73	2.09
Capacity (veh/h)	389	382	372	407
Control Delay (s)	454.6	576.6	361.7	518.9
Approach Delay (s)	454.6	576.6	361.7	518.9
Approach LOS	F	F	F	F

Intersection Summary			
Delay	486.2		
HCM Level of Service	F		
Intersection Capacity Utilization	163.4%	ICU Level of Service	H
Analysis Period (min)	15		

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Sign Control		Stop			Stop			Stop			Stop	
Volume (vph)	9	84	60	24	80	49	57	101	3	209	255	46
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
Hourly flow rate (vph)	10	93	67	27	89	54	63	112	3	232	283	51

Direction, Lane #	EB 1	WB 1	NB 1	SB 1	SB 2
Volume Total (vph)	170	170	179	232	334
Volume Left (vph)	10	27	63	232	0
Volume Right (vph)	67	54	3	0	51
Hadj (s)	-0.19	-0.13	0.16	0.53	0.01
Departure Headway (s)	5.9	6.0	6.0	6.4	5.8
Degree Utilization, x	0.28	0.28	0.30	0.41	0.54
Capacity (veh/h)	552	546	547	548	601
Control Delay (s)	11.2	11.3	11.6	12.5	14.3
Approach Delay (s)	11.2	11.3	11.6	13.6	
Approach LOS	B	B	B	B	

Intersection Summary			
Delay	12.5		
HCM Level of Service	B		
Intersection Capacity Utilization	50.5%	ICU Level of Service	A
Analysis Period (min)	15		

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕		↰	↕	
Sign Control		Stop			Stop			Stop			Stop	
Volume (vph)	38	145	83	82	116	119	72	180	8	143	171	23
Peak Hour Factor	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99
Hourly flow rate (vph)	38	146	84	83	117	120	73	182	8	144	173	23

Direction, Lane #	EB 1	WB 1	NB 1	SB 1	SB 2
Volume Total (vph)	269	320	263	144	196
Volume Left (vph)	38	83	73	144	0
Volume Right (vph)	84	120	8	0	23
Hadj (s)	-0.12	-0.14	0.14	0.53	0.04
Departure Headway (s)	6.5	6.4	6.9	7.6	7.1
Degree Utilization, x	0.49	0.57	0.50	0.30	0.38
Capacity (veh/h)	497	516	478	440	462
Control Delay (s)	15.5	17.3	16.6	12.6	13.2
Approach Delay (s)	15.5	17.3	16.6	13.0	
Approach LOS	C	C	C	B	

Intersection Summary			
Delay	15.5		
HCM Level of Service	C		
Intersection Capacity Utilization	64.8%	ICU Level of Service	C
Analysis Period (min)	15		

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Sign Control		Stop			Stop			Stop			Stop	
Volume (vph)	14	81	91	4	105	9	31	15	3	59	121	12
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
Hourly flow rate (vph)	15	87	98	4	113	10	33	16	3	63	130	13

Direction, Lane #	EB 1	WB 1	WB 2	NB 1	NB 2	SB 1	SB 2
Volume Total (vph)	200	117	10	33	19	194	13
Volume Left (vph)	15	4	0	33	0	63	0
Volume Right (vph)	98	0	10	0	3	0	13
Hadj (s)	-0.24	0.05	-0.67	0.53	-0.08	0.20	-0.67
Departure Headway (s)	5.1	5.5	4.8	6.2	5.5	5.6	4.8
Degree Utilization, x	0.29	0.18	0.01	0.06	0.03	0.30	0.02
Capacity (veh/h)	664	618	705	544	600	606	709
Control Delay (s)	10.2	8.5	6.6	8.3	7.5	9.9	6.6
Approach Delay (s)	10.2	8.3		8.0		9.7	
Approach LOS	B	A		A		A	

Intersection Summary			
Delay	9.4		
HCM Level of Service	A		
Intersection Capacity Utilization	40.2%	ICU Level of Service	A
Analysis Period (min)	15		

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Sign Control		Stop			Stop			Stop			Stop	
Volume (vph)	4	60	51	4	222	55	79	126	2	21	26	35
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
Hourly flow rate (vph)	5	69	59	5	255	63	91	145	2	24	30	40

Direction, Lane #	EB 1	WB 1	WB 2	NB 1	NB 2	SB 1	SB 2
Volume Total (vph)	132	260	63	91	147	54	40
Volume Left (vph)	5	5	0	91	0	24	0
Volume Right (vph)	59	0	63	0	2	0	40
Hadj (s)	-0.23	0.04	-0.67	0.53	0.02	0.26	-0.67
Departure Headway (s)	5.6	5.7	4.9	6.4	5.9	6.4	5.4
Degree Utilization, x	0.21	0.41	0.09	0.16	0.24	0.10	0.06
Capacity (veh/h)	597	610	690	531	575	521	604
Control Delay (s)	10.1	11.3	7.2	9.5	9.6	8.8	7.6
Approach Delay (s)	10.1	10.5		9.5		8.3	
Approach LOS	B	B		A		A	

Intersection Summary			
Delay	9.9		
HCM Level of Service	A		
Intersection Capacity Utilization	33.4%	ICU Level of Service	A
Analysis Period (min)	15		

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Sign Control	Free			Free	Stop	
Grade	0%			0%	0%	
Volume (veh/h)	86	46	5	85	33	9
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Hourly flow rate (vph)	96	51	6	94	37	10
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type					None	
Median storage veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume			147		227	121
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol			147		227	121
tC, single (s)			4.1		6.4	6.2
tC, 2 stage (s)						
tF (s)			2.2		3.5	3.3
p0 queue free %			100		95	99
cM capacity (veh/h)			1435		759	930

Direction, Lane #	EB 1	WB 1	NB 1	NB 2
Volume Total	147	100	37	10
Volume Left	0	6	37	0
Volume Right	51	0	0	10
cSH	1700	1435	759	930
Volume to Capacity	0.09	0.00	0.05	0.01
Queue Length 95th (ft)	0	0	4	1
Control Delay (s)	0.0	0.4	10.0	8.9
Lane LOS		A	A	A
Approach Delay (s)	0.0	0.4	9.8	
Approach LOS			A	

Intersection Summary			
Average Delay	1.7		
Intersection Capacity Utilization	18.6%	ICU Level of Service	A
Analysis Period (min)	15		

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Sign Control	Free			Free	Stop	
Grade	0%			0%	0%	
Volume (veh/h)	56	29	26	189	82	10
Peak Hour Factor	0.87	0.87	0.87	0.87	0.87	0.87
Hourly flow rate (vph)	64	33	30	217	94	11
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type					None	
Median storage veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume			98		358	81
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol			98		358	81
tC, single (s)			4.1		6.4	6.2
tC, 2 stage (s)						
tF (s)			2.2		3.5	3.3
p0 queue free %			98		85	99
cM capacity (veh/h)			1496		628	979

Direction, Lane #	EB 1	WB 1	NB 1	NB 2
Volume Total	98	247	94	11
Volume Left	0	30	94	0
Volume Right	33	0	0	11
cSH	1700	1496	628	979
Volume to Capacity	0.06	0.02	0.15	0.01
Queue Length 95th (ft)	0	2	13	1
Control Delay (s)	0.0	1.1	11.7	8.7
Lane LOS		A	B	A
Approach Delay (s)	0.0	1.1	11.4	
Approach LOS			B	

Intersection Summary			
Average Delay	3.3		
Intersection Capacity Utilization	29.3%	ICU Level of Service	A
Analysis Period (min)	15		

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Sign Control	Free			Free	Stop	
Grade	0%			0%	0%	
Volume (veh/h)	31	37	4	79	23	11
Peak Hour Factor	0.78	0.78	0.78	0.78	0.78	0.78
Hourly flow rate (vph)	40	47	5	101	29	14
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type					None	
Median storage veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume			87		175	63
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol			87		175	63
tC, single (s)			4.1		6.4	6.2
tC, 2 stage (s)						
tF (s)			2.2		3.5	3.3
p0 queue free %			100		96	99
cM capacity (veh/h)			1509		812	1001

Direction, Lane #	EB 1	WB 1	NB 1	NB 2
Volume Total	87	106	29	14
Volume Left	0	5	29	0
Volume Right	47	0	0	14
cSH	1700	1509	812	1001
Volume to Capacity	0.05	0.00	0.04	0.01
Queue Length 95th (ft)	0	0	3	1
Control Delay (s)	0.0	0.4	9.6	8.6
Lane LOS		A	A	A
Approach Delay (s)	0.0	0.4	9.3	
Approach LOS			A	

Intersection Summary			
Average Delay	1.9		
Intersection Capacity Utilization	17.4%	ICU Level of Service	A
Analysis Period (min)	15		

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Sign Control	Free			Free	Stop	
Grade	0%			0%	0%	
Volume (veh/h)	13	36	1	138	55	1
Peak Hour Factor	0.84	0.84	0.84	0.84	0.84	0.84
Hourly flow rate (vph)	15	43	1	164	65	1
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type					None	
Median storage veh)						
Upstream signal (ft)				1314		
pX, platoon unblocked						
vC, conflicting volume			58		204	37
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol			58		204	37
tC, single (s)			4.1		6.4	6.2
tC, 2 stage (s)						
tF (s)			2.2		3.5	3.3
p0 queue free %			100		92	100
cM capacity (veh/h)			1546		784	1035

Direction, Lane #	EB 1	WB 1	NB 1	NB 2
Volume Total	58	165	65	1
Volume Left	0	1	65	0
Volume Right	43	0	0	1
cSH	1700	1546	784	1035
Volume to Capacity	0.03	0.00	0.08	0.00
Queue Length 95th (ft)	0	0	7	0
Control Delay (s)	0.0	0.1	10.0	8.5
Lane LOS		A	B	A
Approach Delay (s)	0.0	0.1	10.0	
Approach LOS			A	

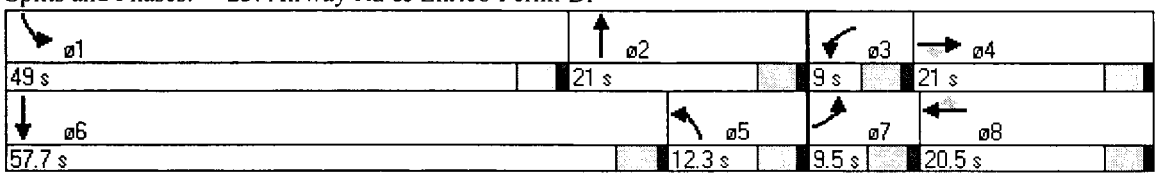
Intersection Summary			
Average Delay	2.3		
Intersection Capacity Utilization	18.1%	ICU Level of Service	A
Analysis Period (min)	15		

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Total Lost Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	1.00	0.95	0.95	1.00	1.00	1.00	1.00	0.95	0.95	1.00	0.95	0.95
Frt		0.925	0.850			0.850		0.939			0.963	
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1770	1637	1504	1770	1863	1583	1770	3323	0	1770	3408	0
Flt Permitted	0.950			0.950			0.950			0.950		
Satd. Flow (perm)	1770	1637	1504	1770	1863	1583	1770	3323	0	1770	3408	0
Satd. Flow (RTOR)		12	22			1		146			28	
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Volume (vph)	3	11	27	1	2	1	59	220	173	1	69	22
Adj. Flow (vph)	4	12	34	1	2	1	74	275	188	1	86	28
Lane Group Flow (vph)	4	24	22	1	2	1	74	463	0	1	114	0
Turn Type	Prot		Perm	Prot		Perm	Prot			Prot		
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases			4			8						
Total Split (s)	9.5	21.0	21.0	9.0	20.5	20.5	12.3	21.0	0.0	49.0	57.7	0.0
Act Effct Green (s)	6.8	8.4	8.4	6.2	8.3	8.3	10.7	45.2		7.5	39.6	
Actuated g/C Ratio	0.10	0.13	0.13	0.09	0.13	0.13	0.16	0.77		0.11	0.68	
v/c Ratio	0.02	0.11	0.10	0.01	0.01	0.00	0.25	0.18		0.00	0.05	
Control Delay	18.0	11.8	9.2	19.0	15.0	14.0	13.0	4.2		18.0	8.4	
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Total Delay	18.0	11.8	9.2	19.0	15.0	14.0	13.0	4.2		18.0	8.4	
LOS	B	B	A	B	B	B	B	A		B	A	
Approach Delay		11.1			15.8			5.4			8.4	
Approach LOS		B			B			A			A	

Intersection Summary

Cycle Length: 100
Actuated Cycle Length: 58.5
Control Type: Actuated-Uncoordinated
Maximum v/c Ratio: 0.25
Intersection Signal Delay: 6.3
Intersection LOS: A
Intersection Capacity Utilization 28.3%
ICU Level of Service A
Analysis Period (min) 15

Splits and Phases: 23: Airway Rd & Enrico Fermi Dr

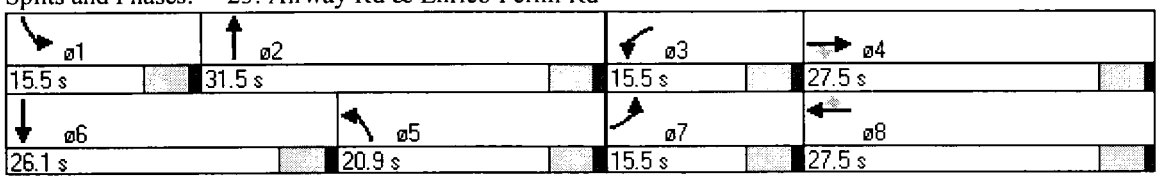


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Total Lost Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	1.00	0.95	0.95	1.00	1.00	1.00	1.00	0.95	0.95	1.00	0.95	0.95
Frt		0.850	0.850					0.999			0.940	
Flt Protected	0.950						0.950					
Satd. Flow (prot)	1770	1504	1504	1863	1863	1863	1770	3536	0	1863	3327	0
Flt Permitted	0.950						0.950					
Satd. Flow (perm)	1770	1504	1504	1863	1863	1863	1770	3536	0	1863	3327	0
Satd. Flow (RTOR)		881	881					1			88	
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Volume (vph)	2	0	13	0	0	0	70	151	1	0	109	72
Adj. Flow (vph)	2	0	16	0	0	0	85	184	1	0	133	88
Lane Group Flow (vph)	2	8	8	0	0	0	85	185	0	0	221	0
Turn Type	Prot		Perm	Prot		Perm	Prot			Prot		
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases			4			8						
Total Split (s)	15.5	27.5	27.5	15.5	27.5	27.5	20.9	31.5	0.0	15.5	26.1	0.0
Act Effct Green (s)	6.2	6.1	6.1				11.3	87.1			71.4	
Actuated g/C Ratio	0.07	0.07	0.07				0.13	0.97			0.79	
v/c Ratio	0.02	0.01	0.01				0.38	0.05			0.08	
Control Delay	39.0	0.0	0.0				40.6	0.4			2.3	
Queue Delay	0.0	0.0	0.0				0.0	0.0			0.0	
Total Delay	39.0	0.0	0.0				40.6	0.4			2.3	
LOS	D	A	A				D	A			A	
Approach Delay		4.3						13.1			2.3	
Approach LOS		A						B			A	

Intersection Summary

Cycle Length: 90
Actuated Cycle Length: 90
Offset: 0 (0%), Referenced to phase 2:NBT and 6:SBT, Start of Green
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 0.38
Intersection Signal Delay: 8.1 — Intersection LOS: A
Intersection Capacity Utilization 22.5% — ICU Level of Service A
Analysis Period (min) 15

Splits and Phases: 23: Airway Rd & Enrico Fermi Rd



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Sign Control		Stop			Stop			Stop			Stop	
Volume (vph)	5	2	0	10	2	93	0	9	2	236	28	4
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
Hourly flow rate (vph)	6	2	0	11	2	107	0	10	2	271	32	5

Direction, Lane #	EB 1	WB 1	NB 1	SB 1
Volume Total (vph)	8	121	13	308
Volume Left (vph)	6	11	0	271
Volume Right (vph)	0	107	2	5
Hadj (s)	0.18	-0.48	0.01	0.21
Departure Headway (s)	5.0	4.2	4.5	4.4
Degree Utilization, x	0.01	0.14	0.02	0.38
Capacity (veh/h)	664	794	751	788
Control Delay (s)	8.0	7.9	7.6	10.1
Approach Delay (s)	8.0	7.9	7.6	10.1
Approach LOS	A	A	A	B

Intersection Summary			
Delay	9.4		
HCM Level of Service	A		
Intersection Capacity Utilization	34.4%	ICU Level of Service	A
Analysis Period (min)	15		

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↔			↔			↔			↔	
Sign Control		Stop			Stop			Stop			Stop	
Volume (vph)	5	10	0	9	3	121	0	61	1	178	146	10
Peak Hour Factor	0.81	0.81	0.81	0.81	0.81	0.81	0.81	0.81	0.81	0.81	0.81	0.81
Hourly flow rate (vph)	6	12	0	11	4	149	0	75	1	220	180	12

Direction, Lane #	EB 1	WB 1	NB 1	SB 1
Volume Total (vph)	19	164	77	412
Volume Left (vph)	6	11	0	220
Volume Right (vph)	0	149	1	12
Hadj (s)	0.10	-0.50	0.12	0.17
Departure Headway (s)	5.4	4.6	5.0	4.6
Degree Utilization, x	0.03	0.21	0.11	0.53
Capacity (veh/h)	587	708	679	754
Control Delay (s)	8.6	8.8	8.6	12.7
Approach Delay (s)	8.6	8.8	8.6	12.7
Approach LOS	A	A	A	B

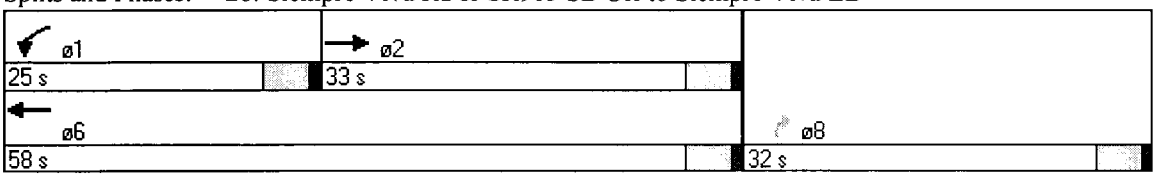
Intersection Summary			
Delay	11.2		
HCM Level of Service	B		
Intersection Capacity Utilization	39.9%	ICU Level of Service	A
Analysis Period (min)	15		

Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Total Lost Time (s)	4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	0.91	0.91	0.97	0.91	1.00	0.88
Frt	0.986					0.850
Flt Protected			0.950			
Satd. Flow (prot)	5014	0	3433	5085	0	2787
Flt Permitted			0.950			
Satd. Flow (perm)	5014	0	3433	5085	0	2787
Satd. Flow (RTOR)	19					940
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Volume (vph)	468	46	219	702	0	280
Adj. Flow (vph)	514	51	241	771	0	308
Lane Group Flow (vph)	565	0	241	771	0	308
Turn Type			Prot			custom
Protected Phases	2		1	6		
Permitted Phases						8
Total Split (s)	33.0	0.0	25.0	58.0	0.0	32.0
Act Effct Green (s)	60.4		11.6	76.0		6.0
Actuated g/C Ratio	0.67		0.13	0.84		0.07
v/c Ratio	0.17		0.55	0.18		0.29
Control Delay	5.6		40.3	1.1		0.7
Queue Delay	0.0		0.0	0.0		0.0
Total Delay	5.6		40.3	1.1		0.7
LOS	A		D	A		A
Approach Delay	5.6			10.5		
Approach LOS	A			B		

Intersection Summary

Cycle Length: 90
Actuated Cycle Length: 90
Offset: 66 (73%), Referenced to phase 2:EBT and 6:WBT, Start of Green
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 0.55
Intersection Signal Delay: 7.4 Intersection LOS: A
Intersection Capacity Utilization 26.5% ICU Level of Service A
Analysis Period (min) 15

Splits and Phases: 28: Siempre Viva Rd & SR905 SB Off to Siempre Viva EB

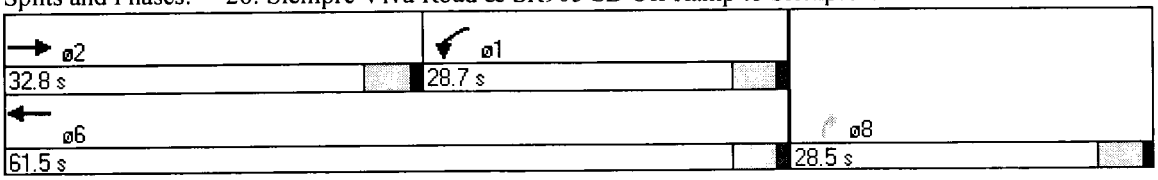


Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Total Lost Time (s)	4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	0.91	0.91	0.97	0.91	1.00	0.88
Frt	0.937					0.850
Flt Protected			0.950			
Satd. Flow (prot)	4765	0	3433	5085	0	2787
Flt Permitted			0.950			
Satd. Flow (perm)	4765	0	3433	5085	0	2787
Satd. Flow (RTOR)	214					1005
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Volume (vph)	444	322	401	669	0	175
Adj. Flow (vph)	522	379	472	787	0	206
Lane Group Flow (vph)	901	0	472	787	0	206
Turn Type			Prot			custom
Protected Phases	2		1	6		
Permitted Phases						8
Total Split (s)	32.8	0.0	28.7	61.5	0.0	28.5
Act Effct Green (s)	47.3		24.7	76.0		6.0
Actuated g/C Ratio	0.53		0.27	0.84		0.07
v/c Ratio	0.35		0.50	0.18		0.18
Control Delay	9.6		25.4	1.3		0.4
Queue Delay	0.0		0.0	0.0		0.0
Total Delay	9.6		25.4	1.3		0.4
LOS	A		C	A		A
Approach Delay	9.6			10.4		
Approach LOS	A			B		

Intersection Summary

Cycle Length: 90
Actuated Cycle Length: 90
Offset: 29 (32%), Referenced to phase 2:EBT and 6:WBT, Start of Green
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 0.50
Intersection Signal Delay: 9.2
Intersection LOS: A
Intersection Capacity Utilization 33.9%
ICU Level of Service A
Analysis Period (min) 15

Splits and Phases: 28: Siempre Viva Road & SR905 SB Off Ramp to Siempre Viva EB



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		↑↑↑	↑↑↑			↱
Sign Control		Free	Free		Stop	
Grade		0%	0%		0%	
Volume (veh/h)	0	748	557	0	0	364
Peak Hour Factor	0.87	0.87	0.87	0.87	0.87	0.87
Hourly flow rate (vph)	0	860	640	0	0	418
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type					None	
Median storage veh)						
Upstream signal (ft)		281	733			
pX, platoon unblocked					0.98	
vC, conflicting volume	640				927	213
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	640				893	213
tC, single (s)	4.1				6.8	6.9
tC, 2 stage (s)						
tF (s)	2.2				3.5	3.3
p0 queue free %	100				100	47
cM capacity (veh/h)	940				276	792

Direction, Lane #	EB 1	EB 2	EB 3	WB 1	WB 2	WB 3	SB 1
Volume Total	287	287	287	213	213	213	418
Volume Left	0	0	0	0	0	0	0
Volume Right	0	0	0	0	0	0	418
cSH	1700	1700	1700	1700	1700	1700	792
Volume to Capacity	0.17	0.17	0.17	0.13	0.13	0.13	0.53
Queue Length 95th (ft)	0	0	0	0	0	0	79
Control Delay (s)	0.0	0.0	0.0	0.0	0.0	0.0	14.5
Lane LOS							B
Approach Delay (s)	0.0			0.0			14.5
Approach LOS							B

Intersection Summary			
Average Delay	3.2		
Intersection Capacity Utilization	40.0%	ICU Level of Service	A
Analysis Period (min)	15		

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		↑↑↑	↑↑↑			↱
Sign Control		Free	Free		Stop	
Grade		0%	0%		0%	
Volume (veh/h)	0	619	694	0	0	376
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93
Hourly flow rate (vph)	0	666	746	0	0	404
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type					None	
Median storage veh)						
Upstream signal (ft)		225	412			
pX, platoon unblocked	0.97				0.97	0.97
vC, conflicting volume	746				968	249
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	666				895	150
tC, single (s)	4.1				6.8	6.9
tC, 2 stage (s)						
tF (s)	2.2				3.5	3.3
p0 queue free %	100				100	52
cM capacity (veh/h)	888				270	839

Direction, Lane #	EB 1	EB 2	EB 3	WB 1	WB 2	WB 3	SB 1
Volume Total	222	222	222	249	249	249	404
Volume Left	0	0	0	0	0	0	0
Volume Right	0	0	0	0	0	0	404
cSH	1700	1700	1700	1700	1700	1700	839
Volume to Capacity	0.13	0.13	0.13	0.15	0.15	0.15	0.48
Queue Length 95th (ft)	0	0	0	0	0	0	66
Control Delay (s)	0.0	0.0	0.0	0.0	0.0	0.0	13.2
Lane LOS							B
Approach Delay (s)	0.0			0.0			13.2
Approach LOS							B

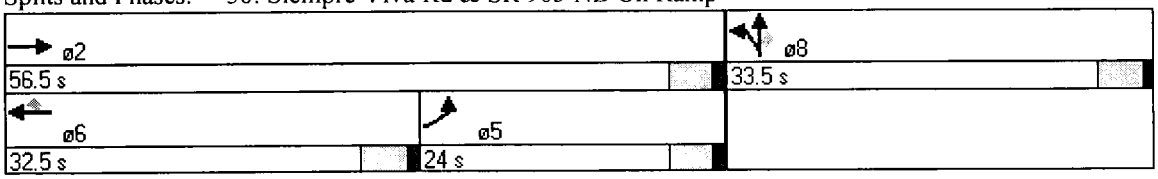
Intersection Summary			
Average Delay	2.9		
Intersection Capacity Utilization	43.4%	ICU Level of Service	A
Analysis Period (min)	15		

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Total Lost Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	0.97	0.91	1.00	1.00	0.86	0.86	1.00	1.00	0.88	1.00	1.00	1.00
Frt					0.991	0.850			0.850			
Flt Protected	0.950							0.953				
Satd. Flow (prot)	3433	5085	0	0	4763	1362	0	1775	2787	0	0	0
Flt Permitted	0.950							0.953				
Satd. Flow (perm)	3433	5085	0	0	4763	1362	0	1775	2787	0	0	0
Satd. Flow (RTOR)					11	155			301			
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Volume (vph)	125	613	0	0	399	175	164	1	289	0	0	0
Adj. Flow (vph)	130	639	0	0	416	182	171	1	301	0	0	0
Lane Group Flow (vph)	130	639	0	0	443	155	0	172	301	0	0	0
Turn Type	Prot					Perm	Split		Perm			
Protected Phases	5	2			6		8	8				
Permitted Phases						6			8			
Total Split (s)	24.0	56.5	0.0	0.0	32.5	32.5	33.5	33.5	33.5	0.0	0.0	0.0
Act Effct Green (s)	9.0	68.1			55.1	55.1		13.9	13.9			
Actuated g/C Ratio	0.10	0.76			0.61	0.61		0.15	0.15			
v/c Ratio	0.38	0.17			0.15	0.17		0.63	0.44			
Control Delay	37.9	1.4			8.3	2.3		45.1	6.0			
Queue Delay	0.0	0.0			0.0	0.0		0.0	0.0			
Total Delay	37.9	1.4			8.3	2.3		45.1	6.0			
LOS	D	A			A	A		D	A			
Approach Delay		7.6			6.7			20.2				
Approach LOS		A			A			C				

Intersection Summary

Cycle Length: 90
Actuated Cycle Length: 90
Offset: 77 (86%), Referenced to phase 2:EBT and 6:WBT, Start of Green
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 0.63
Intersection Signal Delay: 10.6 — Intersection LOS: B
Intersection Capacity Utilization 40.0% — ICU Level of Service A
Analysis Period (min) 15

Splits and Phases: 30: Siempre Viva Rd & SR 905 NB On Ramp

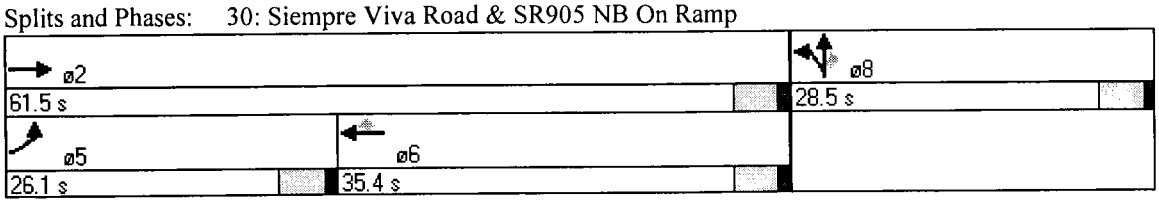


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Total Lost Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	0.97	0.91	1.00	1.00	0.86	0.86	1.00	1.00	0.88	1.00	1.00	1.00
Frt					0.983	0.850			0.850			
Flt Protected	0.950							0.954				
Satd. Flow (prot)	3433	5085	0	0	4724	1362	0	1777	2787	0	0	0
Flt Permitted	0.950							0.954				
Satd. Flow (perm)	3433	5085	0	0	4724	1362	0	1777	2787	0	0	0
Satd. Flow (RTOR)					26	311			226			
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Volume (vph)	297	352	0	0	640	373	49	2	210	0	0	0
Adj. Flow (vph)	319	378	0	0	688	401	53	2	226	0	0	0
Lane Group Flow (vph)	319	378	0	0	778	311	0	55	226	0	0	0
Turn Type	Prot					Perm	Split		Perm			
Protected Phases	5	2			6		8	8				
Permitted Phases						6			8			
Total Split (s)	26.1	61.5	0.0	0.0	35.4	35.4	28.5	28.5	28.5	0.0	0.0	0.0
Act Effct Green (s)	14.5	73.5			55.0	55.0		8.5	8.5			
Actuated g/C Ratio	0.16	0.82			0.61	0.61		0.09	0.09			
v/c Ratio	0.58	0.09			0.27	0.33		0.33	0.48			
Control Delay	32.3	0.9			8.8	2.2		42.7	9.1			
Queue Delay	0.0	0.0			0.0	0.0		0.0	0.0			
Total Delay	32.3	0.9			8.8	2.2		42.7	9.1			
LOS	C	A			A	A		D	A			
Approach Delay		15.2			6.9			15.7				
Approach LOS		B			A			B				

Intersection Summary

Cycle Length: 90
Actuated Cycle Length: 90
Offset: 66 (73%), Referenced to phase 2:EBT and 6:WBT, Start of Green
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 0.58
Intersection Signal Delay: 10.9 — Intersection LOS: B
Intersection Capacity Utilization 43.4% — ICU Level of Service A
Analysis Period (min) 15

Splits and Phases: 30: Siempre Viva Road & SR905 NB On Ramp

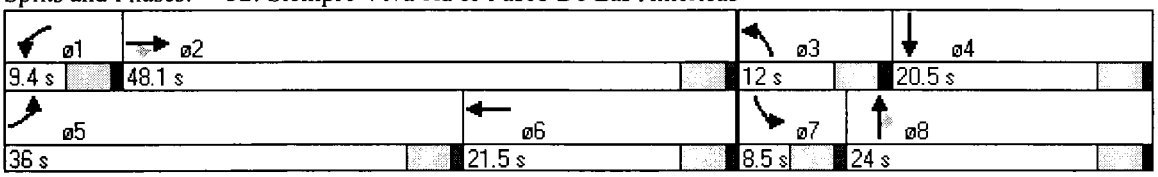


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Total Lost Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	1.00	0.91	1.00	1.00	0.95	0.95	1.00	0.95	1.00	1.00	0.95	0.95
Frt			0.850						0.850		0.932	
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1770	5085	1583	1770	3539	0	1770	3539	1583	1770	3299	0
Flt Permitted	0.950			0.950			0.950			0.950		
Satd. Flow (perm)	1770	5085	1583	1770	3539	0	1770	3539	1583	1770	3299	0
Satd. Flow (RTOR)			154						5		58	
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Volume (vph)	517	407	140	21	272	1	120	51	5	8	64	53
Adj. Flow (vph)	568	447	154	23	299	1	132	56	5	9	70	58
Lane Group Flow (vph)	568	447	154	23	300	0	132	56	5	9	128	0
Turn Type	Prot		Perm	Prot			Prot		Perm	Prot		
Protected Phases	5	2		1	6		3	8		7	4	
Permitted Phases			2						8			
Total Split (s)	36.0	48.1	48.1	9.4	21.5	0.0	12.0	24.0	24.0	8.5	20.5	0.0
Act Effct Green (s)	27.7	40.1	40.1	5.4	11.7		8.1	18.4	18.4	4.6	7.7	
Actuated g/C Ratio	0.39	0.56	0.56	0.07	0.16		0.11	0.26	0.26	0.06	0.11	
v/c Ratio	0.83	0.16	0.16	0.18	0.52		0.66	0.06	0.01	0.09	0.32	
Control Delay	32.6	8.4	2.4	39.4	31.7		51.5	24.6	17.2	39.6	21.4	
Queue Delay	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	
Total Delay	32.6	8.4	2.4	39.4	31.7		51.5	24.6	17.2	39.6	21.4	
LOS	C	A	A	D	C		D	C	B	D	C	
Approach Delay		19.3			32.2			42.8			22.6	
Approach LOS		B			C			D			C	

Intersection Summary

Cycle Length: 90
Actuated Cycle Length: 71.5
Control Type: Actuated-Uncoordinated
Maximum v/c Ratio: 0.83
Intersection Signal Delay: 24.3
Intersection LOS: C
Intersection Capacity Utilization 59.5%
ICU Level of Service B
Analysis Period (min) 15

Splits and Phases: 32: Siempre Viva Rd & Paseo De Las Americas



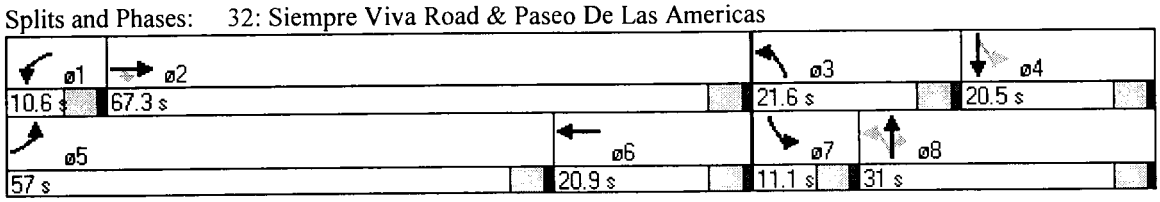
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Total Lost Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	1.00	0.91	1.00	1.00	0.95	0.95	1.00	0.95	1.00	1.00	0.95	0.95
Frt			0.850		0.994				0.850		0.926	
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1770	5085	1583	1770	3518	0	1770	3539	1583	1770	3277	0
Flt Permitted	0.950			0.950			0.459			0.666		
Satd. Flow (perm)	1770	5085	1583	1770	3518	0	855	3539	1583	1241	3277	0
Satd. Flow (RTOR)			67		3				8		89	
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Volume (vph)	630	129	59	30	337	14	269	120	7	6	80	78
Adj. Flow (vph)	716	147	67	34	383	16	306	136	8	7	91	89
Lane Group Flow (vph)	716	147	67	34	399	0	306	136	8	7	180	0
Turn Type	Prot		Perm	Prot			pm+pt		Perm	pm+pt		
Protected Phases	5	2		1	6		3	8		7	4	
Permitted Phases			2				8		8	4		
Total Split (s)	57.0	67.3	67.3	10.6	20.9	0.0	21.6	31.0	31.0	11.1	20.5	0.0
Act Effct Green (s)	45.6	59.4	59.4	6.6	15.4		29.5	27.5	27.5	15.6	9.1	
Actuated g/C Ratio	0.44	0.58	0.58	0.06	0.15		0.29	0.27	0.27	0.14	0.09	
v/c Ratio	0.91	0.05	0.07	0.31	0.76		0.79	0.14	0.02	0.03	0.49	
Control Delay	44.6	10.9	3.2	59.8	53.7		49.5	32.9	19.1	33.0	30.0	
Queue Delay	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	
Total Delay	44.6	10.9	3.2	59.8	53.7		49.5	32.9	19.1	33.0	30.0	
LOS	D	B	A	E	D		D	C	B	C	C	
Approach Delay		36.3			54.2			44.0			30.1	
Approach LOS		D			D			D			C	

Intersection Summary

Cycle Length: 120
Actuated Cycle Length: 102.9
Control Type: Actuated-Uncoordinated
Maximum v/c Ratio: 0.91
Intersection Signal Delay: 41.3
Intersection Capacity Utilization 77.6%
Analysis Period (min) 15

Intersection LOS: D
ICU Level of Service D

Splits and Phases: 32: Siempre Viva Road & Paseo De Las Americas



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Sign Control		Free			Free			Stop			Stop	
Grade		0%			0%			0%			0%	
Volume (veh/h)	54	254	62	20	220	1	21	17	22	2	5	27
Peak Hour Factor	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84
Hourly flow rate (vph)	64	302	74	24	262	1	25	20	26	2	6	32
Pedestrians												
Lane Width (ft)												
Walking Speed (ft/s)												
Percent Blockage												
Right turn flare (veh)												
Median type								None			None	
Median storage veh)												
Upstream signal (ft)		1276										
pX, platoon unblocked												
vC, conflicting volume	263			376			682	779	188	626	815	132
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	263			376			682	779	188	626	815	132
tC, single (s)	4.1			4.1			7.5	6.5	6.9	7.5	6.5	6.9
tC, 2 stage (s)												
tF (s)	2.2			2.2			3.5	4.0	3.3	3.5	4.0	3.3
p0 queue free %	95			98			92	93	97	99	98	96
cM capacity (veh/h)	1298			1179			302	303	822	321	289	894

Direction, Lane #	EB 1	EB 2	EB 3	WB 1	WB 2	WB 3	NB 1	SB 1	SB 2
Volume Total	64	202	175	24	175	88	71	8	32
Volume Left	64	0	0	24	0	0	25	2	0
Volume Right	0	0	74	0	0	1	26	0	32
cSH	1298	1700	1700	1179	1700	1700	394	297	894
Volume to Capacity	0.05	0.12	0.10	0.02	0.10	0.05	0.18	0.03	0.04
Queue Length 95th (ft)	4	0	0	2	0	0	16	2	3
Control Delay (s)	7.9	0.0	0.0	8.1	0.0	0.0	16.1	17.5	9.2
Lane LOS	A			A			C	C	A
Approach Delay (s)	1.2			0.7			16.1	10.9	
Approach LOS							C	B	

Intersection Summary			
Average Delay	2.7		
Intersection Capacity Utilization	32.4%	ICU Level of Service	A
Analysis Period (min)	15		

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Sign Control		Free			Free			Stop			Stop	
Grade		0%			0%			0%			0%	
Volume (veh/h)	39	73	20	17	246	5	51	15	0	1	19	52
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
Hourly flow rate (vph)	43	80	22	19	270	5	56	16	0	1	21	57
Pedestrians												
Lane Width (ft)												
Walking Speed (ft/s)												
Percent Blockage												
Right turn flare (veh)												
Median type								None			None	
Median storage veh)												
Upstream signal (ft)		1290			1303							
pX, platoon unblocked												
vC, conflicting volume	276			102			417	490	51	445	498	138
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	276			102			417	490	51	445	498	138
tC, single (s)	4.1			4.1			7.5	6.5	6.9	7.5	6.5	6.9
tC, 2 stage (s)												
tF (s)	2.2			2.2			3.5	4.0	3.3	3.5	4.0	3.3
p0 queue free %	97			99			88	96	100	100	95	94
cM capacity (veh/h)	1284			1488			453	456	1006	467	451	885

Direction, Lane #	EB 1	EB 2	EB 3	WB 1	WB 2	WB 3	NB 1	SB 1	SB 2
Volume Total	43	53	49	19	180	96	73	22	57
Volume Left	43	0	0	19	0	0	56	1	0
Volume Right	0	0	22	0	0	5	0	0	57
cSH	1284	1700	1700	1488	1700	1700	454	451	885
Volume to Capacity	0.03	0.03	0.03	0.01	0.11	0.06	0.16	0.05	0.06
Queue Length 95th (ft)	3	0	0	1	0	0	14	4	5
Control Delay (s)	7.9	0.0	0.0	7.5	0.0	0.0	14.4	13.4	9.3
Lane LOS	A			A			B	B	A
Approach Delay (s)	2.3			0.5			14.4	10.5	
Approach LOS							B	B	

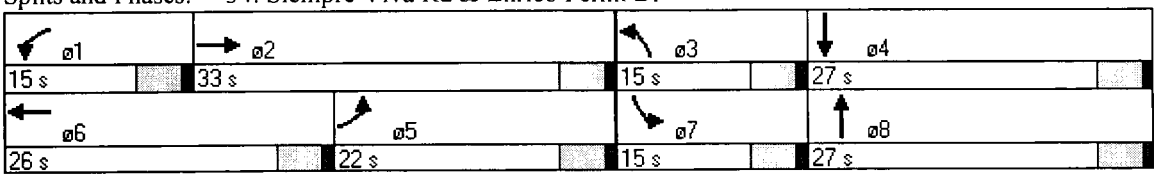
Intersection Summary			
Average Delay	4.0		
Intersection Capacity Utilization	30.6%	ICU Level of Service	A
Analysis Period (min)	15		

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Total Lost Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	0.97	1.00	1.00	1.00	0.95	0.95	1.00	0.95	0.95	1.00	0.95	0.95
Frt		0.917			0.993			0.996			0.912	
Flt Protected	0.950						0.950					
Satd. Flow (prot)	3433	1708	0	1863	3514	0	1770	3525	0	1863	3228	0
Flt Permitted	0.950						0.950					
Satd. Flow (perm)	3433	1708	0	1863	3514	0	1770	3525	0	1863	3228	0
Satd. Flow (RTOR)		5			5			3			38	
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Volume (vph)	242	3	4	0	80	4	9	93	2	0	21	29
Adj. Flow (vph)	314	4	5	0	104	5	12	121	3	0	27	38
Lane Group Flow (vph)	314	9	0	0	109	0	12	124	0	0	65	0
Turn Type	Prot			Prot			Prot			Prot		
Protected Phases	5	2		1	6		3	8		7	4	
Permitted Phases												
Total Split (s)	22.0	33.0	0.0	15.0	26.0	0.0	15.0	27.0	0.0	15.0	27.0	0.0
Act Effct Green (s)	9.5	15.9			7.2		6.5	14.6			13.1	
Actuated g/C Ratio	0.25	0.43			0.18		0.15	0.41			0.37	
v/c Ratio	0.36	0.01			0.17		0.05	0.09			0.05	
Control Delay	13.0	4.4			15.0		19.4	11.1			9.8	
Queue Delay	0.0	0.0			0.0		0.0	0.0			0.0	
Total Delay	13.0	4.4			15.0		19.4	11.1			9.8	
LOS	B	A			B		B	B			A	
Approach Delay		12.8			15.0			11.8			9.8	
Approach LOS		B			B			B			A	

Intersection Summary

Cycle Length: 90
Actuated Cycle Length: 35.4
Control Type: Actuated-Uncoordinated
Maximum v/c Ratio: 0.36
Intersection Signal Delay: 12.6 Intersection LOS: B
Intersection Capacity Utilization 27.4% ICU Level of Service A
Analysis Period (min) 15

Splits and Phases: 34: Siempre Viva Rd & Enrico Fermi Dr



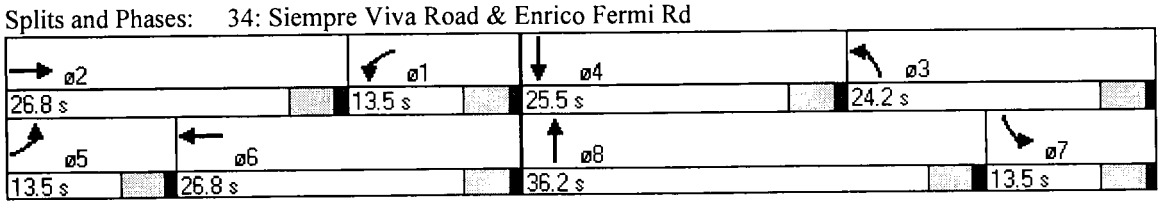
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Total Lost Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	0.97	1.00	1.00	1.00	0.95	0.95	1.00	0.95	0.95	1.00	0.95	0.95
Frt		0.872			0.953			0.998			0.855	
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	3433	1624	0	1770	3373	0	1770	3532	0	1770	3026	0
Flt Permitted	0.950			0.950			0.950			0.950		
Satd. Flow (perm)	3433	1624	0	1770	3373	0	1770	3532	0	1770	3026	0
Satd. Flow (RTOR)		23			11			2			809	
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Volume (vph)	41	4	22	11	23	11	146	149	2	3	4	103
Adj. Flow (vph)	43	4	23	11	24	11	152	155	2	3	4	107
Lane Group Flow (vph)	43	27	0	11	35	0	152	157	0	3	111	0
Turn Type	Prot			Prot			Prot			Prot		
Protected Phases	5	2		1	6		3	8		7	4	
Permitted Phases												
Total Split (s)	13.5	26.8	0.0	13.5	26.8	0.0	24.2	36.2	0.0	13.5	25.5	0.0
Act Effct Green (s)	7.1	9.2		6.8	6.8		11.6	50.0		6.5	33.2	
Actuated g/C Ratio	0.10	0.14		0.10	0.10		0.19	0.81		0.09	0.54	
v/c Ratio	0.12	0.11		0.06	0.10		0.46	0.05		0.02	0.06	
Control Delay	25.9	13.6		28.8	20.9		23.5	5.3		29.0	0.1	
Queue Delay	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Delay	25.9	13.6		28.8	20.9		23.5	5.3		29.0	0.1	
LOS	C	B		C	C		C	A		C	A	
Approach Delay		21.2			22.8			14.3			0.8	
Approach LOS		C			C			B			A	

Intersection Summary

Cycle Length: 90
Actuated Cycle Length: 61.7
Control Type: Semi Act-Uncoord
Maximum v/c Ratio: 0.46
Intersection Signal Delay: 13.0
Intersection Capacity Utilization 29.3%
Analysis Period (min) 15

Intersection LOS: B
ICU Level of Service A

Splits and Phases: 34: Siempre Viva Road & Enrico Fermi Rd

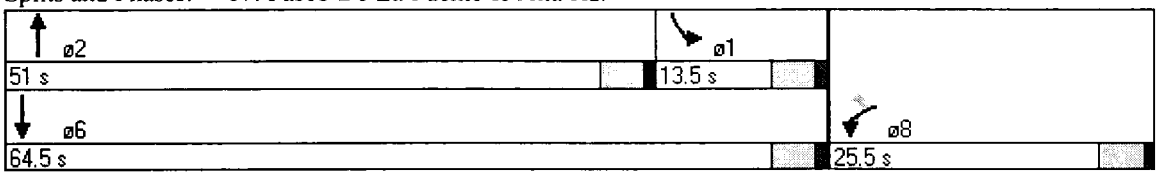


Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Total Lost Time (s)	4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.850	0.996			
Flt Protected	0.950				0.950	
Satd. Flow (prot)	1770	1583	1855	0	1770	1863
Flt Permitted	0.950				0.950	
Satd. Flow (perm)	1770	1583	1855	0	1770	1863
Satd. Flow (RTOR)		5	3			
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Volume (vph)	6	5	634	19	1	166
Adj. Flow (vph)	7	5	689	21	1	180
Lane Group Flow (vph)	7	5	710	0	1	180
Turn Type		Perm			Prot	
Protected Phases	8		2		1	6
Permitted Phases		8				
Total Split (s)	25.5	25.5	51.0	0.0	13.5	64.5
Act Effct Green (s)	6.5	6.5	110.3		6.2	112.7
Actuated g/C Ratio	0.05	0.05	0.95		0.05	0.97
v/c Ratio	0.08	0.06	0.40		0.01	0.10
Control Delay	27.7	18.0	2.3		27.0	0.5
Queue Delay	0.0	0.0	0.0		0.0	0.0
Total Delay	27.7	18.0	2.3		27.0	0.5
LOS	C	B	A		C	A
Approach Delay	23.6		2.3			0.7
Approach LOS	C		A			A

Intersection Summary

Cycle Length: 90
Actuated Cycle Length: 116.1
Control Type: Actuated-Uncoordinated
Maximum v/c Ratio: 0.40
Intersection Signal Delay: 2.2 — Intersection LOS: A
Intersection Capacity Utilization 44.5% — ICU Level of Service A
Analysis Period (min) 15

Splits and Phases: 67: Paseo De La Fuente & Alta Rd.

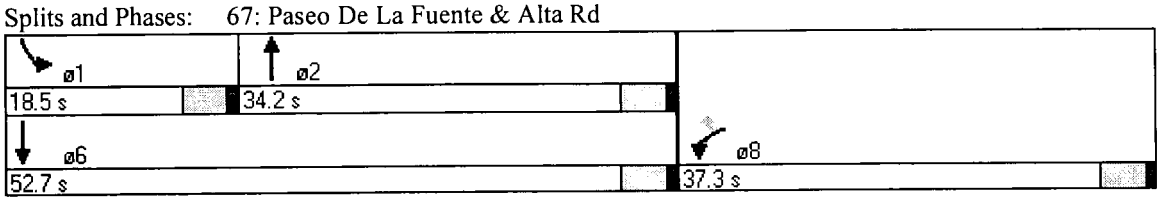


Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Total Lost Time (s)	4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.850	0.996			
Flt Protected	0.950					
Satd. Flow (prot)	1770	1583	1855	0	1863	1863
Flt Permitted	0.950					
Satd. Flow (perm)	1770	1583	1855	0	1863	1863
Satd. Flow (RTOR)		2	2			
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Volume (vph)	221	2	98	3	0	506
Adj. Flow (vph)	273	2	121	4	0	625
Lane Group Flow (vph)	273	2	125	0	0	625
Turn Type		Perm			Prot	
Protected Phases	8		2		1	6
Permitted Phases		8				
Total Split (s)	37.3	37.3	34.2	0.0	18.5	52.7
Act Effct Green (s)	12.7	12.7	24.8			24.8
Actuated g/C Ratio	0.28	0.28	0.54			0.54
v/c Ratio	0.56	0.00	0.12			0.62
Control Delay	18.3	10.5	6.4			11.4
Queue Delay	0.0	0.0	0.0			0.0
Total Delay	18.3	10.5	6.4			11.4
LOS	B	B	A			B
Approach Delay	18.2		6.4			11.4
Approach LOS	B		A			B

Intersection Summary

Cycle Length: 90
Actuated Cycle Length: 45.9
Control Type: Actuated-Uncoordinated
Maximum v/c Ratio: 0.62
Intersection Signal Delay: 12.6
Intersection LOS: B
Intersection Capacity Utilization 45.5%
ICU Level of Service A
Analysis Period (min) 15

Splits and Phases: 67: Paseo De La Fuente & Alta Rd



Existing + Project Units 1-2 Intersection ILV Analysis

INTERSECTION

Signalized Intersection

CAPACITY ANALYSIS

INTERSECTION Otay Mesa/Heritage

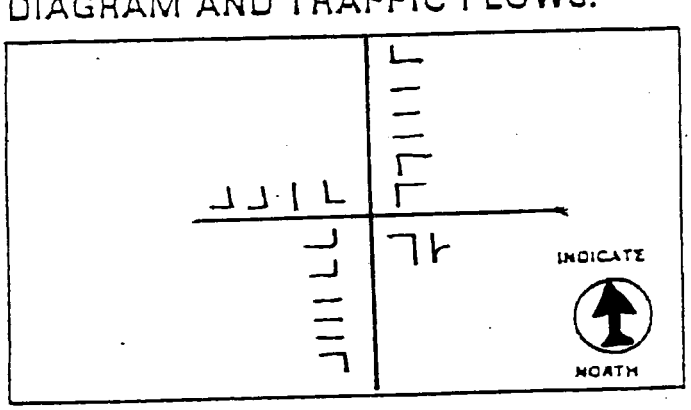
Existing + Units 1-2

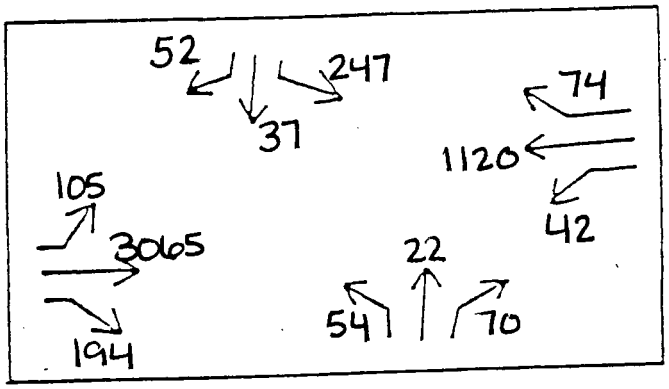
DIST. CO. RTE. P.M. 11/SD/905

BY JB DATE 4-6-10

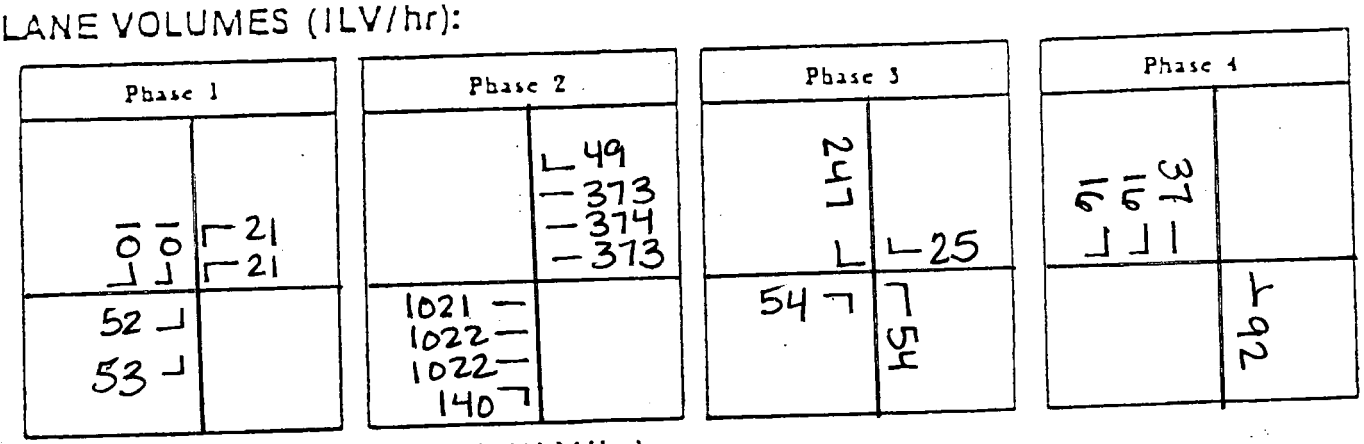
TIME ____ (AM) PM

DIAGRAM AND TRAFFIC FLOWS:





LANE VOLUMES (ILV/hr):



CRITICAL LANE VOLUMES (ILV/hr):

Phase 1	Phase 2	Phase 3	Phase 4
53	1,022	247	92

TOTAL OPERATING LEVEL (ILV/hr):

Σ
1,414

Is . . . ☒ < 1200 ILV/hr.

☐ > 1200 but < 1500 ILV/hr.

☐ > 1500 ILV/hr. (CAPACITY)

REMARKS:

INTERSECTION

Signalized Intersection

CAPACITY ANALYSIS

INTERSECTION Otay Mesa/Heritage

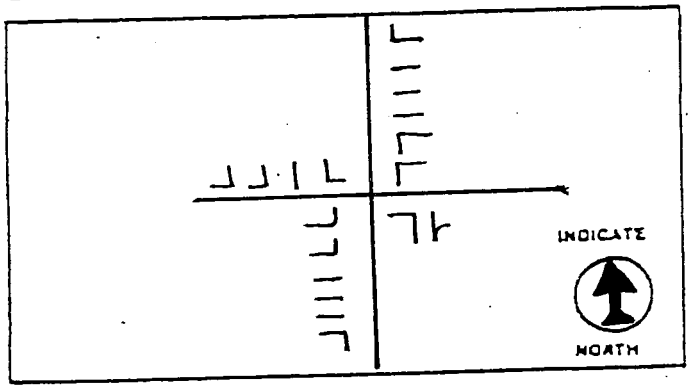
DIST. CO. RTE. P.M. 11/SD/905

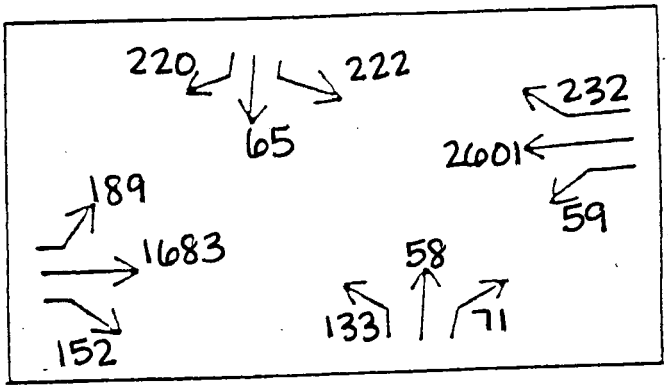
BY SLB DATE 4-6-10

TIME ____ AM (PM)

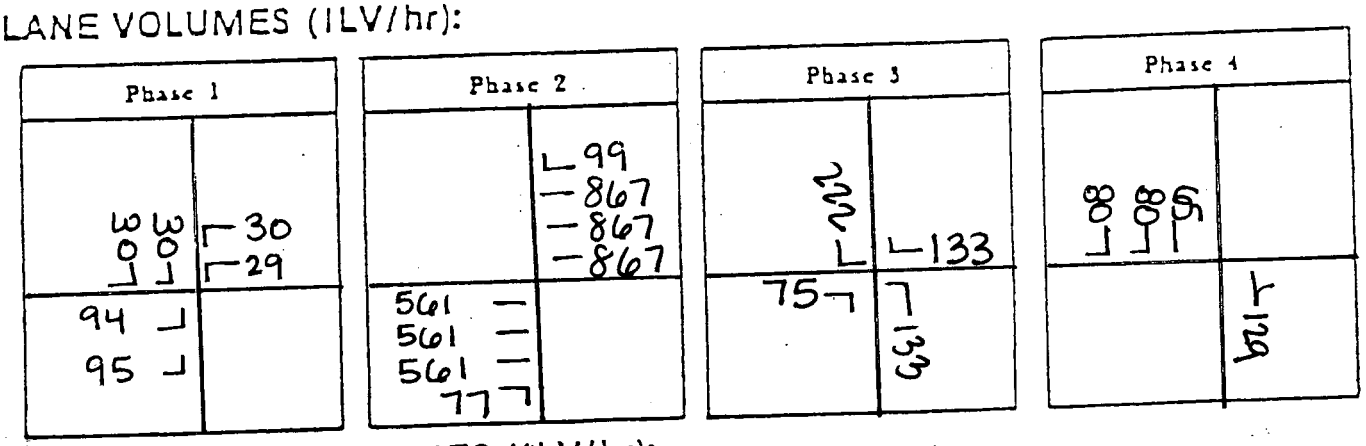
Existing + Units 1-2

DIAGRAM AND TRAFFIC FLOWS:





LANE VOLUMES (ILV/hr):



CRITICAL LANE VOLUMES (ILV/hr):

Phase 1	Phase 2	Phase 3	Phase 4
95	867	222	129

TOTAL OPERATING LEVEL (ILV/hr):

Σ
1,313

Is . . .

- ☐ < 1200 ILV/hr.
- ☒ > 1200 but < 1500 ILV/hr.
- ☐ > 1500 ILV/hr. (CAPACITY)

REMARKS:

INTERSECTION

Signalized Intersection
CAPACITY ANALYSIS

INTERSECTION Otay Mesa/Cactus

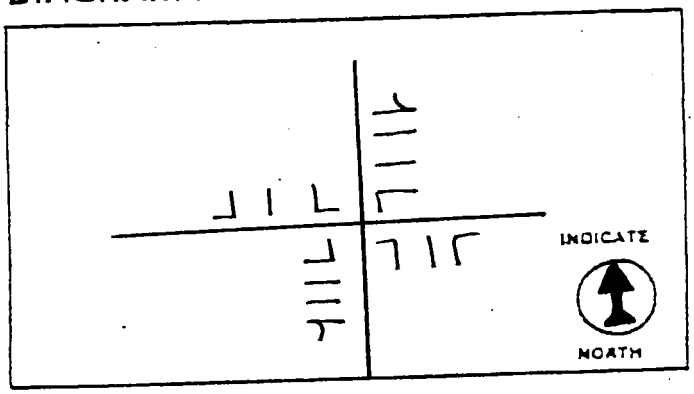
DIST. CO. RTE. P.M. 11/SD/905

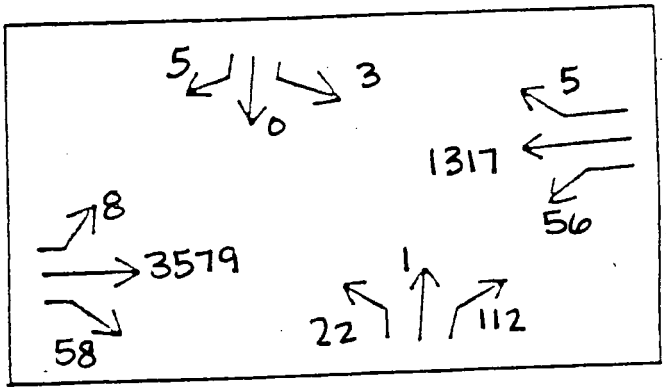
BY LB DATE 4-6-10

TIME ____ (AM) PM

Existing + Units 1-2

DIAGRAM AND TRAFFIC FLOWS:





LANE VOLUMES (ILV/hr):

Phase 1		Phase 2		Phase 3		Phase 4	
0	56		440 441 441	3		5 0	
8	8	1212 1213 1212			22		104

CRITICAL LANE VOLUMES (ILV/hr):

Phase 1	Phase 2	Phase 3	Phase 4
56	1,213	22	104

TOTAL OPERATING LEVEL (ILV/hr):

Σ
1,395

Is . . .

- ☐ < 1200 ILV/hr.
- ☒ > 1200 but < 1500 ILV/hr.
- ☐ > 1500 ILV/hr. (CAPACITY)

REMARKS:

INTERSECTION

Signalized Intersection

CAPACITY ANALYSIS

INTERSECTION Otay Mesa/Cactus

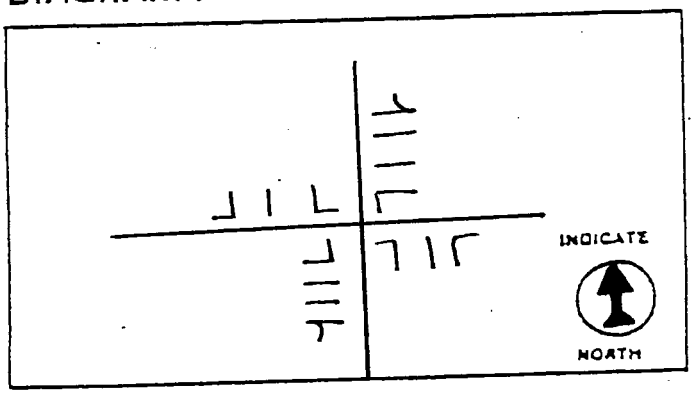
DIST. CO. RTE. P.M. 11/SD/905

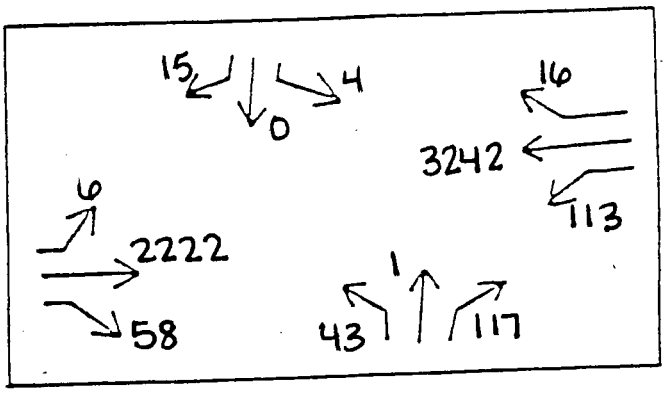
BY LB DATE 4-6-10

TIME ____ AM (PM)

Existing + Units 1-2

DIAGRAM AND TRAFFIC FLOWS:





LANE VOLUMES (ILV/hr):

Phase 1		Phase 2		Phase 3		Phase 4	
5	113		1086 1086 1086			90	
6	8	760 760 760			43		17

CRITICAL LANE VOLUMES (ILV/hr):

Phase 1	Phase 2	Phase 3	Phase 4
113	1,086	43	17

TOTAL OPERATING LEVEL (ILV/hr):

Σ
1,259

Is . . .

- ☐ < 1200 ILV/hr.
- ☒ > 1200 but < 1500 ILV/hr.
- ☐ > 1500 ILV/hr. (CAPACITY)

REMARKS:

INTERSECTION

Signalized Intersection
CAPACITY ANALYSIS

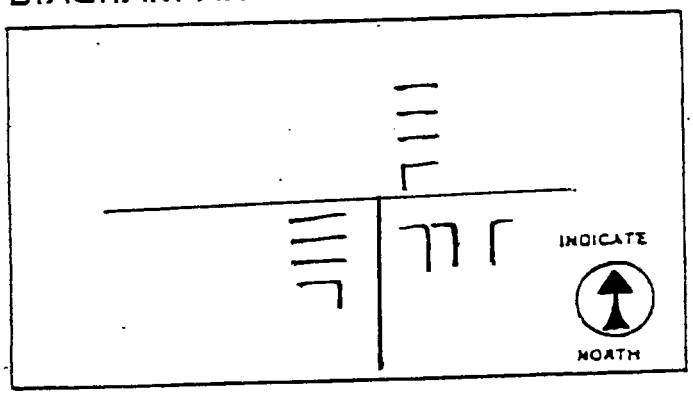
INTERSECTION Otay Mesa Rd / Britannia Blvd DIST. CO. RTE. P.M. 11/SD/905

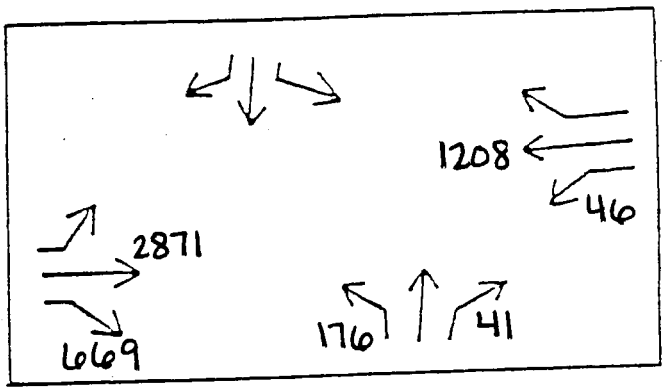
Existing + Units 1-2

BY VB DATE 4-6-10

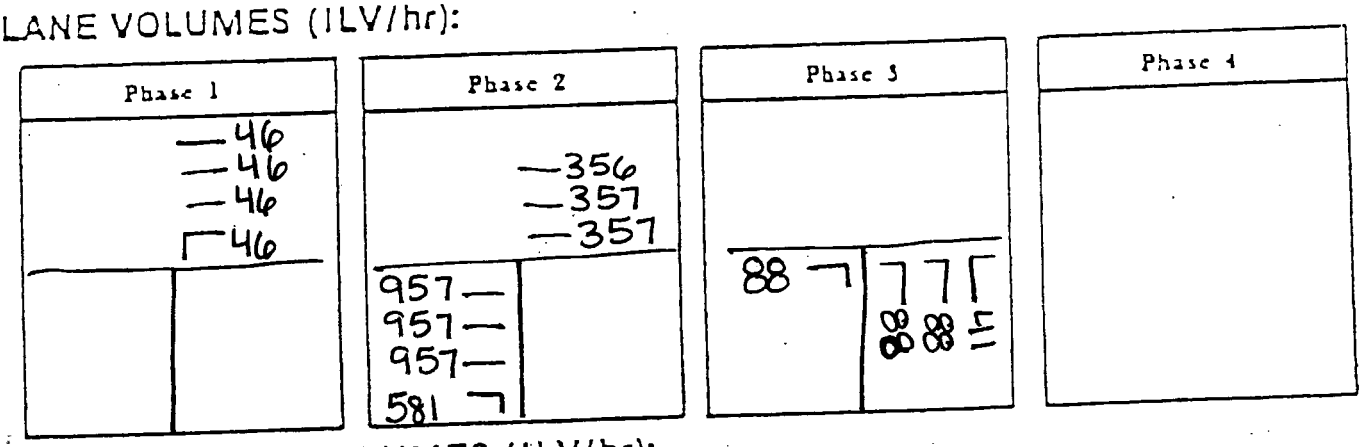
TIME ____ (AM) PM

DIAGRAM AND TRAFFIC FLOWS:





LANE VOLUMES (ILV/hr):



CRITICAL LANE VOLUMES (ILV/hr):

Phase 1	Phase 2	Phase 3	Phase 4
46	957	88	

TOTAL OPERATING LEVEL (ILV/hr):

Σ
1,091

Is . . .

- ☒ < 1200 ILV/hr.
- ☐ > 1200 but < 1500 ILV/hr.
- ☐ > 1500 ILV/hr. (CAPACITY)

REMARKS:

INTERSECTION

Signalized Intersection

CAPACITY ANALYSIS

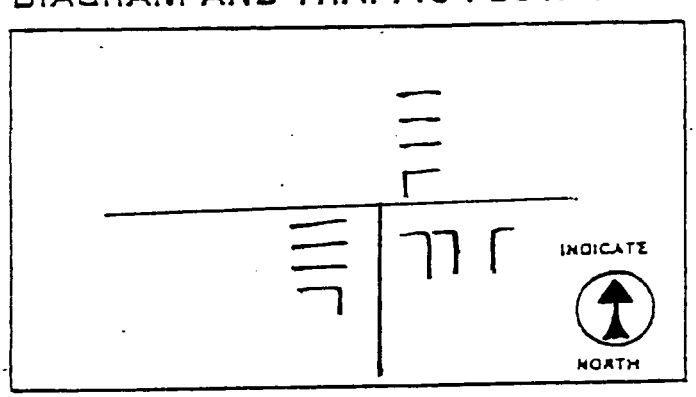
INTERSECTION Otay Mesa Rd / Britannia Blvd DIST. CO. RTE. P.M. 11/SD/905

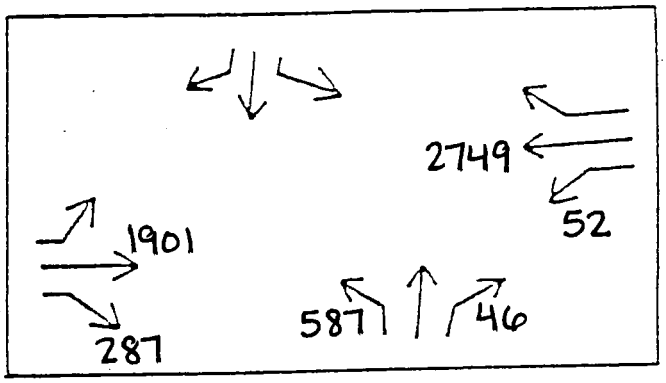
Existing + Units 1-2

BY VB DATE 4-6-10

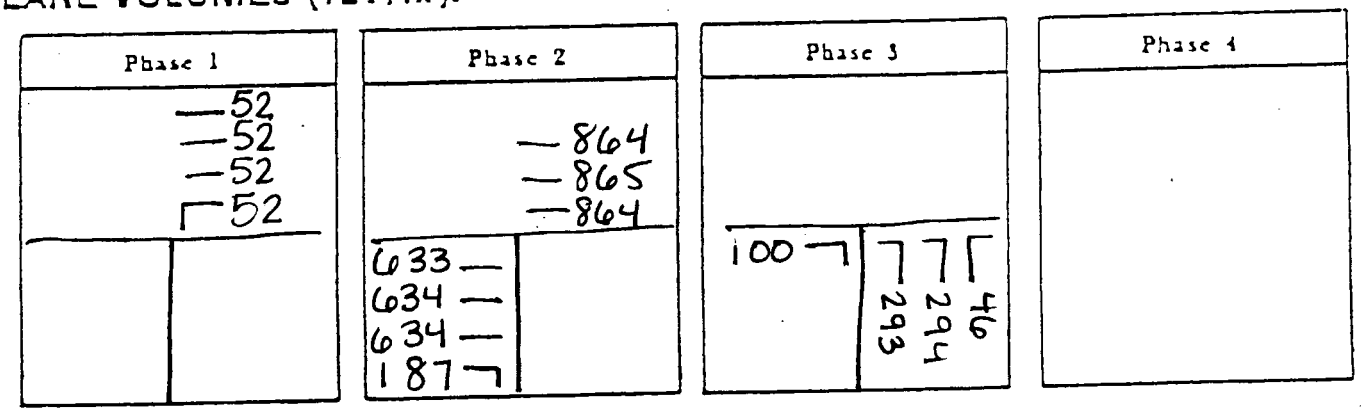
TIME ____ AM (PM)

DIAGRAM AND TRAFFIC FLOWS:





LANE VOLUMES (ILV/hr):



CRITICAL LANE VOLUMES (ILV/hr):

Phase 1	Phase 2	Phase 3	Phase 4
52	865	294	

TOTAL OPERATING LEVEL (ILV/hr):

Σ
1,211

Is . . .

- ☐ < 1200 ILV/hr.
- ☒ > 1200 but < 1500 ILV/hr.
- ☐ > 1500 ILV/hr. (CAPACITY)

REMARKS:

INTERSECTION

Signalized Intersection

CAPACITY ANALYSIS

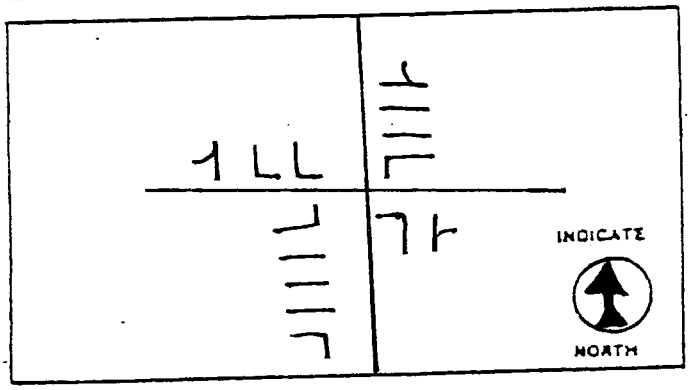
INTERSECTION Otay Mesa Rd/La Media Rd DIST. CO. RTE. P.M. 11/SD/905

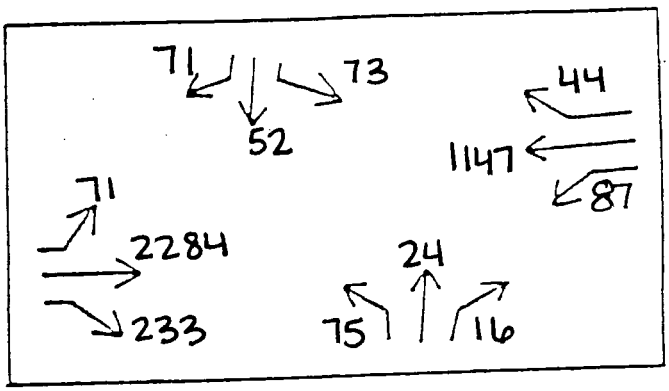
Existing + Units 1-2

BY BB DATE 4-6-10

TIME ____ (AM) PM

DIAGRAM AND TRAFFIC FLOWS:





LANE VOLUMES (ILV/hr):

Phase 1		Phase 2		Phase 3		Phase 4	
	87		397 397 397	37 36 LL		123 1	
71		761 762 761 158		75	75		40

CRITICAL LANE VOLUMES (ILV/hr):

Phase 1	Phase 2	Phase 3	Phase 4
87	762	75	123

TOTAL OPERATING LEVEL (ILV/hr):

Σ
1,047

Is . . .

- ☒ < 1200 ILV/hr.
- ☐ > 1200 but < 1500 ILV/hr.
- ☐ > 1500 ILV/hr. (CAPACITY)

REMARKS:

INTERSECTION

Signalized Intersection

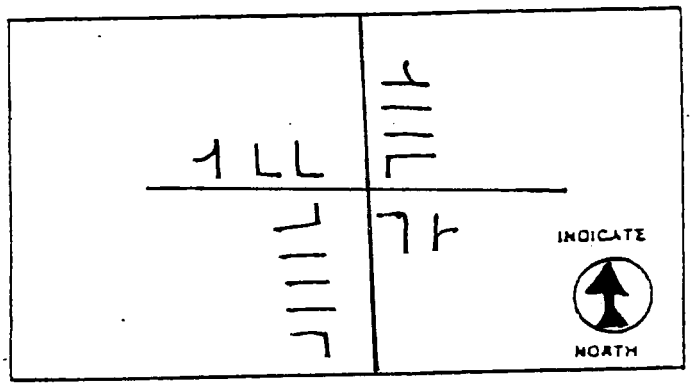
CAPACITY ANALYSIS

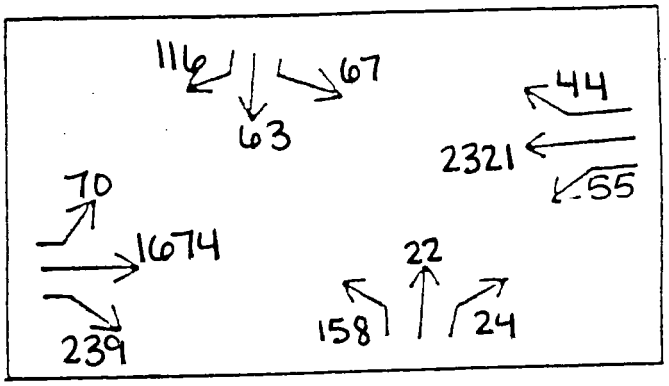
INTERSECTION Otay Mesa Rd/La Media Rd DIST. CO. RTE. P.M. 11/SD/905

Existing + Units 1-2 BY BB DATE 4-6-10

TIME ____ AM (PM)

DIAGRAM AND TRAFFIC FLOWS:





LANE VOLUMES (ILV/hr):

Phase 1		Phase 2		Phase 3		Phase 4	
	⌐ 55		⌐ 788 — 789 — 788	33 34 L L		179 1	
70 ⌐		558 — 558 — 558 — 139 ⌐		100 ⌐	⌐ 158		⌐ 46

CRITICAL LANE VOLUMES (ILV/hr):

Phase 1	Phase 2	Phase 3	Phase 4
70	789	158	179

TOTAL OPERATING LEVEL (ILV/hr):

Σ
1,196

Is . . .

☒ < 1200 ILV/hr.

☐ > 1200 but < 1500 ILV/hr.

☐ > 1500 ILV/hr. (CAPACITY)

REMARKS:

INTERSECTION

Signalized Intersection

CAPACITY ANALYSIS

INTERSECTION Otay Mesa/Piper Ranch

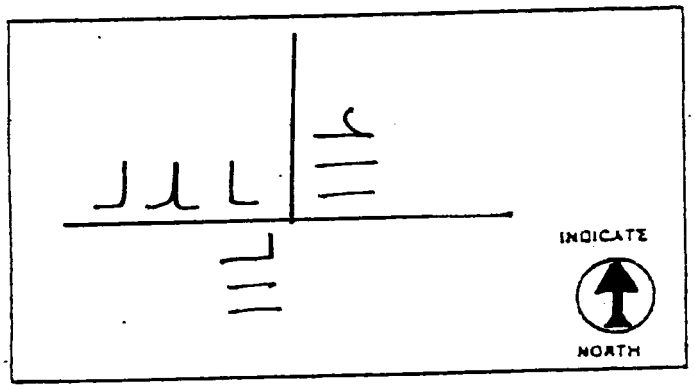
DIST. CO. RTE. P.M. 11/SD/905

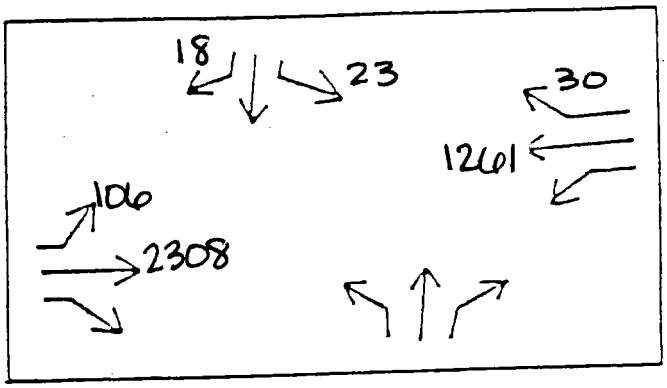
Existing + Units 1-2

BY JB DATE 4-6-10

TIME ___ (AM) PM

DIAGRAM AND TRAFFIC FLOWS:





LANE VOLUMES (ILV/hr):

Phase 1	Phase 2	Phase 3	Phase 4
106 106 106	430 431 430 1,048 1,048	14	

CRITICAL LANE VOLUMES (ILV/hr):

Phase 1	Phase 2	Phase 3	Phase 4
106	1,048	14	

TOTAL OPERATING LEVEL (ILV/hr):

Σ
1,168

Is . . .

- ☒ < 1200 ILV/hr.
- ☐ > 1200 but < 1500 ILV/hr.
- ☐ > 1500 ILV/hr. (CAPACITY)

REMARKS:

INTERSECTION

Signalized Intersection
CAPACITY ANALYSIS

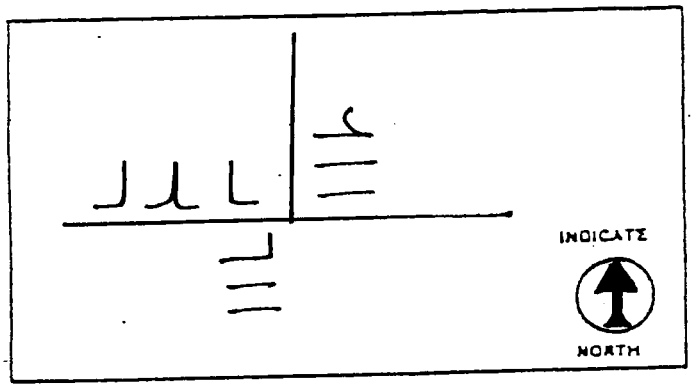
INTERSECTION Otay Mesa/Piper Ranch DIST. CO. RTE. P.M. 11/SD/905

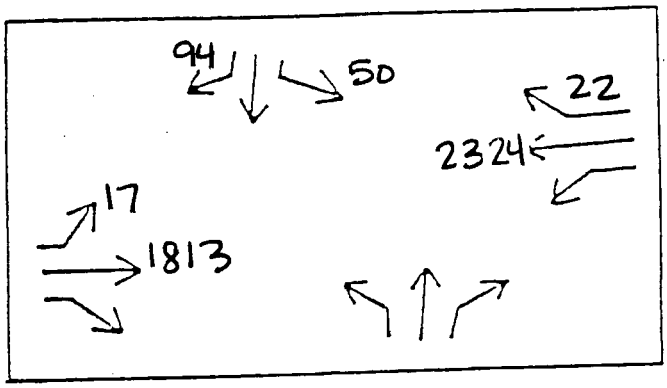
BY JB DATE 4-6-10

Existing + Units 1-2

TIME ____ AM (PM)

DIAGRAM AND TRAFFIC FLOWS:





LANE VOLUMES (ILV/hr):

Phase 1	Phase 2	Phase 3	Phase 4
17 ⌋ 17 — 17 —	⌊ 782 — 782 — 782 889 — 890 —	⌊ ⌊ ⌊ 00 00 00 ⌋ ⌊ L	

CRITICAL LANE VOLUMES (ILV/hr):

Phase 1	Phase 2	Phase 3	Phase 4
17	890	48	

TOTAL OPERATING LEVEL (ILV/hr): Is . . .

Σ
955

- ☒ < 1200 ILV/hr.
- ☐ > 1200 but < 1500 ILV/hr.
- ☐ > 1500 ILV/hr. (CAPACITY)

REMARKS:

INTERSECTION

Signalized Intersection

CAPACITY ANALYSIS

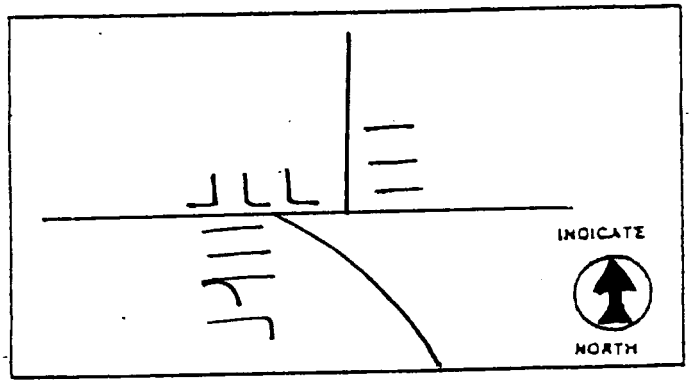
INTERSECTION Otay Mesa / SR-125 SB Ramp DIST. CO. RTE. P.M. 11/SD/905

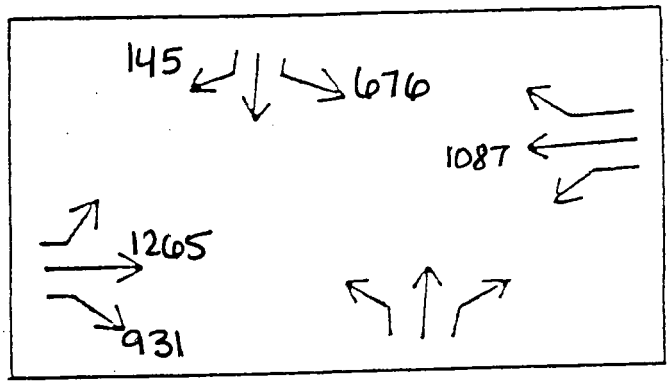
Existing + Units 1-2

BY JB DATE 4-6-10

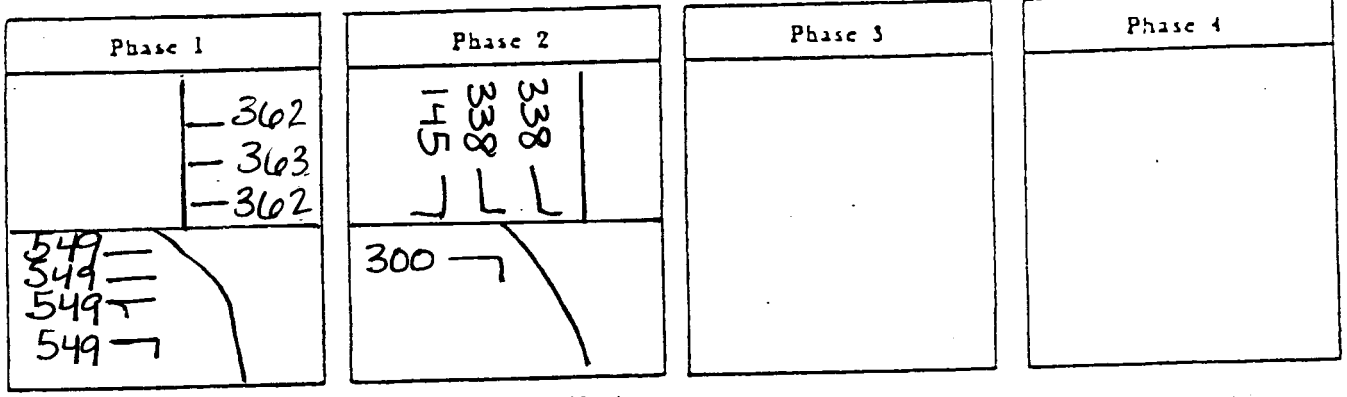
TIME ____ (AM) PM

DIAGRAM AND TRAFFIC FLOWS:





LANE VOLUMES (ILV/hr):



CRITICAL LANE VOLUMES (ILV/hr):

Phase 1	Phase 2	Phase 3	Phase 4
549	338		

TOTAL OPERATING LEVEL (ILV/hr):

Σ
887

Is . . . ☒ < 1200 ILV/hr.

☐ > 1200 but < 1500 ILV/hr.

☐ > 1500 ILV/hr. (CAPACITY)

REMARKS:

INTERSECTION

Signalized Intersection

CAPACITY ANALYSIS

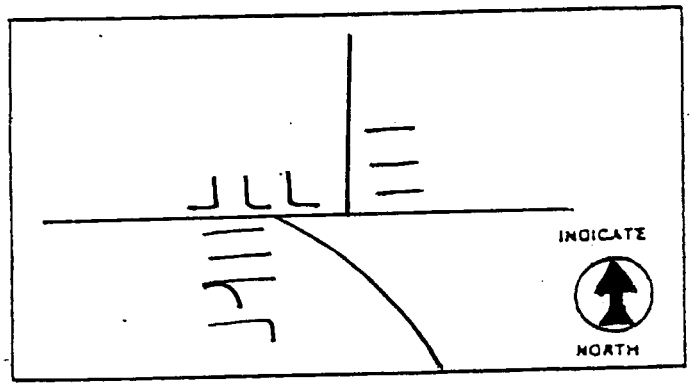
INTERSECTION Otay Mesa / SR-125 SB Ramp DIST. CO. RTE. P.M. 11/SD/905

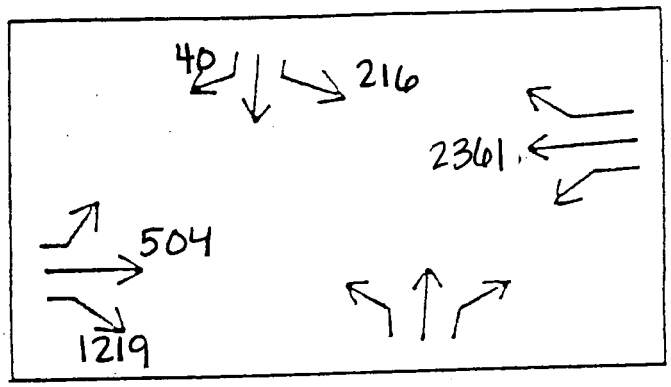
Existing + Units 1-2

BY JB DATE 4-6-10

TIME ____ AM (PM)

DIAGRAM AND TRAFFIC FLOWS:





LANE VOLUMES (ILV/hr):

Phase 1	Phase 2	Phase 3	Phase 4
787 787 787 252 252 560 559	108 108 108 100		

CRITICAL LANE VOLUMES (ILV/hr):

Phase 1	Phase 2	Phase 3	Phase 4
787	108		

TOTAL OPERATING LEVEL (ILV/hr):

Σ
895

Is . . .

- [x] < 1200 ILV/hr.
- [ ] > 1200 but < 1500 ILV/hr.
- [ ] > 1500 ILV/hr. (CAPACITY)

REMARKS:

INTERSECTION

Signalized Intersection

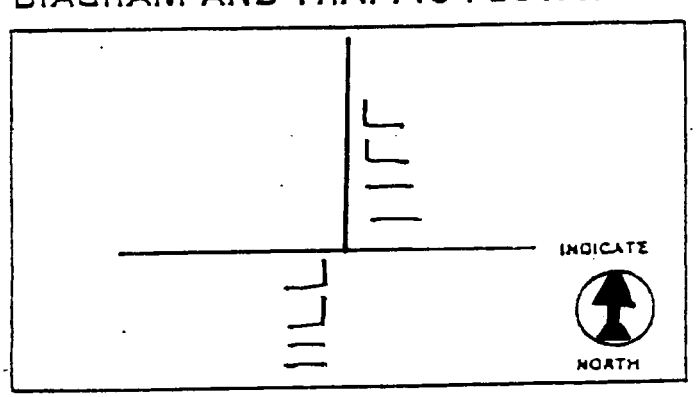
CAPACITY ANALYSIS

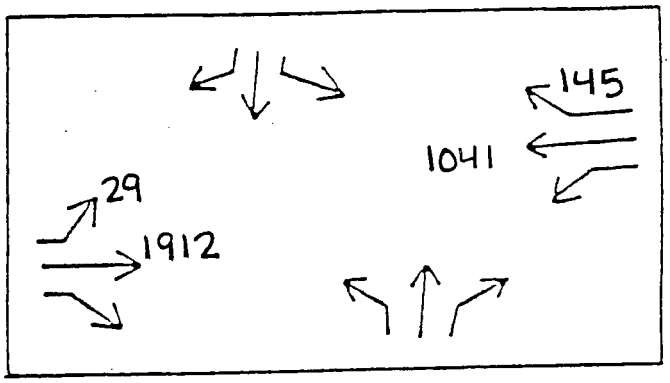
INTERSECTION Otay Mesa/SR-125NB Ramp DIST. CO. RTE. P.M. 11/SD/905

Existing + Units 1-2 BY JB DATE 4-6-10

TIME ____ (AM) PM

DIAGRAM AND TRAFFIC FLOWS:





LANE VOLUMES (ILV/hr):

Phase 1	Phase 2	Phase 3	Phase 4
14 ⌊ 15 ⌊ 15 = 15 =	73 ⌊ 72 ⌊ 521 = 520 = 941 = 941 =		

CRITICAL LANE VOLUMES (ILV/hr):

Phase 1	Phase 2	Phase 3	Phase 4
15	941		

TOTAL OPERATING LEVEL (ILV/hr):

Σ
956

Is . . .

- ☒ < 1200 ILV/hr.
- ☐ > 1200 but < 1500 ILV/hr.
- ☐ > 1500 ILV/hr. (CAPACITY)

REMARKS:

INTERSECTION

Signalized Intersection

CAPACITY ANALYSIS

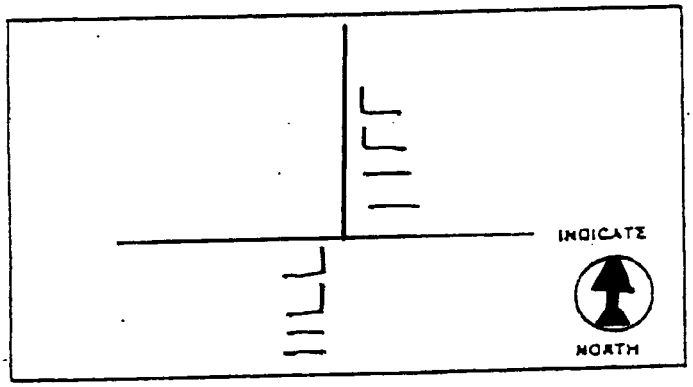
INTERSECTION Otay Mesa/SR-125NB Ramp DIST. CO. RTE. P.M. 11/SD/905

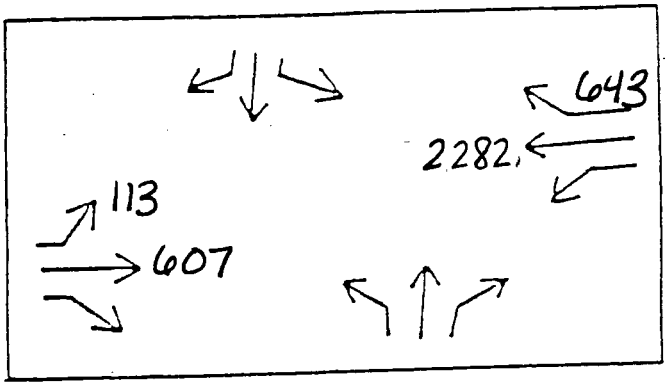
BY JB DATE 4-6-10

Existing + Units 1-2

TIME ____ AM (PM)

DIAGRAM AND TRAFFIC FLOWS:





LANE VOLUMES (ILV/hr):

Phase 1	Phase 2	Phase 3	Phase 4
56 ⌊ 57 ⌊ 57 = 57 =	⌊ 321 ⌊ 322 — 1141 — 1141 246 — 247 —		

CRITICAL LANE VOLUMES (ILV/hr):

Phase 1	Phase 2	Phase 3	Phase 4
57	1,141		

TOTAL OPERATING LEVEL (ILV/hr):

Σ
1,198

Is . . .

- ☒ < 1200 ILV/hr.
- ☐ > 1200 but < 1500 ILV/hr.
- ☐ > 1500 ILV/hr. (CAPACITY)

REMARKS:

INTERSECTION

Signalized Intersection
CAPACITY ANALYSIS

INTERSECTION Otay Mesa/SR-905NB Connector

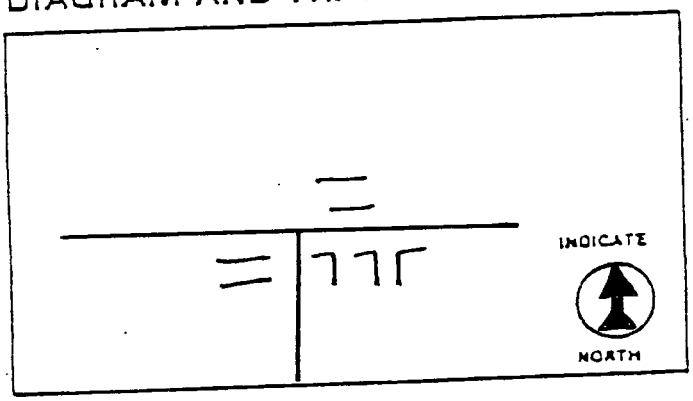
DIST. CO. RTE. P.M. 11/SD/905

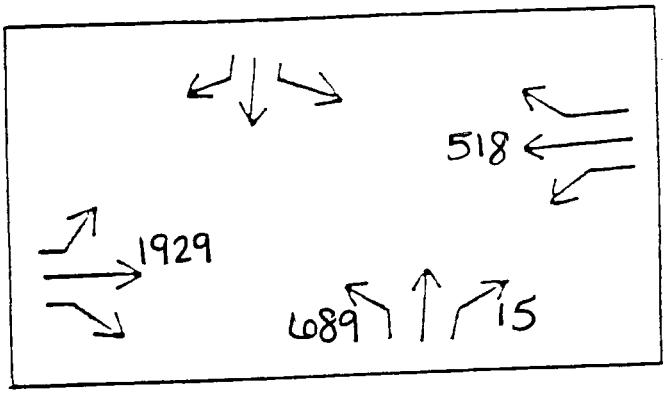
BY JB DATE 4-6-10

TIME ____ (AM) PM

Existing + Units 1-2

DIAGRAM AND TRAFFIC FLOWS:





LANE VOLUMES (ILV/hr):

Phase 1	Phase 2	Phase 3	Phase 4
259 259 964 965	77 345 344 15		

CRITICAL LANE VOLUMES (ILV/hr):

Phase 1	Phase 2	Phase 3	Phase 4
965	345		

TOTAL OPERATING LEVEL (ILV/hr):

Σ
1,310

Is . . .

- ☐ < 1200 ILV/hr.
- ☒ > 1200 but < 1500 ILV/hr.
- ☐ > 1500 ILV/hr. (CAPACITY)

REMARKS:

Signalized Intersection
CAPACITY ANALYSIS

INTERSECTION Otay Mesa/SR-905NB Connector

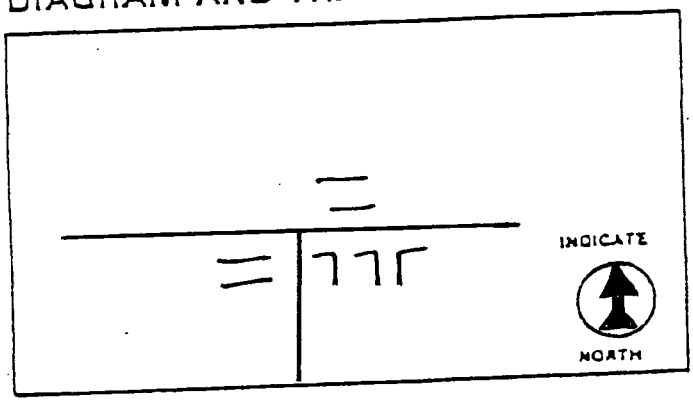
DIST. CO. RTE. P.M. 11/SD/905

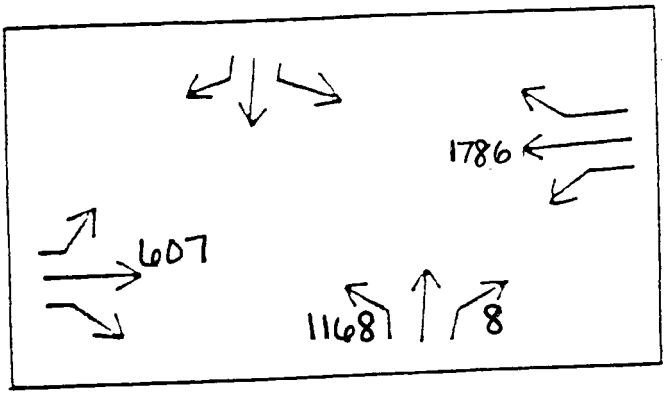
BY JB DATE 4-6-10

TIME ____ AM (PM)

Existing + Units 1-2

DIAGRAM AND TRAFFIC FLOWS:





LANE VOLUMES (1LV/hr):

Phase 1	Phase 2	Phase 3	Phase 4
893 893 303 304	584 584 8		

CRITICAL LANE VOLUMES (1LV/hr):

Phase 1	Phase 2	Phase 3	Phase 4
893	584		

TOTAL OPERATING LEVEL (1LV/hr):

Σ
1,477

Is . . .

- ☐ < 1200 1LV/hr.
- ☒ > 1200 but < 1500 1LV/hr.
- ☐ > 1500 1LV/hr. (CAPACITY)

REMARKS:

INTERSECTION

Signalized Intersection

CAPACITY ANALYSIS

INTERSECTION Siempre Viva | SR-905 SB Ramp

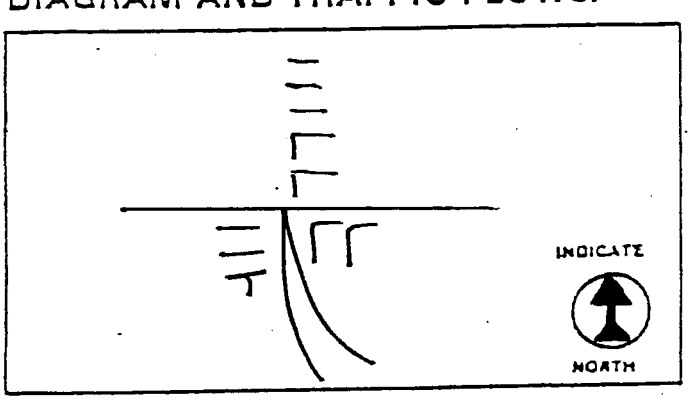
DIST. CO. RTE. P.M. 11 | SD | 905

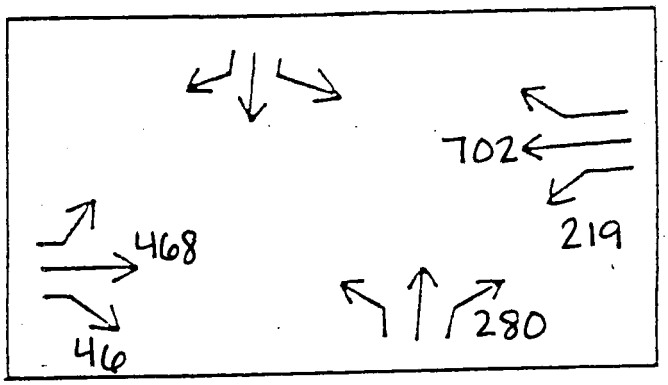
BY KB DATE 4-6-10

TIME ____ (AM) PM

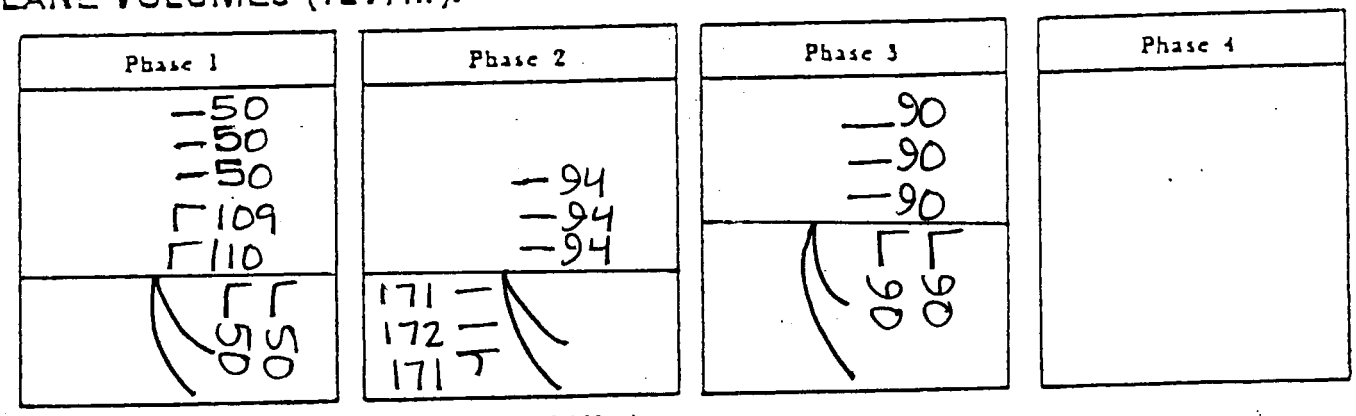
Existing + Units 1-2

DIAGRAM AND TRAFFIC FLOWS:





LANE VOLUMES (ILV/hr):



CRITICAL LANE VOLUMES (ILV/hr):

Phase 1	Phase 2	Phase 3	Phase 4
110	172	90	

TOTAL OPERATING LEVEL (ILV/hr):

Σ
372

Is . . .

- ~~A~~ < 1200 ILV/hr.
- B > 1200 but < 1500 ILV/hr.
- C > 1500 ILV/hr. (CAPACITY)

REMARKS:

INTERSECTION

Signalized Intersection

CAPACITY ANALYSIS

INTERSECTION Siempre Viva | SR-905 SB Ramp

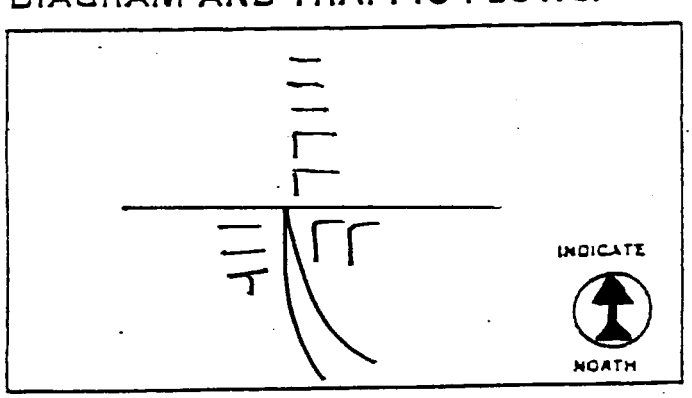
DIST. CO. RTE. P.M. 11 | SD | 905

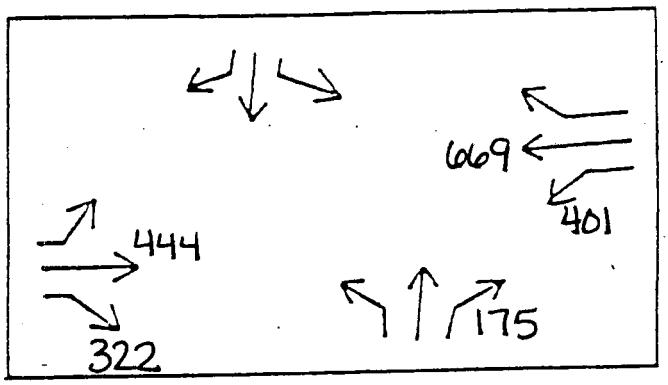
Existing + Units 1-2

BY JB DATE 4-6-10

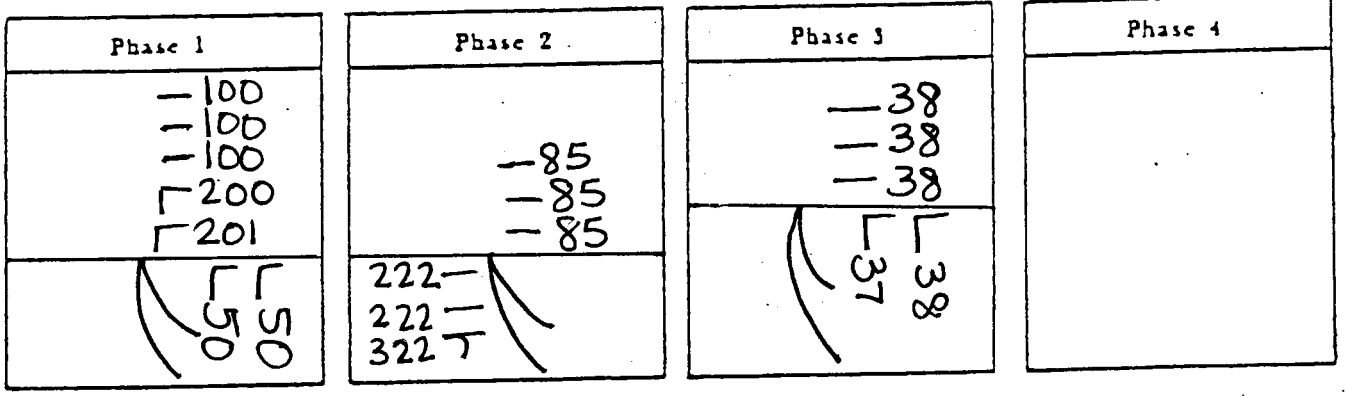
TIME ____ AM (PM)

DIAGRAM AND TRAFFIC FLOWS:





LANE VOLUMES (ILV/hr):



CRITICAL LANE VOLUMES (ILV/hr):

Phase 1	Phase 2	Phase 3	Phase 4
201	322	38	

TOTAL OPERATING LEVEL (ILV/hr):

Σ
561

Is . . .

☒ < 1200 ILV/hr.

☐ > 1200 but < 1500 ILV/hr.

☐ > 1500 ILV/hr. (CAPACITY)

REMARKS:

INTERSECTION

Signalized Intersection

CAPACITY ANALYSIS

INTERSECTION Siempre Viva / SR-905 NB Ramp

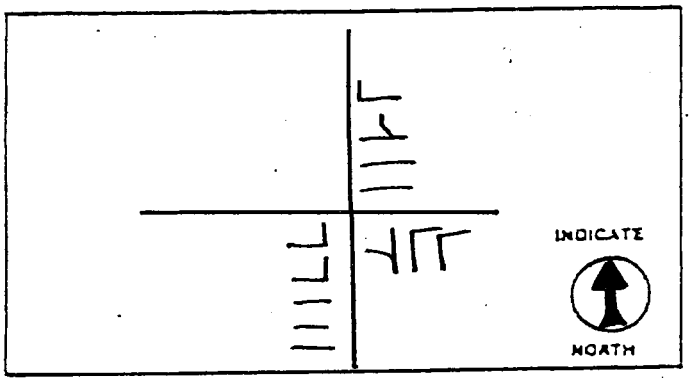
DIST. CO. RTE. P.M. 11/SD/905

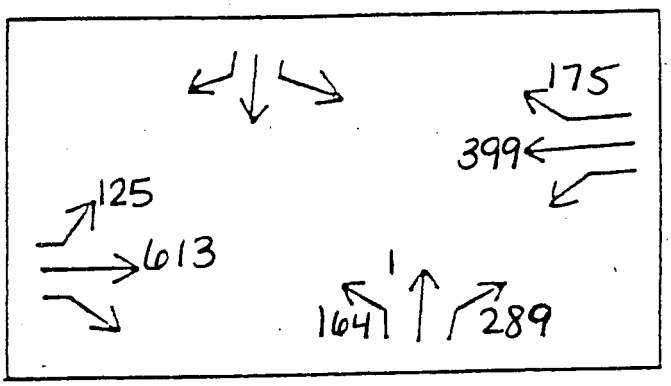
Existing + Units 1-2

BY [illegible] DATE 4-6-10

TIME ___ (AM) PM

DIAGRAM AND TRAFFIC FLOWS:





LANE VOLUMES (ILV/hr):

Phase 1	Phase 2	Phase 3	Phase 4
62 63 63 63 63	144 144 143 143 / 141 142 141	165 144 145	

CRITICAL LANE VOLUMES (ILV/hr):

Phase 1	Phase 2	Phase 3	Phase 4
63	144	165	

TOTAL OPERATING LEVEL (ILV/hr):

Σ
372

Is . . .

- [x] < 1200 ILV/hr.
- [ ] > 1200 but < 1500 ILV/hr.
- [ ] > 1500 ILV/hr. (CAPACITY)

REMARKS:

INTERSECTION

Signalized Intersection

CAPACITY ANALYSIS

INTERSECTION Siempre Viva / SR-905 NB Ramp

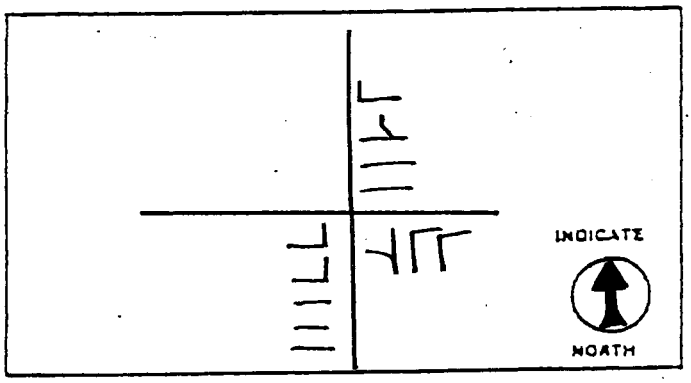
DIST. CO. RTE. P.M. 11/SD/905

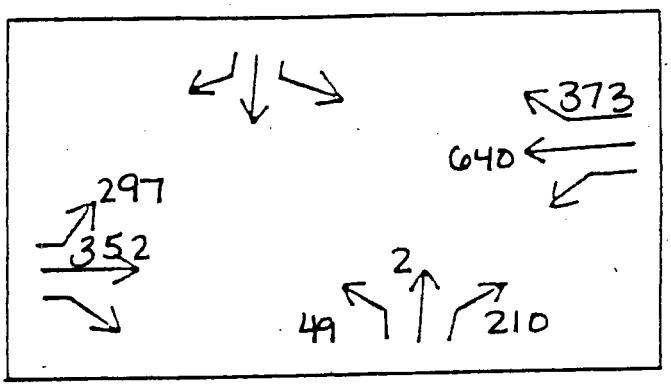
BY [illegible] DATE 4-6-10

TIME ____ AM (PM)

Existing + Units 1-2

DIAGRAM AND TRAFFIC FLOWS:





LANE VOLUMES (ILV/hr):

Phase 1	Phase 2	Phase 3	Phase 4
148 L 149 L 50 ≡ 50 ≡ 49	L 253 L 254 — 253 — 253 68 — 68 — 67 —	L L L 151 105 105	

CRITICAL LANE VOLUMES (ILV/hr):

Phase 1	Phase 2	Phase 3	Phase 4
149	254	105	

TOTAL OPERATING LEVEL (ILV/hr):

Σ
508

Is . . .

☒ < 1200 ILV/hr.

☐ > 1200 but < 1500 ILV/hr.

☐ > 1500 ILV/hr. (CAPACITY)

REMARKS:

APPENDIX G

- Existing + Project Units 1-3 Arterial Synchro Analysis Worksheets
- Existing + Project Units 1-3 Synchro Analysis Worksheets
- Existing + Project Units 1-3 Intersection ILV Analysis

Existing + Project Units 1-3 Arterial Synchro Analysis Worksheets

Arterial Level of Service: EB Otay Mesa Road

Cross Street	Arterial Class	Flow Speed	Running Time	Signal Delay	Travel Time (s)	Dist (mi)	Arterial Speed	Arterial LOS
Heritage Road	II	45	28.4	60.8	89.2	0.27	11.0	F
Cactus Rd	II	45	44.7	34.3	79.0	0.51	23.1	C
Brittania Blvd	II	45	45.5	40.8	86.3	0.52	21.6	D
La Media	II	45	83.0	10.8	93.8	1.04	39.8	A
Piper Ranch Rd	II	45	44.3	17.4	61.7	0.50	29.4	B
	II	45	25.6	14.6	40.2	0.25	22.0	C
SR125 NB Ramp	II	45	14.8	2.4	17.2	0.14	28.3	B
SR905	II	45	15.0	109.5	124.5	0.14	4.0	F
Sanyo Ave	II	45	27.8	9.5	37.3	0.27	25.8	C
Enrico Fermi Dr	II	45	62.8	395.5	458.3	0.78	6.2	F
Total	II		391.9	695.6	1087.5	4.41	14.6	E

Arterial Level of Service: WB Otay Mesa Road

Cross Street	Arterial Class	Flow Speed	Running Time	Signal Delay	Travel Time (s)	Dist (mi)	Arterial Speed	Arterial LOS
Enrico Fermi Dr	II	45	43.2	3.7	46.9	0.49	37.7	A
Sanyo Ave	II	45	62.8	2.7	65.5	0.78	43.1	A
SR905	II	45	27.8	9.9	37.7	0.27	25.5	C
SR125 NB Ramp	II	45	15.0	14.9	29.9	0.14	16.6	E
SR125 SB	II	45	14.8	9.7	24.5	0.14	19.9	D
Piper Ranch Rd	II	45	25.6	4.8	30.4	0.25	29.1	B
La Media	II	45	44.3	11.9	56.2	0.50	32.3	B
Brittania Blvd	II	45	83.0	3.2	86.2	1.04	43.4	A
Cactus Rd	II	45	45.5	2.2	47.7	0.52	39.0	A
Heritage Road	II	45	44.7	13.7	58.4	0.51	31.3	B
Total	II		406.7	76.7	483.4	4.63	34.5	B

Arterial Level of Service: EB Otay Mesa Road

Cross Street	Arterial Class	Flow Speed	Running Time	Signal Delay	Travel Time (s)	Dist (mi)	Arterial Speed	Arterial LOS
Heritage Road	II	45	28.4	19.8	48.2	0.27	20.4	D
Cactus Rd	II	45	44.7	14.7	59.4	0.51	30.8	B
Brittania Blvd	II	45	45.5	10.4	55.9	0.52	33.3	B
La Media	II	45	83.0	27.0	110.0	1.04	34.0	B
Piper Ranch Rd	II	45	43.8	5.1	48.9	0.50	36.7	A
	II	45	26.2	2.1	28.3	0.25	32.0	B
SR125 NB Ramp	II	45	14.7	0.2	14.9	0.14	32.7	B
SR905	II	45	15.0	12.3	27.3	0.14	18.2	D
Sanyo Ave	II	45	27.8	1.6	29.4	0.27	32.7	B
Enrico Fermi Rd	II	45	62.8	16.1	78.9	0.78	35.8	A
Total	II		391.9	109.3	501.2	4.41	31.7	B

Arterial Level of Service: WB Otay Mesa Road

Cross Street	Arterial Class	Flow Speed	Running Time	Signal Delay	Travel Time (s)	Dist (mi)	Arterial Speed	Arterial LOS
Enrico Fermi Rd	II	45	43.2	195.3	238.5	0.49	7.4	F
Sanyo Ave	II	45	62.8	312.5	375.3	0.78	7.5	F
SR905	II	45	27.8	185.2	213.0	0.27	4.5	F
SR125 NB Ramp	II	45	15.0	9.4	24.4	0.14	20.3	D
SR125 SB	II	45	14.7	2.0	16.7	0.14	29.2	B
Piper Ranch Rd	II	45	26.2	3.1	29.3	0.25	30.9	B
La Media	II	45	43.8	36.1	79.9	0.50	22.4	C
Brittania Blvd	II	45	83.0	23.2	106.2	1.04	35.2	A
Cactus Rd	II	45	45.5	8.5	54.0	0.52	34.5	B
Heritage Road	II	45	44.7	45.0	89.7	0.51	20.4	D
Total	II		406.7	820.3	1227.0	4.63	13.6	E

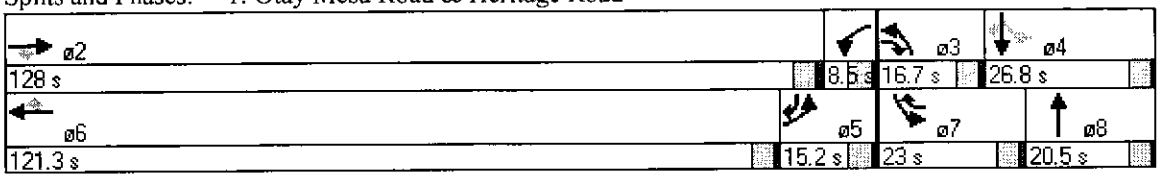
Existing + Project Units 1-3 Synchro Analysis Worksheets

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Total Lost Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	0.97	0.91	1.00	0.97	0.91	1.00	1.00	1.00	1.00	1.00	1.00	0.88
Frt			0.850			0.850		0.885				0.850
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	3433	4803	1583	3433	4803	1583	1770	1649	0	1770	1863	2787
Flt Permitted	0.950			0.950			0.950			0.341		
Satd. Flow (perm)	3433	4803	1583	3433	4803	1583	1770	1649	0	635	1863	2787
Satd. Flow (RTOR)			149			84		41				58
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Volume (vph)	105	3260	194	43	1187	75	54	22	73	250	37	52
Adj. Flow (vph)	118	3663	218	48	1334	84	61	25	82	281	42	58
Lane Group Flow (vph)	118	3663	218	48	1334	84	61	107	0	281	42	58
Turn Type	Prot		pm+ov	Prot		pm+ov	Prot			pm+pt		pm+ov
Protected Phases	5	2	3	1	6	7	3	8		7	4	5
Permitted Phases			2			6				4		4
Total Split (s)	15.2	128.0	16.7	8.5	121.3	23.0	16.7	20.5	0.0	23.0	26.8	15.2
Act Effct Green (s)	10.7	129.2	141.0	4.5	121.3	140.8	11.0	12.5		36.0	21.0	31.7
Actuated g/C Ratio	0.06	0.72	0.78	0.02	0.67	0.78	0.06	0.07		0.20	0.12	0.18
v/c Ratio	0.58	1.06	0.17	0.56	0.41	0.07	0.56	0.70		1.12	0.19	0.11
Control Delay	93.8	60.8	1.3	106.8	13.7	0.6	101.4	73.1		153.5	73.9	10.1
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0
Total Delay	93.8	60.8	1.3	106.8	13.7	0.6	101.4	73.1		153.5	73.9	10.1
LOS	F	E	A	F	B	A	F	E		F	E	B
Approach Delay		58.6			16.0			83.4			122.9	
Approach LOS		E			B			F			F	

Intersection Summary

Cycle Length: 180
Actuated Cycle Length: 180
Offset: 0 (0%), Referenced to phase 2:EBT and 6:WBT, Start of Green, Master Intersection
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 1.12
Intersection Signal Delay: 53.0 — Intersection LOS: D
Intersection Capacity Utilization 90.2% — ICU Level of Service E
Analysis Period (min) 15

Splits and Phases: 1: Otay Mesa Road & Heritage Road

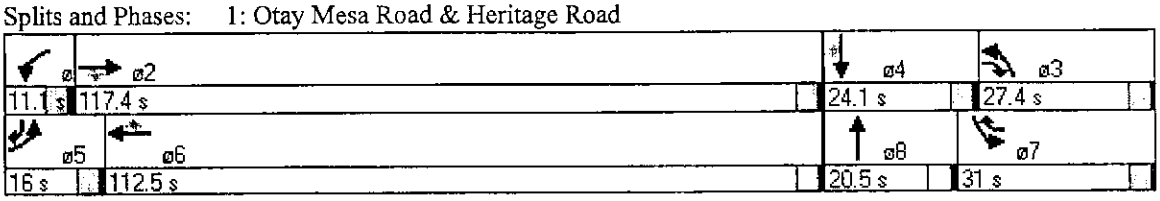


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Total Lost Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	0.97	0.91	1.00	0.97	0.91	1.00	1.00	1.00	1.00	1.00	1.00	0.88
Frt			0.850			0.850		0.917				0.850
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	3433	4803	1583	3433	4803	1583	1770	1708	0	1770	1863	2787
Flt Permitted	0.950			0.950			0.950			0.950		
Satd. Flow (perm)	3433	4803	1583	3433	4803	1583	1770	1708	0	1770	1863	2787
Satd. Flow (RTOR)			157			204		28				87
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Volume (vph)	189	1772	152	61	2786	234	133	58	73	224	65	220
Adj. Flow (vph)	195	1827	157	63	2872	241	137	60	75	231	67	227
Lane Group Flow (vph)	195	1827	157	63	2872	241	137	135	0	231	67	227
Turn Type	Prot		pm+ov	Prot		pm+ov	Prot			Prot		pm+ov
Protected Phases	5	2	3	1	6	7	3	8		7	4	5
Permitted Phases			2			6						4
Total Split (s)	16.0	117.4	27.4	11.1	112.5	31.0	27.4	20.5	0.0	31.0	24.1	16.0
Act Effct Green (s)	12.0	113.6	142.0	7.0	108.6	134.3	28.4	14.8		25.7	12.2	24.2
Actuated g/C Ratio	0.07	0.64	0.80	0.04	0.61	0.76	0.16	0.08		0.15	0.07	0.14
v/c Ratio	0.84	0.59	0.12	0.46	0.98	0.19	0.48	0.80		0.90	0.52	0.50
Control Delay	109.8	19.8	0.5	95.5	45.0	0.9	74.6	94.5		108.7	94.3	31.2
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0
Total Delay	109.8	19.8	0.5	95.5	45.0	0.9	74.6	94.5		108.7	94.3	31.2
LOS	F	B	A	F	D	A	E	F		F	F	C
Approach Delay		26.5			42.6			84.5			73.3	
Approach LOS		C			D			F			E	

Intersection Summary

Cycle Length: 180
Actuated Cycle Length: 177.2
Control Type: Actuated-Uncoordinated
Maximum v/c Ratio: 0.98
Intersection Signal Delay: 41.4
Intersection LOS: D
Intersection Capacity Utilization 92.5%
ICU Level of Service F
Analysis Period (min) 15

Splits and Phases: 1: Otay Mesa Road & Heritage Road

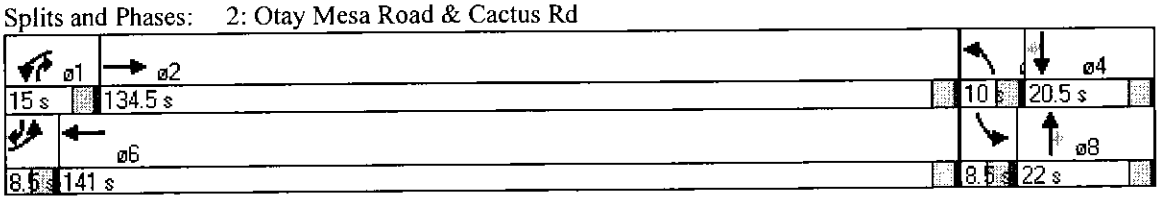


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Total Lost Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	1.00	0.91	0.91	1.00	0.91	0.91	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.998							0.850			0.850
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1770	4797	0	1770	4804	0	1770	1863	1583	1770	1863	1583
Flt Permitted	0.950			0.950			0.950			0.950		
Satd. Flow (perm)	1770	4797	0	1770	4804	0	1770	1863	1583	1770	1863	1583
Satd. Flow (RTOR)		3			1				28			86
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Volume (vph)	8	3782	58	57	1388	5	22	1	115	3	0	5
Adj. Flow (vph)	9	4156	64	63	1525	5	24	1	126	3	0	5
Lane Group Flow (vph)	9	4220	0	63	1530	0	24	1	126	3	0	5
Turn Type	Prot			Prot			Prot		pm+ov	Prot		pm+ov
Protected Phases	5	2		1	6		3	8	1	7	4	5
Permitted Phases									8			4
Total Split (s)	8.5	134.5	0.0	15.0	141.0	0.0	10.0	22.0	15.0	8.5	20.5	8.5
Act Effct Green (s)	7.0	150.3		13.9	164.9		7.9	6.2	20.0	4.5		7.0
Actuated g/C Ratio	0.04	0.84		0.08	0.92		0.04	0.03	0.11	0.02		0.04
v/c Ratio	0.13	1.05		0.46	0.35		0.31	0.02	0.63	0.07		0.03
Control Delay	81.5	34.3		89.8	2.2		92.4	84.0	71.4	89.0		0.4
Queue Delay	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0		0.0
Total Delay	81.5	34.3		89.8	2.2		92.4	84.0	71.4	89.0		0.4
LOS	F	C		F	A		F	F	E	F		A
Approach Delay		34.4			5.7			74.8				
Approach LOS		C			A			E				

Intersection Summary

Cycle Length: 180
Actuated Cycle Length: 180
Offset: 34 (19%), Referenced to phase 2:EBT and 6:WBT, Start of Green
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 1.05
Intersection Signal Delay: 27.8 — Intersection LOS: C
Intersection Capacity Utilization 94.8% — ICU Level of Service F
Analysis Period (min) 15

Splits and Phases: 2: Otay Mesa Road & Cactus Rd

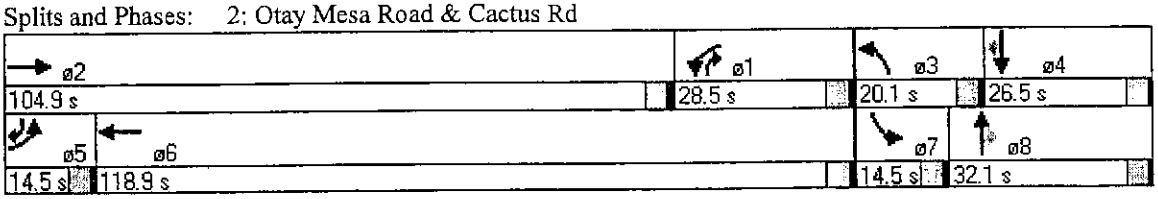


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Total Lost Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	1.00	0.91	0.91	1.00	0.91	0.91	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.996			0.999				0.850			0.850
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1770	4790	0	1770	4799	0	1770	1863	1583	1770	1863	1583
Flt Permitted	0.950			0.950			0.950			0.950		
Satd. Flow (perm)	1770	4790	0	1770	4799	0	1770	1863	1583	1770	1863	1583
Satd. Flow (RTOR)		3			1				97			54
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Volume (vph)	6	2315	58	115	3436	16	43	1	119	4	0	15
Adj. Flow (vph)	6	2362	59	117	3506	16	44	1	121	4	0	15
Lane Group Flow (vph)	6	2421	0	117	3522	0	44	1	121	4	0	15
Turn Type	Prot			Prot			Prot		pm+ov	Prot		pm+ov
Protected Phases	5	2		1	6		3	8	1	7	4	5
Permitted Phases									8			4
Total Split (s)	14.5	104.9	0.0	28.5	118.9	0.0	20.1	32.1	28.5	14.5	26.5	14.5
Act Effct Green (s)	6.7	131.8		27.2	157.1		11.1	8.7	37.1	6.5		6.7
Actuated g/C Ratio	0.04	0.73		0.15	0.87		0.06	0.05	0.21	0.04		0.04
v/c Ratio	0.09	0.69		0.44	0.84		0.40	0.01	0.30	0.06		0.14
Control Delay	86.2	14.7		68.5	8.5		90.7	82.0	16.4	85.5		2.5
Queue Delay	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0		0.0
Total Delay	86.2	14.7		68.5	8.5		90.7	82.0	16.4	85.5		2.5
LOS	F	B		E	A		F	F	B	F		A
Approach Delay		14.9			10.5			36.5				
Approach LOS		B			B			D				

Intersection Summary

Cycle Length: 180
Actuated Cycle Length: 180
Offset: 139 (77%), Referenced to phase 2:EBT and 6:WBT, Start of Green
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 0.84
Intersection Signal Delay: 12.9 — Intersection LOS: B
Intersection Capacity Utilization 89.1% — ICU Level of Service E
Analysis Period (min) 15

Splits and Phases: 2: Otay Mesa Road & Cactus Rd

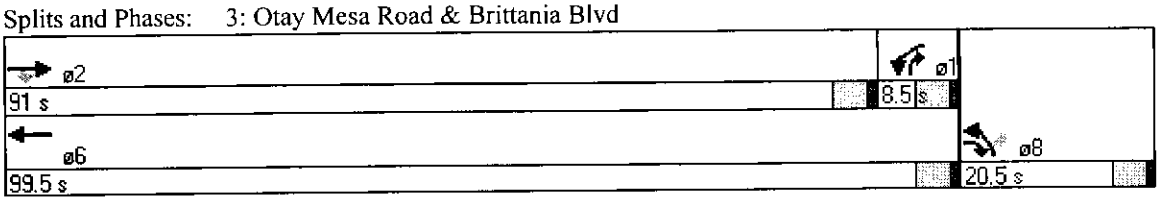


Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↑↑↑	↱	↰	↑↑↑	↰↰	↱
Total Lost Time (s)	4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	0.91	1.00	1.00	0.91	0.97	1.00
Frt		0.850				0.850
Flt Protected			0.950		0.950	
Satd. Flow (prot)	4803	1583	1770	4803	3433	1583
Flt Permitted			0.950		0.950	
Satd. Flow (perm)	4803	1583	1770	4803	3433	1583
Satd. Flow (RTOR)		151				1
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Volume (vph)	3081	669	48	1281	176	48
Adj. Flow (vph)	3625	787	56	1507	207	56
Lane Group Flow (vph)	3625	787	56	1507	207	56
Turn Type		pm+ov	Prot			pm+ov
Protected Phases	2	8	1	6	8	1
Permitted Phases		2				8
Total Split (s)	91.0	20.5	8.5	99.5	20.5	8.5
Act Effct Green (s)	87.9	107.5	4.5	96.4	15.6	24.1
Actuated g/C Ratio	0.73	0.90	0.04	0.80	0.13	0.20
v/c Ratio	1.03	0.55	0.85	0.39	0.46	0.18
Control Delay	40.8	2.5	120.0	3.2	51.8	40.1
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	40.8	2.5	120.0	3.2	51.8	40.1
LOS	D	A	F	A	D	D
Approach Delay	34.0			7.4	49.3	
Approach LOS	C			A	D	

Intersection Summary

Cycle Length: 120
Actuated Cycle Length: 120
Offset: 100 (83%), Referenced to phase 2:EBT and 6:WBT, Start of Green
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 1.03
Intersection Signal Delay: 28.0 — Intersection LOS: C
Intersection Capacity Utilization 71.2% — ICU Level of Service C
Analysis Period (min) 15

Splits and Phases: 3: Otay Mesa Road & Brittania Blvd

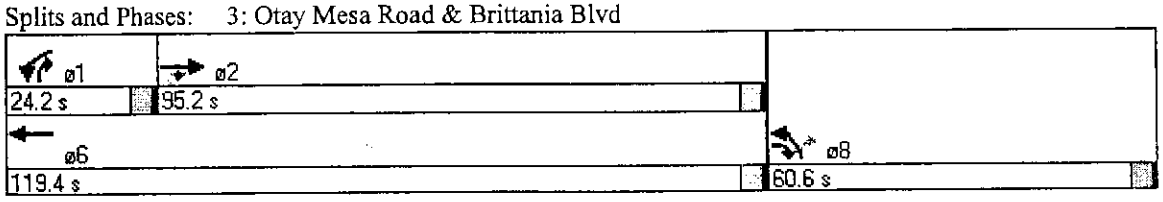


Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↑↑↑	↱	↰	↑↑↑	↰↰	↱
Total Lost Time (s)	4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	0.91	1.00	1.00	0.91	0.97	1.00
Frt		0.850				0.850
Flt Protected			0.950		0.950	
Satd. Flow (prot)	4803	1583	1770	4803	3433	1583
Flt Permitted			0.950		0.950	
Satd. Flow (perm)	4803	1583	1770	4803	3433	1583
Satd. Flow (RTOR)		309				3
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Volume (vph)	1997	287	59	2948	587	49
Adj. Flow (vph)	2147	309	63	3170	631	53
Lane Group Flow (vph)	2147	309	63	3170	631	53
Turn Type		pm+ov	Prot			pm+ov
Protected Phases	2	8	1	6	8	1
Permitted Phases		2				8
Total Split (s)	95.2	60.6	24.2	119.4	60.6	24.2
Act Effct Green (s)	116.8	159.9	12.1	132.9	39.1	55.2
Actuated g/C Ratio	0.65	0.89	0.07	0.74	0.22	0.31
v/c Ratio	0.69	0.21	0.53	0.89	0.85	0.11
Control Delay	10.4	0.8	96.3	23.2	78.8	40.2
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	10.4	0.8	96.3	23.2	78.8	40.2
LOS	B	A	F	C	E	D
Approach Delay	9.2			24.7	75.8	
Approach LOS	A			C	E	

Intersection Summary

Cycle Length: 180
Actuated Cycle Length: 180
Offset: 170 (94%), Referenced to phase 2:EBT and 6:WBT, Start of Green
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 0.89
Intersection Signal Delay: 24.2 — Intersection LOS: C
Intersection Capacity Utilization 80.4% — ICU Level of Service D
Analysis Period (min) 15

Splits and Phases: 3: Otay Mesa Road & Brittania Blvd

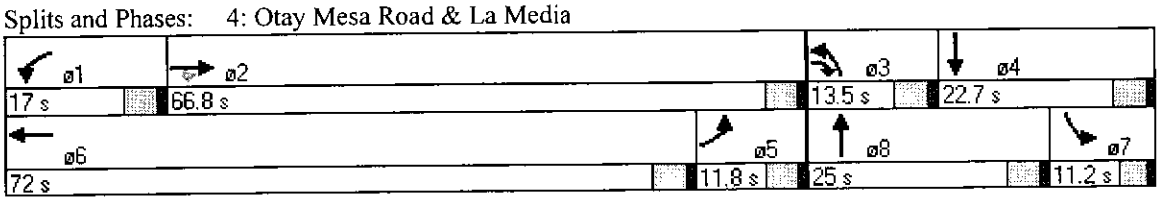


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Total Lost Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	1.00	0.91	1.00	1.00	0.91	0.91	1.00	1.00	1.00	0.97	1.00	1.00
Frt			0.850		0.995			0.939			0.913	
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1770	4803	1583	1770	4788	0	1770	1690	0	3433	1659	0
Flt Permitted	0.950			0.950			0.950			0.950		
Satd. Flow (perm)	1770	4803	1583	1770	4788	0	1770	1690	0	3433	1659	0
Satd. Flow (RTOR)			230		7			17			48	
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Volume (vph)	71	2504	233	87	1223	45	75	24	16	76	52	71
Adj. Flow (vph)	75	2636	245	92	1287	47	79	25	17	80	55	75
Lane Group Flow (vph)	75	2636	245	92	1334	0	79	42	0	80	130	0
Turn Type	Prot		pm+ov	Prot			Prot			Prot		
Protected Phases	5	2	3	1	6		3	8		7	4	
Permitted Phases			2									
Total Split (s)	11.8	66.8	13.5	17.0	72.0	0.0	13.5	25.0	0.0	11.2	22.7	0.0
Act Effct Green (s)	7.7	71.6	84.6	11.6	77.7		9.0	10.1		12.7	11.8	
Actuated g/C Ratio	0.06	0.60	0.70	0.10	0.65		0.08	0.08		0.11	0.10	
v/c Ratio	0.66	0.92	0.21	0.54	0.43		0.59	0.27		0.22	0.63	
Control Delay	44.1	10.8	1.0	62.9	11.9		72.1	39.9		49.2	45.3	
Queue Delay	0.0	0.0	0.0	0.0	0.0		0.0	0.0		0.0	0.0	
Total Delay	44.1	10.8	1.0	62.9	11.9		72.1	39.9		49.2	45.3	
LOS	D	B	A	E	B		E	D		D	D	
Approach Delay		10.8			15.2			60.9			46.8	
Approach LOS		B			B			E			D	

Intersection Summary

Cycle Length: 120
Actuated Cycle Length: 120
Offset: 87 (73%), Referenced to phase 2:EBT and 6:WBT, Start of Green
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 0.92
Intersection Signal Delay: 15.0 — Intersection LOS: B
Intersection Capacity Utilization 77.8% — ICU Level of Service D
Analysis Period (min) 15

Splits and Phases: 4: Otay Mesa Road & La Media

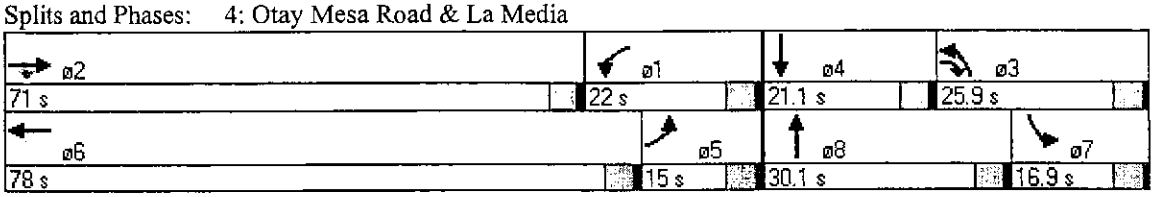


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Total Lost Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	1.00	0.91	1.00	1.00	0.91	0.91	1.00	1.00	1.00	0.97	1.00	1.00
Frt			0.850		0.997			0.922			0.903	
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1770	4803	1583	1770	4793	0	1770	1670	0	3433	1648	0
Flt Permitted	0.950			0.950			0.950			0.950		
Satd. Flow (perm)	1770	4803	1583	1770	4793	0	1770	1670	0	3433	1648	0
Satd. Flow (RTOR)			249		3			25			54	
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Volume (vph)	70	1775	239	55	2530	46	158	22	24	69	63	116
Adj. Flow (vph)	73	1849	249	57	2635	48	165	23	25	72	66	121
Lane Group Flow (vph)	73	1849	249	57	2683	0	165	48	0	72	187	0
Turn Type	Prot		pm+ov	Prot			Prot			Prot		
Protected Phases	5	2	3	1	6		3	8		7	4	
Permitted Phases			2									
Total Split (s)	15.0	71.0	25.9	22.0	78.0	0.0	25.9	30.1	0.0	16.9	21.1	0.0
Act Effct Green (s)	9.9	77.5	99.4	15.4	83.1		17.9	12.1		23.1	15.2	
Actuated g/C Ratio	0.07	0.55	0.71	0.11	0.59		0.13	0.09		0.16	0.11	
v/c Ratio	0.58	0.70	0.21	0.29	0.94		0.73	0.29		0.13	0.82	
Control Delay	81.2	27.0	1.4	59.7	36.1		76.8	39.8		47.7	70.1	
Queue Delay	0.0	0.0	0.0	0.0	0.0		0.0	0.0		0.0	0.0	
Total Delay	81.2	27.0	1.4	59.7	36.1		76.8	39.8		47.7	70.1	
LOS	F	C	A	E	D		E	D		D	E	
Approach Delay		25.9			36.6			68.5			63.9	
Approach LOS		C			D			E			E	

Intersection Summary

Cycle Length: 140
Actuated Cycle Length: 140
Offset: 0 (0%), Referenced to phase 2:EBT and 6:WBT, Start of Green
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 0.94
Intersection Signal Delay: 34.8 — Intersection LOS: C
Intersection Capacity Utilization 86.3% — ICU Level of Service E
Analysis Period (min) 15

Splits and Phases: 4: Otay Mesa Road & La Media

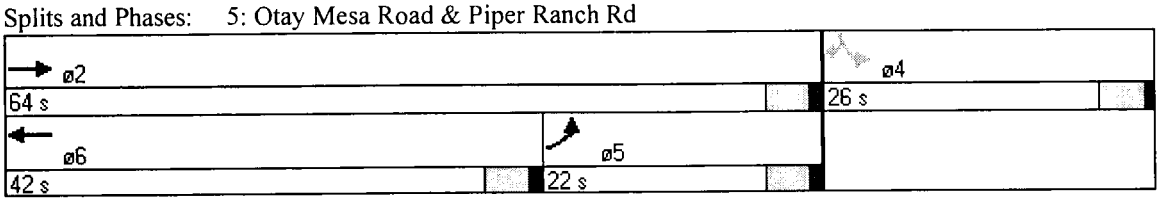


Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Total Lost Time (s)	4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	1.00	0.95	0.91	0.91	0.97	0.91
Frt			0.997			0.850
Flt Protected	0.950				0.950	
Satd. Flow (prot)	1770	3539	5070	0	3433	1441
Flt Permitted	0.950				0.950	
Satd. Flow (perm)	1770	3539	5070	0	3433	1441
Satd. Flow (RTOR)			5			20
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Volume (vph)	106	2531	1338	31	26	18
Adj. Flow (vph)	119	2844	1503	35	29	20
Lane Group Flow (vph)	119	2844	1538	0	29	20
Turn Type	Prot					custom
Protected Phases	5	2	6			
Permitted Phases					4	4
Total Split (s)	22.0	64.0	42.0	0.0	26.0	26.0
Act Effct Green (s)	15.8	75.2	57.6		6.8	6.8
Actuated g/C Ratio	0.18	0.84	0.64		0.08	0.08
v/c Ratio	0.38	0.96	0.47		0.11	0.16
Control Delay	35.5	17.4	4.8		39.4	19.6
Queue Delay	0.0	0.0	0.0		0.0	0.0
Total Delay	35.5	17.4	4.8		39.4	19.6
LOS	D	B	A		D	B
Approach Delay		18.1	4.8		31.3	
Approach LOS		B	A		C	

Intersection Summary

Cycle Length: 90
Actuated Cycle Length: 90
Offset: 9 (10%), Referenced to phase 2:EBT and 6:WBT, Start of Green
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 0.96
Intersection Signal Delay: 13.7 Intersection LOS: B
Intersection Capacity Utilization 80.0% ICU Level of Service D
Analysis Period (min) 15

Splits and Phases: 5: Otay Mesa Road & Piper Ranch Rd

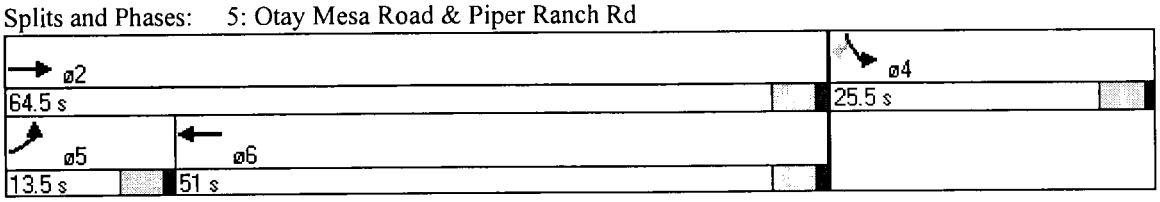


Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Total Lost Time (s)	4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	1.00	0.95	0.91	0.91	0.97	0.91
Frt			0.999		0.929	0.850
Flt Protected	0.950				0.974	
Satd. Flow (prot)	1770	3539	5080	0	3270	1441
Flt Permitted	0.950				0.974	
Satd. Flow (perm)	1770	3539	5080	0	3270	1441
Satd. Flow (RTOR)			2		51	51
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Volume (vph)	17	1915	2535	24	52	94
Adj. Flow (vph)	18	2082	2755	26	57	102
Lane Group Flow (vph)	18	2082	2781	0	108	51
Turn Type	Prot					Perm
Protected Phases	5	2	6		4	
Permitted Phases						4
Total Split (s)	13.5	64.5	51.0	0.0	25.5	25.5
Act Effct Green (s)	6.9	74.5	69.7		7.5	7.5
Actuated g/C Ratio	0.08	0.83	0.77		0.08	0.08
v/c Ratio	0.13	0.71	0.71		0.34	0.31
Control Delay	40.4	5.1	3.1		24.8	16.4
Queue Delay	0.0	0.0	0.0		0.0	0.0
Total Delay	40.4	5.1	3.1		24.8	16.4
LOS	D	A	A		C	B
Approach Delay		5.4	3.1		22.1	
Approach LOS		A	A		C	

Intersection Summary

Cycle Length: 90
Actuated Cycle Length: 90
Offset: 0 (0%), Referenced to phase 2:EBT and 6:WBT, Start of Green
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 0.71
Intersection Signal Delay: 4.6 — Intersection LOS: A
Intersection Capacity Utilization 62.9% — ICU Level of Service B
Analysis Period (min) 15

Splits and Phases: 5: Otay Mesa Road & Piper Ranch Rd

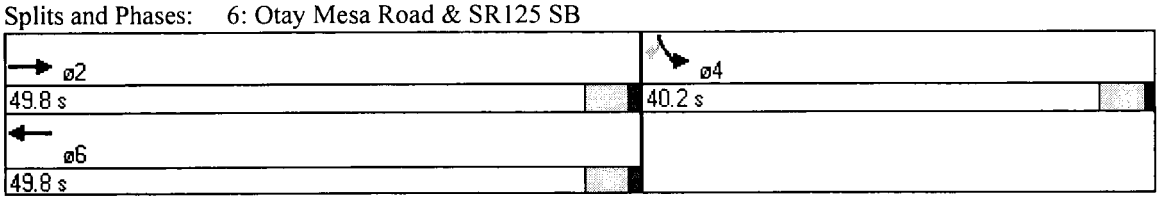


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Total Lost Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	1.00	0.86	0.86	1.00	0.91	1.00	1.00	1.00	1.00	0.97	1.00	1.00
Frt		0.994	0.850									0.850
Flt Protected										0.950		
Satd. Flow (prot)	0	4777	1362	0	5085	0	0	0	0	3433	0	1583
Flt Permitted										0.950		
Satd. Flow (perm)	0	4777	1362	0	5085	0	0	0	0	3433	0	1583
Satd. Flow (RTOR)		10	708									30
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Volume (vph)	0	1491	931	0	1165	0	0	0	0	740	0	145
Adj. Flow (vph)	0	1734	1083	0	1355	0	0	0	0	860	0	169
Lane Group Flow (vph)	0	1811	1006	0	1355	0	0	0	0	860	0	169
Turn Type			Free							Prot		custom
Protected Phases		2			6					4		
Permitted Phases			Free									4
Total Split (s)	0.0	49.8	0.0	0.0	49.8	0.0	0.0	0.0	0.0	40.2	0.0	40.2
Act Effct Green (s)		53.1	90.0		53.1					28.9		28.9
Actuated g/C Ratio		0.59	1.00		0.59					0.32		0.32
v/c Ratio		0.64	0.74		0.45					0.78		0.32
Control Delay		14.6	2.3		9.7					32.5		19.2
Queue Delay		0.0	0.0		0.0					0.0		0.0
Total Delay		14.6	2.3		9.7					32.5		19.2
LOS		B	A		A					C		B
Approach Delay		10.2			9.7							
Approach LOS		B			A							

Intersection Summary

Cycle Length: 90
Actuated Cycle Length: 90
Offset: 2 (2%), Referenced to phase 2:EBT and 6:WBT, Start of Green
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 0.78
Intersection Signal Delay: 14.0 Intersection LOS: B
Intersection Capacity Utilization 64.2% ICU Level of Service C
Analysis Period (min) 15

Splits and Phases: 6: Otay Mesa Road & SR125 SB

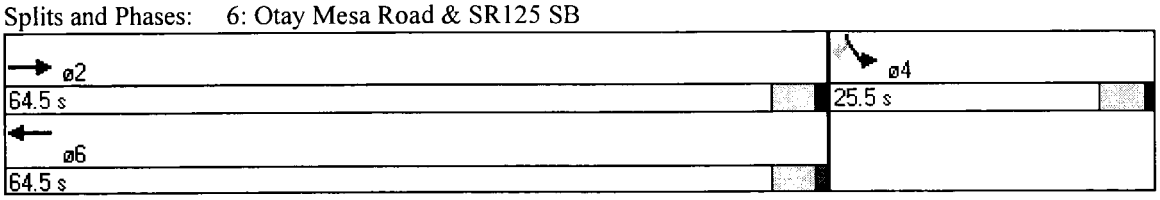


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Total Lost Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	1.00	0.86	0.86	1.00	0.91	1.00	1.00	1.00	1.00	0.97	1.00	1.00
Frt		0.925	0.850									0.850
Flt Protected										0.950		
Satd. Flow (prot)	0	4445	1362	0	5085	0	0	0	0	3433	0	1583
Flt Permitted										0.950		
Satd. Flow (perm)	0	4445	1362	0	5085	0	0	0	0	3433	0	1583
Satd. Flow (RTOR)		612	663									3
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Volume (vph)	0	607	1219	0	2577	0	0	0	0	246	0	40
Adj. Flow (vph)	0	660	1325	0	2801	0	0	0	0	267	0	43
Lane Group Flow (vph)	0	1322	663	0	2801	0	0	0	0	267	0	43
Turn Type			Free							Prot		custom
Protected Phases		2			6					4		
Permitted Phases			Free									4
Total Split (s)	0.0	64.5	0.0	0.0	64.5	0.0	0.0	0.0	0.0	25.5	0.0	25.5
Act Effct Green (s)		69.6	90.0		69.6					12.4		12.4
Actuated g/C Ratio		0.77	1.00		0.77					0.14		0.14
v/c Ratio		0.37	0.49		0.71					0.56		0.19
Control Delay		2.1	0.9		2.0					40.7		33.6
Queue Delay		0.0	0.0		0.2					0.0		0.0
Total Delay		2.1	0.9		2.2					40.7		33.6
LOS		A	A		A					D		C
Approach Delay		1.7			2.2							
Approach LOS		A			A							

Intersection Summary

Cycle Length: 90
Actuated Cycle Length: 90
Offset: 56 (62%), Referenced to phase 2:EBT and 6:WBT, Start of Green
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 0.71
Intersection Signal Delay: 4.3 Intersection LOS: A
Intersection Capacity Utilization 79.1% ICU Level of Service D
Analysis Period (min) 15

Splits and Phases: 6: Otay Mesa Road & SR125 SB

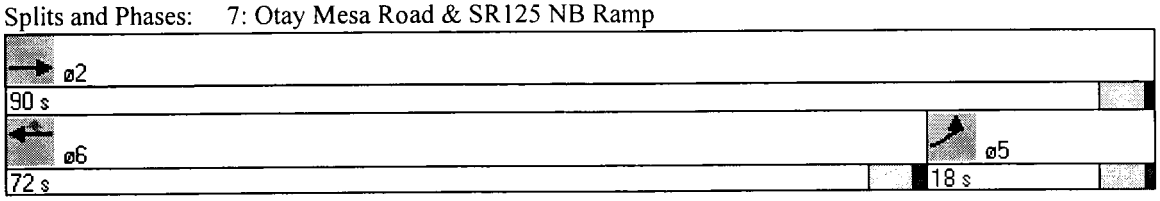


Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Total Lost Time (s)	4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	0.97	0.95	0.95	0.88	1.00	1.00
Frt				0.850		
Flt Protected	0.950					
Satd. Flow (prot)	3433	3539	3539	2787	0	0
Flt Permitted	0.950					
Satd. Flow (perm)	3433	3539	3539	2787	0	0
Satd. Flow (RTOR)				191		
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Volume (vph)	29	2202	1119	166	0	0
Adj. Flow (vph)	33	2531	1286	191	0	0
Lane Group Flow (vph)	33	2531	1286	191	0	0
Turn Type	Prot			Perm		
Protected Phases	5	2	6			
Permitted Phases				6		
Total Split (s)	18.0	90.0	72.0	72.0	0.0	0.0
Act Effct Green (s)	21.8	90.0	65.8	65.8		
Actuated g/C Ratio	0.24	1.00	0.73	0.73		
v/c Ratio	0.04	0.72	0.50	0.09		
Control Delay	18.0	2.4	15.0	4.9		
Queue Delay	0.0	0.0	0.0	0.0		
Total Delay	18.0	2.4	15.0	4.9		
LOS	B	A	B	A		
Approach Delay		2.6	13.7			
Approach LOS		A	B			

Intersection Summary

Cycle Length: 90
Actuated Cycle Length: 90
Offset: 62 (69%), Referenced to phase 2:EBT and 6:WBT, Start of Green
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 0.72
Intersection Signal Delay: 6.6 — Intersection LOS: A
Intersection Capacity Utilization 64.2% — ICU Level of Service C
Analysis Period (min) 15

Splits and Phases: 7: Otay Mesa Road & SR125 NB Ramp

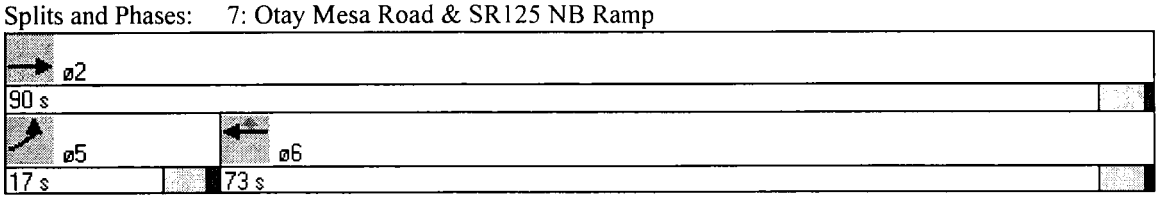


Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Total Lost Time (s)	4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	0.97	0.95	0.95	0.88	1.00	1.00
Frt				0.850		
Flt Protected	0.950					
Satd. Flow (prot)	3433	3539	3539	2787	0	0
Flt Permitted	0.950					
Satd. Flow (perm)	3433	3539	3539	2787	0	0
Satd. Flow (RTOR)				633		
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Volume (vph)	113	740	2498	705	0	0
Adj. Flow (vph)	124	813	2745	775	0	0
Lane Group Flow (vph)	124	813	2745	775	0	0
Turn Type	Prot			Perm		
Protected Phases	5	2	6			
Permitted Phases				6		
Total Split (s)	17.0	90.0	73.0	73.0	0.0	0.0
Act Effct Green (s)	9.0	90.0	73.0	73.0		
Actuated g/C Ratio	0.10	1.00	0.81	0.81		
v/c Ratio	0.36	0.23	0.96	0.33		
Control Delay	45.3	0.2	9.4	0.2		
Queue Delay	0.0	0.0	13.7	0.0		
Total Delay	45.3	0.2	23.1	0.2		
LOS	D	A	C	A		
Approach Delay		6.1	18.0			
Approach LOS		A	B			

Intersection Summary

Cycle Length: 90
Actuated Cycle Length: 90
Offset: 33 (37%), Referenced to phase 2:EBT and 6:WBT, Start of Green
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 0.96
Intersection Signal Delay: 15.5 Intersection LOS: B
Intersection Capacity Utilization 79.1% ICU Level of Service D
Analysis Period (min) 15

Splits and Phases: 7: Otay Mesa Road & SR125 NB Ramp

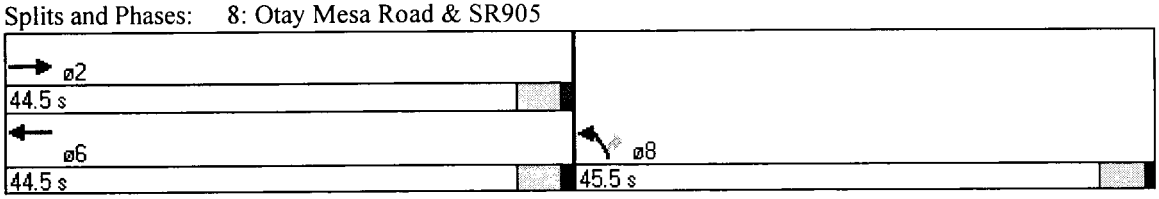


Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Total Lost Time (s)	4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	0.95	1.00	1.00	0.95	0.97	1.00
Frt						0.850
Flt Protected					0.950	
Satd. Flow (prot)	3539	0	0	3539	3433	1583
Flt Permitted					0.950	
Satd. Flow (perm)	3539	0	0	3539	3433	1583
Satd. Flow (RTOR)						
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Volume (vph)	2219	0	0	619	689	15
Adj. Flow (vph)	2580	0	0	720	801	17
Lane Group Flow (vph)	2580	0	0	720	801	17
Turn Type						Perm
Protected Phases	2			6	8	
Permitted Phases						8
Total Split (s)	44.5	0.0	0.0	44.5	45.5	45.5
Act Effct Green (s)	55.3			55.3	26.7	26.7
Actuated g/C Ratio	0.61			0.61	0.30	0.30
v/c Ratio	1.19			0.33	0.79	0.04
Control Delay	107.3			9.8	29.8	13.7
Queue Delay	0.0			0.0	0.0	0.0
Total Delay	107.3			9.8	29.8	13.7
LOS	F			A	C	B
Approach Delay	107.3			9.8	29.5	
Approach LOS	F			A	C	

Intersection Summary

Cycle Length: 90
Actuated Cycle Length: 90
Offset: 58 (64%), Referenced to phase 2:EBT and 6:WBT, Start of Green
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 1.19
Intersection Signal Delay: 74.8 — Intersection LOS: E
Intersection Capacity Utilization 87.7% — ICU Level of Service E
Analysis Period (min) 15

Splits and Phases: 8: Otay Mesa Road & SR905

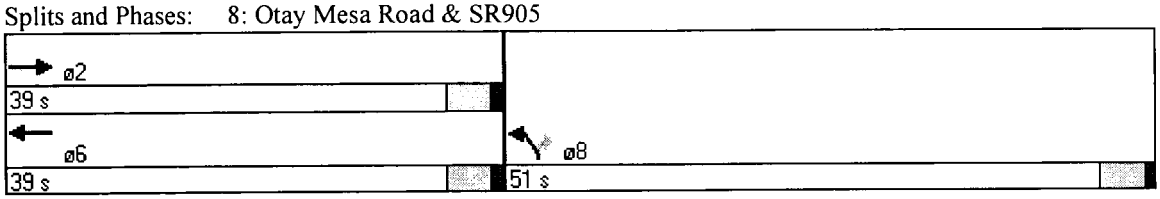


Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↑↑			↑↑	↰↰	↱
Total Lost Time (s)	4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	0.95	1.00	1.00	0.95	0.97	1.00
Frt						0.850
Flt Protected					0.950	
Satd. Flow (prot)	3539	0	0	3539	3433	1583
Flt Permitted					0.950	
Satd. Flow (perm)	3539	0	0	3539	3433	1583
Satd. Flow (RTOR)						9
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Volume (vph)	740	0	0	2072	1168	8
Adj. Flow (vph)	813	0	0	2277	1284	9
Lane Group Flow (vph)	813	0	0	2277	1284	9
Turn Type						Perm
Protected Phases	2			6	8	
Permitted Phases						8
Total Split (s)	39.0	0.0	0.0	39.0	51.0	51.0
Act Effct Green (s)	42.9			42.9	39.1	39.1
Actuated g/C Ratio	0.48			0.48	0.43	0.43
v/c Ratio	0.48			1.35	0.86	0.01
Control Delay	12.3			185.2	29.9	6.1
Queue Delay	0.0			0.0	0.0	0.0
Total Delay	12.3			185.2	29.9	6.1
LOS	B			F	C	A
Approach Delay	12.3			185.2	29.8	
Approach LOS	B			F	C	

Intersection Summary

Cycle Length: 90
Actuated Cycle Length: 90
Offset: 56 (62%), Referenced to phase 2:EBT and 6:WBT, Start of Green
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 1.35
Intersection Signal Delay: 107.3 — Intersection LOS: F
Intersection Capacity Utilization 97.3% — ICU Level of Service F
Analysis Period (min) 15

Splits and Phases: 8: Otay Mesa Road & SR905

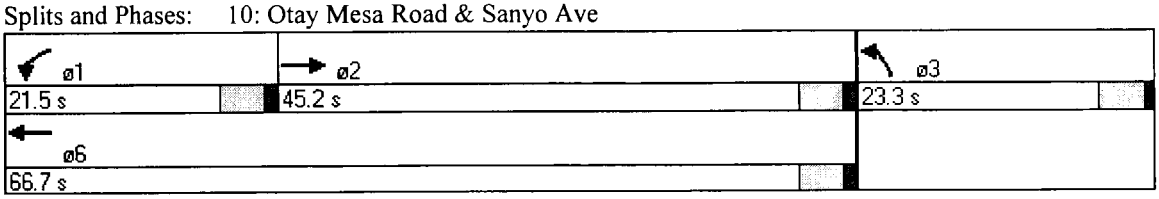


Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Total Lost Time (s)	4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	0.95	0.95	1.00	1.00	0.97	0.95
Frt	0.986				0.965	
Flt Protected			0.950		0.963	
Satd. Flow (prot)	3490	0	1770	1863	3358	0
Flt Permitted			0.950		0.963	
Satd. Flow (perm)	3490	0	1770	1863	3358	0
Satd. Flow (RTOR)	16				12	
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Volume (vph)	1925	200	24	606	32	10
Adj. Flow (vph)	2406	250	30	758	40	12
Lane Group Flow (vph)	2656	0	30	758	52	0
Turn Type			Prot			
Protected Phases	2		1	6	3	
Permitted Phases						
Total Split (s)	45.2	0.0	21.5	66.7	23.3	0.0
Act Effct Green (s)	75.5		7.4	80.7	7.0	
Actuated g/C Ratio	0.84		0.08	0.90	0.08	
v/c Ratio	0.91		0.21	0.45	0.19	
Control Delay	9.5		41.4	2.7	33.1	
Queue Delay	0.0		0.0	0.0	0.0	
Total Delay	9.5		41.4	2.7	33.1	
LOS	A		D	A	C	
Approach Delay	9.5			4.1	33.1	
Approach LOS	A			A	C	

Intersection Summary

Cycle Length: 90
Actuated Cycle Length: 90
Offset: 0 (0%), Referenced to phase 2:EBT and 6:WBT, Start of Green
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 0.91
Intersection Signal Delay: 8.6 — Intersection LOS: A
Intersection Capacity Utilization 69.6% — ICU Level of Service C
Analysis Period (min) 15

Splits and Phases: 10: Otay Mesa Road & Sanyo Ave

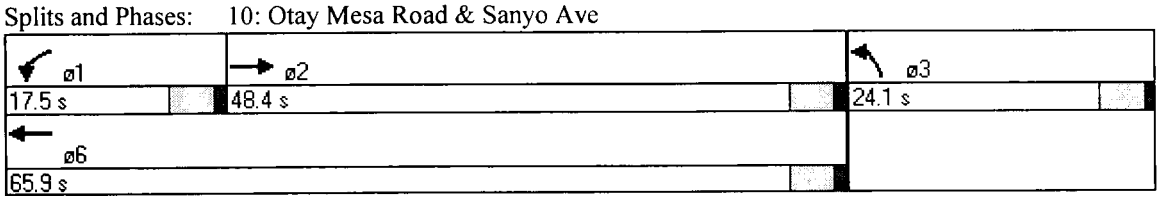


Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Total Lost Time (s)	4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	0.95	0.95	1.00	1.00	0.97	0.95
Frt	0.989				0.996	
Flt Protected			0.950		0.954	
Satd. Flow (prot)	3500	0	1770	1863	3434	0
Flt Permitted			0.950		0.954	
Satd. Flow (perm)	3500	0	1770	1863	3434	0
Satd. Flow (RTOR)	13				3	
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Volume (vph)	692	54	12	1946	185	5
Adj. Flow (vph)	854	67	15	2402	228	6
Lane Group Flow (vph)	921	0	15	2402	234	0
Turn Type			Prot			
Protected Phases	2		1	6	3	
Permitted Phases						
Total Split (s)	48.4	0.0	17.5	65.9	24.1	0.0
Act Effct Green (s)	68.0		6.7	70.4	11.6	
Actuated g/C Ratio	0.76		0.07	0.78	0.13	
v/c Ratio	0.35		0.11	1.65	0.53	
Control Delay	1.6		40.4	312.5	40.2	
Queue Delay	0.0		0.0	0.0	0.0	
Total Delay	1.6		40.4	312.5	40.2	
LOS	A		D	F	D	
Approach Delay	1.6			310.8	40.2	
Approach LOS	A			F	D	

Intersection Summary

Cycle Length: 90
Actuated Cycle Length: 90
Offset: 0 (0%), Referenced to phase 2:EBT and 6:WBT, Start of Green
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 1.65
Intersection Signal Delay: 213.3 — Intersection LOS: F
Intersection Capacity Utilization 114.5% — ICU Level of Service H
Analysis Period (min) 15

Splits and Phases: 10: Otay Mesa Road & Sanyo Ave

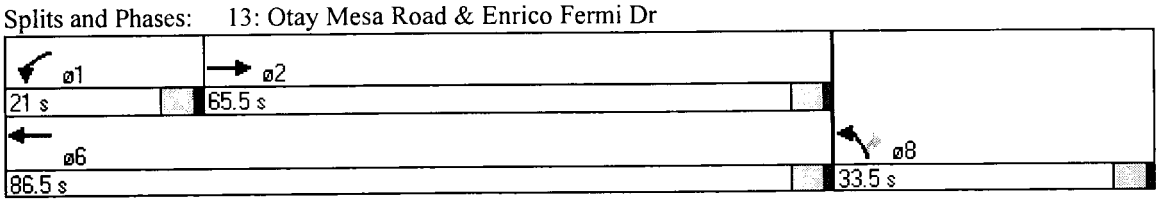


Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Total Lost Time (s)	4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt	0.999					0.850
Flt Protected			0.950		0.950	
Satd. Flow (prot)	1861	0	1770	1863	1770	1583
Flt Permitted			0.950		0.950	
Satd. Flow (perm)	1861	0	1770	1863	1770	1583
Satd. Flow (RTOR)						234
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Volume (vph)	1969	11	54	493	55	216
Adj. Flow (vph)	2316	13	64	580	65	254
Lane Group Flow (vph)	2329	0	64	580	65	254
Turn Type			Prot			Perm
Protected Phases	2		1	6	8	
Permitted Phases						8
Total Split (s)	65.5	0.0	21.0	86.5	33.5	33.5
Act Effct Green (s)	62.2		9.2	73.0	9.8	9.8
Actuated g/C Ratio	0.68		0.10	0.80	0.11	0.11
v/c Ratio	1.83		0.37	0.39	0.34	0.67
Control Delay	395.5		46.0	3.7	43.6	16.5
Queue Delay	0.0		0.0	0.0	0.0	0.0
Total Delay	395.5		46.0	3.7	43.6	16.5
LOS	F		D	A	D	B
Approach Delay	395.5			7.9	22.0	
Approach LOS	F			A	C	

Intersection Summary

Cycle Length: 120
Actuated Cycle Length: 90.9
Control Type: Actuated-Uncoordinated
Maximum v/c Ratio: 1.83
Intersection Signal Delay: 283.5
Intersection LOS: F
Intersection Capacity Utilization 124.3%
ICU Level of Service H
Analysis Period (min) 15

Splits and Phases: 13: Otay Mesa Road & Enrico Fermi Dr

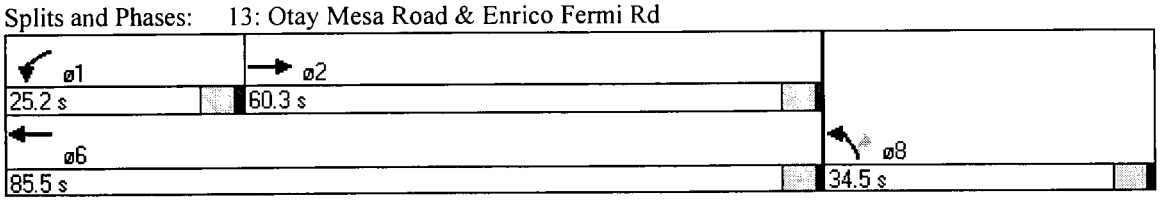


Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Total Lost Time (s)	4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt	0.999					0.850
Flt Protected			0.950		0.950	
Satd. Flow (prot)	1861	0	1770	1863	1770	1583
Flt Permitted			0.950		0.950	
Satd. Flow (perm)	1861	0	1770	1863	1770	1583
Satd. Flow (RTOR)						103
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Volume (vph)	676	4	198	1985	36	95
Adj. Flow (vph)	735	4	215	2158	39	103
Lane Group Flow (vph)	739	0	215	2158	39	103
Turn Type			Prot			Perm
Protected Phases	2		1	6	8	
Permitted Phases						8
Total Split (s)	60.3	0.0	25.2	85.5	34.5	34.5
Act Effct Green (s)	60.7		16.8	81.5	8.2	8.2
Actuated g/C Ratio	0.62		0.17	0.83	0.08	0.08
v/c Ratio	0.64		0.71	1.39	0.26	0.45
Control Delay	16.1		50.9	195.3	46.2	15.4
Queue Delay	0.0		0.0	0.0	0.0	0.0
Total Delay	16.1		50.9	195.3	46.2	15.4
LOS	B		D	F	D	B
Approach Delay	16.1			182.2	23.8	
Approach LOS	B			F	C	

Intersection Summary

Cycle Length: 120
Actuated Cycle Length: 97.7
Control Type: Actuated-Uncoordinated
Maximum v/c Ratio: 1.39
Intersection Signal Delay: 137.6 — Intersection LOS: F
Intersection Capacity Utilization 114.5% — ICU Level of Service H
Analysis Period (min) 15

Splits and Phases: 13: Otay Mesa Road & Enrico Fermi Rd



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Sign Control		Stop			Stop			Stop			Stop	
Volume (vph)	652	752	927	0	211	0	248	1	0	0	4	168
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
Hourly flow rate (vph)	709	817	1008	0	229	0	270	1	0	0	4	183

Direction, Lane #	EB 1	WB 1	NB 1	SB 1
Volume Total (vph)	2534	229	271	187
Volume Left (vph)	709	0	270	0
Volume Right (vph)	1008	0	0	183
Hadj (s)	-0.15	0.03	0.23	-0.55
Departure Headway (s)	5.9	6.8	7.2	6.7
Degree Utilization, x	4.18	0.43	0.54	0.35
Capacity (veh/h)	612	492	479	500
Control Delay (s)	1447.8	14.9	18.2	13.3
Approach Delay (s)	1447.8	14.9	18.2	13.3
Approach LOS	F	B	C	B

Intersection Summary			
Delay	1142.4		
HCM Level of Service	F		
Intersection Capacity Utilization	181.2%	ICU Level of Service	H
Analysis Period (min)	15		

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Sign Control		Stop			Stop			Stop			Stop	
Volume (vph)	101	322	372	0	703	0	879	0	0	0	1	726
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
Hourly flow rate (vph)	116	370	428	0	808	0	1010	0	0	0	1	834

Direction, Lane #	EB 1	WB 1	NB 1	SB 1
Volume Total (vph)	914	808	1010	836
Volume Left (vph)	116	0	1010	0
Volume Right (vph)	428	0	0	834
Hadj (s)	-0.22	0.03	0.23	-0.57
Departure Headway (s)	9.3	9.6	9.8	9.0
Degree Utilization, x	2.37	2.15	2.75	2.09
Capacity (veh/h)	394	382	377	407
Control Delay (s)	645.4	549.4	815.3	518.9
Approach Delay (s)	645.4	549.4	815.3	518.9
Approach LOS	F	F	F	F

Intersection Summary			
Delay	642.1		
HCM Level of Service	F		
Intersection Capacity Utilization	189.3%	ICU Level of Service	H
Analysis Period (min)	15		

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Sign Control		Stop			Stop			Stop			Stop	
Volume (vph)	9	84	60	30	80	49	57	101	3	209	255	46
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
Hourly flow rate (vph)	10	93	67	33	89	54	63	112	3	232	283	51

Direction, Lane #	EB 1	WB 1	NB 1	SB 1	SB 2
Volume Total (vph)	170	177	179	232	334
Volume Left (vph)	10	33	63	232	0
Volume Right (vph)	67	54	3	0	51
Hadj (s)	-0.19	-0.11	0.16	0.53	0.01
Departure Headway (s)	6.0	6.0	6.1	6.4	5.9
Degree Utilization, x	0.28	0.29	0.30	0.41	0.54
Capacity (veh/h)	550	545	543	545	598
Control Delay (s)	11.3	11.5	11.6	12.6	14.4
Approach Delay (s)	11.3	11.5	11.6	13.7	
Approach LOS	B	B	B	B	

Intersection Summary			
Delay	12.6		
HCM Level of Service	B		
Intersection Capacity Utilization	52.9%	ICU Level of Service	A
Analysis Period (min)	15		

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕		↰	↕	
Sign Control		Stop			Stop			Stop			Stop	
Volume (vph)	38	145	83	97	116	119	72	180	8	143	171	23
Peak Hour Factor	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99
Hourly flow rate (vph)	38	146	84	98	117	120	73	182	8	144	173	23

Direction, Lane #	EB 1	WB 1	NB 1	SB 1	SB 2
Volume Total (vph)	269	335	263	144	196
Volume Left (vph)	38	98	73	144	0
Volume Right (vph)	84	120	8	0	23
Hadj (s)	-0.12	-0.12	0.14	0.53	0.04
Departure Headway (s)	6.6	6.4	7.0	7.7	7.1
Degree Utilization, x	0.49	0.60	0.51	0.31	0.39
Capacity (veh/h)	491	515	470	435	457
Control Delay (s)	15.7	18.4	16.9	12.8	13.4
Approach Delay (s)	15.7	18.4	16.9	13.2	
Approach LOS	C	C	C	B	

Intersection Summary			
Delay	16.0		
HCM Level of Service	C		
Intersection Capacity Utilization	68.5%	ICU Level of Service	C
Analysis Period (min)	15		

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Sign Control		Stop			Stop			Stop			Stop	
Volume (vph)	14	81	91	4	111	9	31	15	3	59	121	12
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
Hourly flow rate (vph)	15	87	98	4	119	10	33	16	3	63	130	13

Direction, Lane #	EB 1	WB 1	WB 2	NB 1	NB 2	SB 1	SB 2
Volume Total (vph)	200	124	10	33	19	194	13
Volume Left (vph)	15	4	0	33	0	63	0
Volume Right (vph)	98	0	10	0	3	0	13
Hadj (s)	-0.24	0.05	-0.67	0.53	-0.08	0.20	-0.67
Departure Headway (s)	5.2	5.5	4.8	6.2	5.6	5.7	4.8
Degree Utilization, x	0.29	0.19	0.01	0.06	0.03	0.30	0.02
Capacity (veh/h)	662	618	705	542	597	603	706
Control Delay (s)	10.2	8.6	6.6	8.4	7.5	9.9	6.7
Approach Delay (s)	10.2	8.4		8.1		9.7	
Approach LOS	B	A		A		A	

Intersection Summary			
Delay	9.4		
HCM Level of Service	A		
Intersection Capacity Utilization	40.2%	ICU Level of Service	A
Analysis Period (min)	15		

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Sign Control		Stop			Stop			Stop			Stop	
Volume (vph)	4	60	51	4	237	55	79	126	2	21	26	35
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
Hourly flow rate (vph)	5	69	59	5	272	63	91	145	2	24	30	40

Direction, Lane #	EB 1	WB 1	WB 2	NB 1	NB 2	SB 1	SB 2
Volume Total (vph)	132	277	63	91	147	54	40
Volume Left (vph)	5	5	0	91	0	24	0
Volume Right (vph)	59	0	63	0	2	0	40
Hadj (s)	-0.23	0.04	-0.67	0.53	0.02	0.26	-0.67
Departure Headway (s)	5.7	5.7	5.0	6.5	6.0	6.4	5.5
Degree Utilization, x	0.21	0.44	0.09	0.16	0.24	0.10	0.06
Capacity (veh/h)	594	610	689	525	569	515	597
Control Delay (s)	10.2	11.8	7.2	9.5	9.7	8.9	7.7
Approach Delay (s)	10.2	10.9		9.6		8.4	
Approach LOS	B	B		A		A	

Intersection Summary			
Delay	10.1		
HCM Level of Service	B		
Intersection Capacity Utilization	34.1%	ICU Level of Service	A
Analysis Period (min)	15		

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Sign Control	Free			Free	Stop	
Grade	0%			0%	0%	
Volume (veh/h)	86	46	5	91	33	9
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Hourly flow rate (vph)	96	51	6	101	37	10
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type					None	
Median storage veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume			147		233	121
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol			147		233	121
tC, single (s)			4.1		6.4	6.2
tC, 2 stage (s)						
tF (s)			2.2		3.5	3.3
p0 queue free %			100		95	99
cM capacity (veh/h)			1435		752	930

Direction, Lane #	EB 1	WB 1	NB 1	NB 2
Volume Total	147	107	37	10
Volume Left	0	6	37	0
Volume Right	51	0	0	10
cSH	1700	1435	752	930
Volume to Capacity	0.09	0.00	0.05	0.01
Queue Length 95th (ft)	0	0	4	1
Control Delay (s)	0.0	0.4	10.0	8.9
Lane LOS		A	B	A
Approach Delay (s)	0.0	0.4	9.8	
Approach LOS			A	

Intersection Summary			
Average Delay	1.7		
Intersection Capacity Utilization	18.9%	ICU Level of Service	A
Analysis Period (min)	15		

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Sign Control	Free			Free	Stop	
Grade	0%			0%	0%	
Volume (veh/h)	56	29	26	204	82	10
Peak Hour Factor	0.87	0.87	0.87	0.87	0.87	0.87
Hourly flow rate (vph)	64	33	30	234	94	11
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type					None	
Median storage veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume			98		375	81
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol			98		375	81
tC, single (s)			4.1		6.4	6.2
tC, 2 stage (s)						
tF (s)			2.2		3.5	3.3
p0 queue free %			98		85	99
cM capacity (veh/h)			1496		613	979

Direction, Lane #	EB 1	WB 1	NB 1	NB 2
Volume Total	98	264	94	11
Volume Left	0	30	94	0
Volume Right	33	0	0	11
cSH	1700	1496	613	979
Volume to Capacity	0.06	0.02	0.15	0.01
Queue Length 95th (ft)	0	2	14	1
Control Delay (s)	0.0	1.0	11.9	8.7
Lane LOS		A	B	A
Approach Delay (s)	0.0	1.0	11.6	
Approach LOS			B	

Intersection Summary			
Average Delay	3.2		
Intersection Capacity Utilization	30.1%	ICU Level of Service	A
Analysis Period (min)	15		

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Sign Control	Free			Free	Stop	
Grade	0%			0%	0%	
Volume (veh/h)	31	37	4	85	23	11
Peak Hour Factor	0.78	0.78	0.78	0.78	0.78	0.78
Hourly flow rate (vph)	40	47	5	109	29	14
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type					None	
Median storage veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume			87		183	63
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol			87		183	63
tC, single (s)			4.1		6.4	6.2
tC, 2 stage (s)						
tF (s)			2.2		3.5	3.3
p0 queue free %			100		96	99
cM capacity (veh/h)			1509		804	1001

Direction, Lane #	EB 1	WB 1	NB 1	NB 2
Volume Total	87	114	29	14
Volume Left	0	5	29	0
Volume Right	47	0	0	14
cSH	1700	1509	804	1001
Volume to Capacity	0.05	0.00	0.04	0.01
Queue Length 95th (ft)	0	0	3	1
Control Delay (s)	0.0	0.4	9.6	8.6
Lane LOS		A	A	A
Approach Delay (s)	0.0	0.4	9.3	
Approach LOS			A	

Intersection Summary			
Average Delay	1.8		
Intersection Capacity Utilization	17.7%	ICU Level of Service	A
Analysis Period (min)	15		

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Sign Control	Free			Free	Stop	
Grade	0%			0%	0%	
Volume (veh/h)	13	36	1	153	55	1
Peak Hour Factor	0.84	0.84	0.84	0.84	0.84	0.84
Hourly flow rate (vph)	15	43	1	182	65	1
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type					None	
Median storage veh)						
Upstream signal (ft)				1314		
pX, platoon unblocked						
vC, conflicting volume			58		221	37
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol			58		221	37
tC, single (s)			4.1		6.4	6.2
tC, 2 stage (s)						
tF (s)			2.2		3.5	3.3
p0 queue free %			100		91	100
cM capacity (veh/h)			1546		766	1035

Direction, Lane #	EB 1	WB 1	NB 1	NB 2
Volume Total	58	183	65	1
Volume Left	0	1	65	0
Volume Right	43	0	0	1
cSH	1700	1546	766	1035
Volume to Capacity	0.03	0.00	0.09	0.00
Queue Length 95th (ft)	0	0	7	0
Control Delay (s)	0.0	0.1	10.1	8.5
Lane LOS		A	B	A
Approach Delay (s)	0.0	0.1	10.1	
Approach LOS			B	

Intersection Summary			
Average Delay	2.2		
Intersection Capacity Utilization	18.8%	ICU Level of Service	A
Analysis Period (min)	15		

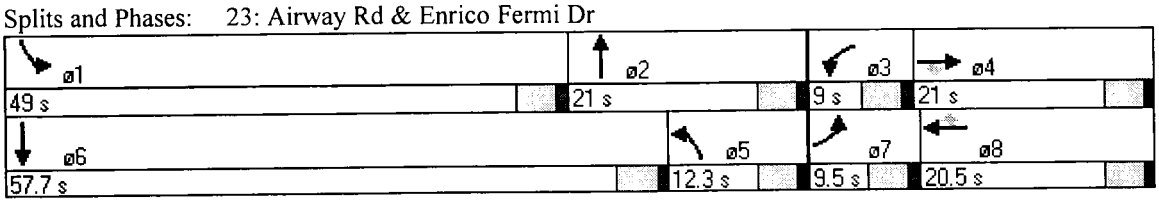
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Total Lost Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	1.00	0.95	0.95	1.00	1.00	1.00	1.00	0.95	0.95	1.00	0.95	0.95
Frt		0.925	0.850			0.850		0.944			0.959	
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1770	1637	1504	1770	1863	1583	1770	3341	0	1770	3394	0
Flt Permitted	0.950			0.950			0.950			0.950		
Satd. Flow (perm)	1770	1637	1504	1770	1863	1583	1770	3341	0	1770	3394	0
Satd. Flow (RTOR)		12	22			1		106			35	
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Volume (vph)	3	11	27	1	2	1	59	253	173	1	75	28
Adj. Flow (vph)	4	12	34	1	2	1	74	316	188	1	94	35
Lane Group Flow (vph)	4	24	22	1	2	1	74	504	0	1	129	0
Turn Type	Prot		Perm	Prot		Perm	Prot			Prot		
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases			4			8						
Total Split (s)	9.5	21.0	21.0	9.0	20.5	20.5	12.3	21.0	0.0	49.0	57.7	0.0
Act Effct Green (s)	6.8	8.4	8.4	6.2	8.3	8.3	10.9	45.8		7.5	40.0	
Actuated g/C Ratio	0.10	0.13	0.13	0.09	0.13	0.13	0.17	0.78		0.11	0.68	
v/c Ratio	0.02	0.11	0.10	0.01	0.01	0.00	0.25	0.19		0.01	0.06	
Control Delay	18.3	12.1	9.4	19.0	15.5	14.0	13.0	4.5		18.0	8.2	
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Total Delay	18.3	12.1	9.4	19.0	15.5	14.0	13.0	4.5		18.0	8.2	
LOS	B	B	A	B	B	B	B	A		B	A	
Approach Delay		11.4			16.0			5.6			8.2	
Approach LOS		B			B			A			A	

Intersection Summary

Cycle Length: 100
Actuated Cycle Length: 58.9
Control Type: Actuated-Uncoordinated
Maximum v/c Ratio: 0.25
Intersection Signal Delay: 6.5
Intersection Capacity Utilization 29.2%
Analysis Period (min) 15

Intersection LOS: A
ICU Level of Service A

Splits and Phases: 23: Airway Rd & Enrico Fermi Dr

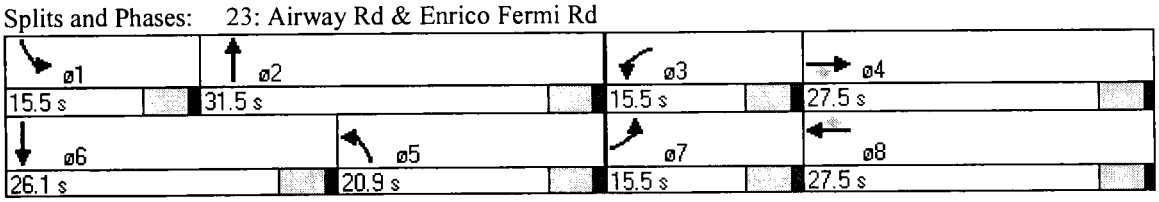


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Total Lost Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	1.00	0.95	0.95	1.00	1.00	1.00	1.00	0.95	0.95	1.00	0.95	0.95
Frt		0.850	0.850					0.999			0.938	
Flt Protected	0.950						0.950					
Satd. Flow (prot)	1770	1504	1504	1863	1863	1863	1770	3536	0	1863	3320	0
Flt Permitted	0.950						0.950					
Satd. Flow (perm)	1770	1504	1504	1863	1863	1863	1770	3536	0	1863	3320	0
Satd. Flow (RTOR)		862	862					1			106	
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Volume (vph)	2	0	13	0	0	0	70	166	1	0	124	87
Adj. Flow (vph)	2	0	16	0	0	0	85	202	1	0	151	106
Lane Group Flow (vph)	2	8	8	0	0	0	85	203	0	0	257	0
Turn Type	Prot		Perm	Prot		Perm	Prot			Prot		
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases			4			8						
Total Split (s)	15.5	27.5	27.5	15.5	27.5	27.5	20.9	31.5	0.0	15.5	26.1	0.0
Act Effct Green (s)	6.2	6.1	6.1				11.3	87.1			71.5	
Actuated g/C Ratio	0.07	0.07	0.07				0.13	0.97			0.79	
v/c Ratio	0.02	0.01	0.01				0.38	0.06			0.10	
Control Delay	39.0	0.0	0.0				40.7	0.4			2.3	
Queue Delay	0.0	0.0	0.0				0.0	0.0			0.0	
Total Delay	39.0	0.0	0.0				40.7	0.4			2.3	
LOS	D	A	A				D	A			A	
Approach Delay		4.3						12.3			2.3	
Approach LOS		A						B			A	

Intersection Summary

Cycle Length: 90
Actuated Cycle Length: 90
Offset: 0 (0%), Referenced to phase 2:NBT and 6:SBT, Start of Green
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 0.38
Intersection Signal Delay: 7.5 — Intersection LOS: A
Intersection Capacity Utilization 23.4% — ICU Level of Service A
Analysis Period (min) 15

Splits and Phases: 23: Airway Rd & Enrico Fermi Rd



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Sign Control		Stop			Stop			Stop			Stop	
Volume (vph)	5	2	0	10	2	93	0	9	2	236	34	4
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
Hourly flow rate (vph)	6	2	0	11	2	107	0	10	2	271	39	5

Direction, Lane #	EB 1	WB 1	NB 1	SB 1
Volume Total (vph)	8	121	13	315
Volume Left (vph)	6	11	0	271
Volume Right (vph)	0	107	2	5
Hadj (s)	0.18	-0.48	0.01	0.21
Departure Headway (s)	5.0	4.2	4.5	4.4
Degree Utilization, x	0.01	0.14	0.02	0.39
Capacity (veh/h)	661	791	749	789
Control Delay (s)	8.0	7.9	7.6	10.2
Approach Delay (s)	8.0	7.9	7.6	10.2
Approach LOS	A	A	A	B

Intersection Summary			
Delay	9.5		
HCM Level of Service	A		
Intersection Capacity Utilization	34.7%	ICU Level of Service	A
Analysis Period (min)	15		

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Sign Control		Stop			Stop			Stop			Stop	
Volume (vph)	5	10	0	9	3	121	0	61	1	178	161	10
Peak Hour Factor	0.81	0.81	0.81	0.81	0.81	0.81	0.81	0.81	0.81	0.81	0.81	0.81
Hourly flow rate (vph)	6	12	0	11	4	149	0	75	1	220	199	12

Direction, Lane #	EB 1	WB 1	NB 1	SB 1
Volume Total (vph)	19	164	77	431
Volume Left (vph)	6	11	0	220
Volume Right (vph)	0	149	1	12
Hadj (s)	0.10	-0.50	0.12	0.17
Departure Headway (s)	5.5	4.7	5.0	4.6
Degree Utilization, x	0.03	0.21	0.11	0.55
Capacity (veh/h)	580	700	674	754
Control Delay (s)	8.6	8.9	8.6	13.2
Approach Delay (s)	8.6	8.9	8.6	13.2
Approach LOS	A	A	A	B

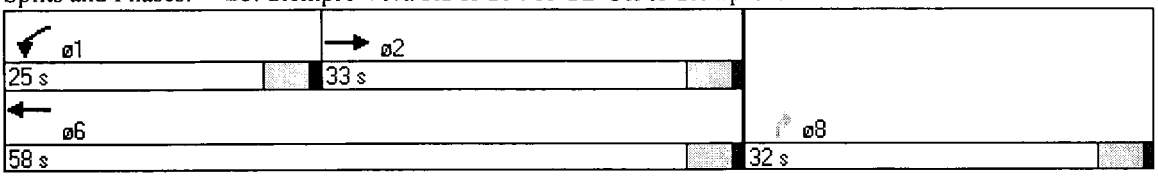
Intersection Summary			
Delay	11.5		
HCM Level of Service	B		
Intersection Capacity Utilization	40.7%	ICU Level of Service	A
Analysis Period (min)	15		

Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Total Lost Time (s)	4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	0.91	0.91	0.97	0.91	1.00	0.88
Frt	0.986					0.850
Flt Protected			0.950			
Satd. Flow (prot)	5014	0	3433	5085	0	2787
Flt Permitted			0.950			
Satd. Flow (perm)	5014	0	3433	5085	0	2787
Satd. Flow (RTOR)	19					940
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Volume (vph)	468	46	225	702	0	280
Adj. Flow (vph)	514	51	247	771	0	308
Lane Group Flow (vph)	565	0	247	771	0	308
Turn Type			Prot			custom
Protected Phases	2		1	6		
Permitted Phases						8
Total Split (s)	33.0	0.0	25.0	58.0	0.0	32.0
Act Effct Green (s)	60.3		11.7	76.0		6.0
Actuated g/C Ratio	0.67		0.13	0.84		0.07
v/c Ratio	0.17		0.55	0.18		0.29
Control Delay	5.7		40.2	1.1		0.7
Queue Delay	0.0		0.0	0.0		0.0
Total Delay	5.7		40.2	1.1		0.7
LOS	A		D	A		A
Approach Delay	5.7			10.6		
Approach LOS	A			B		

Intersection Summary

Cycle Length: 90
Actuated Cycle Length: 90
Offset: 66 (73%), Referenced to phase 2:EBT and 6:WBT, Start of Green
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 0.55
Intersection Signal Delay: 7.5 Intersection LOS: A
Intersection Capacity Utilization 26.5% ICU Level of Service A
Analysis Period (min) 15

Splits and Phases: 28: Siempre Viva Rd & SR905 SB Off to Siempre Viva EB

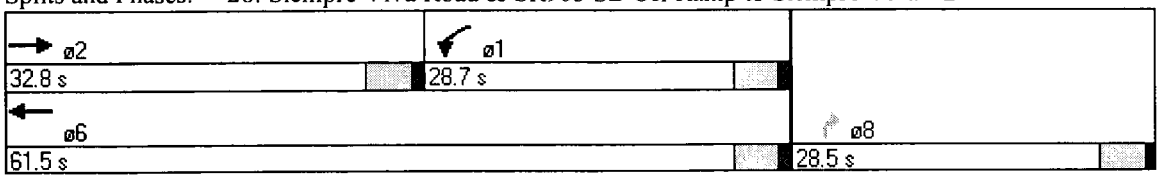


Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Total Lost Time (s)	4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	0.91	0.91	0.97	0.91	1.00	0.88
Frt	0.937					0.850
Flt Protected			0.950			
Satd. Flow (prot)	4765	0	3433	5085	0	2787
Flt Permitted			0.950			
Satd. Flow (perm)	4765	0	3433	5085	0	2787
Satd. Flow (RTOR)	214					1005
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Volume (vph)	444	322	416	669	0	175
Adj. Flow (vph)	522	379	489	787	0	206
Lane Group Flow (vph)	901	0	489	787	0	206
Turn Type			Prot			custom
Protected Phases	2		1	6		
Permitted Phases						8
Total Split (s)	32.8	0.0	28.7	61.5	0.0	28.5
Act Effct Green (s)	47.3		24.7	76.0		6.0
Actuated g/C Ratio	0.53		0.27	0.84		0.07
v/c Ratio	0.35		0.52	0.18		0.18
Control Delay	9.6		25.6	1.3		0.4
Queue Delay	0.0		0.0	0.0		0.0
Total Delay	9.6		25.6	1.3		0.4
LOS	A		C	A		A
Approach Delay	9.6			10.6		
Approach LOS	A			B		

Intersection Summary

Cycle Length: 90
Actuated Cycle Length: 90
Offset: 29 (32%), Referenced to phase 2:EBT and 6:WBT, Start of Green
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 0.52
Intersection Signal Delay: 9.3 Intersection LOS: A
Intersection Capacity Utilization 34.3% ICU Level of Service A
Analysis Period (min) 15

Splits and Phases: 28: Siempre Viva Road & SR905 SB Off Ramp to Siempre Viva EB



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		↑↑↑	↑↑↑			↱
Sign Control		Free	Free		Stop	
Grade		0%	0%		0%	
Volume (veh/h)	0	748	563	0	0	364
Peak Hour Factor	0.87	0.87	0.87	0.87	0.87	0.87
Hourly flow rate (vph)	0	860	647	0	0	418
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type					None	
Median storage veh)						
Upstream signal (ft)		281	733			
pX, platoon unblocked					0.98	
vC, conflicting volume	647				934	216
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	647				900	216
tC, single (s)	4.1				6.8	6.9
tC, 2 stage (s)						
tF (s)	2.2				3.5	3.3
p0 queue free %	100				100	47
cM capacity (veh/h)	934				274	789

Direction, Lane #	EB 1	EB 2	EB 3	WB 1	WB 2	WB 3	SB 1
Volume Total	287	287	287	216	216	216	418
Volume Left	0	0	0	0	0	0	0
Volume Right	0	0	0	0	0	0	418
cSH	1700	1700	1700	1700	1700	1700	789
Volume to Capacity	0.17	0.17	0.17	0.13	0.13	0.13	0.53
Queue Length 95th (ft)	0	0	0	0	0	0	79
Control Delay (s)	0.0	0.0	0.0	0.0	0.0	0.0	14.6
Lane LOS							B
Approach Delay (s)	0.0			0.0			14.6
Approach LOS							B

Intersection Summary			
Average Delay	3.2		
Intersection Capacity Utilization	40.1%	ICU Level of Service	A
Analysis Period (min)	15		

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		↑↑↑	↑↑↑			↱
Sign Control		Free	Free		Stop	
Grade		0%	0%		0%	
Volume (veh/h)	0	619	709	0	0	376
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93
Hourly flow rate (vph)	0	666	762	0	0	404
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type					None	
Median storage veh)						
Upstream signal (ft)		225	412			
pX, platoon unblocked	0.96				0.96	0.96
vC, conflicting volume	762				984	254
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	675				905	147
tC, single (s)	4.1				6.8	6.9
tC, 2 stage (s)						
tF (s)	2.2				3.5	3.3
p0 queue free %	100				100	52
cM capacity (veh/h)	878				266	841

Direction, Lane #	EB 1	EB 2	EB 3	WB 1	WB 2	WB 3	SB 1
Volume Total	222	222	222	254	254	254	404
Volume Left	0	0	0	0	0	0	0
Volume Right	0	0	0	0	0	0	404
cSH	1700	1700	1700	1700	1700	1700	841
Volume to Capacity	0.13	0.13	0.13	0.15	0.15	0.15	0.48
Queue Length 95th (ft)	0	0	0	0	0	0	66
Control Delay (s)	0.0	0.0	0.0	0.0	0.0	0.0	13.2
Lane LOS							B
Approach Delay (s)	0.0			0.0			13.2
Approach LOS							B

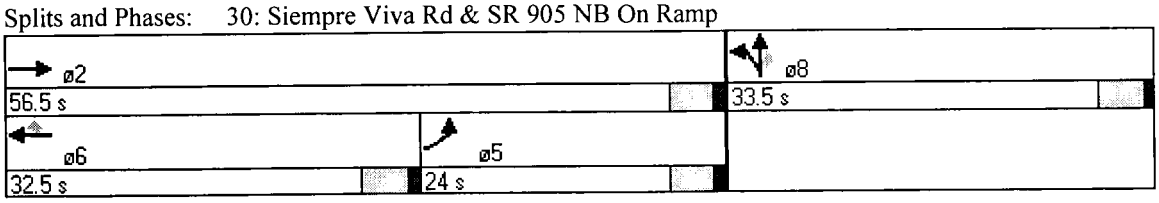
Intersection Summary			
Average Delay	2.9		
Intersection Capacity Utilization	43.6%	ICU Level of Service	A
Analysis Period (min)	15		

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Total Lost Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	0.97	0.91	1.00	1.00	0.86	0.86	1.00	1.00	0.88	1.00	1.00	1.00
Frt					0.992	0.850			0.850			
Flt Protected	0.950							0.953				
Satd. Flow (prot)	3433	5085	0	0	4767	1362	0	1775	2787	0	0	0
Flt Permitted	0.950							0.953				
Satd. Flow (perm)	3433	5085	0	0	4767	1362	0	1775	2787	0	0	0
Satd. Flow (RTOR)					10	157			318			
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Volume (vph)	125	613	0	0	405	175	164	1	305	0	0	0
Adj. Flow (vph)	130	639	0	0	422	182	171	1	318	0	0	0
Lane Group Flow (vph)	130	639	0	0	447	157	0	172	318	0	0	0
Turn Type	Prot					Perm	Split		Perm			
Protected Phases	5	2			6		8	8				
Permitted Phases						6			8			
Total Split (s)	24.0	56.5	0.0	0.0	32.5	32.5	33.5	33.5	33.5	0.0	0.0	0.0
Act Effct Green (s)	9.0	68.1			55.1	55.1		13.9	13.9			
Actuated g/C Ratio	0.10	0.76			0.61	0.61		0.15	0.15			
v/c Ratio	0.38	0.17			0.15	0.18		0.63	0.45			
Control Delay	37.8	1.4			8.3	2.3		45.1	5.9			
Queue Delay	0.0	0.0			0.0	0.0		0.0	0.0			
Total Delay	37.8	1.4			8.3	2.3		45.1	5.9			
LOS	D	A			A	A		D	A			
Approach Delay		7.6			6.7			19.7				
Approach LOS		A			A			B				

Intersection Summary

Cycle Length: 90
Actuated Cycle Length: 90
Offset: 77 (86%), Referenced to phase 2:EBT and 6:WBT, Start of Green
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 0.63
Intersection Signal Delay: 10.5 Intersection LOS: B
Intersection Capacity Utilization 40.1% ICU Level of Service A
Analysis Period (min) 15

Splits and Phases: 30: Siempre Viva Rd & SR 905 NB On Ramp

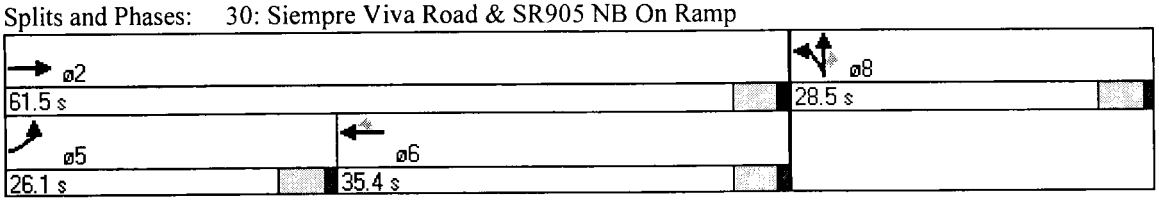


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Total Lost Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	0.97	0.91	1.00	1.00	0.86	0.86	1.00	1.00	0.88	1.00	1.00	1.00
Frt					0.984	0.850			0.850			
Flt Protected	0.950							0.954				
Satd. Flow (prot)	3433	5085	0	0	4729	1362	0	1777	2787	0	0	0
Flt Permitted	0.950							0.954				
Satd. Flow (perm)	3433	5085	0	0	4729	1362	0	1777	2787	0	0	0
Satd. Flow (RTOR)					23	317			233			
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Volume (vph)	297	352	0	0	655	373	49	2	217	0	0	0
Adj. Flow (vph)	319	378	0	0	704	401	53	2	233	0	0	0
Lane Group Flow (vph)	319	378	0	0	788	317	0	55	233	0	0	0
Turn Type	Prot					Perm	Split		Perm			
Protected Phases	5	2			6		8	8				
Permitted Phases						6			8			
Total Split (s)	26.1	61.5	0.0	0.0	35.4	35.4	28.5	28.5	28.5	0.0	0.0	0.0
Act Effct Green (s)	14.5	73.5			55.0	55.0		8.5	8.5			
Actuated g/C Ratio	0.16	0.82			0.61	0.61		0.09	0.09			
v/c Ratio	0.58	0.09			0.27	0.33		0.33	0.49			
Control Delay	32.3	0.9			8.9	2.2		42.7	9.1			
Queue Delay	0.0	0.0			0.0	0.0		0.0	0.0			
Total Delay	32.3	0.9			8.9	2.2		42.7	9.1			
LOS	C	A			A	A		D	A			
Approach Delay		15.2			7.0			15.5				
Approach LOS		B			A			B				

Intersection Summary

Cycle Length: 90
Actuated Cycle Length: 90
Offset: 66 (73%), Referenced to phase 2:EBT and 6:WBT, Start of Green
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 0.58
Intersection Signal Delay: 10.9 — Intersection LOS: B
Intersection Capacity Utilization 43.6% — ICU Level of Service A
Analysis Period (min) 15

Splits and Phases: 30: Siempre Viva Road & SR905 NB On Ramp

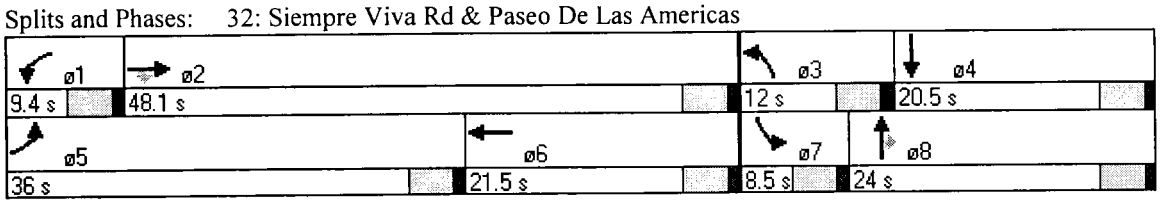


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Total Lost Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	1.00	0.91	1.00	1.00	0.95	0.95	1.00	0.95	1.00	1.00	0.95	0.95
Frt			0.850						0.850		0.932	
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1770	5085	1583	1770	3539	0	1770	3539	1583	1770	3299	0
Flt Permitted	0.950			0.950			0.950			0.950		
Satd. Flow (perm)	1770	5085	1583	1770	3539	0	1770	3539	1583	1770	3299	0
Satd. Flow (RTOR)			154						5		58	
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Volume (vph)	517	423	140	21	278	1	120	51	5	8	64	53
Adj. Flow (vph)	568	465	154	23	305	1	132	56	5	9	70	58
Lane Group Flow (vph)	568	465	154	23	306	0	132	56	5	9	128	0
Turn Type	Prot		Perm	Prot			Prot		Perm	Prot		
Protected Phases	5	2		1	6		3	8		7	4	
Permitted Phases			2						8			
Total Split (s)	36.0	48.1	48.1	9.4	21.5	0.0	12.0	24.0	24.0	8.5	20.5	0.0
Act Effct Green (s)	27.7	40.3	40.3	5.4	11.9		8.1	18.4	18.4	4.6	7.7	
Actuated g/C Ratio	0.39	0.56	0.56	0.07	0.17		0.11	0.26	0.26	0.06	0.11	
v/c Ratio	0.83	0.16	0.16	0.19	0.52		0.66	0.06	0.01	0.09	0.32	
Control Delay	32.8	8.4	2.4	39.6	31.7		51.7	24.7	17.2	39.8	21.5	
Queue Delay	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	
Total Delay	32.8	8.4	2.4	39.6	31.7		51.7	24.7	17.2	39.8	21.5	
LOS	C	A	A	D	C		D	C	B	D	C	
Approach Delay		19.3			32.2			43.0			22.7	
Approach LOS		B			C			D			C	

Intersection Summary

Cycle Length: 90
Actuated Cycle Length: 71.7
Control Type: Actuated-Uncoordinated
Maximum v/c Ratio: 0.83
Intersection Signal Delay: 24.3
Intersection LOS: C
Intersection Capacity Utilization 59.7%
ICU Level of Service B
Analysis Period (min) 15

Splits and Phases: 32: Siempre Viva Rd & Paseo De Las Americas

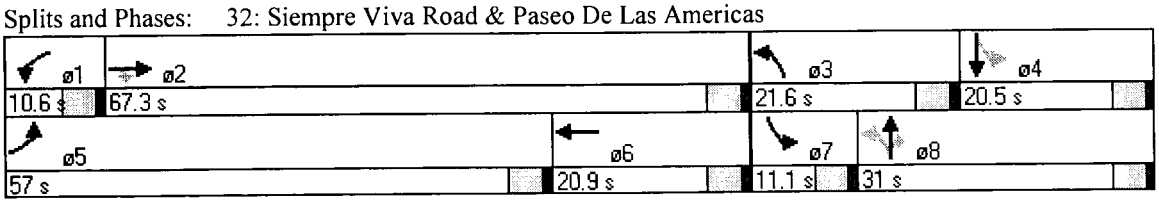


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Total Lost Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	1.00	0.91	1.00	1.00	0.95	0.95	1.00	0.95	1.00	1.00	0.95	0.95
Frt			0.850		0.994				0.850		0.926	
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1770	5085	1583	1770	3518	0	1770	3539	1583	1770	3277	0
Flt Permitted	0.950			0.950			0.459			0.666		
Satd. Flow (perm)	1770	5085	1583	1770	3518	0	855	3539	1583	1241	3277	0
Satd. Flow (RTOR)			67		3				8		89	
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Volume (vph)	630	136	59	30	352	14	269	120	7	6	80	78
Adj. Flow (vph)	716	155	67	34	400	16	306	136	8	7	91	89
Lane Group Flow (vph)	716	155	67	34	416	0	306	136	8	7	180	0
Turn Type	Prot		Perm	Prot			pm+pt		Perm	pm+pt		
Protected Phases	5	2		1	6		3	8		7	4	
Permitted Phases			2				8		8	4		
Total Split (s)	57.0	67.3	67.3	10.6	20.9	0.0	21.6	31.0	31.0	11.1	20.5	0.0
Act Effct Green (s)	45.9	59.9	59.9	6.6	15.7		29.5	27.5	27.5	15.6	9.1	
Actuated g/C Ratio	0.44	0.58	0.58	0.06	0.15		0.29	0.27	0.27	0.14	0.09	
v/c Ratio	0.91	0.05	0.07	0.31	0.78		0.79	0.14	0.02	0.03	0.49	
Control Delay	44.7	10.8	3.2	60.0	54.9		50.0	33.0	19.1	33.0	30.1	
Queue Delay	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	
Total Delay	44.7	10.8	3.2	60.0	54.9		50.0	33.0	19.1	33.0	30.1	
LOS	D	B	A	E	D		D	C	B	C	C	
Approach Delay		36.1			55.2			44.3			30.2	
Approach LOS		D			E			D			C	

Intersection Summary

Cycle Length: 120
Actuated Cycle Length: 103.4
Control Type: Actuated-Uncoordinated
Maximum v/c Ratio: 0.91
Intersection Signal Delay: 41.6
Intersection LOS: D
Intersection Capacity Utilization 78.0%
ICU Level of Service D
Analysis Period (min) 15

Splits and Phases: 32: Siempre Viva Road & Paseo De Las Americas



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Sign Control		Free			Free			Stop			Stop	
Grade		0%			0%			0%			0%	
Volume (veh/h)	54	270	62	20	226	1	21	17	22	2	5	27
Peak Hour Factor	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84
Hourly flow rate (vph)	64	321	74	24	269	1	25	20	26	2	6	32
Pedestrians												
Lane Width (ft)												
Walking Speed (ft/s)												
Percent Blockage												
Right turn flare (veh)												
Median type								None			None	
Median storage veh)												
Upstream signal (ft)		1276										
pX, platoon unblocked												
vC, conflicting volume	270			395			704	805	198	643	841	135
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	270			395			704	805	198	643	841	135
tC, single (s)	4.1			4.1			7.5	6.5	6.9	7.5	6.5	6.9
tC, 2 stage (s)												
tF (s)	2.2			2.2			3.5	4.0	3.3	3.5	4.0	3.3
p0 queue free %	95			98			91	93	97	99	98	96
cM capacity (veh/h)	1290			1160			291	293	810	311	279	889

Direction, Lane #	EB 1	EB 2	EB 3	WB 1	WB 2	WB 3	NB 1	SB 1	SB 2
Volume Total	64	214	181	24	179	91	71	8	32
Volume Left	64	0	0	24	0	0	25	2	0
Volume Right	0	0	74	0	0	1	26	0	32
cSH	1290	1700	1700	1160	1700	1700	381	287	889
Volume to Capacity	0.05	0.13	0.11	0.02	0.11	0.05	0.19	0.03	0.04
Queue Length 95th (ft)	4	0	0	2	0	0	17	2	3
Control Delay (s)	7.9	0.0	0.0	8.2	0.0	0.0	16.6	17.9	9.2
Lane LOS	A			A			C	C	A
Approach Delay (s)	1.1			0.7			16.6	11.0	
Approach LOS							C	B	

Intersection Summary				
Average Delay	2.7			
Intersection Capacity Utilization	32.8%	ICU Level of Service		A
Analysis Period (min)	15			

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Sign Control		Free			Free			Stop			Stop	
Grade		0%			0%			0%			0%	
Volume (veh/h)	39	80	20	17	261	5	51	15	0	1	19	52
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
Hourly flow rate (vph)	43	88	22	19	287	5	56	16	0	1	21	57
Pedestrians												
Lane Width (ft)												
Walking Speed (ft/s)												
Percent Blockage												
Right turn flare (veh)												
Median type								None			None	
Median storage veh)												
Upstream signal (ft)		1290			1303							
pX, platoon unblocked												
vC, conflicting volume	292			110			433	514	55	465	523	146
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	292			110			433	514	55	465	523	146
tC, single (s)	4.1			4.1			7.5	6.5	6.9	7.5	6.5	6.9
tC, 2 stage (s)												
tF (s)	2.2			2.2			3.5	4.0	3.3	3.5	4.0	3.3
p0 queue free %	97			99			87	96	100	100	95	93
cM capacity (veh/h)	1266			1478			440	441	1000	451	436	874

Direction, Lane #	EB 1	EB 2	EB 3	WB 1	WB 2	WB 3	NB 1	SB 1	SB 2
Volume Total	43	59	51	19	191	101	73	22	57
Volume Left	43	0	0	19	0	0	56	1	0
Volume Right	0	0	22	0	0	5	0	0	57
cSH	1266	1700	1700	1478	1700	1700	440	437	874
Volume to Capacity	0.03	0.03	0.03	0.01	0.11	0.06	0.16	0.05	0.07
Queue Length 95th (ft)	3	0	0	1	0	0	15	4	5
Control Delay (s)	7.9	0.0	0.0	7.5	0.0	0.0	14.8	13.7	9.4
Lane LOS	A			A			B	B	A
Approach Delay (s)	2.2			0.4			14.8	10.6	
Approach LOS							B	B	

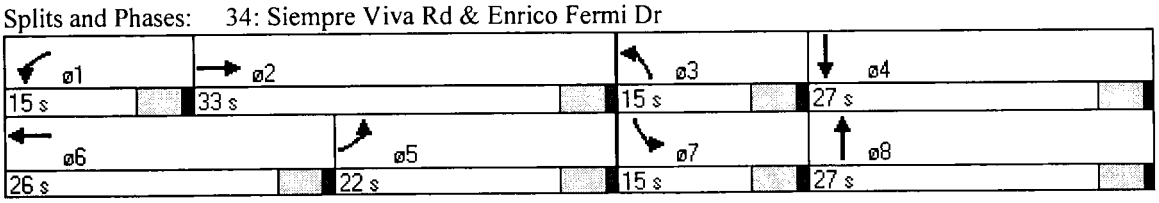
Intersection Summary			
Average Delay	3.9		
Intersection Capacity Utilization	31.0%	ICU Level of Service	A
Analysis Period (min)	15		

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Total Lost Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	0.97	1.00	1.00	1.00	0.95	0.95	1.00	0.95	0.95	1.00	0.95	0.95
Frt		0.917			0.993			0.997			0.906	
Flt Protected	0.950						0.950					
Satd. Flow (prot)	3433	1708	0	1863	3514	0	1770	3529	0	1863	3207	0
Flt Permitted	0.950						0.950					
Satd. Flow (perm)	3433	1708	0	1863	3514	0	1770	3529	0	1863	3207	0
Satd. Flow (RTOR)		5			5			2			45	
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Volume (vph)	258	3	4	0	80	4	9	109	2	0	21	35
Adj. Flow (vph)	335	4	5	0	104	5	12	142	3	0	27	45
Lane Group Flow (vph)	335	9	0	0	109	0	12	145	0	0	72	0
Turn Type	Prot			Prot			Prot			Prot		
Protected Phases	5	2		1	6		3	8		7	4	
Permitted Phases												
Total Split (s)	22.0	33.0	0.0	15.0	26.0	0.0	15.0	27.0	0.0	15.0	27.0	0.0
Act Effct Green (s)	9.7	15.9			7.2		6.6	14.5			13.1	
Actuated g/C Ratio	0.26	0.43			0.18		0.15	0.41			0.37	
v/c Ratio	0.37	0.01			0.17		0.04	0.10			0.06	
Control Delay	13.1	4.4			15.2		19.8	11.4			9.4	
Queue Delay	0.0	0.0			0.0		0.0	0.0			0.0	
Total Delay	13.1	4.4			15.2		19.8	11.4			9.4	
LOS	B	A			B		B	B			A	
Approach Delay		12.9			15.2			12.0			9.4	
Approach LOS		B			B			B			A	

Intersection Summary

Cycle Length: 90
Actuated Cycle Length: 35.2
Control Type: Actuated-Uncoordinated
Maximum v/c Ratio: 0.37
Intersection Signal Delay: 12.7
Intersection LOS: B
Intersection Capacity Utilization 27.9%
ICU Level of Service A
Analysis Period (min) 15

Splits and Phases: 34: Siempre Viva Rd & Enrico Fermi Dr

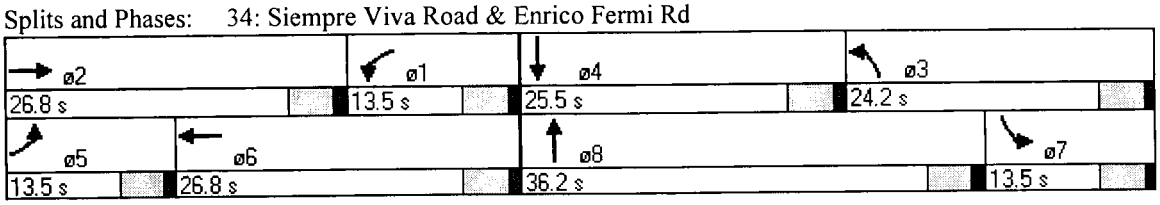


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Total Lost Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	0.97	1.00	1.00	1.00	0.95	0.95	1.00	0.95	0.95	1.00	0.95	0.95
Frt		0.872			0.953			0.998			0.855	
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	3433	1624	0	1770	3373	0	1770	3532	0	1770	3026	0
Flt Permitted	0.950			0.950			0.950			0.950		
Satd. Flow (perm)	3433	1624	0	1770	3373	0	1770	3532	0	1770	3026	0
Satd. Flow (RTOR)		23			11			1			809	
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Volume (vph)	48	4	22	11	23	11	146	156	2	3	4	118
Adj. Flow (vph)	50	4	23	11	24	11	152	162	2	3	4	123
Lane Group Flow (vph)	50	27	0	11	35	0	152	164	0	3	127	0
Turn Type	Prot			Prot			Prot			Prot		
Protected Phases	5	2		1	6		3	8		7	4	
Permitted Phases												
Total Split (s)	13.5	26.8	0.0	13.5	26.8	0.0	24.2	36.2	0.0	13.5	25.5	0.0
Act Effct Green (s)	7.2	9.2		6.8	6.8		11.5	49.8		6.5	33.0	
Actuated g/C Ratio	0.11	0.14		0.10	0.10		0.19	0.81		0.09	0.54	
v/c Ratio	0.14	0.11		0.06	0.10		0.46	0.06		0.02	0.06	
Control Delay	25.9	13.6		28.8	20.9		23.6	5.3		29.0	0.1	
Queue Delay	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Delay	25.9	13.6		28.8	20.9		23.6	5.3		29.0	0.1	
LOS	C	B		C	C		C	A		C	A	
Approach Delay		21.6			22.8			14.1			0.7	
Approach LOS		C			C			B			A	

Intersection Summary

Cycle Length: 90
Actuated Cycle Length: 61.5
Control Type: Semi Act-Uncoord
Maximum v/c Ratio: 0.46
Intersection Signal Delay: 12.8
Intersection LOS: B
Intersection Capacity Utilization 30.1%
ICU Level of Service A
Analysis Period (min) 15

Splits and Phases: 34: Siempre Viva Road & Enrico Fermi Rd

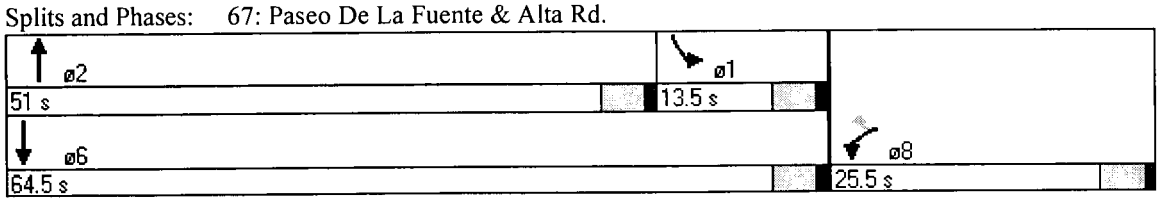


Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Total Lost Time (s)	4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.850	0.996			
Flt Protected	0.950				0.950	
Satd. Flow (prot)	1770	1583	1855	0	1770	1863
Flt Permitted	0.950				0.950	
Satd. Flow (perm)	1770	1583	1855	0	1770	1863
Satd. Flow (RTOR)		5	3			
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Volume (vph)	6	5	634	19	1	166
Adj. Flow (vph)	7	5	689	21	1	180
Lane Group Flow (vph)	7	5	710	0	1	180
Turn Type		Perm			Prot	
Protected Phases	8		2		1	6
Permitted Phases		8				
Total Split (s)	25.5	25.5	51.0	0.0	13.5	64.5
Act Effct Green (s)	6.5	6.5	110.3		6.2	112.7
Actuated g/C Ratio	0.05	0.05	0.95		0.05	0.97
v/c Ratio	0.08	0.06	0.40		0.01	0.10
Control Delay	27.7	18.0	2.3		27.0	0.5
Queue Delay	0.0	0.0	0.0		0.0	0.0
Total Delay	27.7	18.0	2.3		27.0	0.5
LOS	C	B	A		C	A
Approach Delay	23.6		2.3			0.7
Approach LOS	C		A			A

Intersection Summary

Cycle Length: 90
Actuated Cycle Length: 116.1
Control Type: Actuated-Uncoordinated
Maximum v/c Ratio: 0.40
Intersection Signal Delay: 2.2
Intersection LOS: A
Intersection Capacity Utilization 44.5%
ICU Level of Service A
Analysis Period (min) 15

Splits and Phases: 67: Paseo De La Fuente & Alta Rd.

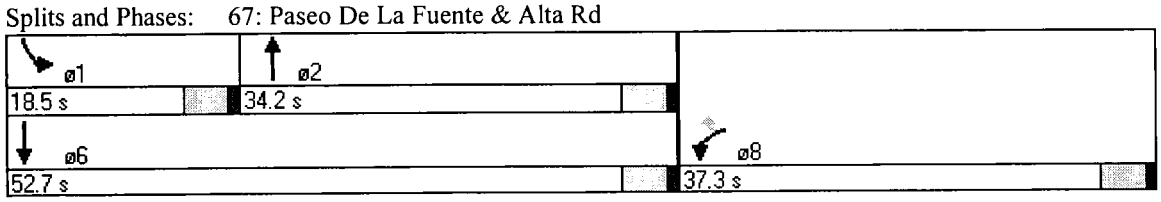


Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Total Lost Time (s)	4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.850	0.996			
Flt Protected	0.950					
Satd. Flow (prot)	1770	1583	1855	0	1863	1863
Flt Permitted	0.950					
Satd. Flow (perm)	1770	1583	1855	0	1863	1863
Satd. Flow (RTOR)		2	2			
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Volume (vph)	221	2	98	3	0	506
Adj. Flow (vph)	273	2	121	4	0	625
Lane Group Flow (vph)	273	2	125	0	0	625
Turn Type		Perm			Prot	
Protected Phases	8		2		1	6
Permitted Phases		8				
Total Split (s)	37.3	37.3	34.2	0.0	18.5	52.7
Act Effct Green (s)	12.7	12.7	24.8			24.8
Actuated g/C Ratio	0.28	0.28	0.54			0.54
v/c Ratio	0.56	0.00	0.12			0.62
Control Delay	18.3	10.5	6.4			11.4
Queue Delay	0.0	0.0	0.0			0.0
Total Delay	18.3	10.5	6.4			11.4
LOS	B	B	A			B
Approach Delay	18.2		6.4			11.4
Approach LOS	B		A			B

Intersection Summary

Cycle Length: 90
Actuated Cycle Length: 45.9
Control Type: Actuated-Uncoordinated
Maximum v/c Ratio: 0.62
Intersection Signal Delay: 12.6
Intersection LOS: B
Intersection Capacity Utilization 45.5%
ICU Level of Service A
Analysis Period (min) 15

Splits and Phases: 67: Paseo De La Fuente & Alta Rd



Existing + Project Units 1-3 Intersection ILV Analysis

INTERSECTION

Signalized Intersection
CAPACITY ANALYSIS

INTERSECTION Otay Mesa/Heritage

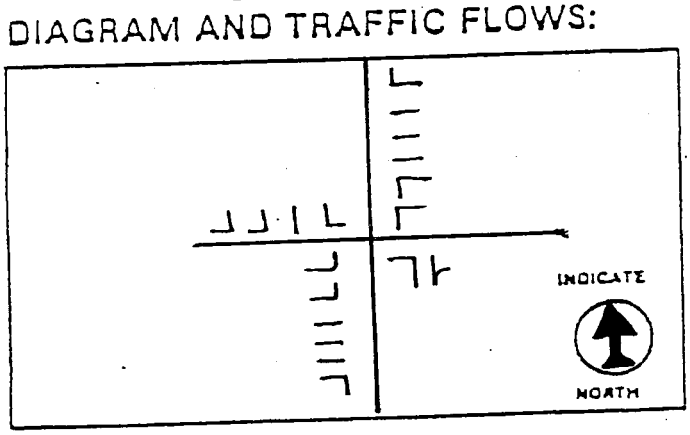
DIST. CO. RTE. P.M. 11/SD/905

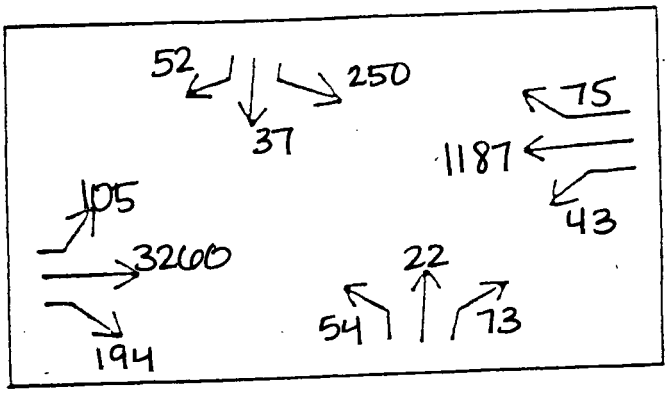
BY SB DATE 4-6-10

TIME ___ (AM) PM

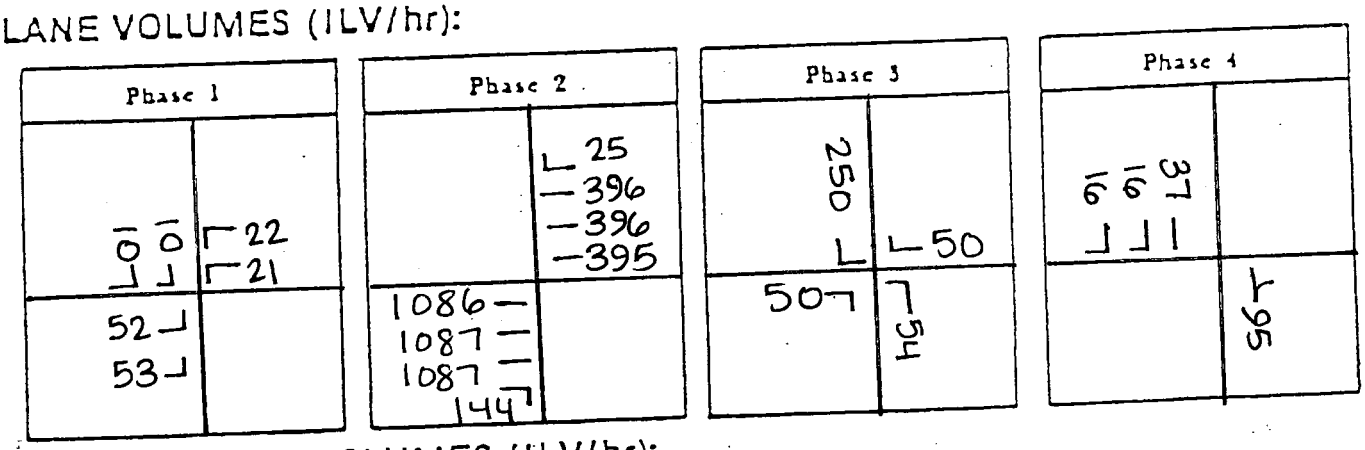
Existing + Units 1-3

DIAGRAM AND TRAFFIC FLOWS:





LANE VOLUMES (ILV/hr):



CRITICAL LANE VOLUMES (ILV/hr):

Phase 1	Phase 2	Phase 3	Phase 4
53	1,087	250	95

TOTAL OPERATING LEVEL (ILV/hr):

Σ
1,485

Is . . .

- ☐ < 1200 ILV/hr.
- ☒ > 1200 but < 1500 ILV/hr.
- ☐ > 1500 ILV/hr. (CAPACITY)

REMARKS:

INTERSECTION

Signalized Intersection

CAPACITY ANALYSIS

INTERSECTION Otay Mesa/Heritage

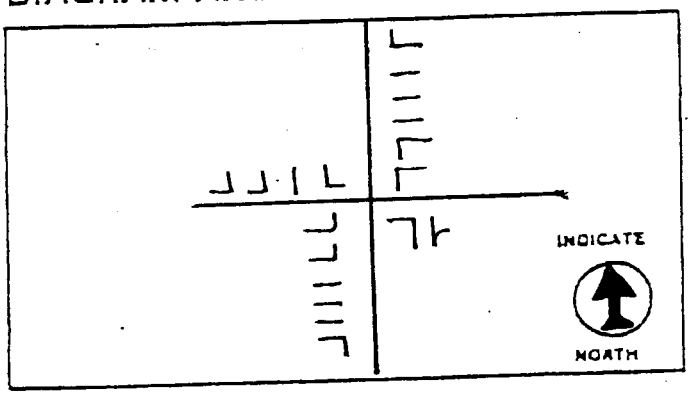
DIST. CO. RTE. P.M. 11/SD/905

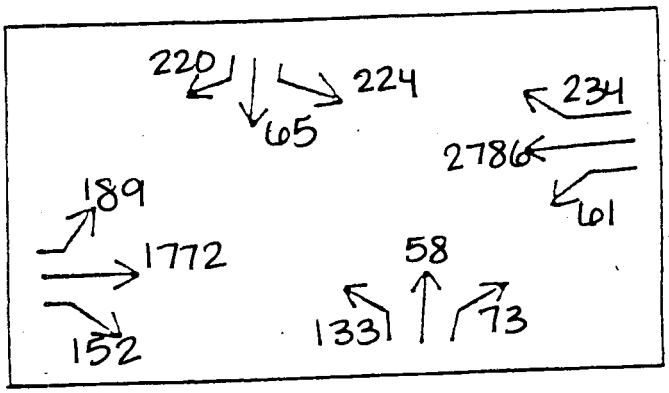
BY SLB DATE 4-6-10

Existing + Units 1-3

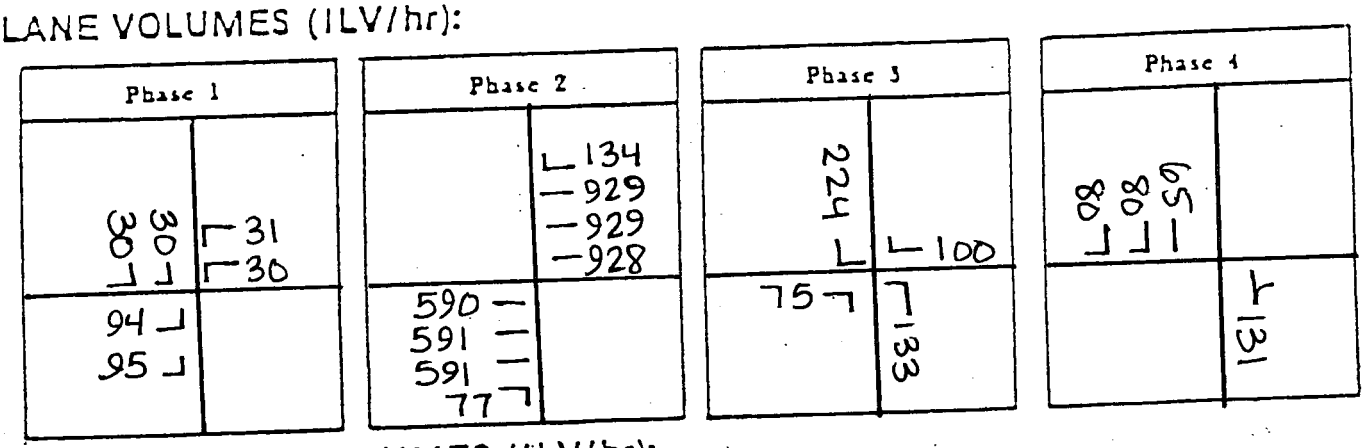
TIME ____ AM (PM)

DIAGRAM AND TRAFFIC FLOWS:





LANE VOLUMES (ILV/hr):



CRITICAL LANE VOLUMES (ILV/hr):

Phase 1	Phase 2	Phase 3	Phase 4
95	929	224	131

TOTAL OPERATING LEVEL (ILV/hr):

Σ
1,379

Is . . .

- ☐ < 1200 ILV/hr.
- ☒ > 1200 but < 1500 ILV/hr.
- ☐ > 1500 ILV/hr. (CAPACITY)

REMARKS:

INTERSECTION

Signalized Intersection
CAPACITY ANALYSIS

INTERSECTION Otay Mesa/Cactus

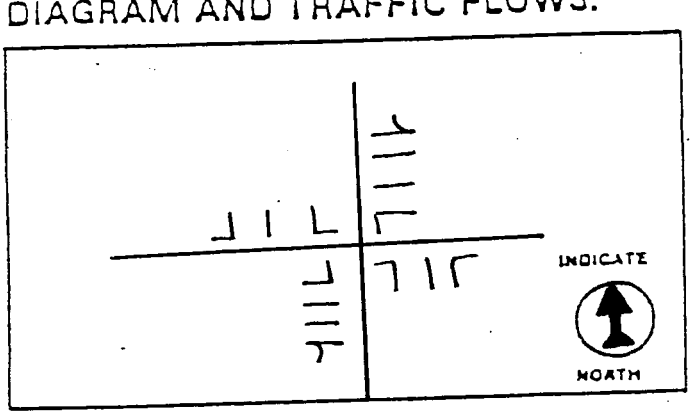
DIST. CO. RTE. P.M. 11/SD/905

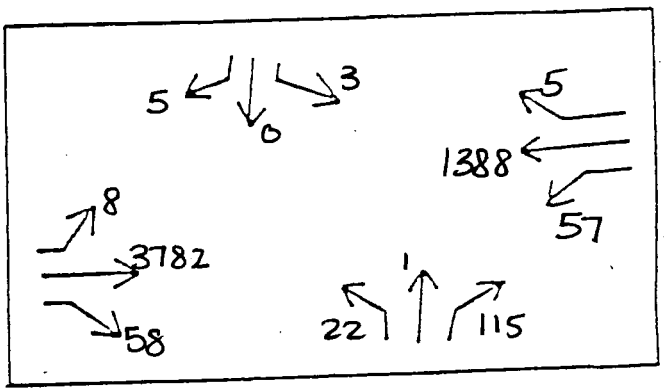
BY [illegible] DATE 4-6-10

TIME ___ (AM) PM

Existing + Units 1-3

DIAGRAM AND TRAFFIC FLOWS:





LANE VOLUMES (ILV/hr):

Phase 1	
0 ⊥	⌐57
8 ⊥	⌐ 50

Phase 2	
	⊥464 — 465 — 464
1280 — 1280 — 1280 ⊤	

Phase 3	
3 ⊥	
	⌐22

Phase 4	
50 ⊥	
	⌐ 65

CRITICAL LANE VOLUMES (ILV/hr):

Phase 1	Phase 2	Phase 3	Phase 4
57	1,280	22	65

TOTAL OPERATING LEVEL (ILV/hr):

Σ
1,424

Is . . .

- ☐ < 1200 ILV/hr.
- ☑ > 1200 but < 1500 ILV/hr.
- ☐ > 1500 ILV/hr. (CAPACITY)

REMARKS:

INTERSECTION

Signalized Intersection
CAPACITY ANALYSIS

INTERSECTION Otay Mesa/Cactus

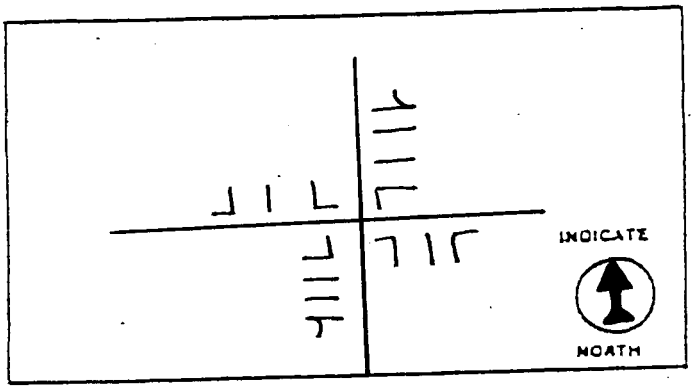
DIST. CO. RTE. P.M. 11/SD/905

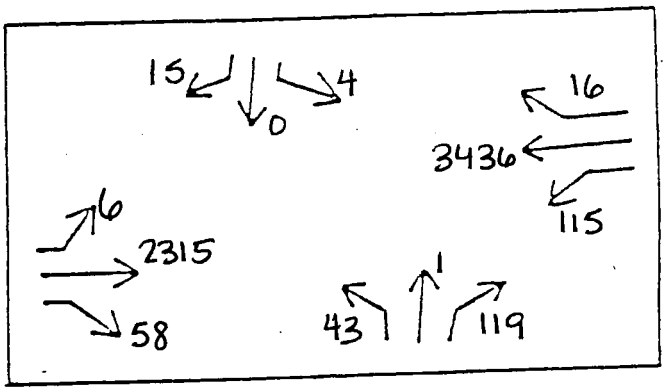
BY [illegible] DATE 4-6-10

TIME ____ AM (PM)

Existing + Units 1-3

DIAGRAM AND TRAFFIC FLOWS:





LANE VOLUMES (ILV/hr):

Phase 1		Phase 2		Phase 3		Phase 4	
9	115		1150 1151 1151	151		150 11	
6	75	791 791 791			143		11 44

CRITICAL LANE VOLUMES (ILV/hr):

Phase 1	Phase 2	Phase 3	Phase 4
115	1,151	43	44

TOTAL OPERATING LEVEL (ILV/hr):

Σ
1,353

Is . . .

- ☐ < 1200 ILV/hr.
- ☒ > 1200 but < 1500 ILV/hr.
- ☐ > 1500 ILV/hr. (CAPACITY)

REMARKS:

INTERSECTION

Signalized Intersection

CAPACITY ANALYSIS

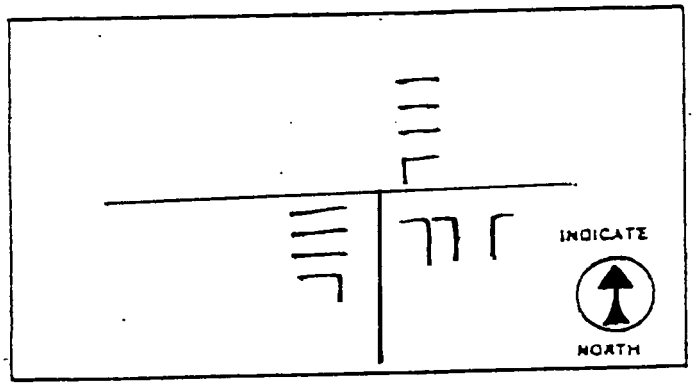
INTERSECTION Otay Mesa Rd / Britannia Blvd DIST. CO. RTE. P.M. 11/SD/905

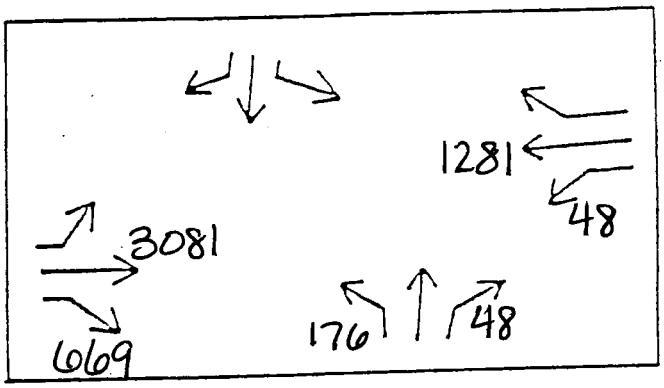
Existing + Units 1-3

BY VB DATE 4-6-10

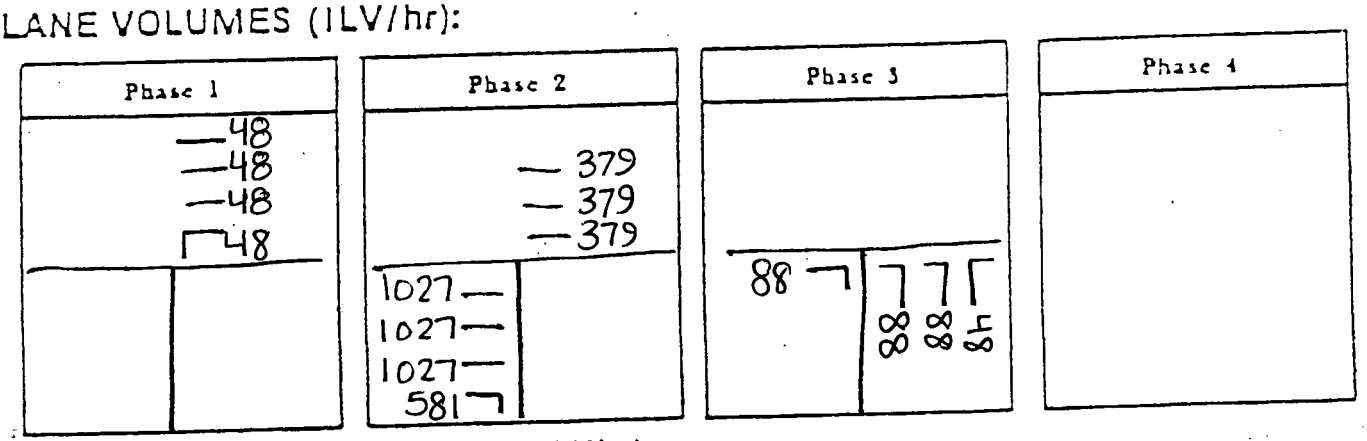
TIME ____ (AM) PM

DIAGRAM AND TRAFFIC FLOWS:





LANE VOLUMES (ILV/hr):



CRITICAL LANE VOLUMES (ILV/hr):

Phase 1	Phase 2	Phase 3	Phase 4
48	1,027	88	

TOTAL OPERATING LEVEL (ILV/hr):

Σ
1,163

Is . . .

- ☒ < 1200 ILV/hr.
- ☐ > 1200 but < 1500 ILV/hr.
- ☐ > 1500 ILV/hr. (CAPACITY)

REMARKS:

INTERSECTION

Signalized Intersection

CAPACITY ANALYSIS

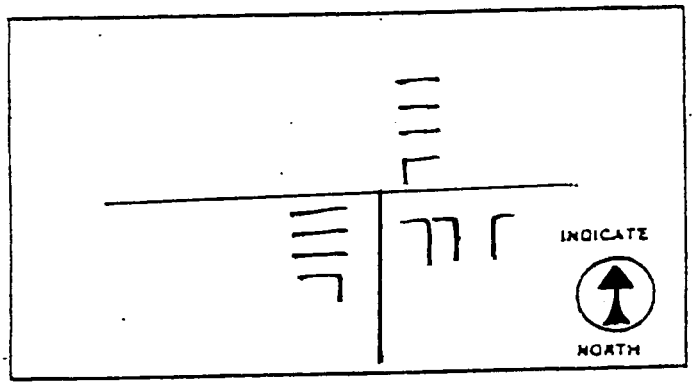
INTERSECTION Otay Mesa Rd / Britannia Blvd DIST. CO. RTE. P.M. 11/SD/905

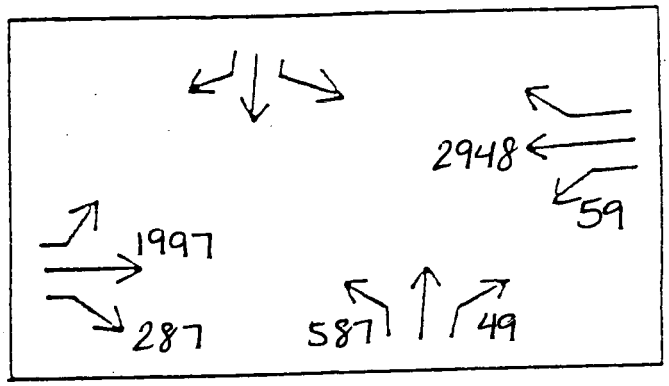
Existing + Units 1-3

BY VB DATE 4-6-10

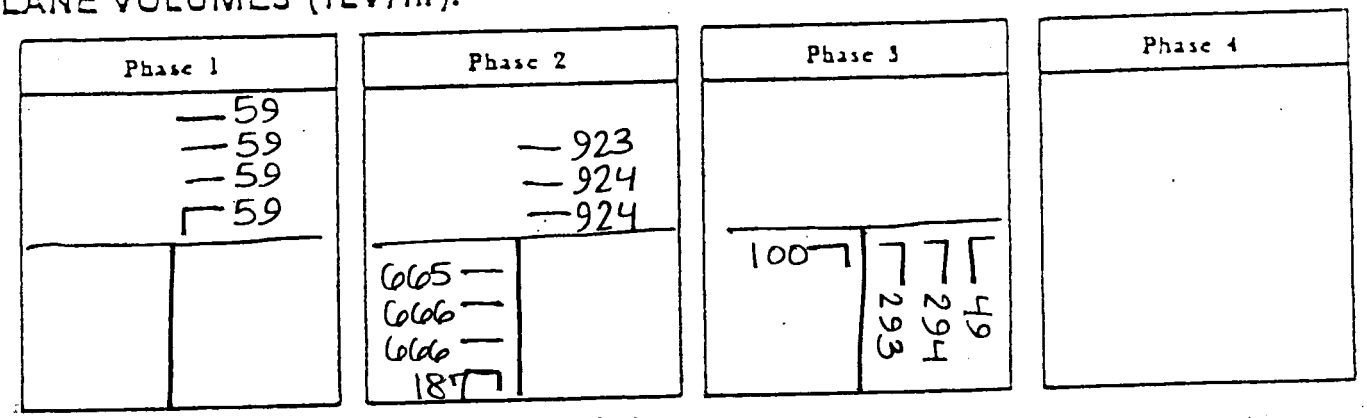
TIME ____ AM (PM)

DIAGRAM AND TRAFFIC FLOWS:





LANE VOLUMES (ILV/hr):



CRITICAL LANE VOLUMES (ILV/hr):

Phase 1	Phase 2	Phase 3	Phase 4
59	924	294	

TOTAL OPERATING LEVEL (ILV/hr):

Σ
1,277

Is . . .

- ☐ < 1200 ILV/hr.
- ☒ > 1200 but < 1500 ILV/hr.
- ☐ > 1500 ILV/hr. (CAPACITY)

REMARKS:

INTERSECTION

Signalized Intersection

CAPACITY ANALYSIS

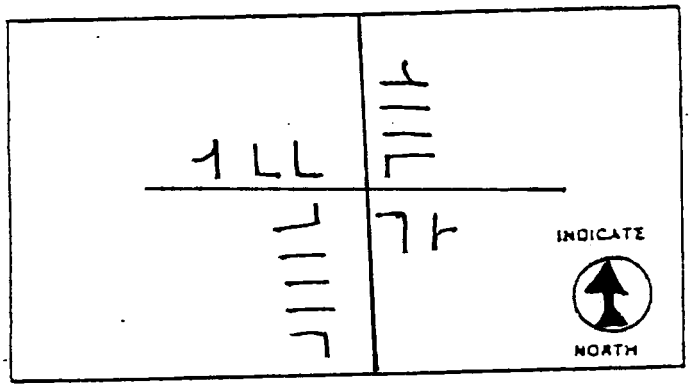
INTERSECTION Otay Mesa Rd/La Media Rd DIST. CO. RTE. P.M. 11/SD/905

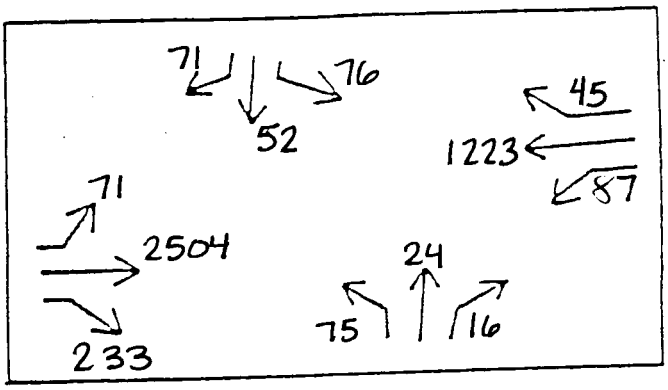
BY EB DATE 4-6-10

Existing + Units 1-3

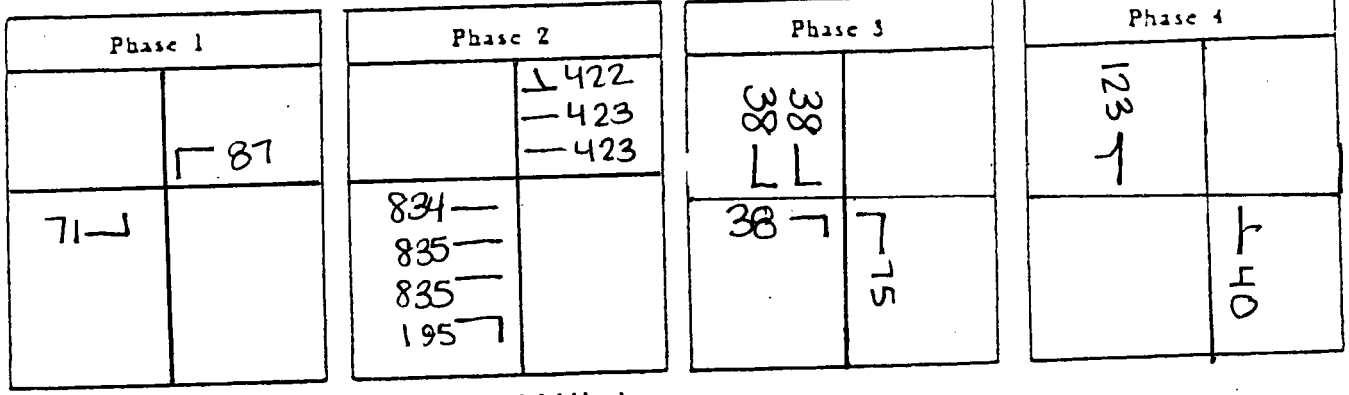
TIME ____ (AM) PM

DIAGRAM AND TRAFFIC FLOWS:





LANE VOLUMES (ILV/hr):



CRITICAL LANE VOLUMES (ILV/hr):

Phase 1	Phase 2	Phase 3	Phase 4
87	835	75	123

TOTAL OPERATING LEVEL (ILV/hr):

Σ
1,120

Is . . . ☒ < 1200 ILV/hr.

☐ > 1200 but < 1500 ILV/hr.

☐ > 1500 ILV/hr. (CAPACITY)

REMARKS:

INTERSECTION

Signalized Intersection

CAPACITY ANALYSIS

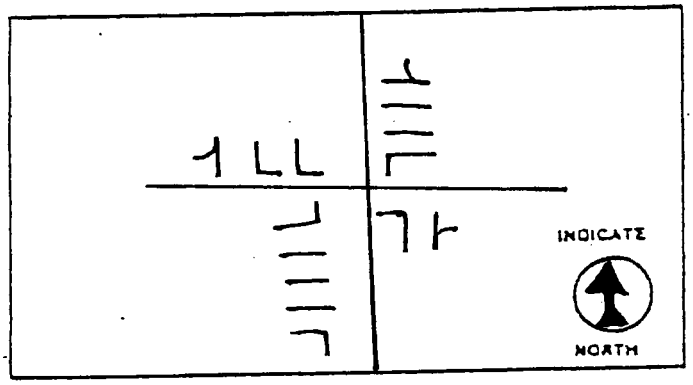
INTERSECTION Otay Mesa Rd/La Media Rd DIST. CO. RTE. P.M. 11/SD/905

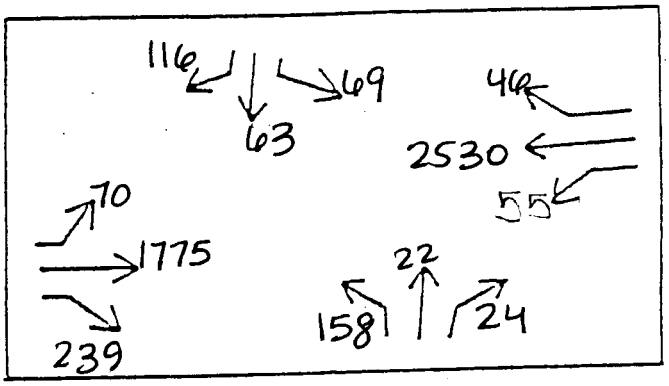
BY JB DATE 4-6-10

Existing + Units 1-3

TIME ____ AM (PM)

DIAGRAM AND TRAFFIC FLOWS:





LANE VOLUMES (ILV/hr):

Phase 1		Phase 2		Phase 3		Phase 4	
	55		858 859 859	35 35 LL		179 1	
70		591 592 592 139		100	158		176

CRITICAL LANE VOLUMES (ILV/hr):

Phase 1	Phase 2	Phase 3	Phase 4
70	859	158	179

TOTAL OPERATING LEVEL (ILV/hr):

Σ
1,266

Is . . .

- ☐ < 1200 ILV/hr.
- ☒ > 1200 but < 1500 ILV/hr.
- ☐ > 1500 ILV/hr. (CAPACITY)

REMARKS:

INTERSECTION

Signalized Intersection

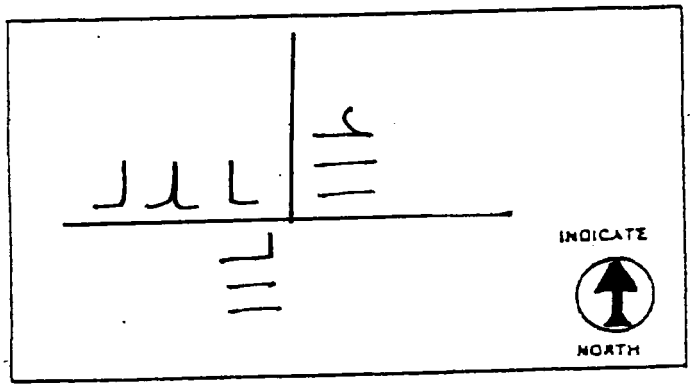
CAPACITY ANALYSIS

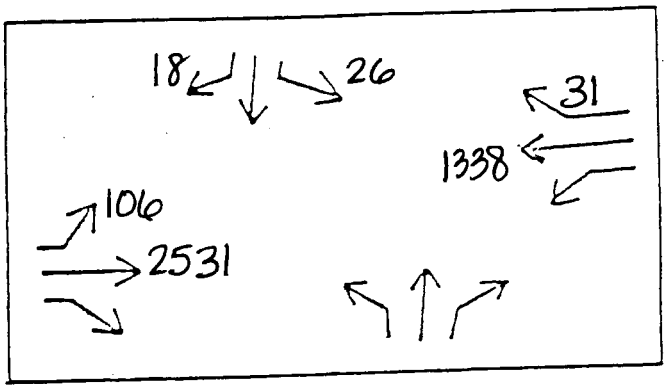
INTERSECTION Otay Mesa/Piper Ranch DIST. CO. RTE. P.M. 11/SD/905

Existing + Units 1-3 BY [illegible] DATE 4-6-10

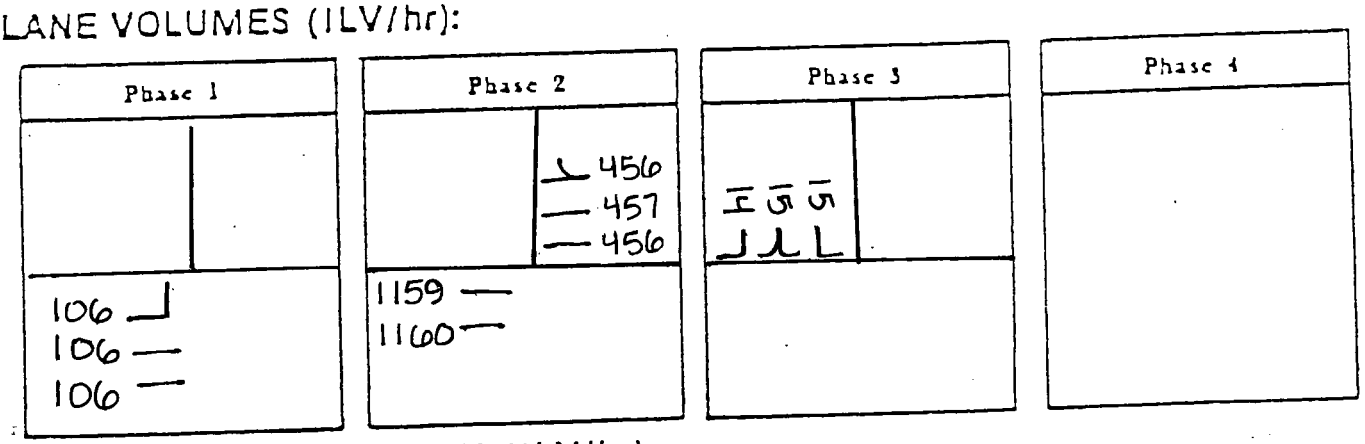
TIME ____ (AM) PM

DIAGRAM AND TRAFFIC FLOWS:





LANE VOLUMES (ILV/hr):



CRITICAL LANE VOLUMES (ILV/hr):

Phase 1	Phase 2	Phase 3	Phase 4
106	1,160	15	

TOTAL OPERATING LEVEL (ILV/hr):

Σ
1,281

Is . . .

- ☐ < 1200 ILV/hr.
- ☒ > 1200 but < 1500 ILV/hr.
- ☐ > 1500 ILV/hr. (CAPACITY)

REMARKS:

INTERSECTION

Signalized Intersection

CAPACITY ANALYSIS

INTERSECTION Otay Mesa/Piper Ranch

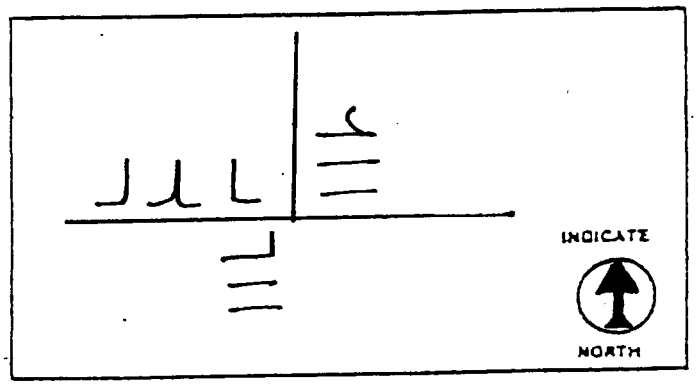
DIST. CO. RTE. P.M. 11/SD/905

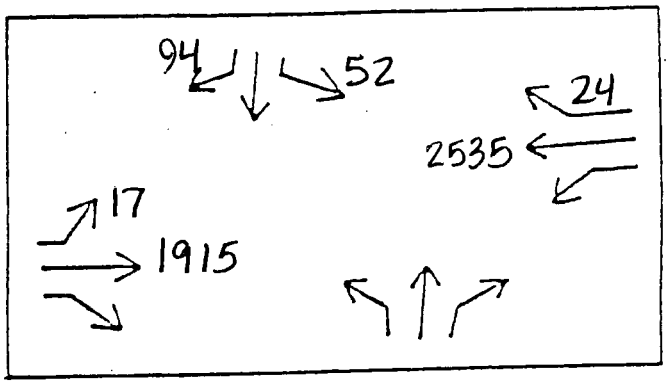
BY [redacted] DATE 4-6-10

Existing + Units 1-3

TIME ____ AM (PM)

DIAGRAM AND TRAFFIC FLOWS:





LANE VOLUMES (ILV/hr):

Phase 1	Phase 2	Phase 3	Phase 4
17 17 17	853 853 853 940 941	49 49 48	

CRITICAL LANE VOLUMES (ILV/hr):

Phase 1	Phase 2	Phase 3	Phase 4
17	941	49	

TOTAL OPERATING LEVEL (ILV/hr):

Σ
1,007

Is . . .

- [x] < 1200 ILV/hr.
- [ ] > 1200 but < 1500 ILV/hr.
- [ ] > 1500 ILV/hr. (CAPACITY)

REMARKS:

INTERSECTION

Signalized Intersection

CAPACITY ANALYSIS

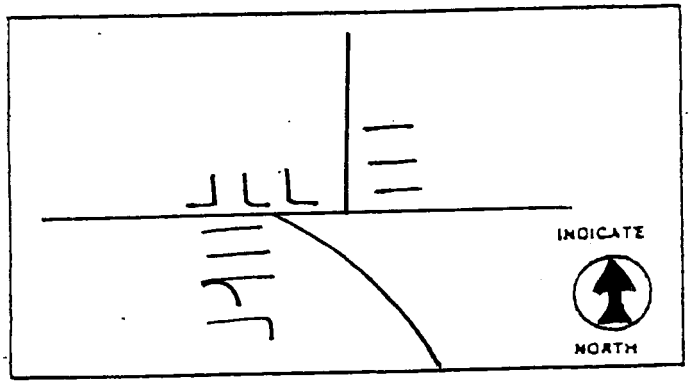
INTERSECTION Otay Mesa / SR-125 SB Ramp DIST. CO. RTE. P.M. 11/SD/905

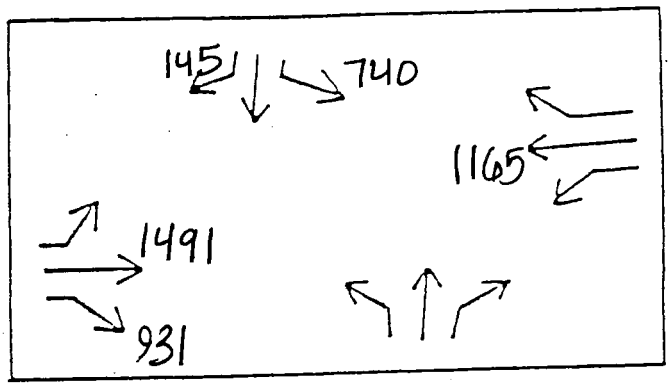
BY JB DATE 4-6-10

Existing + Units 1-3

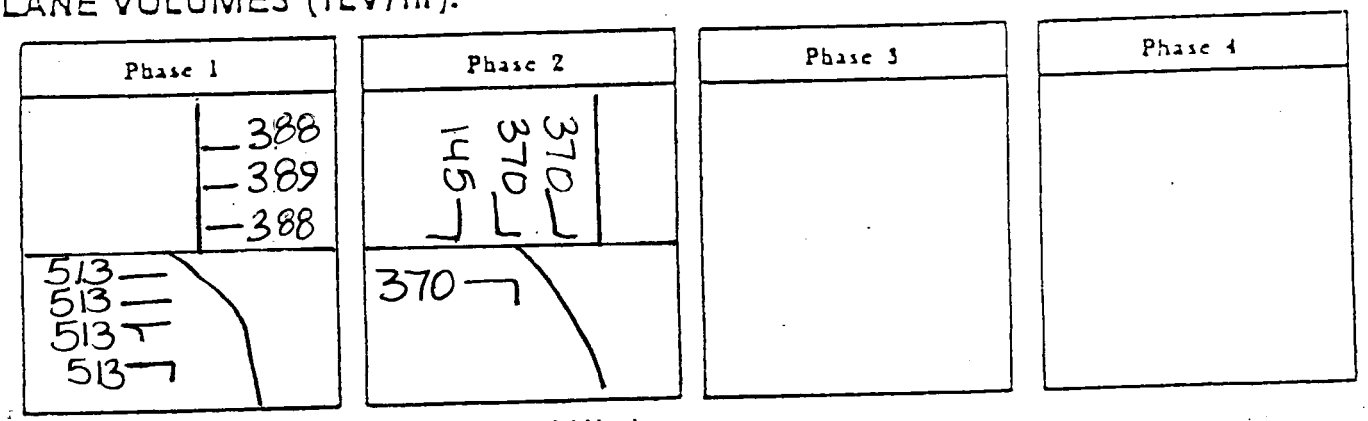
TIME ____ (AM) PM

DIAGRAM AND TRAFFIC FLOWS:





LANE VOLUMES (ILV/hr):



CRITICAL LANE VOLUMES (ILV/hr):

Phase 1	Phase 2	Phase 3	Phase 4
513	370		

TOTAL OPERATING LEVEL (ILV/hr):

Σ
883

Is . . . ☒ < 1200 ILV/hr.

☐ > 1200 but < 1500 ILV/hr.

☐ > 1500 ILV/hr. (CAPACITY)

REMARKS:

INTERSECTION

Signalized Intersection

CAPACITY ANALYSIS

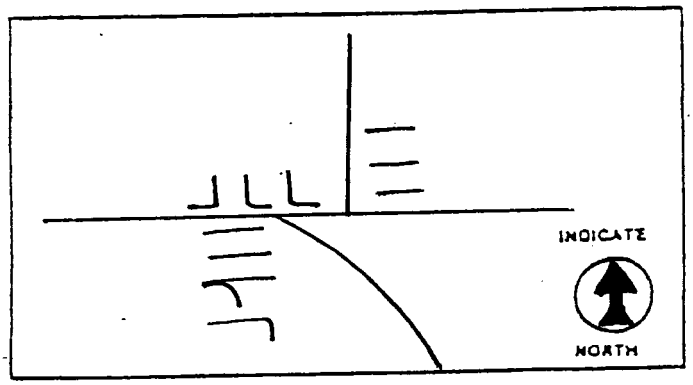
INTERSECTION Otay Mesa / SR-125 SB Ramp DIST. CO. RTE. P.M. 11/SD/905

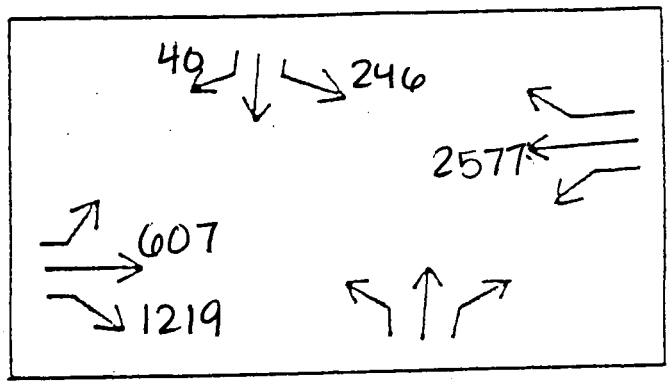
BY JB DATE 4-6-10

Existing + Units 1-3

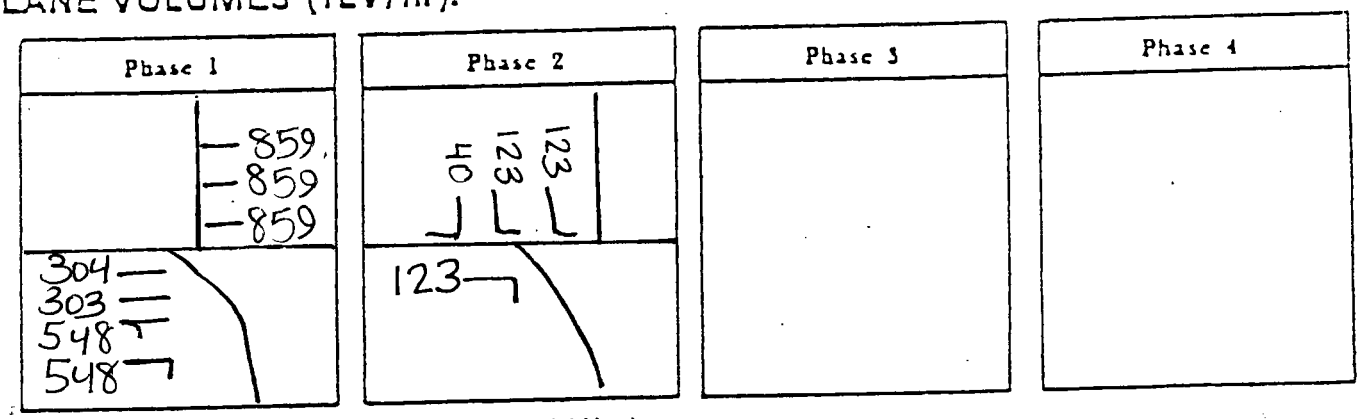
TIME ____ AM (PM)

DIAGRAM AND TRAFFIC FLOWS:





LANE VOLUMES (ILV/hr):



CRITICAL LANE VOLUMES (ILV/hr):

Phase 1	Phase 2	Phase 3	Phase 4
859	123		

TOTAL OPERATING LEVEL (ILV/hr):

Σ
982

Is . . .

- ☒ < 1200 ILV/hr.
- ☐ > 1200 but < 1500 ILV/hr.
- ☐ > 1500 ILV/hr. (CAPACITY)

REMARKS:

INTERSECTION

Signalized Intersection

CAPACITY ANALYSIS

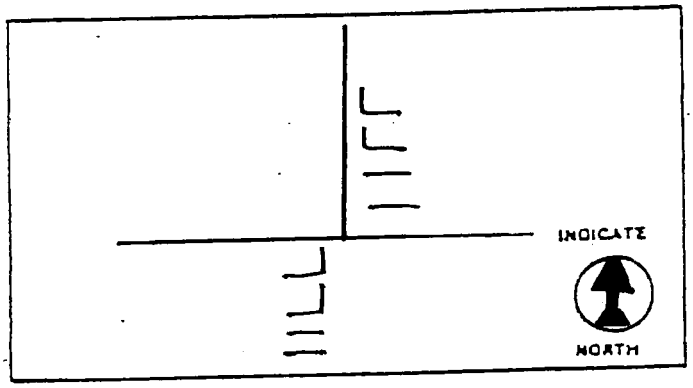
INTERSECTION Otay Mesa/SR-125 NB Ramp DIST. CO. RTE. P.M. 11/SD/9.05

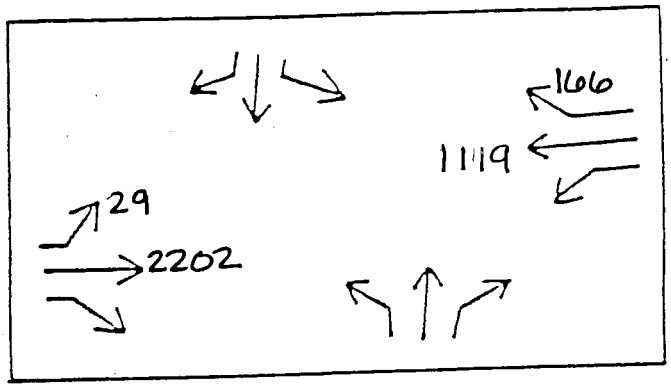
BY JB DATE 4-6-10

Existing + Units 1-3

TIME ——— (AM) PM

DIAGRAM AND TRAFFIC FLOWS:





LANE VOLUMES (1LV/hr):

Phase 1	Phase 2	Phase 3	Phase 4
14 ⌊ 15 ⌊ 15 = 15 =	⌊ 83 ⌊ 83 — 560 — 559 1086 — 1086 =		

CRITICAL LANE VOLUMES (1LV/hr):

Phase 1	Phase 2	Phase 3	Phase 4
15	1,086		

TOTAL OPERATING LEVEL (1LV/hr):

Σ
1,101

Is . . .

☒ < 1200 1LV/hr.

☐ > 1200 but < 1500 1LV/hr.

☐ > 1500 1LV/hr. (CAPACITY)

REMARKS:

INTERSECTION

Signalized Intersection

CAPACITY ANALYSIS

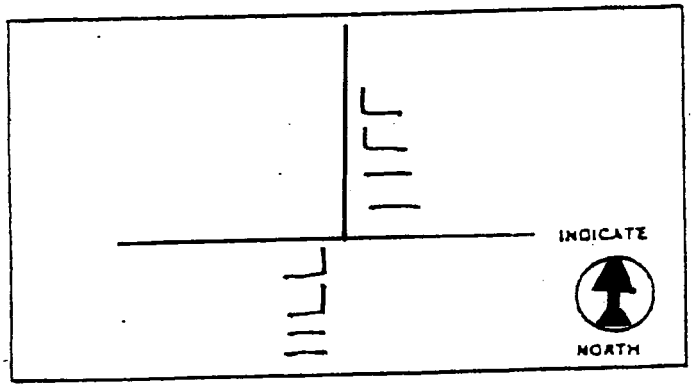
INTERSECTION Otay Mesa/SR-125 NB Ramp DIST. CO. RTE. P.M. 11/50/905

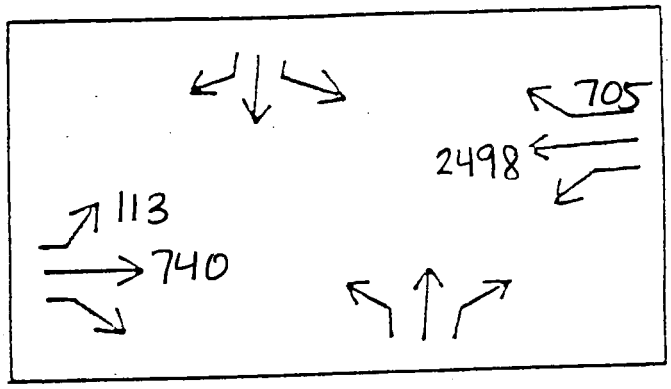
BY JB DATE 4-6-10

Existing + Units 1-3

TIME ____ AM (PM)

DIAGRAM AND TRAFFIC FLOWS:





LANE VOLUMES (ILV/hr):

Phase 1	Phase 2	Phase 3	Phase 4
56 ⌋ 57 ⌋ 57 — 57 —	L 352 L 353 — 1249 — 1249 313 — 313 —		

CRITICAL LANE VOLUMES (ILV/hr):

Phase 1	Phase 2	Phase 3	Phase 4
57	1,249		

TOTAL OPERATING LEVEL (ILV/hr):

Σ
1,306

Is . . .

- ☐ < 1200 ILV/hr.
- ☒ > 1200 but < 1500 ILV/hr.
- ☐ > 1500 ILV/hr. (CAPACITY)

REMARKS:

Signalized Intersection
CAPACITY ANALYSIS

INTERSECTION Otay Mesa/SR-905NB Connector

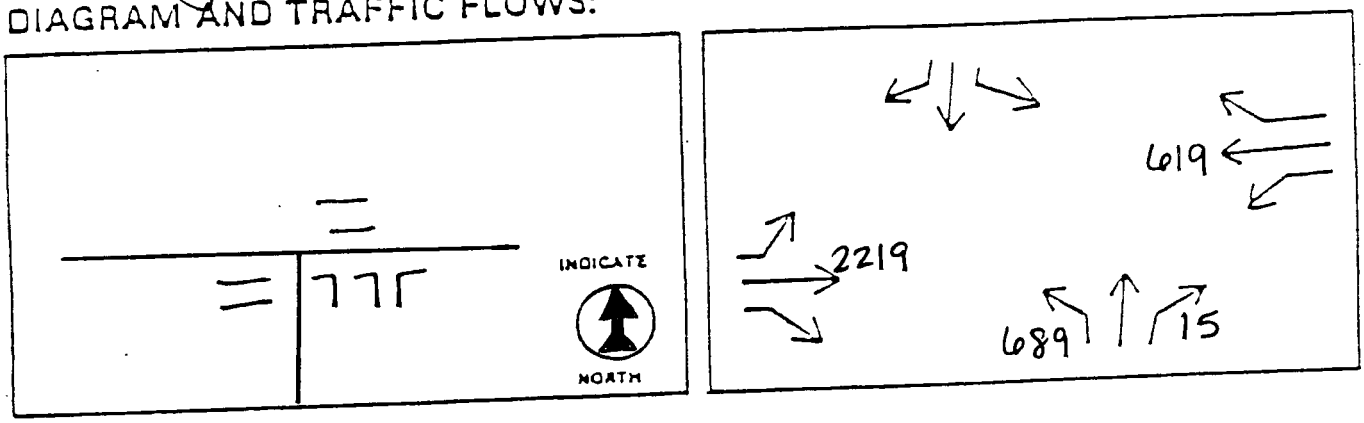
DIST. CO. RTE. P.M. 11/SD/905

BY JB DATE 4-6-10

Existing + Units 1-3

TIME ____ (AM) PM

DIAGRAM AND TRAFFIC FLOWS:



LANE VOLUMES (1LV/hr):

Phase 1	Phase 2	Phase 3	Phase 4
309 310 1109 1110	L 15 T 344 T 345		

CRITICAL LANE VOLUMES (1LV/hr):

Phase 1	Phase 2	Phase 3	Phase 4
1,110	345		

TOTAL OPERATING LEVEL (1LV/hr):

Σ
1,455

Is . . .

- ☐ < 1200 1LV/hr.
- ☒ > 1200 but < 1500 1LV/hr.
- ☐ > 1500 1LV/hr. (CAPACITY)

REMARKS:

Signalized Intersection
CAPACITY ANALYSIS

INTERSECTION Otay Mesa/SR-905NB Connector

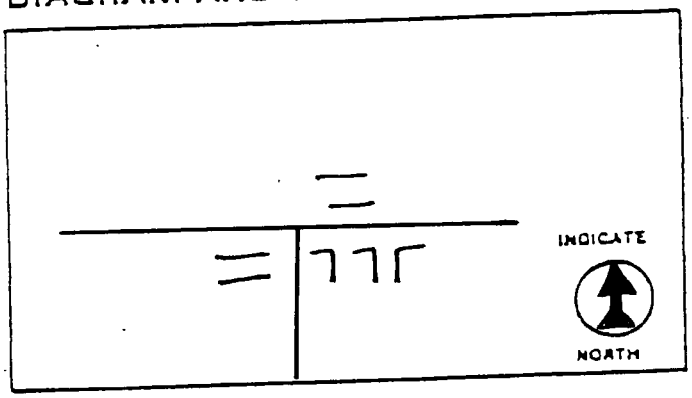
DIST. CO. RTE. P.M. 11/SD/905

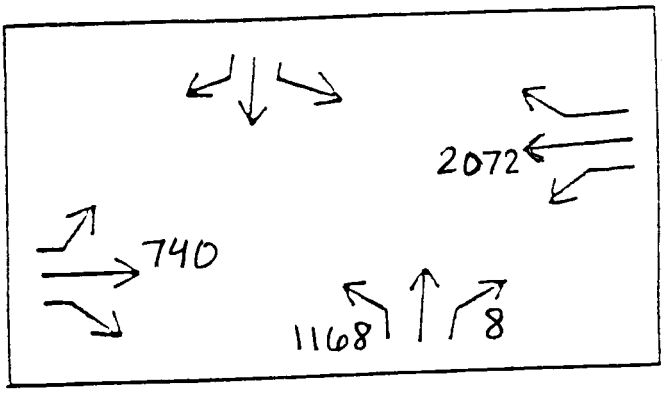
BY JB DATE 4-6-10

Existing + Units 1-3

TIME ____ AM (PM)

DIAGRAM AND TRAFFIC FLOWS:





LANE VOLUMES (ILV/hr):

Phase 1	Phase 2	Phase 3	Phase 4
1036 1036 370 370	584 584 8		

CRITICAL LANE VOLUMES (ILV/hr):

Phase 1	Phase 2	Phase 3	Phase 4
1,036	584		

TOTAL OPERATING LEVEL (ILV/hr):

Σ
1,620

Is . . .

- ☐ < 1200 ILV/hr.
- ☐ > 1200 but < 1500 ILV/hr.
- ☒ > 1500 ILV/hr. (CAPACITY)

REMARKS:

INTERSECTION

Signalized Intersection

CAPACITY ANALYSIS

INTERSECTION Siempre Viva | SR-905 SB Ramp

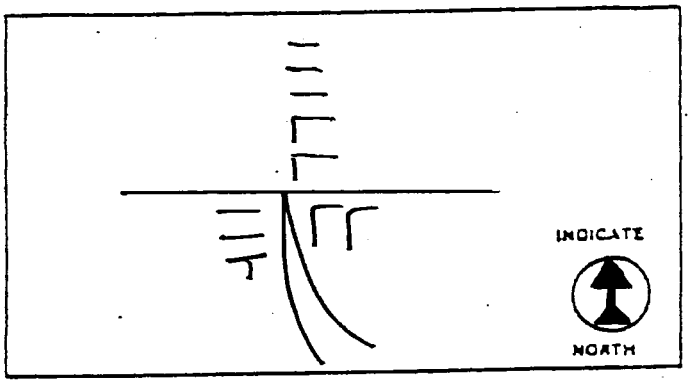
DIST. CO. RTE. P.M. 11 | SD | 905

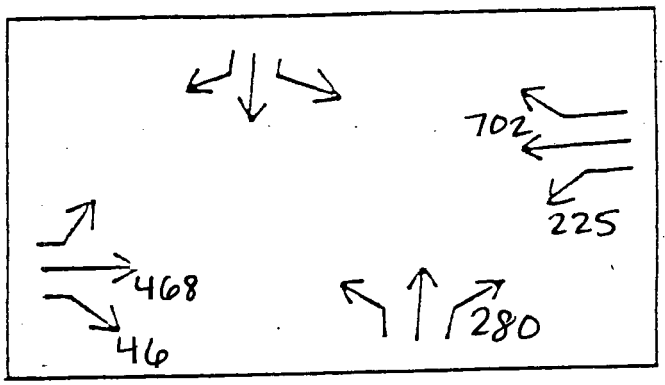
BY JB DATE 4-6-10

TIME ___ (AM) PM

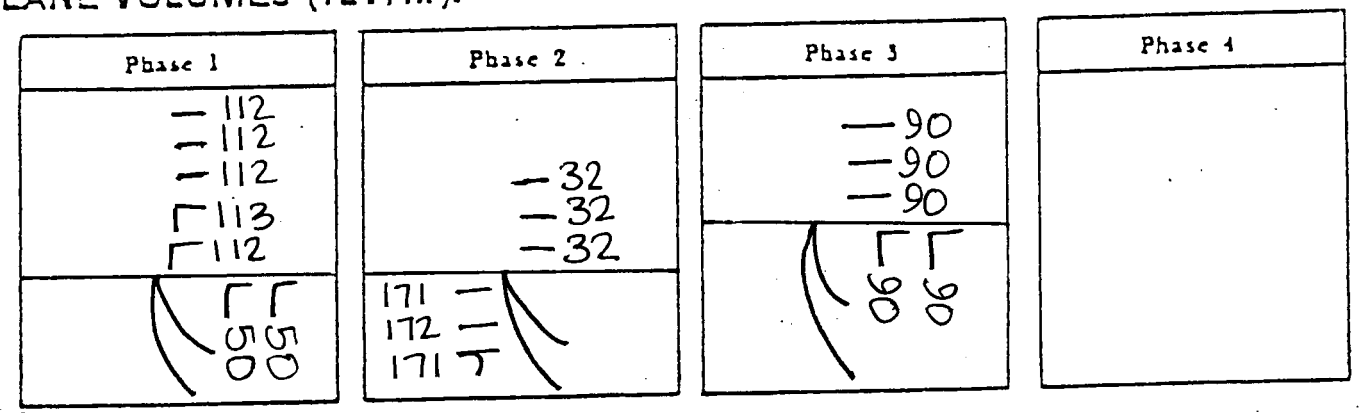
Existing + Units 1-3

DIAGRAM AND TRAFFIC FLOWS:





LANE VOLUMES (ILV/hr):



CRITICAL LANE VOLUMES (ILV/hr):

Phase 1	Phase 2	Phase 3	Phase 4
113	172	90	

TOTAL OPERATING LEVEL (ILV/hr):

Σ
375

Is . . .

☒ < 1200 ILV/hr.

☐ > 1200 but < 1500 ILV/hr.

☐ > 1500 ILV/hr. (CAPACITY)

REMARKS:

INTERSECTION

Signalized Intersection

CAPACITY ANALYSIS

INTERSECTION Siempre Viva | SR-905 SB Ramp

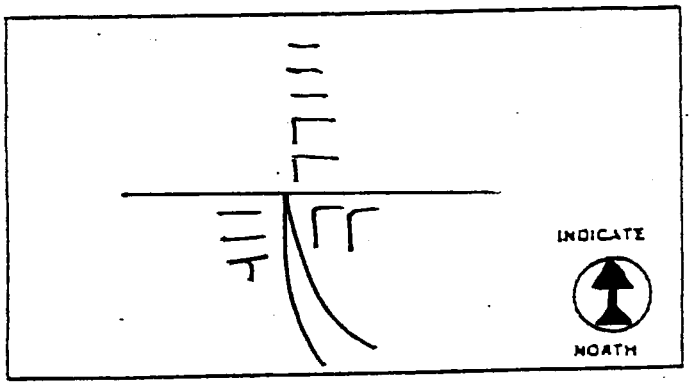
DIST. CO. RTE. P.M. 11 | SD | 905

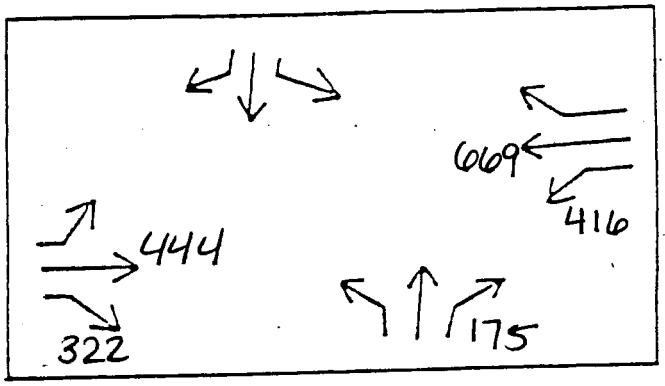
BY VB DATE 4-6-10

TIME ____ AM PM

Existing + Units 1-3

DIAGRAM AND TRAFFIC FLOWS:





LANE VOLUMES (ILV/hr):

Phase 1	Phase 2	Phase 3	Phase 4
69 70 69 208 208 50 50	107 108 107 222 222 322	38 38 38 37 38	

CRITICAL LANE VOLUMES (ILV/hr):

Phase 1	Phase 2	Phase 3	Phase 4
208	322	38	

TOTAL OPERATING LEVEL (ILV/hr):

Σ
568

Is . . .

- ☒ < 1200 ILV/hr.
- ☐ > 1200 but < 1500 ILV/hr.
- ☐ > 1500 ILV/hr. (CAPACITY)

REMARKS:

INTERSECTION

Signalized Intersection

CAPACITY ANALYSIS

INTERSECTION Siempre Viva / SR-905 NB Ramp

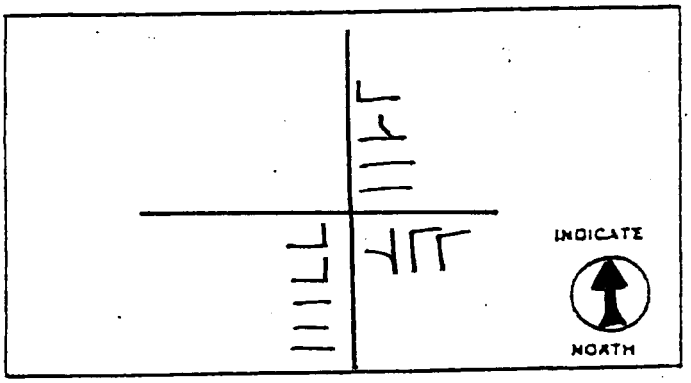
DIST. CO. RTE. P.M. 11/SD/905

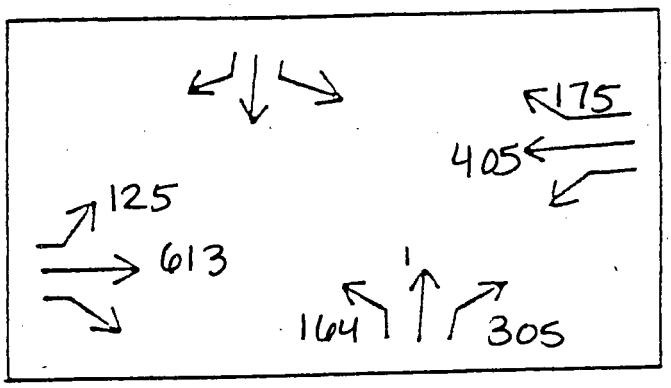
BY [illegible] DATE 4-6-10

TIME ____ (AM) PM

Existing + Units 1-3

DIAGRAM AND TRAFFIC FLOWS:





LANE VOLUMES (ILV/hr):

Phase 1	Phase 2	Phase 3	Phase 4
62 63 63 63 63	145 145 145 145 141 142 141	165 153 152	

CRITICAL LANE VOLUMES (ILV/hr):

Phase 1	Phase 2	Phase 3	Phase 4
63	145	165	

TOTAL OPERATING LEVEL (ILV/hr):

Σ
373

Is . . .

- ☒ < 1200 ILV/hr.
- ☐ > 1200 but < 1500 ILV/hr.
- ☐ > 1500 ILV/hr. (CAPACITY)

REMARKS:

INTERSECTION

Signalized Intersection

CAPACITY ANALYSIS

INTERSECTION Siempre Viva / SR-905 NB Ramp

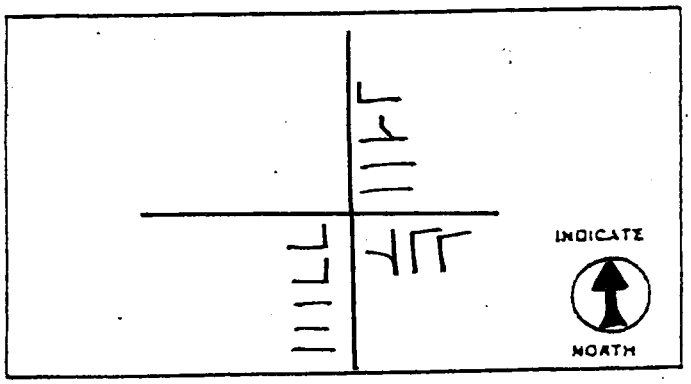
DIST. CO. RTE. P.M. 11/SD/905

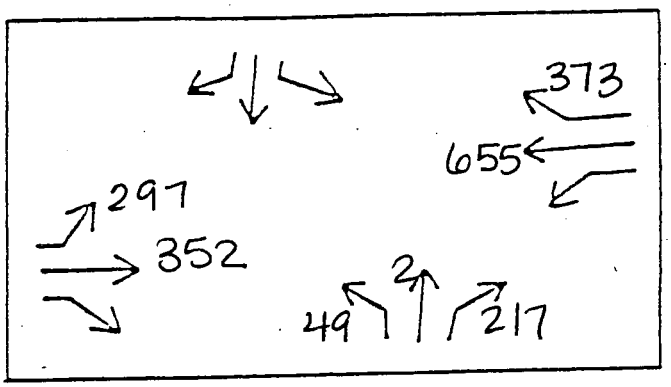
BY [illegible] DATE 4-6-10

TIME ____ AM (PM)

Existing + Units 1-3

DIAGRAM AND TRAFFIC FLOWS:





LANE VOLUMES (ILV/hr):

Phase 1	Phase 2	Phase 3	Phase 4
149 148 49 49 50	257 257 257 257 68 68 68	15 29 58	

CRITICAL LANE VOLUMES (ILV/hr):

Phase 1	Phase 2	Phase 3	Phase 4
149	257	109	

TOTAL OPERATING LEVEL (ILV/hr):

Σ
515

Is . . .

- [x] < 1200 ILV/hr.
- [ ] > 1200 but < 1500 ILV/hr.
- [ ] > 1500 ILV/hr. (CAPACITY)

REMARKS:

APPENDIX H

- Existing + Project Units 1-4 Arterial Synchro Analysis Worksheets
- Existing + Project Units 1-4 Synchro Analysis Worksheets
- Existing + Project Units 1-4 Intersection ILV Analysis

Existing + Project Units 1-4 Arterial Synchro Analysis Worksheets

Arterial Level of Service: EB Otay Mesa Road

Cross Street	Arterial Class	Flow Speed	Running Time	Signal Delay	Travel Time (s)	Dist (mi)	Arterial Speed	Arterial LOS
Heritage Road	II	45	28.4	90.6	119.0	0.27	8.3	F
Cactus Rd	II	45	44.7	59.8	104.5	0.51	17.5	D
Brittania Blvd	II	45	45.5	65.8	111.3	0.52	16.7	E
La Media	II	45	83.0	15.8	98.8	1.04	37.8	A
Piper Ranch Rd	II	45	44.3	38.2	82.5	0.50	22.0	D
	II	45	25.6	16.9	42.5	0.25	20.8	D
SR125 NB Ramp	II	45	14.8	4.6	19.4	0.14	25.1	C
SR905	II	45	15.0	177.9	192.9	0.14	2.6	F
Sanyo Ave	II	45	27.8	28.8	56.6	0.27	17.0	E
Enrico Fermi Dr	II	45	62.8	662.1	724.9	0.78	3.9	F
Total	II		391.9	1160.5	1552.4	4.41	10.2	F

Arterial Level of Service: WB Otay Mesa Road

Cross Street	Arterial Class	Flow Speed	Running Time	Signal Delay	Travel Time (s)	Dist (mi)	Arterial Speed	Arterial LOS
Enrico Fermi Dr	II	45	43.2	7.6	50.8	0.49	34.8	B
Sanyo Ave	II	45	62.8	3.1	65.9	0.78	42.8	A
SR905	II	45	27.8	10.4	38.2	0.27	25.2	C
SR125 NB Ramp	II	45	15.0	8.4	23.4	0.14	21.2	D
SR125 SB	II	45	14.8	12.3	27.1	0.14	18.0	D
Piper Ranch Rd	II	45	25.6	6.8	32.4	0.25	27.3	C
La Media	II	45	44.3	12.1	56.4	0.50	32.2	B
Brittania Blvd	II	45	83.0	3.2	86.2	1.04	43.4	A
Cactus Rd	II	45	45.5	2.3	47.8	0.52	38.9	A
Heritage Road	II	45	44.7	13.3	58.0	0.51	31.5	B
Total	II		406.7	79.5	486.2	4.63	34.3	B

Arterial Level of Service: EB Otay Mesa Road

Cross Street	Arterial Class	Flow Speed	Running Time	Signal Delay	Travel Time (s)	Dist (mi)	Arterial Speed	Arterial LOS
Heritage Road	II	45	28.4	19.5	47.9	0.27	20.5	D
Cactus Rd	II	45	44.7	14.6	59.3	0.51	30.8	B
Brittania Blvd	II	45	45.5	11.5	57.0	0.52	32.7	B
La Media	II	45	83.0	28.0	111.0	1.04	33.7	B
Piper Ranch Rd	II	45	43.8	5.7	49.5	0.50	36.2	A
	II	45	26.2	2.8	29.0	0.25	31.3	B
SR125 NB Ramp	II	45	14.7	0.2	14.9	0.14	32.7	B
SR905	II	45	15.0	15.4	30.4	0.14	16.3	E
Sanyo Ave	II	45	27.8	13.7	41.5	0.27	23.2	C
Enrico Fermi Rd	II	45	62.8	45.5	108.3	0.78	26.1	C
Total	II		391.9	156.9	548.8	4.41	28.9	B

Arterial Level of Service: WB Otay Mesa Road

Cross Street	Arterial Class	Flow Speed	Running Time	Signal Delay	Travel Time (s)	Dist (mi)	Arterial Speed	Arterial LOS
Enrico Fermi Rd	II	45	43.2	146.2	189.4	0.49	9.3	F
Sanyo Ave	II	45	62.8	419.5	482.3	0.78	5.9	F
SR905	II	45	27.8	267.1	294.9	0.27	3.3	F
SR125 NB Ramp	II	45	15.0	25.2	40.2	0.14	12.3	F
SR125 SB	II	45	14.7	2.6	17.3	0.14	28.1	B
Piper Ranch Rd	II	45	26.2	3.3	29.5	0.25	30.7	B
La Media	II	45	43.8	49.7	93.5	0.50	19.2	D
Brittania Blvd	II	45	83.0	28.3	111.3	1.04	33.6	B
Cactus Rd	II	45	45.5	10.3	55.8	0.52	33.4	B
Heritage Road	II	45	44.7	68.5	113.2	0.51	16.1	E
Total	II		406.7	1020.7	1427.4	4.63	11.7	F

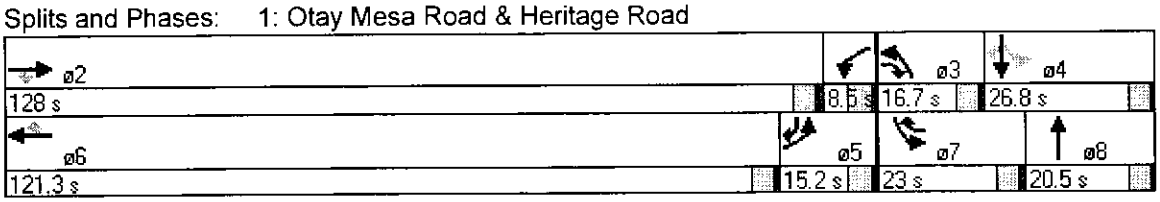
Existing + Project Units 1-4 Synchro Analysis Worksheets

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Total Lost Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	0.97	0.91	1.00	0.97	0.91	1.00	1.00	1.00	1.00	1.00	1.00	0.88
Frt			0.850			0.850		0.893				0.850
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	3433	4803	1583	3433	4803	1583	1770	1663	0	1770	1863	2787
Flt Permitted	0.950			0.950			0.950			0.413		
Satd. Flow (perm)	3433	4803	1583	3433	4803	1583	1770	1663	0	769	1863	2787
Satd. Flow (RTOR)			137			80		44				58
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Volume (vph)	105	3531	194	39	1256	71	54	22	56	233	37	52
Adj. Flow (vph)	118	3967	218	44	1411	80	61	25	63	262	42	58
Lane Group Flow (vph)	118	3967	218	44	1411	80	61	88	0	262	42	58
Turn Type	Prot		pm+ov	Prot		pm+ov	Prot			pm+pt		pm+ov
Protected Phases	5	2	3	1	6	7	3	8		7	4	5
Permitted Phases			2			6				4		4
Total Split (s)	15.2	128.0	16.7	8.5	121.3	23.0	16.7	20.5	0.0	23.0	26.8	15.2
Act Effct Green (s)	10.7	130.8	142.6	4.5	122.9	142.4	11.0	10.9		34.4	19.4	30.1
Actuated g/C Ratio	0.06	0.73	0.79	0.02	0.68	0.79	0.06	0.06		0.19	0.11	0.17
v/c Ratio	0.58	1.14	0.17	0.51	0.43	0.06	0.56	0.62		1.03	0.21	0.11
Control Delay	93.8	90.6	1.4	103.5	13.3	0.5	101.4	60.7		129.5	75.7	10.3
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0
Total Delay	93.8	90.6	1.4	103.5	13.3	0.5	101.4	60.7		129.5	75.7	10.3
LOS	F	F	A	F	B	A	F	E		F	E	B
Approach Delay		86.1			15.2			77.4			104.2	
Approach LOS		F			B			E			F	

Intersection Summary

Cycle Length: 180
Actuated Cycle Length: 180
Offset: 0 (0%), Referenced to phase 2:EBT and 6:WBT, Start of Green, Master Intersection
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 1.14
Intersection Signal Delay: 69.8 — Intersection LOS: E
Intersection Capacity Utilization 94.5% — ICU Level of Service F
Analysis Period (min) 15

Splits and Phases: 1: Otay Mesa Road & Heritage Road

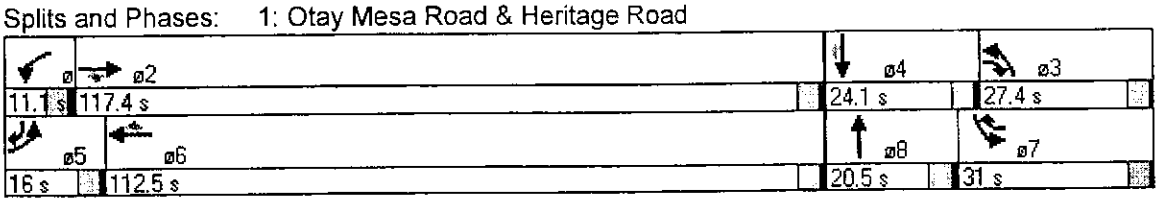


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Total Lost Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	0.97	0.91	1.00	0.97	0.91	1.00	1.00	1.00	1.00	1.00	1.00	0.88
Frt			0.850			0.850		0.920				0.850
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	3433	4803	1583	3433	4803	1583	1770	1714	0	1770	1863	2787
Flt Permitted	0.950			0.950			0.950			0.950		
Satd. Flow (perm)	3433	4803	1583	3433	4803	1583	1770	1714	0	1770	1863	2787
Satd. Flow (RTOR)			157			175		25				86
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Volume (vph)	189	1882	152	46	3041	219	133	58	66	217	65	220
Adj. Flow (vph)	195	1940	157	47	3135	226	137	60	68	224	67	227
Lane Group Flow (vph)	195	1940	157	47	3135	226	137	128	0	224	67	227
Turn Type	Prot		pm+ov	Prot		pm+ov	Prot			Prot		pm+ov
Protected Phases	5	2	3	1	6	7	3	8		7	4	5
Permitted Phases			2			6						4
Total Split (s)	16.0	117.4	27.4	11.1	112.5	31.0	27.4	20.5	0.0	31.0	24.1	16.0
Act Effct Green (s)	12.0	115.9	144.3	6.9	108.6	133.8	27.6	14.6		25.2	12.1	24.2
Actuated g/C Ratio	0.07	0.66	0.82	0.04	0.62	0.76	0.16	0.08		0.14	0.07	0.14
v/c Ratio	0.83	0.61	0.12	0.35	1.06	0.18	0.49	0.78		0.89	0.52	0.50
Control Delay	109.0	19.5	0.5	91.5	68.5	1.1	75.2	93.2		107.1	94.0	31.4
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0
Total Delay	109.0	19.5	0.5	91.5	68.5	1.1	75.2	93.2		107.1	94.0	31.4
LOS	F	B	A	F	E	A	E	F		F	F	C
Approach Delay		25.8			64.3			83.9			72.3	
Approach LOS		C			E			F			E	

Intersection Summary

Cycle Length: 180
Actuated Cycle Length: 176.4
Control Type: Actuated-Uncoordinated
Maximum v/c Ratio: 1.06
Intersection Signal Delay: 52.1
Intersection LOS: D
Intersection Capacity Utilization 96.6%
ICU Level of Service F
Analysis Period (min) 15

Splits and Phases: 1: Otay Mesa Road & Heritage Road

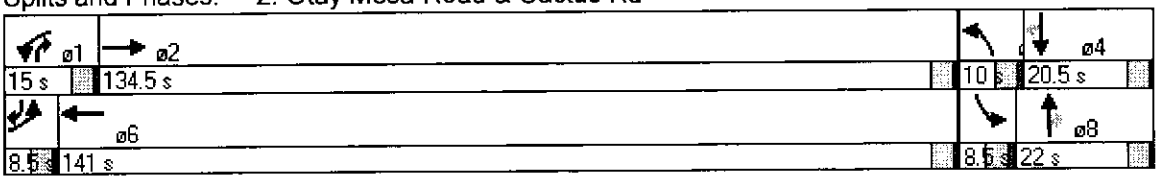


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Total Lost Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	1.00	0.91	0.91	1.00	0.91	0.91	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.998							0.850			0.850
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1770	4797	0	1770	4804	0	1770	1863	1583	1770	1863	1583
Flt Permitted	0.950			0.950			0.950			0.950		
Satd. Flow (perm)	1770	4797	0	1770	4804	0	1770	1863	1583	1770	1863	1583
Satd. Flow (RTOR)		3			1				28			78
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Volume (vph)	8	4004	58	53	1443	5	22	1	98	3	0	5
Adj. Flow (vph)	9	4400	64	58	1586	5	24	1	108	3	0	5
Lane Group Flow (vph)	9	4464	0	58	1591	0	24	1	108	3	0	5
Turn Type	Prot			Prot			Prot		pm+ov	Prot		pm+ov
Protected Phases	5	2		1	6		3	8	1	7	4	5
Permitted Phases									8			4
Total Split (s)	8.5	134.5	0.0	15.0	141.0	0.0	10.0	22.0	15.0	8.5	20.5	8.5
Act Effct Green (s)	7.0	151.6		12.5	164.9		7.9	6.2	18.7	4.5		7.0
Actuated g/C Ratio	0.04	0.84		0.07	0.92		0.04	0.03	0.10	0.02		0.04
v/c Ratio	0.13	1.10		0.47	0.36		0.31	0.02	0.57	0.07		0.04
Control Delay	78.4	59.8		92.3	2.3		92.4	84.0	66.7	89.0		0.6
Queue Delay	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0		0.0
Total Delay	78.4	59.8		92.3	2.3		92.4	84.0	66.7	89.0		0.6
LOS	E	E		F	A		F	F	E	F		A
Approach Delay		59.8			5.5			71.5				
Approach LOS		E			A			E				

Intersection Summary

Cycle Length: 180
Actuated Cycle Length: 180
Offset: 26 (14%), Referenced to phase 2:EBT and 6:WBT, Start of Green
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 1.10
Intersection Signal Delay: 45.7 — Intersection LOS: D
Intersection Capacity Utilization 98.1% — ICU Level of Service F
Analysis Period (min) 15

Splits and Phases: 2: Otay Mesa Road & Cactus Rd

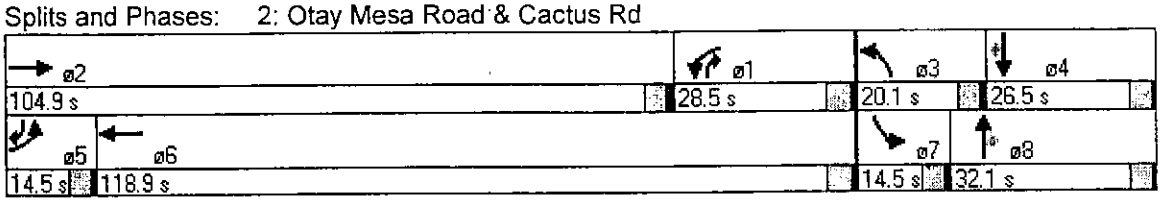


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Total Lost Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	1.00	0.91	0.91	1.00	0.91	0.91	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.996			0.999				0.850			0.850
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1770	4790	0	1770	4799	0	1770	1863	1583	1770	1863	1583
Flt Permitted	0.950			0.950			0.950			0.950		
Satd. Flow (perm)	1770	4790	0	1770	4799	0	1770	1863	1583	1770	1863	1583
Satd. Flow (RTOR)		3			1				97			53
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Volume (vph)	6	2404	58	100	3644	16	43	1	112	4	0	15
Adj. Flow (vph)	6	2453	59	102	3718	16	44	1	114	4	0	15
Lane Group Flow (vph)	6	2512	0	102	3734	0	44	1	114	4	0	15
Turn Type	Prot			Prot			Prot		pm+ov	Prot		pm+ov
Protected Phases	5	2		1	6		3	8	1	7	4	5
Permitted Phases									8			4
Total Split (s)	14.5	104.9	0.0	28.5	118.9	0.0	20.1	32.1	28.5	14.5	26.5	14.5
Act Effct Green (s)	6.7	133.5		25.5	157.1		11.1	8.7	35.4	6.5		6.7
Actuated g/C Ratio	0.04	0.74		0.14	0.87		0.06	0.05	0.20	0.04		0.04
v/c Ratio	0.09	0.71		0.41	0.89		0.40	0.01	0.29	0.06		0.14
Control Delay	86.2	14.6		69.3	10.3		90.7	82.0	14.9	85.5		2.6
Queue Delay	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0		0.0
Total Delay	86.2	14.6		69.3	10.3		90.7	82.0	14.9	85.5		2.6
LOS	F	B		E	B		F	F	B	F		A
Approach Delay		14.8			11.9			36.3				
Approach LOS		B			B			D				

Intersection Summary

Cycle Length: 180
Actuated Cycle Length: 180
Offset: 139 (77%), Referenced to phase 2:EBT and 6:WBT, Start of Green
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 0.89
Intersection Signal Delay: 13.6 — Intersection LOS: B
Intersection Capacity Utilization 93.1% — ICU Level of Service F
Analysis Period (min) 15

Splits and Phases: 2: Otay Mesa Road & Cactus Rd

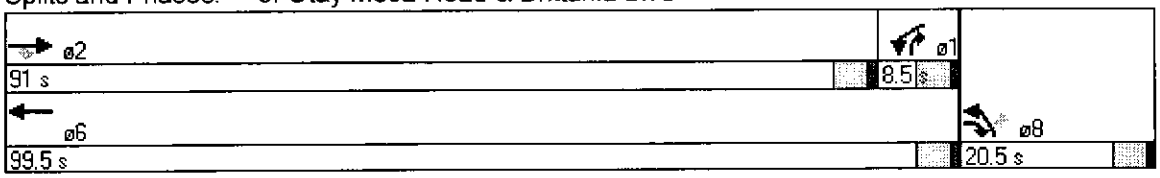


Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↑↑↑	↱	↰	↑↑↑	↰↰	↱
Total Lost Time (s)	4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	0.91	1.00	1.00	0.91	0.97	1.00
Frt		0.850				0.850
Flt Protected			0.950		0.950	
Satd. Flow (prot)	4803	1583	1770	4803	3433	1583
Flt Permitted			0.950		0.950	
Satd. Flow (perm)	4803	1583	1770	4803	3433	1583
Satd. Flow (RTOR)		131				1
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Volume (vph)	3269	669	51	1327	176	57
Adj. Flow (vph)	3846	787	60	1561	207	67
Lane Group Flow (vph)	3846	787	60	1561	207	67
Turn Type		pm+ov	Prot			pm+ov
Protected Phases	2	8	1	6	8	1
Permitted Phases		2				8
Total Split (s)	91.0	20.5	8.5	99.5	20.5	8.5
Act Effct Green (s)	87.8	107.5	4.5	96.3	15.7	24.2
Actuated g/C Ratio	0.73	0.90	0.04	0.80	0.13	0.20
v/c Ratio	1.09	0.55	0.91	0.40	0.46	0.21
Control Delay	65.8	2.6	133.0	3.2	51.7	40.9
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	65.8	2.6	133.0	3.2	51.7	40.9
LOS	E	A	F	A	D	D
Approach Delay	55.1			8.0	49.0	
Approach LOS	E			A	D	

Intersection Summary

Cycle Length: 120
Actuated Cycle Length: 120
Offset: 100 (83%), Referenced to phase 2:EBT and 6:WBT, Start of Green
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 1.09
Intersection Signal Delay: 43.1 — Intersection LOS: D
Intersection Capacity Utilization 74.8% — ICU Level of Service D
Analysis Period (min) 15

Splits and Phases: 3: Otay Mesa Road & Brittania Blvd

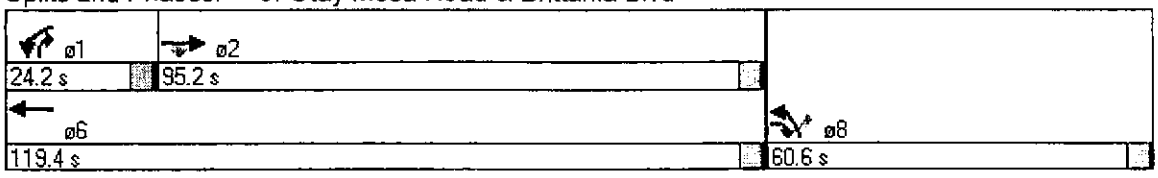


Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↑↑↑	↱	↰	↑↑↑	↰↰	↱
Total Lost Time (s)	4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	0.91	1.00	1.00	0.91	0.97	1.00
Frt		0.850				0.850
Flt Protected			0.950		0.950	
Satd. Flow (prot)	4803	1583	1770	4803	3433	1583
Flt Permitted			0.950		0.950	
Satd. Flow (perm)	4803	1583	1770	4803	3433	1583
Satd. Flow (RTOR)		309				2
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Volume (vph)	2072	287	67	3125	587	53
Adj. Flow (vph)	2228	309	72	3360	631	57
Lane Group Flow (vph)	2228	309	72	3360	631	57
Turn Type		pm+ov	Prot			pm+ov
Protected Phases	2	8	1	6	8	1
Permitted Phases		2				8
Total Split (s)	95.2	60.6	24.2	119.4	60.6	24.2
Act Effct Green (s)	115.9	159.0	13.0	132.9	39.1	56.1
Actuated g/C Ratio	0.64	0.88	0.07	0.74	0.22	0.31
v/c Ratio	0.72	0.22	0.56	0.95	0.85	0.12
Control Delay	11.5	0.8	96.6	28.3	78.8	40.8
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	11.5	0.8	96.6	28.3	78.8	40.8
LOS	B	A	F	C	E	D
Approach Delay	10.2			29.8	75.7	
Approach LOS	B			C	E	

Intersection Summary

Cycle Length: 180
Actuated Cycle Length: 180
Offset: 170 (94%), Referenced to phase 2:EBT and 6:WBT, Start of Green
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 0.95
Intersection Signal Delay: 27.0 — Intersection LOS: C
Intersection Capacity Utilization 83.8% — ICU Level of Service E
Analysis Period (min) 15

Splits and Phases: 3: Otay Mesa Road & Brittania Blvd

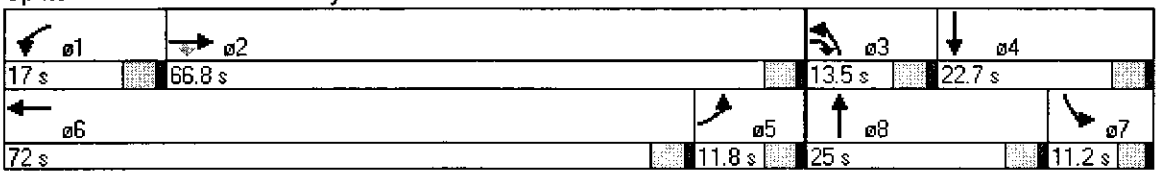


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Total Lost Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	1.00	0.91	1.00	1.00	0.91	0.91	1.00	1.00	1.00	0.97	1.00	1.00
Frt			0.850		0.995			0.939			0.913	
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1770	4803	1583	1770	4788	0	1770	1690	0	3433	1659	0
Flt Permitted	0.950			0.950			0.950			0.950		
Satd. Flow (perm)	1770	4803	1583	1770	4788	0	1770	1690	0	3433	1659	0
Satd. Flow (RTOR)			213		7			17			48	
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Volume (vph)	71	2704	233	87	1273	46	75	24	16	80	52	71
Adj. Flow (vph)	75	2846	245	92	1340	48	79	25	17	84	55	75
Lane Group Flow (vph)	75	2846	245	92	1388	0	79	42	0	84	130	0
Turn Type	Prot		pm+ov	Prot			Prot			Prot		
Protected Phases	5	2	3	1	6		3	8		7	4	
Permitted Phases			2									
Total Split (s)	11.8	66.8	13.5	17.0	72.0	0.0	13.5	25.0	0.0	11.2	22.7	0.0
Act Effct Green (s)	7.7	71.6	84.6	11.6	77.7		9.0	10.1		12.7	11.8	
Actuated g/C Ratio	0.06	0.60	0.70	0.10	0.65		0.08	0.08		0.11	0.10	
v/c Ratio	0.66	0.99	0.21	0.54	0.45		0.59	0.27		0.23	0.63	
Control Delay	44.0	15.8	1.1	62.9	12.1		72.1	39.9		49.4	45.3	
Queue Delay	0.0	0.0	0.0	0.0	0.0		0.0	0.0		0.0	0.0	
Total Delay	44.0	15.8	1.1	62.9	12.1		72.1	39.9		49.4	45.3	
LOS	D	B	A	E	B		E	D		D	D	
Approach Delay		15.3			15.3			60.9			46.9	
Approach LOS		B			B			E			D	

Intersection Summary

Cycle Length: 120
Actuated Cycle Length: 120
Offset: 87 (73%), Referenced to phase 2:EBT and 6:WBT, Start of Green
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 0.99
Intersection Signal Delay: 17.8 Intersection LOS: B
Intersection Capacity Utilization 81.6% ICU Level of Service D
Analysis Period (min) 15

Splits and Phases: 4: Otay Mesa Road & La Media

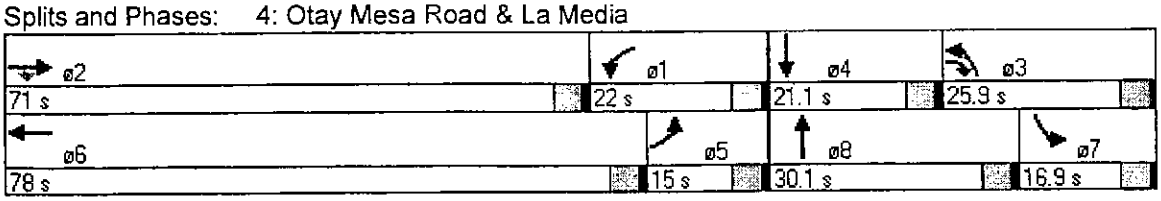


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Total Lost Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	1.00	0.91	1.00	1.00	0.91	0.91	1.00	1.00	1.00	0.97	1.00	1.00
Frt			0.850		0.997			0.922			0.903	
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1770	4803	1583	1770	4793	0	1770	1670	0	3433	1648	0
Flt Permitted	0.950			0.950			0.950			0.950		
Satd. Flow (perm)	1770	4803	1583	1770	4793	0	1770	1670	0	3433	1648	0
Satd. Flow (RTOR)			249		3			25			54	
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Volume (vph)	70	1855	239	55	2719	51	158	22	24	70	63	116
Adj. Flow (vph)	73	1932	249	57	2832	53	165	23	25	73	66	121
Lane Group Flow (vph)	73	1932	249	57	2885	0	165	48	0	73	187	0
Turn Type	Prot		pm+ov	Prot			Prot			Prot		
Protected Phases	5	2	3	1	6		3	8		7	4	
Permitted Phases			2									
Total Split (s)	15.0	71.0	25.9	22.0	78.0	0.0	25.9	30.1	0.0	16.9	21.1	0.0
Act Effct Green (s)	9.9	77.5	99.4	15.4	83.1		17.9	12.1		23.1	15.2	
Actuated g/C Ratio	0.07	0.55	0.71	0.11	0.59		0.13	0.09		0.16	0.11	
v/c Ratio	0.58	0.73	0.21	0.29	1.01		0.73	0.29		0.13	0.82	
Control Delay	81.2	28.0	1.4	59.7	49.7		76.8	39.8		47.7	70.1	
Queue Delay	0.0	0.0	0.0	0.0	0.0		0.0	0.0		0.0	0.0	
Total Delay	81.2	28.0	1.4	59.7	49.7		76.8	39.8		47.7	70.1	
LOS	F	C	A	E	D		E	D		D	E	
Approach Delay		26.8			49.9			68.5			63.8	
Approach LOS		C			D			E			E	

Intersection Summary

Cycle Length: 140
Actuated Cycle Length: 140
Offset: 0 (0%), Referenced to phase 2:EBT and 6:WBT, Start of Green
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 1.01
Intersection Signal Delay: 42.0 — Intersection LOS: D
Intersection Capacity Utilization 87.4% — ICU Level of Service E
Analysis Period (min) 15

Splits and Phases: 4: Otay Mesa Road & La Media

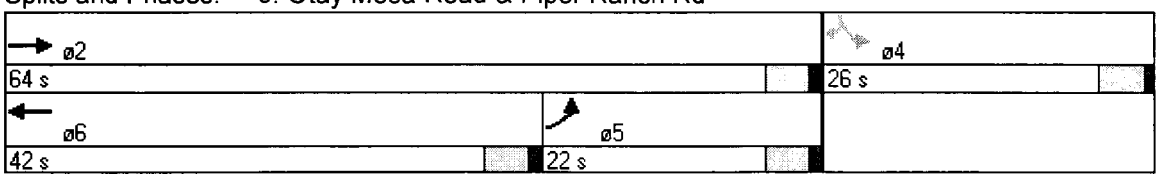


Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Total Lost Time (s)	4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	1.00	0.95	0.91	0.91	0.97	0.91
Frt			0.997			0.850
Flt Protected	0.950				0.950	
Satd. Flow (prot)	1770	3539	5070	0	3433	1441
Flt Permitted	0.950				0.950	
Satd. Flow (perm)	1770	3539	5070	0	3433	1441
Satd. Flow (RTOR)			5			20
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Volume (vph)	106	2737	1389	32	30	18
Adj. Flow (vph)	119	3075	1561	36	34	20
Lane Group Flow (vph)	119	3075	1597	0	34	20
Turn Type	Prot					custom
Protected Phases	5	2	6			
Permitted Phases					4	4
Total Split (s)	22.0	64.0	42.0	0.0	26.0	26.0
Act Effct Green (s)	15.8	75.2	57.6		6.8	6.8
Actuated g/C Ratio	0.18	0.84	0.64		0.08	0.08
v/c Ratio	0.38	1.04	0.49		0.13	0.16
Control Delay	35.5	38.2	6.8		39.6	19.4
Queue Delay	0.0	0.0	0.0		0.0	0.0
Total Delay	35.5	38.2	6.8		39.6	19.4
LOS	D	D	A		D	B
Approach Delay		38.1	6.8		32.1	
Approach LOS		D	A		C	

Intersection Summary

Cycle Length: 90
Actuated Cycle Length: 90
Offset: 9 (10%), Referenced to phase 2:EBT and 6:WBT, Start of Green
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 1.04
Intersection Signal Delay: 27.7 Intersection LOS: C
Intersection Capacity Utilization 85.7% ICU Level of Service E
Analysis Period (min) 15

Splits and Phases: 5: Otay Mesa Road & Piper Ranch Rd

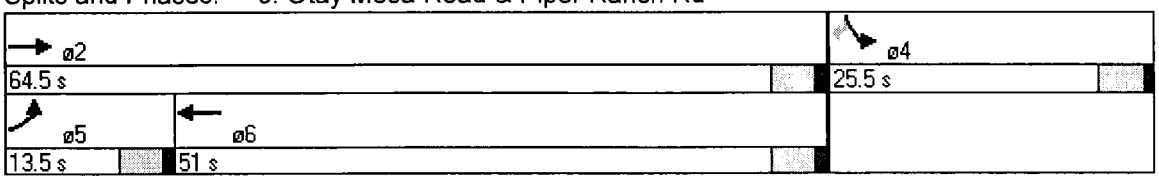


Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Total Lost Time (s)	4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	1.00	0.95	0.91	0.91	0.97	0.91
Frt			0.998		0.930	0.850
Flt Protected	0.950				0.974	
Satd. Flow (prot)	1770	3539	5075	0	3273	1441
Flt Permitted	0.950				0.974	
Satd. Flow (perm)	1770	3539	5075	0	3273	1441
Satd. Flow (RTOR)			3		51	51
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Volume (vph)	17	1999	2728	29	53	94
Adj. Flow (vph)	18	2173	2965	32	58	102
Lane Group Flow (vph)	18	2173	2997	0	109	51
Turn Type	Prot					Perm
Protected Phases	5	2	6		4	
Permitted Phases						4
Total Split (s)	13.5	64.5	51.0	0.0	25.5	25.5
Act Effct Green (s)	6.9	74.4	69.6		7.6	7.6
Actuated g/C Ratio	0.08	0.83	0.77		0.08	0.08
v/c Ratio	0.13	0.74	0.76		0.34	0.30
Control Delay	40.4	5.7	3.3		25.0	16.4
Queue Delay	0.0	0.0	0.0		0.0	0.0
Total Delay	40.4	5.7	3.3		25.0	16.4
LOS	D	A	A		C	B
Approach Delay		6.0	3.3		22.2	
Approach LOS		A	A		C	

Intersection Summary

Cycle Length: 90
Actuated Cycle Length: 90
Offset: 0 (0%), Referenced to phase 2:EBT and 6:WBT, Start of Green
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 0.76
Intersection Signal Delay: 5.0 Intersection LOS: A
Intersection Capacity Utilization 65.3% ICU Level of Service C
Analysis Period (min) 15

Splits and Phases: 5: Otay Mesa Road & Piper Ranch Rd

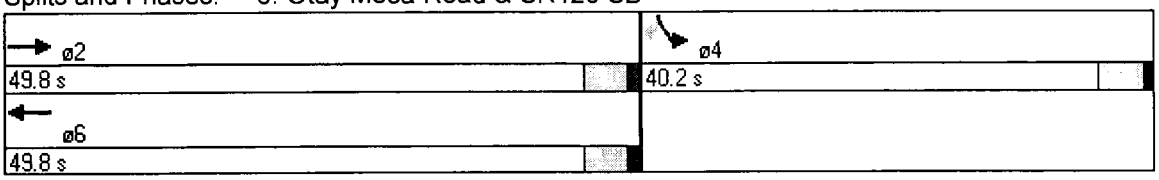


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↑↑↑	↱		↑↑↑					↰↰		↱
Total Lost Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	1.00	0.86	0.86	1.00	0.91	1.00	1.00	1.00	1.00	0.97	1.00	1.00
Frt			0.850									0.850
Flt Protected										0.950		
Satd. Flow (prot)	0	4806	1362	0	5085	0	0	0	0	3433	0	1583
Flt Permitted										0.950		
Satd. Flow (perm)	0	4806	1362	0	5085	0	0	0	0	3433	0	1583
Satd. Flow (RTOR)			621									25
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Volume (vph)	0	1701	931	0	1217	0	0	0	0	830	0	145
Adj. Flow (vph)	0	1978	1083	0	1415	0	0	0	0	965	0	169
Lane Group Flow (vph)	0	1978	1083	0	1415	0	0	0	0	965	0	169
Turn Type			Free							Prot		custom
Protected Phases		2			6					4		
Permitted Phases			Free									4
Total Split (s)	0.0	49.8	0.0	0.0	49.8	0.0	0.0	0.0	0.0	40.2	0.0	40.2
Act Effct Green (s)		50.8	90.0		50.8					31.2		31.2
Actuated g/C Ratio		0.56	1.00		0.56					0.35		0.35
v/c Ratio		0.73	0.80		0.49					0.81		0.30
Control Delay		16.9	2.6		12.3					32.3		18.5
Queue Delay		0.0	0.0		0.0					0.0		0.0
Total Delay		16.9	2.6		12.3					32.3		18.5
LOS		B	A		B					C		B
Approach Delay		11.8			12.3							
Approach LOS		B			B							

Intersection Summary

Cycle Length: 90
Actuated Cycle Length: 90
Offset: 2 (2%), Referenced to phase 2:EBT and 6:WBT, Start of Green
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 0.81
Intersection Signal Delay: 15.7 Intersection LOS: B
Intersection Capacity Utilization 72.5% ICU Level of Service C
Analysis Period (min) 15

Splits and Phases: 6: Otay Mesa Road & SR125 SB

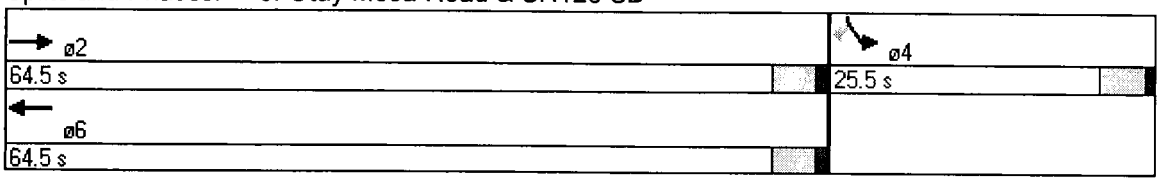


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Total Lost Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	1.00	0.86	0.86	1.00	0.91	1.00	1.00	1.00	1.00	0.97	1.00	1.00
Frt		0.930	0.850									0.850
Flt Protected										0.950		
Satd. Flow (prot)	0	4469	1362	0	5085	0	0	0	0	3433	0	1583
Flt Permitted										0.950		
Satd. Flow (perm)	0	4469	1362	0	5085	0	0	0	0	3433	0	1583
Satd. Flow (RTOR)		539	663									2
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Volume (vph)	0	692	1219	0	2773	0	0	0	0	282	0	40
Adj. Flow (vph)	0	752	1325	0	3014	0	0	0	0	307	0	43
Lane Group Flow (vph)	0	1414	663	0	3014	0	0	0	0	307	0	43
Turn Type			Free							Prot		custom
Protected Phases		2			6					4		
Permitted Phases			Free									4
Total Split (s)	0.0	64.5	0.0	0.0	64.5	0.0	0.0	0.0	0.0	25.5	0.0	25.5
Act Effct Green (s)		68.6	90.0		68.6					13.4		13.4
Actuated g/C Ratio		0.76	1.00		0.76					0.15		0.15
v/c Ratio		0.40	0.49		0.78					0.60		0.18
Control Delay		2.8	0.8		2.6					40.5		32.9
Queue Delay		0.0	0.0		0.5					0.0		0.0
Total Delay		2.8	0.8		3.1					40.5		32.9
LOS		A	A		A					D		C
Approach Delay		2.2			3.1							
Approach LOS		A			A							

Intersection Summary

Cycle Length: 90
Actuated Cycle Length: 90
Offset: 56 (62%), Referenced to phase 2:EBT and 6:WBT, Start of Green
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 0.78
Intersection Signal Delay: 5.1 — Intersection LOS: A
Intersection Capacity Utilization 84.5% — ICU Level of Service E
Analysis Period (min) 15

Splits and Phases: 6: Otay Mesa Road & SR125 SB

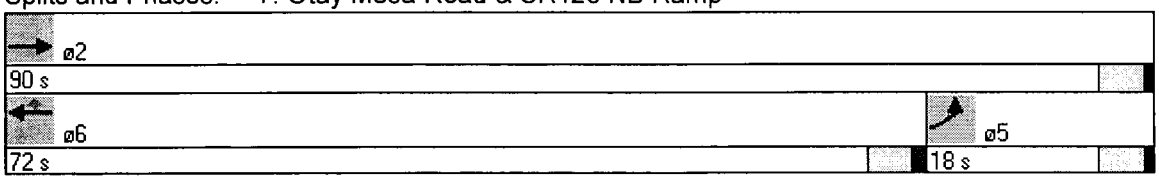


Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Total Lost Time (s)	4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	0.97	0.95	0.95	0.88	1.00	1.00
Frt				0.850		
Flt Protected	0.950					
Satd. Flow (prot)	3433	3539	3539	2787	0	0
Flt Permitted	0.950					
Satd. Flow (perm)	3433	3539	3539	2787	0	0
Satd. Flow (RTOR)				217		
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Volume (vph)	29	2503	1171	189	0	0
Adj. Flow (vph)	33	2877	1346	217	0	0
Lane Group Flow (vph)	33	2877	1346	217	0	0
Turn Type	Prot			Perm		
Protected Phases	5	2	6			
Permitted Phases				6		
Total Split (s)	18.0	90.0	72.0	72.0	0.0	0.0
Act Effct Green (s)	15.1	90.0	75.5	75.5		
Actuated g/C Ratio	0.17	1.00	0.84	0.84		
v/c Ratio	0.06	0.81	0.45	0.09		
Control Delay	21.4	4.6	8.4	2.5		
Queue Delay	0.0	0.0	0.0	0.0		
Total Delay	21.4	4.6	8.4	2.5		
LOS	C	A	A	A		
Approach Delay		4.8	7.6			
Approach LOS		A	A			

Intersection Summary

Cycle Length: 90
Actuated Cycle Length: 90
Offset: 62 (69%), Referenced to phase 2:EBT and 6:WBT, Start of Green
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 0.81
Intersection Signal Delay: 5.7 Intersection LOS: A
Intersection Capacity Utilization 72.5% ICU Level of Service C
Analysis Period (min) 15

Splits and Phases: 7: Otay Mesa Road & SR125 NB Ramp

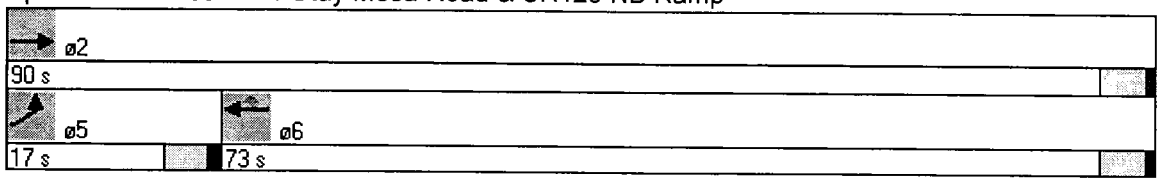


Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Total Lost Time (s)	4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	0.97	0.95	0.95	0.88	1.00	1.00
Frt				0.850		
Flt Protected	0.950					
Satd. Flow (prot)	3433	3539	3539	2787	0	0
Flt Permitted	0.950					
Satd. Flow (perm)	3433	3539	3539	2787	0	0
Satd. Flow (RTOR)				633		
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Volume (vph)	113	861	2694	789	0	0
Adj. Flow (vph)	124	946	2960	867	0	0
Lane Group Flow (vph)	124	946	2960	867	0	0
Turn Type	Prot			Perm		
Protected Phases	5	2	6			
Permitted Phases				6		
Total Split (s)	17.0	90.0	73.0	73.0	0.0	0.0
Act Effct Green (s)	9.0	90.0	73.0	73.0		
Actuated g/C Ratio	0.10	1.00	0.81	0.81		
v/c Ratio	0.36	0.27	1.03	0.36		
Control Delay	45.2	0.2	25.2	0.2		
Queue Delay	0.0	0.0	37.4	0.0		
Total Delay	45.2	0.2	62.6	0.2		
LOS	D	A	E	A		
Approach Delay		5.4	48.4			
Approach LOS		A	D			

Intersection Summary

Cycle Length: 90
Actuated Cycle Length: 90
Offset: 33 (37%), Referenced to phase 2:EBT and 6:WBT, Start of Green
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 1.03
Intersection Signal Delay: 39.0 — Intersection LOS: D
Intersection Capacity Utilization 84.5% — ICU Level of Service E
Analysis Period (min) 15

Splits and Phases: 7: Otay Mesa Road & SR125 NB Ramp

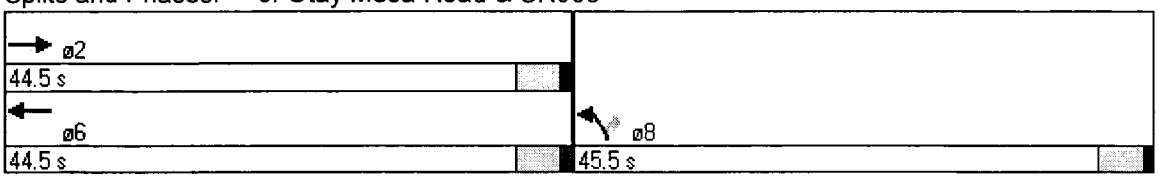


Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↑↑			↑↑	↰↰	↱
Total Lost Time (s)	4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	0.95	1.00	1.00	0.95	0.97	1.00
Frt						0.850
Flt Protected					0.950	
Satd. Flow (prot)	3539	0	0	3539	3433	1583
Flt Permitted					0.950	
Satd. Flow (perm)	3539	0	0	3539	3433	1583
Satd. Flow (RTOR)						
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Volume (vph)	2520	0	0	693	689	15
Adj. Flow (vph)	2930	0	0	806	801	17
Lane Group Flow (vph)	2930	0	0	806	801	17
Turn Type						Perm
Protected Phases	2			6	8	
Permitted Phases						8
Total Split (s)	44.5	0.0	0.0	44.5	45.5	45.5
Act Effct Green (s)	55.3			55.3	26.7	26.7
Actuated g/C Ratio	0.61			0.61	0.30	0.30
v/c Ratio	1.35			0.37	0.79	0.04
Control Delay	177.9			10.4	29.8	13.7
Queue Delay	0.0			0.0	0.0	0.0
Total Delay	177.9			10.4	29.8	13.7
LOS	F			B	C	B
Approach Delay	177.9			10.4	29.5	
Approach LOS	F			B	C	

Intersection Summary

Cycle Length: 90
Actuated Cycle Length: 90
Offset: 58 (64%), Referenced to phase 2:EBT and 6:WBT, Start of Green
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 1.35
Intersection Signal Delay: 121.6 — Intersection LOS: F
Intersection Capacity Utilization 96.0% — ICU Level of Service F
Analysis Period (min) 15

Splits and Phases: 8: Otay Mesa Road & SR905

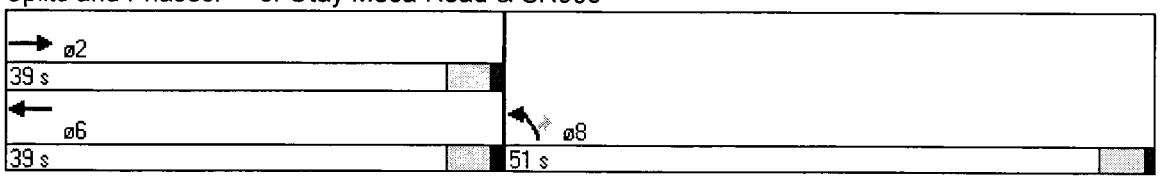


Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↑↑			↑↑	↰↰	↱
Total Lost Time (s)	4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	0.95	1.00	1.00	0.95	0.97	1.00
Frt						0.850
Flt Protected					0.950	
Satd. Flow (prot)	3539	0	0	3539	3433	1583
Flt Permitted					0.950	
Satd. Flow (perm)	3539	0	0	3539	3433	1583
Satd. Flow (RTOR)						9
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Volume (vph)	861	0	0	2354	1168	8
Adj. Flow (vph)	946	0	0	2587	1284	9
Lane Group Flow (vph)	946	0	0	2587	1284	9
Turn Type						Perm
Protected Phases	2			6	8	
Permitted Phases						8
Total Split (s)	39.0	0.0	0.0	39.0	51.0	51.0
Act Effct Green (s)	42.6			42.6	39.4	39.4
Actuated g/C Ratio	0.47			0.47	0.44	0.44
v/c Ratio	0.57			1.55	0.85	0.01
Control Delay	15.4			267.1	26.2	5.0
Queue Delay	0.0			0.0	0.0	0.0
Total Delay	15.4			267.1	26.3	5.0
LOS	B			F	C	A
Approach Delay	15.4			267.1	26.1	
Approach LOS	B			F	C	

Intersection Summary

Cycle Length: 90
Actuated Cycle Length: 90
Offset: 29 (32%), Referenced to phase 2:EBT and 6:WBT, Start of Green
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 1.55
Intersection Signal Delay: 153.2 — Intersection LOS: F
Intersection Capacity Utilization 105.1% — ICU Level of Service G
Analysis Period (min) 15

Splits and Phases: 8: Otay Mesa Road & SR905

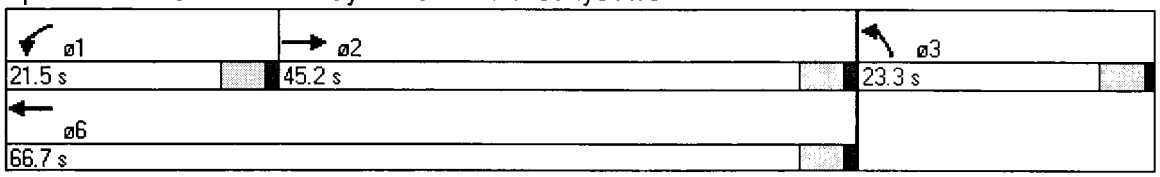


Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Total Lost Time (s)	4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	0.95	0.95	1.00	1.00	0.97	0.95
Frt	0.988				0.965	
Flt Protected			0.950		0.963	
Satd. Flow (prot)	3497	0	1770	1863	3358	0
Flt Permitted			0.950		0.963	
Satd. Flow (perm)	3497	0	1770	1863	3358	0
Satd. Flow (RTOR)	14				12	
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Volume (vph)	2226	200	24	680	32	10
Adj. Flow (vph)	2782	250	30	850	40	12
Lane Group Flow (vph)	3032	0	30	850	52	0
Turn Type			Prot			
Protected Phases	2		1	6	3	
Permitted Phases						
Total Split (s)	45.2	0.0	21.5	66.7	23.3	0.0
Act Effct Green (s)	75.5		7.4	80.7	7.0	
Actuated g/C Ratio	0.84		0.08	0.90	0.08	
v/c Ratio	1.03		0.21	0.51	0.19	
Control Delay	28.8		41.4	3.1	33.1	
Queue Delay	0.0		0.0	0.0	0.0	
Total Delay	28.8		41.4	3.1	33.1	
LOS	C		D	A	C	
Approach Delay	28.8			4.4	33.1	
Approach LOS	C			A	C	

Intersection Summary

Cycle Length: 90
Actuated Cycle Length: 90
Offset: 0 (0%), Referenced to phase 2:EBT and 6:WBT, Start of Green
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 1.03
Intersection Signal Delay: 23.5 Intersection LOS: C
Intersection Capacity Utilization 77.9% ICU Level of Service D
Analysis Period (min) 15

Splits and Phases: 10: Otay Mesa Road & Sanyo Ave

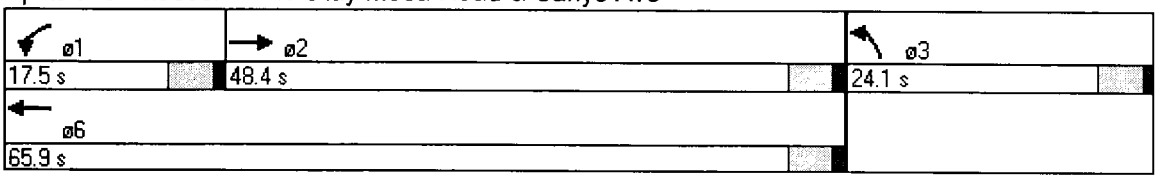


Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Total Lost Time (s)	4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	0.95	0.95	1.00	1.00	0.97	0.95
Frt	0.991				0.996	
Flt Protected			0.950		0.954	
Satd. Flow (prot)	3507	0	1770	1863	3434	0
Flt Permitted			0.950		0.954	
Satd. Flow (perm)	3507	0	1770	1863	3434	0
Satd. Flow (RTOR)	11				3	
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Volume (vph)	813	54	12	2228	185	5
Adj. Flow (vph)	1004	67	15	2751	228	6
Lane Group Flow (vph)	1071	0	15	2751	234	0
Turn Type			Prot			
Protected Phases	2		1	6	3	
Permitted Phases						
Total Split (s)	48.4	0.0	17.5	65.9	24.1	0.0
Act Effct Green (s)	68.0		6.7	70.4	11.6	
Actuated g/C Ratio	0.76		0.07	0.78	0.13	
v/c Ratio	0.40		0.11	1.89	0.53	
Control Delay	13.7		40.4	419.5	40.2	
Queue Delay	0.0		0.0	0.0	0.0	
Total Delay	13.7		40.4	419.5	40.2	
LOS	B		D	F	D	
Approach Delay	13.7			417.4	40.2	
Approach LOS	B			F	D	

Intersection Summary

Cycle Length: 90
Actuated Cycle Length: 90
Offset: 0 (0%), Referenced to phase 2:EBT and 6:WBT, Start of Green
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 1.89
Intersection Signal Delay: 289.5 — Intersection LOS: F
Intersection Capacity Utilization 129.4% — ICU Level of Service H
Analysis Period (min) 15

Splits and Phases: 10: Otay Mesa Road & Sanyo Ave

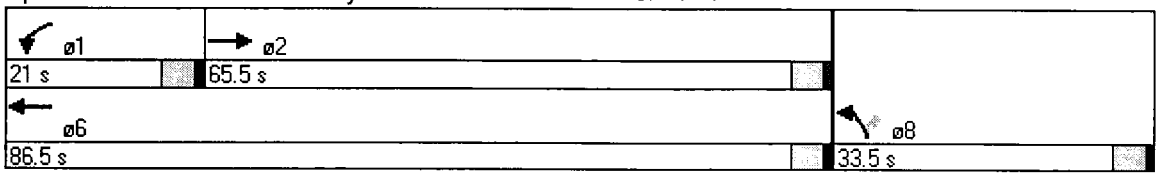


Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Total Lost Time (s)	4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt	0.955					0.850
Flt Protected			0.950		0.950	
Satd. Flow (prot)	1779	0	1770	1863	1770	1583
Flt Permitted			0.950		0.950	
Satd. Flow (perm)	1779	0	1770	1863	1770	1583
Satd. Flow (RTOR)	30					56
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Volume (vph)	1525	756	37	342	280	48
Adj. Flow (vph)	1794	889	44	402	329	56
Lane Group Flow (vph)	2683	0	44	402	329	56
Turn Type			Prot			Perm
Protected Phases	2		1	6	8	
Permitted Phases						8
Total Split (s)	65.5	0.0	21.0	86.5	33.5	33.5
Act Effct Green (s)	62.6		8.6	70.2	23.3	23.3
Actuated g/C Ratio	0.62		0.08	0.69	0.23	0.23
v/c Ratio	2.43		0.31	0.31	0.81	0.14
Control Delay	662.1		53.3	7.6	54.1	9.6
Queue Delay	0.0		0.0	0.0	0.0	0.0
Total Delay	662.1		53.3	7.6	54.1	9.6
LOS	F		D	A	D	A
Approach Delay	662.1			12.1	47.6	
Approach LOS	F			B	D	

Intersection Summary

Cycle Length: 120
Actuated Cycle Length: 101.7
Control Type: Actuated-Uncoordinated
Maximum v/c Ratio: 2.43
Intersection Signal Delay: 512.3 — Intersection LOS: F
Intersection Capacity Utilization 148.5% — ICU Level of Service H
Analysis Period (min) 15

Splits and Phases: 13: Otay Mesa Road & Enrico Fermi Dr

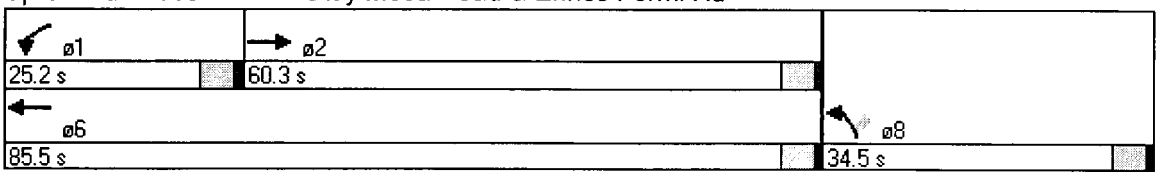


Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Total Lost Time (s)	4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt	0.948					0.850
Flt Protected			0.950		0.950	
Satd. Flow (prot)	1766	0	1770	1863	1770	1583
Flt Permitted			0.950		0.950	
Satd. Flow (perm)	1766	0	1770	1863	1770	1583
Satd. Flow (RTOR)	36					14
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Volume (vph)	492	310	140	1468	835	26
Adj. Flow (vph)	535	337	152	1596	908	28
Lane Group Flow (vph)	872	0	152	1596	908	28
Turn Type			Prot			Perm
Protected Phases	2		1	6	8	
Permitted Phases						8
Total Split (s)	60.3	0.0	25.2	85.5	34.5	34.5
Act Effct Green (s)	62.0		15.5	81.5	30.5	30.5
Actuated g/C Ratio	0.52		0.13	0.68	0.25	0.25
v/c Ratio	0.94		0.66	1.26	2.02	0.07
Control Delay	45.5		63.0	146.2	491.8	21.9
Queue Delay	0.0		0.0	0.0	0.0	0.0
Total Delay	45.5		63.0	146.2	491.8	21.9
LOS	D		E	F	F	C
Approach Delay	45.5			139.0	477.7	
Approach LOS	D			F	F	

Intersection Summary

Cycle Length: 120
Actuated Cycle Length: 120
Control Type: Actuated-Uncoordinated
Maximum v/c Ratio: 2.02
Intersection Signal Delay: 205.2 — Intersection LOS: F
Intersection Capacity Utilization 130.2% — ICU Level of Service H
Analysis Period (min) 15

Splits and Phases: 13: Otay Mesa Road & Enrico Fermi Rd



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Sign Control		Stop			Stop			Stop			Stop	
Volume (vph)	652	391	676	0	96	0	196	1	0	0	4	168
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
Hourly flow rate (vph)	709	425	735	0	104	0	213	1	0	0	4	183

Direction, Lane #	EB 1	WB 1	NB 1	SB 1
Volume Total (vph)	1868	104	214	187
Volume Left (vph)	709	0	213	0
Volume Right (vph)	735	0	0	183
Hadj (s)	-0.13	0.03	0.23	-0.55
Departure Headway (s)	5.3	6.4	6.7	6.0
Degree Utilization, x	2.74	0.18	0.40	0.31
Capacity (veh/h)	692	525	523	572
Control Delay (s)	800.6	10.8	14.0	11.7
Approach Delay (s)	800.6	10.8	14.0	11.7
Approach LOS	F	B	B	B

Intersection Summary			
Delay	632.8		
HCM Level of Service	F		
Intersection Capacity Utilization	136.2%	ICU Level of Service	H
Analysis Period (min)	15		

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Sign Control		Stop			Stop			Stop			Stop	
Volume (vph)	101	168	272	0	356	0	651	0	0	0	1	726
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
Hourly flow rate (vph)	116	193	313	0	409	0	748	0	0	0	1	834

Direction, Lane #	EB 1	WB 1	NB 1	SB 1
Volume Total (vph)	622	409	748	836
Volume Left (vph)	116	0	748	0
Volume Right (vph)	313	0	0	834
Hadj (s)	-0.23	0.03	0.23	-0.57
Departure Headway (s)	9.3	9.6	9.8	9.0
Degree Utilization, x	1.61	1.09	2.04	2.09
Capacity (veh/h)	389	384	373	407
Control Delay (s)	310.6	104.7	497.7	518.9
Approach Delay (s)	310.6	104.7	497.7	518.9
Approach LOS	F	F	F	F

Intersection Summary			
Delay	398.5		
HCM Level of Service	F		
Intersection Capacity Utilization	144.2%	ICU Level of Service	H
Analysis Period (min)	15		

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Sign Control		Stop			Stop			Stop			Stop	
Volume (vph)	9	84	60	35	80	49	57	101	3	209	255	46
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
Hourly flow rate (vph)	10	93	67	39	89	54	63	112	3	232	283	51

Direction, Lane #	EB 1	WB 1	NB 1	SB 1	SB 2
Volume Total (vph)	170	182	179	232	334
Volume Left (vph)	10	39	63	232	0
Volume Right (vph)	67	54	3	0	51
Hadj (s)	-0.19	-0.10	0.16	0.53	0.01
Departure Headway (s)	6.0	6.0	6.1	6.4	5.9
Degree Utilization, x	0.28	0.31	0.30	0.41	0.55
Capacity (veh/h)	547	544	541	543	596
Control Delay (s)	11.3	11.7	11.7	12.7	14.5
Approach Delay (s)	11.3	11.7	11.7	13.8	
Approach LOS	B	B	B	B	

Intersection Summary			
Delay	12.7		
HCM Level of Service	B		
Intersection Capacity Utilization	55.0%	ICU Level of Service	A
Analysis Period (min)	15		

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕		↰	↕	
Sign Control		Stop			Stop			Stop			Stop	
Volume (vph)	38	145	83	119	116	119	72	180	8	143	171	23
Peak Hour Factor	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99
Hourly flow rate (vph)	38	146	84	120	117	120	73	182	8	144	173	23

Direction, Lane #	EB 1	WB 1	NB 1	SB 1	SB 2
Volume Total (vph)	269	358	263	144	196
Volume Left (vph)	38	120	73	144	0
Volume Right (vph)	84	120	8	0	23
Hadj (s)	-0.12	-0.10	0.14	0.53	0.04
Departure Headway (s)	6.7	6.5	7.1	7.8	7.3
Degree Utilization, x	0.50	0.64	0.52	0.31	0.40
Capacity (veh/h)	483	514	461	427	448
Control Delay (s)	16.1	20.4	17.4	13.1	13.7
Approach Delay (s)	16.1	20.4	17.4	13.5	
Approach LOS	C	C	C	B	

Intersection Summary			
Delay	16.9		
HCM Level of Service	C		
Intersection Capacity Utilization	72.4%	ICU Level of Service	C
Analysis Period (min)	15		

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Sign Control		Stop			Stop			Stop			Stop	
Volume (vph)	14	124	91	4	128	21	31	15	3	102	121	12
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
Hourly flow rate (vph)	15	133	98	4	138	23	33	16	3	110	130	13

Direction, Lane #	EB 1	WB 1	WB 2	NB 1	NB 2	SB 1	SB 2
Volume Total (vph)	246	142	23	33	19	240	13
Volume Left (vph)	15	4	0	33	0	110	0
Volume Right (vph)	98	0	23	0	3	0	13
Hadj (s)	-0.19	0.05	-0.67	0.53	-0.08	0.26	-0.67
Departure Headway (s)	5.4	5.8	5.1	6.6	5.9	6.0	5.0
Degree Utilization, x	0.37	0.23	0.03	0.06	0.03	0.40	0.02
Capacity (veh/h)	629	587	663	504	552	572	670
Control Delay (s)	11.6	9.3	7.0	8.8	7.9	11.7	6.9
Approach Delay (s)	11.6	9.0		8.5		11.4	
Approach LOS	B	A		A		B	

Intersection Summary			
Delay	10.7		
HCM Level of Service	B		
Intersection Capacity Utilization	48.5%	ICU Level of Service	A
Analysis Period (min)	15		

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Sign Control		Stop			Stop			Stop			Stop	
Volume (vph)	4	78	51	4	299	95	79	126	2	39	26	35
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
Hourly flow rate (vph)	5	90	59	5	344	109	91	145	2	45	30	40

Direction, Lane #	EB 1	WB 1	WB 2	NB 1	NB 2	SB 1	SB 2
Volume Total (vph)	153	348	109	91	147	75	40
Volume Left (vph)	5	5	0	91	0	45	0
Volume Right (vph)	59	0	109	0	2	0	40
Hadj (s)	-0.19	0.04	-0.67	0.53	0.02	0.33	-0.67
Departure Headway (s)	6.0	5.8	5.1	6.9	6.4	6.9	5.9
Degree Utilization, x	0.25	0.56	0.16	0.17	0.26	0.14	0.07
Capacity (veh/h)	562	597	671	489	527	476	550
Control Delay (s)	11.0	14.9	7.9	10.2	10.4	9.9	8.1
Approach Delay (s)	11.0	13.2		10.3		9.3	
Approach LOS	B	B		B		A	

Intersection Summary			
Delay	11.7		
HCM Level of Service	B		
Intersection Capacity Utilization	37.7%	ICU Level of Service	A
Analysis Period (min)	15		

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Sign Control	Free			Free	Stop	
Grade	0%			0%	0%	
Volume (veh/h)	192	46	5	125	33	9
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Hourly flow rate (vph)	213	51	6	139	37	10
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type					None	
Median storage veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume			264		389	239
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol			264		389	239
tC, single (s)			4.1		6.4	6.2
tC, 2 stage (s)						
tF (s)			2.2		3.5	3.3
p0 queue free %			100		94	99
cM capacity (veh/h)			1300		612	800

Direction, Lane #	EB 1	WB 1	NB 1	NB 2
Volume Total	264	144	37	10
Volume Left	0	6	37	0
Volume Right	51	0	0	10
cSH	1700	1300	612	800
Volume to Capacity	0.16	0.00	0.06	0.01
Queue Length 95th (ft)	0	0	5	1
Control Delay (s)	0.0	0.3	11.3	9.6
Lane LOS		A	B	A
Approach Delay (s)	0.0	0.3	10.9	
Approach LOS			B	

Intersection Summary			
Average Delay	1.2		
Intersection Capacity Utilization	22.9%	ICU Level of Service	A
Analysis Period (min)	15		

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Sign Control	Free			Free	Stop	
Grade	0%			0%	0%	
Volume (veh/h)	99	29	26	326	82	10
Peak Hour Factor	0.87	0.87	0.87	0.87	0.87	0.87
Hourly flow rate (vph)	114	33	30	375	94	11
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type					None	
Median storage veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume			147		565	130
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol			147		565	130
tC, single (s)			4.1		6.4	6.2
tC, 2 stage (s)						
tF (s)			2.2		3.5	3.3
p0 queue free %			98		80	99
cM capacity (veh/h)			1435		476	919

Direction, Lane #	EB 1	WB 1	NB 1	NB 2
Volume Total	147	405	94	11
Volume Left	0	30	94	0
Volume Right	33	0	0	11
cSH	1700	1435	476	919
Volume to Capacity	0.09	0.02	0.20	0.01
Queue Length 95th (ft)	0	2	18	1
Control Delay (s)	0.0	0.7	14.4	9.0
Lane LOS		A	B	A
Approach Delay (s)	0.0	0.7	13.8	
Approach LOS			B	

Intersection Summary			
Average Delay	2.7		
Intersection Capacity Utilization	40.1%	ICU Level of Service	A
Analysis Period (min)	15		

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Sign Control	Free			Free	Stop	
Grade	0%			0%	0%	
Volume (veh/h)	137	37	4	119	23	11
Peak Hour Factor	0.78	0.78	0.78	0.78	0.78	0.78
Hourly flow rate (vph)	176	47	5	153	29	14
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type					None	
Median storage veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume			223		362	199
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol			223		362	199
tC, single (s)			4.1		6.4	6.2
tC, 2 stage (s)						
tF (s)			2.2		3.5	3.3
p0 queue free %			100		95	98
cM capacity (veh/h)			1346		635	842

Direction, Lane #	EB 1	WB 1	NB 1	NB 2
Volume Total	223	158	29	14
Volume Left	0	5	29	0
Volume Right	47	0	0	14
cSH	1700	1346	635	842
Volume to Capacity	0.13	0.00	0.05	0.02
Queue Length 95th (ft)	0	0	4	1
Control Delay (s)	0.0	0.3	11.0	9.4
Lane LOS		A	B	A
Approach Delay (s)	0.0	0.3	10.4	
Approach LOS			B	

Intersection Summary			
Average Delay	1.2		
Intersection Capacity Utilization	19.5%	ICU Level of Service	A
Analysis Period (min)	15		

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Sign Control	Free			Free	Stop	
Grade	0%			0%	0%	
Volume (veh/h)	56	36	1	275	55	1
Peak Hour Factor	0.84	0.84	0.84	0.84	0.84	0.84
Hourly flow rate (vph)	67	43	1	327	65	1
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type					None	
Median storage veh)						
Upstream signal (ft)				1314		
pX, platoon unblocked						
vC, conflicting volume			110		418	88
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol			110		418	88
tC, single (s)			4.1		6.4	6.2
tC, 2 stage (s)						
tF (s)			2.2		3.5	3.3
p0 queue free %			100		89	100
cM capacity (veh/h)			1481		591	970

Direction, Lane #	EB 1	WB 1	NB 1	NB 2
Volume Total	110	329	65	1
Volume Left	0	1	65	0
Volume Right	43	0	0	1
cSH	1700	1481	591	970
Volume to Capacity	0.06	0.00	0.11	0.00
Queue Length 95th (ft)	0	0	9	0
Control Delay (s)	0.0	0.0	11.8	8.7
Lane LOS		A	B	A
Approach Delay (s)	0.0	0.0	11.8	
Approach LOS			B	

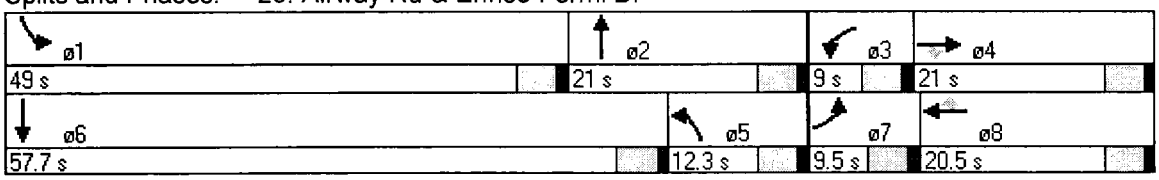
Intersection Summary			
Average Delay	1.6		
Intersection Capacity Utilization	25.3%	ICU Level of Service	A
Analysis Period (min)	15		

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Total Lost Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	1.00	0.95	0.95	1.00	1.00	1.00	1.00	0.95	0.95	1.00	0.95	0.95
Frt			0.850			0.850		0.880			0.942	
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1770	1770	1504	1770	1863	1583	1770	3115	0	1770	3334	0
Flt Permitted	0.950			0.950			0.950			0.950		
Satd. Flow (perm)	1770	1770	1504	1770	1863	1583	1770	3115	0	1770	3334	0
Satd. Flow (RTOR)			34			246		247			41	
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Volume (vph)	3	117	27	29	30	226	59	85	386	746	52	33
Adj. Flow (vph)	4	127	34	32	33	246	74	106	420	811	65	41
Lane Group Flow (vph)	4	127	34	32	33	246	74	526	0	811	106	0
Turn Type	Prot		Perm	Prot		Perm	Prot			Prot		
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases			4			8						
Total Split (s)	9.5	21.0	21.0	9.0	20.5	20.5	12.3	21.0	0.0	49.0	57.7	0.0
Act Effct Green (s)	5.6	11.8	11.8	5.0	15.1	15.1	42.2	13.2		45.1	19.5	
Actuated g/C Ratio	0.06	0.14	0.14	0.06	0.17	0.17	0.47	0.15		0.52	0.22	
v/c Ratio	0.04	0.53	0.15	0.33	0.10	0.52	0.09	0.94dr		0.89	0.14	
Control Delay	47.0	45.3	14.0	53.7	32.7	9.0	10.3	27.8		35.7	27.8	
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Total Delay	47.0	45.3	14.0	53.7	32.7	9.0	10.3	27.8		35.7	27.8	
LOS	D	D	B	D	C	A	B	C		D	C	
Approach Delay		38.9			16.2			25.6			34.8	
Approach LOS		D			B			C			C	

Intersection Summary

Cycle Length: 100
Actuated Cycle Length: 87.3
Control Type: Actuated-Uncoordinated
Maximum v/c Ratio: 0.89
Intersection Signal Delay: 29.4 — Intersection LOS: C
Intersection Capacity Utilization 79.5% — ICU Level of Service D
Analysis Period (min) 15
dr - Defacto Right Lane. Recode with 1 though lane as a right lane.

Splits and Phases: 23: Airway Rd & Enrico Fermi Dr

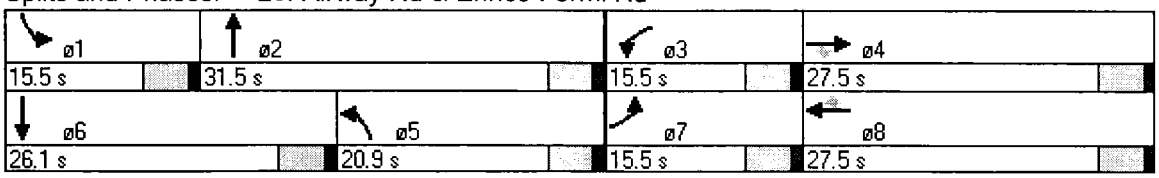


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Total Lost Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	1.00	0.95	0.95	1.00	1.00	1.00	1.00	0.95	0.95	1.00	0.95	0.95
Frt			0.850			0.850		0.928			0.894	
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1770	1770	1504	1770	1863	1583	1770	3284	0	1770	3164	0
Flt Permitted	0.950			0.950			0.950			0.950		
Satd. Flow (perm)	1770	1770	1504	1770	1863	1583	1770	3284	0	1770	3164	0
Satd. Flow (RTOR)			16			871		109			133	
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Volume (vph)	2	43	13	100	100	799	70	97	89	306	46	109
Adj. Flow (vph)	2	52	16	122	122	974	85	118	109	373	56	133
Lane Group Flow (vph)	2	52	16	122	122	974	85	227	0	373	189	0
Turn Type	Prot		Perm	Prot		Perm	Prot			Prot		
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases			4			8						
Total Split (s)	15.5	27.5	27.5	15.5	27.5	27.5	20.9	31.5	0.0	15.5	26.1	0.0
Act Effct Green (s)	6.2	17.6	17.6	14.5	29.8	29.8	11.7	11.2		34.8	36.4	
Actuated g/C Ratio	0.07	0.20	0.20	0.16	0.33	0.33	0.13	0.12		0.39	0.40	
v/c Ratio	0.02	0.15	0.05	0.43	0.20	0.88	0.37	0.45		0.54	0.14	
Control Delay	39.0	25.7	9.4	38.9	18.9	13.0	39.8	21.7		32.5	11.0	
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Total Delay	39.0	25.7	9.4	38.9	18.9	13.0	39.8	21.7		32.5	11.0	
LOS	D	C	A	D	B	B	D	C		C	B	
Approach Delay		22.4			16.2			26.7			25.3	
Approach LOS		C			B			C			C	

Intersection Summary

Cycle Length: 90
Actuated Cycle Length: 90
Offset: 0 (0%), Referenced to phase 2:NBT and 6:SBT, Start of Green
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 0.88
Intersection Signal Delay: 20.2 — Intersection LOS: C
Intersection Capacity Utilization 68.3% — ICU Level of Service C
Analysis Period (min) 15

Splits and Phases: 23: Airway Rd & Enrico Fermi Rd



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Sign Control		Stop			Stop			Stop			Stop	
Volume (vph)	5	2	0	10	2	93	0	9	2	236	39	4
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
Hourly flow rate (vph)	6	2	0	11	2	107	0	10	2	271	45	5

Direction, Lane #	EB 1	WB 1	NB 1	SB 1
Volume Total (vph)	8	121	13	321
Volume Left (vph)	6	11	0	271
Volume Right (vph)	0	107	2	5
Hadj (s)	0.18	-0.48	0.01	0.21
Departure Headway (s)	5.0	4.2	4.6	4.4
Degree Utilization, x	0.01	0.14	0.02	0.39
Capacity (veh/h)	658	788	748	789
Control Delay (s)	8.1	7.9	7.6	10.3
Approach Delay (s)	8.1	7.9	7.6	10.3
Approach LOS	A	A	A	B

Intersection Summary			
Delay	9.5		
HCM Level of Service	A		
Intersection Capacity Utilization	35.0%	ICU Level of Service	A
Analysis Period (min)	15		

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Sign Control		Stop			Stop			Stop			Stop	
Volume (vph)	5	10	0	9	3	121	0	61	1	178	183	10
Peak Hour Factor	0.81	0.81	0.81	0.81	0.81	0.81	0.81	0.81	0.81	0.81	0.81	0.81
Hourly flow rate (vph)	6	12	0	11	4	149	0	75	1	220	226	12

Direction, Lane #	EB 1	WB 1	NB 1	SB 1
Volume Total (vph)	19	164	77	458
Volume Left (vph)	6	11	0	220
Volume Right (vph)	0	149	1	12
Hadj (s)	0.10	-0.50	0.12	0.16
Departure Headway (s)	5.6	4.7	5.0	4.6
Degree Utilization, x	0.03	0.22	0.11	0.59
Capacity (veh/h)	570	688	667	755
Control Delay (s)	8.7	9.0	8.6	14.0
Approach Delay (s)	8.7	9.0	8.6	14.0
Approach LOS	A	A	A	B

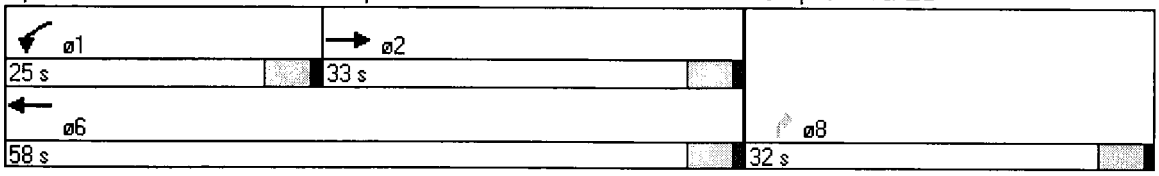
Intersection Summary			
Delay	12.2		
HCM Level of Service	B		
Intersection Capacity Utilization	41.8%	ICU Level of Service	A
Analysis Period (min)	15		

Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Total Lost Time (s)	4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	0.91	0.91	0.97	0.91	1.00	0.88
Frt	0.986					0.850
Flt Protected			0.950			
Satd. Flow (prot)	5014	0	3433	5085	0	2787
Flt Permitted			0.950			
Satd. Flow (perm)	5014	0	3433	5085	0	2787
Satd. Flow (RTOR)	19					940
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Volume (vph)	468	46	230	702	0	280
Adj. Flow (vph)	514	51	253	771	0	308
Lane Group Flow (vph)	565	0	253	771	0	308
Turn Type			Prot			custom
Protected Phases	2		1	6		
Permitted Phases						8
Total Split (s)	33.0	0.0	25.0	58.0	0.0	32.0
Act Effct Green (s)	60.1		11.9	76.0		6.0
Actuated g/C Ratio	0.67		0.13	0.84		0.07
v/c Ratio	0.17		0.56	0.18		0.29
Control Delay	5.8		40.1	1.1		0.7
Queue Delay	0.0		0.0	0.0		0.0
Total Delay	5.8		40.1	1.1		0.7
LOS	A		D	A		A
Approach Delay	5.8			10.8		
Approach LOS	A			B		

Intersection Summary

Cycle Length: 90
Actuated Cycle Length: 90
Offset: 66 (73%), Referenced to phase 2:EBT and 6:WBT, Start of Green
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 0.56
Intersection Signal Delay: 7.6 Intersection LOS: A
Intersection Capacity Utilization 26.5% ICU Level of Service A
Analysis Period (min) 15

Splits and Phases: 28: Siempre Viva Rd & SR905 SB Off to Siempre Viva EB

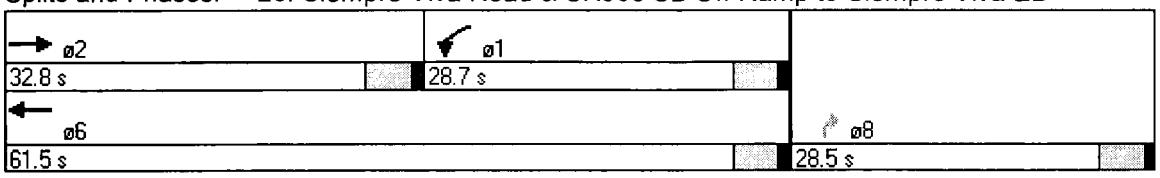


Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Total Lost Time (s)	4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	0.91	0.91	0.97	0.91	1.00	0.88
Frt	0.937					0.850
Flt Protected			0.950			
Satd. Flow (prot)	4765	0	3433	5085	0	2787
Flt Permitted			0.950			
Satd. Flow (perm)	4765	0	3433	5085	0	2787
Satd. Flow (RTOR)	214					1005
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Volume (vph)	444	322	438	669	0	175
Adj. Flow (vph)	522	379	515	787	0	206
Lane Group Flow (vph)	901	0	515	787	0	206
Turn Type			Prot			custom
Protected Phases	2		1	6		
Permitted Phases						8
Total Split (s)	32.8	0.0	28.7	61.5	0.0	28.5
Act Effct Green (s)	47.3		24.7	76.0		6.0
Actuated g/C Ratio	0.53		0.27	0.84		0.07
v/c Ratio	0.35		0.55	0.18		0.18
Control Delay	9.6		26.0	1.3		0.4
Queue Delay	0.0		0.0	0.0		0.0
Total Delay	9.6		26.0	1.3		0.4
LOS	A		C	A		A
Approach Delay	9.6			11.1		
Approach LOS	A			B		

Intersection Summary

Cycle Length: 90
Actuated Cycle Length: 90
Offset: 29 (32%), Referenced to phase 2:EBT and 6:WBT, Start of Green
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 0.55
Intersection Signal Delay: 9.6 Intersection LOS: A
Intersection Capacity Utilization 35.0% ICU Level of Service A
Analysis Period (min) 15

Splits and Phases: 28: Siempre Viva Road & SR905 SB Off Ramp to Siempre Viva EB



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		↑↑↑	↑↑↑			↱
Sign Control		Free	Free		Stop	
Grade		0%	0%		0%	
Volume (veh/h)	0	748	568	0	0	364
Peak Hour Factor	0.87	0.87	0.87	0.87	0.87	0.87
Hourly flow rate (vph)	0	860	653	0	0	418
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type					None	
Median storage veh)						
Upstream signal (ft)		281	733			
pX, platoon unblocked					0.98	
vC, conflicting volume	653				939	218
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	653				905	218
tC, single (s)	4.1				6.8	6.9
tC, 2 stage (s)						
tF (s)	2.2				3.5	3.3
p0 queue free %	100				100	47
cM capacity (veh/h)	930				272	787

Direction, Lane #	EB 1	EB 2	EB 3	WB 1	WB 2	WB 3	SB 1
Volume Total	287	287	287	218	218	218	418
Volume Left	0	0	0	0	0	0	0
Volume Right	0	0	0	0	0	0	418
cSH	1700	1700	1700	1700	1700	1700	787
Volume to Capacity	0.17	0.17	0.17	0.13	0.13	0.13	0.53
Queue Length 95th (ft)	0	0	0	0	0	0	80
Control Delay (s)	0.0	0.0	0.0	0.0	0.0	0.0	14.7
Lane LOS							B
Approach Delay (s)	0.0			0.0			14.7
Approach LOS							B

Intersection Summary			
Average Delay	3.2		
Intersection Capacity Utilization	40.2%	ICU Level of Service	A
Analysis Period (min)	15		

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		↑↑↑	↑↑↑			↱
Sign Control		Free	Free		Stop	
Grade		0%	0%		0%	
Volume (veh/h)	0	619	731	0	0	376
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93
Hourly flow rate (vph)	0	666	786	0	0	404
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type					None	
Median storage veh)						
Upstream signal (ft)		225	412			
pX, platoon unblocked	0.96				0.96	0.96
vC, conflicting volume	786				1008	262
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	689				920	142
tC, single (s)	4.1				6.8	6.9
tC, 2 stage (s)						
tF (s)	2.2				3.5	3.3
p0 queue free %	100				100	52
cM capacity (veh/h)	863				259	843

Direction, Lane #	EB 1	EB 2	EB 3	WB 1	WB 2	WB 3	SB 1
Volume Total	222	222	222	262	262	262	404
Volume Left	0	0	0	0	0	0	0
Volume Right	0	0	0	0	0	0	404
cSH	1700	1700	1700	1700	1700	1700	843
Volume to Capacity	0.13	0.13	0.13	0.15	0.15	0.15	0.48
Queue Length 95th (ft)	0	0	0	0	0	0	66
Control Delay (s)	0.0	0.0	0.0	0.0	0.0	0.0	13.1
Lane LOS							B
Approach Delay (s)	0.0			0.0			13.1
Approach LOS							B

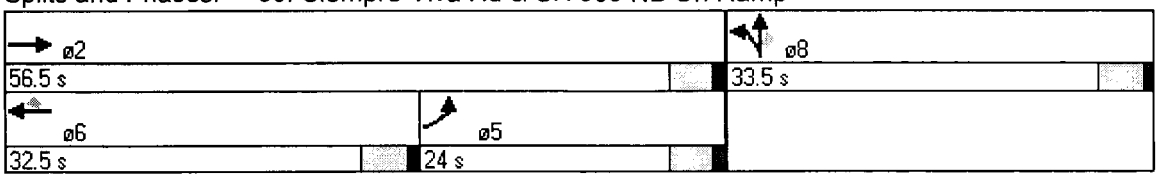
Intersection Summary			
Average Delay	2.9		
Intersection Capacity Utilization	44.1%	ICU Level of Service	A
Analysis Period (min)	15		

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Total Lost Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	0.97	0.91	1.00	1.00	0.86	0.86	1.00	1.00	0.88	1.00	1.00	1.00
Frt					0.992	0.850			0.850			
Flt Protected	0.950							0.953				
Satd. Flow (prot)	3433	5085	0	0	4767	1362	0	1775	2787	0	0	0
Flt Permitted	0.950							0.953				
Satd. Flow (perm)	3433	5085	0	0	4767	1362	0	1775	2787	0	0	0
Satd. Flow (RTOR)					9	159			341			
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Volume (vph)	125	613	0	0	410	175	164	1	327	0	0	0
Adj. Flow (vph)	130	639	0	0	427	182	171	1	341	0	0	0
Lane Group Flow (vph)	130	639	0	0	450	159	0	172	341	0	0	0
Turn Type	Prot					Perm	Split		Perm			
Protected Phases	5	2			6		8	8				
Permitted Phases						6			8			
Total Split (s)	24.0	56.5	0.0	0.0	32.5	32.5	33.5	33.5	33.5	0.0	0.0	0.0
Act Effct Green (s)	9.0	67.9			54.9	54.9		14.1	14.1			
Actuated g/C Ratio	0.10	0.75			0.61	0.61		0.16	0.16			
v/c Ratio	0.38	0.17			0.15	0.18		0.62	0.47			
Control Delay	37.8	1.5			8.4	2.3		44.5	5.9			
Queue Delay	0.0	0.0			0.0	0.0		0.0	0.0			
Total Delay	37.8	1.5			8.4	2.3		44.5	5.9			
LOS	D	A			A	A		D	A			
Approach Delay		7.6			6.8			18.8				
Approach LOS		A			A			B				

Intersection Summary

Cycle Length: 90
Actuated Cycle Length: 90
Offset: 77 (86%), Referenced to phase 2:EBT and 6:WBT, Start of Green
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 0.62
Intersection Signal Delay: 10.4 Intersection LOS: B
Intersection Capacity Utilization 40.2% ICU Level of Service A
Analysis Period (min) 15

Splits and Phases: 30: Siempre Viva Rd & SR 905 NB On Ramp

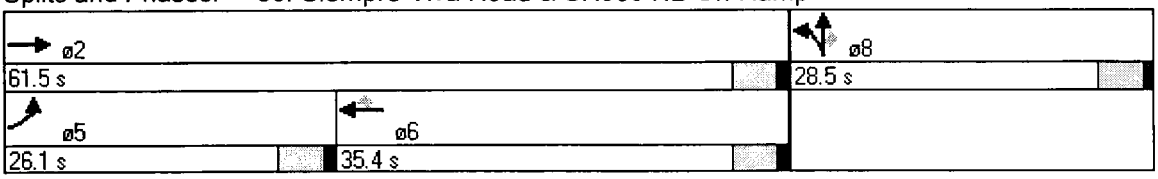


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Total Lost Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	0.97	0.91	1.00	1.00	0.86	0.86	1.00	1.00	0.88	1.00	1.00	1.00
Frt					0.986	0.850			0.850			
Flt Protected	0.950							0.954				
Satd. Flow (prot)	3433	5085	0	0	4739	1362	0	1777	2787	0	0	0
Flt Permitted	0.950							0.954				
Satd. Flow (perm)	3433	5085	0	0	4739	1362	0	1777	2787	0	0	0
Satd. Flow (RTOR)					20	326			243			
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Volume (vph)	297	352	0	0	677	373	49	2	226	0	0	0
Adj. Flow (vph)	319	378	0	0	728	401	53	2	243	0	0	0
Lane Group Flow (vph)	319	378	0	0	803	326	0	55	243	0	0	0
Turn Type	Prot					Perm	Split		Perm			
Protected Phases	5	2			6		8	8				
Permitted Phases						6			8			
Total Split (s)	26.1	61.5	0.0	0.0	35.4	35.4	28.5	28.5	28.5	0.0	0.0	0.0
Act Effct Green (s)	14.5	73.5			55.0	55.0		8.5	8.5			
Actuated g/C Ratio	0.16	0.82			0.61	0.61		0.09	0.09			
v/c Ratio	0.58	0.09			0.28	0.34		0.33	0.50			
Control Delay	32.3	0.9			8.9	2.3		42.7	9.1			
Queue Delay	0.0	0.0			0.0	0.0		0.0	0.0			
Total Delay	32.3	0.9			8.9	2.3		42.7	9.1			
LOS	C	A			A	A		D	A			
Approach Delay		15.2			7.0			15.3				
Approach LOS		B			A			B				

Intersection Summary

Cycle Length: 90
Actuated Cycle Length: 90
Offset: 66 (73%), Referenced to phase 2:EBT and 6:WBT, Start of Green
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 0.58
Intersection Signal Delay: 10.9 Intersection LOS: B
Intersection Capacity Utilization 44.1% ICU Level of Service A
Analysis Period (min) 15

Splits and Phases: 30: Siempre Viva Road & SR905 NB On Ramp

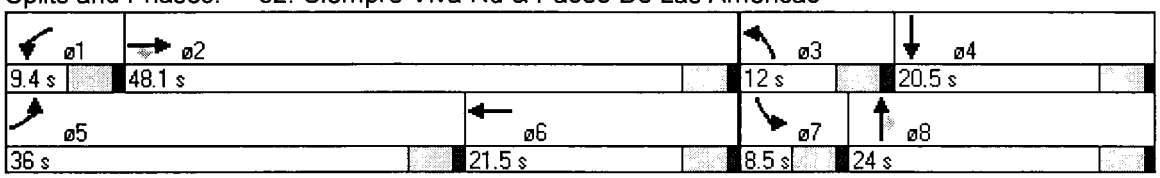


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Total Lost Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	1.00	0.91	1.00	1.00	0.95	0.95	1.00	0.95	1.00	1.00	0.95	0.95
Frt			0.850						0.850		0.932	
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1770	5085	1583	1770	3539	0	1770	3539	1583	1770	3299	0
Flt Permitted	0.950			0.950			0.950			0.950		
Satd. Flow (perm)	1770	5085	1583	1770	3539	0	1770	3539	1583	1770	3299	0
Satd. Flow (RTOR)			154						5		58	
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Volume (vph)	517	445	140	21	283	1	120	51	5	8	64	53
Adj. Flow (vph)	568	489	154	23	311	1	132	56	5	9	70	58
Lane Group Flow (vph)	568	489	154	23	312	0	132	56	5	9	128	0
Turn Type	Prot		Perm	Prot			Prot		Perm	Prot		
Protected Phases	5	2		1	6		3	8		7	4	
Permitted Phases			2						8			
Total Split (s)	36.0	48.1	48.1	9.4	21.5	0.0	12.0	24.0	24.0	8.5	20.5	0.0
Act Effct Green (s)	27.7	40.4	40.4	5.4	12.0		8.1	18.4	18.4	4.6	7.7	
Actuated g/C Ratio	0.39	0.56	0.56	0.07	0.17		0.11	0.26	0.26	0.06	0.11	
v/c Ratio	0.83	0.17	0.16	0.19	0.53		0.66	0.06	0.01	0.09	0.32	
Control Delay	32.9	8.4	2.4	39.7	31.8		51.8	24.7	17.4	39.9	21.6	
Queue Delay	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	
Total Delay	32.9	8.4	2.4	39.7	31.8		51.8	24.7	17.4	39.9	21.6	
LOS	C	A	A	D	C		D	C	B	D	C	
Approach Delay		19.1			32.3			43.0			22.8	
Approach LOS		B			C			D			C	

Intersection Summary

Cycle Length: 90
Actuated Cycle Length: 71.8
Control Type: Actuated-Uncoordinated
Maximum v/c Ratio: 0.83
Intersection Signal Delay: 24.2 — Intersection LOS: C
Intersection Capacity Utilization 59.8% — ICU Level of Service B
Analysis Period (min) 15

Splits and Phases: 32: Siempre Viva Rd & Paseo De Las Americas

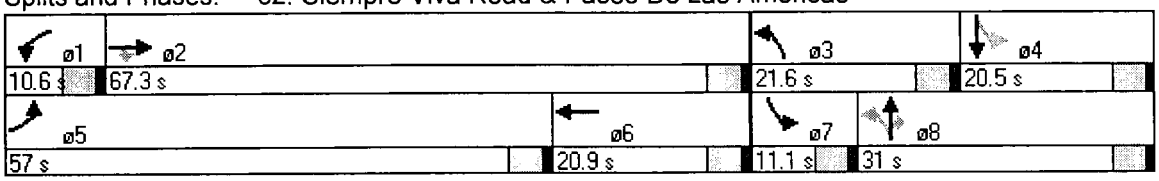


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Total Lost Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	1.00	0.91	1.00	1.00	0.95	0.95	1.00	0.95	1.00	1.00	0.95	0.95
Frt			0.850		0.995				0.850		0.926	
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1770	5085	1583	1770	3522	0	1770	3539	1583	1770	3277	0
Flt Permitted	0.950			0.950			0.459			0.666		
Satd. Flow (perm)	1770	5085	1583	1770	3522	0	855	3539	1583	1241	3277	0
Satd. Flow (RTOR)			67		3				8		89	
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Volume (vph)	630	145	59	30	374	14	269	120	7	6	80	78
Adj. Flow (vph)	716	165	67	34	425	16	306	136	8	7	91	89
Lane Group Flow (vph)	716	165	67	34	441	0	306	136	8	7	180	0
Turn Type	Prot		Perm	Prot			pm+pt		Perm	pm+pt		
Protected Phases	5	2		1	6		3	8		7	4	
Permitted Phases			2				8		8	4		
Total Split (s)	57.0	67.3	67.3	10.6	20.9	0.0	21.6	31.0	31.0	11.1	20.5	0.0
Act Effct Green (s)	46.0	60.4	60.4	6.6	16.0		29.5	27.5	27.5	15.6	9.1	
Actuated g/C Ratio	0.44	0.58	0.58	0.06	0.15		0.28	0.26	0.26	0.14	0.09	
v/c Ratio	0.91	0.06	0.07	0.32	0.81		0.79	0.15	0.02	0.03	0.49	
Control Delay	44.9	10.8	3.2	60.1	56.7		50.4	33.1	19.1	33.0	30.1	
Queue Delay	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	
Total Delay	44.9	10.8	3.2	60.1	56.7		50.4	33.1	19.1	33.0	30.1	
LOS	D	B	A	E	E		D	C	B	C	C	
Approach Delay		36.0			57.0			44.6			30.2	
Approach LOS		D			E			D			C	

Intersection Summary

Cycle Length: 120
Actuated Cycle Length: 103.9
Control Type: Actuated-Uncoordinated
Maximum v/c Ratio: 0.91
Intersection Signal Delay: 42.2 — Intersection LOS: D
Intersection Capacity Utilization 78.6% — ICU Level of Service D
Analysis Period (min) 15

Splits and Phases: 32: Siempre Viva Road & Paseo De Las Americas



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Sign Control		Free			Free			Stop			Stop	
Grade		0%			0%			0%			0%	
Volume (veh/h)	54	292	62	20	231	1	21	17	22	2	5	27
Peak Hour Factor	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84
Hourly flow rate (vph)	64	348	74	24	275	1	25	20	26	2	6	32
Pedestrians												
Lane Width (ft)												
Walking Speed (ft/s)												
Percent Blockage												
Right turn flare (veh)												
Median type								None			None	
Median storage veh)												
Upstream signal (ft)		1276										
pX, platoon unblocked												
vC, conflicting volume	276			421			733	837	211	662	873	138
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	276			421			733	837	211	662	873	138
tC, single (s)	4.1			4.1			7.5	6.5	6.9	7.5	6.5	6.9
tC, 2 stage (s)												
tF (s)	2.2			2.2			3.5	4.0	3.3	3.5	4.0	3.3
p0 queue free %	95			98			91	93	97	99	98	96
cM capacity (veh/h)	1284			1134			277	280	795	300	267	885

Direction, Lane #	EB 1	EB 2	EB 3	WB 1	WB 2	WB 3	NB 1	SB 1	SB 2
Volume Total	64	232	190	24	183	93	71	8	32
Volume Left	64	0	0	24	0	0	25	2	0
Volume Right	0	0	74	0	0	1	26	0	32
cSH	1284	1700	1700	1134	1700	1700	365	276	885
Volume to Capacity	0.05	0.14	0.11	0.02	0.11	0.05	0.20	0.03	0.04
Queue Length 95th (ft)	4	0	0	2	0	0	18	2	3
Control Delay (s)	8.0	0.0	0.0	8.2	0.0	0.0	17.2	18.5	9.2
Lane LOS	A			A			C	C	A
Approach Delay (s)	1.1			0.7			17.2	11.1	
Approach LOS							C	B	

Intersection Summary				
Average Delay	2.7			
Intersection Capacity Utilization	33.5%	ICU Level of Service		A
Analysis Period (min)	15			

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Sign Control		Free			Free			Stop			Stop	
Grade		0%			0%			0%			0%	
Volume (veh/h)	39	89	20	17	283	5	51	15	0	1	19	52
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
Hourly flow rate (vph)	43	98	22	19	311	5	56	16	0	1	21	57
Pedestrians												
Lane Width (ft)												
Walking Speed (ft/s)												
Percent Blockage												
Right turn flare (veh)												
Median type								None			None	
Median storage veh)												
Upstream signal (ft)		1290			1303							
pX, platoon unblocked												
vC, conflicting volume	316			120			455	548	60	494	557	158
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	316			120			455	548	60	494	557	158
tC, single (s)	4.1			4.1			7.5	6.5	6.9	7.5	6.5	6.9
tC, 2 stage (s)												
tF (s)	2.2			2.2			3.5	4.0	3.3	3.5	4.0	3.3
p0 queue free %	97			99			87	96	100	100	95	93
cM capacity (veh/h)	1240			1466			423	422	993	429	417	859

Direction, Lane #	EB 1	EB 2	EB 3	WB 1	WB 2	WB 3	NB 1	SB 1	SB 2
Volume Total	43	65	55	19	207	109	73	22	57
Volume Left	43	0	0	19	0	0	56	1	0
Volume Right	0	0	22	0	0	5	0	0	57
cSH	1240	1700	1700	1466	1700	1700	423	418	859
Volume to Capacity	0.03	0.04	0.03	0.01	0.12	0.06	0.17	0.05	0.07
Queue Length 95th (ft)	3	0	0	1	0	0	15	4	5
Control Delay (s)	8.0	0.0	0.0	7.5	0.0	0.0	15.3	14.1	9.5
Lane LOS	A			A			C	B	A
Approach Delay (s)	2.1			0.4			15.3	10.8	
Approach LOS							C	B	

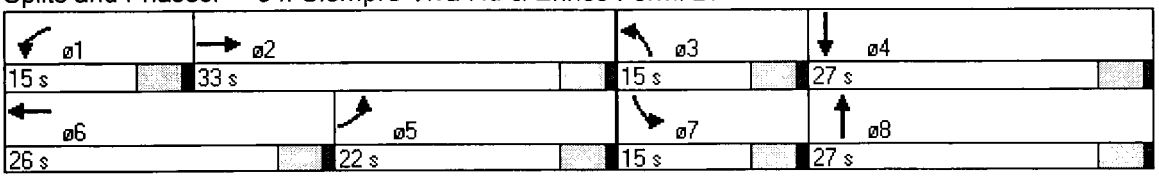
Intersection Summary			
Average Delay	3.8		
Intersection Capacity Utilization	31.6%	ICU Level of Service	A
Analysis Period (min)	15		

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Total Lost Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	0.97	1.00	1.00	1.00	0.95	0.95	1.00	0.95	0.95	1.00	0.95	0.95
Frt		0.917			0.993			0.997			0.901	
Flt Protected	0.950						0.950					
Satd. Flow (prot)	3433	1708	0	1863	3514	0	1770	3529	0	1863	3189	0
Flt Permitted	0.950						0.950					
Satd. Flow (perm)	3433	1708	0	1863	3514	0	1770	3529	0	1863	3189	0
Satd. Flow (RTOR)		5			5			2			52	
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Volume (vph)	280	3	4	0	80	4	9	131	2	0	21	40
Adj. Flow (vph)	364	4	5	0	104	5	12	170	3	0	27	52
Lane Group Flow (vph)	364	9	0	0	109	0	12	173	0	0	79	0
Turn Type	Prot			Prot			Prot			Prot		
Protected Phases	5	2		1	6		3	8		7	4	
Permitted Phases												
Total Split (s)	22.0	33.0	0.0	15.0	26.0	0.0	15.0	27.0	0.0	15.0	27.0	0.0
Act Effct Green (s)	10.0	16.0			7.2		6.6	14.6			13.1	
Actuated g/C Ratio	0.27	0.43			0.18		0.15	0.42			0.37	
v/c Ratio	0.40	0.01			0.17		0.04	0.12			0.06	
Control Delay	13.2	4.4			15.5		20.2	11.5			9.1	
Queue Delay	0.0	0.0			0.0		0.0	0.0			0.0	
Total Delay	13.2	4.4			15.5		20.2	11.5			9.1	
LOS	B	A			B		C	B			A	
Approach Delay		13.0			15.5			12.0			9.1	
Approach LOS		B			B			B			A	

Intersection Summary

Cycle Length: 90
Actuated Cycle Length: 35.1
Control Type: Actuated-Uncoordinated
Maximum v/c Ratio: 0.40
Intersection Signal Delay: 12.7 — Intersection LOS: B
Intersection Capacity Utilization 28.5% — ICU Level of Service A
Analysis Period (min) 15

Splits and Phases: 34: Siempre Viva Rd & Enrico Fermi Dr

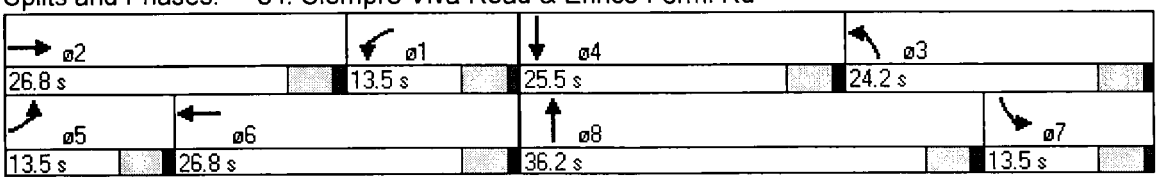


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Total Lost Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	0.97	1.00	1.00	1.00	0.95	0.95	1.00	0.95	0.95	1.00	0.95	0.95
Frt		0.872			0.953			0.998			0.854	
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	3433	1624	0	1770	3373	0	1770	3532	0	1770	3022	0
Flt Permitted	0.950			0.950			0.950			0.950		
Satd. Flow (perm)	3433	1624	0	1770	3373	0	1770	3532	0	1770	3022	0
Satd. Flow (RTOR)		23			11			1			809	
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Volume (vph)	57	4	22	11	23	11	146	165	2	3	4	140
Adj. Flow (vph)	59	4	23	11	24	11	152	172	2	3	4	146
Lane Group Flow (vph)	59	27	0	11	35	0	152	174	0	3	150	0
Turn Type	Prot			Prot			Prot			Prot		
Protected Phases	5	2		1	6		3	8		7	4	
Permitted Phases												
Total Split (s)	13.5	26.8	0.0	13.5	26.8	0.0	24.2	36.2	0.0	13.5	25.5	0.0
Act Effct Green (s)	7.4	9.5		6.8	6.8		11.6	48.0		6.4	32.4	
Actuated g/C Ratio	0.11	0.14		0.09	0.10		0.18	0.75		0.09	0.51	
v/c Ratio	0.16	0.11		0.07	0.10		0.47	0.07		0.02	0.08	
Control Delay	26.0	13.6		29.8	21.9		25.2	5.9		29.7	0.1	
Queue Delay	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Delay	26.0	13.6		29.8	21.9		25.2	5.9		29.7	0.1	
LOS	C	B		C	C		C	A		C	A	
Approach Delay		22.1			23.8			14.9			0.7	
Approach LOS		C			C			B			A	

Intersection Summary

Cycle Length: 90
Actuated Cycle Length: 63.9
Control Type: Semi Act-Uncoord
Maximum v/c Ratio: 0.47
Intersection Signal Delay: 13.0 Intersection LOS: B
Intersection Capacity Utilization 31.0% ICU Level of Service A
Analysis Period (min) 15

Splits and Phases: 34: Siempre Viva Road & Enrico Fermi Rd

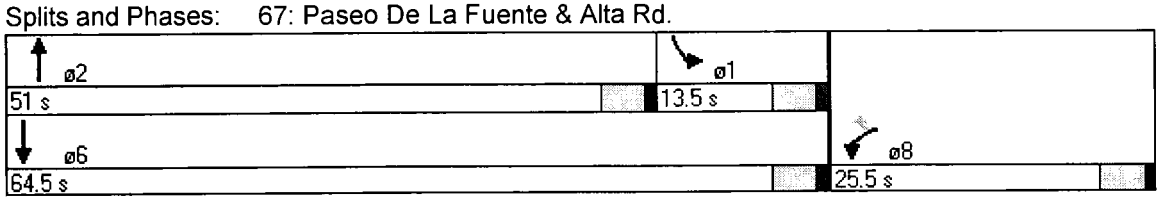


Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Total Lost Time (s)	4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.850	0.996			
Flt Protected	0.950				0.950	
Satd. Flow (prot)	1770	1583	1855	0	1770	1863
Flt Permitted	0.950				0.950	
Satd. Flow (perm)	1770	1583	1855	0	1770	1863
Satd. Flow (RTOR)		5	3			
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Volume (vph)	6	5	634	19	1	166
Adj. Flow (vph)	7	5	689	21	1	180
Lane Group Flow (vph)	7	5	710	0	1	180
Turn Type		Perm			Prot	
Protected Phases	8		2		1	6
Permitted Phases		8				
Total Split (s)	25.5	25.5	51.0	0.0	13.5	64.5
Act Effct Green (s)	6.5	6.5	110.3		6.2	112.7
Actuated g/C Ratio	0.05	0.05	0.95		0.05	0.97
v/c Ratio	0.08	0.06	0.40		0.01	0.10
Control Delay	27.7	18.0	2.3		27.0	0.5
Queue Delay	0.0	0.0	0.0		0.0	0.0
Total Delay	27.7	18.0	2.3		27.0	0.5
LOS	C	B	A		C	A
Approach Delay	23.6		2.3			0.7
Approach LOS	C		A			A

Intersection Summary

Cycle Length: 90
Actuated Cycle Length: 116.1
Control Type: Actuated-Uncoordinated
Maximum v/c Ratio: 0.40
Intersection Signal Delay: 2.2
Intersection LOS: A
Intersection Capacity Utilization 44.5%
ICU Level of Service A
Analysis Period (min) 15

Splits and Phases: 67: Paseo De La Fuente & Alta Rd.

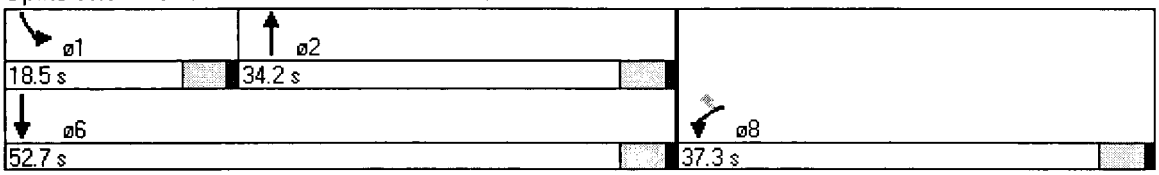


Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Total Lost Time (s)	4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.850	0.996			
Flt Protected	0.950					
Satd. Flow (prot)	1770	1583	1855	0	1863	1863
Flt Permitted	0.950					
Satd. Flow (perm)	1770	1583	1855	0	1863	1863
Satd. Flow (RTOR)		2	2			
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Volume (vph)	221	2	98	3	0	506
Adj. Flow (vph)	273	2	121	4	0	625
Lane Group Flow (vph)	273	2	125	0	0	625
Turn Type		Perm			Prot	
Protected Phases	8		2		1	6
Permitted Phases		8				
Total Split (s)	37.3	37.3	34.2	0.0	18.5	52.7
Act Effct Green (s)	12.7	12.7	24.8			24.8
Actuated g/C Ratio	0.28	0.28	0.54			0.54
v/c Ratio	0.56	0.00	0.12			0.62
Control Delay	18.3	10.5	6.4			11.4
Queue Delay	0.0	0.0	0.0			0.0
Total Delay	18.3	10.5	6.4			11.4
LOS	B	B	A			B
Approach Delay	18.2		6.4			11.4
Approach LOS	B		A			B

Intersection Summary

Cycle Length: 90
Actuated Cycle Length: 45.9
Control Type: Actuated-Uncoordinated
Maximum v/c Ratio: 0.62
Intersection Signal Delay: 12.6 Intersection LOS: B
Intersection Capacity Utilization 45.5% ICU Level of Service A
Analysis Period (min) 15

Splits and Phases: 67: Paseo De La Fuente & Alta Rd



Existing + Project Units 1-4 Intersection ILV Analysis

INTERSECTION

Signalized Intersection
CAPACITY ANALYSIS

INTERSECTION Otay Mesa/Heritage

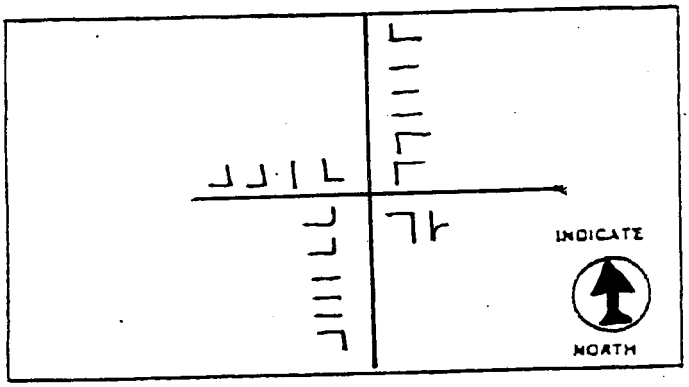
DIST. CO. RTE. P.M. 11/SD/905

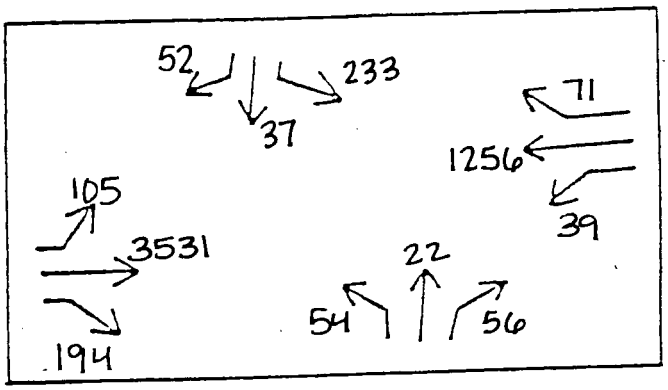
BY SLB DATE 4-6-10

Existing + Units 1-4

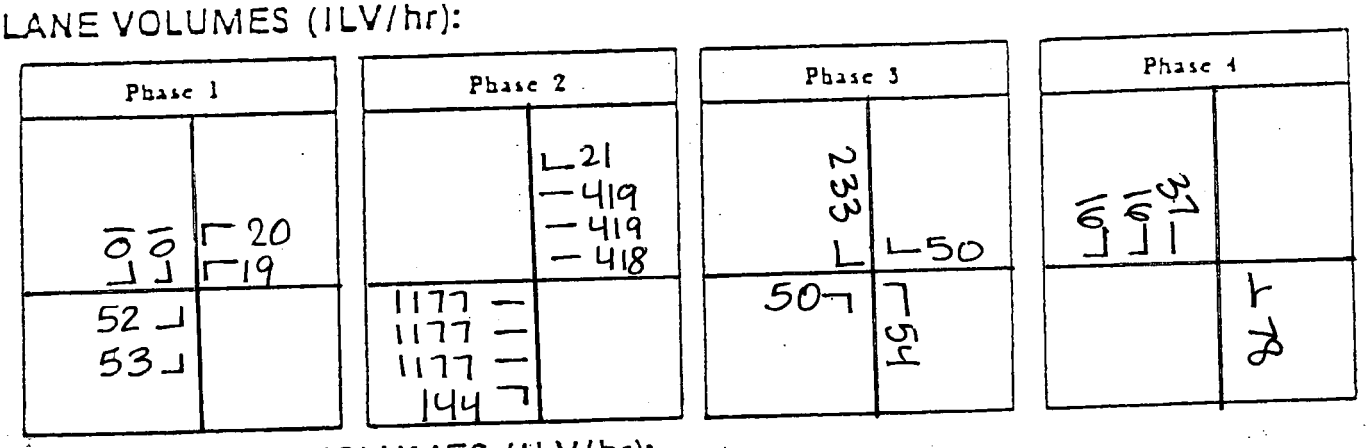
TIME ___ (AM) PM

DIAGRAM AND TRAFFIC FLOWS:





LANE VOLUMES (ILV/hr):



CRITICAL LANE VOLUMES (ILV/hr):

Phase 1	Phase 2	Phase 3	Phase 4
53	1,177	233	78

TOTAL OPERATING LEVEL (ILV/hr):

Σ
1,541

Is . . .

- ☐ < 1200 ILV/hr.
- ☐ > 1200 but < 1500 ILV/hr.
- ☒ > 1500 ILV/hr. (CAPACITY)

REMARKS:

INTERSECTION

Signalized Intersection
CAPACITY ANALYSIS

INTERSECTION Otay Mesa/Heritage

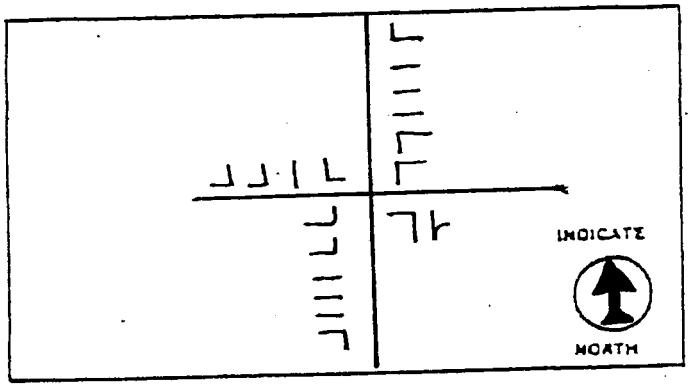
DIST. CO. RTE. P.M. 11/SD/905

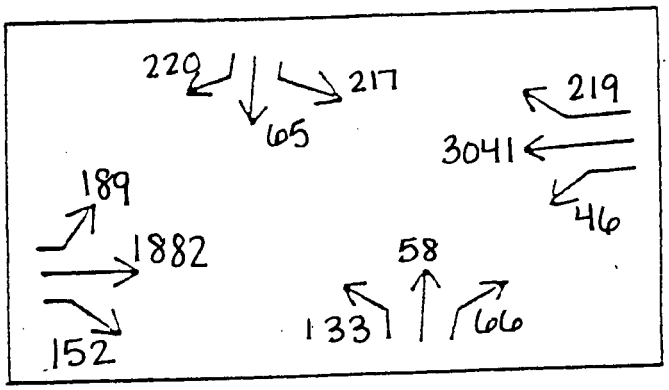
BY JB DATE 4-6-10

Existing + Units 1-4

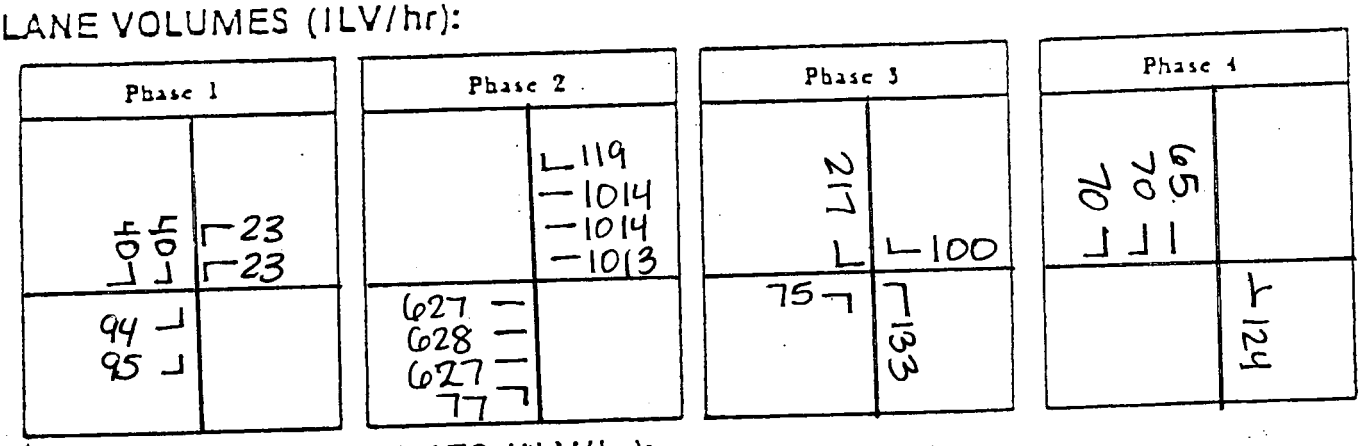
TIME _____ AM (PM)

DIAGRAM AND TRAFFIC FLOWS:





LANE VOLUMES (ILV/hr):



CRITICAL LANE VOLUMES (ILV/hr):

Phase 1	Phase 2	Phase 3	Phase 4
95	1,014	217	124

TOTAL OPERATING LEVEL (ILV/hr):

Σ
1,450

Is . . .

- ☐ < 1200 ILV/hr.
- ☒ > 1200 but < 1500 ILV/hr.
- ☐ > 1500 ILV/hr. (CAPACITY)

REMARKS:

INTERSECTION

Signalized Intersection
CAPACITY ANALYSIS

INTERSECTION Otay Mesa/Cactus

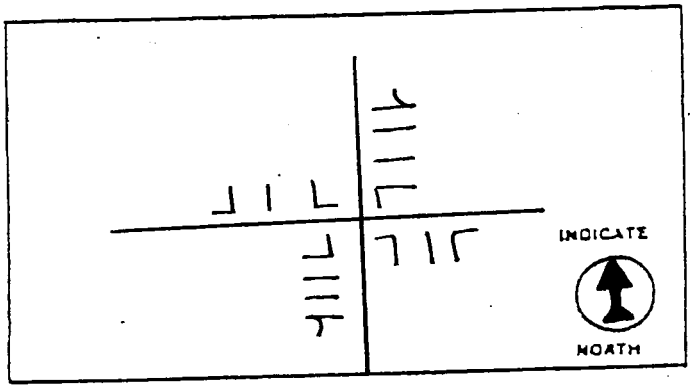
DIST. CO. RTE. P.M. 11/SD/905

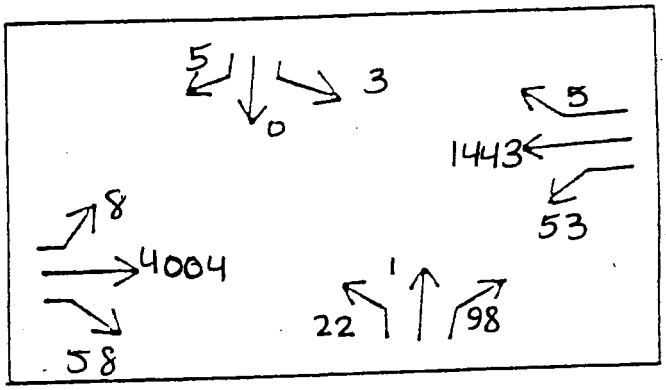
BY [illegible] DATE 4-16-10

Existing + Units 1-4

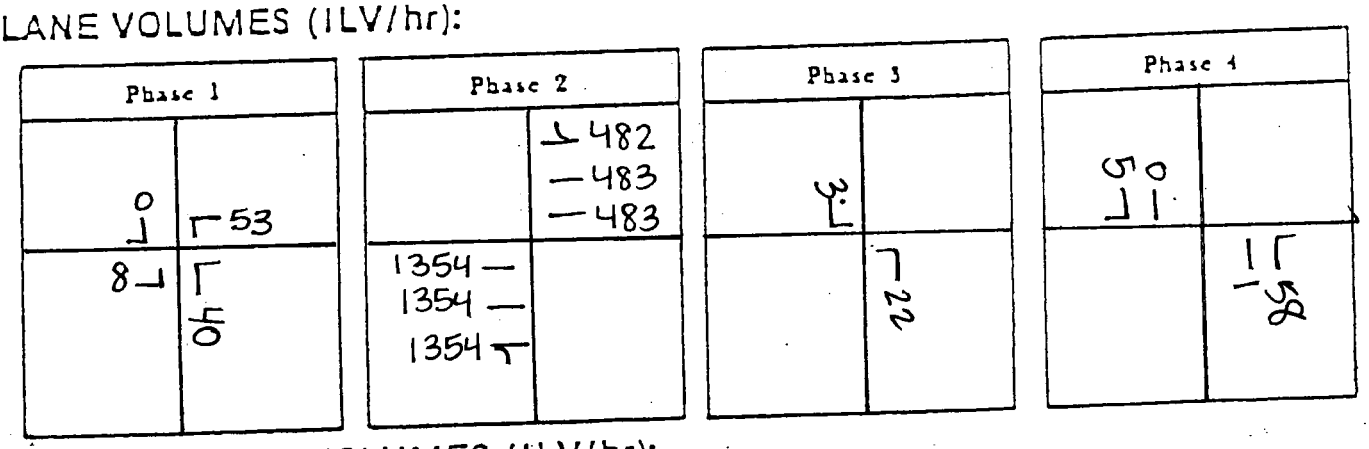
TIME ____ (AM) PM

DIAGRAM AND TRAFFIC FLOWS:





LANE VOLUMES (ILV/hr):



CRITICAL LANE VOLUMES (ILV/hr):

Phase 1	Phase 2	Phase 3	Phase 4
53	1,354	22	58

TOTAL OPERATING LEVEL (ILV/hr):

Σ
1,487

Is . . .

- ☐ < 1200 ILV/hr.
- ☒ > 1200 but < 1500 ILV/hr.
- ☐ > 1500 ILV/hr. (CAPACITY)

REMARKS:

INTERSECTION

Signalized Intersection
CAPACITY ANALYSIS

INTERSECTION Otay Mesa/Cactus

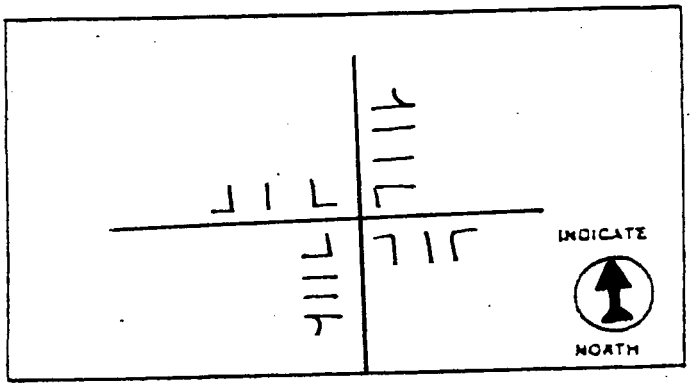
DIST. CO. RTE. P.M. 11/SD/905

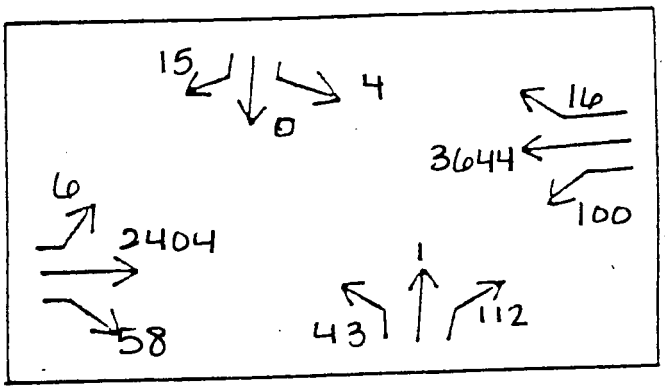
BY [illegible] DATE 4-6-10

TIME _____ AM PM

Existing + Units 1-4

DIAGRAM AND TRAFFIC FLOWS:





LANE VOLUMES (ILV/hr):

Phase 1		Phase 2		Phase 3		Phase 4	
0	100		1220 1220 1220	4		15 0	
6	50	821 821 820			43		62

CRITICAL LANE VOLUMES (ILV/hr):

Phase 1	Phase 2	Phase 3	Phase 4
100	1,220	43	62

TOTAL OPERATING LEVEL (ILV/hr):

Σ
1,425

Is . . .

- ☐ < 1200 ILV/hr.
- ☒ > 1200 but < 1500 ILV/hr.
- ☐ > 1500 ILV/hr. (CAPACITY)

REMARKS:

INTERSECTION

Signalized Intersection

CAPACITY ANALYSIS

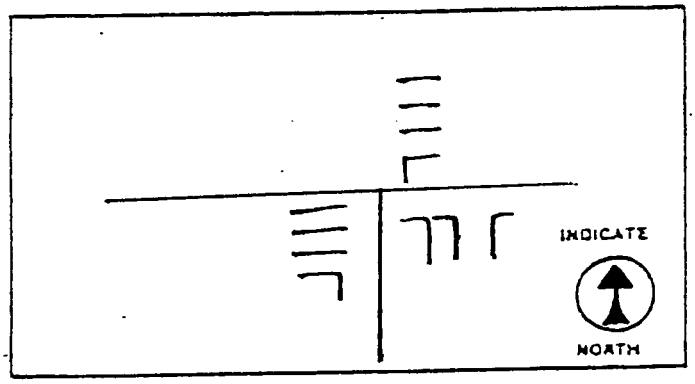
INTERSECTION Otay Mesa Rd / Britannia Blvd DIST. CO. RTE. P.M. 11/SD/905

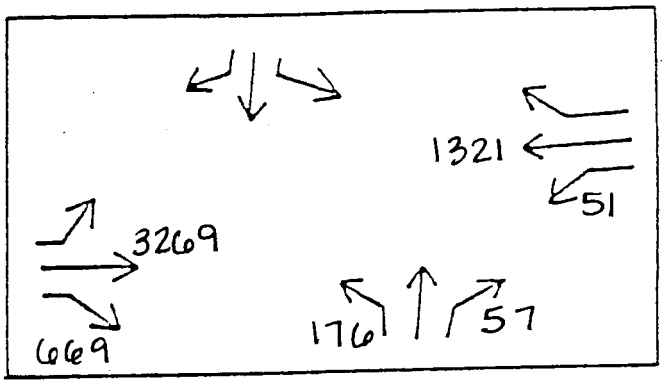
BY VB DATE 4-6-10

Existing + Units 1-4

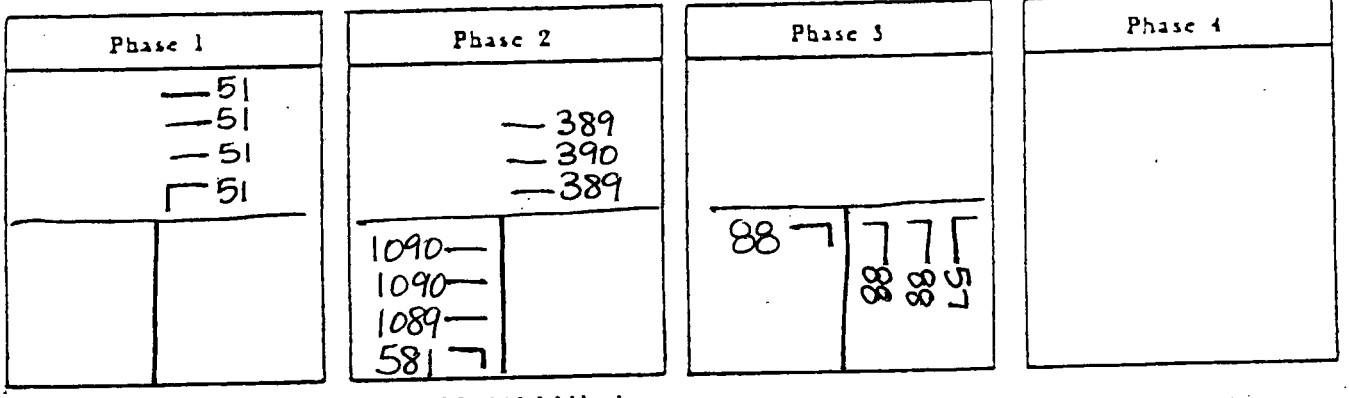
TIME ___ (AM) PM

DIAGRAM AND TRAFFIC FLOWS:





LANE VOLUMES (ILV/hr):



CRITICAL LANE VOLUMES (ILV/hr):

Phase 1	Phase 2	Phase 3	Phase 4
51	1,090	88	

TOTAL OPERATING LEVEL (ILV/hr):

Σ
1,229

Is . . .

- ☐ < 1200 ILV/hr.
- ☒ > 1200 but < 1500 ILV/hr.
- ☐ > 1500 ILV/hr. (CAPACITY)

REMARKS:

INTERSECTION

Signalized Intersection

CAPACITY ANALYSIS

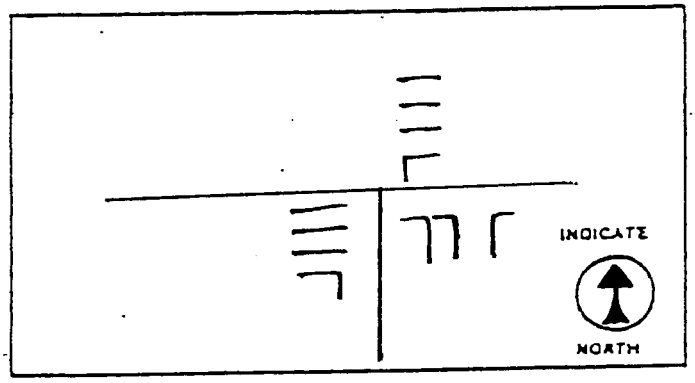
INTERSECTION Otay Mesa Rd / Britannia Blvd DIST. CO. RTE. P.M. 11/SD/905

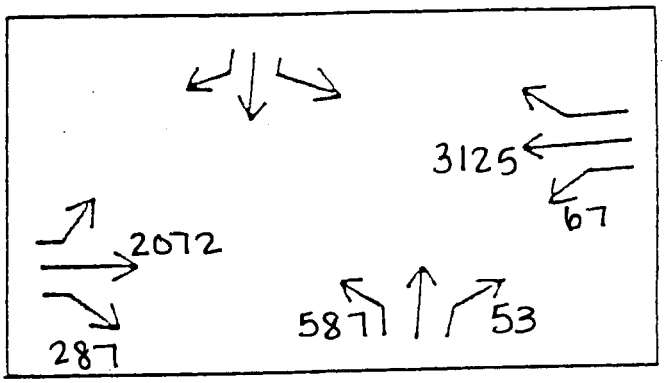
Existing + Units 1-4

BY VB DATE 4-6-10

TIME ____ AM (PM)

DIAGRAM AND TRAFFIC FLOWS:





LANE VOLUMES (ILV/hr):

Phase 1	Phase 2	Phase 3	Phase 4
67 67 67 67	975 975 974 691 691 690 187	100 293 294 53	

CRITICAL LANE VOLUMES (ILV/hr):

Phase 1	Phase 2	Phase 3	Phase 4
67	975	294	

TOTAL OPERATING LEVEL (ILV/hr):

Σ
1,336

Is . . .

- ☐ < 1200 ILV/hr.
- ☒ > 1200 but < 1500 ILV/hr.
- ☐ > 1500 ILV/hr. (CAPACITY)

REMARKS:

INTERSECTION

Signalized Intersection

CAPACITY ANALYSIS

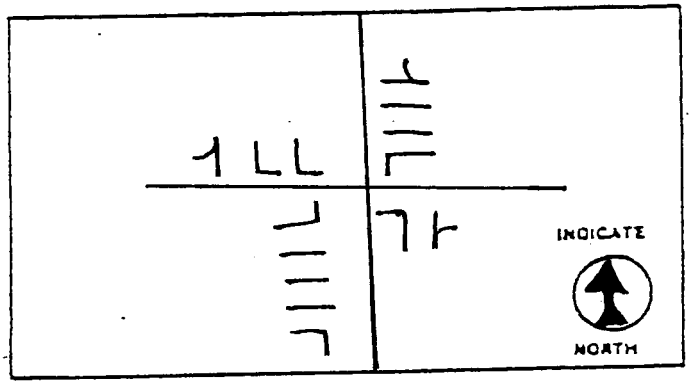
INTERSECTION Otay Mesa Rd/La Media Rd DIST. CO. RTE. P.M. 11/SD/905

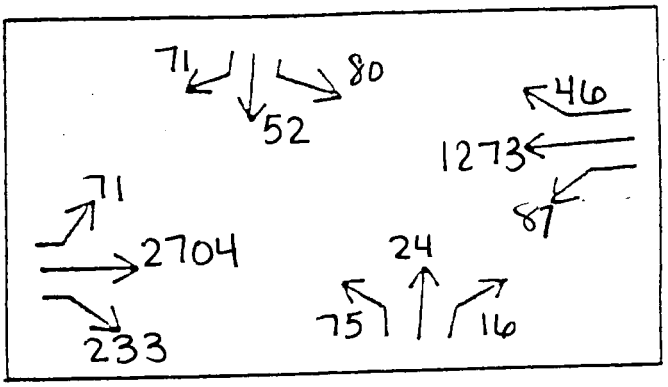
BY DB DATE 4-6-10

Existing + Units 1-4

TIME ___ (AM) PM

DIAGRAM AND TRAFFIC FLOWS:





LANE VOLUMES (ILV/hr):

Phase 1		Phase 2		Phase 3		Phase 4	
	⌐87		↓439 —440 —440	40 40 LL		132 ↑	
71 ⌐		901 — 902 — 901 — 158 ⌐		75 ⌐	⌐ 75		↑ 40

CRITICAL LANE VOLUMES (ILV/hr):

Phase 1	Phase 2	Phase 3	Phase 4
87	902	75	132

TOTAL OPERATING LEVEL (ILV/hr):

Σ
1,196

Is . . .

- ☐ < 1200 ILV/hr.
- ☒ > 1200 but < 1500 ILV/hr.
- ☐ > 1500 ILV/hr. (CAPACITY)

REMARKS:

INTERSECTION

Signalized Intersection

CAPACITY ANALYSIS

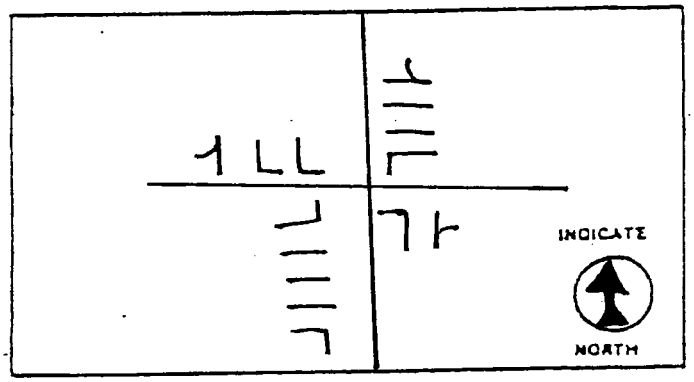
INTERSECTION Otay Mesa Rd/La Media Rd DIST. CO. RTE. P.M. 11/SD/905

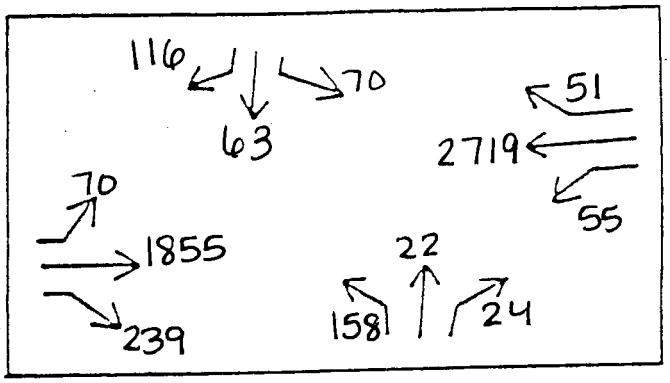
BY JB DATE 4-6-10

Existing + Units 1-4

TIME ____ AM (PM)

DIAGRAM AND TRAFFIC FLOWS:





LANE VOLUMES (ILV/hr):

Phase 1		Phase 2		Phase 3		Phase 4	
	55		923 924 923	35 35 LL		179 1	
70		618 619 618 139		100	158		46

CRITICAL LANE VOLUMES (ILV/hr):

Phase 1	Phase 2	Phase 3	Phase 4
70	924	158	179

TOTAL OPERATING LEVEL (ILV/hr):

Σ
1,331

Is . . .

- ☐ < 1200 ILV/hr.
- ☒ > 1200 but < 1500 ILV/hr.
- ☐ > 1500 ILV/hr. (CAPACITY)

REMARKS:

INTERSECTION

Signalized Intersection

CAPACITY ANALYSIS

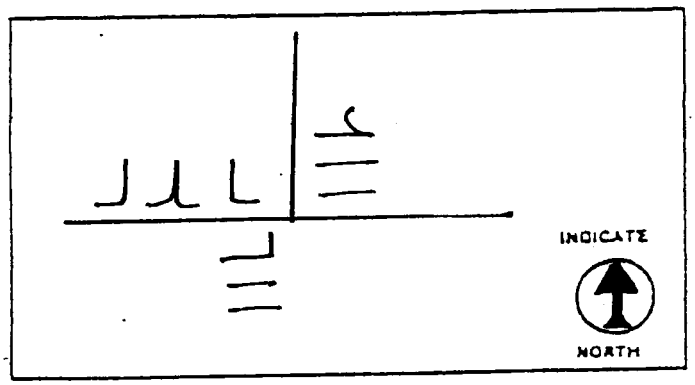
INTERSECTION Otay Mesa/Piper Ranch DIST. CO. RTE. P.M. 11/SD/905

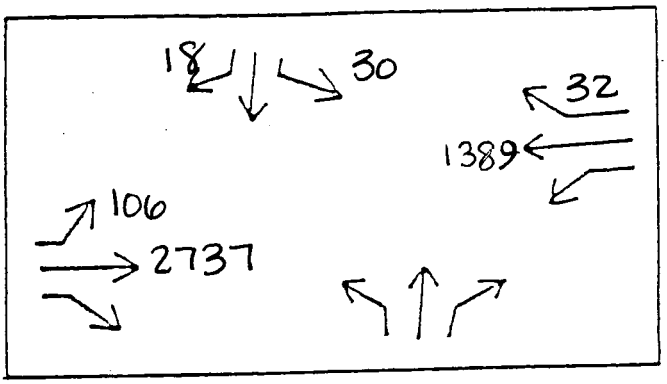
BY JB DATE 4-6-10

Existing + Units 1-4

TIME ____ AM PM

DIAGRAM AND TRAFFIC FLOWS:





LANE VOLUMES (ILV/hr):

Phase 1	Phase 2	Phase 3	Phase 4
106 106 106	473 474 474 1263 1262		

CRITICAL LANE VOLUMES (ILV/hr):

Phase 1	Phase 2	Phase 3	Phase 4
106	1,263	16	

TOTAL OPERATING LEVEL (ILV/hr):

Σ
1,385

Is . . .

- ☐ < 1200 ILV/hr.
- ☒ > 1200 but < 1500 ILV/hr.
- ☐ > 1500 ILV/hr. (CAPACITY)

REMARKS:

INTERSECTION

Signalized Intersection

CAPACITY ANALYSIS

INTERSECTION Otay Mesa/Piper Ranch

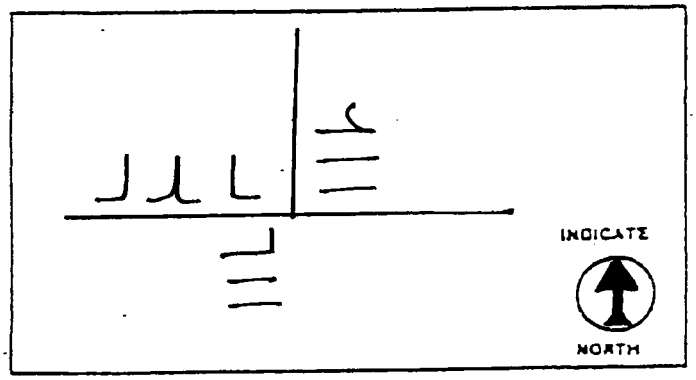
DIST. CO. RTE. P.M. 11/SD/905

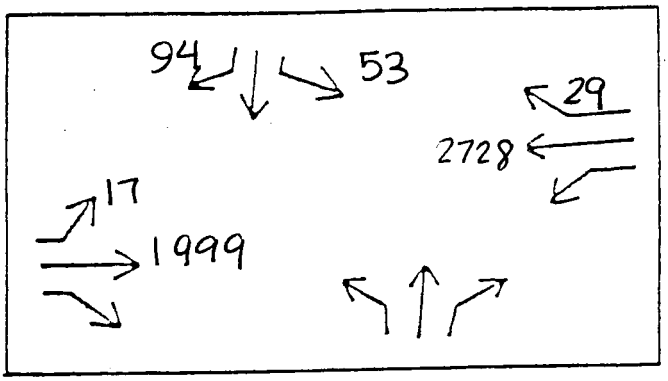
BY JB DATE 4-6-10

TIME ____ AM (PM)

Existing + Units 1-4

DIAGRAM AND TRAFFIC FLOWS:





LANE VOLUMES (ILV/hr):

Phase 1	Phase 2	Phase 3	Phase 4
17 ⌋ 17 — 17 —	919 ⌊ 919 — 919 — 982 — 983 —	49 49 49 ⌋ ⌊ L	

CRITICAL LANE VOLUMES (ILV/hr):

Phase 1	Phase 2	Phase 3	Phase 4
17	983	49	

TOTAL OPERATING LEVEL (ILV/hr):

Σ
1,049

Is . . .

- ☒ < 1200 ILV/hr.
- ☐ > 1200 but < 1500 ILV/hr.
- ☐ > 1500 ILV/hr. (CAPACITY)

REMARKS:

Signalized Intersection

CAPACITY ANALYSIS

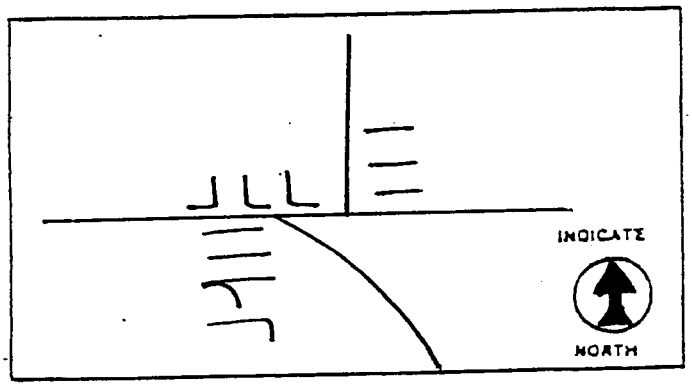
INTERSECTION Otay Mesa / SR-125 SB Ramp DIST. CO. RTE. P.M. 11/SD/905

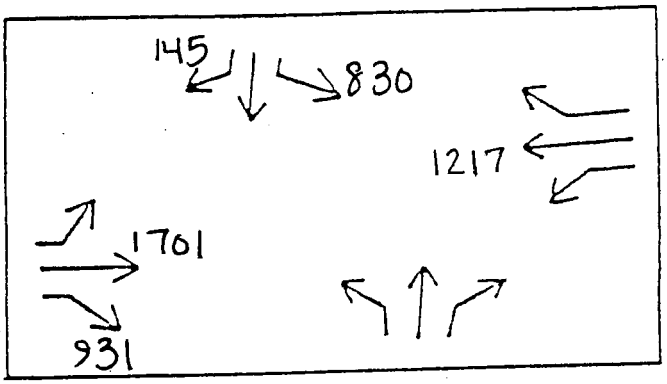
BY JB DATE 4-6-10

Existing + Units 1-4

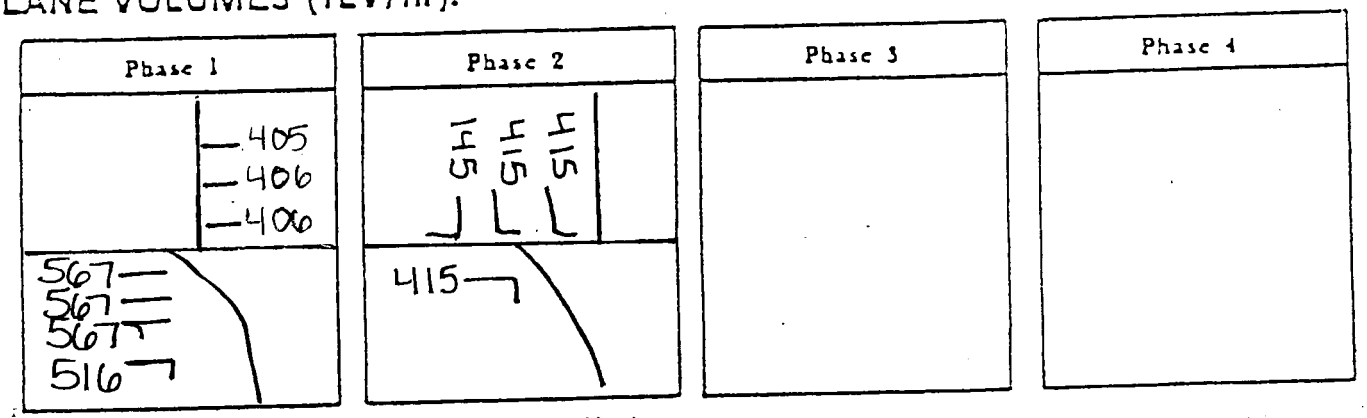
TIME ____ (AM) PM

DIAGRAM AND TRAFFIC FLOWS:





LANE VOLUMES (ILV/hr):



CRITICAL LANE VOLUMES (ILV/hr):

Phase 1	Phase 2	Phase 3	Phase 4
567	415		

TOTAL OPERATING LEVEL (ILV/hr):

Σ
982

Is . . . ☒ < 1200 ILV/hr.

☐ > 1200 but < 1500 ILV/hr.

☐ > 1500 ILV/hr. (CAPACITY)

REMARKS:

INTERSECTION

Signalized Intersection

CAPACITY ANALYSIS

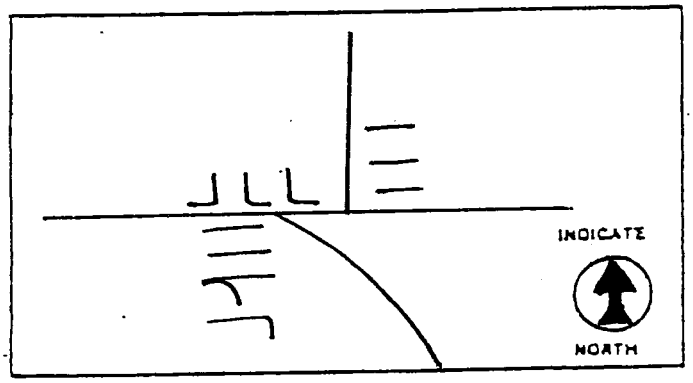
INTERSECTION Otay Mesa / SR-125 SB Ramp DIST. CO. RTE. P.M. 11/SD/905

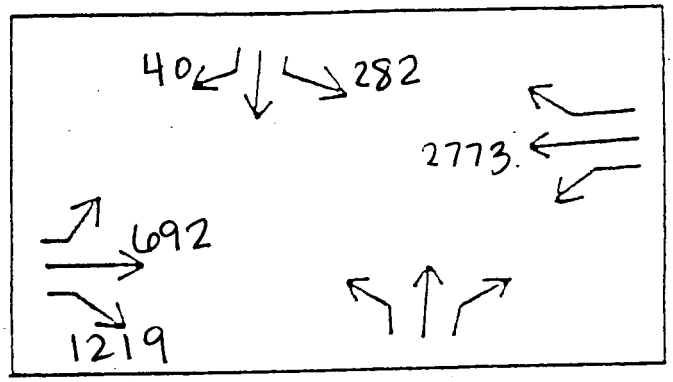
BY JB DATE 4-6-10

Existing + Units 1-4

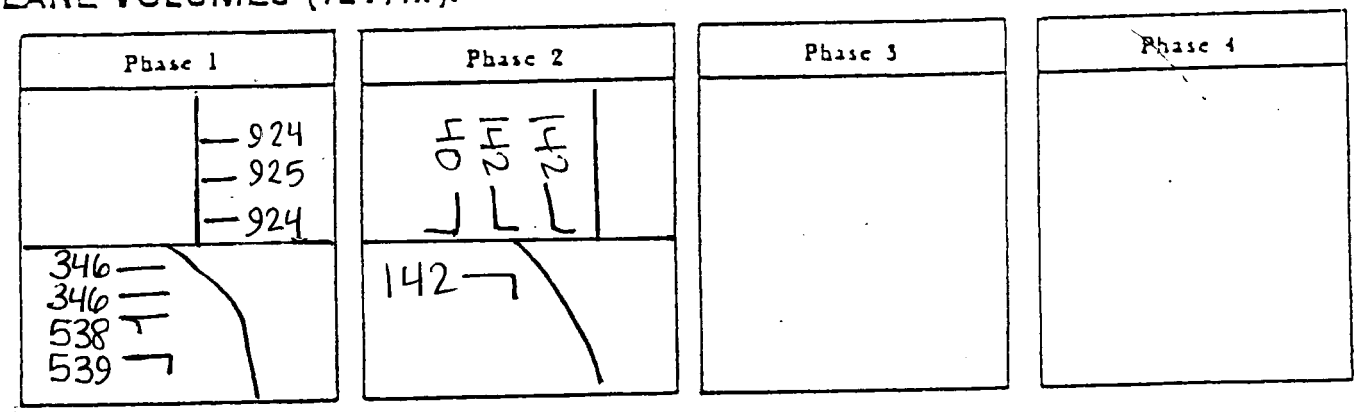
TIME ____ AM (PM)

DIAGRAM AND TRAFFIC FLOWS:





LANE VOLUMES (ILV/hr):



CRITICAL LANE VOLUMES (ILV/hr):

Phase 1	Phase 2	Phase 3	Phase 4
925	142		

TOTAL OPERATING LEVEL (ILV/hr):

Σ
1,067

Is . . . ☒ < 1200 ILV/hr.

☐ > 1200 but < 1500 ILV/hr.

☐ > 1500 ILV/hr. (CAPACITY)

REMARKS:

INTERSECTION

Signalized Intersection

CAPACITY ANALYSIS

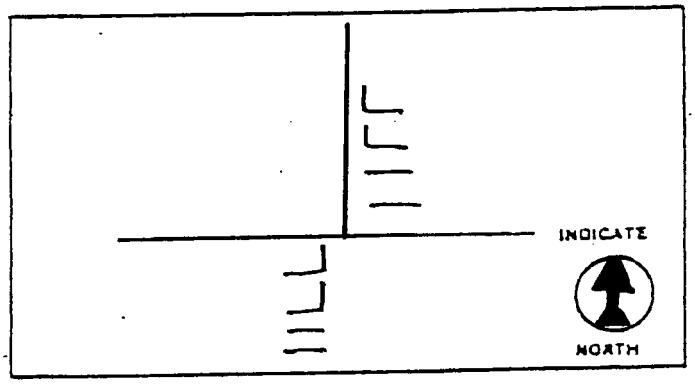
INTERSECTION Otay Mesa/SR-125NB Ramp DIST. CO. RTE. P.M. 11/SD/905

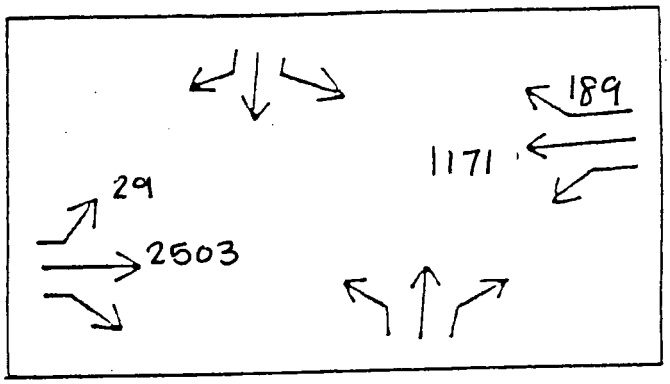
Existing + Units 1-4

BY JB DATE 4-6-10

TIME ____ (AM) PM

DIAGRAM AND TRAFFIC FLOWS:





LANE VOLUMES (ILV/hr):

Phase 1	Phase 2	Phase 3	Phase 4
14 ⌊ 15 ⌊ 15 = 15 =	⌊ 94 ⌊ 95 — 585 — 586 1237 = 1236 =		

CRITICAL LANE VOLUMES (ILV/hr):

Phase 1	Phase 2	Phase 3	Phase 4
15	1,237		

TOTAL OPERATING LEVEL (ILV/hr):

Σ
1,252

Is . . .

- ☐ < 1200 ILV/hr.
- ☒ > 1200 but < 1500 ILV/hr.
- ☐ > 1500 ILV/hr. (CAPACITY)

REMARKS:

INTERSECTION

Signalized Intersection

CAPACITY ANALYSIS

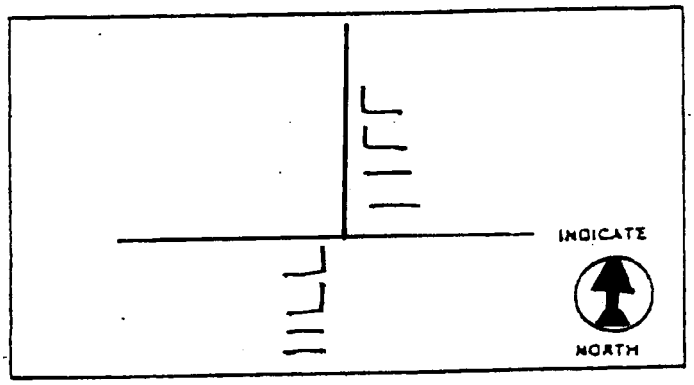
INTERSECTION Otay Mesa/SR-125NB Ramp DIST. CO. RTE. P.M. 11/SD/905

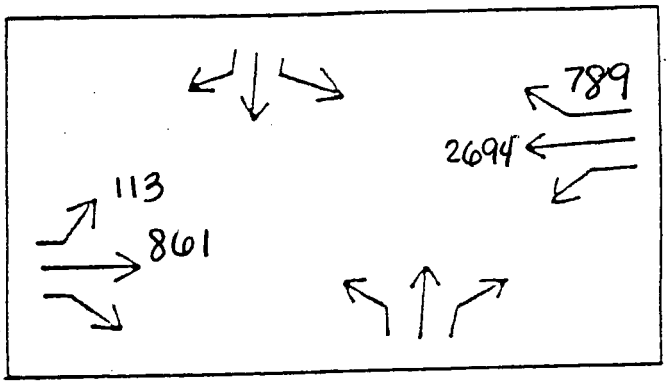
BY JB DATE 4-6-10

Existing + Units 1-4

TIME ____ AM (PM)

DIAGRAM AND TRAFFIC FLOWS:





LANE VOLUMES (ILV/hr):

Phase 1	Phase 2	Phase 3	Phase 4
56 L 57 L 57 = 57 =	L 394 L 395 — 1347 — 1347 373 — 374 —		

CRITICAL LANE VOLUMES (ILV/hr):

Phase 1	Phase 2	Phase 3	Phase 4
57	1,347		

TOTAL OPERATING LEVEL (ILV/hr):

Σ
1,404

Is . . .

- ☐ < 1200 ILV/hr.
- ☒ > 1200 but < 1500 ILV/hr.
- ☐ > 1500 ILV/hr. (CAPACITY)

REMARKS:

INTERSECTION

Signalized Intersection
CAPACITY ANALYSIS

INTERSECTION Otay Mesa/SR-905NB Connector

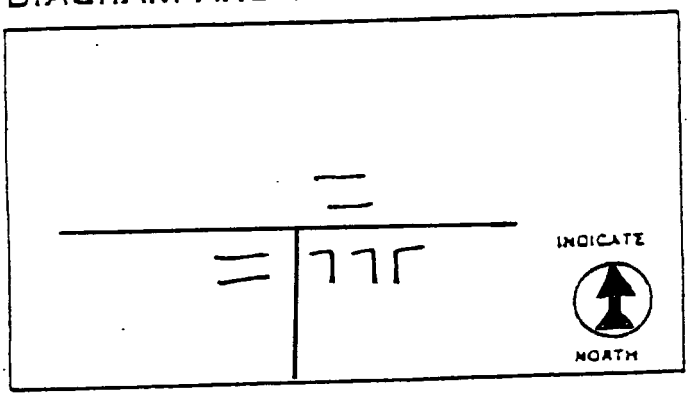
DIST. CO. RTE. P.M. 11/SD/905

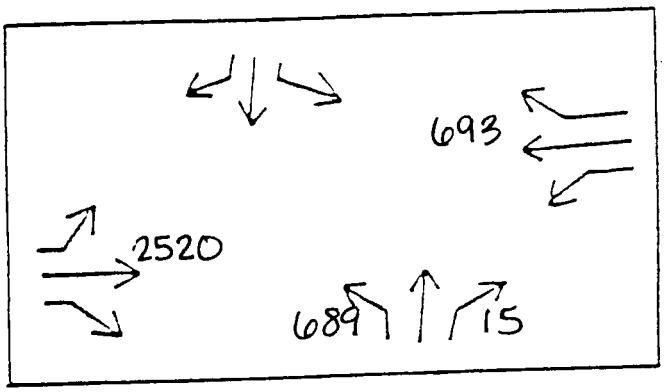
BY JB DATE 4-6-10

Existing + Units 1-4

TIME ____ (AM) PM

DIAGRAM AND TRAFFIC FLOWS:





LANE VOLUMES (ILV/hr):

Phase 1	Phase 2	Phase 3	Phase 4
347 346 1260 1260	15 344 345		

CRITICAL LANE VOLUMES (ILV/hr):

Phase 1	Phase 2	Phase 3	Phase 4
1,260	345		

TOTAL OPERATING LEVEL (ILV/hr):

Σ
1,605

Is . . .

- ☐ < 1200 ILV/hr.
- ☐ > 1200 but < 1500 ILV/hr.
- ☒ > 1500 ILV/hr. (CAPACITY)

REMARKS:

INTERSECTION

Signalized Intersection
CAPACITY ANALYSIS

INTERSECTION Otay Mesa/SR-905NB Connector

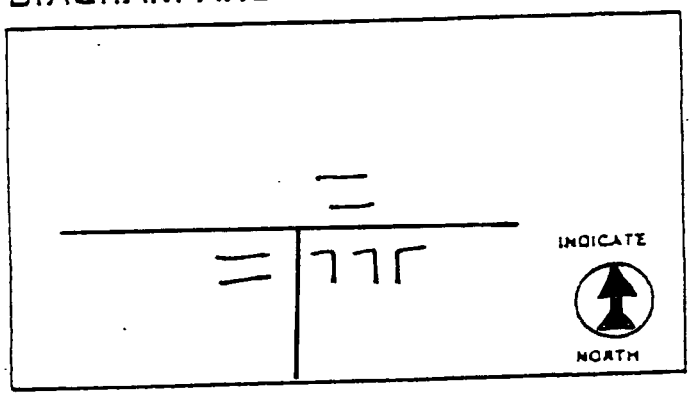
DIST. CO. RTE. P.M. 11/SD/905

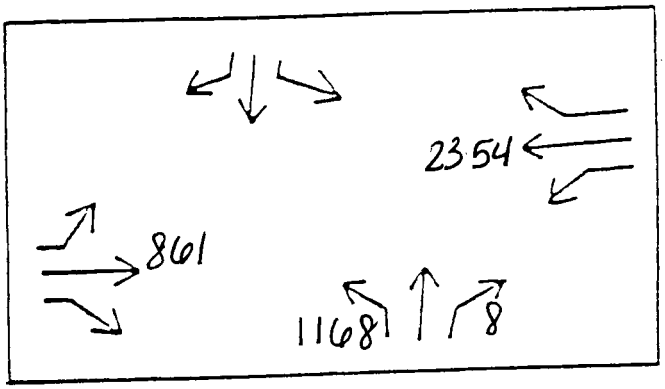
BY JB DATE 4-6-10

TIME ____ AM (PM)

Existing + Units 1-4

DIAGRAM AND TRAFFIC FLOWS:





LANE VOLUMES (ILV/hr):

Phase 1	Phase 2	Phase 3	Phase 4
1177 1177 430 431	777 585 584		

CRITICAL LANE VOLUMES (ILV/hr):

Phase 1	Phase 2	Phase 3	Phase 4
1,177	584		

TOTAL OPERATING LEVEL (ILV/hr):

Σ
1,761

Is . . .

- ☐ < 1200 ILV/hr.
- ☐ > 1200 but < 1500 ILV/hr.
- ☒ > 1500 ILV/hr. (CAPACITY)

REMARKS:

Signalized Intersection
CAPACITY ANALYSIS

INTERSECTION Siempre Viva | SR-905 SB Ramp

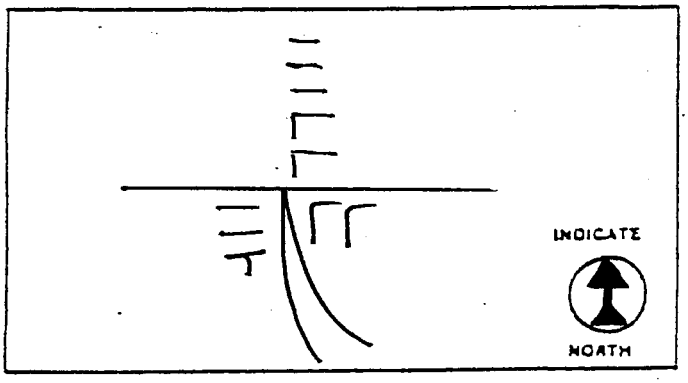
DIST. CO. RTE. P.M. 11 | SD | 905

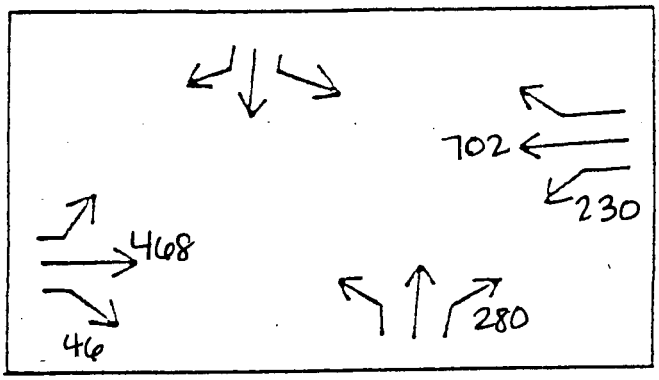
Existing + Units 1-4

BY DB DATE 4-6-10

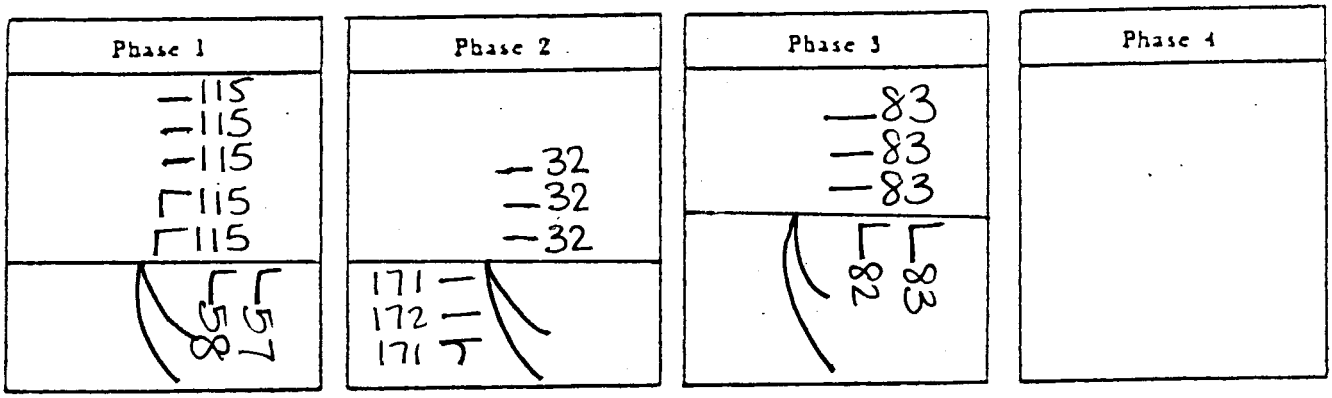
TIME ____ (AM) PM

DIAGRAM AND TRAFFIC FLOWS:





LANE VOLUMES (ILV/hr):



CRITICAL LANE VOLUMES (ILV/hr):

Phase 1	Phase 2	Phase 3	Phase 4
115	172	83	

TOTAL OPERATING LEVEL (ILV/hr):

Σ
370

Is . . .

- ☒ < 1200 ILV/hr.
- ☐ > 1200 but < 1500 ILV/hr.
- ☐ > 1500 ILV/hr. (CAPACITY)

REMARKS:

INTERSECTION

Signalized Intersection

CAPACITY ANALYSIS

INTERSECTION Siempre Viva | SR-905 SB Ramp

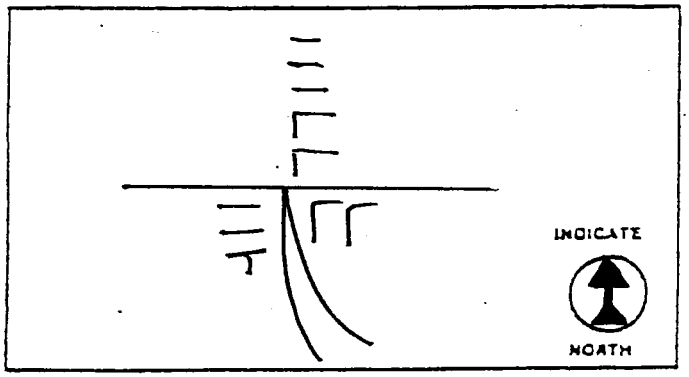
DIST. CO. RTE. P.M. 11 | SD | 905

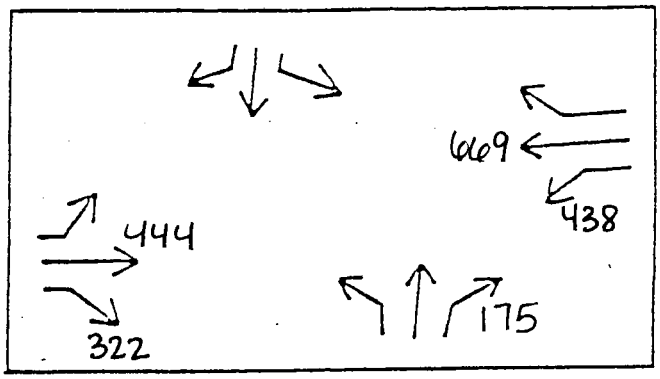
BY XB DATE 4-6-10

TIME ____ AM (PM)

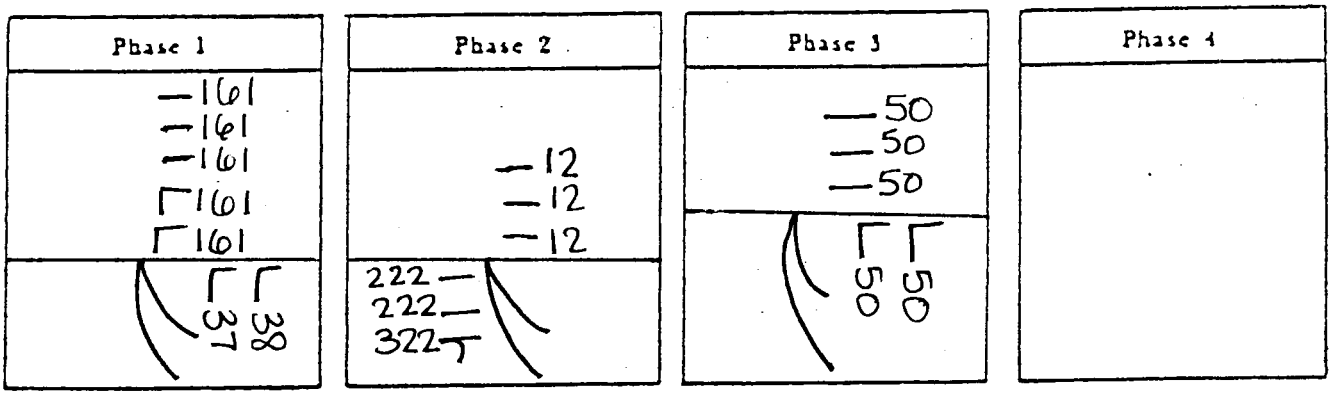
Existing + Units 1-4

DIAGRAM AND TRAFFIC FLOWS:





LANE VOLUMES (1LV/hr):



CRITICAL LANE VOLUMES (1LV/hr):

Phase 1	Phase 2	Phase 3	Phase 4
161	322	50	

TOTAL OPERATING LEVEL (1LV/hr):

Σ
533

Is . . .

☒ < 1200 1LV/hr.

☐ > 1200 but < 1500 1LV/hr.

☐ > 1500 1LV/hr. (CAPACITY)

REMARKS:

INTERSECTION

Signalized Intersection

CAPACITY ANALYSIS

INTERSECTION Siempre Viva / SR-905 NB Ramp

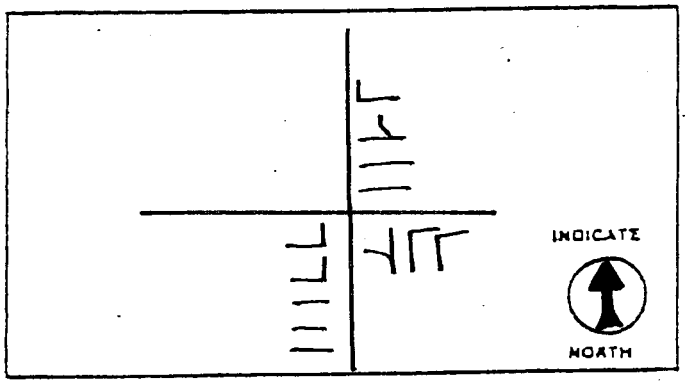
DIST. CO. RTE. P.M. 11/SD/905

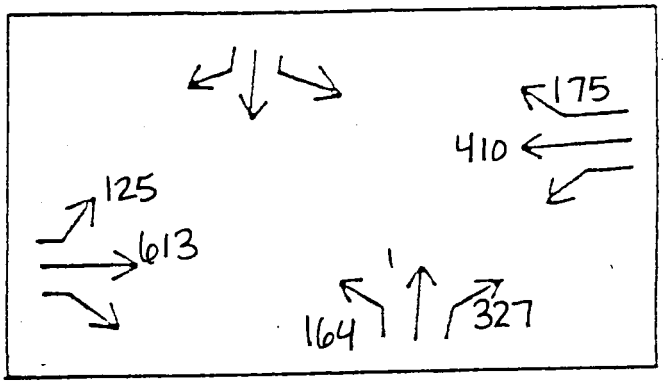
BY [illegible] DATE 4-6-10

TIME ____ (AM) PM

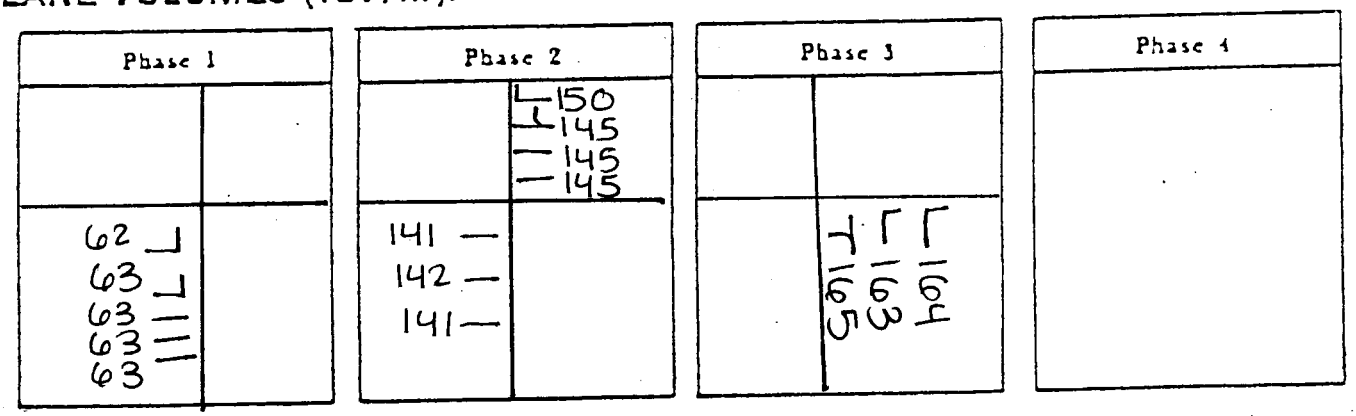
Existing + Units 1-4

DIAGRAM AND TRAFFIC FLOWS:





LANE VOLUMES (ILV/hr):



CRITICAL LANE VOLUMES (ILV/hr):

Phase 1	Phase 2	Phase 3	Phase 4
63	150	165	

TOTAL OPERATING LEVEL (ILV/hr):

Σ
378

Is . . . ☒ < 1200 ILV/hr.

☐ > 1200 but < 1500 ILV/hr.

☐ > 1500 ILV/hr. (CAPACITY)

REMARKS:

INTERSECTION

Signalized Intersection

CAPACITY ANALYSIS

INTERSECTION Siempre Viva / SR-905 NB Ramp

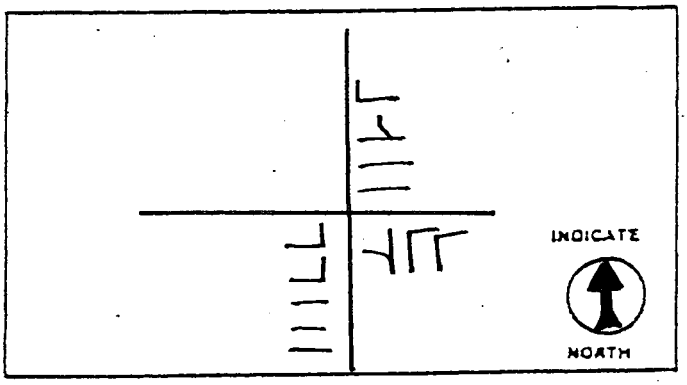
DIST. CO. RTE. P.M. 11 / SD / 905

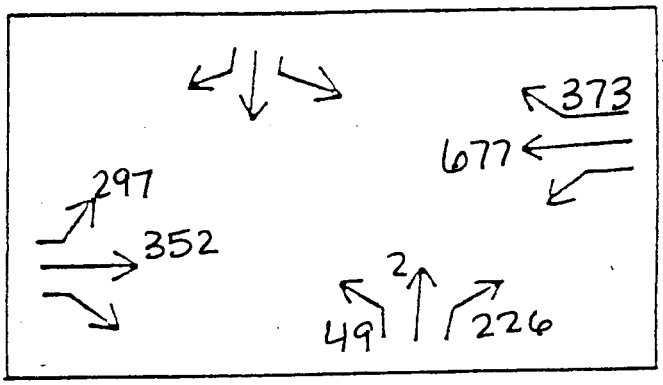
BY DR DATE 4-6-10

TIME ____ AM (PM)

Existing + Units 1-4

DIAGRAM AND TRAFFIC FLOWS:





LANE VOLUMES (ILV/hr):

Phase 1	Phase 2	Phase 3	Phase 4
148 L 149 L 49 — 50 — 49 —	L 248 L 267 — 268 — 267 68 — 68 — 68 —	151 T 113 R 113 L	

CRITICAL LANE VOLUMES (ILV/hr):

Phase 1	Phase 2	Phase 3	Phase 4
149	268	113	

TOTAL OPERATING LEVEL (ILV/hr):

Σ
530

Is . . .

☒ < 1200 ILV/hr.

☐ > 1200 but < 1500 ILV/hr.

☐ > 1500 ILV/hr. (CAPACITY)

REMARKS:

APPENDIX I

- Existing + Project Units 1-5 Arterial Synchro Analysis Worksheets
- Existing + Project Units 1-5 Synchro Analysis Worksheets
- Existing + Project Units 1-5 Intersection ILV Analysis

Existing + Project Units 1-5 Arterial Synchro Analysis Worksheets

Arterial Level of Service: EB Otay Mesa Road

Cross Street	Arterial Class	Flow Speed	Running Time	Signal Delay	Travel Time (s)	Dist (mi)	Arterial Speed	Arterial LOS
Heritage Road	II	45	28.4	95.9	124.3	0.27	7.9	F
Cactus Rd	II	45	44.7	64.7	109.4	0.51	16.7	E
Brittania Blvd	II	45	45.5	71.7	117.2	0.52	15.9	E
La Media	II	45	83.0	19.4	102.4	1.04	36.5	A
Piper Ranch Rd	II	45	44.3	44.2	88.5	0.50	20.5	D
	II	45	25.6	17.5	43.1	0.25	20.5	D
SR125 NB Ramp	II	45	14.8	5.1	19.9	0.14	24.5	C
SR905	II	45	15.0	190.9	205.9	0.14	2.4	F
Sanyo Ave	II	45	27.8	39.2	67.0	0.27	14.4	E
Enrico Fermi Dr	II	45	62.8	751.6	814.4	0.78	3.5	F
Total	II		391.9	1300.2	1692.1	4.41	9.4	F

Arterial Level of Service: WB Otay Mesa Road

Cross Street	Arterial Class	Flow Speed	Running Time	Signal Delay	Travel Time (s)	Dist (mi)	Arterial Speed	Arterial LOS
Enrico Fermi Dr	II	45	43.2	8.6	51.8	0.49	34.1	B
Sanyo Ave	II	45	62.8	3.7	66.5	0.78	42.4	A
SR905	II	45	27.8	11.3	39.1	0.27	24.6	C
SR125 NB Ramp	II	45	15.0	7.3	22.3	0.14	22.2	C
SR125 SB	II	45	14.8	12.5	27.3	0.14	17.9	D
Piper Ranch Rd	II	45	25.6	7.4	33.0	0.25	26.8	C
La Media	II	45	44.3	12.4	56.7	0.50	32.0	B
Brittania Blvd	II	45	83.0	3.3	86.3	1.04	43.3	A
Cactus Rd	II	45	45.5	2.4	47.9	0.52	38.9	A
Heritage Road	II	45	44.7	13.5	58.2	0.51	31.4	B
Total	II		406.7	82.4	489.1	4.63	34.1	B

Arterial Level of Service: EB Otay Mesa Road

Cross Street	Arterial Class	Flow Speed	Running Time	Signal Delay	Travel Time (s)	Dist (mi)	Arterial Speed	Arterial LOS
Heritage Road	II	45	28.4	19.9	48.3	0.27	20.3	D
Cactus Rd	II	45	44.7	14.8	59.5	0.51	30.7	B
Brittania Blvd	II	45	45.5	12.0	57.5	0.52	32.4	B
La Media	II	45	83.0	28.6	111.6	1.04	33.5	B
Piper Ranch Rd	II	45	43.8	6.0	49.8	0.50	36.0	A
	II	45	26.2	3.2	29.4	0.25	30.8	B
SR125 NB Ramp	II	45	14.7	0.2	14.9	0.14	32.7	B
SR905	II	45	15.0	18.7	33.7	0.14	14.7	E
Sanyo Ave	II	45	27.8	5.5	33.3	0.27	28.9	B
Enrico Fermi Rd	II	45	62.8	62.0	124.8	0.78	22.6	C
Total	II		391.9	170.9	562.8	4.41	28.2	B

Arterial Level of Service: WB Otay Mesa Road

Cross Street	Arterial Class	Flow Speed	Running Time	Signal Delay	Travel Time (s)	Dist (mi)	Arterial Speed	Arterial LOS
Enrico Fermi Rd	II	45	43.2	157.9	201.1	0.49	8.8	F
Sanyo Ave	II	45	62.8	442.1	504.9	0.78	5.6	F
SR905	II	45	27.8	297.8	325.6	0.27	3.0	F
SR125 NB Ramp	II	45	15.0	42.6	57.6	0.14	8.6	F
SR125 SB	II	45	14.7	3.1	17.8	0.14	27.3	C
Piper Ranch Rd	II	45	26.2	3.3	29.5	0.25	30.7	B
La Media	II	45	43.8	54.5	98.3	0.50	18.2	D
Brittania Blvd	II	45	83.0	30.1	113.1	1.04	33.0	B
Cactus Rd	II	45	45.5	10.7	56.2	0.52	33.1	B
Heritage Road	II	45	44.7	74.0	118.7	0.51	15.4	E
Total	II		406.7	1116.1	1522.8	4.63	10.9	F

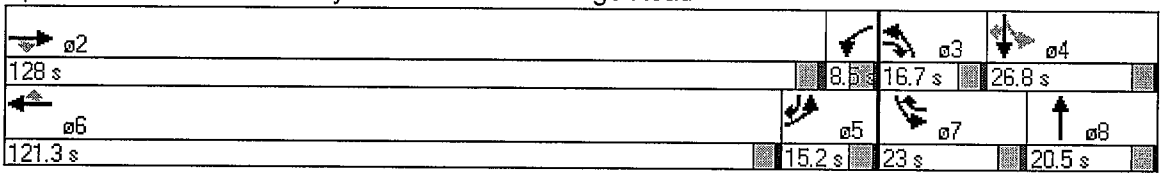
Existing + Project Units 1-5 Synchro Analysis Worksheets

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Total Lost Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	0.97	0.91	1.00	0.97	0.91	1.00	1.00	1.00	1.00	1.00	1.00	0.88
Frt			0.850			0.850		0.893				0.850
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	3433	4803	1583	3433	4803	1583	1770	1663	0	1770	1863	2787
Flt Permitted	0.950			0.950			0.950			0.413		
Satd. Flow (perm)	3433	4803	1583	3433	4803	1583	1770	1663	0	769	1863	2787
Satd. Flow (RTOR)			136			80		44				58
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Volume (vph)	105	3569	194	39	1314	71	54	22	56	233	37	52
Adj. Flow (vph)	118	4010	218	44	1476	80	61	25	63	262	42	58
Lane Group Flow (vph)	118	4010	218	44	1476	80	61	88	0	262	42	58
Turn Type	Prot		pm+ov	Prot		pm+ov	Prot			pm+pt		pm+ov
Protected Phases	5	2	3	1	6	7	3	8		7	4	5
Permitted Phases			2			6				4		4
Total Split (s)	15.2	128.0	16.7	8.5	121.3	23.0	16.7	20.5	0.0	23.0	26.8	15.2
Act Effct Green (s)	10.7	130.8	142.6	4.5	122.9	142.4	11.0	10.9		34.4	19.4	30.1
Actuated g/C Ratio	0.06	0.73	0.79	0.02	0.68	0.79	0.06	0.06		0.19	0.11	0.17
v/c Ratio	0.58	1.15	0.17	0.51	0.45	0.06	0.56	0.62		1.03	0.21	0.11
Control Delay	93.8	95.9	1.4	103.2	13.5	0.5	101.4	60.7		129.5	75.7	10.3
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0
Total Delay	93.8	95.9	1.4	103.2	13.5	0.5	101.4	60.7		129.5	75.7	10.3
LOS	F	F	A	F	B	A	F	E		F	E	B
Approach Delay		91.1			15.3			77.4			104.2	
Approach LOS		F			B			E			F	

Intersection Summary

Cycle Length: 180
Actuated Cycle Length: 180
Offset: 0 (0%), Referenced to phase 2:EBT and 6:WBT, Start of Green, Master Intersection
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 1.15
Intersection Signal Delay: 72.8 — Intersection LOS: E
Intersection Capacity Utilization 95.2% — ICU Level of Service F
Analysis Period (min) 15

Splits and Phases: 1: Otay Mesa Road & Heritage Road

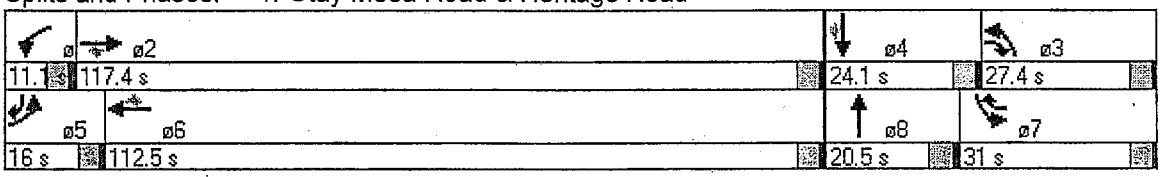


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Total Lost Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	0.97	0.91	1.00	0.97	0.91	1.00	1.00	1.00	1.00	1.00	1.00	0.88
Frt			0.850			0.850		0.920				0.850
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	3433	4803	1583	3433	4803	1583	1770	1714	0	1770	1863	2787
Flt Permitted	0.950			0.950			0.950			0.950		
Satd. Flow (perm)	3433	4803	1583	3433	4803	1583	1770	1714	0	1770	1863	2787
Satd. Flow (RTOR)			157			173		25				86
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Volume (vph)	189	1925	152	46	3084	219	133	58	66	217	65	220
Adj. Flow (vph)	195	1985	157	47	3179	226	137	60	68	224	67	227
Lane Group Flow (vph)	195	1985	157	47	3179	226	137	128	0	224	67	227
Turn Type	Prot		pm+ov	Prot		pm+ov	Prot			Prot		pm+ov
Protected Phases	5	2	3	1	6	7	3	8		7	4	5
Permitted Phases			2			6						4
Total Split (s)	16.0	117.4	27.4	11.1	112.5	31.0	27.4	20.5	0.0	31.0	24.1	16.0
Act Effct Green (s)	12.0	115.9	144.3	6.9	108.6	133.8	27.6	14.6		25.2	12.1	24.2
Actuated g/C Ratio	0.07	0.66	0.82	0.04	0.62	0.76	0.16	0.08		0.14	0.07	0.14
v/c Ratio	0.83	0.63	0.12	0.35	1.08	0.18	0.49	0.78		0.89	0.52	0.50
Control Delay	109.0	19.9	0.5	91.5	74.0	1.1	75.2	93.2		107.1	94.0	31.4
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0
Total Delay	109.0	19.9	0.5	91.5	74.0	1.1	75.2	93.2		107.1	94.0	31.4
LOS	F	B	A	F	E	A	E	F		F	F	C
Approach Delay		26.0			69.5			83.9			72.3	
Approach LOS		C			E			F			E	

Intersection Summary

Cycle Length: 180
Actuated Cycle Length: 176.4
Control Type: Actuated-Uncoordinated
Maximum v/c Ratio: 1.08
Intersection Signal Delay: 54.8
Intersection LOS: D
Intersection Capacity Utilization 97.4%
ICU Level of Service F
Analysis Period (min) 15

Splits and Phases: 1: Otay Mesa Road & Heritage Road

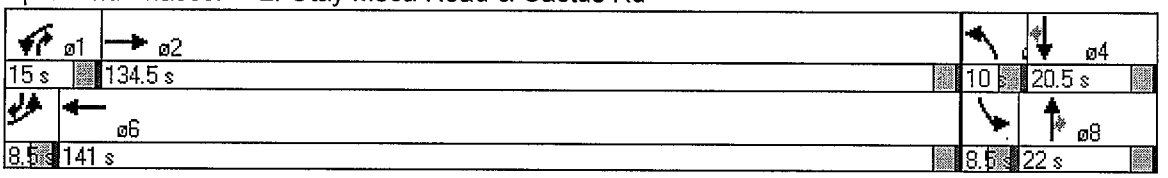


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Total Lost Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	1.00	0.91	0.91	1.00	0.91	0.91	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.998							0.850			0.850
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1770	4797	0	1770	4804	0	1770	1863	1583	1770	1863	1583
Flt Permitted	0.950			0.950			0.950			0.950		
Satd. Flow (perm)	1770	4797	0	1770	4804	0	1770	1863	1583	1770	1863	1583
Satd. Flow (RTOR)		3			1				28			71
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Volume (vph)	8	4042	58	53	1501	5	22	1	98	3	0	5
Adj. Flow (vph)	9	4442	64	58	1649	5	24	1	108	3	0	5
Lane Group Flow (vph)	9	4506	0	58	1654	0	24	1	108	3	0	5
Turn Type	Prot			Prot			Prot		pm+ov	Prot		pm+ov
Protected Phases	5	2		1	6		3	8	1	7	4	5
Permitted Phases									8			4
Total Split (s)	8.5	134.5	0.0	15.0	141.0	0.0	10.0	22.0	15.0	8.5	20.5	8.5
Act Effct Green (s)	7.0	151.6		12.5	164.9		7.9	6.2	18.7	4.5		7.0
Actuated g/C Ratio	0.04	0.84		0.07	0.92		0.04	0.03	0.10	0.02		0.04
v/c Ratio	0.13	1.12		0.47	0.38		0.31	0.02	0.57	0.07		0.04
Control Delay	77.9	64.7		92.3	2.4		92.4	84.0	66.7	89.0		0.6
Queue Delay	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0		0.0
Total Delay	77.9	64.7		92.3	2.4		92.4	84.0	66.7	89.0		0.6
LOS	E	E		F	A		F	F	E	F		A
Approach Delay		64.7			5.4			71.5				
Approach LOS		E			A			E				

Intersection Summary

Cycle Length: 180
Actuated Cycle Length: 180
Offset: 26 (14%), Referenced to phase 2:EBT and 6:WBT, Start of Green
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 1.12
Intersection Signal Delay: 48.9 — Intersection LOS: D
Intersection Capacity Utilization 98.8% — ICU Level of Service F
Analysis Period (min) 15

Splits and Phases: 2: Otay Mesa Road & Cactus Rd

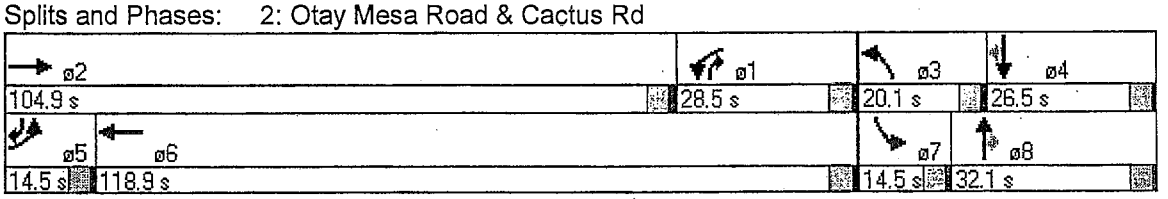


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Total Lost Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	1.00	0.91	0.91	1.00	0.91	0.91	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.997			0.999				0.850			0.850
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1770	4795	0	1770	4799	0	1770	1863	1583	1770	1863	1583
Flt Permitted	0.950			0.950			0.950			0.950		
Satd. Flow (perm)	1770	4795	0	1770	4799	0	1770	1863	1583	1770	1863	1583
Satd. Flow (RTOR)		3			1				96			53
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Volume (vph)	6	2447	58	100	3687	16	43	1	112	4	0	15
Adj. Flow (vph)	6	2497	59	102	3762	16	44	1	114	4	0	15
Lane Group Flow (vph)	6	2556	0	102	3778	0	44	1	114	4	0	15
Turn Type	Prot			Prot			Prot		pm+ov	Prot		pm+ov
Protected Phases	5	2		1	6		3	8	1	7	4	5
Permitted Phases									8			4
Total Split (s)	14.5	104.9	0.0	28.5	118.9	0.0	20.1	32.1	28.5	14.5	26.5	14.5
Act Effct Green (s)	6.7	134.1		24.9	157.1		11.1	8.7	34.8	6.5		6.7
Actuated g/C Ratio	0.04	0.74		0.14	0.87		0.06	0.05	0.19	0.04		0.04
v/c Ratio	0.09	0.72		0.42	0.90		0.40	0.01	0.30	0.06		0.14
Control Delay	86.2	14.8		69.8	10.7		90.7	82.0	15.3	85.5		2.6
Queue Delay	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0		0.0
Total Delay	86.2	14.8		69.8	10.7		90.7	82.0	15.3	85.5		2.6
LOS	F	B		E	B		F	F	B	F		A
Approach Delay		14.9			12.3			36.6				
Approach LOS		B			B			D				

Intersection Summary

Cycle Length: 180
Actuated Cycle Length: 180
Offset: 139 (77%), Referenced to phase 2:EBT and 6:WBT, Start of Green
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 0.90
Intersection Signal Delay: 13.9 — Intersection LOS: B
Intersection Capacity Utilization 94.0% — ICU Level of Service F
Analysis Period (min) 15

Splits and Phases: 2: Otay Mesa Road & Cactus Rd

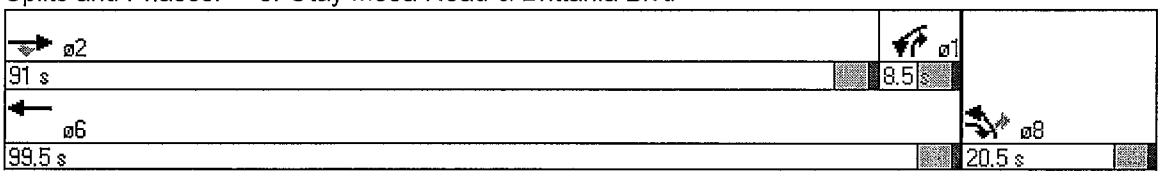


Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↑↑↑	↱	↰	↑↑↑	↰↰	↱
Total Lost Time (s)	4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	0.91	1.00	1.00	0.91	0.97	1.00
Frt		0.850				0.850
Flt Protected			0.950		0.950	
Satd. Flow (prot)	4803	1583	1770	4803	3433	1583
Flt Permitted			0.950		0.950	
Satd. Flow (perm)	4803	1583	1770	4803	3433	1583
Satd. Flow (RTOR)		121				1
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Volume (vph)	3307	669	53	1385	176	58
Adj. Flow (vph)	3891	787	62	1629	207	68
Lane Group Flow (vph)	3891	787	62	1629	207	68
Turn Type		pm+ov	Prot			pm+ov
Protected Phases	2	8	1	6	8	1
Permitted Phases		2				8
Total Split (s)	91.0	20.5	8.5	99.5	20.5	8.5
Act Effct Green (s)	87.8	107.5	4.5	96.3	15.7	24.2
Actuated g/C Ratio	0.73	0.90	0.04	0.80	0.13	0.20
v/c Ratio	1.11	0.55	0.94	0.42	0.46	0.21
Control Delay	71.7	2.6	139.9	3.3	51.6	40.9
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	71.7	2.6	139.9	3.3	51.6	40.9
LOS	E	A	F	A	D	D
Approach Delay	60.1			8.3	48.9	
Approach LOS	E			A	D	

Intersection Summary

Cycle Length: 120
Actuated Cycle Length: 120
Offset: 100 (83%), Referenced to phase 2:EBT and 6:WBT, Start of Green
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 1.11
Intersection Signal Delay: 46.5 Intersection LOS: D
Intersection Capacity Utilization 75.6% ICU Level of Service D
Analysis Period (min) 15

Splits and Phases: 3: Otay Mesa Road & Brittania Blvd

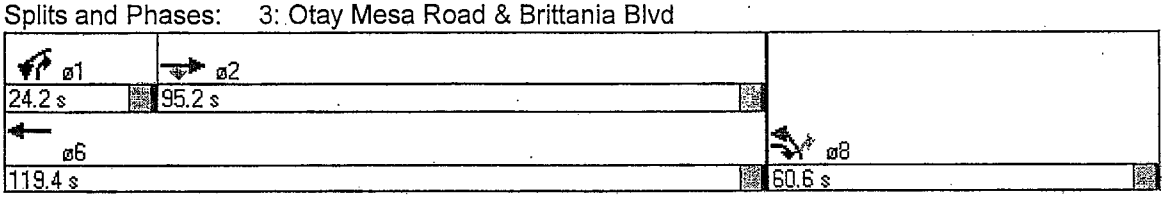


Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Total Lost Time (s)	4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	0.91	1.00	1.00	0.91	0.97	1.00
Frt		0.850				0.850
Flt Protected			0.950		0.950	
Satd. Flow (prot)	4803	1583	1770	4803	3433	1583
Flt Permitted			0.950		0.950	
Satd. Flow (perm)	4803	1583	1770	4803	3433	1583
Satd. Flow (RTOR)		309				2
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Volume (vph)	2115	287	68	3168	587	54
Adj. Flow (vph)	2274	309	73	3406	631	58
Lane Group Flow (vph)	2274	309	73	3406	631	58
Turn Type		pm+ov	Prot			pm+ov
Protected Phases	2	8	1	6	8	1
Permitted Phases		2				8
Total Split (s)	95.2	60.6	24.2	119.4	60.6	24.2
Act Effct Green (s)	115.8	158.9	13.1	132.9	39.1	56.2
Actuated g/C Ratio	0.64	0.88	0.07	0.74	0.22	0.31
v/c Ratio	0.74	0.22	0.57	0.96	0.85	0.12
Control Delay	12.0	0.8	96.7	30.1	78.8	40.8
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	12.0	0.8	96.7	30.1	78.8	40.8
LOS	B	A	F	C	E	D
Approach Delay	10.6			31.5	75.6	
Approach LOS	B			C	E	

Intersection Summary

Cycle Length: 180
Actuated Cycle Length: 180
Offset: 170 (94%), Referenced to phase 2:EBT and 6:WBT, Start of Green
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 0.96
Intersection Signal Delay: 28.0 Intersection LOS: C
Intersection Capacity Utilization 84.6% ICU Level of Service E
Analysis Period (min) 15

Splits and Phases: 3: Otay Mesa Road & Brittania Blvd

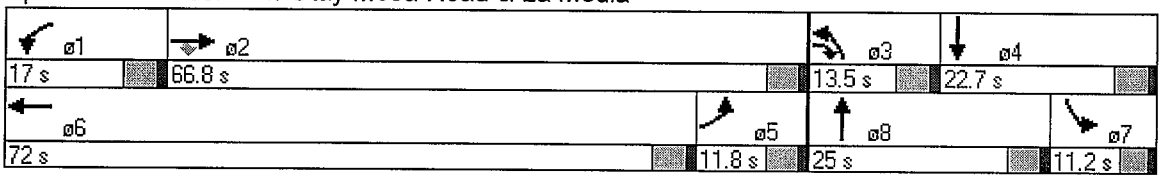


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Total Lost Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	1.00	0.91	1.00	1.00	0.91	0.91	1.00	1.00	1.00	0.97	1.00	1.00
Frt			0.850		0.995			0.939			0.913	
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1770	4803	1583	1770	4788	0	1770	1690	0	3433	1659	0
Flt Permitted	0.950			0.950			0.950			0.950		
Satd. Flow (perm)	1770	4803	1583	1770	4788	0	1770	1690	0	3433	1659	0
Satd. Flow (RTOR)			210		7			17			48	
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Volume (vph)	71	2744	233	87	1333	47	75	24	16	81	52	71
Adj. Flow (vph)	75	2888	245	92	1403	49	79	25	17	85	55	75
Lane Group Flow (vph)	75	2888	245	92	1452	0	79	42	0	85	130	0
Turn Type	Prot		pm+ov	Prot			Prot			Prot		
Protected Phases	5	2	3	1	6		3	8		7	4	
Permitted Phases			2									
Total Split (s)	11.8	66.8	13.5	17.0	72.0	0.0	13.5	25.0	0.0	11.2	22.7	0.0
Act Effct Green (s)	7.7	71.6	84.6	11.6	77.7		9.0	10.1		12.7	11.8	
Actuated g/C Ratio	0.06	0.60	0.70	0.10	0.65		0.08	0.08		0.11	0.10	
v/c Ratio	0.66	1.01	0.21	0.54	0.47		0.59	0.27		0.23	0.63	
Control Delay	44.0	19.4	1.1	62.9	12.4		72.1	39.9		49.5	45.3	
Queue Delay	0.0	0.0	0.0	0.0	0.0		0.0	0.0		0.0	0.0	
Total Delay	44.0	19.4	1.1	62.9	12.4		72.1	39.9		49.5	45.3	
LOS	D	B	A	E	B		E	D		D	D	
Approach Delay		18.6			15.4			60.9			47.0	
Approach LOS		B			B			E			D	

Intersection Summary

Cycle Length: 120
Actuated Cycle Length: 120
Offset: 87 (73%), Referenced to phase 2:EBT and 6:WBT, Start of Green
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 1.01
Intersection Signal Delay: 19.8 — Intersection LOS: B
Intersection Capacity Utilization 82.4% — ICU Level of Service E
Analysis Period (min) 15

Splits and Phases: 4: Otay Mesa Road & La Media

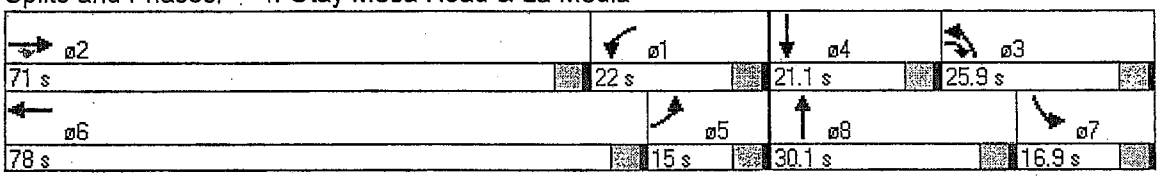


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Total Lost Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	1.00	0.91	1.00	1.00	0.91	0.91	1.00	1.00	1.00	0.97	1.00	1.00
Frt			0.850		0.997			0.922			0.903	
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1770	4803	1583	1770	4793	0	1770	1670	0	3433	1648	0
Flt Permitted	0.950			0.950			0.950			0.950		
Satd. Flow (perm)	1770	4803	1583	1770	4793	0	1770	1670	0	3433	1648	0
Satd. Flow (RTOR)			249		3			25			54	
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Volume (vph)	70	1900	239	55	2764	52	158	22	24	71	63	116
Adj. Flow (vph)	73	1979	249	57	2879	54	165	23	25	74	66	121
Lane Group Flow (vph)	73	1979	249	57	2933	0	165	48	0	74	187	0
Turn Type	Prot		pm+ov	Prot			Prot			Prot		
Protected Phases	5	2	3	1	6		3	8		7	4	
Permitted Phases			2									
Total Split (s)	15.0	71.0	25.9	22.0	78.0	0.0	25.9	30.1	0.0	16.9	21.1	0.0
Act Effct Green (s)	9.9	77.5	99.4	15.4	83.1		17.9	12.1		23.1	15.2	
Actuated g/C Ratio	0.07	0.55	0.71	0.11	0.59		0.13	0.09		0.16	0.11	
v/c Ratio	0.58	0.74	0.21	0.29	1.03		0.73	0.29		0.13	0.82	
Control Delay	81.2	28.6	1.4	59.7	54.5		76.8	39.8		47.7	70.1	
Queue Delay	0.0	0.0	0.0	0.0	0.0		0.0	0.0		0.0	0.0	
Total Delay	81.2	28.6	1.4	59.7	54.5		76.8	39.8		47.7	70.1	
LOS	F	C	A	E	D		E	D		D	E	
Approach Delay		27.3			54.6			68.5			63.8	
Approach LOS		C			D			E			E	

Intersection Summary

Cycle Length: 140
Actuated Cycle Length: 140
Offset: 0 (0%), Referenced to phase 2:EBT and 6:WBT, Start of Green
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 1.03
Intersection Signal Delay: 44.7 — Intersection LOS: D
Intersection Capacity Utilization 87.4% — ICU Level of Service E
Analysis Period (min) 15

Splits and Phases: 4: Otay Mesa Road & La Media

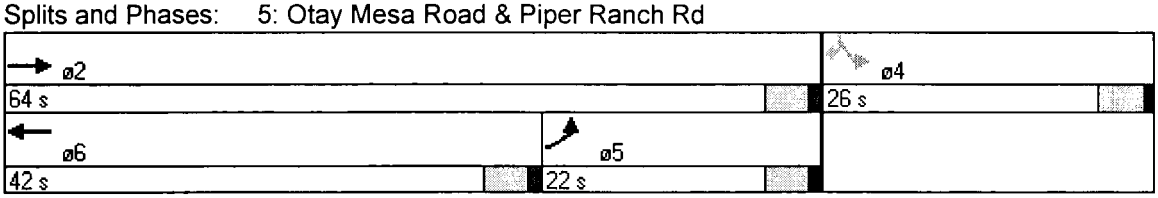


Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Total Lost Time (s)	4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	1.00	0.95	0.91	0.91	0.97	0.91
Frt			0.997			0.850
Flt Protected	0.950				0.950	
Satd. Flow (prot)	1770	3539	5070	0	3433	1441
Flt Permitted	0.950				0.950	
Satd. Flow (perm)	1770	3539	5070	0	3433	1441
Satd. Flow (RTOR)			4			20
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Volume (vph)	106	2778	1450	33	31	18
Adj. Flow (vph)	119	3121	1629	37	35	20
Lane Group Flow (vph)	119	3121	1666	0	35	20
Turn Type	Prot					custom
Protected Phases	5	2	6			
Permitted Phases					4	4
Total Split (s)	22.0	64.0	42.0	0.0	26.0	26.0
Act Effct Green (s)	15.8	75.1	57.5		6.9	6.9
Actuated g/C Ratio	0.18	0.83	0.64		0.08	0.08
v/c Ratio	0.38	1.06	0.51		0.13	0.16
Control Delay	35.5	44.2	7.4		39.6	19.4
Queue Delay	0.0	0.0	0.0		0.0	0.0
Total Delay	35.5	44.2	7.4		39.6	19.4
LOS	D	D	A		D	B
Approach Delay		43.9	7.4		32.3	
Approach LOS		D	A		C	

Intersection Summary

Cycle Length: 90
Actuated Cycle Length: 90
Offset: 9 (10%), Referenced to phase 2:EBT and 6:WBT, Start of Green
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 1.06
Intersection Signal Delay: 31.5 Intersection LOS: C
Intersection Capacity Utilization 86.8% ICU Level of Service E
Analysis Period (min) 15

Splits and Phases: 5: Otay Mesa Road & Piper Ranch Rd

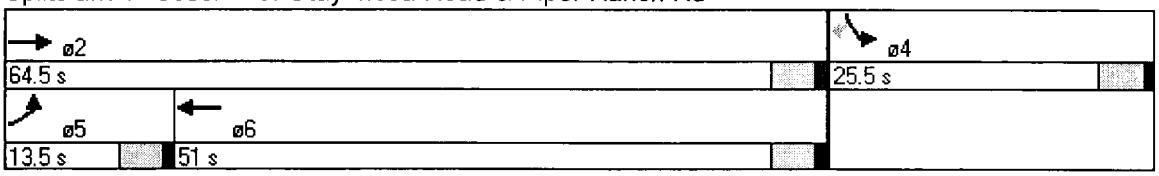


Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Total Lost Time (s)	4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	1.00	0.95	0.91	0.91	0.97	0.91
Frt			0.998		0.930	0.850
Flt Protected	0.950				0.974	
Satd. Flow (prot)	1770	3539	5075	0	3273	1441
Flt Permitted	0.950				0.974	
Satd. Flow (perm)	1770	3539	5075	0	3273	1441
Satd. Flow (RTOR)			3		51	51
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Volume (vph)	17	2044	2773	30	54	94
Adj. Flow (vph)	18	2222	3014	33	59	102
Lane Group Flow (vph)	18	2222	3047	0	110	51
Turn Type	Prot					Perm
Protected Phases	5	2	6		4	
Permitted Phases						4
Total Split (s)	13.5	64.5	51.0	0.0	25.5	25.5
Act Effct Green (s)	6.9	74.4	69.6		7.6	7.6
Actuated g/C Ratio	0.08	0.83	0.77		0.08	0.08
v/c Ratio	0.13	0.76	0.78		0.34	0.30
Control Delay	40.4	6.0	3.3		25.1	16.4
Queue Delay	0.0	0.0	0.0		0.0	0.0
Total Delay	40.4	6.0	3.3		25.1	16.4
LOS	D	A	A		C	B
Approach Delay		6.3	3.3		22.3	
Approach LOS		A	A		C	

Intersection Summary

Cycle Length: 90
Actuated Cycle Length: 90
Offset: 0 (0%), Referenced to phase 2:EBT and 6:WBT, Start of Green
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 0.78
Intersection Signal Delay: 5.1 Intersection LOS: A
Intersection Capacity Utilization 66.5% ICU Level of Service C
Analysis Period (min) 15

Splits and Phases: 5: Otay Mesa Road & Piper Ranch Rd

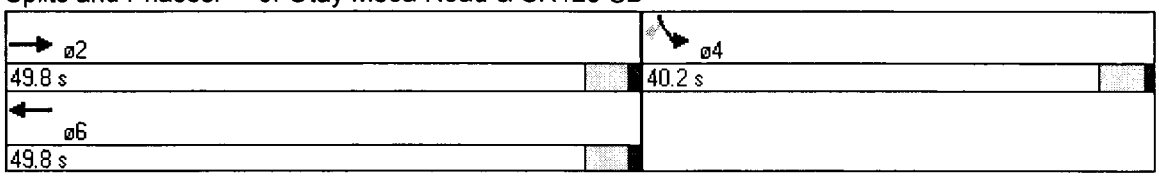


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Total Lost Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	1.00	0.86	0.86	1.00	0.91	1.00	1.00	1.00	1.00	0.97	1.00	1.00
Frt			0.850									0.850
Flt Protected										0.950		
Satd. Flow (prot)	0	4806	1362	0	5085	0	0	0	0	3433	0	1583
Flt Permitted										0.950		
Satd. Flow (perm)	0	4806	1362	0	5085	0	0	0	0	3433	0	1583
Satd. Flow (RTOR)			606									20
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Volume (vph)	0	1743	931	0	1279	0	0	0	0	843	0	145
Adj. Flow (vph)	0	2027	1083	0	1487	0	0	0	0	980	0	169
Lane Group Flow (vph)	0	2027	1083	0	1487	0	0	0	0	980	0	169
Turn Type			Free							Prot		custom
Protected Phases		2			6					4		
Permitted Phases			Free									4
Total Split (s)	0.0	49.8	0.0	0.0	49.8	0.0	0.0	0.0	0.0	40.2	0.0	40.2
Act Effct Green (s)		50.4	90.0		50.4					31.6		31.6
Actuated g/C Ratio		0.56	1.00		0.56					0.35		0.35
v/c Ratio		0.75	0.80		0.52					0.81		0.30
Control Delay		17.5	2.6		12.5					32.2		18.9
Queue Delay		0.0	0.0		0.0					0.0		0.0
Total Delay		17.5	2.6		12.5					32.2		18.9
LOS		B	A		B					C		B
Approach Delay		12.3			12.5							
Approach LOS		B			B							

Intersection Summary

Cycle Length: 90
Actuated Cycle Length: 90
Offset: 2 (2%), Referenced to phase 2:EBT and 6:WBT, Start of Green
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 0.81
Intersection Signal Delay: 15.9 Intersection LOS: B
Intersection Capacity Utilization 74.0% ICU Level of Service D
Analysis Period (min) 15

Splits and Phases: 6: Otay Mesa Road & SR125 SB

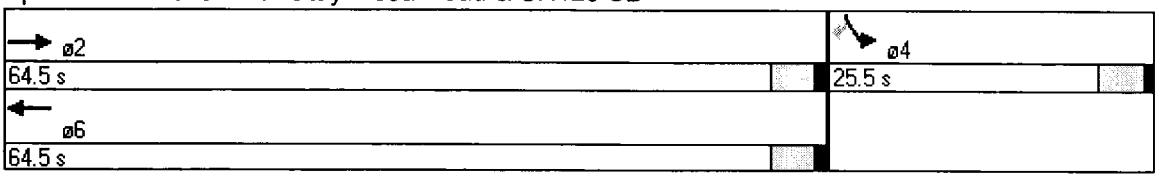


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Total Lost Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	1.00	0.86	0.86	1.00	0.91	1.00	1.00	1.00	1.00	0.97	1.00	1.00
Frt		0.932	0.850									0.850
Flt Protected										0.950		
Satd. Flow (prot)	0	4479	1362	0	5085	0	0	0	0	3433	0	1583
Flt Permitted										0.950		
Satd. Flow (perm)	0	4479	1362	0	5085	0	0	0	0	3433	0	1583
Satd. Flow (RTOR)		505	663									2
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Volume (vph)	0	738	1219	0	2819	0	0	0	0	296	0	40
Adj. Flow (vph)	0	802	1325	0	3064	0	0	0	0	322	0	43
Lane Group Flow (vph)	0	1464	663	0	3064	0	0	0	0	322	0	43
Turn Type			Free							Prot		custom
Protected Phases		2			6					4		
Permitted Phases			Free									4
Total Split (s)	0.0	64.5	0.0	0.0	64.5	0.0	0.0	0.0	0.0	25.5	0.0	25.5
Act Effct Green (s)		68.2	90.0		68.2					13.8		13.8
Actuated g/C Ratio		0.76	1.00		0.76					0.15		0.15
v/c Ratio		0.42	0.49		0.80					0.61		0.18
Control Delay		3.2	0.8		3.1					40.3		32.4
Queue Delay		0.0	0.0		0.6					0.0		0.0
Total Delay		3.2	0.8		3.7					40.3		32.4
LOS		A	A		A					D		C
Approach Delay		2.4			3.7							
Approach LOS		A			A							

Intersection Summary

Cycle Length: 90
Actuated Cycle Length: 90
Offset: 56 (62%), Referenced to phase 2:EBT and 6:WBT, Start of Green
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 0.80
Intersection Signal Delay: 5.5 Intersection LOS: A
Intersection Capacity Utilization 85.7% ICU Level of Service E
Analysis Period (min) 15

Splits and Phases: 6: Otay Mesa Road & SR125 SB

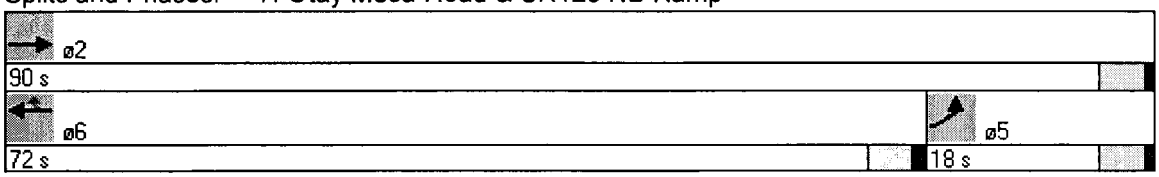


Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Total Lost Time (s)	4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	0.97	0.95	0.95	0.88	1.00	1.00
Frt				0.850		
Flt Protected	0.950					
Satd. Flow (prot)	3433	3539	3539	2787	0	0
Flt Permitted	0.950					
Satd. Flow (perm)	3433	3539	3539	2787	0	0
Satd. Flow (RTOR)				239		
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Volume (vph)	29	2557	1233	208	0	0
Adj. Flow (vph)	33	2939	1417	239	0	0
Lane Group Flow (vph)	33	2939	1417	239	0	0
Turn Type	Prot			Perm		
Protected Phases	5	2	6			
Permitted Phases				6		
Total Split (s)	18.0	90.0	72.0	72.0	0.0	0.0
Act Effct Green (s)	14.4	90.0	76.2	76.2		
Actuated g/C Ratio	0.16	1.00	0.85	0.85		
v/c Ratio	0.06	0.83	0.47	0.10		
Control Delay	21.8	5.1	7.3	1.9		
Queue Delay	0.0	0.0	0.0	0.0		
Total Delay	21.8	5.1	7.3	1.9		
LOS	C	A	A	A		
Approach Delay		5.3	6.5			
Approach LOS		A	A			

Intersection Summary

Cycle Length: 90
Actuated Cycle Length: 90
Offset: 62 (69%), Referenced to phase 2:EBT and 6:WBT, Start of Green
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 0.83
Intersection Signal Delay: 5.7 Intersection LOS: A
Intersection Capacity Utilization 74.0% ICU Level of Service D
Analysis Period (min) 15

Splits and Phases: 7: Otay Mesa Road & SR125 NB Ramp

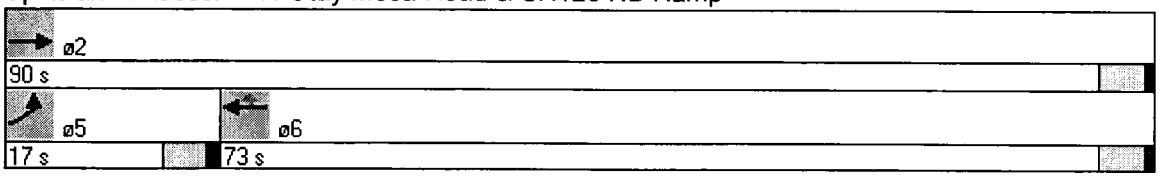


Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Total Lost Time (s)	4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	0.97	0.95	0.95	0.88	1.00	1.00
Frt				0.850		
Flt Protected	0.950					
Satd. Flow (prot)	3433	3539	3539	2787	0	0
Flt Permitted	0.950					
Satd. Flow (perm)	3433	3539	3539	2787	0	0
Satd. Flow (RTOR)				633		
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Volume (vph)	113	921	2740	803	0	0
Adj. Flow (vph)	124	1012	3011	882	0	0
Lane Group Flow (vph)	124	1012	3011	882	0	0
Turn Type	Prot			Perm		
Protected Phases	5	2	6			
Permitted Phases				6		
Total Split (s)	17.0	90.0	73.0	73.0	0.0	0.0
Act Effct Green (s)	9.0	90.0	73.0	73.0		
Actuated g/C Ratio	0.10	1.00	0.81	0.81		
v/c Ratio	0.36	0.29	1.05	0.37		
Control Delay	44.9	0.2	42.6	1.1		
Queue Delay	0.0	0.0	14.7	0.0		
Total Delay	44.9	0.2	57.3	1.1		
LOS	D	A	E	A		
Approach Delay		5.1	44.6			
Approach LOS		A	D			

Intersection Summary

Cycle Length: 90
Actuated Cycle Length: 90
Offset: 33 (37%), Referenced to phase 2:EBT and 6:WBT, Start of Green
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 1.05
Intersection Signal Delay: 35.6 Intersection LOS: D
Intersection Capacity Utilization 85.7% ICU Level of Service E
Analysis Period (min) 15

Splits and Phases: 7: Otay Mesa Road & SR125 NB Ramp

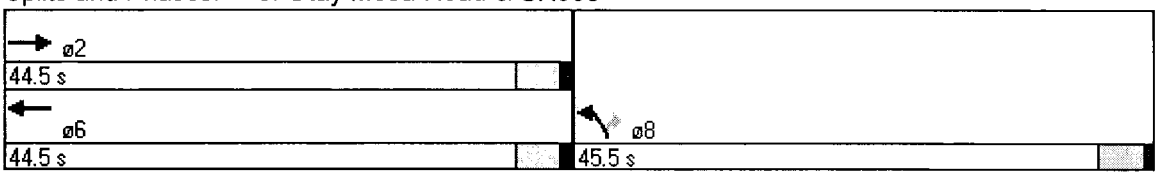


Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↑↑			↑↑	↰↰	↱
Total Lost Time (s)	4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	0.95	1.00	1.00	0.95	0.97	1.00
Frt						0.850
Flt Protected					0.950	
Satd. Flow (prot)	3539	0	0	3539	3433	1583
Flt Permitted					0.950	
Satd. Flow (perm)	3539	0	0	3539	3433	1583
Satd. Flow (RTOR)						
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Volume (vph)	2574	0	0	775	689	15
Adj. Flow (vph)	2993	0	0	901	801	17
Lane Group Flow (vph)	2993	0	0	901	801	17
Turn Type						Perm
Protected Phases	2			6	8	
Permitted Phases						8
Total Split (s)	44.5	0.0	0.0	44.5	45.5	45.5
Act Effct Green (s)	55.3			55.3	26.7	26.7
Actuated g/C Ratio	0.61			0.61	0.30	0.30
v/c Ratio	1.38			0.41	0.79	0.04
Control Delay	190.9			11.3	29.8	13.7
Queue Delay	0.0			0.0	0.0	0.0
Total Delay	190.9			11.3	29.8	13.7
LOS	F			B	C	B
Approach Delay	190.9			11.3	29.5	
Approach LOS	F			B	C	

Intersection Summary

Cycle Length: 90
Actuated Cycle Length: 90
Offset: 58 (64%), Referenced to phase 2:EBT and 6:WBT, Start of Green
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 1.38
Intersection Signal Delay: 128.5 — Intersection LOS: F
Intersection Capacity Utilization 97.5% — ICU Level of Service F
Analysis Period (min) 15

Splits and Phases: 8: Otay Mesa Road & SR905

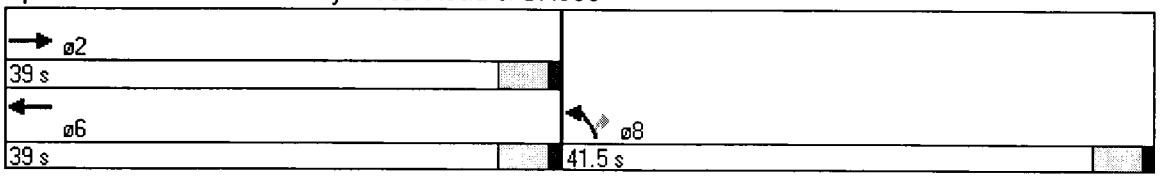


Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↑↑			↑↑	↰↰	↱
Total Lost Time (s)	4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	0.95	1.00	1.00	0.95	0.97	1.00
Frt						0.850
Flt Protected					0.950	
Satd. Flow (prot)	3539	0	0	3539	3433	1583
Flt Permitted					0.950	
Satd. Flow (perm)	3539	0	0	3539	3433	1583
Satd. Flow (RTOR)						9
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Volume (vph)	921	0	0	2414	1168	8
Adj. Flow (vph)	1012	0	0	2653	1284	9
Lane Group Flow (vph)	1012	0	0	2653	1284	9
Turn Type						Perm
Protected Phases	2			6	8	
Permitted Phases						8
Total Split (s)	39.0	0.0	0.0	39.0	41.5	41.5
Act Effct Green (s)	37.6			37.6	34.9	34.9
Actuated g/C Ratio	0.47			0.47	0.43	0.43
v/c Ratio	0.61			1.61	0.86	0.01
Control Delay	18.7			297.8	27.4	6.8
Queue Delay	0.0			4.8	2.7	0.0
Total Delay	18.7			302.6	30.0	6.8
LOS	B			F	C	A
Approach Delay	18.7			302.6	29.9	
Approach LOS	B			F	C	

Intersection Summary

Cycle Length: 80.5
Actuated Cycle Length: 80.5
Offset: 0 (0%), Referenced to phase 2:EBT and 6:WBT, Start of Green
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 1.61
Intersection Signal Delay: 173.5 — Intersection LOS: F
Intersection Capacity Utilization 106.7% — ICU Level of Service G
Analysis Period (min) 15

Splits and Phases: 8: Otay Mesa Road & SR905

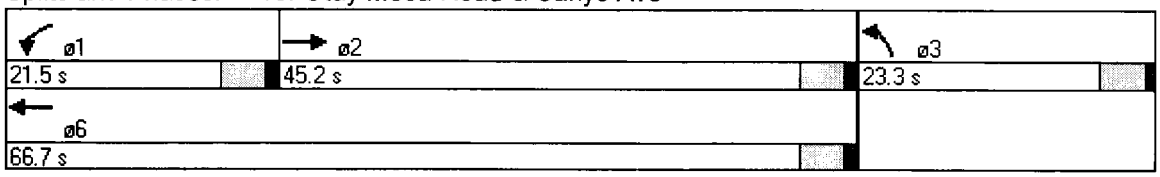


Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Total Lost Time (s)	4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	0.95	0.95	1.00	1.00	0.97	0.95
Frt	0.988				0.965	
Flt Protected			0.950		0.963	
Satd. Flow (prot)	3497	0	1770	1863	3358	0
Flt Permitted			0.950		0.963	
Satd. Flow (perm)	3497	0	1770	1863	3358	0
Satd. Flow (RTOR)	13				12	
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Volume (vph)	2280	200	24	762	32	10
Adj. Flow (vph)	2850	250	30	952	40	12
Lane Group Flow (vph)	3100	0	30	952	52	0
Turn Type			Prot			
Protected Phases	2		1	6	3	
Permitted Phases						
Total Split (s)	45.2	0.0	21.5	66.7	23.3	0.0
Act Effct Green (s)	75.5		7.4	80.7	7.0	
Actuated g/C Ratio	0.84		0.08	0.90	0.08	
v/c Ratio	1.06		0.21	0.57	0.19	
Control Delay	39.2		41.4	3.7	33.1	
Queue Delay	0.0		0.0	0.0	0.0	
Total Delay	39.2		41.4	3.7	33.1	
LOS	D		D	A	C	
Approach Delay	39.2			4.8	33.1	
Approach LOS	D			A	C	

Intersection Summary

Cycle Length: 90
Actuated Cycle Length: 90
Offset: 0 (0%), Referenced to phase 2:EBT and 6:WBT, Start of Green
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 1.06
Intersection Signal Delay: 31.0 Intersection LOS: C
Intersection Capacity Utilization 79.4% ICU Level of Service D
Analysis Period (min) 15

Splits and Phases: 10: Otay Mesa Road & Sanyo Ave

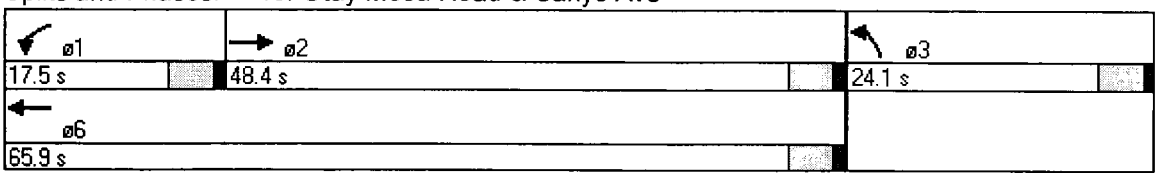


Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Total Lost Time (s)	4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	0.95	0.95	1.00	1.00	0.97	0.95
Frt	0.991				0.996	
Flt Protected			0.950		0.954	
Satd. Flow (prot)	3507	0	1770	1863	3434	0
Flt Permitted			0.950		0.954	
Satd. Flow (perm)	3507	0	1770	1863	3434	0
Satd. Flow (RTOR)	10				3	
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Volume (vph)	873	54	12	2288	185	5
Adj. Flow (vph)	1078	67	15	2825	228	6
Lane Group Flow (vph)	1145	0	15	2825	234	0
Turn Type			Prot			
Protected Phases	2		1	6	3	
Permitted Phases						
Total Split (s)	48.4	0.0	17.5	65.9	24.1	0.0
Act Effct Green (s)	68.0		6.7	70.4	11.6	
Actuated g/C Ratio	0.76		0.07	0.78	0.13	
v/c Ratio	0.43		0.11	1.94	0.53	
Control Delay	5.5		40.4	442.1	40.2	
Queue Delay	0.0		0.0	0.0	0.0	
Total Delay	5.5		40.4	442.1	40.2	
LOS	A		D	F	D	
Approach Delay	5.5			440.0	40.2	
Approach LOS	A			F	D	

Intersection Summary

Cycle Length: 90
Actuated Cycle Length: 90
Offset: 0 (0%), Referenced to phase 2:EBT and 6:WBT, Start of Green
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 1.94
Intersection Signal Delay: 299.9 Intersection LOS: F
Intersection Capacity Utilization 132.5% ICU Level of Service H
Analysis Period (min) 15

Splits and Phases: 10: Otay Mesa Road & Sanyo Ave

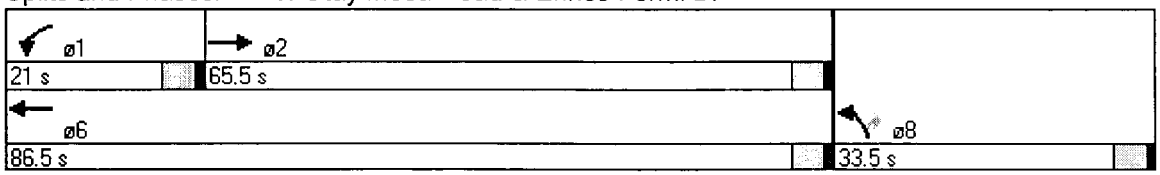


Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Total Lost Time (s)	4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt	0.955					0.850
Flt Protected			0.950		0.950	
Satd. Flow (prot)	1779	0	1770	1863	1770	1583
Flt Permitted			0.950		0.950	
Satd. Flow (perm)	1779	0	1770	1863	1770	1583
Satd. Flow (RTOR)	31					56
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Volume (vph)	1557	778	42	385	318	48
Adj. Flow (vph)	1832	915	49	453	374	56
Lane Group Flow (vph)	2747	0	49	453	374	56
Turn Type			Prot			Perm
Protected Phases	2		1	6	8	
Permitted Phases						8
Total Split (s)	65.5	0.0	21.0	86.5	33.5	33.5
Act Effct Green (s)	62.1		8.9	72.7	26.3	26.3
Actuated g/C Ratio	0.58		0.08	0.68	0.25	0.25
v/c Ratio	2.63		0.34	0.36	0.86	0.13
Control Delay	751.6		54.8	8.6	59.4	9.6
Queue Delay	0.0		0.0	0.0	0.0	0.0
Total Delay	751.6		54.8	8.6	59.4	9.6
LOS	F		D	A	E	A
Approach Delay	751.6			13.1	52.9	
Approach LOS	F			B	D	

Intersection Summary

Cycle Length: 120
Actuated Cycle Length: 107
Control Type: Actuated-Uncoordinated
Maximum v/c Ratio: 2.63
Intersection Signal Delay: 569.2 — Intersection LOS: F
Intersection Capacity Utilization 153.6% — ICU Level of Service H
Analysis Period (min) 15

Splits and Phases: 13: Otay Mesa Road & Enrico Fermi Dr

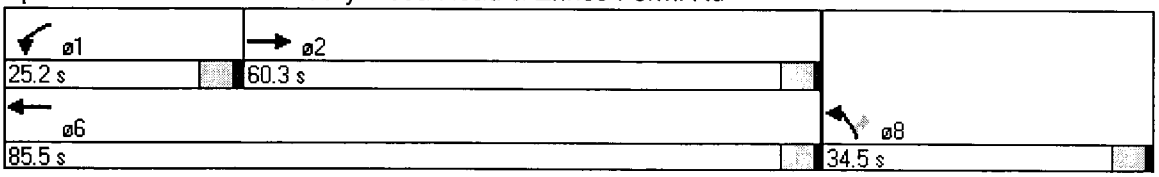


Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Total Lost Time (s)	4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt	0.948					0.850
Flt Protected			0.950		0.950	
Satd. Flow (prot)	1766	0	1770	1863	1770	1583
Flt Permitted			0.950		0.950	
Satd. Flow (perm)	1766	0	1770	1863	1770	1583
Satd. Flow (RTOR)	36					13
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Volume (vph)	528	335	144	1500	863	26
Adj. Flow (vph)	574	364	157	1630	938	28
Lane Group Flow (vph)	938	0	157	1630	938	28
Turn Type			Prot			Perm
Protected Phases	2		1	6	8	
Permitted Phases						8
Total Split (s)	60.3	0.0	25.2	85.5	34.5	34.5
Act Effct Green (s)	61.7		15.8	81.5	30.5	30.5
Actuated g/C Ratio	0.51		0.13	0.68	0.25	0.25
v/c Ratio	1.01		0.67	1.29	2.08	0.07
Control Delay	62.0		63.4	157.9	520.8	22.6
Queue Delay	0.0		0.0	0.0	0.0	0.0
Total Delay	62.0		63.4	157.9	520.8	22.6
LOS	E		E	F	F	C
Approach Delay	62.0			149.6	506.4	
Approach LOS	E			F	F	

Intersection Summary

Cycle Length: 120
Actuated Cycle Length: 120
Control Type: Actuated-Uncoordinated
Maximum v/c Ratio: 2.08
Intersection Signal Delay: 220.7 Intersection LOS: F
Intersection Capacity Utilization 133.4% ICU Level of Service H
Analysis Period (min) 15

Splits and Phases: 13: Otay Mesa Road & Enrico Fermi Rd



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Sign Control		Stop			Stop			Stop			Stop	
Volume (vph)	652	423	676	0	144	0	196	1	0	0	4	168
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
Hourly flow rate (vph)	709	460	735	0	157	0	213	1	0	0	4	183

Direction, Lane #	EB 1	WB 1	NB 1	SB 1
Volume Total (vph)	1903	157	214	187
Volume Left (vph)	709	0	213	0
Volume Right (vph)	735	0	0	183
Hadj (s)	-0.12	0.03	0.23	-0.55
Departure Headway (s)	5.5	6.4	6.9	6.2
Degree Utilization, x	2.89	0.28	0.41	0.32
Capacity (veh/h)	673	525	508	550
Control Delay (s)	865.3	11.9	14.5	12.1
Approach Delay (s)	865.3	11.9	14.5	12.1
Approach LOS	F	B	B	B

Intersection Summary			
Delay	672.1		
HCM Level of Service	F		
Intersection Capacity Utilization	142.1%	ICU Level of Service	H
Analysis Period (min)	15		

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Sign Control		Stop			Stop			Stop			Stop	
Volume (vph)	101	204	272	0	392	0	651	0	0	0	1	726
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
Hourly flow rate (vph)	116	234	313	0	451	0	748	0	0	0	1	834

Direction, Lane #	EB 1	WB 1	NB 1	SB 1
Volume Total (vph)	663	451	748	836
Volume Left (vph)	116	0	748	0
Volume Right (vph)	313	0	0	834
Hadj (s)	-0.21	0.03	0.23	-0.57
Departure Headway (s)	9.4	9.6	9.8	9.0
Degree Utilization, x	1.72	1.20	2.04	2.09
Capacity (veh/h)	389	380	373	407
Control Delay (s)	358.5	143.0	497.7	518.9
Approach Delay (s)	358.5	143.0	497.7	518.9
Approach LOS	F	F	F	F

Intersection Summary			
Delay	410.8		
HCM Level of Service	F		
Intersection Capacity Utilization	148.0%	ICU Level of Service	H
Analysis Period (min)	15		

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕		↰	↕	
Sign Control		Stop			Stop			Stop			Stop	
Volume (vph)	9	84	60	40	80	49	57	101	3	209	255	46
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
Hourly flow rate (vph)	10	93	67	44	89	54	63	112	3	232	283	51

Direction, Lane #	EB 1	WB 1	NB 1	SB 1	SB 2
Volume Total (vph)	170	188	179	232	334
Volume Left (vph)	10	44	63	232	0
Volume Right (vph)	67	54	3	0	51
Hadj (s)	-0.19	-0.09	0.16	0.53	0.01
Departure Headway (s)	6.0	6.0	6.1	6.4	5.9
Degree Utilization, x	0.28	0.32	0.30	0.42	0.55
Capacity (veh/h)	545	543	538	541	593
Control Delay (s)	11.3	11.8	11.8	12.7	14.7
Approach Delay (s)	11.3	11.8	11.8	13.9	
Approach LOS	B	B	B	B	

Intersection Summary			
Delay	12.8		
HCM Level of Service	B		
Intersection Capacity Utilization	56.2%	ICU Level of Service	B
Analysis Period (min)	15		

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕		↰	↕	
Sign Control		Stop			Stop			Stop			Stop	
Volume (vph)	38	145	83	123	116	119	72	180	8	143	171	23
Peak Hour Factor	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99
Hourly flow rate (vph)	38	146	84	124	117	120	73	182	8	144	173	23

Direction, Lane #	EB 1	WB 1	NB 1	SB 1	SB 2
Volume Total (vph)	269	362	263	144	196
Volume Left (vph)	38	124	73	144	0
Volume Right (vph)	84	120	8	0	23
Hadj (s)	-0.12	-0.10	0.14	0.53	0.04
Departure Headway (s)	6.7	6.5	7.1	7.8	7.3
Degree Utilization, x	0.50	0.65	0.52	0.31	0.40
Capacity (veh/h)	482	514	459	426	447
Control Delay (s)	16.2	20.8	17.5	13.1	13.8
Approach Delay (s)	16.2	20.8	17.5	13.5	
Approach LOS	C	C	C	B	

Intersection Summary			
Delay	17.1		
HCM Level of Service	C		
Intersection Capacity Utilization	72.6%	ICU Level of Service	C
Analysis Period (min)	15		

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Sign Control		Stop			Stop			Stop			Stop	
Volume (vph)	14	125	91	4	135	23	31	15	3	103	121	12
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
Hourly flow rate (vph)	15	134	98	4	145	25	33	16	3	111	130	13

Direction, Lane #	EB 1	WB 1	WB 2	NB 1	NB 2	SB 1	SB 2
Volume Total (vph)	247	149	25	33	19	241	13
Volume Left (vph)	15	4	0	33	0	111	0
Volume Right (vph)	98	0	25	0	3	0	13
Hadj (s)	-0.19	0.05	-0.67	0.53	-0.08	0.26	-0.67
Departure Headway (s)	5.5	5.8	5.1	6.6	6.0	6.0	5.1
Degree Utilization, x	0.38	0.24	0.03	0.06	0.03	0.40	0.02
Capacity (veh/h)	627	586	662	501	547	569	665
Control Delay (s)	11.7	9.4	7.0	8.8	8.0	11.8	7.0
Approach Delay (s)	11.7	9.1		8.5		11.6	
Approach LOS	B	A		A		B	

Intersection Summary			
Delay	10.8		
HCM Level of Service	B		
Intersection Capacity Utilization	49.0%	ICU Level of Service	A
Analysis Period (min)	15		

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Sign Control		Stop			Stop			Stop			Stop	
Volume (vph)	4	79	51	4	304	96	79	126	2	40	26	35
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
Hourly flow rate (vph)	5	91	59	5	349	110	91	145	2	46	30	40

Direction, Lane #	EB 1	WB 1	WB 2	NB 1	NB 2	SB 1	SB 2
Volume Total (vph)	154	354	110	91	147	76	40
Volume Left (vph)	5	5	0	91	0	46	0
Volume Right (vph)	59	0	110	0	2	0	40
Hadj (s)	-0.19	0.04	-0.67	0.53	0.02	0.34	-0.67
Departure Headway (s)	6.0	5.8	5.1	6.9	6.4	7.0	5.9
Degree Utilization, x	0.26	0.57	0.16	0.17	0.26	0.15	0.07
Capacity (veh/h)	560	597	670	487	525	474	548
Control Delay (s)	11.1	15.2	7.9	10.2	10.5	10.0	8.2
Approach Delay (s)	11.1	13.5		10.4		9.3	
Approach LOS	B	B		B		A	

Intersection Summary			
Delay	11.9		
HCM Level of Service	B		
Intersection Capacity Utilization	38.0%	ICU Level of Service	A
Analysis Period (min)	15		

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Sign Control	Free			Free	Stop	
Grade	0%			0%	0%	
Volume (veh/h)	195	46	5	135	33	9
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Hourly flow rate (vph)	217	51	6	150	37	10
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type					None	
Median storage veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume			268		403	242
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol			268		403	242
tC, single (s)			4.1		6.4	6.2
tC, 2 stage (s)						
tF (s)			2.2		3.5	3.3
p0 queue free %			100		94	99
cM capacity (veh/h)			1296		601	797

Direction, Lane #	EB 1	WB 1	NB 1	NB 2
Volume Total	268	156	37	10
Volume Left	0	6	37	0
Volume Right	51	0	0	10
cSH	1700	1296	601	797
Volume to Capacity	0.16	0.00	0.06	0.01
Queue Length 95th (ft)	0	0	5	1
Control Delay (s)	0.0	0.3	11.4	9.6
Lane LOS		A	B	A
Approach Delay (s)	0.0	0.3	11.0	
Approach LOS			B	

Intersection Summary			
Average Delay	1.2		
Intersection Capacity Utilization	23.1%	ICU Level of Service	A
Analysis Period (min)	15		

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Sign Control	Free			Free	Stop	
Grade	0%			0%	0%	
Volume (veh/h)	103	29	26	333	82	10
Peak Hour Factor	0.87	0.87	0.87	0.87	0.87	0.87
Hourly flow rate (vph)	118	33	30	383	94	11
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type					None	
Median storage veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume			152		578	135
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol			152		578	135
tC, single (s)			4.1		6.4	6.2
tC, 2 stage (s)						
tF (s)			2.2		3.5	3.3
p0 queue free %			98		80	99
cM capacity (veh/h)			1429		468	914

Direction, Lane #	EB 1	WB 1	NB 1	NB 2
Volume Total	152	413	94	11
Volume Left	0	30	94	0
Volume Right	33	0	0	11
cSH	1700	1429	468	914
Volume to Capacity	0.09	0.02	0.20	0.01
Queue Length 95th (ft)	0	2	19	1
Control Delay (s)	0.0	0.7	14.6	9.0
Lane LOS		A	B	A
Approach Delay (s)	0.0	0.7	14.0	
Approach LOS			B	

Intersection Summary			
Average Delay	2.7		
Intersection Capacity Utilization	40.7%	ICU Level of Service	A
Analysis Period (min)	15		

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Sign Control	Free			Free	Stop	
Grade	0%			0%	0%	
Volume (veh/h)	140	37	4	129	23	11
Peak Hour Factor	0.78	0.78	0.78	0.78	0.78	0.78
Hourly flow rate (vph)	179	47	5	165	29	14
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type					None	
Median storage veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume			227		379	203
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol			227		379	203
tC, single (s)			4.1		6.4	6.2
tC, 2 stage (s)						
tF (s)			2.2		3.5	3.3
p0 queue free %			100		95	98
cM capacity (veh/h)			1341		621	837

Direction, Lane #	EB 1	WB 1	NB 1	NB 2
Volume Total	227	171	29	14
Volume Left	0	5	29	0
Volume Right	47	0	0	14
cSH	1700	1341	621	837
Volume to Capacity	0.13	0.00	0.05	0.02
Queue Length 95th (ft)	0	0	4	1
Control Delay (s)	0.0	0.3	11.1	9.4
Lane LOS		A	B	A
Approach Delay (s)	0.0	0.3	10.5	
Approach LOS			B	

Intersection Summary			
Average Delay	1.1		
Intersection Capacity Utilization	20.0%	ICU Level of Service	A
Analysis Period (min)	15		

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Sign Control	Free			Free	Stop	
Grade	0%			0%	0%	
Volume (veh/h)	60	36	1	282	55	1
Peak Hour Factor	0.84	0.84	0.84	0.84	0.84	0.84
Hourly flow rate (vph)	71	43	1	336	65	1
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type					None	
Median storage veh)						
Upstream signal (ft)				1314		
pX, platoon unblocked						
vC, conflicting volume			114		431	93
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol			114		431	93
tC, single (s)			4.1		6.4	6.2
tC, 2 stage (s)						
tF (s)			2.2		3.5	3.3
p0 queue free %			100		89	100
cM capacity (veh/h)			1475		581	964

Direction, Lane #	EB 1	WB 1	NB 1	NB 2
Volume Total	114	337	65	1
Volume Left	0	1	65	0
Volume Right	43	0	0	1
cSH	1700	1475	581	964
Volume to Capacity	0.07	0.00	0.11	0.00
Queue Length 95th (ft)	0	0	9	0
Control Delay (s)	0.0	0.0	12.0	8.7
Lane LOS		A	B	A
Approach Delay (s)	0.0	0.0	11.9	
Approach LOS			B	

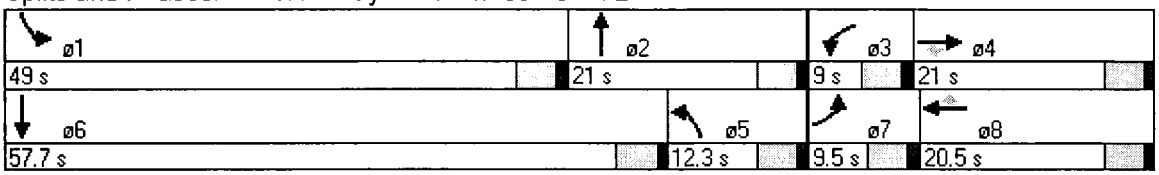
Intersection Summary			
Average Delay	1.6		
Intersection Capacity Utilization	25.6%	ICU Level of Service	A
Analysis Period (min)	15		

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Total Lost Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	1.00	0.95	0.95	1.00	1.00	1.00	1.00	0.95	0.95	1.00	0.95	0.95
Frt			0.850			0.850		0.880			0.936	
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1770	1770	1504	1770	1863	1583	1770	3115	0	1770	3313	0
Flt Permitted	0.950			0.950			0.950			0.950		
Satd. Flow (perm)	1770	1770	1504	1770	1863	1583	1770	3115	0	1770	3313	0
Satd. Flow (RTOR)			34			287		239			48	
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Volume (vph)	3	120	27	34	35	264	59	85	392	768	52	38
Adj. Flow (vph)	4	130	34	37	38	287	74	106	426	835	65	48
Lane Group Flow (vph)	4	130	34	37	38	287	74	532	0	835	113	0
Turn Type	Prot		Perm	Prot		Perm	Prot			Prot		
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases			4			8						
Total Split (s)	9.5	21.0	21.0	9.0	20.5	20.5	12.3	21.0	0.0	49.0	57.7	0.0
Act Effct Green (s)	5.6	12.0	12.0	5.0	15.2	15.2	42.6	13.5		45.8	19.9	
Actuated g/C Ratio	0.06	0.14	0.14	0.05	0.17	0.17	0.47	0.15		0.52	0.23	
v/c Ratio	0.04	0.54	0.15	0.38	0.12	0.56	0.09	0.96dr		0.91	0.14	
Control Delay	47.0	45.8	14.0	56.4	32.9	9.1	10.5	29.1		38.7	26.2	
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Total Delay	47.0	45.8	14.0	56.4	32.9	9.1	10.5	29.1		38.7	26.2	
LOS	D	D	B	E	C	A	B	C		D	C	
Approach Delay		39.4			16.5			26.8			37.2	
Approach LOS		D			B			C			D	

Intersection Summary

Cycle Length: 100
Actuated Cycle Length: 88.4
Control Type: Actuated-Uncoordinated
Maximum v/c Ratio: 0.91
Intersection Signal Delay: 30.8 Intersection LOS: C
Intersection Capacity Utilization 81.1% ICU Level of Service D
Analysis Period (min) 15
dr - Defacto Right Lane. Recode with 1 though lane as a right lane.

Splits and Phases: 23: Airway Rd & Enrico Fermi Dr

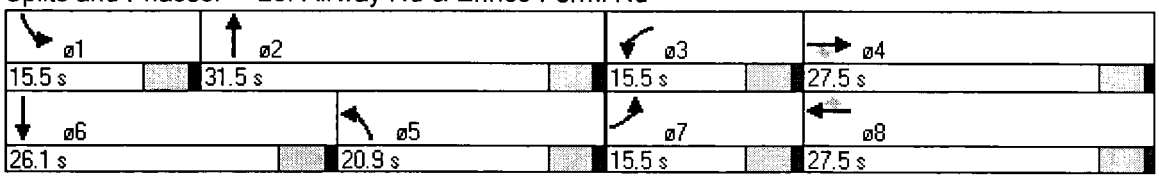


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Total Lost Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	1.00	0.95	0.95	1.00	1.00	1.00	1.00	0.95	0.95	1.00	0.95	0.95
Frt			0.850			0.850		0.925			0.893	
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1770	1770	1504	1770	1863	1583	1770	3274	0	1770	3161	0
Flt Permitted	0.950			0.950			0.950			0.950		
Satd. Flow (perm)	1770	1770	1504	1770	1863	1583	1770	3274	0	1770	3161	0
Satd. Flow (RTOR)			16			871		117			138	
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Volume (vph)	2	47	13	104	104	827	70	97	96	331	46	113
Adj. Flow (vph)	2	57	16	127	127	1009	85	118	117	404	56	138
Lane Group Flow (vph)	2	57	16	127	127	1009	85	235	0	404	194	0
Turn Type	Prot		Perm	Prot		Perm	Prot			Prot		
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases			4			8						
Total Split (s)	15.5	27.5	27.5	15.5	27.5	27.5	20.9	31.5	0.0	15.5	26.1	0.0
Act Effct Green (s)	6.2	21.3	21.3	17.7	36.7	36.7	11.7	9.0		30.1	29.5	
Actuated g/C Ratio	0.07	0.24	0.24	0.20	0.41	0.41	0.13	0.10		0.33	0.33	
v/c Ratio	0.02	0.14	0.04	0.36	0.17	0.87	0.37	0.54		0.68	0.17	
Control Delay	39.0	22.6	8.5	35.7	15.0	12.2	39.7	23.6		41.0	12.3	
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Total Delay	39.0	22.6	8.5	35.7	15.0	12.2	39.7	23.6		41.0	12.3	
LOS	D	C	A	D	B	B	D	C		D	B	
Approach Delay		20.0			14.9			27.9			31.7	
Approach LOS		C			B			C			C	

Intersection Summary

Cycle Length: 90
Actuated Cycle Length: 90
Offset: 0 (0%), Referenced to phase 2:NBT and 6:SBT, Start of Green
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 0.87
Intersection Signal Delay: 21.3 — Intersection LOS: C
Intersection Capacity Utilization 70.3% — ICU Level of Service C
Analysis Period (min) 15

Splits and Phases: 23: Airway Rd & Enrico Fermi Rd



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Sign Control		Stop			Stop			Stop			Stop	
Volume (vph)	5	2	0	10	2	93	0	9	2	236	44	4
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
Hourly flow rate (vph)	6	2	0	11	2	107	0	10	2	271	51	5

Direction, Lane #	EB 1	WB 1	NB 1	SB 1
Volume Total (vph)	8	121	13	326
Volume Left (vph)	6	11	0	271
Volume Right (vph)	0	107	2	5
Hadj (s)	0.18	-0.48	0.01	0.21
Departure Headway (s)	5.0	4.2	4.6	4.4
Degree Utilization, x	0.01	0.14	0.02	0.40
Capacity (veh/h)	656	784	746	789
Control Delay (s)	8.1	7.9	7.6	10.3
Approach Delay (s)	8.1	7.9	7.6	10.3
Approach LOS	A	A	A	B

Intersection Summary			
Delay	9.6		
HCM Level of Service	A		
Intersection Capacity Utilization	35.2%	ICU Level of Service	A
Analysis Period (min)	15		

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Sign Control		Stop			Stop			Stop			Stop	
Volume (vph)	5	10	0	9	3	121	0	61	1	178	187	10
Peak Hour Factor	0.81	0.81	0.81	0.81	0.81	0.81	0.81	0.81	0.81	0.81	0.81	0.81
Hourly flow rate (vph)	6	12	0	11	4	149	0	75	1	220	231	12

Direction, Lane #	EB 1	WB 1	NB 1	SB 1
Volume Total (vph)	19	164	77	463
Volume Left (vph)	6	11	0	220
Volume Right (vph)	0	149	1	12
Hadj (s)	0.10	-0.50	0.12	0.16
Departure Headway (s)	5.6	4.7	5.0	4.6
Degree Utilization, x	0.03	0.22	0.11	0.60
Capacity (veh/h)	569	686	666	755
Control Delay (s)	8.7	9.0	8.7	14.2
Approach Delay (s)	8.7	9.0	8.7	14.2
Approach LOS	A	A	A	B

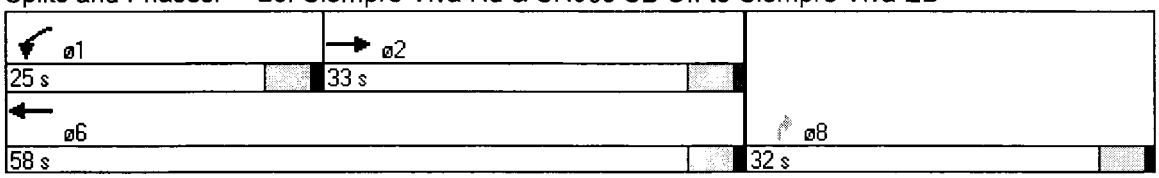
Intersection Summary			
Delay	12.3		
HCM Level of Service	B		
Intersection Capacity Utilization	42.0%	ICU Level of Service	A
Analysis Period (min)	15		

Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Total Lost Time (s)	4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	0.91	0.91	0.97	0.91	1.00	0.88
Frt	0.986					0.850
Flt Protected			0.950			
Satd. Flow (prot)	5014	0	3433	5085	0	2787
Flt Permitted			0.950			
Satd. Flow (perm)	5014	0	3433	5085	0	2787
Satd. Flow (RTOR)	19					940
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Volume (vph)	468	46	235	702	0	280
Adj. Flow (vph)	514	51	258	771	0	308
Lane Group Flow (vph)	565	0	258	771	0	308
Turn Type			Prot			custom
Protected Phases	2		1	6		
Permitted Phases						8
Total Split (s)	33.0	0.0	25.0	58.0	0.0	32.0
Act Effct Green (s)	60.0		12.0	76.0		6.0
Actuated g/C Ratio	0.67		0.13	0.84		0.07
v/c Ratio	0.17		0.56	0.18		0.29
Control Delay	5.8		40.1	1.1		0.7
Queue Delay	0.0		0.0	0.0		0.0
Total Delay	5.8		40.1	1.1		0.7
LOS	A		D	A		A
Approach Delay	5.8			10.9		
Approach LOS	A			B		

Intersection Summary

Cycle Length: 90
Actuated Cycle Length: 90
Offset: 66 (73%), Referenced to phase 2:EBT and 6:WBT, Start of Green
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 0.56
Intersection Signal Delay: 7.7 Intersection LOS: A
Intersection Capacity Utilization 26.5% ICU Level of Service A
Analysis Period (min) 15

Splits and Phases: 28: Siempre Viva Rd & SR905 SB Off to Siempre Viva EB

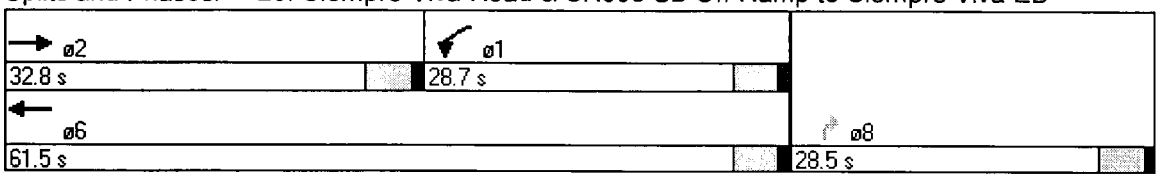


Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Total Lost Time (s)	4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	0.91	0.91	0.97	0.91	1.00	0.88
Frt	0.937					0.850
Flt Protected			0.950			
Satd. Flow (prot)	4765	0	3433	5085	0	2787
Flt Permitted			0.950			
Satd. Flow (perm)	4765	0	3433	5085	0	2787
Satd. Flow (RTOR)	214					1005
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Volume (vph)	444	322	442	669	0	175
Adj. Flow (vph)	522	379	520	787	0	206
Lane Group Flow (vph)	901	0	520	787	0	206
Turn Type			Prot			custom
Protected Phases	2		1	6		
Permitted Phases						8
Total Split (s)	32.8	0.0	28.7	61.5	0.0	28.5
Act Effct Green (s)	47.3		24.7	76.0		6.0
Actuated g/C Ratio	0.53		0.27	0.84		0.07
v/c Ratio	0.35		0.55	0.18		0.18
Control Delay	9.6		26.1	1.3		0.4
Queue Delay	0.0		0.0	0.0		0.0
Total Delay	9.6		26.1	1.3		0.4
LOS	A		C	A		A
Approach Delay	9.6			11.2		
Approach LOS	A			B		

Intersection Summary

Cycle Length: 90
Actuated Cycle Length: 90
Offset: 29 (32%), Referenced to phase 2:EBT and 6:WBT, Start of Green
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 0.55
Intersection Signal Delay: 9.7 Intersection LOS: A
Intersection Capacity Utilization 35.1% ICU Level of Service A
Analysis Period (min) 15

Splits and Phases: 28: Siempre Viva Road & SR905 SB Off Ramp to Siempre Viva EB



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		↑↑↑	↑↑↑			↱
Sign Control		Free	Free		Stop	
Grade		0%	0%		0%	
Volume (veh/h)	0	748	573	0	0	364
Peak Hour Factor	0.87	0.87	0.87	0.87	0.87	0.87
Hourly flow rate (vph)	0	860	659	0	0	418
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type					None	
Median storage veh)						
Upstream signal (ft)		281	733			
pX, platoon unblocked					0.98	
vC, conflicting volume	659				945	220
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	659				910	220
tC, single (s)	4.1				6.8	6.9
tC, 2 stage (s)						
tF (s)	2.2				3.5	3.3
p0 queue free %	100				100	47
cM capacity (veh/h)	925				269	784

Direction, Lane #	EB 1	EB 2	EB 3	WB 1	WB 2	WB 3	SB 1
Volume Total	287	287	287	220	220	220	418
Volume Left	0	0	0	0	0	0	0
Volume Right	0	0	0	0	0	0	418
cSH	1700	1700	1700	1700	1700	1700	784
Volume to Capacity	0.17	0.17	0.17	0.13	0.13	0.13	0.53
Queue Length 95th (ft)	0	0	0	0	0	0	80
Control Delay (s)	0.0	0.0	0.0	0.0	0.0	0.0	14.7
Lane LOS							B
Approach Delay (s)	0.0			0.0			14.7
Approach LOS							B

Intersection Summary			
Average Delay	3.2		
Intersection Capacity Utilization	40.3%	ICU Level of Service	A
Analysis Period (min)	15		

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		↑↑↑	↑↑↑			↱
Sign Control		Free	Free		Stop	
Grade		0%	0%		0%	
Volume (veh/h)	0	619	735	0	0	376
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93
Hourly flow rate (vph)	0	666	790	0	0	404
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type					None	
Median storage veh)						
Upstream signal (ft)		225	412			
pX, platoon unblocked	0.96				0.96	0.96
vC, conflicting volume	790				1012	263
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	692				923	141
tC, single (s)	4.1				6.8	6.9
tC, 2 stage (s)						
tF (s)	2.2				3.5	3.3
p0 queue free %	100				100	52
cM capacity (veh/h)	861				257	843

Direction, Lane #	EB 1	EB 2	EB 3	WB 1	WB 2	WB 3	SB 1
Volume Total	222	222	222	263	263	263	404
Volume Left	0	0	0	0	0	0	0
Volume Right	0	0	0	0	0	0	404
cSH	1700	1700	1700	1700	1700	1700	843
Volume to Capacity	0.13	0.13	0.13	0.15	0.15	0.15	0.48
Queue Length 95th (ft)	0	0	0	0	0	0	66
Control Delay (s)	0.0	0.0	0.0	0.0	0.0	0.0	13.1
Lane LOS							B
Approach Delay (s)	0.0			0.0			13.1
Approach LOS							B

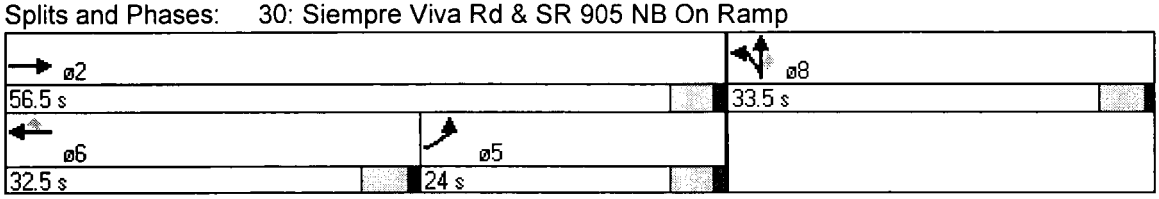
Intersection Summary			
Average Delay	2.9		
Intersection Capacity Utilization	44.1%	ICU Level of Service	A
Analysis Period (min)	15		

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Total Lost Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	0.97	0.91	1.00	1.00	0.86	0.86	1.00	1.00	0.88	1.00	1.00	1.00
Frt					0.993	0.850			0.850			
Flt Protected	0.950							0.953				
Satd. Flow (prot)	3433	5085	0	0	4772	1362	0	1775	2787	0	0	0
Flt Permitted	0.950							0.953				
Satd. Flow (perm)	3433	5085	0	0	4772	1362	0	1775	2787	0	0	0
Satd. Flow (RTOR)					8	161			344			
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Volume (vph)	125	613	0	0	415	175	164	1	330	0	0	0
Adj. Flow (vph)	130	639	0	0	432	182	171	1	344	0	0	0
Lane Group Flow (vph)	130	639	0	0	453	161	0	172	344	0	0	0
Turn Type	Prot					Perm	Split		Perm			
Protected Phases	5	2			6		8	8				
Permitted Phases						6			8			
Total Split (s)	24.0	56.5	0.0	0.0	32.5	32.5	33.5	33.5	33.5	0.0	0.0	0.0
Act Effct Green (s)	9.0	67.9			54.9	54.9		14.1	14.1			
Actuated g/C Ratio	0.10	0.75			0.61	0.61		0.16	0.16			
v/c Ratio	0.38	0.17			0.16	0.18		0.62	0.47			
Control Delay	37.7	1.5			8.4	2.3		44.5	5.9			
Queue Delay	0.0	0.0			0.0	0.0		0.0	0.0			
Total Delay	37.7	1.5			8.4	2.3		44.5	5.9			
LOS	D	A			A	A		D	A			
Approach Delay		7.6			6.8			18.7				
Approach LOS		A			A			B				

Intersection Summary

Cycle Length: 90
Actuated Cycle Length: 90
Offset: 77 (86%), Referenced to phase 2:EBT and 6:WBT, Start of Green
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 0.62
Intersection Signal Delay: 10.4 Intersection LOS: B
Intersection Capacity Utilization 40.3% ICU Level of Service A
Analysis Period (min) 15

Splits and Phases: 30: Siempre Viva Rd & SR 905 NB On Ramp

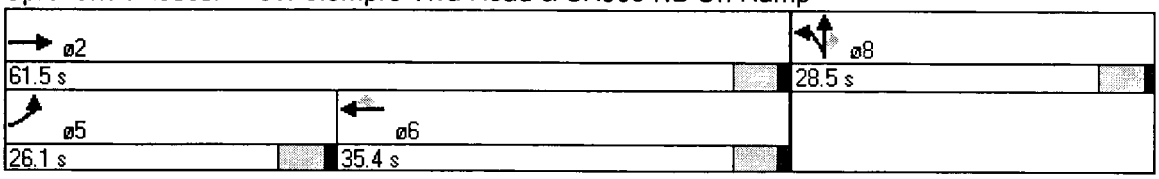


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Total Lost Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	0.97	0.91	1.00	1.00	0.86	0.86	1.00	1.00	0.88	1.00	1.00	1.00
Frt					0.986	0.850			0.850			
Flt Protected	0.950							0.954				
Satd. Flow (prot)	3433	5085	0	0	4739	1362	0	1777	2787	0	0	0
Flt Permitted	0.950							0.954				
Satd. Flow (perm)	3433	5085	0	0	4739	1362	0	1777	2787	0	0	0
Satd. Flow (RTOR)					19	328			247			
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Volume (vph)	297	352	0	0	681	373	49	2	230	0	0	0
Adj. Flow (vph)	319	378	0	0	732	401	53	2	247	0	0	0
Lane Group Flow (vph)	319	378	0	0	805	328	0	55	247	0	0	0
Turn Type	Prot					Perm	Split		Perm			
Protected Phases	5	2			6		8	8				
Permitted Phases						6			8			
Total Split (s)	26.1	61.5	0.0	0.0	35.4	35.4	28.5	28.5	28.5	0.0	0.0	0.0
Act Effct Green (s)	14.5	73.5			55.0	55.0		8.5	8.5			
Actuated g/C Ratio	0.16	0.82			0.61	0.61		0.09	0.09			
v/c Ratio	0.58	0.09			0.28	0.34		0.33	0.51			
Control Delay	32.3	0.9			9.0	2.3		42.7	9.0			
Queue Delay	0.0	0.0			0.0	0.0		0.0	0.0			
Total Delay	32.3	0.9			9.0	2.3		42.7	9.0			
LOS	C	A			A	A		D	A			
Approach Delay		15.2			7.0			15.2				
Approach LOS		B			A			B				

Intersection Summary

Cycle Length: 90
Actuated Cycle Length: 90
Offset: 66 (73%), Referenced to phase 2:EBT and 6:WBT, Start of Green
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 0.58
Intersection Signal Delay: 10.9 Intersection LOS: B
Intersection Capacity Utilization 44.1% ICU Level of Service A
Analysis Period (min) 15

Splits and Phases: 30: Siempre Viva Road & SR905 NB On Ramp

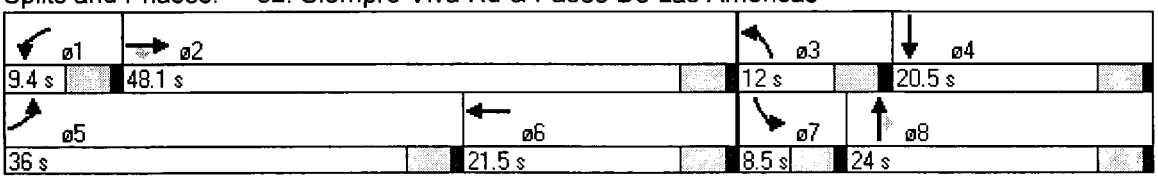


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Total Lost Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	1.00	0.91	1.00	1.00	0.95	0.95	1.00	0.95	1.00	1.00	0.95	0.95
Frt			0.850						0.850		0.932	
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1770	5085	1583	1770	3539	0	1770	3539	1583	1770	3299	0
Flt Permitted	0.950			0.950			0.950			0.950		
Satd. Flow (perm)	1770	5085	1583	1770	3539	0	1770	3539	1583	1770	3299	0
Satd. Flow (RTOR)			154						5		58	
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Volume (vph)	517	448	140	21	288	1	120	51	5	8	64	53
Adj. Flow (vph)	568	492	154	23	316	1	132	56	5	9	70	58
Lane Group Flow (vph)	568	492	154	23	317	0	132	56	5	9	128	0
Turn Type	Prot		Perm	Prot			Prot		Perm	Prot		
Protected Phases	5	2		1	6		3	8		7	4	
Permitted Phases			2						8			
Total Split (s)	36.0	48.1	48.1	9.4	21.5	0.0	12.0	24.0	24.0	8.5	20.5	0.0
Act Effct Green (s)	27.7	40.5	40.5	5.4	12.1		8.1	18.4	18.4	4.6	7.7	
Actuated g/C Ratio	0.39	0.56	0.56	0.07	0.17		0.11	0.26	0.26	0.06	0.11	
v/c Ratio	0.83	0.17	0.16	0.19	0.53		0.66	0.06	0.01	0.09	0.32	
Control Delay	33.1	8.4	2.4	39.7	31.8		52.0	24.8	17.4	39.9	21.6	
Queue Delay	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	
Total Delay	33.1	8.4	2.4	39.7	31.8		52.0	24.8	17.4	39.9	21.6	
LOS	C	A	A	D	C		D	C	B	D	C	
Approach Delay		19.2			32.3			43.2			22.8	
Approach LOS		B			C			D			C	

Intersection Summary

Cycle Length: 90
Actuated Cycle Length: 71.9
Control Type: Actuated-Uncoordinated
Maximum v/c Ratio: 0.83
Intersection Signal Delay: 24.3 — Intersection LOS: C
Intersection Capacity Utilization 60.0% — ICU Level of Service B
Analysis Period (min) 15

Splits and Phases: 32: Siempre Viva Rd & Paseo De Las Americas

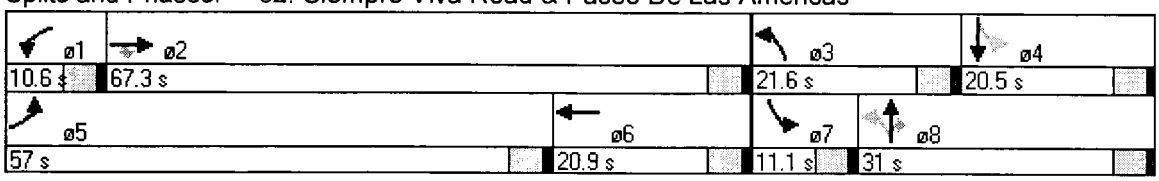


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Total Lost Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	1.00	0.91	1.00	1.00	0.95	0.95	1.00	0.95	1.00	1.00	0.95	0.95
Frt			0.850		0.995				0.850		0.926	
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1770	5085	1583	1770	3522	0	1770	3539	1583	1770	3277	0
Flt Permitted	0.950			0.950			0.459			0.666		
Satd. Flow (perm)	1770	5085	1583	1770	3522	0	855	3539	1583	1241	3277	0
Satd. Flow (RTOR)			67		3				8		89	
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Volume (vph)	630	149	59	30	378	14	269	120	7	6	80	78
Adj. Flow (vph)	716	169	67	34	430	16	306	136	8	7	91	89
Lane Group Flow (vph)	716	169	67	34	446	0	306	136	8	7	180	0
Turn Type	Prot		Perm	Prot			pm+pt		Perm	pm+pt		
Protected Phases	5	2		1	6		3	8		7	4	
Permitted Phases			2				8		8	4		
Total Split (s)	57.0	67.3	67.3	10.6	20.9	0.0	21.6	31.0	31.0	11.1	20.5	0.0
Act Effct Green (s)	46.0	60.5	60.5	6.5	16.1		29.5	27.5	27.5	15.6	9.1	
Actuated g/C Ratio	0.44	0.58	0.58	0.06	0.15		0.28	0.26	0.26	0.14	0.09	
v/c Ratio	0.91	0.06	0.07	0.32	0.81		0.79	0.15	0.02	0.03	0.49	
Control Delay	45.0	10.8	3.2	60.2	57.1		50.4	33.1	19.1	33.0	30.1	
Queue Delay	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	
Total Delay	45.0	10.8	3.2	60.2	57.1		50.4	33.1	19.1	33.0	30.1	
LOS	D	B	A	E	E		D	C	B	C	C	
Approach Delay		36.0			57.3			44.6			30.2	
Approach LOS		D			E			D			C	

Intersection Summary

Cycle Length: 120
Actuated Cycle Length: 104
Control Type: Actuated-Uncoordinated
Maximum v/c Ratio: 0.91
Intersection Signal Delay: 42.3 — Intersection LOS: D
Intersection Capacity Utilization 78.8% — ICU Level of Service D
Analysis Period (min) 15

Splits and Phases: 32: Siempre Viva Road & Paseo De Las Americas



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Sign Control		Free			Free			Stop			Stop	
Grade		0%			0%			0%			0%	
Volume (veh/h)	54	295	62	20	236	1	21	17	22	2	5	27
Peak Hour Factor	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84
Hourly flow rate (vph)	64	351	74	24	281	1	25	20	26	2	6	32
Pedestrians												
Lane Width (ft)												
Walking Speed (ft/s)												
Percent Blockage												
Right turn flare (veh)												
Median type								None			None	
Median storage veh)												
Upstream signal (ft)		1276										
pX, platoon unblocked												
vC, conflicting volume	282			425			740	846	212	670	883	141
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	282			425			740	846	212	670	883	141
tC, single (s)	4.1			4.1			7.5	6.5	6.9	7.5	6.5	6.9
tC, 2 stage (s)												
tF (s)	2.2			2.2			3.5	4.0	3.3	3.5	4.0	3.3
p0 queue free %	95			98			91	93	97	99	98	96
cM capacity (veh/h)	1277			1131			273	277	793	296	263	881

Direction, Lane #	EB 1	EB 2	EB 3	WB 1	WB 2	WB 3	NB 1	SB 1	SB 2
Volume Total	64	234	191	24	187	95	71	8	32
Volume Left	64	0	0	24	0	0	25	2	0
Volume Right	0	0	74	0	0	1	26	0	32
cSH	1277	1700	1700	1131	1700	1700	361	272	881
Volume to Capacity	0.05	0.14	0.11	0.02	0.11	0.06	0.20	0.03	0.04
Queue Length 95th (ft)	4	0	0	2	0	0	18	2	3
Control Delay (s)	8.0	0.0	0.0	8.3	0.0	0.0	17.4	18.7	9.2
Lane LOS	A			A			C	C	A
Approach Delay (s)	1.0			0.6			17.4	11.2	
Approach LOS							C	B	

Intersection Summary				
Average Delay	2.7			
Intersection Capacity Utilization	33.5%	ICU Level of Service		A
Analysis Period (min)	15			

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Sign Control		Free			Free			Stop			Stop	
Grade		0%			0%			0%			0%	
Volume (veh/h)	39	93	20	17	287	5	51	15	0	1	19	52
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
Hourly flow rate (vph)	43	102	22	19	315	5	56	16	0	1	21	57
Pedestrians												
Lane Width (ft)												
Walking Speed (ft/s)												
Percent Blockage												
Right turn flare (veh)												
Median type								None			None	
Median storage veh)												
Upstream signal (ft)		1290			1303							
pX, platoon unblocked												
vC, conflicting volume	321			124			462	557	62	501	565	160
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	321			124			462	557	62	501	565	160
tC, single (s)	4.1			4.1			7.5	6.5	6.9	7.5	6.5	6.9
tC, 2 stage (s)												
tF (s)	2.2			2.2			3.5	4.0	3.3	3.5	4.0	3.3
p0 queue free %	97			99			87	96	100	100	95	93
cM capacity (veh/h)	1236			1460			418	417	990	424	412	856

Direction, Lane #	EB 1	EB 2	EB 3	WB 1	WB 2	WB 3	NB 1	SB 1	SB 2
Volume Total	43	68	56	19	210	111	73	22	57
Volume Left	43	0	0	19	0	0	56	1	0
Volume Right	0	0	22	0	0	5	0	0	57
cSH	1236	1700	1700	1460	1700	1700	418	413	856
Volume to Capacity	0.03	0.04	0.03	0.01	0.12	0.07	0.17	0.05	0.07
Queue Length 95th (ft)	3	0	0	1	0	0	16	4	5
Control Delay (s)	8.0	0.0	0.0	7.5	0.0	0.0	15.4	14.2	9.5
Lane LOS	A			A			C	B	A
Approach Delay (s)	2.1			0.4			15.4	10.8	
Approach LOS							C	B	

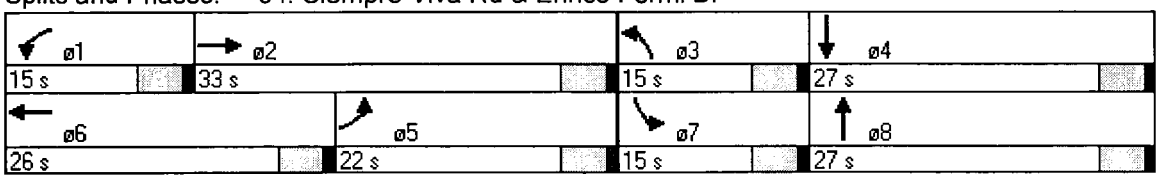
Intersection Summary			
Average Delay	3.7		
Intersection Capacity Utilization	31.7%	ICU Level of Service	A
Analysis Period (min)	15		

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Total Lost Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	0.97	1.00	1.00	1.00	0.95	0.95	1.00	0.95	0.95	1.00	0.95	0.95
Frt		0.917			0.993			0.997			0.898	
Flt Protected	0.950						0.950					
Satd. Flow (prot)	3433	1708	0	1863	3514	0	1770	3529	0	1863	3178	0
Flt Permitted	0.950						0.950					
Satd. Flow (perm)	3433	1708	0	1863	3514	0	1770	3529	0	1863	3178	0
Satd. Flow (RTOR)		5			5			2			58	
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Volume (vph)	283	3	4	0	80	4	9	134	2	0	21	45
Adj. Flow (vph)	368	4	5	0	104	5	12	174	3	0	27	58
Lane Group Flow (vph)	368	9	0	0	109	0	12	177	0	0	85	0
Turn Type	Prot			Prot			Prot			Prot		
Protected Phases	5	2		1	6		3	8		7	4	
Permitted Phases												
Total Split (s)	22.0	33.0	0.0	15.0	26.0	0.0	15.0	27.0	0.0	15.0	27.0	0.0
Act Effct Green (s)	10.1	16.1			7.3		6.7	14.6			13.1	
Actuated g/C Ratio	0.27	0.43			0.19		0.15	0.42			0.37	
v/c Ratio	0.40	0.01			0.17		0.04	0.12			0.07	
Control Delay	13.2	4.4			15.6		20.3	11.5			8.8	
Queue Delay	0.0	0.0			0.0		0.0	0.0			0.0	
Total Delay	13.2	4.4			15.6		20.3	11.5			8.8	
LOS	B	A			B		C	B			A	
Approach Delay		13.0			15.6			12.0			8.8	
Approach LOS		B			B			B			A	

Intersection Summary

Cycle Length: 90
Actuated Cycle Length: 35.1
Control Type: Actuated-Uncoordinated
Maximum v/c Ratio: 0.40
Intersection Signal Delay: 12.7
Intersection LOS: B
Intersection Capacity Utilization 28.6%
ICU Level of Service A
Analysis Period (min) 15

Splits and Phases: 34: Siempre Viva Rd & Enrico Fermi Dr

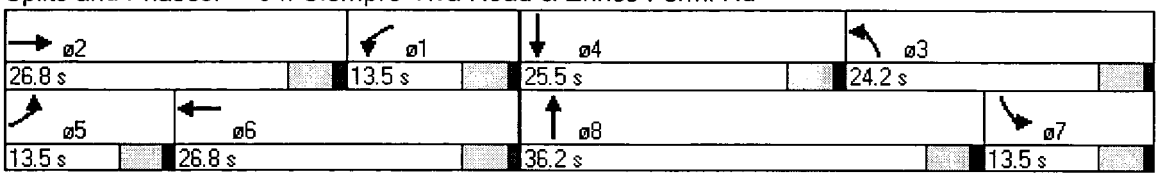


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Total Lost Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	0.97	1.00	1.00	1.00	0.95	0.95	1.00	0.95	0.95	1.00	0.95	0.95
Frt		0.872			0.953			0.998			0.854	
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	3433	1624	0	1770	3373	0	1770	3532	0	1770	3022	0
Flt Permitted	0.950			0.950			0.950			0.950		
Satd. Flow (perm)	3433	1624	0	1770	3373	0	1770	3532	0	1770	3022	0
Satd. Flow (RTOR)		23			11			1			809	
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Volume (vph)	61	4	22	11	23	11	146	169	2	3	4	144
Adj. Flow (vph)	64	4	23	11	24	11	152	176	2	3	4	150
Lane Group Flow (vph)	64	27	0	11	35	0	152	178	0	3	154	0
Turn Type	Prot			Prot			Prot			Prot		
Protected Phases	5	2		1	6		3	8		7	4	
Permitted Phases												
Total Split (s)	13.5	26.8	0.0	13.5	26.8	0.0	24.2	36.2	0.0	13.5	25.5	0.0
Act Effct Green (s)	7.4	9.5		6.8	6.8		11.6	47.9		6.4	32.3	
Actuated g/C Ratio	0.11	0.14		0.09	0.10		0.18	0.75		0.09	0.51	
v/c Ratio	0.17	0.11		0.07	0.10		0.47	0.07		0.02	0.08	
Control Delay	25.9	13.6		29.7	21.9		25.2	5.9		30.0	0.1	
Queue Delay	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Delay	25.9	13.6		29.7	21.9		25.2	5.9		30.0	0.1	
LOS	C	B		C	C		C	A		C	A	
Approach Delay		22.3			23.8			14.8			0.7	
Approach LOS		C			C			B			A	

Intersection Summary

Cycle Length: 90
Actuated Cycle Length: 63.8
Control Type: Semi Act-Uncoord
Maximum v/c Ratio: 0.47
Intersection Signal Delay: 13.0
Intersection LOS: B
Intersection Capacity Utilization 31.3%
ICU Level of Service A
Analysis Period (min) 15

Splits and Phases: 34: Siempre Viva Road & Enrico Fermi Rd

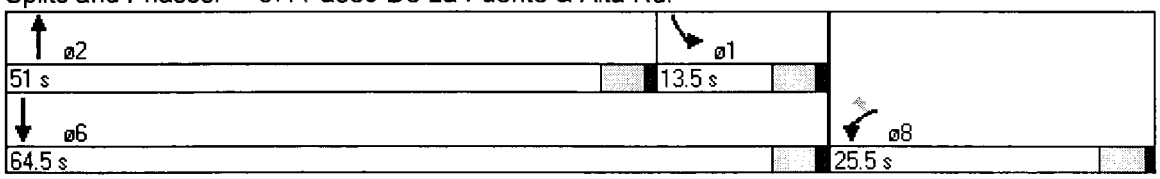


Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Total Lost Time (s)	4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.850	0.996			
Flt Protected	0.950				0.950	
Satd. Flow (prot)	1770	1583	1855	0	1770	1863
Flt Permitted	0.950				0.950	
Satd. Flow (perm)	1770	1583	1855	0	1770	1863
Satd. Flow (RTOR)		5	3			
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Volume (vph)	6	5	634	19	1	166
Adj. Flow (vph)	7	5	689	21	1	180
Lane Group Flow (vph)	7	5	710	0	1	180
Turn Type		Perm			Prot	
Protected Phases	8		2		1	6
Permitted Phases		8				
Total Split (s)	25.5	25.5	51.0	0.0	13.5	64.5
Act Effct Green (s)	6.5	6.5	110.3		6.2	112.7
Actuated g/C Ratio	0.05	0.05	0.95		0.05	0.97
v/c Ratio	0.08	0.06	0.40		0.01	0.10
Control Delay	27.7	18.0	2.3		27.0	0.5
Queue Delay	0.0	0.0	0.0		0.0	0.0
Total Delay	27.7	18.0	2.3		27.0	0.5
LOS	C	B	A		C	A
Approach Delay	23.6		2.3			0.7
Approach LOS	C		A			A

Intersection Summary

Cycle Length: 90
Actuated Cycle Length: 116.1
Control Type: Actuated-Uncoordinated
Maximum v/c Ratio: 0.40
Intersection Signal Delay: 2.2 — Intersection LOS: A
Intersection Capacity Utilization 44.5% — ICU Level of Service A
Analysis Period (min) 15

Splits and Phases: 67: Paseo De La Fuente & Alta Rd.

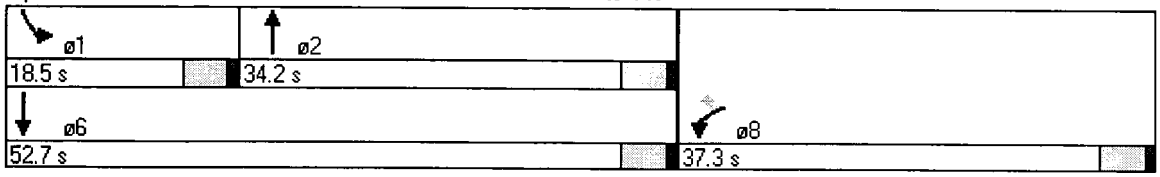


Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Total Lost Time (s)	4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.850	0.996			
Flt Protected	0.950					
Satd. Flow (prot)	1770	1583	1855	0	1863	1863
Flt Permitted	0.950					
Satd. Flow (perm)	1770	1583	1855	0	1863	1863
Satd. Flow (RTOR)		2	2			
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Volume (vph)	221	2	98	3	0	506
Adj. Flow (vph)	273	2	121	4	0	625
Lane Group Flow (vph)	273	2	125	0	0	625
Turn Type		Perm			Prot	
Protected Phases	8		2		1	6
Permitted Phases		8				
Total Split (s)	37.3	37.3	34.2	0.0	18.5	52.7
Act Effct Green (s)	12.7	12.7	24.8			24.8
Actuated g/C Ratio	0.28	0.28	0.54			0.54
v/c Ratio	0.56	0.00	0.12			0.62
Control Delay	18.3	10.5	6.4			11.4
Queue Delay	0.0	0.0	0.0			0.0
Total Delay	18.3	10.5	6.4			11.4
LOS	B	B	A			B
Approach Delay	18.2		6.4			11.4
Approach LOS	B		A			B

Intersection Summary

Cycle Length: 90
Actuated Cycle Length: 45.9
Control Type: Actuated-Uncoordinated
Maximum v/c Ratio: 0.62
Intersection Signal Delay: 12.6 — Intersection LOS: B
Intersection Capacity Utilization 45.5% — ICU Level of Service A
Analysis Period (min) 15

Splits and Phases: 67: Paseo De La Fuente & Alta Rd



Existing + Project Units 1-5 Intersection ILV Analysis

INTERSECTION

Signalized Intersection

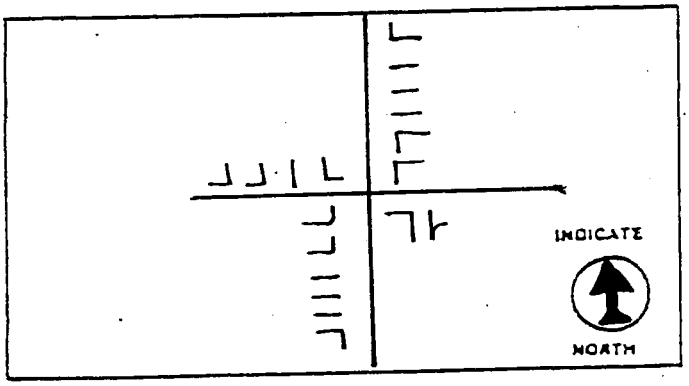
CAPACITY ANALYSIS

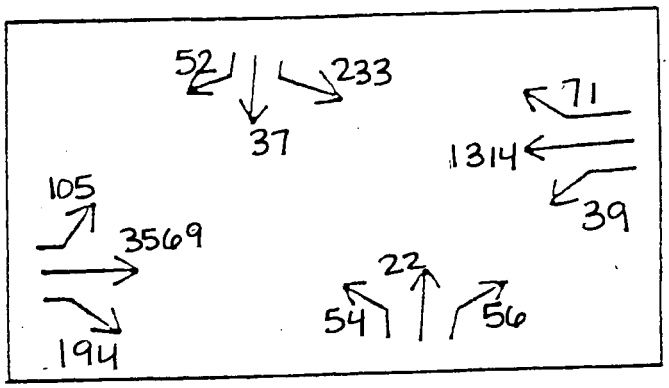
INTERSECTION Otay Mesa/Heritage DIST. CO. RTE. P.M. 11/SD/905

Existing + Units 1-5 BY SLB DATE 4-6-10

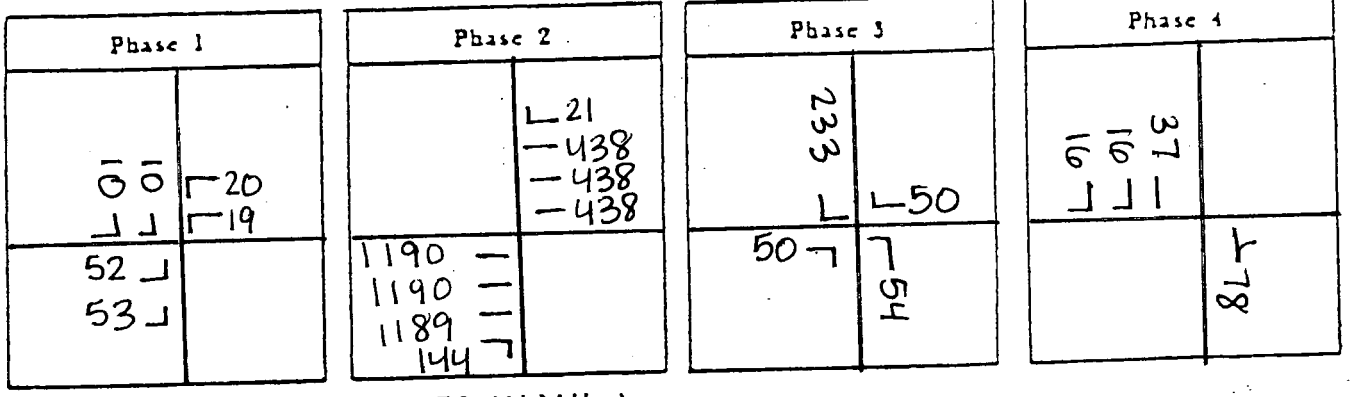
TIME ____ (AM) PM

DIAGRAM AND TRAFFIC FLOWS:





LANE VOLUMES (1LV/hr):



CRITICAL LANE VOLUMES (1LV/hr):

Phase 1	Phase 2	Phase 3	Phase 4
53	1,190	233	78

TOTAL OPERATING LEVEL (1LV/hr):

Σ
1,554

Is . . . ☐ < 1200 1LV/hr.

☐ > 1200 but < 1500 1LV/hr.

☒ > 1500 1LV/hr. (CAPACITY)

REMARKS:

INTERSECTION

Signalized Intersection

CAPACITY ANALYSIS

INTERSECTION Otay Mesa/Heritage

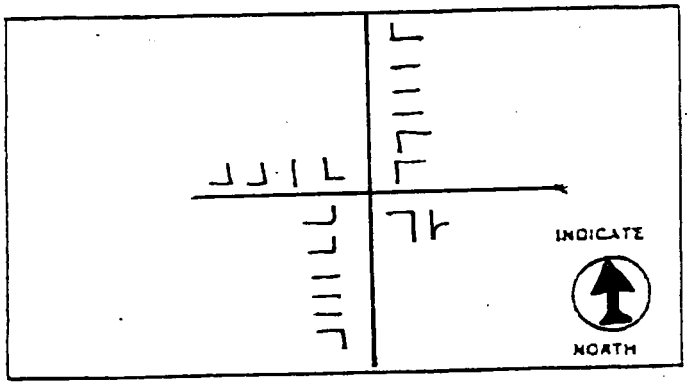
DIST. CO. RTE. P.M. 11/SD/905

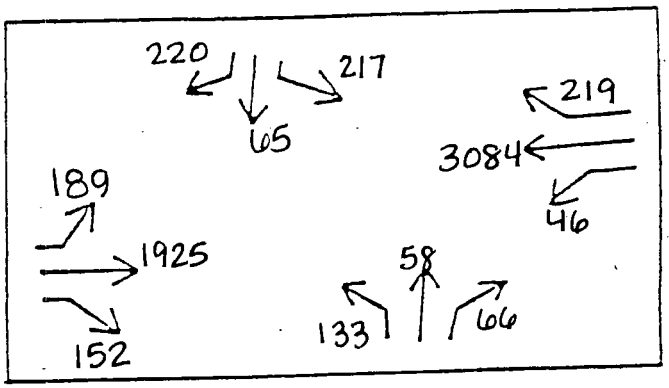
BY JB DATE 4-6-10

Existing + Units 1-5

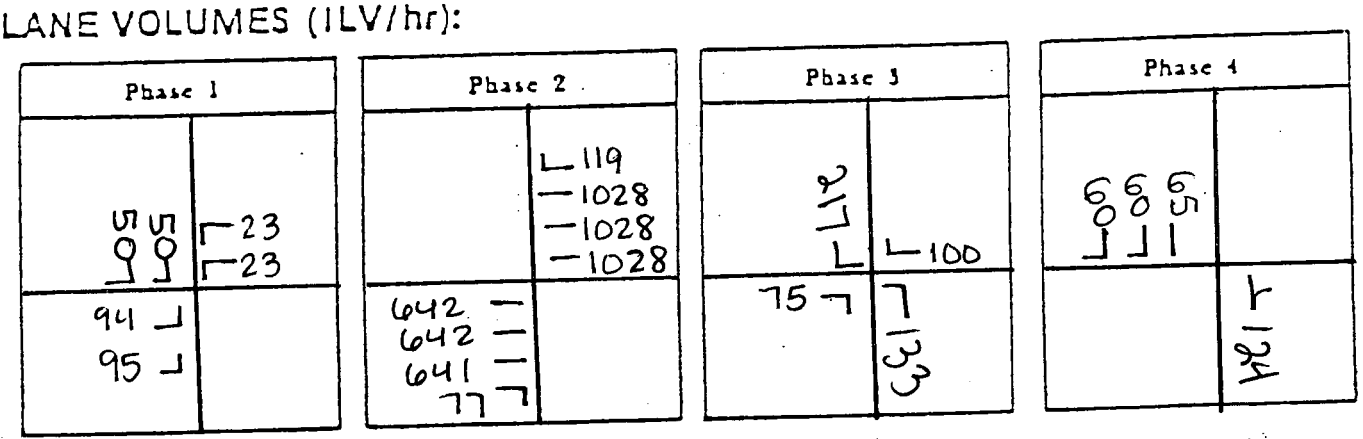
TIME ____ AM (PM)

DIAGRAM AND TRAFFIC FLOWS:





LANE VOLUMES (ILV/hr):



CRITICAL LANE VOLUMES (ILV/hr):

Phase 1	Phase 2	Phase 3	Phase 4
95	1,028	217	124

TOTAL OPERATING LEVEL (ILV/hr):

Σ
1,464

Is . . .

- ☐ < 1200 ILV/hr.
- ☒ > 1200 but < 1500 ILV/hr.
- ☐ > 1500 ILV/hr. (CAPACITY)

REMARKS:

Signalized Intersection
CAPACITY ANALYSIS

INTERSECTION Otay Mesa/Cactus

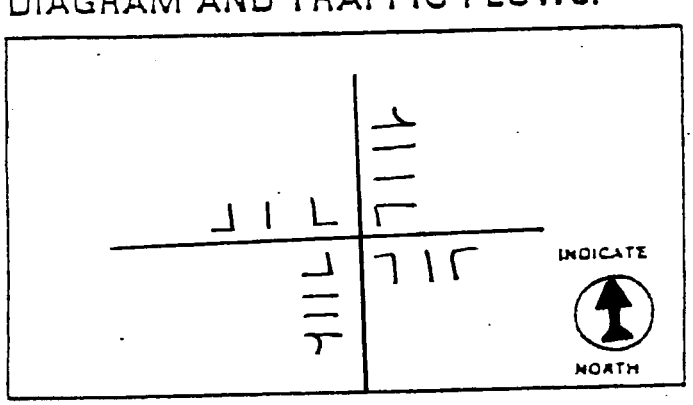
DIST. CO. RTE. P.M. 11/SD/905

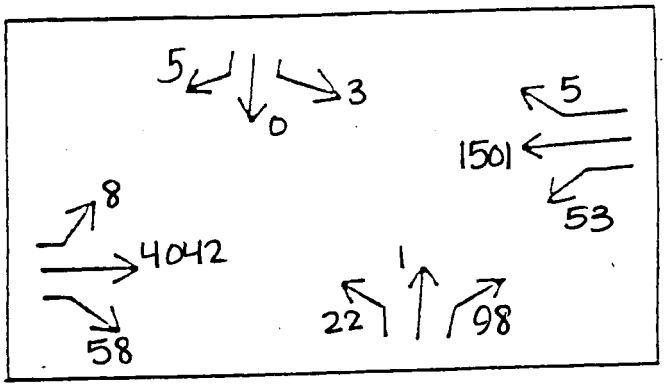
BY LB DATE 4-6-10

TIME ____ (AM) PM

Existing + Units 1-5

DIAGRAM AND TRAFFIC FLOWS:





LANE VOLUMES (ILV/hr):

Phase 1		Phase 2		Phase 3		Phase 4	
0	53		502 502 502	3		50	
8	50	1366 1367 1367			22		48

CRITICAL LANE VOLUMES (ILV/hr):

Phase 1	Phase 2	Phase 3	Phase 4
53	1367	22	48

TOTAL OPERATING LEVEL (ILV/hr):

Σ
1,490

Is . . .

- ☐ < 1200 ILV/hr.
- ☒ > 1200 but < 1500 ILV/hr.
- ☐ > 1500 ILV/hr. (CAPACITY)

REMARKS:

INTERSECTION

Signalized Intersection
CAPACITY ANALYSIS

INTERSECTION Otay Mesa/Cactus

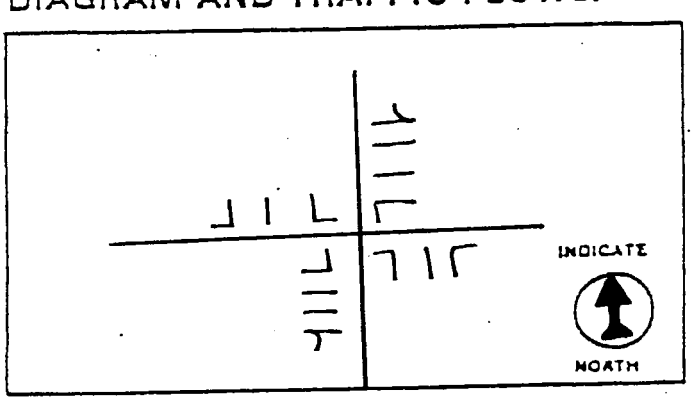
DIST. CO. RTE. P.M. 11/SD/905

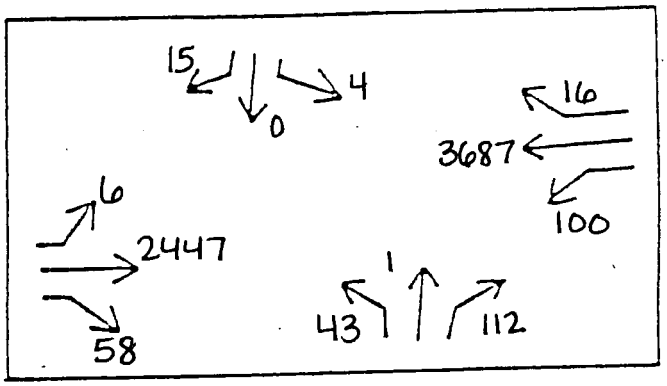
BY [illegible] DATE 4-6-10

TIME ____ AM (PM)

Existing + Units 1-5

DIAGRAM AND TRAFFIC FLOWS:





LANE VOLUMES (ILV/hr):

Phase 1		Phase 2		Phase 3		Phase 4	
	100		1234 1235 1234				
6	15	835 835 835			43		37

CRITICAL LANE VOLUMES (ILV/hr):

Phase 1	Phase 2	Phase 3	Phase 4
100	1,235	43	37

TOTAL OPERATING LEVEL (ILV/hr):

Σ
1,415

Is . . .

- ☐ < 1200 ILV/hr.
- ☒ > 1200 but < 1500 ILV/hr.
- ☐ > 1500 ILV/hr. (CAPACITY)

REMARKS:

INTERSECTION

Signalized Intersection

CAPACITY ANALYSIS

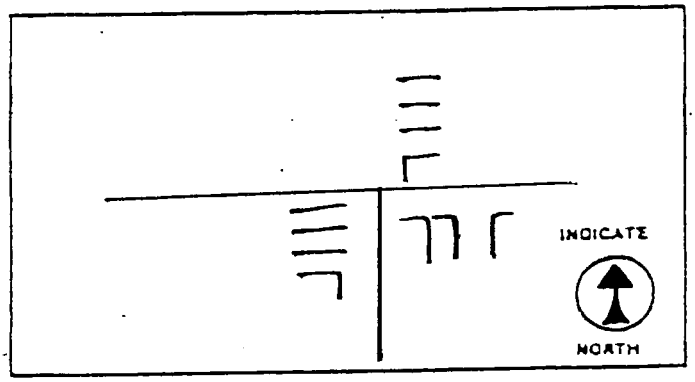
INTERSECTION Otay Mesa Rd / Britannia Blvd DIST. CO. RTE. P.M. 11/SD/905

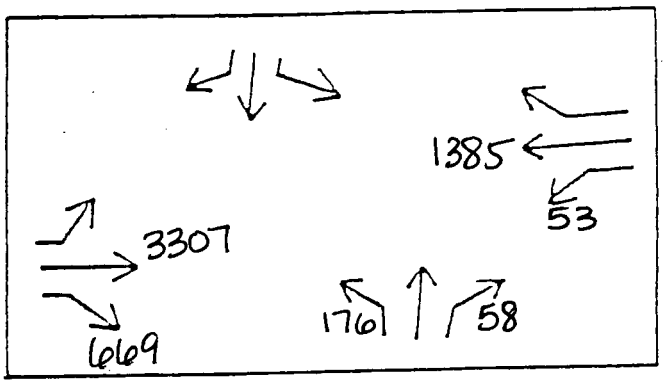
BY VB DATE 4-6-10

Existing + Units 1-5

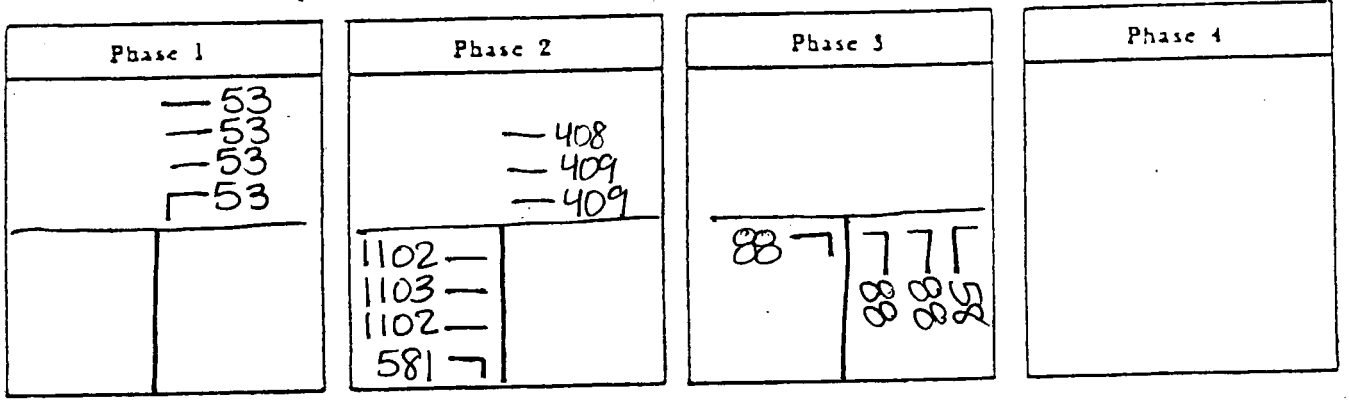
TIME ____ (AM) PM

DIAGRAM AND TRAFFIC FLOWS:





LANE VOLUMES (ILV/hr):



CRITICAL LANE VOLUMES (ILV/hr):

Phase 1	Phase 2	Phase 3	Phase 4
53	1,103	88	

TOTAL OPERATING LEVEL (ILV/hr):

Σ
1,244

Is . . .

- ☐ < 1200 ILV/hr.
- ☒ > 1200 but < 1500 ILV/hr.
- ☐ > 1500 ILV/hr. (CAPACITY)

REMARKS:

INTERSECTION

Signalized Intersection

CAPACITY ANALYSIS

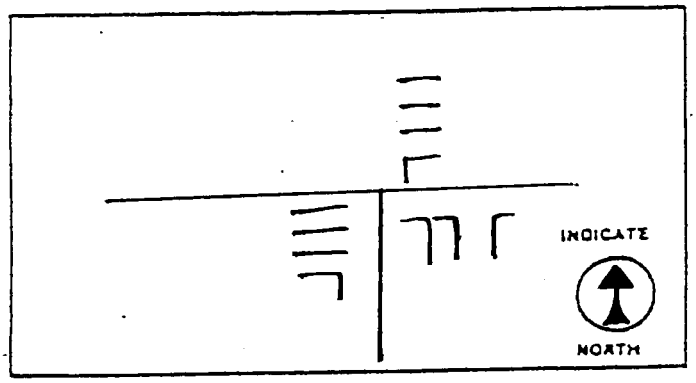
INTERSECTION Otay Mesa Rd / Britannia Blvd DIST. CO. RTE. P.M. 11/SD/905

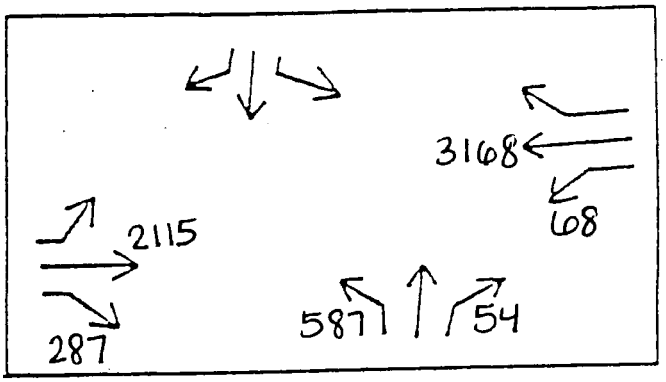
Existing + Units 1-5

BY VB DATE 4-6-10

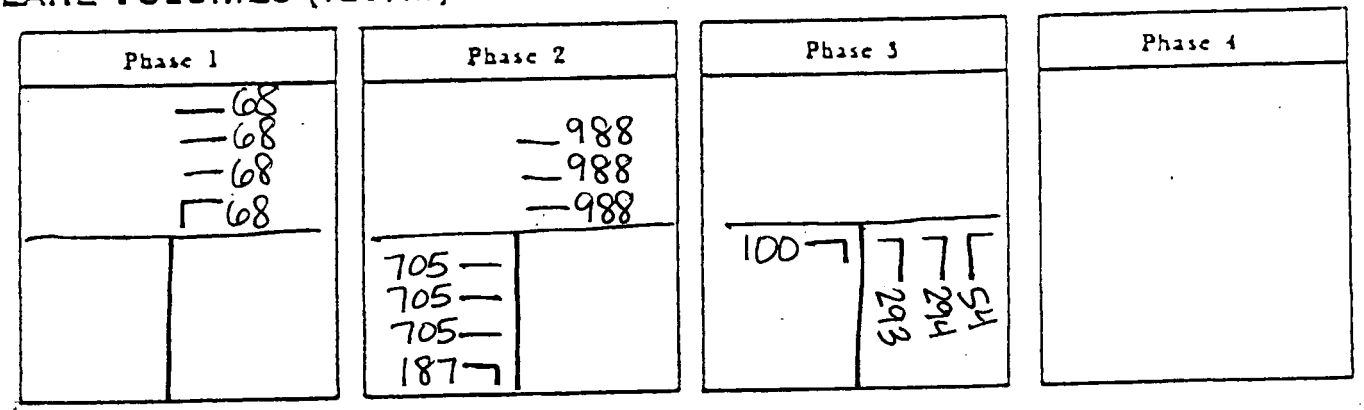
TIME ____ AM (PM)

DIAGRAM AND TRAFFIC FLOWS:





LANE VOLUMES (ILV/hr):



CRITICAL LANE VOLUMES (ILV/hr):

Phase 1	Phase 2	Phase 3	Phase 4
68	988	294	

TOTAL OPERATING LEVEL (ILV/hr):

Σ
1,350

Is . . .

- ☐ < 1200 ILV/hr.
- ☒ > 1200 but < 1500 ILV/hr.
- ☐ > 1500 ILV/hr. (CAPACITY)

REMARKS:

INTERSECTION

Signalized Intersection

CAPACITY ANALYSIS

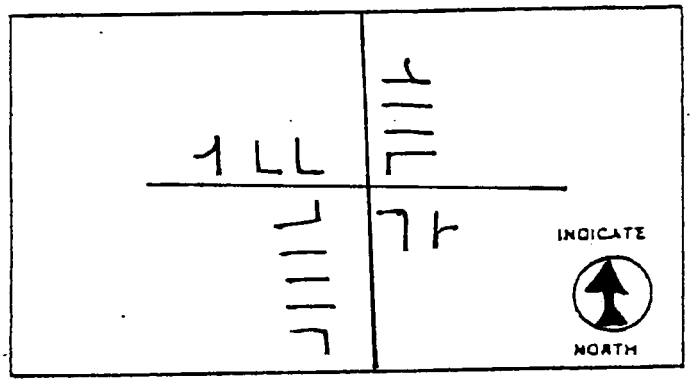
INTERSECTION Otay Mesa Rd/La Media Rd DIST. CO. RTE. P.M. 11/SD/905

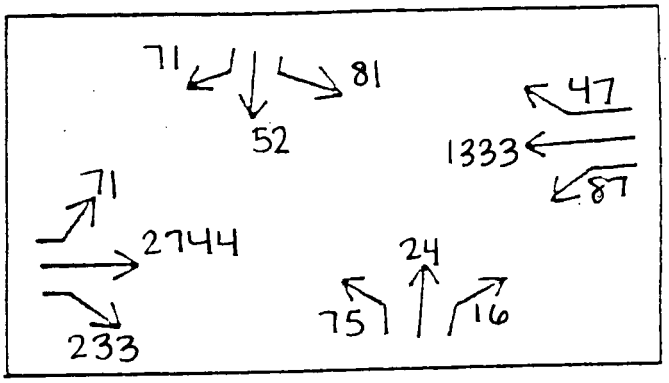
Existing + Units 1-5

BY JB DATE 4-6-10

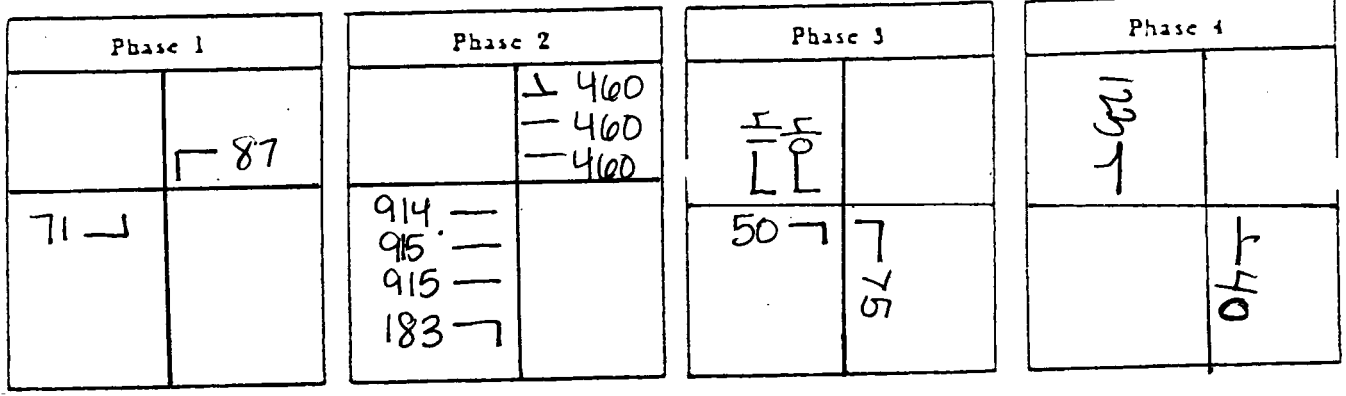
TIME ____ (AM) PM

DIAGRAM AND TRAFFIC FLOWS:





LANE VOLUMES (ILV/hr):



CRITICAL LANE VOLUMES (ILV/hr):

Phase 1	Phase 2	Phase 3	Phase 4
87	915	75	123

TOTAL OPERATING LEVEL (ILV/hr):

Σ
1,200

Is . . .

- ☒ < 1200 ILV/hr.
- ☐ > 1200 but < 1500 ILV/hr.
- ☐ > 1500 ILV/hr. (CAPACITY)

REMARKS:

INTERSECTION

Signalized Intersection
CAPACITY ANALYSIS

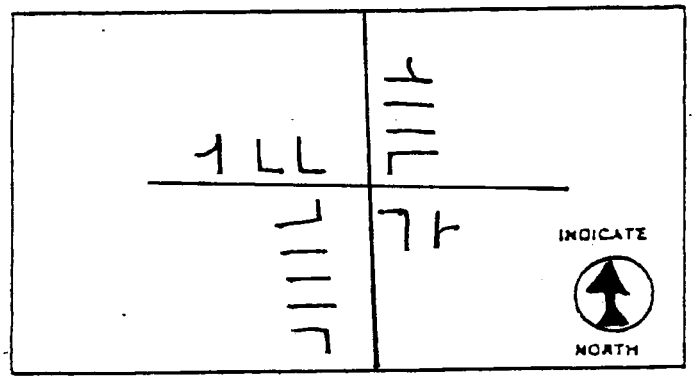
INTERSECTION Otay Mesa Rd/La Media Rd DIST. CO. RTE. P.M. 11/SD/905

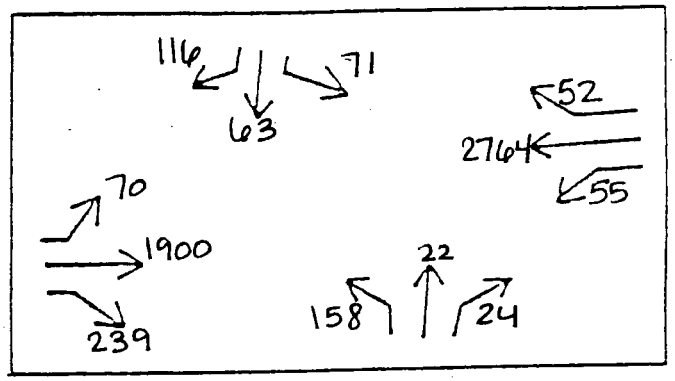
BY JB DATE 4-6-10

Existing + Units 1-5

TIME _____ AM (PM)

DIAGRAM AND TRAFFIC FLOWS:





LANE VOLUMES (ILV/hr):

Phase 1	Phase 2	Phase 3	Phase 4
55	938 939 939	36 35	179
70	633 634 633 164	75 158	46

CRITICAL LANE VOLUMES (ILV/hr):

Phase 1	Phase 2	Phase 3	Phase 4
70	939	158	179

TOTAL OPERATING LEVEL (ILV/hr):

Σ
1,346

Is . . .

- ☐ < 1200 ILV/hr.
- ☒ > 1200 but < 1500 ILV/hr.
- ☐ > 1500 ILV/hr. (CAPACITY)

REMARKS:

Signalized Intersection
CAPACITY ANALYSIS

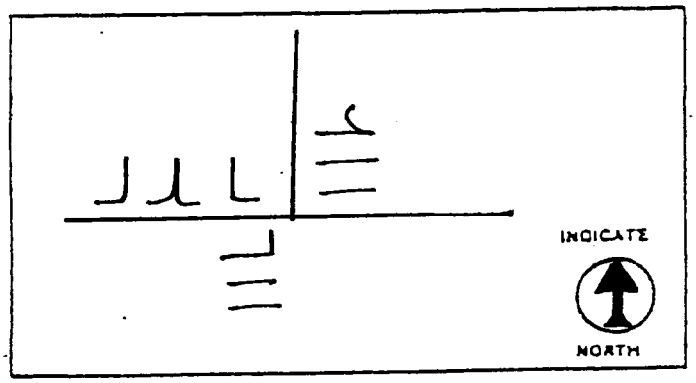
INTERSECTION Otay Mesa/Piper Ranch DIST. CO. RTE. P.M. 11/SD/905

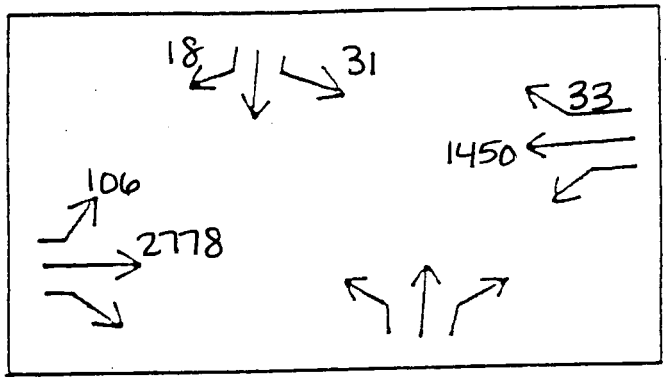
BY JB DATE 4-6-10

Existing + Units 1-5

TIME ____ (AM) PM

DIAGRAM AND TRAFFIC FLOWS:





LANE VOLUMES (ILV/hr):

Phase 1	Phase 2	Phase 3	Phase 4
106 106 106	494 495 494 1283 1283		

CRITICAL LANE VOLUMES (ILV/hr):

Phase 1	Phase 2	Phase 3	Phase 4
106	1,283	17	

TOTAL OPERATING LEVEL (ILV/hr):

Σ
1,406

Is . . .

- ☐ < 1200 ILV/hr.
- ☒ > 1200 but < 1500 ILV/hr.
- ☐ > 1500 ILV/hr. (CAPACITY)

REMARKS:

INTERSECTION

Signalized Intersection

CAPACITY ANALYSIS

INTERSECTION Otay Mesa/Piper Ranch

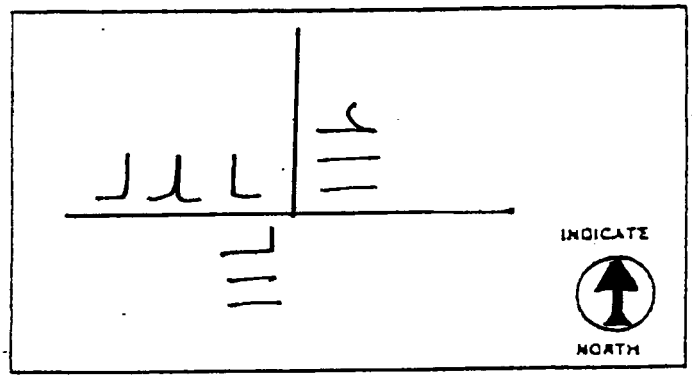
DIST. CO. RTE. P.M. 11/SD/905

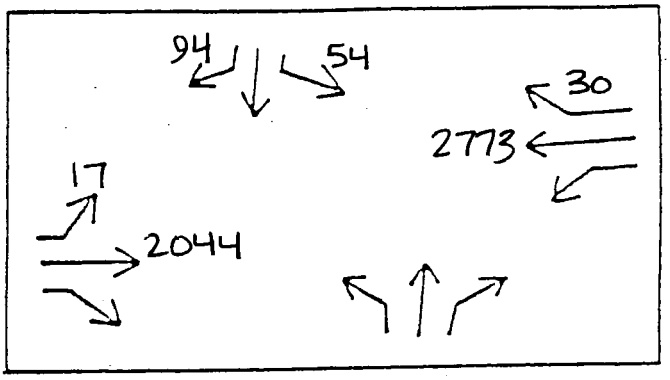
BY JB DATE 4-6-10

Existing + Units 1-5

TIME ____ AM (PM)

DIAGRAM AND TRAFFIC FLOWS:





LANE VOLUMES (ILV/hr):

Phase 1	Phase 2	Phase 3	Phase 4
17 17 17	934 935 934 1005 1005	49 50 49	

CRITICAL LANE VOLUMES (ILV/hr):

Phase 1	Phase 2	Phase 3	Phase 4
17	1,005	50	

TOTAL OPERATING LEVEL (ILV/hr):

Σ
1,072

Is . . .

- ☒ < 1200 ILV/hr.
- ☐ > 1200 but < 1500 ILV/hr.
- ☐ > 1500 ILV/hr. (CAPACITY)

REMARKS:

INTERSECTION

Signalized Intersection

CAPACITY ANALYSIS

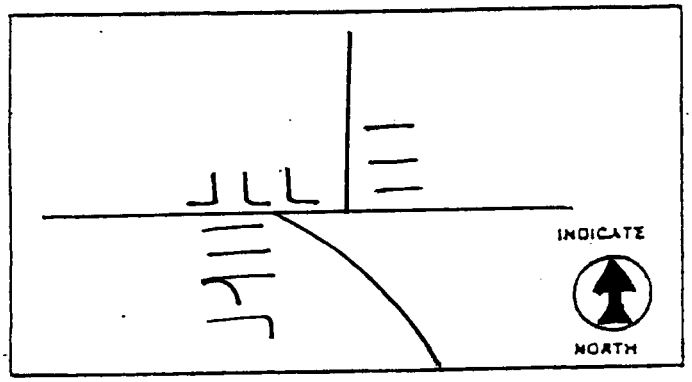
INTERSECTION Otay Mesa / SR-125 SB Ramp DIST. CO. RTE. P.M. 11/SD/905

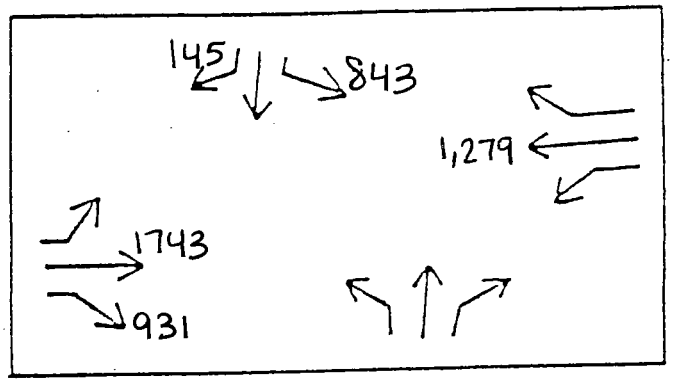
BY JLB DATE 4-6-10

Existing + Units 1-5

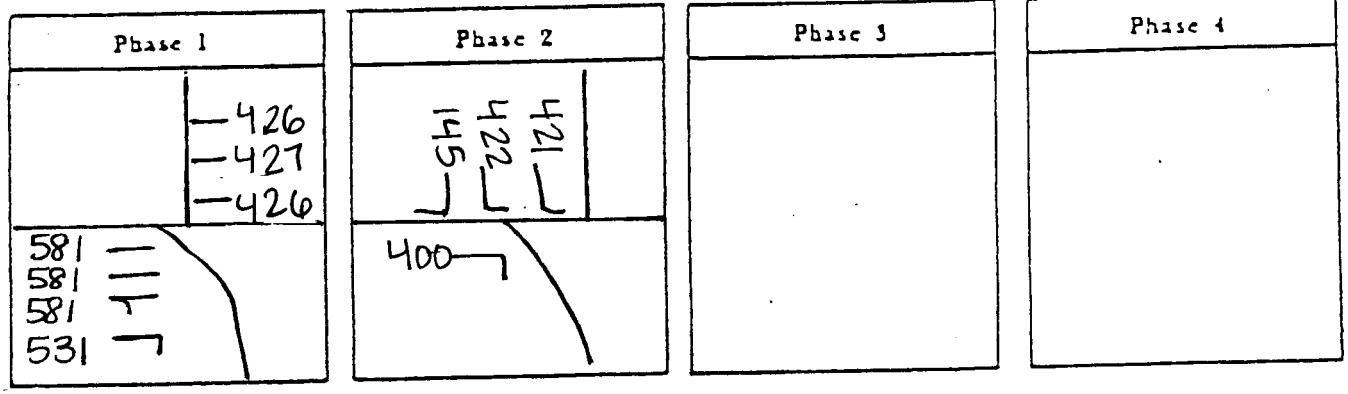
TIME ____ (AM) PM

DIAGRAM AND TRAFFIC FLOWS:





LANE VOLUMES (ILV/hr):



CRITICAL LANE VOLUMES (ILV/hr):

Phase 1	Phase 2	Phase 3	Phase 4
581	422		

TOTAL OPERATING LEVEL (ILV/hr):

Σ
1,003

Is . . . ☒ < 1200 ILV/hr.

☐ > 1200 but < 1500 ILV/hr.

☐ > 1500 ILV/hr. (CAPACITY)

REMARKS:

INTERSECTION

Signalized Intersection

CAPACITY ANALYSIS

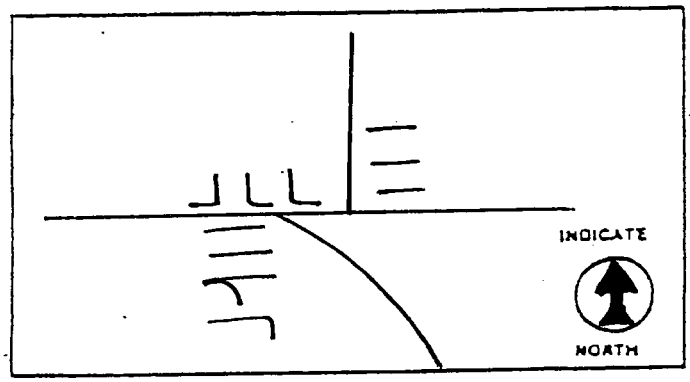
INTERSECTION Otay Mesa / SR-125 SB Ramp DIST. CO. RTE. P.M. 11/SD/905

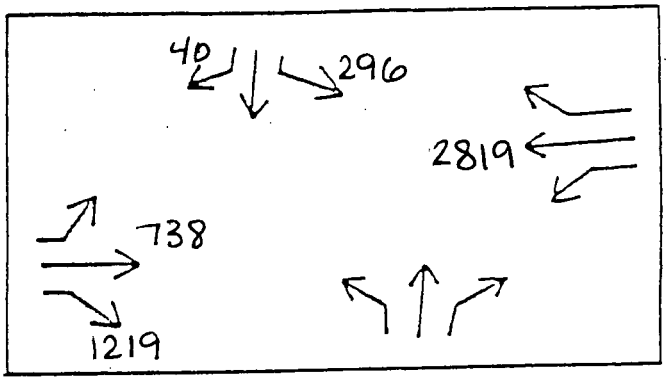
BY JB DATE 4-6-10

Existing + Units 1-5

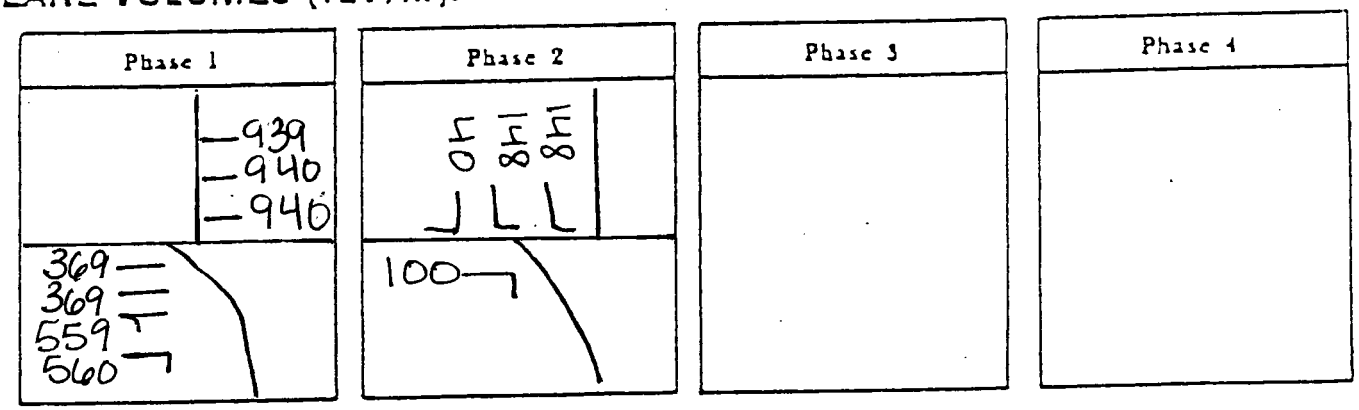
TIME ____ AM (PM)

DIAGRAM AND TRAFFIC FLOWS:





LANE VOLUMES (ILV/hr):



CRITICAL LANE VOLUMES (ILV/hr):

Phase 1	Phase 2	Phase 3	Phase 4
940	148		

TOTAL OPERATING LEVEL (ILV/hr):

Σ
1,088

Is . . .

- ☒ < 1200 ILV/hr.
- ☐ > 1200 but < 1500 ILV/hr.
- ☐ > 1500 ILV/hr. (CAPACITY)

REMARKS:

INTERSECTION

Signalized Intersection

CAPACITY ANALYSIS

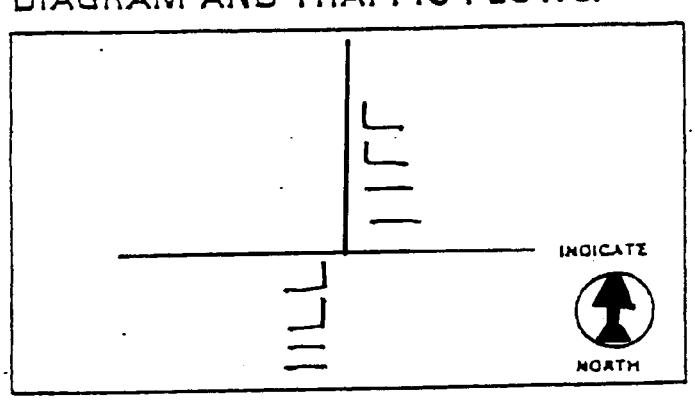
INTERSECTION Otay Mesa/SR-125NB Ramp DIST. CO. RTE. P.M. 11/50/905

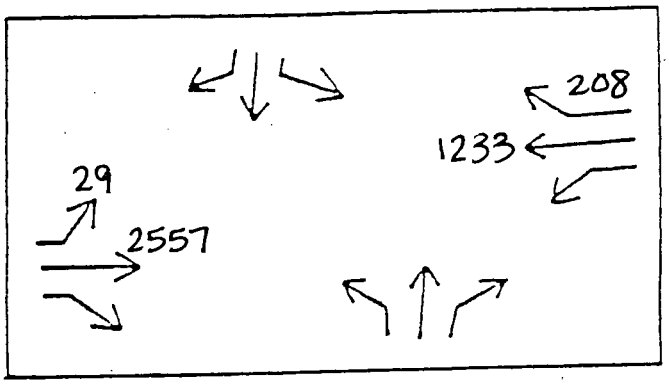
BY JB DATE 4-6-10

Existing + Units 1-5

TIME ____ (AM) PM

DIAGRAM AND TRAFFIC FLOWS:





LANE VOLUMES (ILV/hr):

Phase 1	Phase 2	Phase 3	Phase 4
14 ⌋ 15 ⌋ 15 = 15 =	104 ⌊ 104 ⌊ 617 — 616 — 1263 — 1264 —		

CRITICAL LANE VOLUMES (ILV/hr):

Phase 1	Phase 2	Phase 3	Phase 4
15	1,264		

TOTAL OPERATING LEVEL (ILV/hr):

Σ
1,279

Is . . .

- ☐ < 1200 ILV/hr.
- ☒ > 1200 but < 1500 ILV/hr.
- ☐ > 1500 ILV/hr. (CAPACITY)

REMARKS:

INTERSECTION

Signalized Intersection

CAPACITY ANALYSIS

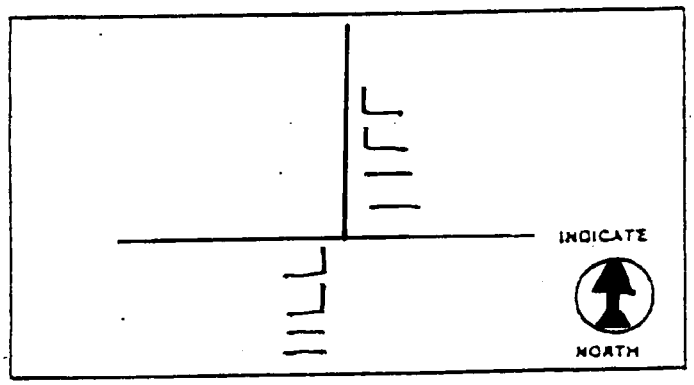
INTERSECTION Otay Mesa/SR-125 NB Ramp DIST. CO. RTE. P.M. 11/SD/9.05

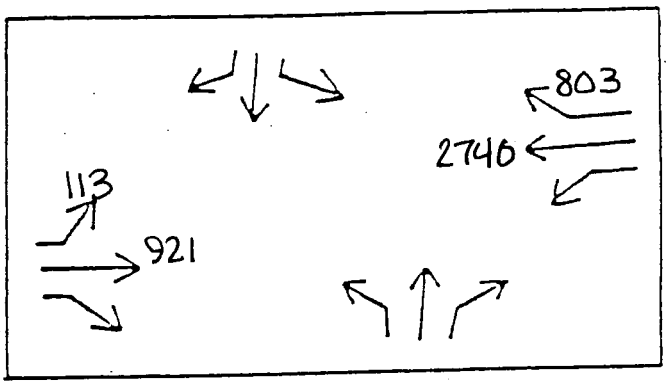
BY JB DATE 4-6-10

Existing + Units 1-5

TIME ____ AM (PM)

DIAGRAM AND TRAFFIC FLOWS:





LANE VOLUMES (ILV/hr):

Phase 1	Phase 2	Phase 3	Phase 4
56 57 57 57	402 401 1370 1370 403 404		

CRITICAL LANE VOLUMES (ILV/hr):

Phase 1	Phase 2	Phase 3	Phase 4
57	1,370		

TOTAL OPERATING LEVEL (ILV/hr):

Σ
1,427

Is . . .

- ☐ < 1200 ILV/hr.
- ☒ > 1200 but < 1500 ILV/hr.
- ☐ > 1500 ILV/hr. (CAPACITY)

REMARKS:

Signalized Intersection
CAPACITY ANALYSIS

INTERSECTION Otay Mesa/SR-905NB Connector

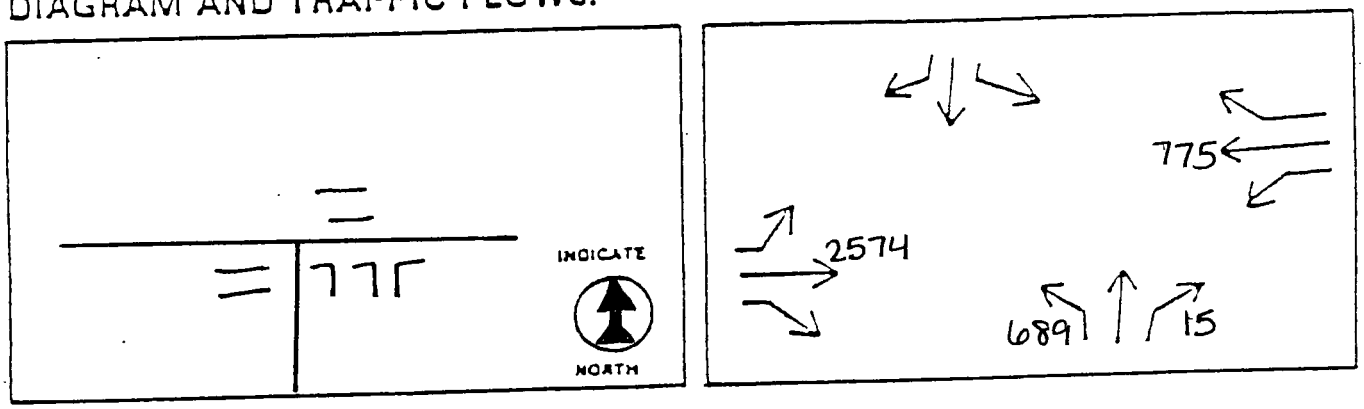
DIST. CO. RTE. P.M. 11/SD/905

BY JB DATE 4-6-10

TIME ____ (AM) PM

Existing + Units 1-5

DIAGRAM AND TRAFFIC FLOWS:



LANE VOLUMES (ILV/hr):

Phase 1	Phase 2	Phase 3	Phase 4
388 387 1287 1287	15 345 344		

CRITICAL LANE VOLUMES (ILV/hr):

Phase 1	Phase 2	Phase 3	Phase 4
1,287	345		

TOTAL OPERATING LEVEL (ILV/hr):

Σ
1,632

Is . . .

- ☐ < 1200 ILV/hr.
- ☐ > 1200 but < 1500 ILV/hr.
- ☒ > 1500 ILV/hr. (CAPACITY)

REMARKS:

INTERSECTION

Signalized Intersection

CAPACITY ANALYSIS

INTERSECTION Otay Mesa/SR-905NB Connector

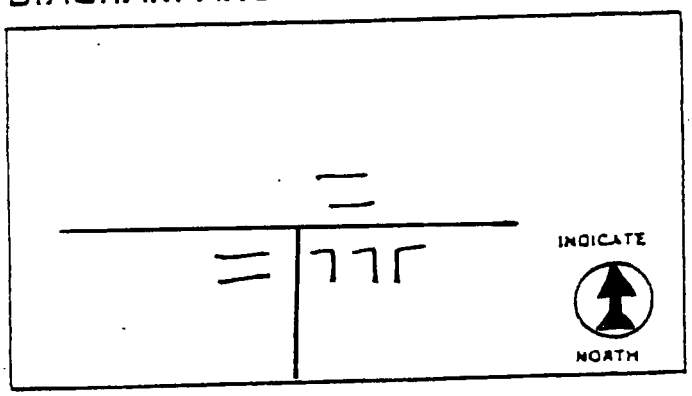
DIST. CO. RTE. P.M. 11/SD/905

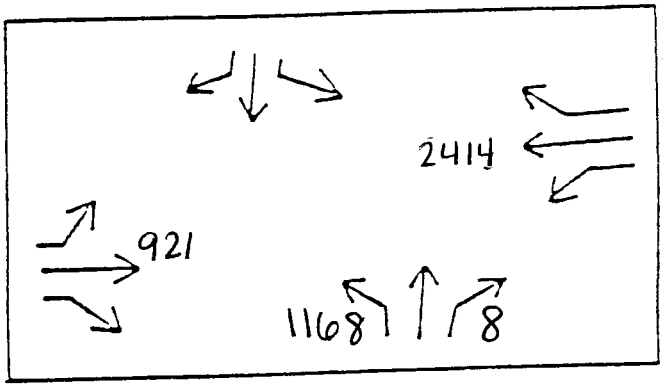
BY JB DATE 4-6-10

Existing + Units 1-5

TIME ____ AM (PM)

DIAGRAM AND TRAFFIC FLOWS:





LANE VOLUMES (ILV/hr):

Phase 1	Phase 2	Phase 3	Phase 4
1207 1207 460 461	584 584 8		

CRITICAL LANE VOLUMES (ILV/hr):

Phase 1	Phase 2	Phase 3	Phase 4
1,207	584		

TOTAL OPERATING LEVEL (ILV/hr):

Σ
1,791

Is . . .

- ☐ < 1200 ILV/hr.
- ☐ > 1200 but < 1500 ILV/hr.
- ☒ > 1500 ILV/hr. (CAPACITY)

REMARKS:

Signalized Intersection

CAPACITY ANALYSIS

INTERSECTION Siempre Viva | SR-905 SB Ramp

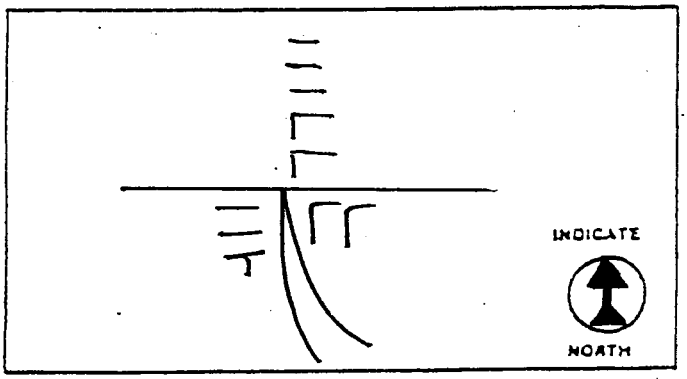
DIST. CO. RTE. P.M. 11 | SD | 905

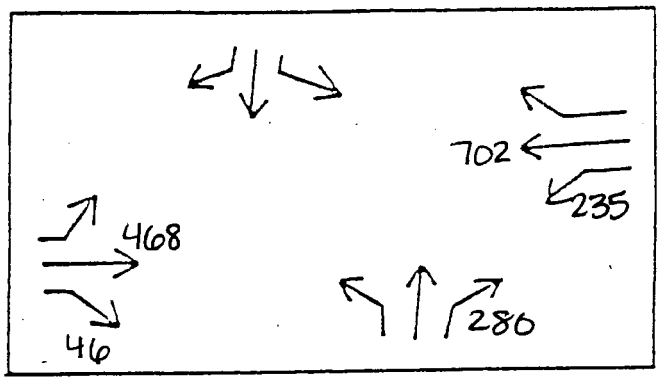
BY JB DATE 4-6-10

TIME ____ (AM) PM

Existing + Units 1-5

DIAGRAM AND TRAFFIC FLOWS:





LANE VOLUMES (ILV/hr):

Phase 1	Phase 2	Phase 3	Phase 4
39 39 39 117 118 39 39	94 94 94 171 172 171	101 101 101 0 0	

CRITICAL LANE VOLUMES (ILV/hr):

Phase 1	Phase 2	Phase 3	Phase 4
118	172	101	

TOTAL OPERATING LEVEL (ILV/hr):

Σ
391

Is . . .

- ☒ ≤ 1200 ILV/hr.
- ☐ > 1200 but < 1500 ILV/hr.
- ☐ > 1500 ILV/hr. (CAPACITY)

REMARKS:

Signalized Intersection
CAPACITY ANALYSIS

INTERSECTION Siempre Viva | SR-905 SB Ramp

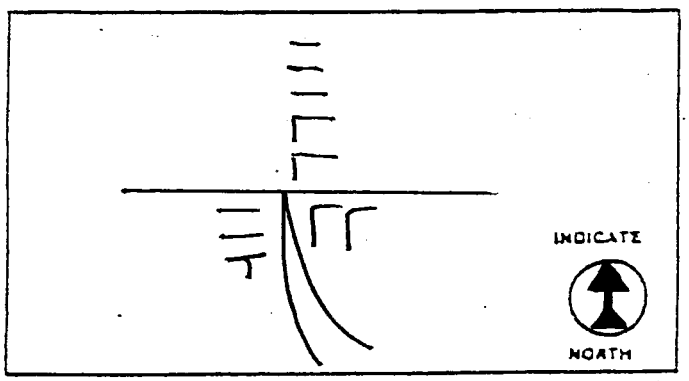
DIST. CO. RTE. P.M. 11 | SD | 905

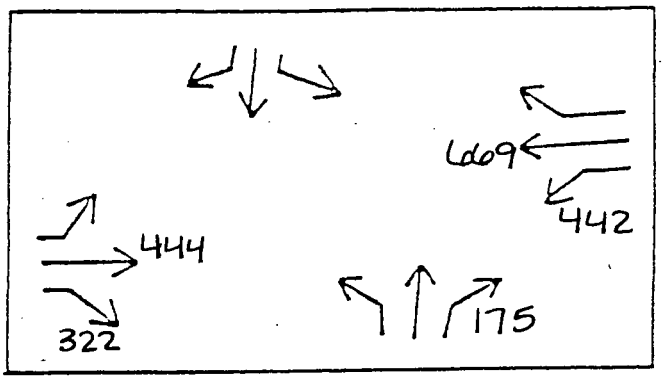
BY CB DATE 4-6-10

Existing + Units 1-5

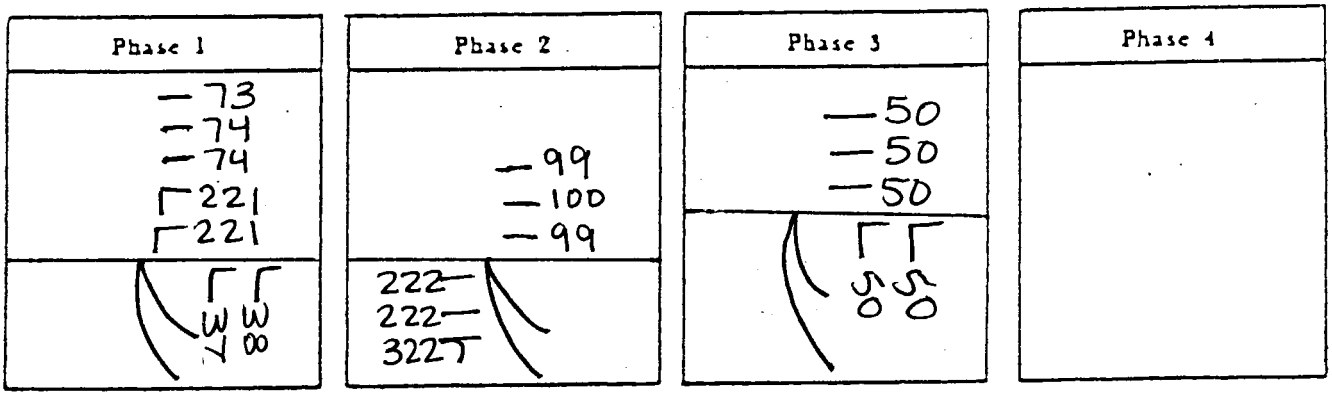
TIME ____ AM (PM)

DIAGRAM AND TRAFFIC FLOWS:





LANE VOLUMES (ILV/hr):



CRITICAL LANE VOLUMES (ILV/hr):

Phase 1	Phase 2	Phase 3	Phase 4
221	322	50	

TOTAL OPERATING LEVEL (ILV/hr):

Σ
593

Is . . .

- ☒ < 1200 ILV/hr.
- ☐ > 1200 but < 1500 ILV/hr.
- ☐ > 1500 ILV/hr. (CAPACITY)

REMARKS:

Signalized Intersection

CAPACITY ANALYSIS

INTERSECTION Siempre Viva / SR-905 NB Ramp

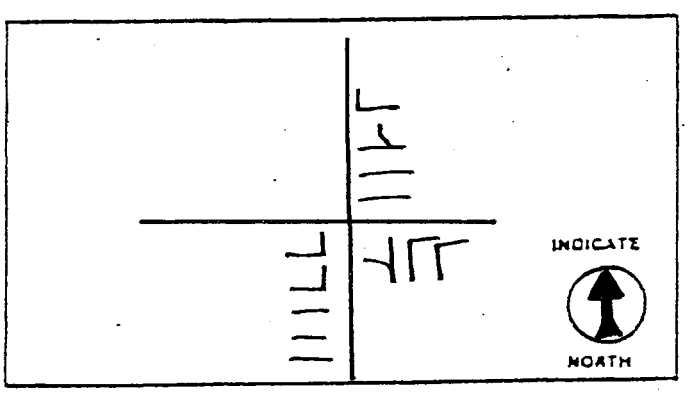
DIST. CO. RTE. P.M. 11/SD/905

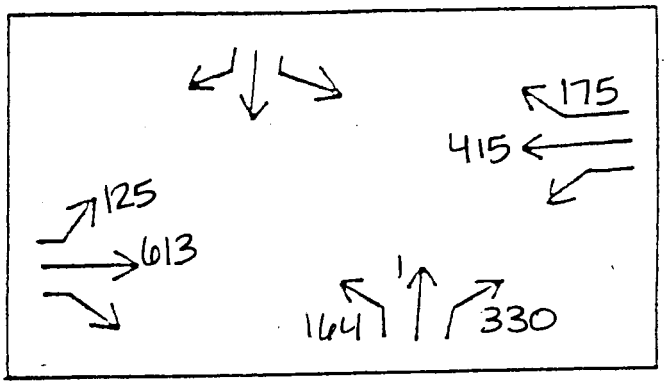
BY JR DATE 4-6-10

TIME ____ (AM) PM

Existing + Units 1-5

DIAGRAM AND TRAFFIC FLOWS:





LANE VOLUMES (ILV/hr):

Phase 1	Phase 2	Phase 3	Phase 4
62 L 63 L 63 T 63 T 63 T	125 L 155 L 155 T 155 T 141 T 142 T 141 T	165 T 165 T 165 R	

CRITICAL LANE VOLUMES (ILV/hr):

Phase 1	Phase 2	Phase 3	Phase 4
63	155	165	

TOTAL OPERATING LEVEL (ILV/hr):

Σ
383

Is . . .

- ☒ < 1200 ILV/hr.
- ☐ > 1200 but < 1500 ILV/hr.
- ☐ > 1500 ILV/hr. (CAPACITY)

REMARKS:

Signalized Intersection

CAPACITY ANALYSIS

INTERSECTION Siempre Viva / SR-905 NB Ramp

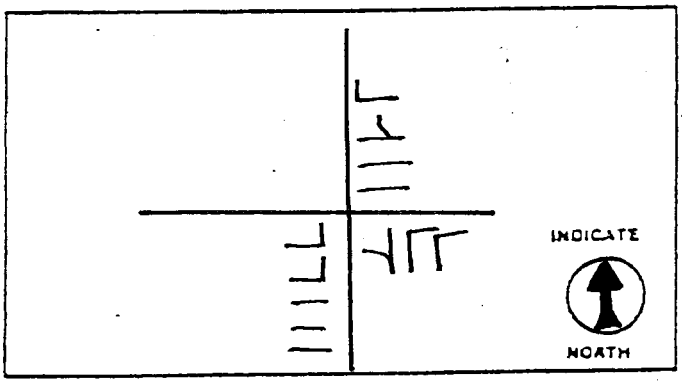
DIST. CO. RTE. P.M. 11/SD/905

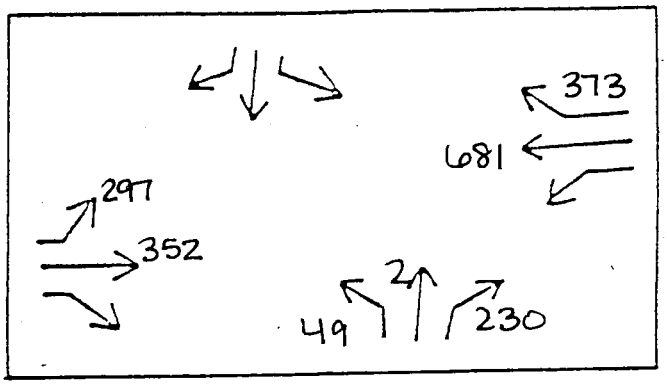
BY JLR DATE 4-6-10

TIME ____ AM (PM)

Existing + Units 1-5

DIAGRAM AND TRAFFIC FLOWS:





LANE VOLUMES (1LV/hr):

Phase 1	Phase 2	Phase 3	Phase 4
148 ⌋ 149 ⌊ 49 = 50 = 50 =	⌋ 273 ⌊ 261 = 260 = 260 67 — 68 — 68 —	⌋ 115 ⌊ 115 ↑ 151	

CRITICAL LANE VOLUMES (1LV/hr):

Phase 1	Phase 2	Phase 3	Phase 4
149	273	115	

TOTAL OPERATING LEVEL (1LV/hr):

Σ
537

Is . . .

☒ < 1200 1LV/hr.

☐ > 1200 but < 1500 1LV/hr.

☐ > 1500 1LV/hr. (CAPACITY)

REMARKS:

APPENDIX J

- Cumulative w/o Project – Intersection Synchro Analysis
- Cumulative w/o Project – Intersection ILV Analysis
- Cumulative w/Project – Intersection Synchro Analysis
- Cumulative w/Project– Intersection ILV Analysis

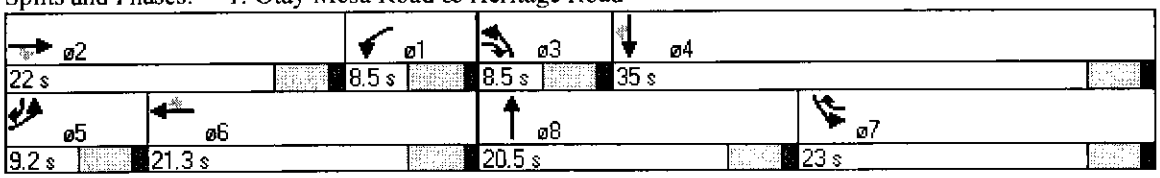
Cumulative w/o Project – Intersection Synchro Analysis

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Total Lost Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	0.97	0.91	1.00	0.97	0.91	1.00	1.00	1.00	1.00	1.00	1.00	0.88
Frt			0.850			0.850		0.949				0.850
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	3433	4803	1583	3433	4803	1583	1770	1768	0	1770	1863	2787
Flt Permitted	0.950			0.950			0.950			0.950		
Satd. Flow (perm)	3433	4803	1583	3433	4803	1583	1770	1768	0	1770	1863	2787
Satd. Flow (RTOR)			65			127		22				97
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Volume (vph)	180	992	60	10	408	118	20	40	20	384	60	90
Adj. Flow (vph)	194	1067	65	11	439	127	22	43	22	413	65	97
Lane Group Flow (vph)	194	1067	65	11	439	127	22	65	0	413	65	97
Turn Type	Prot		pm+ov	Prot		pm+ov	Prot			Prot		pm+ov
Protected Phases	5	2	3	1	6	7	3	8		7	4	5
Permitted Phases			2			6						4
Total Split (s)	9.2	22.0	8.5	8.5	21.3	23.0	8.5	20.5	0.0	23.0	35.0	9.2
Act Effct Green (s)	6.7	28.1	35.8	4.5	19.2	43.5	4.5	7.8		24.3	29.4	40.0
Actuated g/C Ratio	0.09	0.38	0.48	0.06	0.26	0.59	0.06	0.11		0.33	0.40	0.54
v/c Ratio	0.63	0.58	0.08	0.05	0.35	0.13	0.20	0.31		0.71	0.09	0.06
Control Delay	44.6	22.2	3.7	24.8	19.7	1.5	37.7	22.7		28.8	13.8	2.1
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0
Total Delay	44.6	22.2	3.7	24.8	19.7	1.5	37.7	22.7		28.8	13.8	2.1
LOS	D	C	A	C	B	A	D	C		C	B	A
Approach Delay		24.6			15.8			26.5			22.6	
Approach LOS		C			B			C			C	

Intersection Summary

Cycle Length: 74
Actuated Cycle Length: 74
Offset: 0 (0%), Referenced to phase 2:EBT and 6:WBT, Start of Green, Master Intersection
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 0.71
Intersection Signal Delay: 22.2 — Intersection LOS: C
Intersection Capacity Utilization 60.4% — ICU Level of Service B
Analysis Period (min) 15

Splits and Phases: 1: Otay Mesa Road & Heritage Road

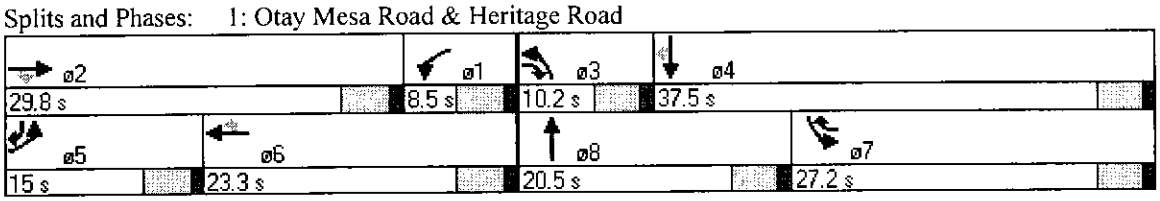


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Total Lost Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	0.97	0.91	1.00	0.97	0.91	1.00	1.00	1.00	1.00	1.00	1.00	0.88
Frt			0.850			0.850		0.972				0.850
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	3433	4803	1583	3433	4803	1583	1770	1811	0	1770	1863	2787
Flt Permitted	0.950			0.950			0.950			0.950		
Satd. Flow (perm)	3433	4803	1583	3433	4803	1583	1770	1811	0	1770	1863	2787
Satd. Flow (RTOR)			52			322		12				272
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Volume (vph)	320	596	50	20	812	365	40	90	20	368	100	370
Adj. Flow (vph)	330	614	52	21	837	376	41	93	21	379	103	381
Lane Group Flow (vph)	330	614	52	21	837	376	41	114	0	379	103	381
Turn Type	Prot		pm+ov	Prot		pm+ov	Prot			Prot		pm+ov
Protected Phases	5	2	3	1	6	7	3	8		7	4	5
Permitted Phases			2			6						4
Total Split (s)	15.0	29.8	10.2	8.5	23.3	27.2	10.2	20.5	0.0	27.2	37.5	15.0
Act Effct Green (s)	12.1	36.9	45.5	4.5	24.2	47.3	6.2	10.5		23.1	29.5	45.6
Actuated g/C Ratio	0.14	0.43	0.53	0.05	0.28	0.55	0.07	0.12		0.27	0.34	0.53
v/c Ratio	0.68	0.30	0.06	0.12	0.62	0.37	0.32	0.49		0.80	0.16	0.24
Control Delay	43.3	18.8	3.7	26.8	21.8	3.9	45.0	33.0		38.8	19.2	3.2
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0
Total Delay	43.3	18.8	3.7	26.8	21.8	3.9	45.0	33.0		38.8	19.2	3.2
LOS	D	B	A	C	C	A	D	C		D	B	A
Approach Delay		26.1			16.5			36.2			20.7	
Approach LOS		C			B			D			C	

Intersection Summary

Cycle Length: 86
Actuated Cycle Length: 86
Offset: 0 (0%), Referenced to phase 2:EBT and 6:WBT, Start of Green, Master Intersection
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 0.80
Intersection Signal Delay: 21.5 — Intersection LOS: C
Intersection Capacity Utilization 61.9% — ICU Level of Service B
Analysis Period (min) 15

Splits and Phases: 1: Otay Mesa Road & Heritage Road

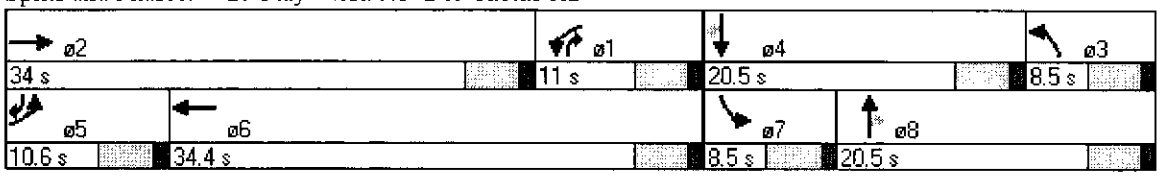


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Total Lost Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	1.00	0.91	0.91	1.00	0.91	0.91	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.993			0.989				0.850			0.850
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1770	4781	0	1770	4769	0	1770	1863	1583	1770	1863	1583
Flt Permitted	0.950			0.950			0.950			0.950		
Satd. Flow (perm)	1770	4781	0	1770	4769	0	1770	1863	1583	1770	1863	1583
Satd. Flow (RTOR)		12			21				104			44
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Volume (vph)	50	1246	60	60	506	40	20	10	100	20	10	40
Adj. Flow (vph)	55	1369	66	66	556	44	22	11	110	22	11	44
Lane Group Flow (vph)	55	1435	0	66	600	0	22	11	110	22	11	44
Turn Type	Prot			Prot			Prot		pm+ov	Prot		pm+ov
Protected Phases	5	2		1	6		3	8	1	7	4	5
Permitted Phases									8			4
Total Split (s)	10.6	34.0	0.0	11.0	34.4	0.0	8.5	20.5	11.0	8.5	20.5	10.6
Act Effct Green (s)	8.4	54.7		6.9	53.3		7.0	7.2	9.3	5.7	6.4	9.8
Actuated g/C Ratio	0.11	0.74		0.09	0.72		0.09	0.10	0.13	0.08	0.09	0.13
v/c Ratio	0.28	0.41		0.40	0.17		0.13	0.06	0.38	0.16	0.07	0.18
Control Delay	40.3	1.7		30.0	3.2		32.0	29.0	9.1	35.0	31.0	7.6
Queue Delay	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	40.3	1.7		30.0	3.2		32.0	29.0	9.1	35.0	31.0	7.6
LOS	D	A		C	A		C	C	A	D	C	A
Approach Delay		3.2			5.8			14.1			18.8	
Approach LOS		A			A			B			B	

Intersection Summary

Cycle Length: 74
Actuated Cycle Length: 74
Offset: 36 (49%), Referenced to phase 2:EBT and 6:WBT, Start of Green
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 0.41
Intersection Signal Delay: 5.1 — Intersection LOS: A
Intersection Capacity Utilization 46.5% — ICU Level of Service A
Analysis Period (min) 15

Splits and Phases: 2: Otay Mesa Road & Cactus Rd

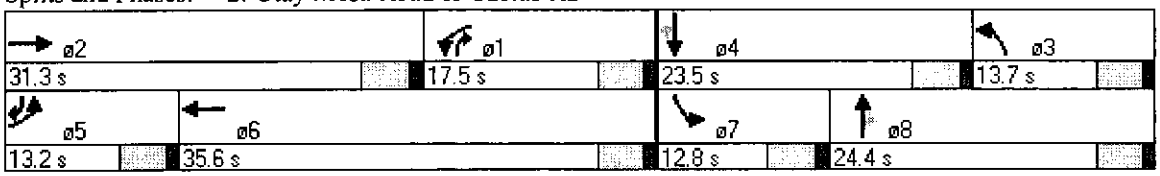


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Total Lost Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	1.00	0.91	0.91	1.00	0.91	0.91	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.990			0.987				0.850			0.850
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1770	4772	0	1770	4764	0	1770	1863	1583	1770	1863	1583
Flt Permitted	0.950			0.950			0.950			0.950		
Satd. Flow (perm)	1770	4772	0	1770	4764	0	1770	1863	1583	1770	1863	1583
Satd. Flow (RTOR)		13			21				112			102
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Volume (vph)	40	864	60	100	1117	110	50	10	110	30	10	100
Adj. Flow (vph)	41	882	61	102	1140	112	51	10	112	31	10	102
Lane Group Flow (vph)	41	943	0	102	1252	0	51	10	112	31	10	102
Turn Type	Prot			Prot			Prot		pm+ov	Prot		pm+ov
Protected Phases	5	2		1	6		3	8	1	7	4	5
Permitted Phases									8			4
Total Split (s)	13.2	31.3	0.0	17.5	35.6	0.0	13.7	24.4	17.5	12.8	23.5	13.2
Act Effct Green (s)	8.0	52.8		14.7	62.4		8.3	7.3	19.1	7.5	6.4	9.4
Actuated g/C Ratio	0.09	0.61		0.17	0.73		0.10	0.08	0.22	0.09	0.07	0.11
v/c Ratio	0.25	0.32		0.34	0.36		0.30	0.06	0.26	0.20	0.07	0.39
Control Delay	35.9	5.4		36.3	10.3		38.3	35.5	5.7	38.1	37.0	8.6
Queue Delay	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	35.9	5.4		36.3	10.3		38.3	35.5	5.7	38.1	37.0	8.6
LOS	D	A		D	B		D	D	A	D	D	A
Approach Delay		6.7			12.2			17.0			16.9	
Approach LOS		A			B			B			B	

Intersection Summary

Cycle Length: 86
Actuated Cycle Length: 86
Offset: 49 (57%), Referenced to phase 2:EBT and 6:WBT, Start of Green
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 0.39
Intersection Signal Delay: 10.8 — Intersection LOS: B
Intersection Capacity Utilization 46.8% — ICU Level of Service A
Analysis Period (min) 15

Splits and Phases: 2: Otay Mesa Road & Cactus Rd

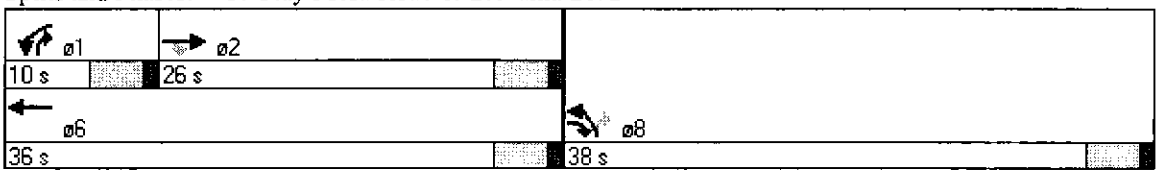


Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↑↑↑	↱	↰	↑↑↑	↰↰	↱
Total Lost Time (s)	4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	0.91	1.00	1.00	0.91	0.97	1.00
Frt		0.850				0.850
Flt Protected			0.950		0.950	
Satd. Flow (prot)	4803	1583	1770	4803	3433	1583
Flt Permitted			0.950		0.950	
Satd. Flow (perm)	4803	1583	1770	4803	3433	1583
Satd. Flow (RTOR)		428				13
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Volume (vph)	816	790	50	416	210	20
Adj. Flow (vph)	960	929	59	489	247	24
Lane Group Flow (vph)	960	929	59	489	247	24
Turn Type		pm+ov	Prot			pm+ov
Protected Phases	2	8	1	6	8	1
Permitted Phases		2				8
Total Split (s)	26.0	38.0	10.0	36.0	38.0	10.0
Act Effct Green (s)	38.7	61.4	7.4	48.1	17.9	29.3
Actuated g/C Ratio	0.52	0.83	0.10	0.65	0.24	0.40
v/c Ratio	0.38	0.67	0.33	0.16	0.30	0.04
Control Delay	7.5	6.8	42.3	2.2	21.1	5.8
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	7.5	6.8	42.3	2.2	21.1	5.8
LOS	A	A	D	A	C	A
Approach Delay	7.2			6.5	19.7	
Approach LOS	A			A	B	

Intersection Summary

Cycle Length: 74
Actuated Cycle Length: 74
Offset: 68 (92%), Referenced to phase 2:EBT and 6:WBT, Start of Green
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 0.67
Intersection Signal Delay: 8.3 — Intersection LOS: A
Intersection Capacity Utilization 58.9% — ICU Level of Service B
Analysis Period (min) 15

Splits and Phases: 3: Otay Mesa Road & Brittania Blvd

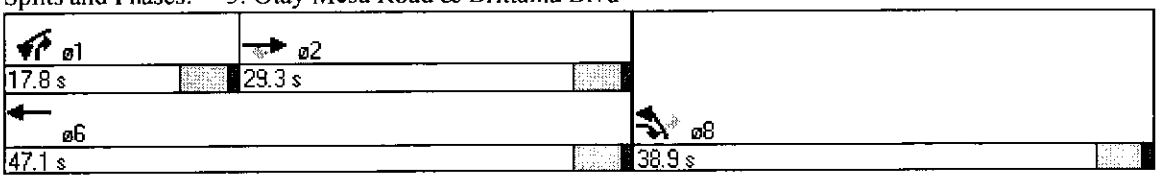


Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↑↑↑	↱	↰	↑↑↑	↰↰	↱
Total Lost Time (s)	4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	0.91	1.00	1.00	0.91	0.97	1.00
Frt		0.850				0.850
Flt Protected			0.950		0.950	
Satd. Flow (prot)	4803	1583	1770	4803	3433	1583
Flt Permitted			0.950		0.950	
Satd. Flow (perm)	4803	1583	1770	4803	3433	1583
Satd. Flow (RTOR)		366				43
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Volume (vph)	644	340	30	797	700	40
Adj. Flow (vph)	692	366	32	857	753	43
Lane Group Flow (vph)	692	366	32	857	753	43
Turn Type		pm+ov	Prot			pm+ov
Protected Phases	2	8	1	6	8	1
Permitted Phases		2				8
Total Split (s)	29.3	38.9	17.8	47.1	38.9	17.8
Act Effct Green (s)	47.2	76.5	7.2	54.3	23.7	34.9
Actuated g/C Ratio	0.55	0.89	0.08	0.63	0.28	0.41
v/c Ratio	0.26	0.25	0.22	0.28	0.80	0.06
Control Delay	3.7	0.7	33.8	4.7	30.0	4.0
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	3.7	0.7	33.8	4.7	30.0	4.0
LOS	A	A	C	A	C	A
Approach Delay	2.7			5.7	28.6	
Approach LOS	A			A	C	

Intersection Summary

Cycle Length: 86
Actuated Cycle Length: 86
Offset: 62 (72%), Referenced to phase 2:EBT and 6:WBT, Start of Green
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 0.80
Intersection Signal Delay: 11.2 — Intersection LOS: B
Intersection Capacity Utilization 45.7% — ICU Level of Service A
Analysis Period (min) 15

Splits and Phases: 3: Otay Mesa Road & Brittania Blvd

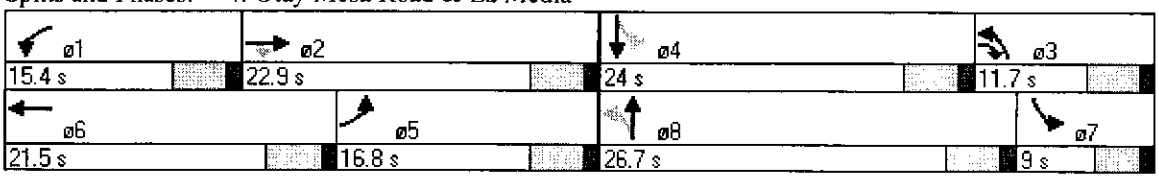


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Total Lost Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	1.00	0.91	1.00	1.00	0.91	0.91	1.00	1.00	1.00	0.97	1.00	1.00
Frt			0.850		0.976			0.971			0.928	
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1770	4803	1583	1770	4729	0	1770	1727	0	3433	1677	0
Flt Permitted	0.950			0.950			0.459			0.706		
Satd. Flow (perm)	1770	4803	1583	1770	4729	0	855	1727	0	2551	1677	0
Satd. Flow (RTOR)			253		48			15			61	
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Volume (vph)	120	733	240	108	425	80	80	60	14	110	130	120
Adj. Flow (vph)	126	772	253	114	447	84	84	63	15	116	137	126
Lane Group Flow (vph)	126	772	253	114	531	0	84	78	0	116	263	0
Turn Type	Prot		pm+ov	Prot			pm+pt			pm+pt		
Protected Phases	5	2	3	1	6		3	8		7	4	
Permitted Phases			2				8			4		
Total Split (s)	16.8	22.9	11.7	15.4	21.5	0.0	11.7	26.7	0.0	9.0	24.0	0.0
Act Effct Green (s)	11.6	29.7	37.1	9.5	27.7		16.3	10.9		24.0	14.3	
Actuated g/C Ratio	0.16	0.40	0.50	0.13	0.37		0.22	0.15		0.32	0.19	
v/c Ratio	0.45	0.40	0.28	0.50	0.30		0.31	0.29		0.12	0.70	
Control Delay	16.7	6.4	2.2	17.4	4.7		20.1	25.6		16.0	24.4	
Queue Delay	0.0	0.0	0.0	0.0	0.0		0.0	0.0		0.0	0.0	
Total Delay	16.7	6.4	2.2	17.4	4.7		20.1	25.6		16.0	24.4	
LOS	B	A	A	B	A		C	C		B	C	
Approach Delay		6.6			6.9			22.7			21.8	
Approach LOS		A			A			C			C	

Intersection Summary

Cycle Length: 74
Actuated Cycle Length: 74
Offset: 6 (8%), Referenced to phase 2:EBT and 6:WBT, Start of Green
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 0.70
Intersection Signal Delay: 10.3 — Intersection LOS: B
Intersection Capacity Utilization 52.1% — ICU Level of Service A
Analysis Period (min) 15

Splits and Phases: 4: Otay Mesa Road & La Media

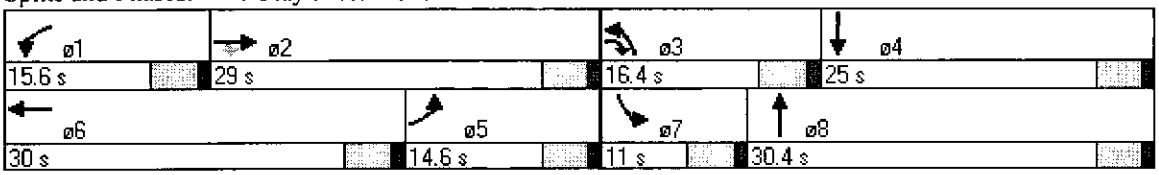


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Total Lost Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	1.00	0.91	1.00	1.00	0.91	0.91	1.00	1.00	1.00	0.97	1.00	1.00
Frt			0.850		0.993			0.953			0.919	
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1770	4803	1583	1770	4782	0	1770	1706	0	3433	1667	0
Flt Permitted	0.950			0.950			0.950			0.950		
Satd. Flow (perm)	1770	4803	1583	1770	4782	0	1770	1706	0	3433	1667	0
Satd. Flow (RTOR)			260		9			27			66	
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Volume (vph)	120	602	250	65	1184	60	170	60	27	120	160	190
Adj. Flow (vph)	125	627	260	68	1233	62	177	62	28	125	167	198
Lane Group Flow (vph)	125	627	260	68	1295	0	177	90	0	125	365	0
Turn Type	Prot		pm+ov	Prot			Prot			Prot		
Protected Phases	5	2	3	1	6		3	8		7	4	
Permitted Phases			2									
Total Split (s)	14.6	29.0	16.4	15.6	30.0	0.0	16.4	30.4	0.0	11.0	25.0	0.0
Act Effct Green (s)	10.0	32.2	48.0	8.9	31.4		11.8	24.0		6.9	19.1	
Actuated g/C Ratio	0.12	0.37	0.56	0.10	0.37		0.14	0.28		0.08	0.22	
v/c Ratio	0.61	0.35	0.26	0.37	0.74		0.73	0.18		0.45	0.86	
Control Delay	38.3	15.0	1.1	23.5	18.4		51.0	17.0		43.2	40.5	
Queue Delay	0.0	0.0	0.0	0.0	0.0		0.0	0.0		0.0	0.0	
Total Delay	38.3	15.0	1.1	23.5	18.4		51.0	17.0		43.2	40.5	
LOS	D	B	A	C	B		D	B		D	D	
Approach Delay		14.3			18.6			39.5			41.2	
Approach LOS		B			B			D			D	

Intersection Summary

Cycle Length: 86
Actuated Cycle Length: 86
Offset: 49 (57%), Referenced to phase 2:EBT and 6:WBT, Start of Green
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 0.86
Intersection Signal Delay: 22.5 — Intersection LOS: C
Intersection Capacity Utilization 73.7% — ICU Level of Service D
Analysis Period (min) 15

Splits and Phases: 4: Otay Mesa Road & La Media

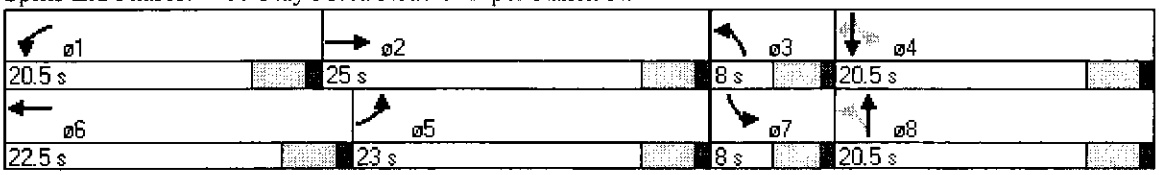


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Total Lost Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	1.00	0.95	0.95	1.00	0.91	0.91	1.00	1.00	1.00	1.00	0.95	0.95
Frt		0.968			0.985			0.898			0.945	0.850
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1770	3606	0	1770	5273	0	1770	1673	0	1770	1672	1504
Flt Permitted	0.950			0.950			0.734			0.737		
Satd. Flow (perm)	1770	3606	0	1770	5273	0	1367	1673	0	1373	1672	1504
Satd. Flow (RTOR)		45			24			21			12	30
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Volume (vph)	250	677	180	100	533	59	30	10	20	17	20	40
Adj. Flow (vph)	260	705	188	104	555	61	31	10	21	18	21	42
Lane Group Flow (vph)	260	893	0	104	616	0	31	31	0	18	33	30
Turn Type	Prot			Prot			pm+pt			pm+pt		Perm
Protected Phases	5	2		1	6		3	8		7	4	
Permitted Phases							8			4		4
Total Split (s)	23.0	25.0	0.0	20.5	22.5	0.0	8.0	20.5	0.0	8.0	20.5	20.5
Act Effct Green (s)	19.0	44.0		9.8	32.7		9.5	8.7		8.7	7.1	7.1
Actuated g/C Ratio	0.26	0.59		0.13	0.44		0.13	0.12		0.12	0.10	0.10
v/c Ratio	0.57	0.41		0.44	0.26		0.16	0.14		0.10	0.19	0.18
Control Delay	19.5	2.9		21.0	11.2		27.0	16.4		25.6	22.8	12.6
Queue Delay	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	0.0
Total Delay	19.5	2.9		21.0	11.2		27.0	16.4		25.6	22.8	12.6
LOS	B	A		C	B		C	B		C	C	B
Approach Delay		6.7			12.6			21.7			19.6	
Approach LOS		A			B			C			B	

Intersection Summary

Cycle Length: 74
Actuated Cycle Length: 74
Offset: 52 (70%), Referenced to phase 2:EBT and 6:WBT, Start of Green
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 0.57
Intersection Signal Delay: 9.8 — Intersection LOS: A
Intersection Capacity Utilization 47.1% — ICU Level of Service A
Analysis Period (min) 15

Splits and Phases: 5: Otay Mesa Road & Piper Ranch Rd

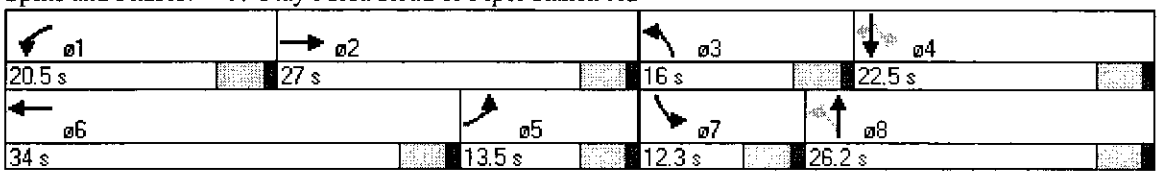


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Total Lost Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	1.00	0.95	0.95	1.00	0.91	0.91	1.00	1.00	1.00	1.00	0.95	0.95
Frt		0.990			0.998			0.875			0.862	0.850
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1770	3688	0	1770	5342	0	1770	1630	0	1770	1525	1504
Flt Permitted	0.950			0.950			0.522			0.677		
Satd. Flow (perm)	1770	3688	0	1770	5342	0	972	1630	0	1261	1525	1504
Satd. Flow (RTOR)		8			2			104			114	115
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Volume (vph)	40	850	60	30	1309	17	180	20	100	109	10	220
Adj. Flow (vph)	42	885	62	31	1364	18	188	21	104	114	10	229
Lane Group Flow (vph)	42	947	0	31	1382	0	188	125	0	114	124	115
Turn Type	Prot			Prot			pm+pt			pm+pt		Perm
Protected Phases	5	2		1	6		3	8		7	4	
Permitted Phases							8			4		4
Total Split (s)	13.5	27.0	0.0	20.5	34.0	0.0	16.0	26.2	0.0	12.3	22.5	22.5
Act Effct Green (s)	8.3	52.5		6.9	46.8		22.7	13.2		15.7	7.8	7.8
Actuated g/C Ratio	0.10	0.61		0.08	0.54		0.26	0.15		0.18	0.09	0.09
v/c Ratio	0.25	0.42		0.22	0.47		0.52	0.37		0.41	0.51	0.48
Control Delay	23.4	3.4		33.1	5.6		30.2	11.2		28.4	10.9	9.2
Queue Delay	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	0.0
Total Delay	23.4	3.4		33.1	5.6		30.2	11.2		28.4	10.9	9.2
LOS	C	A		C	A		C	B		C	B	A
Approach Delay		4.2			6.2			22.6			16.0	
Approach LOS		A			A			C			B	

Intersection Summary

Cycle Length: 86
Actuated Cycle Length: 86
Offset: 14 (16%), Referenced to phase 2:EBT and 6:WBT, Start of Green
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 0.52
Intersection Signal Delay: 8.4 — Intersection LOS: A
Intersection Capacity Utilization 54.4% — ICU Level of Service A
Analysis Period (min) 15

Splits and Phases: 5: Otay Mesa Road & Piper Ranch Rd

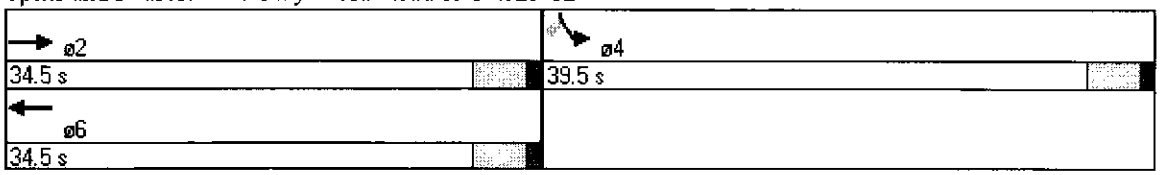


Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		↑↑↑	↑↑↑		↰↰	↱
Total Lost Time (s)	4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	1.00	0.91	0.91	1.00	0.97	1.00
Frt						0.850
Flt Protected					0.950	
Satd. Flow (prot)	0	5353	5353	0	3614	1667
Flt Permitted					0.950	
Satd. Flow (perm)	0	5353	5353	0	3614	1667
Satd. Flow (RTOR)						272
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Volume (vph)	0	714	422	0	500	270
Adj. Flow (vph)	0	744	440	0	521	281
Lane Group Flow (vph)	0	744	440	0	521	281
Turn Type						Perm
Protected Phases		2	6		4	
Permitted Phases						4
Total Split (s)	0.0	34.5	34.5	0.0	39.5	39.5
Act Effct Green (s)		49.8	49.8		16.2	16.2
Actuated g/C Ratio		0.67	0.67		0.22	0.22
v/c Ratio		0.21	0.12		0.66	0.49
Control Delay		2.0	7.4		26.3	4.4
Queue Delay		0.0	0.0		0.0	0.0
Total Delay		2.0	7.4		26.3	4.4
LOS		A	A		C	A
Approach Delay		2.0	7.4		18.7	
Approach LOS		A	A		B	

Intersection Summary

Cycle Length: 74
Actuated Cycle Length: 74
Offset: 8 (11%), Referenced to phase 2:EBT and 6:WBT, Start of Green
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 0.66
Intersection Signal Delay: 9.9 Intersection LOS: A
Intersection Capacity Utilization 33.7% ICU Level of Service A
Analysis Period (min) 15

Splits and Phases: 6: Otay Mesa Road & SR125 SB

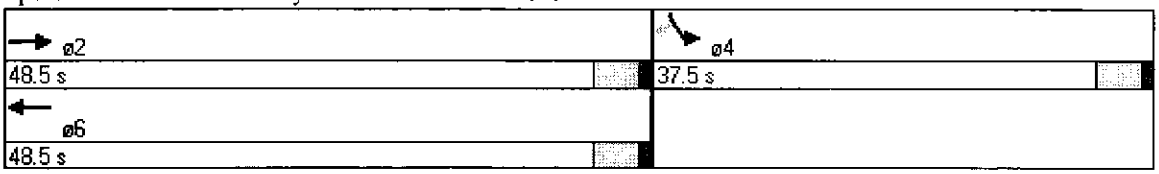


Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		↑↑↑	↑↑↑		↰↰	↱
Total Lost Time (s)	4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	1.00	0.91	0.91	1.00	0.97	1.00
Frt						0.850
Flt Protected					0.950	
Satd. Flow (prot)	0	5353	5353	0	3433	1583
Flt Permitted					0.950	
Satd. Flow (perm)	0	5353	5353	0	3433	1583
Satd. Flow (RTOR)						33
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Volume (vph)	0	1059	1286	0	131	70
Adj. Flow (vph)	0	1103	1340	0	136	73
Lane Group Flow (vph)	0	1103	1340	0	136	73
Turn Type						Perm
Protected Phases		2	6		4	
Permitted Phases						4
Total Split (s)	0.0	48.5	48.5	0.0	37.5	37.5
Act Effct Green (s)		72.1	72.1		8.8	8.8
Actuated g/C Ratio		0.84	0.84		0.10	0.10
v/c Ratio		0.25	0.30		0.39	0.38
Control Delay		5.7	3.5		35.9	22.7
Queue Delay		0.0	0.0		0.0	0.0
Total Delay		5.7	3.5		35.9	22.7
LOS		A	A		D	C
Approach Delay		5.7	3.5		31.3	
Approach LOS		A	A		C	

Intersection Summary

Cycle Length: 86
Actuated Cycle Length: 86
Offset: 62 (72%), Referenced to phase 2:EBT and 6:WBT, Start of Green
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 0.39
Intersection Signal Delay: 6.6 — Intersection LOS: A
Intersection Capacity Utilization 44.7% — ICU Level of Service A
Analysis Period (min) 15

Splits and Phases: 6: Otay Mesa Road & SR125 SB

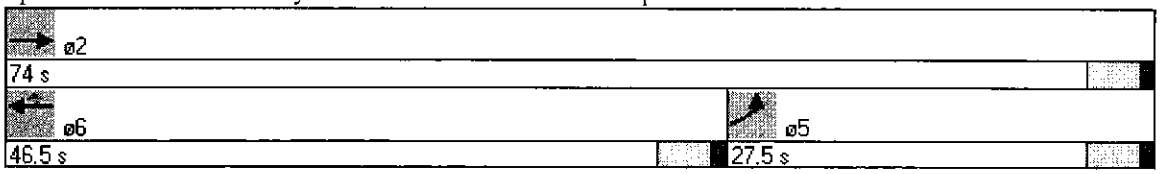


Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Total Lost Time (s)	4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	0.97	0.95	0.95	0.88	1.00	1.00
Frt				0.850		
Flt Protected	0.950					
Satd. Flow (prot)	3704	3819	3819	3007	0	0
Flt Permitted	0.950					
Satd. Flow (perm)	3704	3819	3819	3007	0	0
Satd. Flow (RTOR)				119		
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Volume (vph)	30	1184	422	114	0	0
Adj. Flow (vph)	31	1233	440	119	0	0
Lane Group Flow (vph)	31	1233	440	119	0	0
Turn Type	Prot			Perm		
Protected Phases	5	2	6			
Permitted Phases				6		
Total Split (s)	27.5	74.0	46.5	46.5	0.0	0.0
Act Effct Green (s)	15.2	74.0	59.3	59.3		
Actuated g/C Ratio	0.21	1.00	0.80	0.80		
v/c Ratio	0.04	0.32	0.14	0.05		
Control Delay	14.0	0.4	8.2	4.7		
Queue Delay	0.0	0.0	0.0	0.0		
Total Delay	14.0	0.4	8.2	4.7		
LOS	B	A	A	A		
Approach Delay		0.7	7.5			
Approach LOS		A	A			

Intersection Summary

Cycle Length: 74
Actuated Cycle Length: 74
Offset: 62 (84%), Referenced to phase 2:EBT and 6:WBT, Start of Green
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 0.32
Intersection Signal Delay: 2.8 — Intersection LOS: A
Intersection Capacity Utilization 33.7% — ICU Level of Service A
Analysis Period (min) 15

Splits and Phases: 7: Otay Mesa Road & SR125 NB Ramp

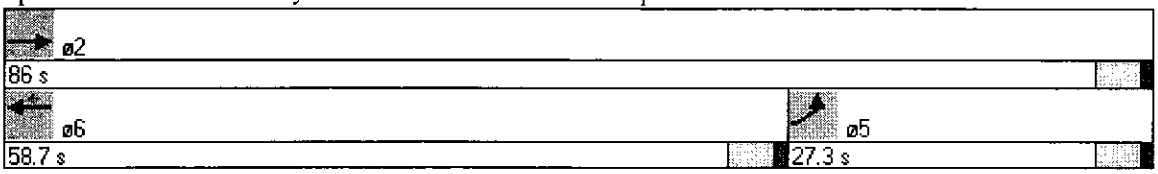


Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Total Lost Time (s)	4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	0.97	0.95	0.95	0.88	1.00	1.00
Frt				0.850		
Flt Protected	0.950					
Satd. Flow (prot)	3433	3725	3725	2933	0	0
Flt Permitted	0.950					
Satd. Flow (perm)	3433	3725	3725	2933	0	0
Satd. Flow (RTOR)				574		
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Volume (vph)	150	1040	1286	551	0	0
Adj. Flow (vph)	156	1083	1340	574	0	0
Lane Group Flow (vph)	156	1083	1340	574	0	0
Turn Type	Prot			Perm		
Protected Phases	5	2	6			
Permitted Phases				6		
Total Split (s)	27.3	86.0	58.7	58.7	0.0	0.0
Act Effct Green (s)	23.6	86.0	54.4	54.4		
Actuated g/C Ratio	0.27	1.00	0.63	0.63		
v/c Ratio	0.17	0.29	0.57	0.28		
Control Delay	23.8	1.0	4.4	0.2		
Queue Delay	0.0	0.0	0.0	0.0		
Total Delay	23.8	1.0	4.4	0.2		
LOS	C	A	A	A		
Approach Delay		3.9	3.1			
Approach LOS		A	A			

Intersection Summary

Cycle Length: 86
Actuated Cycle Length: 86
Offset: 16 (19%), Referenced to phase 2:EBT and 6:WBT, Start of Green
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 0.57
Intersection Signal Delay: 3.4 — Intersection LOS: A
Intersection Capacity Utilization 44.7% — ICU Level of Service A
Analysis Period (min) 15

Splits and Phases: 7: Otay Mesa Road & SR125 NB Ramp

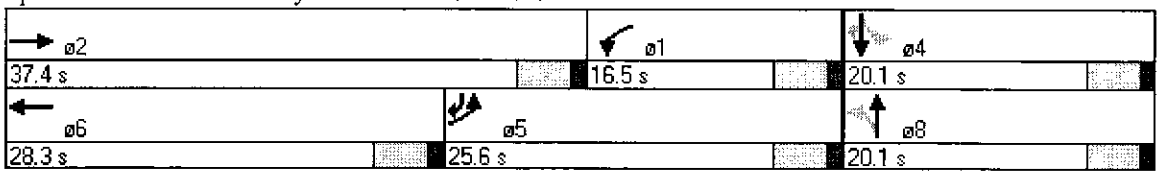


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Total Lost Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	0.97	0.95	0.95	1.00	0.95	0.95	1.00	1.00	1.00	1.00	1.00	0.88
Frt		0.998			0.968			0.955				0.850
Flt Protected	0.950			0.950				0.984			0.960	
Satd. Flow (prot)	3433	3718	0	1770	3606	0	0	1750	0	0	1788	2933
Flt Permitted	0.950			0.950				0.926			0.778	
Satd. Flow (perm)	3433	3718	0	1770	3606	0	0	1647	0	0	1449	2933
Satd. Flow (RTOR)		2			51			10				260
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Volume (vph)	350	824	10	10	326	90	10	10	10	50	10	250
Adj. Flow (vph)	365	858	10	10	340	94	10	10	10	52	10	260
Lane Group Flow (vph)	365	868	0	10	434	0	0	30	0	0	62	260
Turn Type	Prot			Prot			Perm			Perm		pm+ov
Protected Phases	5	2		1	6			8			4	5
Permitted Phases							8			4		4
Total Split (s)	25.6	37.4	0.0	16.5	28.3	0.0	20.1	20.1	0.0	20.1	20.1	25.6
Act Effct Green (s)	13.0	54.8		6.5	40.2			8.9			8.9	25.8
Actuated g/C Ratio	0.18	0.74		0.09	0.54			0.12			0.12	0.35
v/c Ratio	0.61	0.32		0.06	0.22			0.15			0.36	0.22
Control Delay	39.3	5.5		23.0	12.0			21.6			28.9	1.9
Queue Delay	0.0	0.0		0.0	0.0			0.0			0.0	0.0
Total Delay	39.3	5.5		23.0	12.0			21.6			28.9	1.9
LOS	D	A		C	B			C			C	A
Approach Delay		15.5			12.3			21.6			7.1	
Approach LOS		B			B			C			A	

Intersection Summary

Cycle Length: 74
Actuated Cycle Length: 74
Offset: 20 (27%), Referenced to phase 2:EBT and 6:WBT, Start of Green
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 0.61
Intersection Signal Delay: 13.5 Intersection LOS: B
Intersection Capacity Utilization 43.6% ICU Level of Service A
Analysis Period (min) 15

Splits and Phases: 9: Otay Mesa Road & Harvest Rd

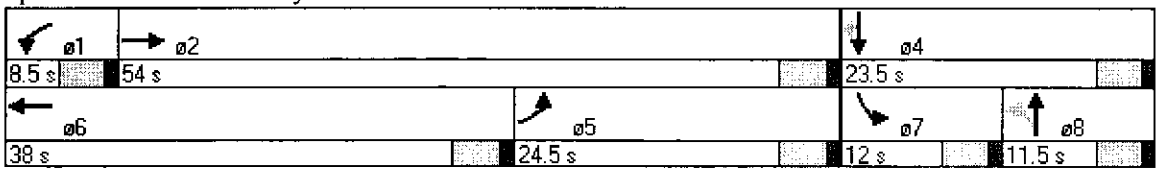


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Total Lost Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	0.97	0.95	0.95	1.00	0.95	0.95	1.00	1.00	1.00	1.00	1.00	0.88
Frt		0.990			0.972			0.955				0.850
Flt Protected	0.950			0.950				0.984			0.955	
Satd. Flow (prot)	3614	3688	0	1770	3440	0	0	1750	0	0	1779	2933
Flt Permitted	0.950			0.950				0.835			0.679	
Satd. Flow (perm)	3614	3688	0	1770	3440	0	0	1485	0	0	1265	2933
Satd. Flow (RTOR)		15			39			10				818
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Volume (vph)	750	270	20	10	987	230	10	10	10	180	10	960
Adj. Flow (vph)	781	281	21	10	1028	240	10	10	10	188	10	1000
Lane Group Flow (vph)	781	302	0	10	1268	0	0	30	0	0	198	1000
Turn Type	Prot			Prot			Perm			Prot		Perm
Protected Phases	5	2		1	6			8		7	4	
Permitted Phases							8					4
Total Split (s)	24.5	54.0	0.0	8.5	38.0	0.0	11.5	11.5	0.0	12.0	23.5	23.5
Act Effct Green (s)	20.5	56.8		4.5	34.0			7.5			14.1	19.5
Actuated g/C Ratio	0.24	0.66		0.05	0.40			0.09			0.16	0.23
v/c Ratio	0.91	0.12		0.11	0.92			0.22			0.68	0.77
Control Delay	34.6	3.5		34.9	29.4			29.9			49.5	9.3
Queue Delay	0.0	0.0		0.0	0.0			0.0			0.0	0.0
Total Delay	34.6	3.5		34.9	29.4			29.9			49.5	9.3
LOS	C	A		C	C			C			D	A
Approach Delay		25.9			29.4			29.9			16.0	
Approach LOS		C			C			C			B	

Intersection Summary

Cycle Length: 86
Actuated Cycle Length: 86
Offset: 32 (37%), Referenced to phase 2:EBT and 6:WBT, Start of Green
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 0.92
Intersection Signal Delay: 23.9 — Intersection LOS: C
Intersection Capacity Utilization 82.1% — ICU Level of Service E
Analysis Period (min) 15

Splits and Phases: 9: Otay Mesa Road & Harvest Rd

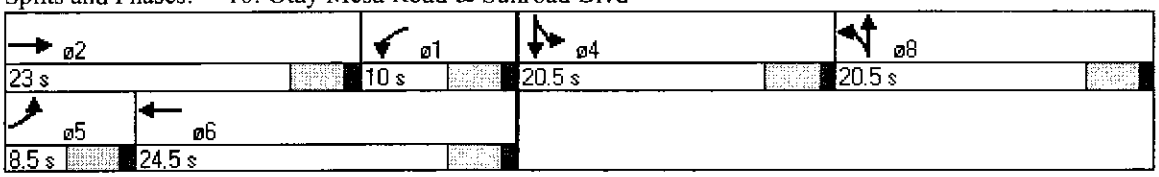


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Total Lost Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	1.00	0.95	0.95	1.00	1.00	1.00	0.95	0.95	1.00	1.00	1.00	1.00
Frt		0.964			0.996			0.956			0.984	
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1770	3591	0	1770	1953	0	1681	1692	0	1770	1833	0
Flt Permitted	0.950			0.950			0.950			0.950		
Satd. Flow (perm)	1770	3591	0	1770	1953	0	1681	1692	0	1770	1833	0
Satd. Flow (RTOR)		56			2			26			8	
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Volume (vph)	20	654	210	78	266	8	150	130	54	2	80	10
Adj. Flow (vph)	21	681	219	81	277	8	156	135	56	2	83	10
Lane Group Flow (vph)	21	900	0	81	285	0	156	191	0	2	93	0
Turn Type	Prot			Prot			Split			Split		
Protected Phases	5	2		1	6		8	8		4	4	
Permitted Phases												
Total Split (s)	8.5	23.0	0.0	10.0	24.5	0.0	20.5	20.5	0.0	20.5	20.5	0.0
Act Effct Green (s)	6.6	34.0		6.0	37.6		12.9	12.9		9.1	9.1	
Actuated g/C Ratio	0.09	0.46		0.08	0.51		0.17	0.17		0.12	0.12	
v/c Ratio	0.13	0.54		0.56	0.29		0.53	0.60		0.01	0.40	
Control Delay	52.6	10.0		43.0	12.3		30.0	27.2		26.5	27.9	
Queue Delay	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Delay	52.6	10.0		43.0	12.3		30.0	27.2		26.5	27.9	
LOS	D	A		D	B		C	C		C	C	
Approach Delay		10.9			19.1			28.5			27.9	
Approach LOS		B			B			C			C	

Intersection Summary

Cycle Length: 74
Actuated Cycle Length: 74
Offset: 32 (43%), Referenced to phase 2:EBT and 6:WBT, Start of Green
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 0.60
Intersection Signal Delay: 17.1 — Intersection LOS: B
Intersection Capacity Utilization 53.8% — ICU Level of Service A
Analysis Period (min) 15

Splits and Phases: 10: Otay Mesa Road & Sunroad Blvd

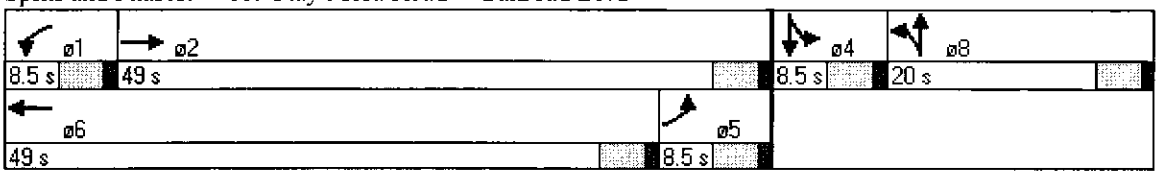


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Total Lost Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	1.00	0.95	0.95	1.00	1.00	1.00	0.95	0.95	1.00	1.00	1.00	1.00
Frt		0.963						0.943			0.981	
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1863	3588	0	1770	1863	0	1681	1669	0	1770	1827	0
Flt Permitted	0.950			0.950			0.950			0.950		
Satd. Flow (perm)	1863	3588	0	1770	1863	0	1681	1669	0	1770	1827	0
Satd. Flow (RTOR)		77						32			6	
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Volume (vph)	10	340	110	35	957	2	250	160	98	6	140	20
Adj. Flow (vph)	11	358	116	37	1007	2	263	168	103	6	147	21
Lane Group Flow (vph)	11	474	0	37	1009	0	263	271	0	6	168	0
Turn Type	Prot			Prot			Split			Split		
Protected Phases	5	2		1	6		8	8		4	4	
Permitted Phases												
Total Split (s)	8.5	49.0	0.0	8.5	49.0	0.0	20.0	20.0	0.0	8.5	8.5	0.0
Act Effct Green (s)	4.5	42.1		4.8	45.5		15.5	15.5		11.3	11.3	
Actuated g/C Ratio	0.05	0.49		0.06	0.53		0.18	0.18		0.13	0.13	
v/c Ratio	0.11	0.26		0.37	1.02		0.87	0.83		0.03	0.69	
Control Delay	32.2	6.1		51.9	52.9		58.8	49.4		35.8	53.5	
Queue Delay	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Delay	32.2	6.1		51.9	52.9		58.8	49.4		35.8	53.5	
LOS	C	A		D	D		E	D		D	D	
Approach Delay		6.7			52.9			54.0			52.9	
Approach LOS		A			D			D			D	

Intersection Summary

Cycle Length: 86
Actuated Cycle Length: 86
Offset: 77 (90%), Referenced to phase 2:EBT and 6:WBT, Start of Green
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 1.02
Intersection Signal Delay: 43.1 — Intersection LOS: D
Intersection Capacity Utilization 83.2% — ICU Level of Service E
Analysis Period (min) 15

Splits and Phases: 10: Otay Mesa Road & Sunroad Blvd



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Sign Control		Free	Free		Stop	
Grade		0%	0%		0%	
Volume (veh/h)	40	670	332	49	17	20
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	43	728	361	53	18	22
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type					None	
Median storage veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume	414				1203	388
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	414				1203	388
tC, single (s)	4.1				6.4	6.2
tC, 2 stage (s)						
tF (s)	2.2				3.5	3.3
p0 queue free %	96				91	97
cM capacity (veh/h)	1145				196	661

Direction, Lane #	EB 1	EB 2	WB 1	SB 1
Volume Total	43	728	414	40
Volume Left	43	0	0	18
Volume Right	0	0	53	22
cSH	1145	1700	1700	316
Volume to Capacity	0.04	0.43	0.24	0.13
Queue Length 95th (ft)	3	0	0	11
Control Delay (s)	8.3	0.0	0.0	18.0
Lane LOS	A			C
Approach Delay (s)	0.5		0.0	18.0
Approach LOS				C

Intersection Summary			
Average Delay	0.9		
Intersection Capacity Utilization	45.3%	ICU Level of Service	A
Analysis Period (min)	15		

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Sign Control		Free	Free		Stop	
Grade		0%	0%		0%	
Volume (veh/h)	20	424	954	27	49	40
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	22	461	1037	29	53	43
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type					None	
Median storage veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume	1066				1556	1052
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	1066				1556	1052
tC, single (s)	4.1				6.4	6.2
tC, 2 stage (s)						
tF (s)	2.2				3.5	3.3
p0 queue free %	97				56	84
cM capacity (veh/h)	653				120	275

Direction, Lane #	EB 1	EB 2	WB 1	SB 1
Volume Total	22	461	1066	97
Volume Left	22	0	0	53
Volume Right	0	0	29	43
cSH	653	1700	1700	161
Volume to Capacity	0.03	0.27	0.63	0.60
Queue Length 95th (ft)	3	0	0	81
Control Delay (s)	10.7	0.0	0.0	56.5
Lane LOS	B			F
Approach Delay (s)	0.5		0.0	56.5
Approach LOS				F

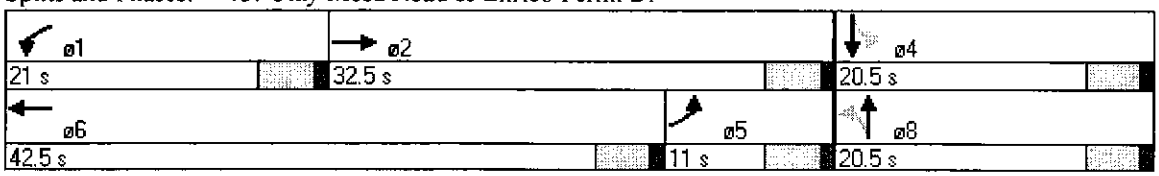
Intersection Summary			
Average Delay	3.5		
Intersection Capacity Utilization	63.7%	ICU Level of Service	B
Analysis Period (min)	15		

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Total Lost Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.986			0.995			0.943			0.925	
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1770	1837	0	1770	1853	0	1770	1757	0	1770	1723	0
Flt Permitted	0.950			0.950			0.728			0.631		
Satd. Flow (perm)	1770	1837	0	1770	1853	0	1356	1757	0	1175	1723	0
Satd. Flow (RTOR)		8			3			39			22	
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Volume (vph)	60	597	60	230	291	9	110	80	50	7	20	20
Adj. Flow (vph)	65	649	65	250	316	10	120	87	54	8	22	22
Lane Group Flow (vph)	65	714	0	250	326	0	120	141	0	8	44	0
Turn Type	Prot			Prot			Perm			Perm		
Protected Phases	5	2		1	6			8			4	
Permitted Phases							8			4		
Total Split (s)	11.0	32.5	0.0	21.0	42.5	0.0	20.5	20.5	0.0	20.5	20.5	0.0
Act Effct Green (s)	6.8	35.1		15.0	47.5		11.9	11.9		11.9	11.9	
Actuated g/C Ratio	0.09	0.47		0.20	0.64		0.16	0.16		0.16	0.16	
v/c Ratio	0.40	0.82		0.70	0.27		0.55	0.45		0.04	0.15	
Control Delay	21.9	17.8		33.5	8.3		31.6	21.5		24.1	16.0	
Queue Delay	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Delay	21.9	17.8		33.5	8.3		31.6	21.5		24.1	16.0	
LOS	C	B		C	A		C	C		C	B	
Approach Delay		18.2			19.3			26.1			17.2	
Approach LOS		B			B			C			B	

Intersection Summary

Cycle Length: 74
Actuated Cycle Length: 74
Offset: 2 (3%), Referenced to phase 2:EBT and 6:WBT, Start of Green
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 0.82
Intersection Signal Delay: 19.8 — Intersection LOS: B
Intersection Capacity Utilization 70.6% — ICU Level of Service C
Analysis Period (min) 15

Splits and Phases: 13: Otay Mesa Road & Enrico Fermi Dr

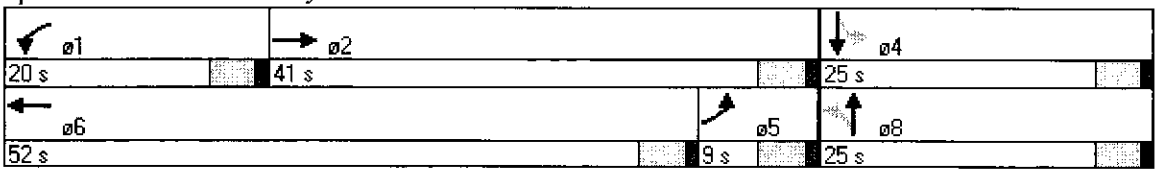


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Total Lost Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.994			0.999			0.867			0.943	
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1770	1852	0	1770	1861	0	1770	1615	0	1770	1757	0
Flt Permitted	0.950			0.950			0.619			0.190		
Satd. Flow (perm)	1770	1852	0	1770	1861	0	1153	1615	0	354	1757	0
Satd. Flow (RTOR)		3			1			341			34	
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Volume (vph)	30	453	20	32	751	7	170	40	314	9	80	50
Adj. Flow (vph)	33	492	22	35	816	8	185	43	341	10	87	54
Lane Group Flow (vph)	33	514	0	35	824	0	185	384	0	10	141	0
Turn Type	Prot			Prot			Perm			Perm		
Protected Phases	5	2		1	6			8			4	
Permitted Phases							8			4		
Total Split (s)	9.0	41.0	0.0	20.0	52.0	0.0	25.0	25.0	0.0	25.0	25.0	0.0
Act Effct Green (s)	5.0	52.8		7.6	54.9		17.7	17.7		17.7	17.7	
Actuated g/C Ratio	0.06	0.61		0.09	0.64		0.21	0.21		0.21	0.21	
v/c Ratio	0.32	0.45		0.22	0.69		0.78	0.64		0.14	0.36	
Control Delay	39.0	7.3		36.7	16.3		43.7	9.2		29.6	22.9	
Queue Delay	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Delay	39.0	7.3		36.7	16.3		43.7	9.2		29.6	22.9	
LOS	D	A		D	B		D	A		C	C	
Approach Delay		9.2			17.1			20.4			23.3	
Approach LOS		A			B			C			C	

Intersection Summary

Cycle Length: 86
Actuated Cycle Length: 86
Offset: 54 (63%), Referenced to phase 2:EBT and 6:WBT, Start of Green
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 0.78
Intersection Signal Delay: 16.4 — Intersection LOS: B
Intersection Capacity Utilization 74.8% — ICU Level of Service D
Analysis Period (min) 15

Splits and Phases: 13: Otay Mesa Road & Enrico Fermi Rd



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Sign Control		Stop			Stop			Stop			Stop	
Volume (vph)	630	4	12	30	64	30	23	30	30	30	30	410
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
Hourly flow rate (vph)	663	4	13	32	67	32	24	32	32	32	32	432

Direction, Lane #	EB 1	WB 1	NB 1	SB 1
Volume Total (vph)	680	131	87	495
Volume Left (vph)	663	32	24	32
Volume Right (vph)	13	32	32	432
Hadj (s)	0.22	-0.06	-0.13	-0.48
Departure Headway (s)	6.3	6.9	7.2	5.9
Degree Utilization, x	1.19	0.25	0.17	0.81
Capacity (veh/h)	562	472	453	495
Control Delay (s)	122.2	12.2	11.7	28.8
Approach Delay (s)	122.2	12.2	11.7	28.8
Approach LOS	F	B	B	D

Intersection Summary			
Delay	71.8		
HCM Level of Service	F		
Intersection Capacity Utilization	79.1%	ICU Level of Service	D
Analysis Period (min)	15		

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Sign Control		Stop			Stop			Stop			Stop	
Volume (vph)	520	13	9	30	29	30	12	30	30	30	30	720
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
Hourly flow rate (vph)	547	14	9	32	31	32	13	32	32	32	32	758

Direction, Lane #	EB 1	WB 1	NB 1	SB 1
Volume Total (vph)	571	94	76	821
Volume Left (vph)	547	32	13	32
Volume Right (vph)	9	32	32	758
Hadj (s)	0.22	-0.10	-0.18	-0.51
Departure Headway (s)	6.4	7.3	7.3	5.7
Degree Utilization, x	1.02	0.19	0.15	1.30
Capacity (veh/h)	558	482	479	619
Control Delay (s)	68.7	12.0	11.6	166.5
Approach Delay (s)	68.7	12.0	11.6	166.5
Approach LOS	F	B	B	F

Intersection Summary			
Delay	113.9		
HCM Level of Service	F		
Intersection Capacity Utilization	94.1%	ICU Level of Service	F
Analysis Period (min)	15		

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Sign Control		Stop			Stop			Stop			Stop	
Volume (vph)	30	67	70	30	149	60	60	80	30	160	200	70
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
Hourly flow rate (vph)	33	74	78	33	166	67	67	89	33	178	222	78

Direction, Lane #	EB 1	WB 1	NB 1	SB 1	SB 2
Volume Total (vph)	186	266	189	178	300
Volume Left (vph)	33	33	67	178	0
Volume Right (vph)	78	67	33	0	78
Hadj (s)	-0.18	-0.09	0.05	0.53	-0.07
Departure Headway (s)	6.1	6.0	6.3	6.8	6.2
Degree Utilization, x	0.32	0.44	0.33	0.33	0.51
Capacity (veh/h)	529	552	515	506	559
Control Delay (s)	11.9	13.7	12.3	11.9	14.3
Approach Delay (s)	11.9	13.7	12.3	13.4	
Approach LOS	B	B	B	B	

Intersection Summary			
Delay	13.1		
HCM Level of Service	B		
Intersection Capacity Utilization	50.2%	ICU Level of Service	A
Analysis Period (min)	15		

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Sign Control		Stop			Stop			Stop			Stop	
Volume (vph)	80	29	90	30	307	140	80	140	30	70	130	30
Peak Hour Factor	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99
Hourly flow rate (vph)	81	29	91	30	310	141	81	141	30	71	131	30

Direction, Lane #	EB 1	WB 1	NB 1	SB 1	SB 2
Volume Total (vph)	201	482	253	71	162
Volume Left (vph)	81	30	81	71	0
Volume Right (vph)	91	141	30	0	30
Hadj (s)	-0.16	-0.13	0.08	0.53	-0.01
Departure Headway (s)	6.4	5.8	6.8	7.7	7.2
Degree Utilization, x	0.36	0.78	0.48	0.15	0.32
Capacity (veh/h)	488	598	482	416	442
Control Delay (s)	13.0	26.6	15.8	10.9	12.4
Approach Delay (s)	13.0	26.6	15.8	11.9	
Approach LOS	B	D	C	B	

Intersection Summary			
Delay	19.0		
HCM Level of Service	C		
Intersection Capacity Utilization	71.6%	ICU Level of Service	C
Analysis Period (min)	15		

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Sign Control		Stop			Stop			Stop			Stop	
Volume (vph)	47	94	80	10	198	510	30	60	70	250	450	39
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
Hourly flow rate (vph)	51	101	86	11	213	548	32	65	75	269	484	42

Direction, Lane #	EB 1	WB 1	WB 2	NB 1	NB 2	SB 1	SB 2
Volume Total (vph)	238	224	548	32	140	753	42
Volume Left (vph)	51	11	0	32	0	269	0
Volume Right (vph)	86	0	548	0	75	0	42
Hadj (s)	-0.14	0.06	-0.67	0.53	-0.34	0.21	-0.67
Departure Headway (s)	8.2	7.7	7.0	9.2	8.4	8.0	7.1
Degree Utilization, x	0.54	0.48	1.06	0.08	0.32	1.66	0.08
Capacity (veh/h)	422	463	525	377	417	461	499
Control Delay (s)	20.6	16.2	81.1	11.9	14.1	326.9	9.5
Approach Delay (s)	20.6	62.3		13.7		310.2	
Approach LOS	C	F		B		F	

Intersection Summary			
Delay	152.7		
HCM Level of Service	F		
Intersection Capacity Utilization	81.7%	ICU Level of Service	D
Analysis Period (min)	15		

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Sign Control		Stop			Stop			Stop			Stop	
Volume (vph)	19	87	50	10	225	570	70	450	60	230	90	117
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
Hourly flow rate (vph)	22	100	57	11	259	655	80	517	69	264	103	134

Direction, Lane #	EB 1	WB 1	WB 2	NB 1	NB 2	SB 1	SB 2
Volume Total (vph)	179	270	655	80	586	368	134
Volume Left (vph)	22	11	0	80	0	264	0
Volume Right (vph)	57	0	655	0	69	0	134
Hadj (s)	-0.13	0.06	-0.67	0.53	-0.05	0.39	-0.67
Departure Headway (s)	9.5	8.5	7.8	9.1	8.5	9.1	8.0
Degree Utilization, x	0.47	0.64	1.42	0.20	1.39	0.92	0.30
Capacity (veh/h)	362	418	473	387	430	390	444
Control Delay (s)	20.8	24.2	222.3	13.2	213.2	57.6	13.2
Approach Delay (s)	20.8	164.5		189.1		45.7	
Approach LOS	C	F		F		E	

Intersection Summary			
Delay	134.1		
HCM Level of Service	F		
Intersection Capacity Utilization	81.3%	ICU Level of Service	D
Analysis Period (min)	15		

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Sign Control		Free			Free			Stop			Stop	
Grade		0%			0%			0%			0%	
Volume (veh/h)	60	144	190	6	228	10	570	60	186	10	70	60
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
Hourly flow rate (vph)	67	160	211	7	253	11	633	67	207	11	78	67
Pedestrians												
Lane Width (ft)												
Walking Speed (ft/s)												
Percent Blockage												
Right turn flare (veh)												
Median type								None			None	
Median storage veh)												
Upstream signal (ft)												
pX, platoon unblocked												
vC, conflicting volume	264			371			644	677	186	726	777	132
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	264			371			644	677	186	726	777	132
tC, single (s)	4.1			4.1			7.5	6.5	6.9	7.5	6.5	6.9
tC, 2 stage (s)												
tF (s)	2.2			2.2			3.5	4.0	3.3	3.5	4.0	3.3
p0 queue free %	95			99			0	81	75	94	75	93
cM capacity (veh/h)	1297			1184			255	352	825	192	308	893

Direction, Lane #	EB 1	EB 2	EB 3	WB 1	WB 2	WB 3	NB 1	NB 2	SB 1
Volume Total	67	107	264	7	169	96	700	207	156
Volume Left	67	0	0	7	0	0	633	0	11
Volume Right	0	0	211	0	0	11	0	207	67
cSH	1297	1700	1700	1184	1700	1700	262	825	404
Volume to Capacity	0.05	0.06	0.16	0.01	0.10	0.06	2.67	0.25	0.39
Queue Length 95th (ft)	4	0	0	0	0	0	1479	25	44
Control Delay (s)	7.9	0.0	0.0	8.1	0.0	0.0	791.6	10.8	19.4
Lane LOS	A			A			F	B	C
Approach Delay (s)	1.2			0.2			613.6		19.4
Approach LOS							F		C

Intersection Summary			
Average Delay	316.1		
Intersection Capacity Utilization	69.4%	ICU Level of Service	C
Analysis Period (min)	15		

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Sign Control		Free			Free			Stop			Stop	
Grade		0%			0%			0%			0%	
Volume (veh/h)	70	77	240	36	295	20	580	70	214	10	70	60
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
Hourly flow rate (vph)	80	89	276	41	339	23	667	80	246	11	80	69
Pedestrians												
Lane Width (ft)												
Walking Speed (ft/s)												
Percent Blockage												
Right turn flare (veh)												
Median type								None			None	
Median storage veh)												
Upstream signal (ft)												
pX, platoon unblocked												
vC, conflicting volume	362			364			749	832	182	925	959	181
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	362			364			749	832	182	925	959	181
tC, single (s)	4.1			4.1			7.5	6.5	6.9	7.5	6.5	6.9
tC, 2 stage (s)												
tF (s)	2.2			2.2			3.5	4.0	3.3	3.5	4.0	3.3
p0 queue free %	93			97			0	71	70	90	65	92
cM capacity (veh/h)	1193			1191			186	273	829	113	230	831

Direction, Lane #	EB 1	EB 2	EB 3	WB 1	WB 2	WB 3	NB 1	NB 2	SB 1
Volume Total	80	59	305	41	226	136	747	246	161
Volume Left	80	0	0	41	0	0	667	0	11
Volume Right	0	0	276	0	0	23	0	246	69
cSH	1193	1700	1700	1191	1700	1700	193	829	301
Volume to Capacity	0.07	0.03	0.18	0.03	0.13	0.08	3.87	0.30	0.53
Queue Length 95th (ft)	5	0	0	3	0	0	Err	31	74
Control Delay (s)	8.2	0.0	0.0	8.1	0.0	0.0	Err	11.2	29.9
Lane LOS	A			A			F	B	D
Approach Delay (s)	1.5			0.8			7525.2		29.9
Approach LOS							F		D

Intersection Summary			
Average Delay	3735.2		
Intersection Capacity Utilization	70.3%	ICU Level of Service	C
Analysis Period (min)	15		

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Sign Control	Free			Free	Stop	
Grade	0%			0%	0%	
Volume (veh/h)	220	70	14	184	50	30
Peak Hour Factor	0.78	0.78	0.78	0.78	0.78	0.78
Hourly flow rate (vph)	282	90	18	236	64	38
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type					None	
Median storage veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume			372		599	186
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol			372		599	186
tC, single (s)			4.1		6.8	6.9
tC, 2 stage (s)						
tF (s)			2.2		3.5	3.3
p0 queue free %			98		85	95
cM capacity (veh/h)			1183		427	825

Direction, Lane #	EB 1	EB 2	WB 1	WB 2	NB 1	NB 2
Volume Total	188	184	18	236	64	38
Volume Left	0	0	18	0	64	0
Volume Right	0	90	0	0	0	38
cSH	1700	1700	1183	1700	427	825
Volume to Capacity	0.11	0.11	0.02	0.14	0.15	0.05
Queue Length 95th (ft)	0	0	1	0	13	4
Control Delay (s)	0.0	0.0	8.1	0.0	14.9	9.6
Lane LOS			A		B	A
Approach Delay (s)	0.0		0.6		12.9	
Approach LOS					B	

Intersection Summary			
Average Delay	2.0		
Intersection Capacity Utilization	21.6%	ICU Level of Service	A
Analysis Period (min)	15		

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↑↑↱		↰	↑	↰	↱
Sign Control	Free			Free	Stop	
Grade	0%			0%	0%	
Volume (veh/h)	221	70	1	201	110	1
Peak Hour Factor	0.84	0.84	0.84	0.84	0.84	0.84
Hourly flow rate (vph)	263	83	1	239	131	1
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type					None	
Median storage veh)						
Upstream signal (ft)				1314		
pX, platoon unblocked						
vC, conflicting volume			346		546	173
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol			346		546	173
tC, single (s)			4.1		6.8	6.9
tC, 2 stage (s)						
tF (s)			2.2		3.5	3.3
p0 queue free %			100		72	100
cM capacity (veh/h)			1209		467	840

Direction, Lane #	EB 1	EB 2	WB 1	WB 2	NB 1	NB 2
Volume Total	175	171	1	239	131	1
Volume Left	0	0	1	0	131	0
Volume Right	0	83	0	0	0	1
cSH	1700	1700	1209	1700	467	840
Volume to Capacity	0.10	0.10	0.00	0.14	0.28	0.00
Queue Length 95th (ft)	0	0	0	0	28	0
Control Delay (s)	0.0	0.0	8.0	0.0	15.7	9.3
Lane LOS			A		C	A
Approach Delay (s)	0.0		0.0		15.6	
Approach LOS					C	

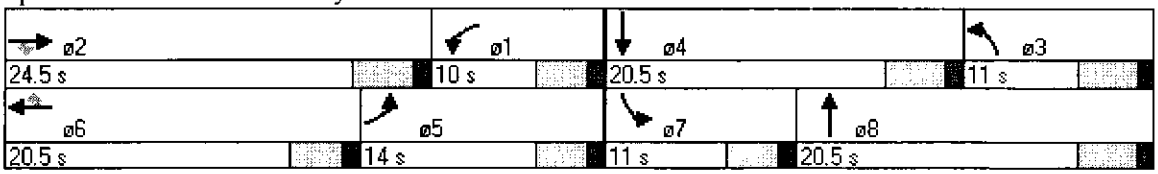
Intersection Summary			
Average Delay	2.9		
Intersection Capacity Utilization	23.3%	ICU Level of Service	A
Analysis Period (min)	15		

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Total Lost Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	1.00	0.95	0.95	1.00	1.00	1.00	1.00	0.95	0.95	1.00	0.95	0.95
Frt			0.850			0.850		0.868			0.969	
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1770	1770	1504	1770	1863	1583	1770	3072	0	1770	3430	0
Flt Permitted	0.950			0.950			0.950			0.950		
Satd. Flow (perm)	1770	1770	1504	1770	1863	1583	1770	3072	0	1770	3430	0
Satd. Flow (RTOR)			62			146		337			46	
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Volume (vph)	130	70	50	60	30	134	110	36	310	108	224	58
Adj. Flow (vph)	162	76	62	65	33	146	138	45	337	117	280	72
Lane Group Flow (vph)	162	76	62	65	33	146	138	382	0	117	352	0
Turn Type	Prot		Perm	Prot		Perm	Prot			Prot		
Protected Phases	5	2		1	6		3	8		7	4	
Permitted Phases			2			6						
Total Split (s)	14.0	24.5	24.5	10.0	20.5	20.5	11.0	20.5	0.0	11.0	20.5	0.0
Act Effct Green (s)	9.3	26.7	26.7	5.9	19.4	19.4	9.9	16.4		6.9	11.4	
Actuated g/C Ratio	0.14	0.40	0.40	0.09	0.29	0.29	0.15	0.25		0.10	0.17	
v/c Ratio	0.65	0.11	0.10	0.41	0.06	0.26	0.52	0.38		0.63	0.56	
Control Delay	37.3	16.2	5.7	36.3	19.3	5.5	22.2	2.3		44.4	22.5	
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Total Delay	37.3	16.2	5.7	36.3	19.3	5.5	22.2	2.3		44.4	22.5	
LOS	D	B	A	D	B	A	C	A		D	C	
Approach Delay		25.4			15.6			7.6			28.0	
Approach LOS		C			B			A			C	

Intersection Summary

Cycle Length: 66
Actuated Cycle Length: 66
Offset: 25 (38%), Referenced to phase 2:EBT and 6:WBT, Start of Green
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 0.65
Intersection Signal Delay: 18.6 — Intersection LOS: B
Intersection Capacity Utilization 40.9% — ICU Level of Service A
Analysis Period (min) 15

Splits and Phases: 23: Airway Rd & Enrico Fermi Dr

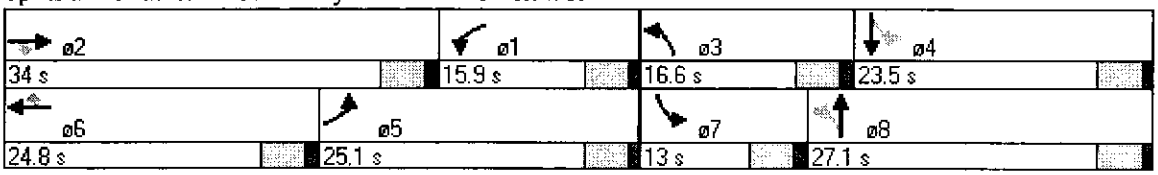


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Total Lost Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	1.00	0.95	0.95	1.00	1.00	1.00	1.00	0.95	0.95	1.00	0.95	0.95
Frt			0.850			0.850		0.973			0.983	
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1770	1770	1504	1770	1863	1583	1770	3444	0	1770	3479	0
Flt Permitted	0.950			0.950			0.573			0.452		
Satd. Flow (perm)	1770	1770	1504	1770	1863	1583	1067	3444	0	842	3479	0
Satd. Flow (RTOR)			33			161		27			13	
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Volume (vph)	162	30	30	60	60	148	130	324	70	55	95	12
Adj. Flow (vph)	176	33	33	65	65	161	141	352	76	60	103	13
Lane Group Flow (vph)	176	33	33	65	65	161	141	428	0	60	116	0
Turn Type	Prot		Perm	Prot		Perm	pm+pt			pm+pt		
Protected Phases	5	2		1	6		3	8		7	4	
Permitted Phases			2			6	8			4		
Total Split (s)	25.1	34.0	34.0	15.9	24.8	24.8	16.6	27.1	0.0	13.0	23.5	0.0
Act Effct Green (s)	17.0	42.7	42.7	9.0	32.8	32.8	25.5	18.2		23.3	15.3	
Actuated g/C Ratio	0.19	0.47	0.47	0.10	0.36	0.36	0.28	0.20		0.26	0.17	
v/c Ratio	0.53	0.04	0.05	0.37	0.10	0.24	0.38	0.60		0.20	0.19	
Control Delay	35.2	16.9	6.7	40.1	23.5	5.3	17.7	23.9		21.6	27.5	
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Total Delay	35.2	16.9	6.7	40.1	23.5	5.3	17.7	23.9		21.6	27.5	
LOS	D	B	A	D	C	A	B	C		C	C	
Approach Delay		28.8			17.2			22.4			25.5	
Approach LOS		C			B			C			C	

Intersection Summary

Cycle Length: 90
Actuated Cycle Length: 90
Offset: 77 (86%), Referenced to phase 2:EBT and 6:WBT, Start of Green
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 0.60
Intersection Signal Delay: 22.8 — Intersection LOS: C
Intersection Capacity Utilization 40.2% — ICU Level of Service A
Analysis Period (min) 15

Splits and Phases: 23: Airway Rd & Enrico Fermi Rd

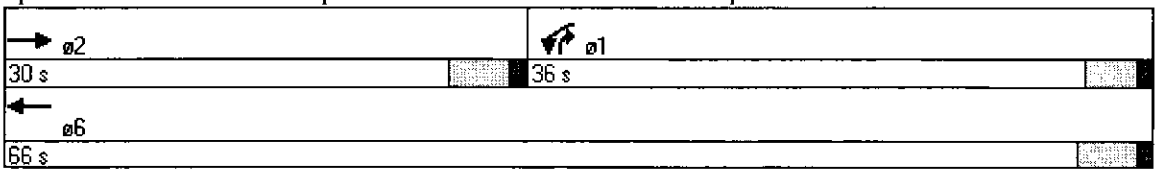


Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Total Lost Time (s)	4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	0.91	0.91	0.97	0.91	1.00	0.88
Frt	0.985					0.850
Flt Protected			0.950			
Satd. Flow (prot)	5273	0	3614	5353	0	2933
Flt Permitted			0.950			
Satd. Flow (perm)	5273	0	3614	5353	0	2933
Satd. Flow (RTOR)	34					77
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Volume (vph)	904	100	467	878	0	569
Adj. Flow (vph)	942	104	486	915	0	593
Lane Group Flow (vph)	1046	0	486	915	0	593
Turn Type			Prot			Over
Protected Phases	2		1	6		1
Permitted Phases						
Total Split (s)	30.0	0.0	36.0	66.0	0.0	36.0
Act Effct Green (s)	26.0		32.0	66.0		32.0
Actuated g/C Ratio	0.39		0.48	1.00		0.48
v/c Ratio	0.50		0.28	0.17		0.41
Control Delay	15.6		9.7	0.1		10.4
Queue Delay	0.0		0.0	0.0		0.0
Total Delay	15.6		9.7	0.1		10.4
LOS	B		A	A		B
Approach Delay	15.6			3.4		
Approach LOS	B			A		

Intersection Summary

Cycle Length: 66
Actuated Cycle Length: 66
Offset: 28 (42%), Referenced to phase 2:EBT and 6:WBT, Start of Green
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 0.50
Intersection Signal Delay: 8.9 Intersection LOS: A
Intersection Capacity Utilization 44.3% ICU Level of Service A
Analysis Period (min) 15

Splits and Phases: 28: Siempre Viva Rd & SR905 SB Off to Siempre Viva EB

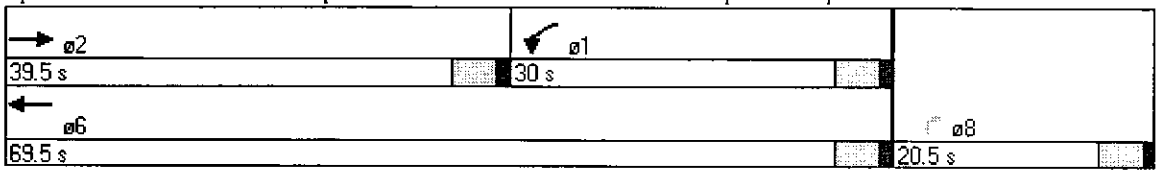


Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Total Lost Time (s)	4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	0.91	0.91	0.97	0.91	1.00	0.88
Frt	0.936					0.850
Flt Protected			0.950			
Satd. Flow (prot)	4760	0	3523	5085	0	2787
Flt Permitted			0.950			
Satd. Flow (perm)	4760	0	3523	5085	0	2787
Satd. Flow (RTOR)	244					847
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Volume (vph)	948	700	760	304	0	383
Adj. Flow (vph)	988	729	792	317	0	399
Lane Group Flow (vph)	1717	0	792	317	0	399
Turn Type			Prot			custom
Protected Phases	2		1	6		
Permitted Phases						8
Total Split (s)	39.5	0.0	30.0	69.5	0.0	20.5
Act Effct Green (s)	46.0		26.0	76.0		6.0
Actuated g/C Ratio	0.51		0.29	0.84		0.07
v/c Ratio	0.67		0.78	0.07		0.41
Control Delay	15.4		31.9	0.9		0.7
Queue Delay	0.0		0.0	0.0		0.0
Total Delay	15.4		31.9	0.9		0.7
LOS	B		C	A		A
Approach Delay	15.4			23.0		
Approach LOS	B			C		

Intersection Summary

Cycle Length: 90
Actuated Cycle Length: 90
Offset: 66 (73%), Referenced to phase 2:EBT and 6:WBT, Start of Green
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 0.78
Intersection Signal Delay: 16.2 Intersection LOS: B
Intersection Capacity Utilization 61.8% ICU Level of Service B
Analysis Period (min) 15

Splits and Phases: 28: Siempre Viva Road & SR905 SB Off Ramp to Siempre Viva EB



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		↑↑↑	↑↑↑			↱
Sign Control		Free	Free		Stop	
Grade		0%	0%		0%	
Volume (veh/h)	0	1473	865	0	0	480
Peak Hour Factor	0.87	0.87	0.87	0.87	0.87	0.87
Hourly flow rate (vph)	0	1693	994	0	0	552
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type					None	
Median storage veh)						
Upstream signal (ft)		281	733			
pX, platoon unblocked					0.87	
vC, conflicting volume	994				1559	331
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	994				1336	331
tC, single (s)	4.1				6.8	6.9
tC, 2 stage (s)						
tF (s)	2.2				3.5	3.3
p0 queue free %	100				100	17
cM capacity (veh/h)	691				125	664

Direction, Lane #	EB 1	EB 2	EB 3	WB 1	WB 2	WB 3	SB 1
Volume Total	564	564	564	331	331	331	552
Volume Left	0	0	0	0	0	0	0
Volume Right	0	0	0	0	0	0	552
cSH	1700	1700	1700	1700	1700	1700	664
Volume to Capacity	0.33	0.33	0.33	0.19	0.19	0.19	0.83
Queue Length 95th (ft)	0	0	0	0	0	0	224
Control Delay (s)	0.0	0.0	0.0	0.0	0.0	0.0	31.3
Lane LOS							D
Approach Delay (s)	0.0			0.0			31.3
Approach LOS							D

Intersection Summary			
Average Delay	5.3		
Intersection Capacity Utilization	53.1%	ICU Level of Service	A
Analysis Period (min)	15		

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		↑↑↑	↑↑↑			↱
Sign Control		Free	Free		Stop	
Grade		0%	0%		0%	
Volume (veh/h)	0	1331	564	0	0	500
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93
Hourly flow rate (vph)	0	1431	606	0	0	538
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type					None	
Median storage veh)						
Upstream signal (ft)		225	412			
pX, platoon unblocked						
vC, conflicting volume	606				1084	202
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	606				1084	202
tC, single (s)	4.1				6.8	6.9
tC, 2 stage (s)						
tF (s)	2.2				3.5	3.3
p0 queue free %	100				100	33
cM capacity (veh/h)	968				212	805

Direction, Lane #	EB 1	EB 2	EB 3	WB 1	WB 2	WB 3	SB 1
Volume Total	477	477	477	202	202	202	538
Volume Left	0	0	0	0	0	0	0
Volume Right	0	0	0	0	0	0	538
cSH	1700	1700	1700	1700	1700	1700	805
Volume to Capacity	0.28	0.28	0.28	0.12	0.12	0.12	0.67
Queue Length 95th (ft)	0	0	0	0	0	0	130
Control Delay (s)	0.0	0.0	0.0	0.0	0.0	0.0	18.0
Lane LOS							C
Approach Delay (s)	0.0			0.0			18.0
Approach LOS							C

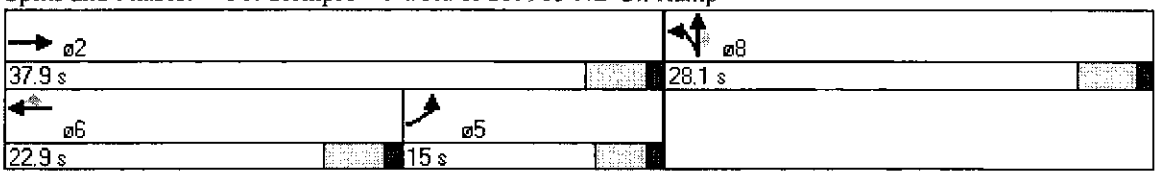
Intersection Summary			
Average Delay	3.8		
Intersection Capacity Utilization	62.5%	ICU Level of Service	B
Analysis Period (min)	15		

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Total Lost Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	0.97	0.91	1.00	1.00	0.86	0.86	1.00	1.00	0.88	1.00	1.00	1.00
Frt					0.966	0.850			0.850			
Flt Protected	0.950							0.954				
Satd. Flow (prot)	3704	5487	0	0	5009	1469	0	1917	3007	0	0	0
Flt Permitted	0.950							0.954				
Satd. Flow (perm)	3704	5487	0	0	5009	1469	0	1917	3007	0	0	0
Satd. Flow (RTOR)					105	266			68			
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Volume (vph)	250	1223	0	0	505	401	360	10	487	0	0	0
Adj. Flow (vph)	260	1274	0	0	526	418	375	10	507	0	0	0
Lane Group Flow (vph)	260	1274	0	0	678	266	0	385	507	0	0	0
Turn Type	Prot					Perm	Split		Perm			
Protected Phases	5	2			6		8	8				
Permitted Phases						6			8			
Total Split (s)	15.0	37.9	0.0	0.0	22.9	22.9	28.1	28.1	28.1	0.0	0.0	0.0
Act Effct Green (s)	9.6	38.9			25.3	25.3		19.1	19.1			
Actuated g/C Ratio	0.15	0.59			0.38	0.38		0.29	0.29			
v/c Ratio	0.48	0.39			0.34	0.37		0.69	0.55			
Control Delay	24.5	6.7			12.4	7.3		23.2	17.5			
Queue Delay	0.0	0.0			0.0	0.0		0.0	0.0			
Total Delay	24.5	6.7			12.4	7.3		23.2	17.5			
LOS	C	A			B	A		C	B			
Approach Delay		9.7			11.0			20.0				
Approach LOS		A			B			B				

Intersection Summary

Cycle Length: 66
Actuated Cycle Length: 66
Offset: 42 (64%), Referenced to phase 2:EBT and 6:WBT, Start of Green
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 0.69
Intersection Signal Delay: 12.8 — Intersection LOS: B
Intersection Capacity Utilization 53.1% — ICU Level of Service A
Analysis Period (min) 15

Splits and Phases: 30: Siempre Viva Rd & SR 905 NB On Ramp

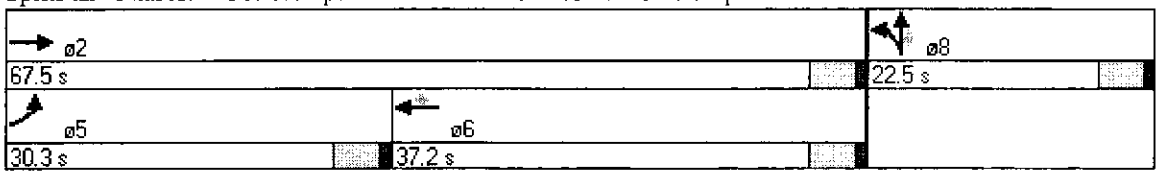


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Total Lost Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	0.97	0.91	1.00	1.00	0.86	0.86	1.00	1.00	0.88	1.00	1.00	1.00
Frt					0.935	0.850			0.850			
Flt Protected	0.950							0.956				
Satd. Flow (prot)	3433	5085	0	0	4494	1362	0	1781	2787	0	0	0
Flt Permitted	0.950							0.956				
Satd. Flow (perm)	3433	5085	0	0	4494	1362	0	1781	2787	0	0	0
Satd. Flow (RTOR)					244	367			444			
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Volume (vph)	600	731	0	0	454	696	110	10	422	0	0	0
Adj. Flow (vph)	632	769	0	0	478	733	116	11	444	0	0	0
Lane Group Flow (vph)	632	769	0	0	844	367	0	127	444	0	0	0
Turn Type	Prot					Perm	Split		Perm			
Protected Phases	5	2			6		8	8				
Permitted Phases						6			8			
Total Split (s)	30.3	67.5	0.0	0.0	37.2	37.2	22.5	22.5	22.5	0.0	0.0	0.0
Act Effct Green (s)	22.0	69.5			43.5	43.5		12.5	12.5			
Actuated g/C Ratio	0.24	0.77			0.48	0.48		0.14	0.14			
v/c Ratio	0.75	0.20			0.37	0.43		0.51	0.58			
Control Delay	41.1	2.5			12.3	4.0		37.5	5.2			
Queue Delay	0.0	0.0			0.0	0.0		0.0	0.0			
Total Delay	41.1	2.5			12.3	4.0		37.5	5.2			
LOS	D	A			B	A		D	A			
Approach Delay		19.9			9.8			12.4				
Approach LOS		B			A			B				

Intersection Summary

Cycle Length: 90
Actuated Cycle Length: 90
Offset: 83 (92%), Referenced to phase 2:EBT and 6:WBT, Start of Green
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 0.75
Intersection Signal Delay: 14.7 Intersection LOS: B
Intersection Capacity Utilization 62.5% ICU Level of Service B
Analysis Period (min) 15

Splits and Phases: 30: Siempre Viva Road & SR905 NB On Ramp

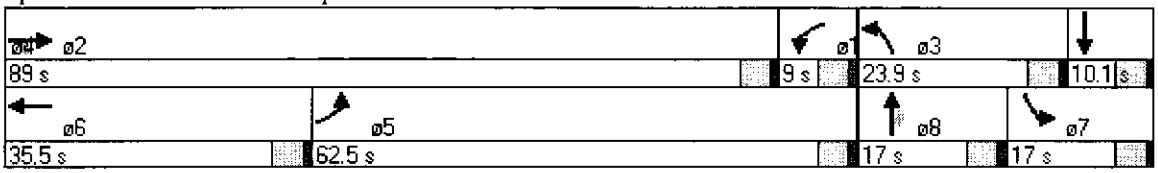


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Total Lost Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	1.00	0.91	1.00	1.00	0.95	0.95	1.00	0.95	1.00	1.00	0.95	0.95
Frt			0.850		0.950				0.850		0.880	
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1863	5487	1583	1770	3628	0	1770	3539	1583	1770	3115	0
Flt Permitted	0.950			0.950			0.950			0.950		
Satd. Flow (perm)	1863	5487	1583	1770	3628	0	1770	3539	1583	1770	3115	0
Satd. Flow (RTOR)			143		60				66		262	
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Volume (vph)	791	619	130	30	488	240	180	197	60	100	59	238
Adj. Flow (vph)	869	680	143	33	536	264	198	216	66	110	65	262
Lane Group Flow (vph)	869	680	143	33	800	0	198	216	66	110	327	0
Turn Type	Prot		Perm	Prot			Prot		Perm	Prot		
Protected Phases	5	2		1	6		3	8		7	4	
Permitted Phases			2						8			
Total Split (s)	62.5	89.0	89.0	9.0	35.5	0.0	23.9	17.0	17.0	17.0	10.1	0.0
Act Effct Green (s)	58.5	89.9	89.9	5.0	32.8		18.3	12.3	12.3	12.4	6.4	
Actuated g/C Ratio	0.44	0.68	0.68	0.04	0.25		0.14	0.09	0.09	0.09	0.05	
v/c Ratio	1.05	0.18	0.13	0.49	0.85		0.81	0.65	0.32	0.66	0.82	
Control Delay	76.2	7.5	1.6	77.3	47.7		72.0	65.9	16.4	74.2	30.8	
Queue Delay	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	
Total Delay	76.2	7.5	1.6	77.3	47.7		72.0	65.9	16.4	74.2	30.8	
LOS	E	A	A	E	D		E	E	B	E	C	
Approach Delay		42.3			48.9			61.6			41.7	
Approach LOS		D			D			E			D	

Intersection Summary

Cycle Length: 132
Actuated Cycle Length: 132
Offset: 59 (45%), Referenced to phase 2:EBT and 6:WBT, Start of Green
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 1.05
Intersection Signal Delay: 46.5 — Intersection LOS: D
Intersection Capacity Utilization 93.9% — ICU Level of Service F
Analysis Period (min) 15

Splits and Phases: 32: Siempre Viva Rd & Paseo De Las Americas

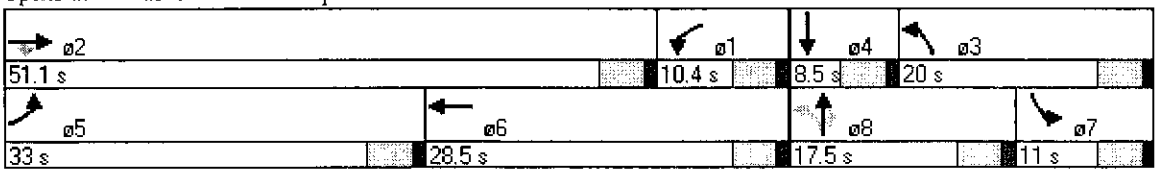


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Total Lost Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	1.00	0.91	1.00	1.00	0.95	0.95	1.00	0.95	1.00	1.00	0.95	0.95
Frt			0.850		0.940				0.850		0.878	
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1770	5085	1583	1770	3327	0	1770	3539	1583	1770	3107	0
Flt Permitted	0.950			0.950			0.471			0.950		
Satd. Flow (perm)	1770	5085	1583	1770	3327	0	877	3539	1583	1770	3107	0
Satd. Flow (RTOR)			74		176				42		360	
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Volume (vph)	617	416	70	40	478	320	330	309	40	80	77	342
Adj. Flow (vph)	649	438	74	42	503	337	347	325	42	84	81	360
Lane Group Flow (vph)	649	438	74	42	840	0	347	325	42	84	441	0
Turn Type	Prot		Perm	Prot			pm+pt		Perm	Prot		
Protected Phases	5	2		1	6		3	8		7	4	
Permitted Phases			2				8		8			
Total Split (s)	33.0	51.1	51.1	10.4	28.5	0.0	20.0	17.5	17.5	11.0	8.5	0.0
Act Effct Green (s)	29.6	51.9	51.9	6.3	24.5		23.9	14.9	14.9	7.2	4.5	
Actuated g/C Ratio	0.33	0.58	0.58	0.07	0.27		0.27	0.17	0.17	0.08	0.05	
v/c Ratio	1.12	0.15	0.08	0.34	0.81		0.90	0.56	0.14	0.60	0.89	
Control Delay	101.4	8.1	2.7	36.2	21.2		57.6	39.2	12.3	58.4	30.5	
Queue Delay	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	
Total Delay	101.4	8.1	2.7	36.2	21.2		57.6	39.2	12.3	58.4	30.5	
LOS	F	A	A	D	C		E	D	B	E	C	
Approach Delay		59.9			21.9			46.6			35.0	
Approach LOS		E			C			D			C	

Intersection Summary

Cycle Length: 90
Actuated Cycle Length: 90
Offset: 47 (52%), Referenced to phase 2:EBT and 6:WBT, Start of Green
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 1.12
Intersection Signal Delay: 42.8 — Intersection LOS: D
Intersection Capacity Utilization 102.5% — ICU Level of Service G
Analysis Period (min) 15

Splits and Phases: 32: Siempre Viva Road & Paseo De Las Americas



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Sign Control		Free			Free			Stop			Stop	
Grade		0%			0%			0%			0%	
Volume (veh/h)	123	556	100	40	654	10	40	40	50	4	10	70
Peak Hour Factor	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84
Hourly flow rate (vph)	146	662	119	48	779	12	48	48	60	5	12	83
Pedestrians												
Lane Width (ft)												
Walking Speed (ft/s)												
Percent Blockage												
Right turn flare (veh)												
Median type								None			None	
Median storage veh)												
Upstream signal (ft)		1276										
pX, platoon unblocked				0.99			0.99	0.99	0.99	0.99	0.99	
vC, conflicting volume	790			781			1588	1900	390	1587	1954	395
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	790			769			1584	1899	375	1583	1953	395
tC, single (s)	4.1			4.1			7.5	6.5	6.9	7.5	6.5	6.9
tC, 2 stage (s)												
tF (s)	2.2			2.2			3.5	4.0	3.3	3.5	4.0	3.3
p0 queue free %	82			94			0	10	90	61	76	86
cM capacity (veh/h)	825			833			42	53	616	12	49	604

Direction, Lane #	EB 1	EB 2	EB 3	WB 1	WB 2	WB 3	NB 1	SB 1	SB 2
Volume Total	146	441	340	48	519	271	155	17	83
Volume Left	146	0	0	48	0	0	48	5	0
Volume Right	0	0	119	0	0	12	60	0	83
cSH	825	1700	1700	833	1700	1700	73	26	604
Volume to Capacity	0.18	0.26	0.20	0.06	0.31	0.16	2.13	0.63	0.14
Queue Length 95th (ft)	16	0	0	5	0	0	358	49	12
Control Delay (s)	10.3	0.0	0.0	9.6	0.0	0.0	644.7	273.7	11.9
Lane LOS	B			A			F	F	B
Approach Delay (s)	1.6			0.5			644.7	55.5	
Approach LOS							F	F	

Intersection Summary			
Average Delay	53.1		
Intersection Capacity Utilization	49.3%	ICU Level of Service	A
Analysis Period (min)	15		

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Sign Control		Free			Free			Stop			Stop	
Grade		0%			0%			0%			0%	
Volume (veh/h)	92	414	30	40	635	20	90	30	10	3	40	130
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
Hourly flow rate (vph)	101	455	33	44	698	22	99	33	11	3	44	143
Pedestrians												
Lane Width (ft)												
Walking Speed (ft/s)												
Percent Blockage												
Right turn flare (veh)												
Median type								None			None	
Median storage veh)												
Upstream signal (ft)		1290			1303							
pX, platoon unblocked												
vC, conflicting volume	720			488			1275	1481	244	1254	1487	360
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	720			488			1275	1481	244	1254	1487	360
tC, single (s)	4.1			4.1			7.5	6.5	6.9	7.5	6.5	6.9
tC, 2 stage (s)												
tF (s)	2.2			2.2			3.5	4.0	3.3	3.5	4.0	3.3
p0 queue free %	88			96			0	69	99	96	58	78
cM capacity (veh/h)	878			1071			58	105	757	85	105	637

Direction, Lane #	EB 1	EB 2	EB 3	WB 1	WB 2	WB 3	NB 1	SB 1	SB 2
Volume Total	101	303	185	44	465	255	143	47	143
Volume Left	101	0	0	44	0	0	99	3	0
Volume Right	0	0	33	0	0	22	11	0	143
cSH	878	1700	1700	1071	1700	1700	70	103	637
Volume to Capacity	0.12	0.18	0.11	0.04	0.27	0.15	2.04	0.46	0.22
Queue Length 95th (ft)	10	0	0	3	0	0	330	50	21
Control Delay (s)	9.6	0.0	0.0	8.5	0.0	0.0	612.1	66.7	12.3
Lane LOS	A			A			F	F	B
Approach Delay (s)	1.7			0.5			612.1	25.8	
Approach LOS							F	D	

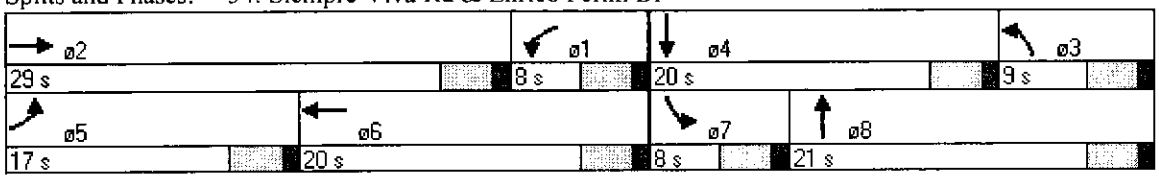
Intersection Summary			
Average Delay	55.6		
Intersection Capacity Utilization	47.1%	ICU Level of Service	A
Analysis Period (min)	15		

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Total Lost Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	0.97	1.00	1.00	1.00	0.95	0.95	1.00	0.95	0.95	1.00	0.95	0.95
Frt		0.988			0.974			0.967			0.865	
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	3433	1840	0	1770	3447	0	1770	3422	0	1770	3061	0
Flt Permitted	0.950			0.950			0.950			0.950		
Satd. Flow (perm)	3433	1840	0	1770	3447	0	1770	3422	0	1770	3061	0
Satd. Flow (RTOR)		8			35			26			343	
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Volume (vph)	256	330	30	20	380	80	60	70	20	20	30	264
Adj. Flow (vph)	332	429	39	26	494	104	78	91	26	26	39	343
Lane Group Flow (vph)	332	468	0	26	598	0	78	117	0	26	382	0
Turn Type	Prot			Prot			Prot			Prot		
Protected Phases	5	2		1	6		3	8		7	4	
Permitted Phases												
Total Split (s)	17.0	29.0	0.0	8.0	20.0	0.0	9.0	21.0	0.0	8.0	20.0	0.0
Act Effct Green (s)	11.1	36.5		5.0	24.6		6.5	15.1		4.7	9.7	
Actuated g/C Ratio	0.17	0.55		0.08	0.37		0.10	0.23		0.07	0.15	
v/c Ratio	0.58	0.46		0.19	0.46		0.45	0.15		0.21	0.51	
Control Delay	28.0	9.1		32.9	18.6		39.1	15.2		32.2	2.0	
Queue Delay	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Delay	28.0	9.1		32.9	18.6		39.1	15.2		32.2	2.0	
LOS	C	A		C	B		D	B		C	A	
Approach Delay		16.9			19.2			24.8			3.9	
Approach LOS		B			B			C			A	

Intersection Summary

Cycle Length: 66
Actuated Cycle Length: 66
Offset: 0 (0%), Referenced to phase 2:EBT and 6:WBT, Start of Green
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 0.58
Intersection Signal Delay: 15.8 — Intersection LOS: B
Intersection Capacity Utilization 48.6% — ICU Level of Service A
Analysis Period (min) 15

Splits and Phases: 34: Siempre Viva Rd & Enrico Fermi Dr

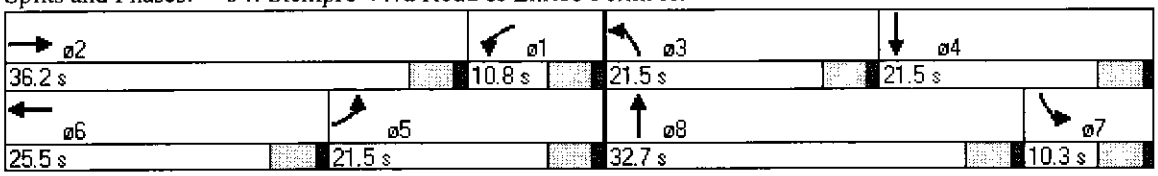


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Total Lost Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	0.97	1.00	1.00	1.00	0.95	0.95	1.00	0.95	0.95	1.00	0.95	0.95
Frt		0.966			0.980			0.978			0.860	
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	3433	1799	0	1770	3468	0	1770	3461	0	1770	3044	0
Flt Permitted	0.950			0.950			0.950			0.950		
Satd. Flow (perm)	3433	1799	0	1770	3468	0	1770	3461	0	1770	3044	0
Satd. Flow (RTOR)		19			18			21			141	
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Volume (vph)	304	100	30	30	390	60	170	120	20	20	10	135
Adj. Flow (vph)	317	104	31	31	406	62	177	125	21	21	10	141
Lane Group Flow (vph)	317	135	0	31	468	0	177	146	0	21	151	0
Turn Type	Prot			Prot			Prot			Prot		
Protected Phases	5	2		1	6		3	8		7	4	
Permitted Phases												
Total Split (s)	21.5	36.2	0.0	10.8	25.5	0.0	21.5	32.7	0.0	10.3	21.5	0.0
Act Effct Green (s)	14.9	33.9		6.5	21.5		14.0	37.5		6.2	23.6	
Actuated g/C Ratio	0.17	0.38		0.07	0.24		0.16	0.42		0.07	0.26	
v/c Ratio	0.56	0.20		0.24	0.56		0.64	0.10		0.17	0.17	
Control Delay	36.1	11.3		43.7	31.8		40.6	16.2		34.2	6.9	
Queue Delay	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Delay	36.1	11.3		43.7	31.8		40.6	16.2		34.2	6.9	
LOS	D	B		D	C		D	B		C	A	
Approach Delay		28.7			32.5			29.6			10.2	
Approach LOS		C			C			C			B	

Intersection Summary

Cycle Length: 90
Actuated Cycle Length: 90
Offset: 84 (93%), Referenced to phase 2:EBT and 6:WBT, Start of Green
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 0.64
Intersection Signal Delay: 28.0 — Intersection LOS: C
Intersection Capacity Utilization 48.8% — ICU Level of Service A
Analysis Period (min) 15

Splits and Phases: 34: Siempre Viva Road & Enrico Fermi Rd



Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Sign Control	Stop		Free			Free
Grade	0%		0%			0%
Volume (veh/h)	27	30	548	79	30	434
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	29	33	596	86	33	472
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type	TWLTL					
Median storage veh)	1					
Upstream signal (ft)			1299			
pX, platoon unblocked	0.86	0.86			0.86	
vC, conflicting volume	1176	639			682	
vC1, stage 1 conf vol	639					
vC2, stage 2 conf vol	537					
vCu, unblocked vol	1203	581			631	
tC, single (s)	6.4	6.2			4.1	
tC, 2 stage (s)	5.4					
tF (s)	3.5	3.3			2.2	
p0 queue free %	91	93			96	
cM capacity (veh/h)	313	443			821	

Direction, Lane #	WB 1	NB 1	SB 1
Volume Total	62	682	504
Volume Left	29	0	33
Volume Right	33	86	0
cSH	371	1700	821
Volume to Capacity	0.17	0.40	0.04
Queue Length 95th (ft)	15	0	3
Control Delay (s)	16.7	0.0	1.1
Lane LOS	C		A
Approach Delay (s)	16.7	0.0	1.1
Approach LOS	C		

Intersection Summary			
Average Delay	1.3		
Intersection Capacity Utilization	57.5%	ICU Level of Service	B
Analysis Period (min)	15		

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Sign Control	Stop		Free			Free
Grade	0%		0%			0%
Volume (veh/h)	49	30	525	27	30	467
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	53	33	571	29	33	508
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type	TWLTL					
Median storage veh)	1					
Upstream signal (ft)			1296			
pX, platoon unblocked	0.78	0.78			0.78	
vC, conflicting volume	1158	585			600	
vC1, stage 1 conf vol	585					
vC2, stage 2 conf vol	573					
vCu, unblocked vol	1202	472			490	
tC, single (s)	6.4	6.2			4.1	
tC, 2 stage (s)	5.4					
tF (s)	3.5	3.3			2.2	
p0 queue free %	83	93			96	
cM capacity (veh/h)	306	465			842	

Direction, Lane #	WB 1	NB 1	SB 1
Volume Total	86	600	540
Volume Left	53	0	33
Volume Right	33	29	0
cSH	351	1700	842
Volume to Capacity	0.24	0.35	0.04
Queue Length 95th (ft)	24	0	3
Control Delay (s)	18.5	0.0	1.1
Lane LOS	C		A
Approach Delay (s)	18.5	0.0	1.1
Approach LOS	C		

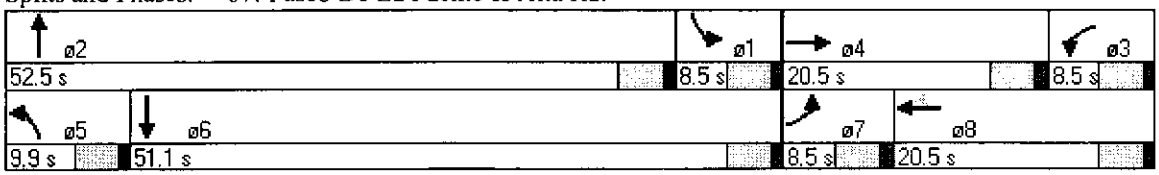
Intersection Summary			
Average Delay	1.8		
Intersection Capacity Utilization	60.4%	ICU Level of Service	B
Analysis Period (min)	15		

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Total Lost Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.925				0.850		0.984			0.989	
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1770	1723	0	1770	1863	1583	1770	1833	0	1770	1842	0
Flt Permitted	0.950			0.950			0.950			0.950		
Satd. Flow (perm)	1770	1723	0	1770	1863	1583	1770	1833	0	1770	1842	0
Satd. Flow (RTOR)		33				29		11			6	
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Volume (vph)	30	30	30	40	30	27	30	570	70	31	400	30
Adj. Flow (vph)	33	33	33	43	33	29	33	620	76	34	435	33
Lane Group Flow (vph)	33	66	0	43	33	29	33	696	0	34	468	0
Turn Type	Prot			Prot		Perm	Prot			Prot		
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases						8						
Total Split (s)	8.5	20.5	0.0	8.5	20.5	20.5	9.9	52.5	0.0	8.5	51.1	0.0
Act Effct Green (s)	5.7	9.1		5.7	9.0	9.0	7.4	55.2		5.7	54.7	
Actuated g/C Ratio	0.08	0.12		0.08	0.12	0.12	0.10	0.82		0.08	0.81	
v/c Ratio	0.24	0.27		0.31	0.14	0.13	0.19	0.47		0.24	0.31	
Control Delay	32.9	16.5		34.2	25.3	13.0	30.1	8.2		32.9	7.0	
Queue Delay	0.0	0.0		0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Total Delay	32.9	16.5		34.2	25.3	13.0	30.1	8.2		32.9	7.0	
LOS	C	B		C	C	B	C	A		C	A	
Approach Delay		21.9			25.5			9.2			8.7	
Approach LOS		C			C			A			A	

Intersection Summary

Cycle Length: 90
Actuated Cycle Length: 67.7
Control Type: Actuated-Uncoordinated
Maximum v/c Ratio: 0.47
Intersection Signal Delay: 11.1 — Intersection LOS: B
Intersection Capacity Utilization 50.9% — ICU Level of Service A
Analysis Period (min) 15

Splits and Phases: 67: Paseo De La Fuente & Alta Rd.

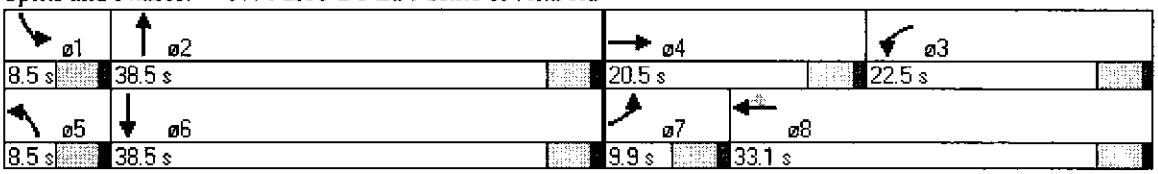


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Total Lost Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.925				0.850		0.986			0.991	
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1770	1723	0	1770	1863	1583	1770	1837	0	1770	1846	0
Flt Permitted	0.950			0.950			0.950			0.950		
Satd. Flow (perm)	1770	1723	0	1770	1863	1583	1770	1837	0	1770	1846	0
Satd. Flow (RTOR)		33				35		7			4	
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Volume (vph)	30	30	30	260	30	32	30	490	50	26	460	30
Adj. Flow (vph)	33	33	33	283	33	35	33	533	54	28	500	33
Lane Group Flow (vph)	33	66	0	283	33	35	33	587	0	28	533	0
Turn Type	Prot			Prot		Perm	Prot			Prot		
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases						8						
Total Split (s)	9.9	20.5	0.0	22.5	33.1	33.1	8.5	38.5	0.0	8.5	38.5	0.0
Act Effct Green (s)	6.3	7.8		14.7	18.1	18.1	4.8	28.4		4.8	28.4	
Actuated g/C Ratio	0.09	0.12		0.24	0.30	0.30	0.07	0.47		0.07	0.47	
v/c Ratio	0.20	0.28		0.66	0.06	0.07	0.25	0.68		0.22	0.62	
Control Delay	38.0	20.4		28.4	20.1	9.0	41.3	19.7		40.6	18.2	
Queue Delay	0.0	0.0		0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Total Delay	38.0	20.4		28.4	20.1	9.0	41.3	19.7		40.6	18.2	
LOS	D	C		C	C	A	D	B		D	B	
Approach Delay		26.3			25.7			20.8			19.4	
Approach LOS		C			C			C			B	

Intersection Summary

Cycle Length: 90
Actuated Cycle Length: 61
Control Type: Actuated-Uncoordinated
Maximum v/c Ratio: 0.68
Intersection Signal Delay: 21.7 — Intersection LOS: C
Intersection Capacity Utilization 56.6% — ICU Level of Service B
Analysis Period (min) 15

Splits and Phases: 67: Paseo De La Fuente & Alta Rd



Cumulative w/o Project – Intersection ILV Analysis

INTERSECTION

Signalized Intersection

CAPACITY ANALYSIS

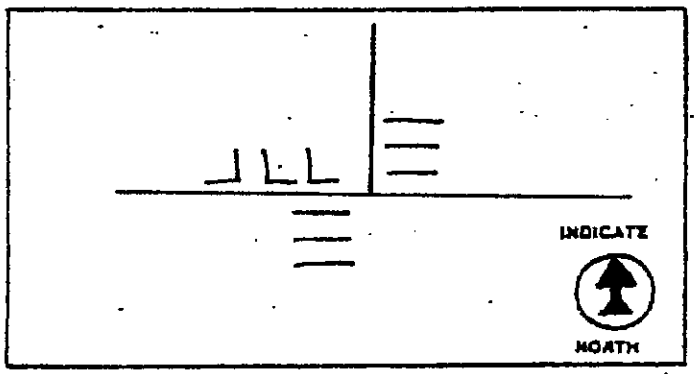
INTERSECTION Otay Mesa/SR-125 SB
Cumulative (2020) w/
SR-905 (Phases 1A & 1B)

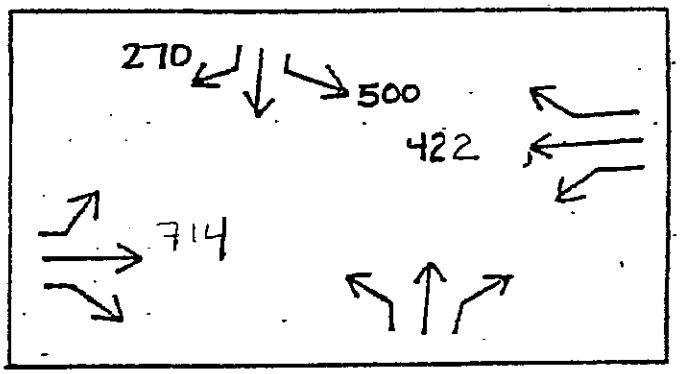
DIST. CO. RTE. P.M. 11/SD/125

BY JEB/DAH DATE 3-23-10 / 8-17-10

TIME ____ AM PM

DIAGRAM AND TRAFFIC FLOWS: w/o Project





LANE VOLUMES (ILV/hr):

Phase 1	Phase 2	Phase 3	Phase 4
140 141 141 238 238 238	270 250 250		

CRITICAL LANE VOLUMES (ILV/hr):

Phase 1	Phase 2	Phase 3	Phase 4
238	270		

TOTAL OPERATING LEVEL (ILV/hr):

Σ
508

Is . . .

☒ < 1200 ILV/hr.

☐ > 1200 but < 1500 ILV/hr.

☐ > 1500 ILV/hr. (CAPACITY)

REMARKS:

INTERSECTION

Signalized Intersection

CAPACITY ANALYSIS

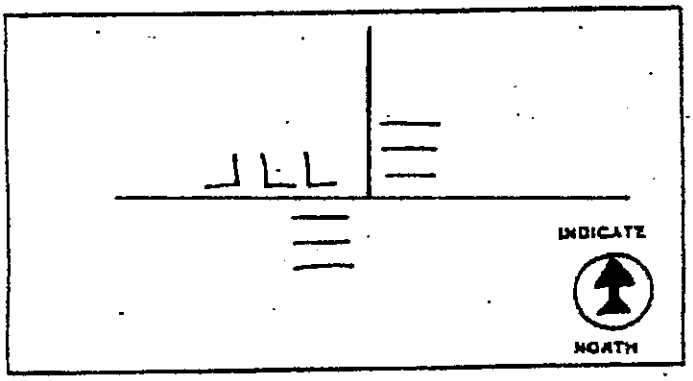
INTERSECTION Otay Mesa/SR-125 SB Cumulative (2020) w/ SR-905 (Phases 1A & 1B) w/o Project

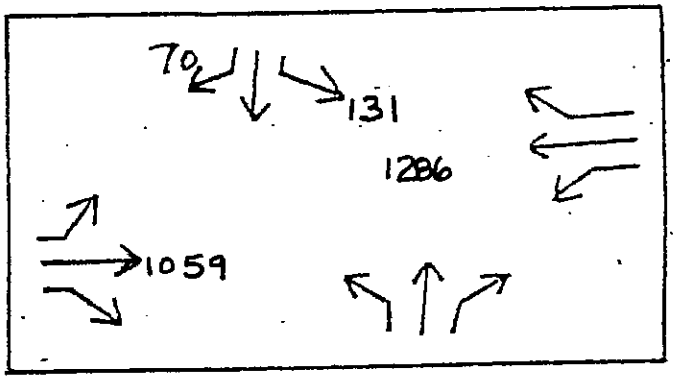
DIST. CO. RTE. P.M. 11/SD/125

BY JLB/[illegible] DATE 3-23-10/8-17-10

TIME ____ AM (PM)

DIAGRAM AND TRAFFIC FLOWS:





LANE VOLUMES (ILV/hr):

Phase 1	Phase 2	Phase 3	Phase 4
428 429 429 353 353 353	70 65 66		

CRITICAL LANE VOLUMES (ILV/hr):

Phase 1	Phase 2	Phase 3	Phase 4
429	70		

TOTAL OPERATING LEVEL (ILV/hr):

Σ
499

Is . . .

☒ < 1200 ILV/hr.

☐ > 1200 but < 1500 ILV/hr.

☐ > 1500 ILV/hr. (CAPACITY)

REMARKS:

INTERSECTION

Signalized Intersection

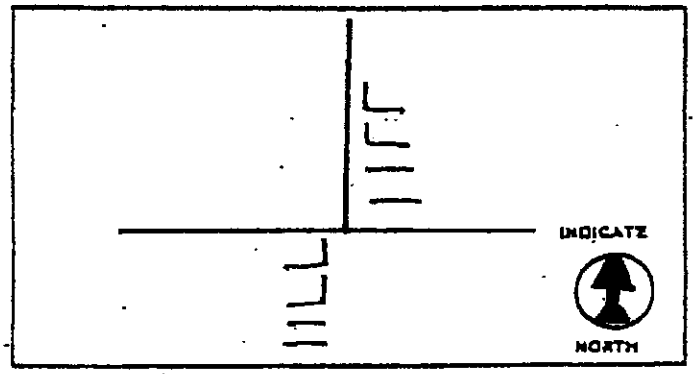
CAPACITY ANALYSIS

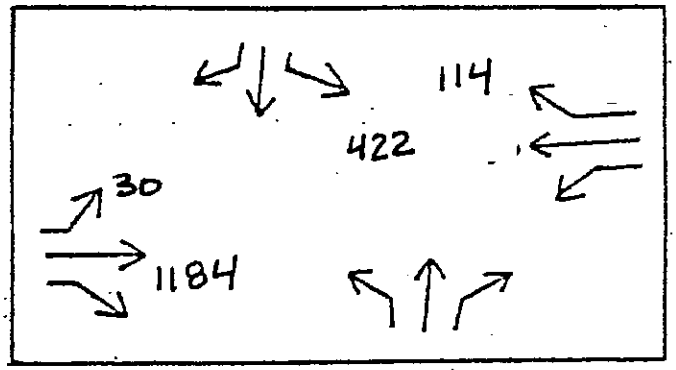
INTERSECTION Otay Mesa/SR-125NB Ramp DIST. CO. RTE. P.M. 11/SD/905

Cumulative (2020) w/ SR-905 (Phases 1A & 1B) w/o Project BY JB/SH DATE 3-23-10 / 8-17-10

TIME ____ (AM) PM

DIAGRAM AND TRAFFIC FLOWS:





LANE VOLUMES (ILV/hr):

Phase 1	Phase 2	Phase 3	Phase 4
15 L 15 L 15 15	L 57 L 57 211 211 577 577		

CRITICAL LANE VOLUMES (ILV/hr):

Phase 1	Phase 2	Phase 3	Phase 4
15	577		

TOTAL OPERATING LEVEL (ILV/hr):

Σ
592

Is . . .

☒ < 1200 ILV/hr.

☐ > 1200 but < 1500 ILV/hr.

☐ > 1500 ILV/hr. (CAPACITY)

REMARKS:

INTERSECTION

Signalized Intersection

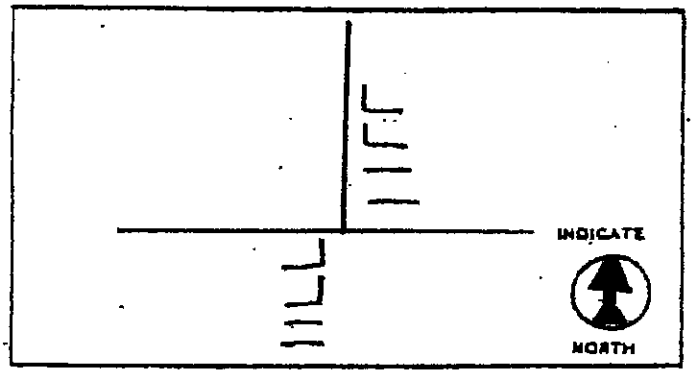
CAPACITY ANALYSIS

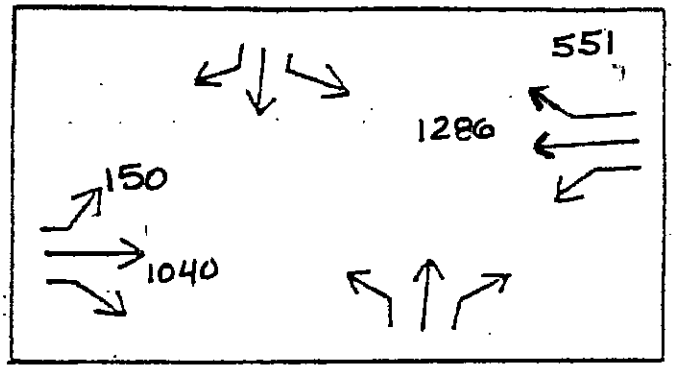
INTERSECTION Otay Mesa/SR-125 NB Ramp DIST. CO. RTE. P.M. 11/SD/905

Cumulative (2020) w/ SR-905 (Phases 1A & 1B) w/o Project BY JB/KH DATE 3-23-10 / 8-17-10

TIME ____ AM (PM)

DIAGRAM AND TRAFFIC FLOWS:





LANE VOLUMES (ILV/hr):

Phase 1	Phase 2	Phase 3	Phase 4
75 75 75 75	276 275 643 643 520 520		

CRITICAL LANE VOLUMES (ILV/hr):

Phase 1	Phase 2	Phase 3	Phase 4
75	643		

TOTAL OPERATING LEVEL (ILV/hr):

Σ
718

Is . . .

- ☒ < 1200 ILV/hr.
- ☐ > 1200 but < 1500 ILV/hr.
- ☐ > 1500 ILV/hr. (CAPACITY)

REMARKS:

INTERSECTION

Signalized Intersection

CAPACITY ANALYSIS

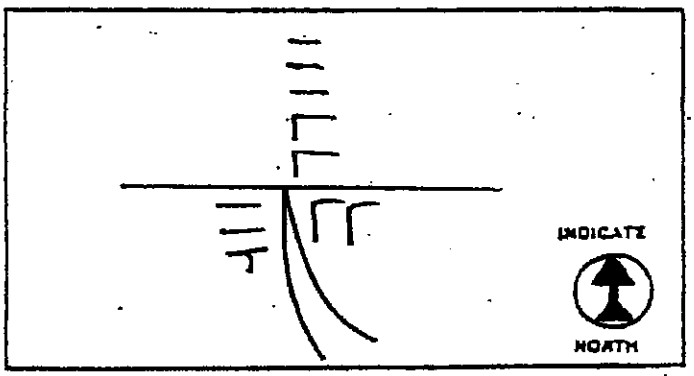
INTERSECTION Siempre Viva | SR-905 SB Ramp
Cumulative (2020) w/ SR-905 (Phases 1A & 1B)

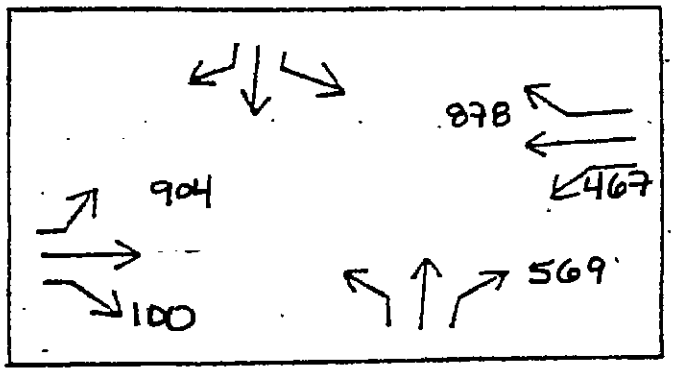
DIST. CO. RTE. P.M. 11 | SD | 905

BY CB/MH DATE 3-23-10 / 8-17-10

TIME ____ (AM) PM

DIAGRAM AND TRAFFIC FLOWS: w/o Project





LANE VOLUMES (1LV/hr):

Phase 1	Phase 2	Phase 3	Phase 4
97 97 98 233 234	97 98 98 335 335 334	97 98 98	

CRITICAL LANE VOLUMES (1LV/hr):

Phase 1	Phase 2	Phase 3	Phase 4
234	335	168	

TOTAL OPERATING LEVEL (1LV/hr):

Σ
737

Is . . .

- ☒ < 1200 1LV/hr.
- ☐ > 1200 but < 1500 1LV/hr.
- ☐ > 1500 1LV/hr. (CAPACITY)

REMARKS:

INTERSECTION

Signalized Intersection

CAPACITY ANALYSIS

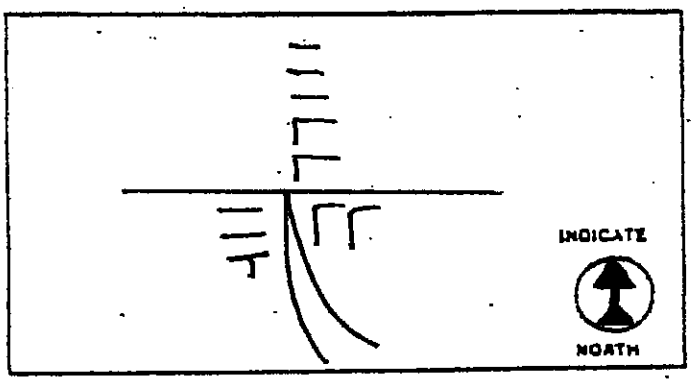
INTERSECTION Siempre Viva | SR-905 SB Ramp
Cumulative (2020) w/ SR-905 (Phases 1A & 1B)

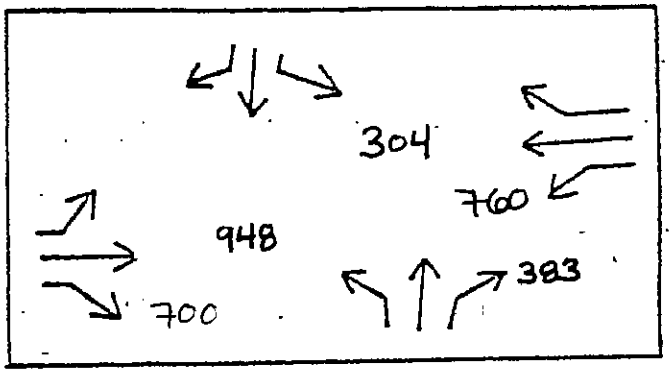
DIST. CO. RTE. P.M. 11 | SD | 905

BY XB DATE 3-23-10

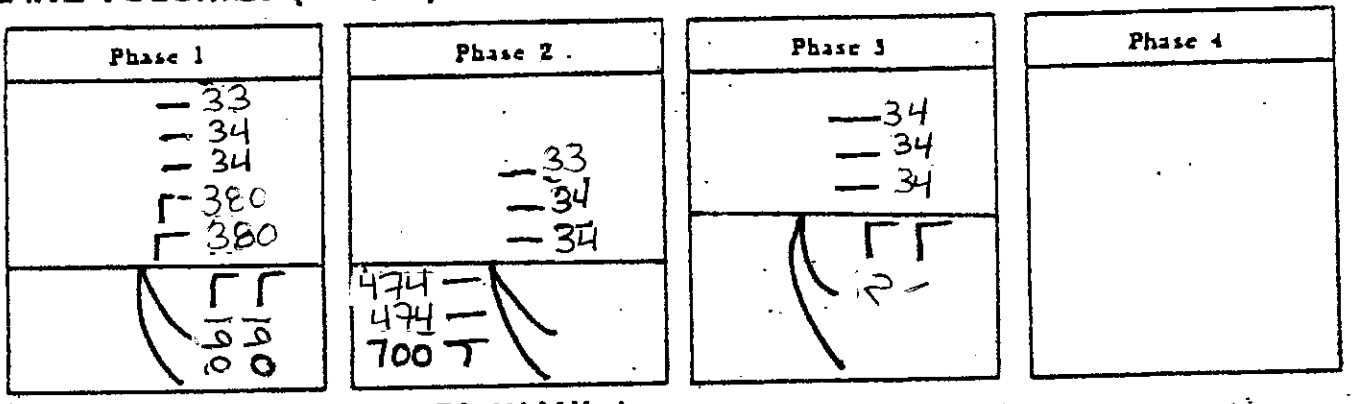
TIME ____ AM (PM)

DIAGRAM AND TRAFFIC FLOWS: w/o Project





LANE VOLUMES (1LV/hr):



CRITICAL LANE VOLUMES (1LV/hr):

Phase 1	Phase 2	Phase 3	Phase 4
380	700	34	

TOTAL OPERATING LEVEL (1LV/hr):

Σ
1114

Is . . .

- [x] < 1200 1LV/hr.
- [ ] > 1200 but < 1500 1LV/hr.
- [ ] > 1500 1LV/hr. (CAPACITY)

REMARKS:

INTERSECTION

Signalized Intersection

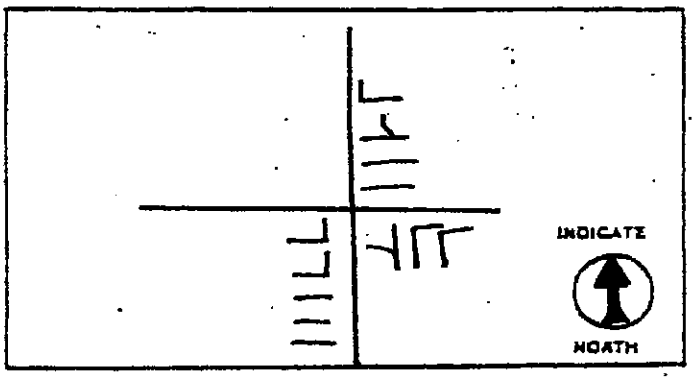
CAPACITY ANALYSIS

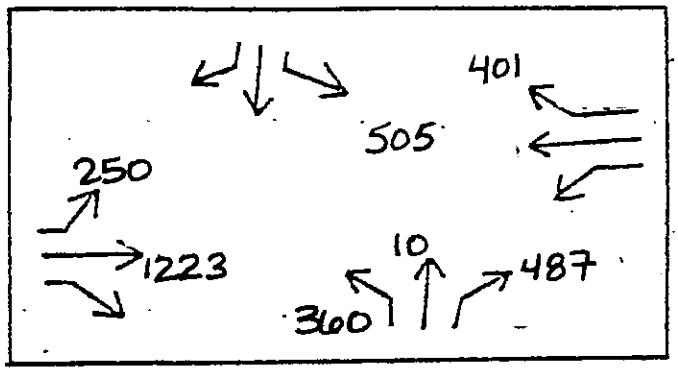
INTERSECTION Siempre Viva / SR-905 NB Ramp DIST. CO. RTE. P.M. 11/SD/905

Cumulative (2020) w/ SR 905 (Phases 1A & 1B) BY MH DATE 3-23-10 / 8-17-10

TIME ____ (AM) PM

DIAGRAM AND TRAFFIC FLOWS: w/o Project





LANE VOLUMES (ILV/hr):

Phase 1	Phase 2	Phase 3	Phase 4
125 L 125 L 125 125 125	226 L 226 L 227 227 283 283 282	370 T 243 L 244 L	

CRITICAL LANE VOLUMES (ILV/hr):

Phase 1	Phase 2	Phase 3	Phase 4
125	283	370	

TOTAL OPERATING LEVEL (ILV/hr): Is . . .

Σ 778

☒ < 1200 ILV/hr.

☐ > 1200 but < 1500 ILV/hr.

☐ > 1500 ILV/hr. (CAPACITY)

REMARKS:

Signalized Intersection

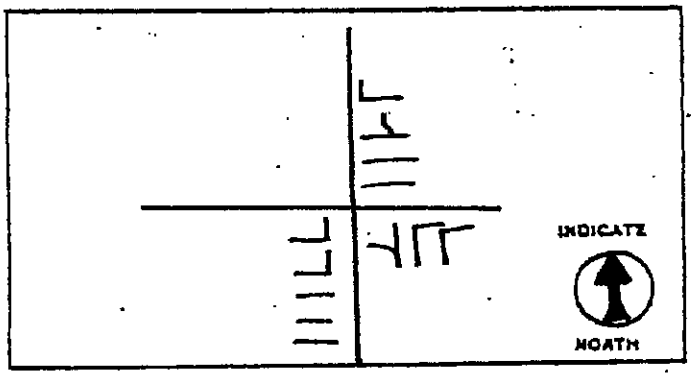
CAPACITY ANALYSIS

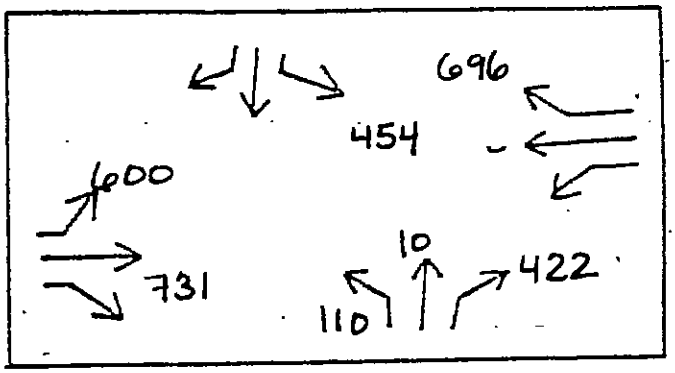
INTERSECTION Siempre Viva / SR-905 NB DIST. CO. RTE. P.M. 11/SD/905

Cumulative (2020) w/o Ramp Project BY [illegible] DATE 3-23-10

w/ SR-905 (Phases 1A & 1B) TIME ____ AM (PM)

DIAGRAM AND TRAFFIC FLOWS:





LANE VOLUMES (ILV/hr):

Phase 1	Phase 2	Phase 3	Phase 4
300 300 122 122 122	348 348 227 227 122 122 121	120 211 211	

CRITICAL LANE VOLUMES (ILV/hr):

Phase 1	Phase 2	Phase 3	Phase 4
300	348	211	

TOTAL OPERATING LEVEL (ILV/hr):

Σ
859

Is . . .

- ☑ < 1200 ILV/hr.
- ☐ > 1200 but < 1500 ILV/hr.
- ☐ > 1500 ILV/hr. (CAPACITY)

REMARKS:

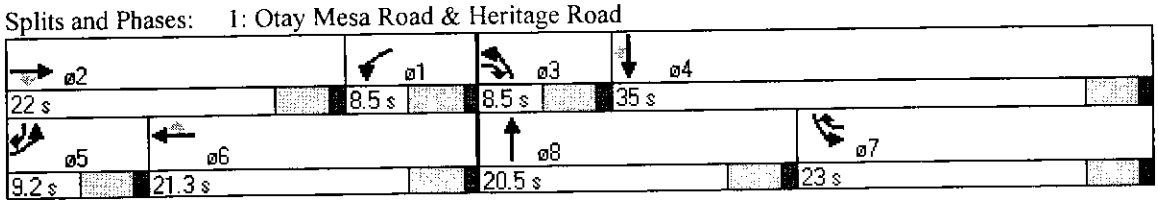
Cumulative w/Project – Intersection Synchro Analysis

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Total Lost Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	0.97	0.91	1.00	0.97	0.91	1.00	1.00	1.00	1.00	1.00	1.00	0.88
Frt			0.850			0.850		0.949				0.850
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	3433	4803	1583	3433	4803	1583	1770	1768	0	1770	1863	2787
Flt Permitted	0.950			0.950			0.950			0.950		
Satd. Flow (perm)	3433	4803	1583	3433	4803	1583	1770	1768	0	1770	1863	2787
Satd. Flow (RTOR)			65			129		22				97
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Volume (vph)	180	1000	60	10	410	120	20	40	20	390	60	90
Adj. Flow (vph)	194	1075	65	11	441	129	22	43	22	419	65	97
Lane Group Flow (vph)	194	1075	65	11	441	129	22	65	0	419	65	97
Turn Type	Prot		pm+ov	Prot		pm+ov	Prot			Prot		pm+ov
Protected Phases	5	2	3	1	6	7	3	8		7	4	5
Permitted Phases			2			6						4
Total Split (s)	9.2	22.0	8.5	8.5	21.3	23.0	8.5	20.5	0.0	23.0	35.0	9.2
Act Effct Green (s)	6.6	27.8	35.5	4.5	18.9	43.6	4.5	7.8		24.6	29.7	40.3
Actuated g/C Ratio	0.09	0.38	0.48	0.06	0.26	0.59	0.06	0.11		0.33	0.40	0.54
v/c Ratio	0.63	0.60	0.08	0.05	0.36	0.13	0.20	0.31		0.71	0.09	0.06
Control Delay	45.0	22.6	3.7	25.1	19.9	1.5	37.7	25.8		28.9	13.7	2.1
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0
Total Delay	45.0	22.6	3.7	25.1	19.9	1.5	37.7	25.8		28.9	13.7	2.1
LOS	D	C	A	C	B	A	D	C		C	B	A
Approach Delay		24.9			15.9			28.8			22.7	
Approach LOS		C			B			C			C	

Intersection Summary

Cycle Length: 74
Actuated Cycle Length: 74
Offset: 0 (0%), Referenced to phase 2:EBT and 6:WBT, Start of Green, Master Intersection
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 0.71
Intersection Signal Delay: 22.5 — Intersection LOS: C
Intersection Capacity Utilization 60.9% — ICU Level of Service B
Analysis Period (min) 15

Splits and Phases: 1: Otay Mesa Road & Heritage Road

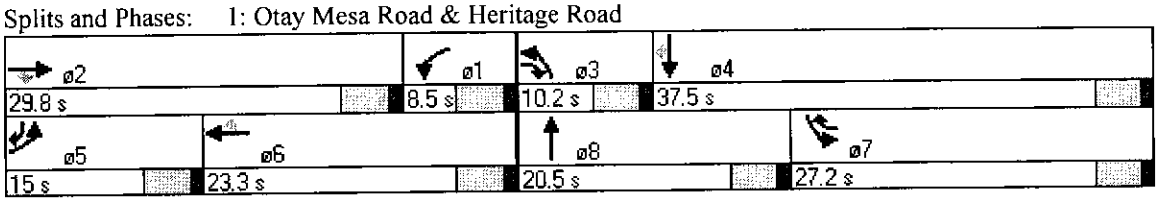


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Total Lost Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	0.97	0.91	1.00	0.97	0.91	1.00	1.00	1.00	1.00	1.00	1.00	0.88
Frt			0.850			0.850		0.972				0.850
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	3433	4803	1583	3433	4803	1583	1770	1811	0	1770	1863	2787
Flt Permitted	0.950			0.950			0.950			0.950		
Satd. Flow (perm)	3433	4803	1583	3433	4803	1583	1770	1811	0	1770	1863	2787
Satd. Flow (RTOR)			52			322		12				272
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Volume (vph)	320	600	50	20	820	370	40	90	20	370	100	370
Adj. Flow (vph)	330	619	52	21	845	381	41	93	21	381	103	381
Lane Group Flow (vph)	330	619	52	21	845	381	41	114	0	381	103	381
Turn Type	Prot		pm+ov	Prot		pm+ov	Prot			Prot		pm+ov
Protected Phases	5	2	3	1	6	7	3	8		7	4	5
Permitted Phases			2			6						4
Total Split (s)	15.0	29.8	10.2	8.5	23.3	27.2	10.2	20.5	0.0	27.2	37.5	15.0
Act Effct Green (s)	12.1	36.9	45.4	4.5	24.2	47.4	6.2	10.5		23.2	29.6	45.7
Actuated g/C Ratio	0.14	0.43	0.53	0.05	0.28	0.55	0.07	0.12		0.27	0.34	0.53
v/c Ratio	0.68	0.30	0.06	0.12	0.63	0.38	0.32	0.49		0.80	0.16	0.24
Control Delay	43.6	18.9	3.7	27.0	22.1	4.2	45.1	37.9		42.3	19.3	3.2
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0
Total Delay	43.6	18.9	3.7	27.0	22.1	4.2	45.1	37.9		42.3	19.3	3.2
LOS	D	B	A	C	C	A	D	D		D	B	A
Approach Delay		26.2			16.7			39.8			22.4	
Approach LOS		C			B			D			C	

Intersection Summary

Cycle Length: 86
Actuated Cycle Length: 86
Offset: 0 (0%), Referenced to phase 2:EBT and 6:WBT, Start of Green, Master Intersection
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 0.80
Intersection Signal Delay: 22.2 — Intersection LOS: C
Intersection Capacity Utilization 62.1% — ICU Level of Service B
Analysis Period (min) 15

Splits and Phases: 1: Otay Mesa Road & Heritage Road

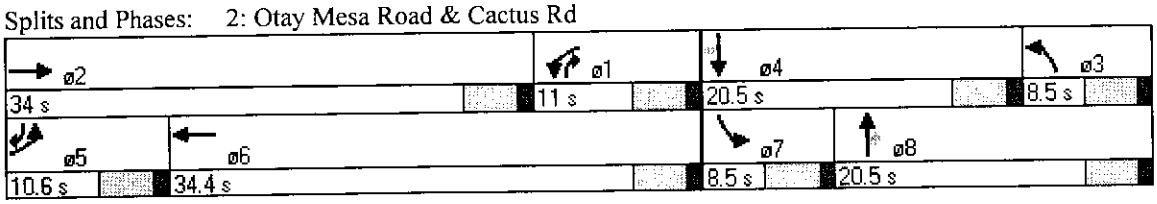


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Total Lost Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	1.00	0.91	0.91	1.00	0.91	0.91	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.993			0.989				0.850			0.850
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1770	4781	0	1770	4769	0	1770	1863	1583	1770	1863	1583
Flt Permitted	0.950			0.950			0.950			0.950		
Satd. Flow (perm)	1770	4781	0	1770	4769	0	1770	1863	1583	1770	1863	1583
Satd. Flow (RTOR)		12			21				103			44
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Volume (vph)	50	1260	60	60	510	40	20	10	100	20	10	40
Adj. Flow (vph)	55	1385	66	66	560	44	22	11	110	22	11	44
Lane Group Flow (vph)	55	1451	0	66	604	0	22	11	110	22	11	44
Turn Type	Prot			Prot			Prot		pm+ov	Prot		pm+ov
Protected Phases	5	2		1	6		3	8	1	7	4	5
Permitted Phases									8			4
Total Split (s)	10.6	34.0	0.0	11.0	34.4	0.0	8.5	20.5	11.0	8.5	20.5	10.6
Act Effct Green (s)	8.4	54.8		6.9	53.3		7.0	7.2	9.2	5.7	6.4	9.8
Actuated g/C Ratio	0.11	0.74		0.09	0.72		0.09	0.10	0.12	0.08	0.09	0.13
v/c Ratio	0.28	0.41		0.40	0.18		0.13	0.06	0.38	0.16	0.07	0.18
Control Delay	40.3	1.7		30.6	3.1		32.0	29.5	9.4	35.0	31.7	7.6
Queue Delay	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	40.3	1.7		30.6	3.1		32.0	29.5	9.4	35.0	31.7	7.6
LOS	D	A		C	A		C	C	A	D	C	A
Approach Delay		3.1			5.8			14.5			18.9	
Approach LOS		A			A			B			B	

Intersection Summary

Cycle Length: 74
Actuated Cycle Length: 74
Offset: 36 (49%), Referenced to phase 2:EBT and 6:WBT, Start of Green
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 0.41
Intersection Signal Delay: 5.1 — Intersection LOS: A
Intersection Capacity Utilization 46.8% — ICU Level of Service A
Analysis Period (min) 15

Splits and Phases: 2: Otay Mesa Road & Cactus Rd

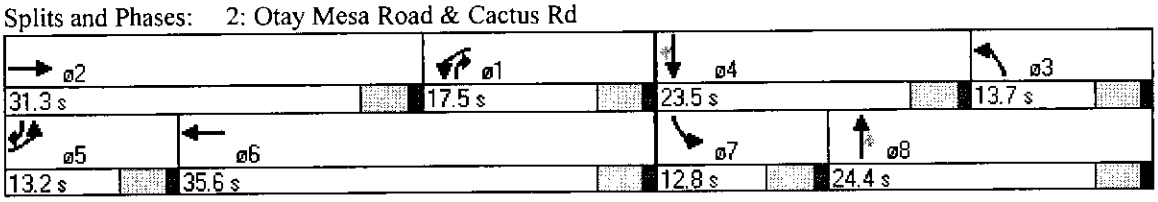


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Total Lost Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	1.00	0.91	0.91	1.00	0.91	0.91	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.990			0.987				0.850			0.850
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1770	4772	0	1770	4764	0	1770	1863	1583	1770	1863	1583
Flt Permitted	0.950			0.950			0.950			0.950		
Satd. Flow (perm)	1770	4772	0	1770	4764	0	1770	1863	1583	1770	1863	1583
Satd. Flow (RTOR)		13			21				112			102
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Volume (vph)	40	870	60	100	1130	110	50	10	110	30	10	100
Adj. Flow (vph)	41	888	61	102	1153	112	51	10	112	31	10	102
Lane Group Flow (vph)	41	949	0	102	1265	0	51	10	112	31	10	102
Turn Type	Prot			Prot			Prot		pm+ov	Prot		pm+ov
Protected Phases	5	2		1	6		3	8	1	7	4	5
Permitted Phases									8			4
Total Split (s)	13.2	31.3	0.0	17.5	35.6	0.0	13.7	24.4	17.5	12.8	23.5	13.2
Act Effct Green (s)	8.0	52.7		14.8	62.4		8.3	7.3	19.2	7.5	6.4	9.4
Actuated g/C Ratio	0.09	0.61		0.17	0.73		0.10	0.08	0.22	0.09	0.07	0.11
v/c Ratio	0.25	0.32		0.34	0.37		0.30	0.06	0.25	0.20	0.07	0.39
Control Delay	37.0	5.5		36.1	10.3		39.8	36.2	5.6	39.0	37.9	9.4
Queue Delay	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	37.0	5.5		36.1	10.3		39.8	36.2	5.6	39.0	37.9	9.4
LOS	D	A		D	B		D	D	A	D	D	A
Approach Delay		6.8			12.2			17.5			17.8	
Approach LOS		A			B			B			B	

Intersection Summary

Cycle Length: 86
Actuated Cycle Length: 86
Offset: 49 (57%), Referenced to phase 2:EBT and 6:WBT, Start of Green
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 0.39
Intersection Signal Delay: 10.9 — Intersection LOS: B
Intersection Capacity Utilization 47.1% — ICU Level of Service A
Analysis Period (min) 15

Splits and Phases: 2: Otay Mesa Road & Cactus Rd

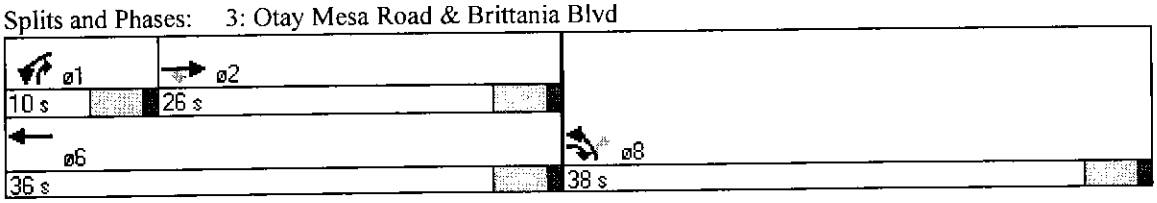


Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↑↑↑	↱	↰	↑↑↑	↰↰	↱
Total Lost Time (s)	4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	0.91	1.00	1.00	0.91	0.97	1.00
Frt		0.850				0.850
Flt Protected			0.950		0.950	
Satd. Flow (prot)	4803	1583	1770	4803	3433	1583
Flt Permitted			0.950		0.950	
Satd. Flow (perm)	4803	1583	1770	4803	3433	1583
Satd. Flow (RTOR)		428				12
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Volume (vph)	830	790	50	420	210	20
Adj. Flow (vph)	976	929	59	494	247	24
Lane Group Flow (vph)	976	929	59	494	247	24
Turn Type		pm+ov	Prot			pm+ov
Protected Phases	2	8	1	6	8	1
Permitted Phases		2				8
Total Split (s)	26.0	38.0	10.0	36.0	38.0	10.0
Act Effct Green (s)	38.7	61.4	7.4	48.1	17.9	29.3
Actuated g/C Ratio	0.52	0.83	0.10	0.65	0.24	0.40
v/c Ratio	0.39	0.67	0.33	0.16	0.30	0.04
Control Delay	7.6	7.5	42.3	2.2	21.8	6.0
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	7.6	7.5	42.3	2.2	21.8	6.0
LOS	A	A	D	A	C	A
Approach Delay	7.6			6.5	20.4	
Approach LOS	A			A	C	

Intersection Summary

Cycle Length: 74
Actuated Cycle Length: 74
Offset: 68 (92%), Referenced to phase 2:EBT and 6:WBT, Start of Green
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 0.67
Intersection Signal Delay: 8.6 — Intersection LOS: A
Intersection Capacity Utilization 58.9% — ICU Level of Service B
Analysis Period (min) 15

Splits and Phases: 3: Otay Mesa Road & Brittania Blvd

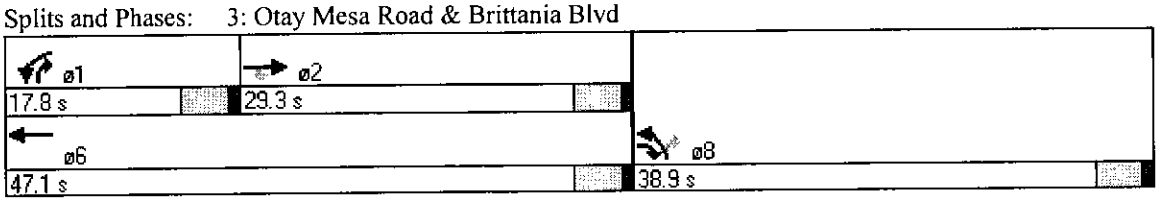


Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↑↑↑	↱	↰	↑↑↑	↰↰	↱
Total Lost Time (s)	4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	0.91	1.00	1.00	0.91	0.97	1.00
Frt		0.850				0.850
Flt Protected			0.950		0.950	
Satd. Flow (prot)	4803	1583	1770	4803	3433	1583
Flt Permitted			0.950		0.950	
Satd. Flow (perm)	4803	1583	1770	4803	3433	1583
Satd. Flow (RTOR)		366				43
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Volume (vph)	650	340	30	810	700	40
Adj. Flow (vph)	699	366	32	871	753	43
Lane Group Flow (vph)	699	366	32	871	753	43
Turn Type		pm+ov	Prot			pm+ov
Protected Phases	2	8	1	6	8	1
Permitted Phases		2				8
Total Split (s)	29.3	38.9	17.8	47.1	38.9	17.8
Act Effct Green (s)	47.2	76.5	7.2	54.3	23.7	34.9
Actuated g/C Ratio	0.55	0.89	0.08	0.63	0.28	0.41
v/c Ratio	0.27	0.25	0.22	0.29	0.80	0.06
Control Delay	3.7	0.8	35.6	4.7	35.4	4.1
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	3.7	0.8	35.6	4.7	35.4	4.1
LOS	A	A	D	A	D	A
Approach Delay	2.7			5.8	33.7	
Approach LOS	A			A	C	

Intersection Summary

Cycle Length: 86
Actuated Cycle Length: 86
Offset: 62 (72%), Referenced to phase 2:EBT and 6:WBT, Start of Green
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 0.80
Intersection Signal Delay: 12.7 — Intersection LOS: B
Intersection Capacity Utilization 45.9% — ICU Level of Service A
Analysis Period (min) 15

Splits and Phases: 3: Otay Mesa Road & Brittania Blvd

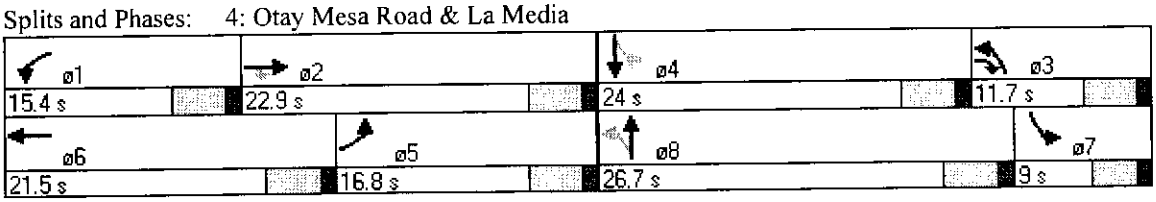


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Total Lost Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	1.00	0.91	1.00	1.00	0.91	0.91	1.00	1.00	1.00	0.97	1.00	1.00
Frt			0.850		0.977			0.962			0.928	
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1770	4803	1583	1770	4733	0	1770	1716	0	3433	1677	0
Flt Permitted	0.950			0.950			0.459			0.702		
Satd. Flow (perm)	1770	4803	1583	1770	4733	0	855	1716	0	2537	1677	0
Satd. Flow (RTOR)			253		47			21			61	
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Volume (vph)	120	750	240	110	430	80	80	60	20	110	130	120
Adj. Flow (vph)	126	789	253	116	453	84	84	63	21	116	137	126
Lane Group Flow (vph)	126	789	253	116	537	0	84	84	0	116	263	0
Turn Type	Prot		pm+ov	Prot			pm+pt			pm+pt		
Protected Phases	5	2	3	1	6		3	8		7	4	
Permitted Phases			2				8			4		
Total Split (s)	16.8	22.9	11.7	15.4	21.5	0.0	11.7	26.7	0.0	9.0	24.0	0.0
Act Effct Green (s)	11.6	29.7	37.0	9.5	27.7		16.3	11.0		24.0	14.3	
Actuated g/C Ratio	0.16	0.40	0.50	0.13	0.37		0.22	0.15		0.32	0.19	
v/c Ratio	0.45	0.41	0.28	0.51	0.30		0.31	0.31		0.12	0.70	
Control Delay	17.8	6.4	2.2	20.5	4.7		20.7	26.4		16.0	31.0	
Queue Delay	0.0	0.0	0.0	0.0	0.0		0.0	0.0		0.0	0.0	
Total Delay	17.8	6.4	2.2	20.5	4.7		20.7	26.4		16.0	31.0	
LOS	B	A	A	C	A		C	C		B	C	
Approach Delay		6.7			7.5			23.5			26.4	
Approach LOS		A			A			C			C	

Intersection Summary

Cycle Length: 74
Actuated Cycle Length: 74
Offset: 6 (8%), Referenced to phase 2:EBT and 6:WBT, Start of Green
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 0.70
Intersection Signal Delay: 11.3 — Intersection LOS: B
Intersection Capacity Utilization 52.5% — ICU Level of Service A
Analysis Period (min) 15

Splits and Phases: 4: Otay Mesa Road & La Media

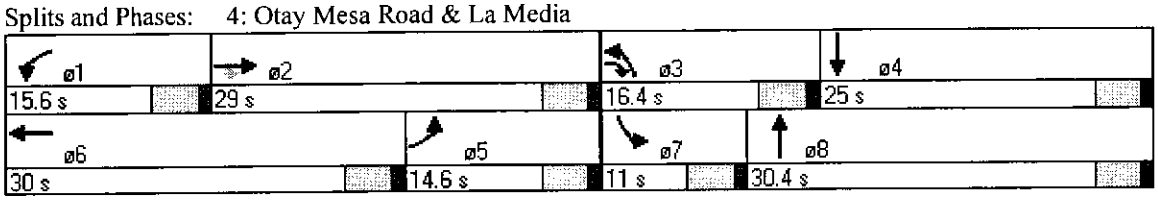


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Total Lost Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	1.00	0.91	1.00	1.00	0.91	0.91	1.00	1.00	1.00	0.97	1.00	1.00
Frt			0.850		0.993			0.950			0.919	
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1770	4803	1583	1770	4782	0	1770	1703	0	3433	1667	0
Flt Permitted	0.950			0.950			0.950			0.950		
Satd. Flow (perm)	1770	4803	1583	1770	4782	0	1770	1703	0	3433	1667	0
Satd. Flow (RTOR)			260		9			30			66	
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Volume (vph)	120	610	250	70	1200	60	170	60	30	120	160	190
Adj. Flow (vph)	125	635	260	73	1250	62	177	62	31	125	167	198
Lane Group Flow (vph)	125	635	260	73	1312	0	177	93	0	125	365	0
Turn Type	Prot		pm+ov	Prot			Prot			Prot		
Protected Phases	5	2	3	1	6		3	8		7	4	
Permitted Phases			2									
Total Split (s)	14.6	29.0	16.4	15.6	30.0	0.0	16.4	30.4	0.0	11.0	25.0	0.0
Act Effct Green (s)	10.0	32.1	47.9	9.0	31.4		11.8	24.0		6.9	19.1	
Actuated g/C Ratio	0.12	0.37	0.56	0.10	0.37		0.14	0.28		0.08	0.22	
v/c Ratio	0.61	0.35	0.26	0.39	0.75		0.73	0.19		0.45	0.86	
Control Delay	40.6	15.1	1.1	26.6	18.5		54.0	16.7		43.3	47.5	
Queue Delay	0.0	0.0	0.0	0.0	0.0		0.0	0.0		0.0	0.0	
Total Delay	40.6	15.1	1.1	26.6	18.5		54.0	16.7		43.3	47.5	
LOS	D	B	A	C	B		D	B		D	D	
Approach Delay		14.7			18.9			41.2			46.4	
Approach LOS		B			B			D			D	

Intersection Summary

Cycle Length: 86
Actuated Cycle Length: 86
Offset: 49 (57%), Referenced to phase 2:EBT and 6:WBT, Start of Green
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 0.86
Intersection Signal Delay: 23.7 — Intersection LOS: C
Intersection Capacity Utilization 74.0% — ICU Level of Service D
Analysis Period (min) 15

Splits and Phases: 4: Otay Mesa Road & La Media

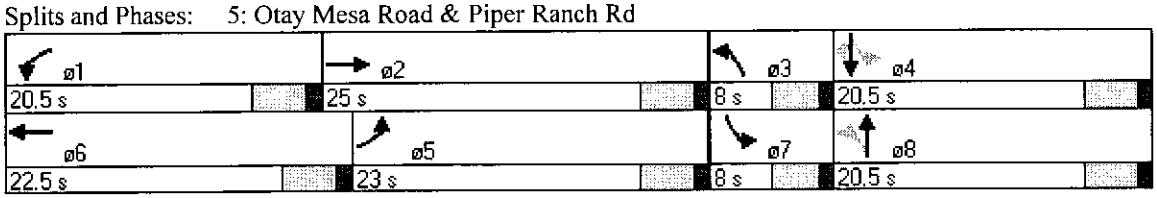


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Total Lost Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	1.00	0.95	0.95	1.00	0.91	0.91	1.00	1.00	1.00	1.00	0.95	0.95
Frt		0.969			0.985			0.898			0.945	0.850
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1770	3610	0	1770	5273	0	1770	1673	0	1770	1672	1504
Flt Permitted	0.950			0.950			0.734			0.737		
Satd. Flow (perm)	1770	3610	0	1770	5273	0	1367	1673	0	1373	1672	1504
Satd. Flow (RTOR)		43			24			21			12	30
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Volume (vph)	250	700	180	100	540	60	30	10	20	20	20	40
Adj. Flow (vph)	260	729	188	104	562	62	31	10	21	21	21	42
Lane Group Flow (vph)	260	917	0	104	624	0	31	31	0	21	33	30
Turn Type	Prot			Prot			pm+pt			pm+pt		Perm
Protected Phases	5	2		1	6		3	8		7	4	
Permitted Phases							8			4		4
Total Split (s)	23.0	25.0	0.0	20.5	22.5	0.0	8.0	20.5	0.0	8.0	20.5	20.5
Act Effct Green (s)	19.0	44.0		9.8	32.7		8.7	7.1		8.7	7.1	7.1
Actuated g/C Ratio	0.26	0.59		0.13	0.44		0.12	0.10		0.12	0.10	0.10
v/c Ratio	0.57	0.42		0.44	0.27		0.17	0.17		0.12	0.19	0.18
Control Delay	19.3	3.0		24.8	10.9		27.3	19.3		26.0	24.8	14.4
Queue Delay	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	0.0
Total Delay	19.3	3.0		24.8	10.9		27.3	19.3		26.0	24.8	14.4
LOS	B	A		C	B		C	B		C	C	B
Approach Delay		6.6			12.9			23.3			21.4	
Approach LOS		A			B			C			C	

Intersection Summary

Cycle Length: 74
Actuated Cycle Length: 74
Offset: 52 (70%), Referenced to phase 2:EBT and 6:WBT, Start of Green
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 0.57
Intersection Signal Delay: 10.0 — Intersection LOS: A
Intersection Capacity Utilization 47.7% — ICU Level of Service A
Analysis Period (min) 15

Splits and Phases: 5: Otay Mesa Road & Piper Ranch Rd

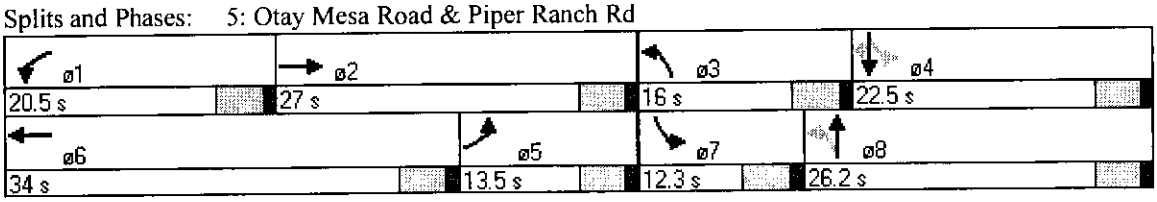


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Total Lost Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	1.00	0.95	0.95	1.00	0.91	0.91	1.00	1.00	1.00	1.00	0.95	0.95
Frt		0.990			0.998			0.875			0.862	0.850
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1770	3688	0	1770	5342	0	1770	1630	0	1770	1525	1504
Flt Permitted	0.950			0.950			0.522			0.677		
Satd. Flow (perm)	1770	3688	0	1770	5342	0	972	1630	0	1261	1525	1504
Satd. Flow (RTOR)		8			3			104			114	115
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Volume (vph)	40	860	60	30	1330	20	180	20	100	110	10	220
Adj. Flow (vph)	42	896	62	31	1385	21	188	21	104	115	10	229
Lane Group Flow (vph)	42	958	0	31	1406	0	188	125	0	115	124	115
Turn Type	Prot			Prot			pm+pt			pm+pt		Perm
Protected Phases	5	2		1	6		3	8		7	4	
Permitted Phases							8			4		4
Total Split (s)	13.5	27.0	0.0	20.5	34.0	0.0	16.0	26.2	0.0	12.3	22.5	22.5
Act Effct Green (s)	8.3	52.5		6.9	46.8		22.7	13.2		15.7	7.8	7.8
Actuated g/C Ratio	0.10	0.61		0.08	0.54		0.26	0.15		0.18	0.09	0.09
v/c Ratio	0.25	0.43		0.22	0.48		0.52	0.37		0.41	0.51	0.48
Control Delay	24.2	3.5		36.5	5.1		30.5	13.0		28.8	16.7	14.2
Queue Delay	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	0.0
Total Delay	24.2	3.5		36.5	5.1		30.5	13.0		28.8	16.7	14.2
LOS	C	A		D	A		C	B		C	B	B
Approach Delay		4.3			5.7			23.5			19.8	
Approach LOS		A			A			C			B	

Intersection Summary

Cycle Length: 86
Actuated Cycle Length: 86
Offset: 14 (16%), Referenced to phase 2:EBT and 6:WBT, Start of Green
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 0.52
Intersection Signal Delay: 8.7 — Intersection LOS: A
Intersection Capacity Utilization 54.8% — ICU Level of Service A
Analysis Period (min) 15

Splits and Phases: 5: Otay Mesa Road & Piper Ranch Rd

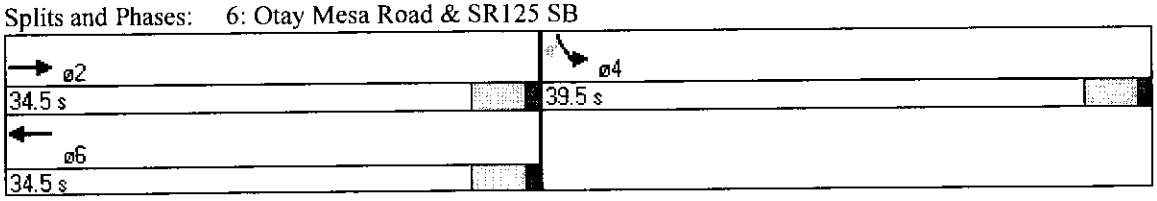


Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		↑↑↑	↑↑↑		↰↰	↱
Total Lost Time (s)	4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	1.00	0.91	0.91	1.00	0.97	1.00
Frt						0.850
Flt Protected					0.950	
Satd. Flow (prot)	0	5353	5353	0	3614	1667
Flt Permitted					0.950	
Satd. Flow (perm)	0	5353	5353	0	3614	1667
Satd. Flow (RTOR)						265
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Volume (vph)	0	740	430	0	520	270
Adj. Flow (vph)	0	771	448	0	542	281
Lane Group Flow (vph)	0	771	448	0	542	281
Turn Type						Perm
Protected Phases		2	6		4	
Permitted Phases						4
Total Split (s)	0.0	34.5	34.5	0.0	39.5	39.5
Act Effct Green (s)		49.3	49.3		16.7	16.7
Actuated g/C Ratio		0.67	0.67		0.23	0.23
v/c Ratio		0.22	0.13		0.66	0.48
Control Delay		2.2	7.3		29.7	6.7
Queue Delay		0.0	0.0		0.0	0.0
Total Delay		2.2	7.3		29.7	6.7
LOS		A	A		C	A
Approach Delay		2.2	7.3		21.9	
Approach LOS		A	A		C	

Intersection Summary

Cycle Length: 74
Actuated Cycle Length: 74
Offset: 8 (11%), Referenced to phase 2:EBT and 6:WBT, Start of Green
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 0.66
Intersection Signal Delay: 11.2 — Intersection LOS: B
Intersection Capacity Utilization 34.8% — ICU Level of Service A
Analysis Period (min) 15

Splits and Phases: 6: Otay Mesa Road & SR125 SB

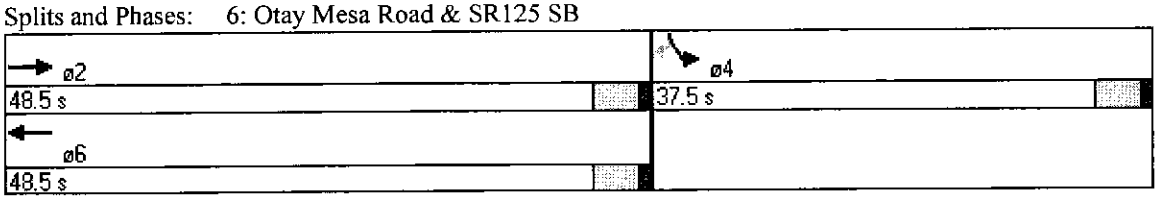


Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		↑↑↑	↑↑↑		↰↰	↱
Total Lost Time (s)	4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	1.00	0.91	0.91	1.00	0.97	1.00
Frt						0.850
Flt Protected					0.950	
Satd. Flow (prot)	0	5353	5353	0	3433	1583
Flt Permitted					0.950	
Satd. Flow (perm)	0	5353	5353	0	3433	1583
Satd. Flow (RTOR)						31
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Volume (vph)	0	1070	1310	0	140	70
Adj. Flow (vph)	0	1115	1365	0	146	73
Lane Group Flow (vph)	0	1115	1365	0	146	73
Turn Type						Perm
Protected Phases		2	6		4	
Permitted Phases						4
Total Split (s)	0.0	48.5	48.5	0.0	37.5	37.5
Act Effct Green (s)		69.0	69.0		9.0	9.0
Actuated g/C Ratio		0.80	0.80		0.10	0.10
v/c Ratio		0.26	0.32		0.41	0.38
Control Delay		5.9	3.9		39.0	28.6
Queue Delay		0.0	0.0		0.0	0.0
Total Delay		5.9	3.9		39.0	28.6
LOS		A	A		D	C
Approach Delay		5.9	3.9		35.5	
Approach LOS		A	A		D	

Intersection Summary

Cycle Length: 86
Actuated Cycle Length: 86
Offset: 62 (72%), Referenced to phase 2:EBT and 6:WBT, Start of Green
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 0.41
Intersection Signal Delay: 7.3 — Intersection LOS: A
Intersection Capacity Utilization 45.3% — ICU Level of Service A
Analysis Period (min) 15

Splits and Phases: 6: Otay Mesa Road & SR125 SB

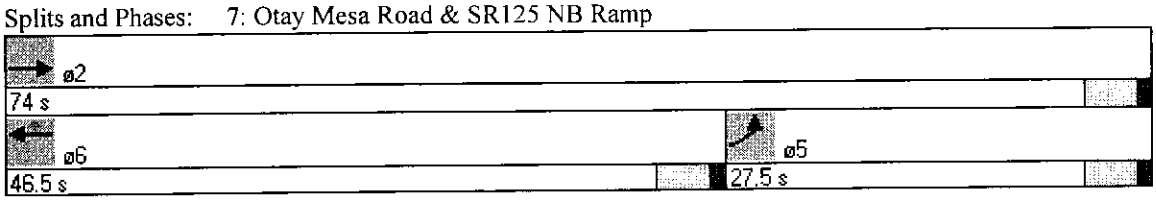


Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Total Lost Time (s)	4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	0.97	0.95	0.95	0.88	1.00	1.00
Frt				0.850		
Flt Protected	0.950					
Satd. Flow (prot)	3704	3819	3819	3007	0	0
Flt Permitted	0.950					
Satd. Flow (perm)	3704	3819	3819	3007	0	0
Satd. Flow (RTOR)				125		
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Volume (vph)	30	1230	430	120	0	0
Adj. Flow (vph)	31	1281	448	125	0	0
Lane Group Flow (vph)	31	1281	448	125	0	0
Turn Type	Prot			Perm		
Protected Phases	5	2	6			
Permitted Phases				6		
Total Split (s)	27.5	74.0	46.5	46.5	0.0	0.0
Act Effct Green (s)	15.9	74.0	58.6	58.6		
Actuated g/C Ratio	0.21	1.00	0.79	0.79		
v/c Ratio	0.04	0.34	0.15	0.05		
Control Delay	13.7	0.5	9.0	5.1		
Queue Delay	0.0	0.0	0.0	0.0		
Total Delay	13.7	0.5	9.0	5.1		
LOS	B	A	A	A		
Approach Delay		0.8	8.1			
Approach LOS		A	A			

Intersection Summary

Cycle Length: 74
Actuated Cycle Length: 74
Offset: 62 (84%), Referenced to phase 2:EBT and 6:WBT, Start of Green
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 0.34
Intersection Signal Delay: 3.0 — Intersection LOS: A
Intersection Capacity Utilization 34.8% — ICU Level of Service A
Analysis Period (min) 15

Splits and Phases: 7: Otay Mesa Road & SR125 NB Ramp

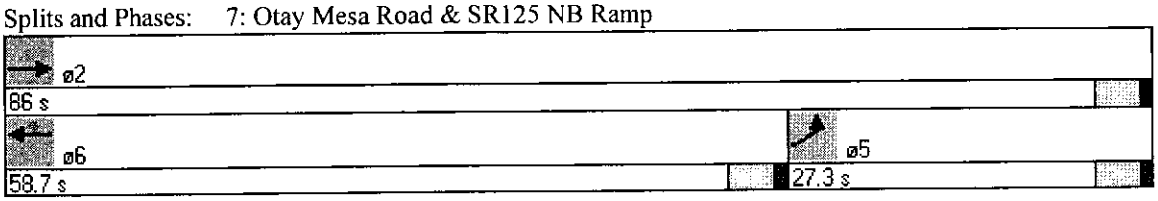


Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Total Lost Time (s)	4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	0.97	0.95	0.95	0.88	1.00	1.00
Frt				0.850		
Flt Protected	0.950					
Satd. Flow (prot)	3433	3725	3725	2933	0	0
Flt Permitted	0.950					
Satd. Flow (perm)	3433	3725	3725	2933	0	0
Satd. Flow (RTOR)				594		
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Volume (vph)	150	1060	1310	570	0	0
Adj. Flow (vph)	156	1104	1365	594	0	0
Lane Group Flow (vph)	156	1104	1365	594	0	0
Turn Type	Prot			Perm		
Protected Phases	5	2	6			
Permitted Phases				6		
Total Split (s)	27.3	86.0	58.7	58.7	0.0	0.0
Act Effct Green (s)	23.4	86.0	54.6	54.6		
Actuated g/C Ratio	0.27	1.00	0.63	0.63		
v/c Ratio	0.17	0.30	0.58	0.29		
Control Delay	23.8	1.0	4.2	0.2		
Queue Delay	0.0	0.0	0.0	0.0		
Total Delay	23.8	1.0	4.2	0.2		
LOS	C	A	A	A		
Approach Delay		3.9	3.0			
Approach LOS		A	A			

Intersection Summary

Cycle Length: 86
Actuated Cycle Length: 86
Offset: 16 (19%), Referenced to phase 2:EBT and 6:WBT, Start of Green
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 0.58
Intersection Signal Delay: 3.3 — Intersection LOS: A
Intersection Capacity Utilization 45.3% — ICU Level of Service A
Analysis Period (min) 15

Splits and Phases: 7: Otay Mesa Road & SR125 NB Ramp

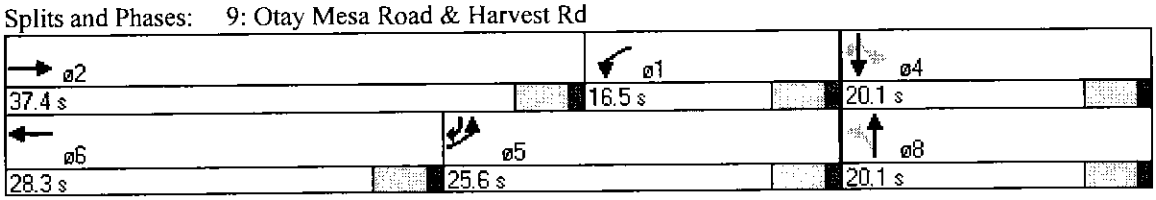


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Total Lost Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	0.97	0.95	0.95	1.00	0.95	0.95	1.00	1.00	1.00	1.00	1.00	0.88
Frt		0.998			0.969			0.955				0.850
Flt Protected	0.950			0.950				0.984			0.960	
Satd. Flow (prot)	3433	3718	0	1770	3610	0	0	1750	0	0	1788	2933
Flt Permitted	0.950			0.950				0.926			0.778	
Satd. Flow (perm)	3433	3718	0	1770	3610	0	0	1647	0	0	1449	2933
Satd. Flow (RTOR)		2			48			10				260
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Volume (vph)	350	870	10	10	340	90	10	10	10	50	10	250
Adj. Flow (vph)	365	906	10	10	354	94	10	10	10	52	10	260
Lane Group Flow (vph)	365	916	0	10	448	0	0	30	0	0	62	260
Turn Type	Prot			Prot			Perm			Perm		pm+ov
Protected Phases	5	2		1	6			8			4	5
Permitted Phases							8			4		4
Total Split (s)	25.6	37.4	0.0	16.5	28.3	0.0	20.1	20.1	0.0	20.1	20.1	25.6
Act Effct Green (s)	13.0	54.8		6.5	40.2			8.9			8.9	25.8
Actuated g/C Ratio	0.18	0.74		0.09	0.54			0.12			0.12	0.35
v/c Ratio	0.61	0.33		0.06	0.23			0.15			0.36	0.22
Control Delay	42.4	5.4		24.2	12.2			22.6			33.2	1.9
Queue Delay	0.0	0.0		0.0	0.0			0.0			0.0	0.0
Total Delay	42.4	5.4		24.2	12.2			22.6			33.2	1.9
LOS	D	A		C	B			C			C	A
Approach Delay		16.0			12.4			22.6			7.9	
Approach LOS		B			B			C			A	

Intersection Summary

Cycle Length: 74
Actuated Cycle Length: 74
Offset: 20 (27%), Referenced to phase 2:EBT and 6:WBT, Start of Green
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 0.61
Intersection Signal Delay: 14.1 — Intersection LOS: B
Intersection Capacity Utilization 44.8% — ICU Level of Service A
Analysis Period (min) 15

Splits and Phases: 9: Otay Mesa Road & Harvest Rd

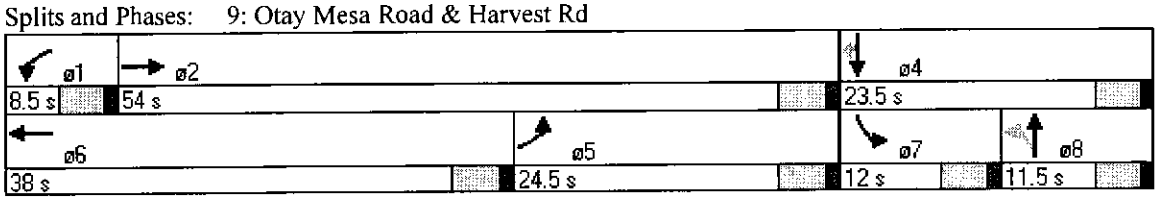


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Total Lost Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	0.97	0.95	0.95	1.00	0.95	0.95	1.00	1.00	1.00	1.00	1.00	0.88
Frt		0.990			0.973			0.955				0.850
Flt Protected	0.950			0.950				0.984			0.955	
Satd. Flow (prot)	3614	3688	0	1770	3444	0	0	1750	0	0	1779	2933
Flt Permitted	0.950			0.950				0.835			0.679	
Satd. Flow (perm)	3614	3688	0	1770	3444	0	0	1485	0	0	1265	2933
Satd. Flow (RTOR)		14			37			10				812
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Volume (vph)	750	290	20	10	1030	230	10	10	10	180	10	960
Adj. Flow (vph)	781	302	21	10	1073	240	10	10	10	188	10	1000
Lane Group Flow (vph)	781	323	0	10	1313	0	0	30	0	0	198	1000
Turn Type	Prot			Prot			Perm			Prot		Perm
Protected Phases	5	2		1	6			8		7	4	
Permitted Phases							8					4
Total Split (s)	24.5	54.0	0.0	8.5	38.0	0.0	11.5	11.5	0.0	12.0	23.5	23.5
Act Effct Green (s)	20.5	56.8		4.5	34.0			7.5			14.1	19.5
Actuated g/C Ratio	0.24	0.66		0.05	0.40			0.09			0.16	0.23
v/c Ratio	0.91	0.13		0.11	0.95			0.22			0.68	0.77
Control Delay	34.5	3.6		34.6	28.2			30.5			49.5	9.5
Queue Delay	0.0	0.0		0.0	0.0			0.0			0.0	0.0
Total Delay	34.5	3.6		34.6	28.2			30.5			49.5	9.5
LOS	C	A		C	C			C			D	A
Approach Delay		25.4			28.3			30.5			16.1	
Approach LOS		C			C			C			B	

Intersection Summary

Cycle Length: 86
Actuated Cycle Length: 86
Offset: 32 (37%), Referenced to phase 2:EBT and 6:WBT, Start of Green
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 0.95
Intersection Signal Delay: 23.4 — Intersection LOS: C
Intersection Capacity Utilization 83.3% — ICU Level of Service E
Analysis Period (min) 15

Splits and Phases: 9: Otay Mesa Road & Harvest Rd

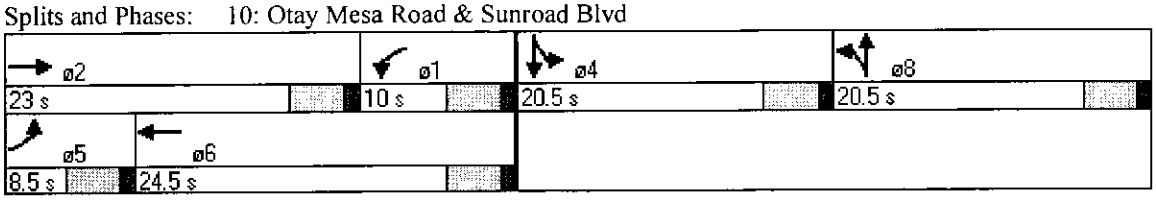


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Total Lost Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	1.00	0.95	0.95	1.00	1.00	1.00	0.95	0.95	1.00	1.00	1.00	1.00
Frt		0.965			0.995			0.953			0.984	
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1770	3595	0	1770	1951	0	1681	1686	0	1770	1833	0
Flt Permitted	0.950			0.950			0.950			0.950		
Satd. Flow (perm)	1770	3595	0	1770	1951	0	1681	1686	0	1770	1833	0
Satd. Flow (RTOR)		51			2			29			8	
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Volume (vph)	20	700	210	80	280	10	150	130	60	10	80	10
Adj. Flow (vph)	21	729	219	83	292	10	156	135	62	10	83	10
Lane Group Flow (vph)	21	948	0	83	302	0	156	197	0	10	93	0
Turn Type	Prot			Prot			Split			Split		
Protected Phases	5	2		1	6		8	8		4	4	
Permitted Phases												
Total Split (s)	8.5	23.0	0.0	10.0	24.5	0.0	20.5	20.5	0.0	20.5	20.5	0.0
Act Effct Green (s)	6.5	33.8		6.0	37.4		13.1	13.1		9.1	9.1	
Actuated g/C Ratio	0.09	0.46		0.08	0.51		0.18	0.18		0.12	0.12	
v/c Ratio	0.13	0.57		0.58	0.31		0.52	0.61		0.05	0.40	
Control Delay	52.6	11.3		45.0	13.6		33.1	31.3		27.4	31.7	
Queue Delay	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Delay	52.6	11.3		45.0	13.6		33.1	31.3		27.4	31.7	
LOS	D	B		D	B		C	C		C	C	
Approach Delay		12.2			20.3			32.1			31.3	
Approach LOS		B			C			C			C	

Intersection Summary

Cycle Length: 74
Actuated Cycle Length: 74
Offset: 32 (43%), Referenced to phase 2:EBT and 6:WBT, Start of Green
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 0.61
Intersection Signal Delay: 18.9 — Intersection LOS: B
Intersection Capacity Utilization 55.3% — ICU Level of Service B
Analysis Period (min) 15

Splits and Phases: 10: Otay Mesa Road & Sunroad Blvd

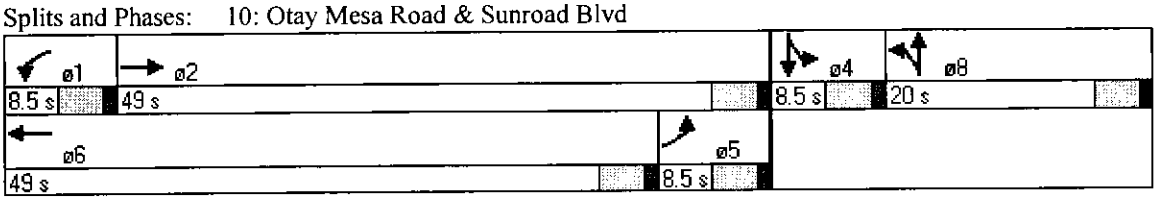


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Total Lost Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	1.00	0.95	0.95	1.00	1.00	1.00	0.95	0.95	1.00	1.00	1.00	1.00
Frt		0.965			0.998			0.942			0.981	
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1863	3595	0	1770	1859	0	1681	1667	0	1770	1827	0
Flt Permitted	0.950			0.950			0.950			0.950		
Satd. Flow (perm)	1863	3595	0	1770	1859	0	1681	1667	0	1770	1827	0
Satd. Flow (RTOR)		70			1			32			6	
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Volume (vph)	10	360	110	40	1000	10	250	160	100	10	140	20
Adj. Flow (vph)	11	379	116	42	1053	11	263	168	105	11	147	21
Lane Group Flow (vph)	11	495	0	42	1064	0	263	273	0	11	168	0
Turn Type	Prot			Prot			Split			Split		
Protected Phases	5	2		1	6		8	8		4	4	
Permitted Phases												
Total Split (s)	8.5	49.0	0.0	8.5	49.0	0.0	20.0	20.0	0.0	8.5	8.5	0.0
Act Effct Green (s)	4.5	42.1		4.8	45.5		15.5	15.5		11.3	11.3	
Actuated g/C Ratio	0.05	0.49		0.06	0.53		0.18	0.18		0.13	0.13	
v/c Ratio	0.11	0.28		0.42	1.08		0.87	0.83		0.05	0.69	
Control Delay	33.1	6.6		52.6	72.0		62.5	52.9		36.1	53.5	
Queue Delay	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Delay	33.1	6.6		52.6	72.0		62.5	52.9		36.1	53.5	
LOS	C	A		D	E		E	D		D	D	
Approach Delay		7.2			71.2			57.6			52.4	
Approach LOS		A			E			E			D	

Intersection Summary

Cycle Length: 86
Actuated Cycle Length: 86
Offset: 77 (90%), Referenced to phase 2:EBT and 6:WBT, Start of Green
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 1.08
Intersection Signal Delay: 52.7 — Intersection LOS: D
Intersection Capacity Utilization 86.0% — ICU Level of Service E
Analysis Period (min) 15

Splits and Phases: 10: Otay Mesa Road & Sunroad Blvd



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Sign Control		Free	Free		Stop	
Grade		0%	0%		0%	
Volume (veh/h)	40	730	350	50	20	20
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	43	793	380	54	22	22
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type					None	
Median storage veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume	435				1288	408
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	435				1288	408
tC, single (s)	4.1				6.4	6.2
tC, 2 stage (s)						
tF (s)	2.2				3.5	3.3
p0 queue free %	96				88	97
cM capacity (veh/h)	1125				174	644

Direction, Lane #	EB 1	EB 2	WB 1	SB 1
Volume Total	43	793	435	43
Volume Left	43	0	0	22
Volume Right	0	0	54	22
cSH	1125	1700	1700	274
Volume to Capacity	0.04	0.47	0.26	0.16
Queue Length 95th (ft)	3	0	0	14
Control Delay (s)	8.3	0.0	0.0	20.6
Lane LOS	A			C
Approach Delay (s)	0.4		0.0	20.6
Approach LOS				C

Intersection Summary			
Average Delay	1.0		
Intersection Capacity Utilization	48.4%	ICU Level of Service	A
Analysis Period (min)	15		

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Sign Control		Free	Free		Stop	
Grade		0%	0%		0%	
Volume (veh/h)	20	450	1010	30	50	40
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	22	489	1098	33	54	43
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type					None	
Median storage veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume	1130				1647	1114
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	1130				1647	1114
tC, single (s)	4.1				6.4	6.2
tC, 2 stage (s)						
tF (s)	2.2				3.5	3.3
p0 queue free %	96				48	83
cM capacity (veh/h)	618				105	253

Direction, Lane #	EB 1	EB 2	WB 1	SB 1
Volume Total	22	489	1130	98
Volume Left	22	0	0	54
Volume Right	0	0	33	43
cSH	618	1700	1700	142
Volume to Capacity	0.04	0.29	0.66	0.69
Queue Length 95th (ft)	3	0	0	97
Control Delay (s)	11.0	0.0	0.0	73.0
Lane LOS	B			F
Approach Delay (s)	0.5		0.0	73.0
Approach LOS				F

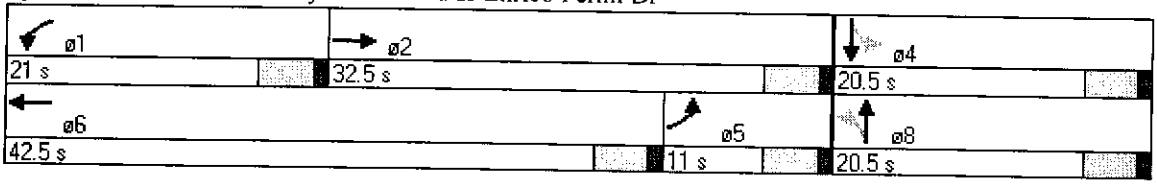
Intersection Summary			
Average Delay	4.2		
Intersection Capacity Utilization	66.9%	ICU Level of Service	C
Analysis Period (min)	15		

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Total Lost Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.993			0.995			0.893			0.925	
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1770	1850	0	1770	1853	0	1770	1663	0	1770	1723	0
Flt Permitted	0.950			0.950			0.728			0.307		
Satd. Flow (perm)	1770	1850	0	1770	1853	0	1356	1663	0	572	1723	0
Satd. Flow (RTOR)		4			3			156			22	
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Volume (vph)	60	660	30	320	310	10	90	80	200	10	20	20
Adj. Flow (vph)	65	717	33	348	337	11	98	87	217	11	22	22
Lane Group Flow (vph)	65	750	0	348	348	0	98	304	0	11	44	0
Turn Type	Prot			Prot			Perm			Perm		
Protected Phases	5	2		1	6			8			4	
Permitted Phases							8			4		
Total Split (s)	11.0	32.5	0.0	21.0	42.5	0.0	20.5	20.5	0.0	20.5	20.5	0.0
Act Effct Green (s)	6.8	31.9		17.9	47.2		12.2	12.2		12.2	12.2	
Actuated g/C Ratio	0.09	0.43		0.24	0.64		0.16	0.16		0.16	0.16	
v/c Ratio	0.40	0.94		0.81	0.29		0.44	0.75		0.12	0.15	
Control Delay	21.6	31.6		44.0	8.8		32.7	25.8		26.8	16.1	
Queue Delay	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Delay	21.6	31.6		44.0	8.8		32.7	25.8		26.8	16.1	
LOS	C	C		D	A		C	C		C	B	
Approach Delay		30.8			26.4			27.5			18.2	
Approach LOS		C			C			C			B	

Intersection Summary

Cycle Length: 74
Actuated Cycle Length: 74
Offset: 2 (3%), Referenced to phase 2:EBT and 6:WBT, Start of Green
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 0.94
Intersection Signal Delay: 28.2 — Intersection LOS: C
Intersection Capacity Utilization 80.8% — ICU Level of Service D
Analysis Period (min) 15

Splits and Phases: 13: Otay Mesa Road & Enrico Fermi Dr

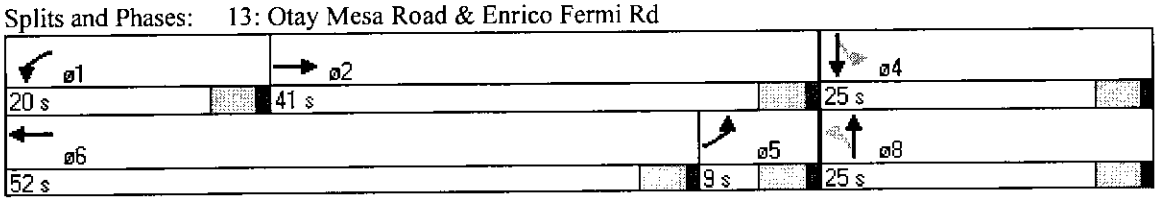


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Total Lost Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.997			0.998			0.863			0.943	
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1770	1857	0	1770	1859	0	1770	1608	0	1770	1757	0
Flt Permitted	0.950			0.950			0.619			0.190		
Satd. Flow (perm)	1770	1857	0	1770	1859	0	1153	1608	0	354	1757	0
Satd. Flow (RTOR)		2			1			435			34	
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Volume (vph)	30	480	10	220	810	10	170	40	400	10	80	50
Adj. Flow (vph)	33	522	11	239	880	11	185	43	435	11	87	54
Lane Group Flow (vph)	33	533	0	239	891	0	185	478	0	11	141	0
Turn Type	Prot			Prot			Perm			Perm		
Protected Phases	5	2		1	6			8			4	
Permitted Phases							8			4		
Total Split (s)	9.0	41.0	0.0	20.0	52.0	0.0	25.0	25.0	0.0	25.0	25.0	0.0
Act Effct Green (s)	5.0	41.1		15.0	54.7		17.9	17.9		17.9	17.9	
Actuated g/C Ratio	0.06	0.48		0.17	0.64		0.21	0.21		0.21	0.21	
v/c Ratio	0.32	0.60		0.77	0.75		0.77	0.70		0.15	0.36	
Control Delay	39.0	14.5		51.5	18.8		53.1	10.7		31.2	23.5	
Queue Delay	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Delay	39.0	14.5		51.5	18.8		53.1	10.7		31.2	23.5	
LOS	D	B		D	B		D	B		C	C	
Approach Delay		15.9			25.7			22.5			24.1	
Approach LOS		B			C			C			C	

Intersection Summary

Cycle Length: 86
Actuated Cycle Length: 86
Offset: 54 (63%), Referenced to phase 2:EBT and 6:WBT, Start of Green
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 0.77
Intersection Signal Delay: 22.6 — Intersection LOS: C
Intersection Capacity Utilization 90.1% — ICU Level of Service E
Analysis Period (min) 15

Splits and Phases: 13: Otay Mesa Road & Enrico Fermi Rd



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Sign Control		Stop			Stop			Stop			Stop	
Volume (vph)	600	80	110	30	90	30	80	30	30	30	30	410
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
Hourly flow rate (vph)	632	84	116	32	95	32	84	32	32	32	32	432

Direction, Lane #	EB 1	WB 1	NB 1	SB 1
Volume Total (vph)	832	158	147	495
Volume Left (vph)	632	32	84	32
Volume Right (vph)	116	32	32	432
Hadj (s)	0.10	-0.05	0.02	-0.48
Departure Headway (s)	6.6	7.4	7.6	6.2
Degree Utilization, x	1.52	0.32	0.31	0.85
Capacity (veh/h)	547	441	434	572
Control Delay (s)	261.3	13.9	13.9	34.8
Approach Delay (s)	261.3	13.9	13.9	34.8
Approach LOS	F	B	B	D

Intersection Summary			
Delay	146.3		
HCM Level of Service	F		
Intersection Capacity Utilization	93.9%	ICU Level of Service	F
Analysis Period (min)	15		

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Sign Control		Stop			Stop			Stop			Stop	
Volume (vph)	520	50	90	30	110	30	190	30	30	30	30	720
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
Hourly flow rate (vph)	547	53	95	32	116	32	200	32	32	32	32	758

Direction, Lane #	EB 1	WB 1	NB 1	SB 1
Volume Total (vph)	695	179	263	821
Volume Left (vph)	547	32	200	32
Volume Right (vph)	95	32	32	758
Hadj (s)	0.11	-0.04	0.11	-0.51
Departure Headway (s)	7.5	8.5	8.2	6.8
Degree Utilization, x	1.44	0.42	0.60	1.56
Capacity (veh/h)	496	401	425	534
Control Delay (s)	230.0	17.5	22.6	279.3
Approach Delay (s)	230.0	17.5	22.6	279.3
Approach LOS	F	C	C	F

Intersection Summary			
Delay	203.4		
HCM Level of Service	F		
Intersection Capacity Utilization	121.2%	ICU Level of Service	H
Analysis Period (min)	15		

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕		↰	↱	
Sign Control		Stop			Stop			Stop			Stop	
Volume (vph)	30	70	70	30	150	60	60	80	30	160	200	70
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
Hourly flow rate (vph)	33	78	78	33	167	67	67	89	33	178	222	78

Direction, Lane #	EB 1	WB 1	NB 1	SB 1	SB 2
Volume Total (vph)	189	267	189	178	300
Volume Left (vph)	33	33	67	178	0
Volume Right (vph)	78	67	33	0	78
Hadj (s)	-0.18	-0.09	0.05	0.53	-0.07
Departure Headway (s)	6.1	6.0	6.3	6.8	6.2
Degree Utilization, x	0.32	0.45	0.33	0.34	0.51
Capacity (veh/h)	528	551	513	505	558
Control Delay (s)	12.0	13.8	12.4	12.0	14.3
Approach Delay (s)	12.0	13.8	12.4	13.5	
Approach LOS	B	B	B	B	

Intersection Summary			
Delay	13.1		
HCM Level of Service	B		
Intersection Capacity Utilization	50.3%	ICU Level of Service	A
Analysis Period (min)	15		

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↔			↔			↔		↰	↱	
Sign Control		Stop			Stop			Stop			Stop	
Volume (vph)	80	30	90	30	310	140	80	140	30	70	130	30
Peak Hour Factor	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99
Hourly flow rate (vph)	81	30	91	30	313	141	81	141	30	71	131	30

Direction, Lane #	EB 1	WB 1	NB 1	SB 1	SB 2
Volume Total (vph)	202	485	253	71	162
Volume Left (vph)	81	30	81	71	0
Volume Right (vph)	91	141	30	0	30
Hadj (s)	-0.16	-0.13	0.08	0.53	-0.01
Departure Headway (s)	6.4	5.9	6.8	7.8	7.2
Degree Utilization, x	0.36	0.79	0.48	0.15	0.32
Capacity (veh/h)	487	485	478	415	441
Control Delay (s)	13.0	27.1	15.9	11.0	12.4
Approach Delay (s)	13.0	27.1	15.9	12.0	
Approach LOS	B	D	C	B	

Intersection Summary			
Delay	19.3		
HCM Level of Service	C		
Intersection Capacity Utilization	71.8%	ICU Level of Service	C
Analysis Period (min)	15		

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Sign Control		Stop			Stop			Stop			Stop	
Volume (vph)	50	100	80	10	200	510	30	60	70	250	450	40
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
Hourly flow rate (vph)	54	108	86	11	215	548	32	65	75	269	484	43

Direction, Lane #	EB 1	WB 1	WB 2	NB 1	NB 2	SB 1	SB 2
Volume Total (vph)	247	226	548	32	140	753	43
Volume Left (vph)	54	11	0	32	0	269	0
Volume Right (vph)	86	0	548	0	75	0	43
Hadj (s)	-0.13	0.06	-0.67	0.53	-0.34	0.21	-0.67
Departure Headway (s)	8.3	7.7	7.0	9.3	8.4	8.0	7.1
Degree Utilization, x	0.57	0.48	1.06	0.08	0.33	1.67	0.09
Capacity (veh/h)	422	461	523	375	415	459	496
Control Delay (s)	21.5	16.5	83.0	11.9	14.2	330.2	9.6
Approach Delay (s)	21.5	63.6		13.8		312.8	
Approach LOS	C	F		B		F	

Intersection Summary			
Delay	153.8		
HCM Level of Service	F		
Intersection Capacity Utilization	82.3%	ICU Level of Service	E
Analysis Period (min)	15		

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Sign Control		Stop			Stop			Stop			Stop	
Volume (vph)	20	90	50	10	230	570	70	450	60	230	90	120
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
Hourly flow rate (vph)	23	103	57	11	264	655	80	517	69	264	103	138

Direction, Lane #	EB 1	WB 1	WB 2	NB 1	NB 2	SB 1	SB 2
Volume Total (vph)	184	276	655	80	586	368	138
Volume Left (vph)	23	11	0	80	0	264	0
Volume Right (vph)	57	0	655	0	69	0	138
Hadj (s)	-0.13	0.05	-0.67	0.53	-0.05	0.39	-0.67
Departure Headway (s)	9.5	8.5	7.8	9.2	8.6	9.1	8.0
Degree Utilization, x	0.49	0.65	1.43	0.20	1.40	0.93	0.31
Capacity (veh/h)	362	416	471	386	429	389	442
Control Delay (s)	21.2	25.2	224.7	13.3	215.6	58.3	13.4
Approach Delay (s)	21.2	165.5		191.2		46.0	
Approach LOS	C	F		F		E	

Intersection Summary			
Delay	135.0		
HCM Level of Service	F		
Intersection Capacity Utilization	81.5%	ICU Level of Service	D
Analysis Period (min)	15		

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Sign Control		Free			Free			Stop			Stop	
Grade		0%			0%			0%			0%	
Volume (veh/h)	60	150	190	10	230	10	570	60	200	10	70	60
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
Hourly flow rate (vph)	67	167	211	11	256	11	633	67	222	11	78	67
Pedestrians												
Lane Width (ft)												
Walking Speed (ft/s)												
Percent Blockage												
Right turn flare (veh)												
Median type								None			None	
Median storage veh)												
Upstream signal (ft)												
pX, platoon unblocked												
vC, conflicting volume	267			378			661	694	189	756	794	133
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	267			378			661	694	189	756	794	133
tC, single (s)	4.1			4.1			7.5	6.5	6.9	7.5	6.5	6.9
tC, 2 stage (s)												
tF (s)	2.2			2.2			3.5	4.0	3.3	3.5	4.0	3.3
p0 queue free %	95			99			0	81	73	94	74	93
cM capacity (veh/h)	1294			1177			246	342	821	176	300	891

Direction, Lane #	EB 1	EB 2	EB 3	WB 1	WB 2	WB 3	NB 1	NB 2	SB 1
Volume Total	67	111	267	11	170	96	700	222	156
Volume Left	67	0	0	11	0	0	633	0	11
Volume Right	0	0	211	0	0	11	0	222	67
cSH	1294	1700	1700	1177	1700	1700	253	821	391
Volume to Capacity	0.05	0.07	0.16	0.01	0.10	0.06	2.77	0.27	0.40
Queue Length 95th (ft)	4	0	0	1	0	0	1507	27	47
Control Delay (s)	7.9	0.0	0.0	8.1	0.0	0.0	837.4	11.0	20.1
Lane LOS	A			A			F	B	C
Approach Delay (s)	1.2			0.3			638.3		20.1
Approach LOS							F		C

Intersection Summary			
Average Delay	329.1		
Intersection Capacity Utilization	69.6%	ICU Level of Service	C
Analysis Period (min)	15		

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Sign Control		Free			Free			Stop			Stop	
Grade		0%			0%			0%			0%	
Volume (veh/h)	70	80	240	50	300	20	580	70	220	10	70	60
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
Hourly flow rate (vph)	80	92	276	57	345	23	667	80	253	11	80	69
Pedestrians												
Lane Width (ft)												
Walking Speed (ft/s)												
Percent Blockage												
Right turn flare (veh)												
Median type								None			None	
Median storage veh)												
Upstream signal (ft)												
pX, platoon unblocked												
vC, conflicting volume	368			368			787	874	184	971	1000	184
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	368			368			787	874	184	971	1000	184
tC, single (s)	4.1			4.1			7.5	6.5	6.9	7.5	6.5	6.9
tC, 2 stage (s)												
tF (s)	2.2			2.2			3.5	4.0	3.3	3.5	4.0	3.3
p0 queue free %	93			95			0	68	69	88	62	92
cM capacity (veh/h)	1187			1187			168	254	827	100	214	827

Direction, Lane #	EB 1	EB 2	EB 3	WB 1	WB 2	WB 3	NB 1	NB 2	SB 1
Volume Total	80	61	307	57	230	138	747	253	161
Volume Left	80	0	0	57	0	0	667	0	11
Volume Right	0	0	276	0	0	23	0	253	69
cSH	1187	1700	1700	1187	1700	1700	175	827	280
Volume to Capacity	0.07	0.04	0.18	0.05	0.14	0.08	4.28	0.31	0.57
Queue Length 95th (ft)	5	0	0	4	0	0	Err	32	83
Control Delay (s)	8.3	0.0	0.0	8.2	0.0	0.0	Err	11.3	33.8
Lane LOS	A			A			F	B	D
Approach Delay (s)	1.5			1.1			7473.4		33.8
Approach LOS							F		D

Intersection Summary			
Average Delay	3676.6		
Intersection Capacity Utilization	70.3%	ICU Level of Service	C
Analysis Period (min)	15		

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Sign Control	Free			Free	Stop	
Grade	0%			0%	0%	
Volume (veh/h)	260	70	10	200	50	30
Peak Hour Factor	0.78	0.78	0.78	0.78	0.78	0.78
Hourly flow rate (vph)	333	90	13	256	64	38
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type					None	
Median storage veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume			423		660	212
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol			423		660	212
tC, single (s)			4.1		6.8	6.9
tC, 2 stage (s)						
tF (s)			2.2		3.5	3.3
p0 queue free %			99		84	95
cM capacity (veh/h)			1133		391	794

Direction, Lane #	EB 1	EB 2	WB 1	WB 2	NB 1	NB 2
Volume Total	222	201	13	256	64	38
Volume Left	0	0	13	0	64	0
Volume Right	0	90	0	0	0	38
cSH	1700	1700	1133	1700	391	794
Volume to Capacity	0.13	0.12	0.01	0.15	0.16	0.05
Queue Length 95th (ft)	0	0	1	0	14	4
Control Delay (s)	0.0	0.0	8.2	0.0	16.0	9.8
Lane LOS			A		C	A
Approach Delay (s)	0.0		0.4		13.7	
Approach LOS					B	

Intersection Summary			
Average Delay	1.9		
Intersection Capacity Utilization	20.5%	ICU Level of Service	A
Analysis Period (min)	15		

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Sign Control	Free			Free	Stop	
Grade	0%			0%	0%	
Volume (veh/h)	230	70	10	230	110	10
Peak Hour Factor	0.84	0.84	0.84	0.84	0.84	0.84
Hourly flow rate (vph)	274	83	12	274	131	12
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type					None	
Median storage veh)						
Upstream signal (ft)				1314		
pX, platoon unblocked						
vC, conflicting volume			357		613	179
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol			357		613	179
tC, single (s)			4.1		6.8	6.9
tC, 2 stage (s)						
tF (s)			2.2		3.5	3.3
p0 queue free %			99		69	99
cM capacity (veh/h)			1198		420	834

Direction, Lane #	EB 1	EB 2	WB 1	WB 2	NB 1	NB 2
Volume Total	183	175	12	274	131	12
Volume Left	0	0	12	0	131	0
Volume Right	0	83	0	0	0	12
cSH	1700	1700	1198	1700	420	834
Volume to Capacity	0.11	0.10	0.01	0.16	0.31	0.01
Queue Length 95th (ft)	0	0	1	0	33	1
Control Delay (s)	0.0	0.0	8.0	0.0	17.4	9.4
Lane LOS			A		C	A
Approach Delay (s)	0.0		0.3		16.7	
Approach LOS					C	

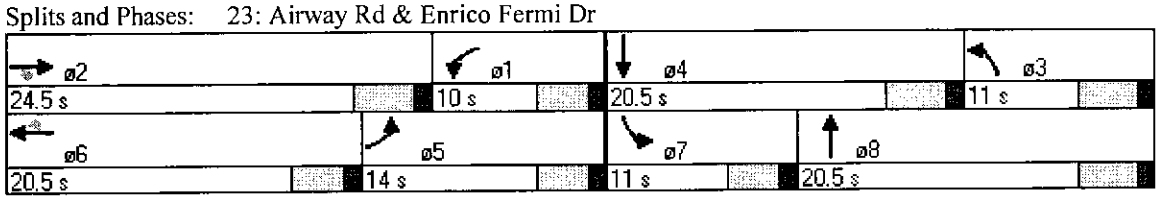
Intersection Summary			
Average Delay	3.2		
Intersection Capacity Utilization	24.9%	ICU Level of Service	A
Analysis Period (min)	15		

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Total Lost Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	1.00	0.95	0.95	1.00	1.00	1.00	1.00	0.95	0.95	1.00	0.95	0.95
Frt			0.850			0.850		0.896			0.969	
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1770	1770	1504	1770	1863	1583	1770	3171	0	1770	3430	0
Flt Permitted	0.950			0.950			0.950			0.950		
Satd. Flow (perm)	1770	1770	1504	1770	1863	1583	1770	3171	0	1770	3430	0
Satd. Flow (RTOR)			62			152		337			47	
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Volume (vph)	170	70	50	60	30	140	110	120	310	110	270	70
Adj. Flow (vph)	212	76	62	65	33	152	138	150	337	120	338	88
Lane Group Flow (vph)	212	76	62	65	33	152	138	487	0	120	426	0
Turn Type	Prot		Perm	Prot		Perm	Prot			Prot		
Protected Phases	5	2		1	6		3	8		7	4	
Permitted Phases			2			6						
Total Split (s)	14.0	24.5	24.5	10.0	20.5	20.5	11.0	20.5	0.0	11.0	20.5	0.0
Act Effct Green (s)	9.8	26.3	26.3	5.9	18.4	18.4	9.0	16.9		6.8	12.8	
Actuated g/C Ratio	0.15	0.40	0.40	0.09	0.28	0.28	0.14	0.26		0.10	0.19	
v/c Ratio	0.81	0.11	0.10	0.41	0.06	0.28	0.57	0.46		0.66	0.61	
Control Delay	52.3	16.3	5.7	36.6	19.3	5.6	25.2	3.0		47.7	25.0	
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Total Delay	52.3	16.3	5.7	36.6	19.3	5.6	25.2	3.0		47.7	25.0	
LOS	D	B	A	D	B	A	C	A		D	C	
Approach Delay		36.2			15.5			7.9			30.0	
Approach LOS		D			B			A			C	

Intersection Summary

Cycle Length: 66
Actuated Cycle Length: 66
Offset: 25 (38%), Referenced to phase 2:EBT and 6:WBT, Start of Green
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 0.81
Intersection Signal Delay: 21.4 — Intersection LOS: C
Intersection Capacity Utilization 45.5% — ICU Level of Service A
Analysis Period (min) 15

Splits and Phases: 23: Airway Rd & Enrico Fermi Dr

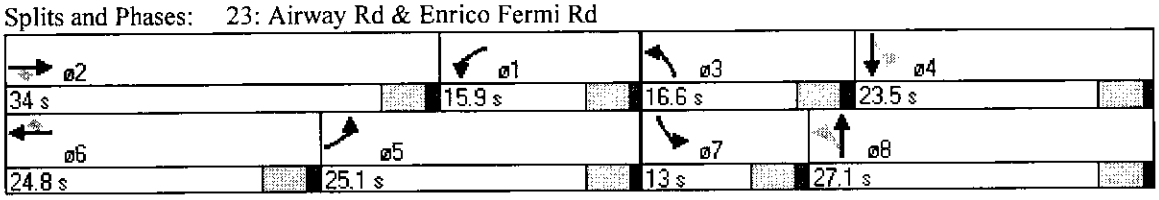


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Total Lost Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	1.00	0.95	0.95	1.00	1.00	1.00	1.00	0.95	0.95	1.00	0.95	0.95
Frt			0.850			0.850		0.977			0.974	
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1770	1770	1504	1770	1863	1583	1770	3458	0	1770	3447	0
Flt Permitted	0.950			0.950			0.397			0.376		
Satd. Flow (perm)	1770	1770	1504	1770	1863	1583	740	3458	0	700	3447	0
Satd. Flow (RTOR)			33			163		22			25	
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Volume (vph)	180	30	30	60	60	150	130	390	70	60	240	50
Adj. Flow (vph)	196	33	33	65	65	163	141	424	76	65	261	54
Lane Group Flow (vph)	196	33	33	65	65	163	141	500	0	65	315	0
Turn Type	Prot		Perm	Prot		Perm	pm+pt			pm+pt		
Protected Phases	5	2		1	6		3	8		7	4	
Permitted Phases			2			6	8			4		
Total Split (s)	25.1	34.0	34.0	15.9	24.8	24.8	16.6	27.1	0.0	13.0	23.5	0.0
Act Effct Green (s)	17.1	40.4	40.4	9.0	30.3	30.3	27.4	20.6		26.2	18.2	
Actuated g/C Ratio	0.19	0.45	0.45	0.10	0.34	0.34	0.30	0.23		0.29	0.20	
v/c Ratio	0.58	0.04	0.05	0.37	0.10	0.25	0.44	0.62		0.22	0.44	
Control Delay	39.7	18.3	7.2	42.9	25.2	5.7	16.9	21.9		20.5	30.0	
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Total Delay	39.7	18.3	7.2	42.9	25.2	5.7	16.9	21.9		20.5	30.0	
LOS	D	B	A	D	C	A	B	C		C	C	
Approach Delay		32.9			18.3			20.8			28.4	
Approach LOS		C			B			C			C	

Intersection Summary

Cycle Length: 90
Actuated Cycle Length: 90
Offset: 77 (86%), Referenced to phase 2:EBT and 6:WBT, Start of Green
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 0.62
Intersection Signal Delay: 24.2 — Intersection LOS: C
Intersection Capacity Utilization 43.0% — ICU Level of Service A
Analysis Period (min) 15

Splits and Phases: 23: Airway Rd & Enrico Fermi Rd



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Sign Control		Stop			Stop			Stop			Stop	
Volume (vph)	30	190	30	30	230	110	30	30	30	240	30	30
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
Hourly flow rate (vph)	34	218	34	34	264	126	34	34	34	276	34	34

Direction, Lane #	EB 1	WB 1	NB 1	SB 1
Volume Total (vph)	287	425	103	345
Volume Left (vph)	34	34	34	276
Volume Right (vph)	34	126	34	34
Hadj (s)	-0.01	-0.13	-0.07	0.14
Departure Headway (s)	6.3	5.9	7.0	6.5
Degree Utilization, x	0.50	0.70	0.20	0.62
Capacity (veh/h)	518	573	414	521
Control Delay (s)	15.5	21.5	11.7	19.4
Approach Delay (s)	15.5	21.5	11.7	19.4
Approach LOS	C	C	B	C

Intersection Summary			
Delay	18.5		
HCM Level of Service	C		
Intersection Capacity Utilization	54.8%	ICU Level of Service	A
Analysis Period (min)	15		

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Sign Control		Stop			Stop			Stop			Stop	
Volume (vph)	30	460	30	30	610	140	30	80	30	120	100	30
Peak Hour Factor	0.81	0.81	0.81	0.81	0.81	0.81	0.81	0.81	0.81	0.81	0.81	0.81
Hourly flow rate (vph)	37	568	37	37	753	173	37	99	37	148	123	37

Direction, Lane #	EB 1	WB 1	NB 1	SB 1
Volume Total (vph)	642	963	173	309
Volume Left (vph)	37	37	37	148
Volume Right (vph)	37	173	37	37
Hadj (s)	0.01	-0.07	0.01	0.10
Departure Headway (s)	7.4	7.3	8.8	8.2
Degree Utilization, x	1.31	1.95	0.42	0.70
Capacity (veh/h)	490	500	386	432
Control Delay (s)	177.9	452.8	18.1	28.1
Approach Delay (s)	177.9	452.8	18.1	28.1
Approach LOS	F	F	C	D

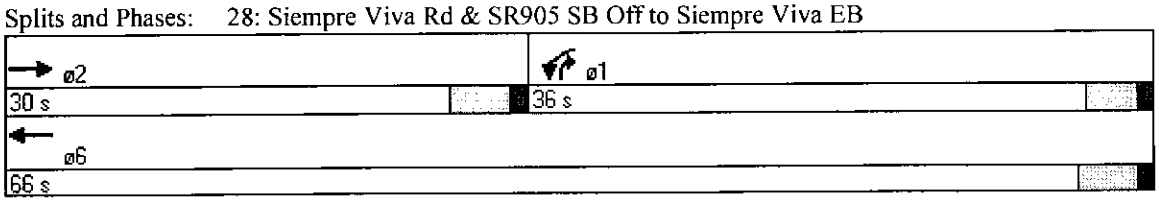
Intersection Summary			
Delay	269.4		
HCM Level of Service	F		
Intersection Capacity Utilization	77.0%	ICU Level of Service	D
Analysis Period (min)	15		

Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Total Lost Time (s)	4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	0.91	0.91	0.97	0.91	1.00	0.88
Frt	0.985					0.850
Flt Protected			0.950			
Satd. Flow (prot)	5273	0	3614	5353	0	2933
Flt Permitted			0.950			
Satd. Flow (perm)	5273	0	3614	5353	0	2933
Satd. Flow (RTOR)	33					75
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Volume (vph)	910	100	480	880	0	700
Adj. Flow (vph)	948	104	500	917	0	729
Lane Group Flow (vph)	1052	0	500	917	0	729
Turn Type			Prot			Over
Protected Phases	2		1	6		1
Permitted Phases						
Total Split (s)	30.0	0.0	36.0	66.0	0.0	36.0
Act Effct Green (s)	26.0		32.0	66.0		32.0
Actuated g/C Ratio	0.39		0.48	1.00		0.48
v/c Ratio	0.50		0.29	0.17		0.50
Control Delay	15.6		9.7	0.1		11.7
Queue Delay	0.0		0.0	0.0		0.0
Total Delay	15.6		9.7	0.1		11.7
LOS	B		A	A		B
Approach Delay	15.6			3.5		
Approach LOS	B			A		

Intersection Summary

Cycle Length: 66
Actuated Cycle Length: 66
Offset: 28 (42%), Referenced to phase 2:EBT and 6:WBT, Start of Green
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 0.50
Intersection Signal Delay: 9.3 Intersection LOS: A
Intersection Capacity Utilization 48.7% ICU Level of Service A
Analysis Period (min) 15

Splits and Phases: 28: Siempre Viva Rd & SR905 SB Off to Siempre Viva EB

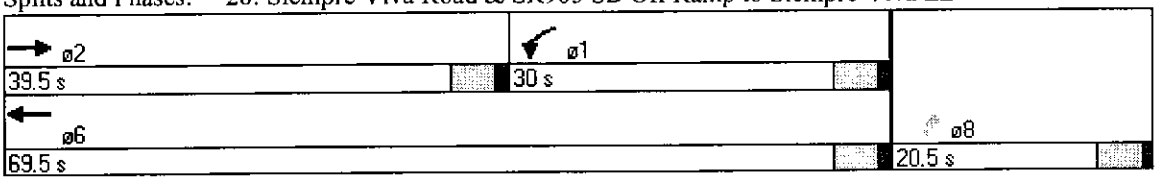


Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Total Lost Time (s)	4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	0.91	0.91	0.97	0.91	1.00	0.88
Frt	0.936					0.850
Flt Protected			0.950			
Satd. Flow (prot)	4760	0	3523	5085	0	2787
Flt Permitted			0.950			
Satd. Flow (perm)	4760	0	3523	5085	0	2787
Satd. Flow (RTOR)	243					847
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Volume (vph)	950	700	800	310	0	440
Adj. Flow (vph)	990	729	833	323	0	458
Lane Group Flow (vph)	1719	0	833	323	0	458
Turn Type			Prot			custom
Protected Phases	2		1	6		
Permitted Phases						8
Total Split (s)	39.5	0.0	30.0	69.5	0.0	20.5
Act Effct Green (s)	45.8		26.0	75.8		6.2
Actuated g/C Ratio	0.51		0.29	0.84		0.07
v/c Ratio	0.68		0.82	0.08		0.47
Control Delay	15.6		32.7	1.0		1.6
Queue Delay	0.0		0.0	0.0		0.0
Total Delay	15.6		32.7	1.0		1.6
LOS	B		C	A		A
Approach Delay	15.6			23.8		
Approach LOS	B			C		

Intersection Summary

Cycle Length: 90
Actuated Cycle Length: 90
Offset: 66 (73%), Referenced to phase 2:EBT and 6:WBT, Start of Green
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 0.82
Intersection Signal Delay: 16.5 — Intersection LOS: B
Intersection Capacity Utilization 63.0% — ICU Level of Service B
Analysis Period (min) 15

Splits and Phases: 28: Siempre Viva Road & SR905 SB Off Ramp to Siempre Viva EB



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		↑↑↑	↑↑↑			↱
Sign Control		Free	Free		Stop	
Grade		0%	0%		0%	
Volume (veh/h)	0	1610	880	0	0	480
Peak Hour Factor	0.87	0.87	0.87	0.87	0.87	0.87
Hourly flow rate (vph)	0	1851	1011	0	0	552
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type					None	
Median storage veh)						
Upstream signal (ft)		281	733			
pX, platoon unblocked					0.87	
vC, conflicting volume	1011				1628	337
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	1011				1414	337
tC, single (s)	4.1				6.8	6.9
tC, 2 stage (s)						
tF (s)	2.2				3.5	3.3
p0 queue free %	100				100	16
cM capacity (veh/h)	681				111	659

Direction, Lane #	EB 1	EB 2	EB 3	WB 1	WB 2	WB 3	SB 1
Volume Total	617	617	617	337	337	337	552
Volume Left	0	0	0	0	0	0	0
Volume Right	0	0	0	0	0	0	552
cSH	1700	1700	1700	1700	1700	1700	659
Volume to Capacity	0.36	0.36	0.36	0.20	0.20	0.20	0.84
Queue Length 95th (ft)	0	0	0	0	0	0	229
Control Delay (s)	0.0	0.0	0.0	0.0	0.0	0.0	32.2
Lane LOS							D
Approach Delay (s)	0.0			0.0			32.2
Approach LOS							D

Intersection Summary			
Average Delay	5.2		
Intersection Capacity Utilization	53.4%	ICU Level of Service	A
Analysis Period (min)	15		

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		↑↑↑	↑↑↑			↱
Sign Control		Free	Free		Stop	
Grade		0%	0%		0%	
Volume (veh/h)	0	1390	610	0	0	500
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93
Hourly flow rate (vph)	0	1495	656	0	0	538
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type					None	
Median storage veh)						
Upstream signal (ft)		225	412			
pX, platoon unblocked						
vC, conflicting volume	656				1154	219
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	656				1154	219
tC, single (s)	4.1				6.8	6.9
tC, 2 stage (s)						
tF (s)	2.2				3.5	3.3
p0 queue free %	100				100	32
cM capacity (veh/h)	927				190	786

Direction, Lane #	EB 1	EB 2	EB 3	WB 1	WB 2	WB 3	SB 1
Volume Total	498	498	498	219	219	219	538
Volume Left	0	0	0	0	0	0	0
Volume Right	0	0	0	0	0	0	538
cSH	1700	1700	1700	1700	1700	1700	786
Volume to Capacity	0.29	0.29	0.29	0.13	0.13	0.13	0.68
Queue Length 95th (ft)	0	0	0	0	0	0	138
Control Delay (s)	0.0	0.0	0.0	0.0	0.0	0.0	18.9
Lane LOS							C
Approach Delay (s)	0.0			0.0			18.9
Approach LOS							C

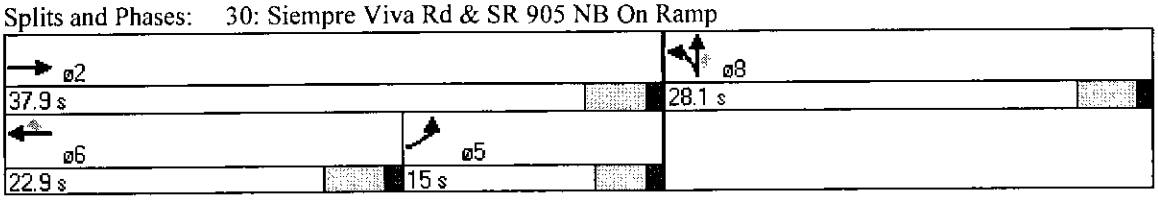
Intersection Summary			
Average Delay	3.8		
Intersection Capacity Utilization	67.6%	ICU Level of Service	C
Analysis Period (min)	15		

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Total Lost Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	0.97	0.91	1.00	1.00	0.86	0.86	1.00	1.00	0.88	1.00	1.00	1.00
Frt					0.964	0.850			0.850			
Flt Protected	0.950							0.954				
Satd. Flow (prot)	3704	5487	0	0	4999	1469	0	1917	3007	0	0	0
Flt Permitted	0.950							0.954				
Satd. Flow (perm)	3704	5487	0	0	4999	1469	0	1917	3007	0	0	0
Satd. Flow (RTOR)					123	284			46			
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Volume (vph)	250	1360	0	0	520	440	360	10	530	0	0	0
Adj. Flow (vph)	260	1417	0	0	542	458	375	10	552	0	0	0
Lane Group Flow (vph)	260	1417	0	0	716	284	0	385	552	0	0	0
Turn Type	Prot					Perm	Split		Perm			
Protected Phases	5	2			6		8	8				
Permitted Phases						6			8			
Total Split (s)	15.0	37.9	0.0	0.0	22.9	22.9	28.1	28.1	28.1	0.0	0.0	0.0
Act Effct Green (s)	9.6	38.9			25.3	25.3		19.1	19.1			
Actuated g/C Ratio	0.15	0.59			0.38	0.38		0.29	0.29			
v/c Ratio	0.48	0.44			0.36	0.38		0.69	0.61			
Control Delay	26.5	7.5			12.1	7.4		27.1	20.8			
Queue Delay	0.0	0.0			0.0	0.0		0.0	0.0			
Total Delay	26.5	7.5			12.1	7.4		27.1	20.8			
LOS	C	A			B	A		C	C			
Approach Delay		10.4			10.8			23.4				
Approach LOS		B			B			C				

Intersection Summary

Cycle Length: 66
Actuated Cycle Length: 66
Offset: 42 (64%), Referenced to phase 2:EBT and 6:WBT, Start of Green
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 0.69
Intersection Signal Delay: 13.9 — Intersection LOS: B
Intersection Capacity Utilization 53.4% — ICU Level of Service A
Analysis Period (min) 15

Splits and Phases: 30: Siempre Viva Rd & SR 905 NB On Ramp

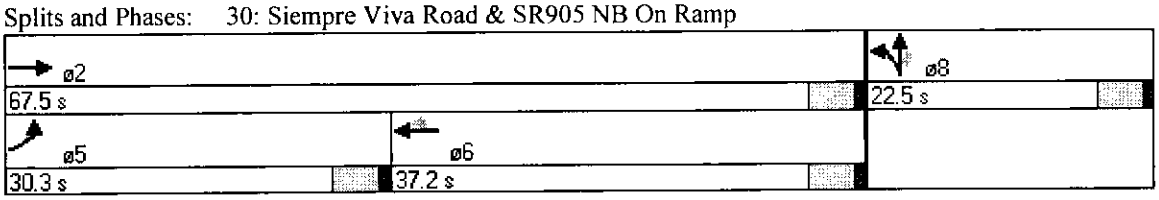


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Total Lost Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	0.97	0.91	1.00	1.00	0.86	0.86	1.00	1.00	0.88	1.00	1.00	1.00
Frt					0.932	0.850			0.850			
Flt Protected	0.950							0.956				
Satd. Flow (prot)	3433	5085	0	0	4479	1362	0	1781	2787	0	0	0
Flt Permitted	0.950							0.956				
Satd. Flow (perm)	3433	5085	0	0	4479	1362	0	1781	2787	0	0	0
Satd. Flow (RTOR)					260	432			412			
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Volume (vph)	600	790	0	0	500	820	110	10	440	0	0	0
Adj. Flow (vph)	632	832	0	0	526	863	116	11	463	0	0	0
Lane Group Flow (vph)	632	832	0	0	957	432	0	127	463	0	0	0
Turn Type	Prot					Perm	Split		Perm			
Protected Phases	5	2			6		8	8				
Permitted Phases						6			8			
Total Split (s)	30.3	67.5	0.0	0.0	37.2	37.2	22.5	22.5	22.5	0.0	0.0	0.0
Act Effct Green (s)	22.0	69.5			43.5	43.5		12.5	12.5			
Actuated g/C Ratio	0.24	0.77			0.48	0.48		0.14	0.14			
v/c Ratio	0.75	0.21			0.42	0.49		0.51	0.62			
Control Delay	45.8	2.4			9.4	1.9		42.4	9.5			
Queue Delay	0.0	0.0			0.0	0.0		0.0	0.0			
Total Delay	45.8	2.4			9.4	1.9		42.4	9.5			
LOS	D	A			A	A		D	A			
Approach Delay		21.1			7.0			16.6				
Approach LOS		C			A			B				

Intersection Summary

Cycle Length: 90
Actuated Cycle Length: 90
Offset: 83 (92%), Referenced to phase 2:EBT and 6:WBT, Start of Green
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 0.75
Intersection Signal Delay: 14.7 — Intersection LOS: B
Intersection Capacity Utilization 67.6% — ICU Level of Service C
Analysis Period (min) 15

Splits and Phases: 30: Siempre Viva Road & SR905 NB On Ramp

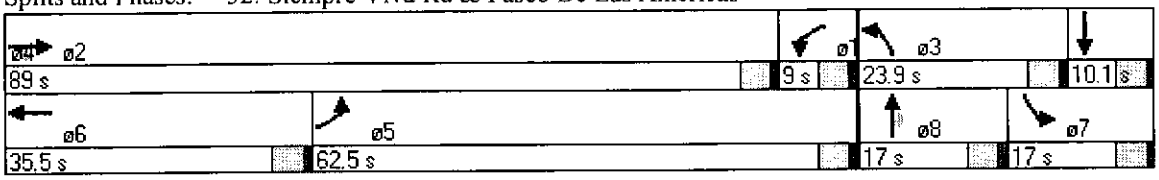


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Total Lost Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	1.00	0.91	1.00	1.00	0.95	0.95	1.00	0.95	1.00	1.00	0.95	0.95
Frt			0.850		0.954				0.850		0.880	
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1863	5487	1583	1770	3643	0	1770	3539	1583	1770	3115	0
Flt Permitted	0.950			0.950			0.950			0.950		
Satd. Flow (perm)	1863	5487	1583	1770	3643	0	1770	3539	1583	1770	3115	0
Satd. Flow (RTOR)			143		51				66		264	
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Volume (vph)	800	790	130	30	540	240	180	200	60	100	60	240
Adj. Flow (vph)	879	868	143	33	593	264	198	220	66	110	66	264
Lane Group Flow (vph)	879	868	143	33	857	0	198	220	66	110	330	0
Turn Type	Prot		Perm	Prot			Prot		Perm	Prot		
Protected Phases	5	2		1	6		3	8		7	4	
Permitted Phases			2						8			
Total Split (s)	62.5	89.0	89.0	9.0	35.5	0.0	23.9	17.0	17.0	17.0	10.1	0.0
Act Effct Green (s)	58.5	89.9	89.9	5.0	32.8		18.3	12.3	12.3	12.4	6.4	
Actuated g/C Ratio	0.44	0.68	0.68	0.04	0.25		0.14	0.09	0.09	0.09	0.05	
v/c Ratio	1.06	0.23	0.13	0.49	0.91		0.81	0.66	0.32	0.67	0.82	
Control Delay	79.4	7.3	1.3	77.8	53.8		79.3	68.0	16.7	77.1	31.0	
Queue Delay	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	
Total Delay	79.4	7.3	1.3	77.8	53.8		79.3	68.0	16.7	77.1	31.0	
LOS	E	A	A	E	D		E	E	B	E	C	
Approach Delay		40.4			54.7			65.6			42.5	
Approach LOS		D			D			E			D	

Intersection Summary

Cycle Length: 132
Actuated Cycle Length: 132
Offset: 59 (45%), Referenced to phase 2:EBT and 6:WBT, Start of Green
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 1.06
Intersection Signal Delay: 47.4 — Intersection LOS: D
Intersection Capacity Utilization 95.8% — ICU Level of Service F
Analysis Period (min) 15

Splits and Phases: 32: Siempre Viva Rd & Paseo De Las Americas

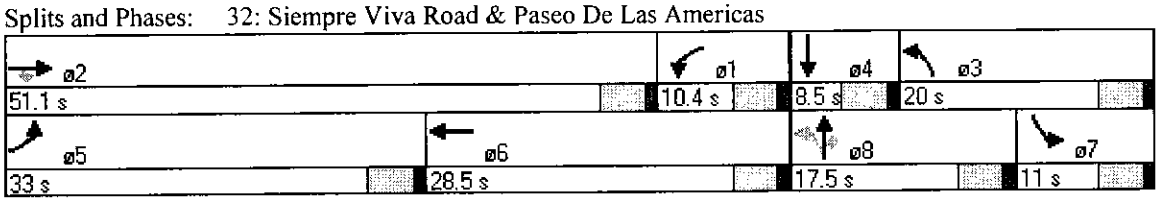


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Total Lost Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	1.00	0.91	1.00	1.00	0.95	0.95	1.00	0.95	1.00	1.00	0.95	0.95
Frt			0.850		0.950				0.850		0.878	
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1770	5085	1583	1770	3362	0	1770	3539	1583	1770	3107	0
Flt Permitted	0.950			0.950			0.471			0.950		
Satd. Flow (perm)	1770	5085	1583	1770	3362	0	877	3539	1583	1770	3107	0
Satd. Flow (RTOR)			74		95				42		368	
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Volume (vph)	620	490	70	40	640	320	330	310	40	80	80	350
Adj. Flow (vph)	653	516	74	42	674	337	347	326	42	84	84	368
Lane Group Flow (vph)	653	516	74	42	1011	0	347	326	42	84	452	0
Turn Type	Prot		Perm	Prot			pm+pt		Perm	Prot		
Protected Phases	5	2		1	6		3	8		7	4	
Permitted Phases			2				8		8			
Total Split (s)	33.0	51.1	51.1	10.4	28.5	0.0	20.0	17.5	17.5	11.0	8.5	0.0
Act Effct Green (s)	29.6	51.9	51.9	6.3	24.5		23.9	14.9	14.9	7.2	4.5	
Actuated g/C Ratio	0.33	0.58	0.58	0.07	0.27		0.27	0.17	0.17	0.08	0.05	
v/c Ratio	1.12	0.18	0.08	0.34	1.03		0.90	0.56	0.14	0.60	0.90	
Control Delay	102.2	8.5	2.6	36.8	57.1		61.7	39.4	12.4	58.7	31.0	
Queue Delay	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	
Total Delay	102.2	8.5	2.6	36.8	57.1		61.7	39.4	12.4	58.7	31.0	
LOS	F	A	A	D	E		E	D	B	E	C	
Approach Delay		57.4			56.3			48.6			35.3	
Approach LOS		E			E			D			D	

Intersection Summary

Cycle Length: 90
Actuated Cycle Length: 90
Offset: 47 (52%), Referenced to phase 2:EBT and 6:WBT, Start of Green
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 1.12
Intersection Signal Delay: 52.0 — Intersection LOS: D
Intersection Capacity Utilization 107.4% — ICU Level of Service G
Analysis Period (min) 15

Splits and Phases: 32: Siempre Viva Road & Paseo De Las Americas



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Sign Control		Free			Free			Stop			Stop	
Grade		0%			0%			0%			0%	
Volume (veh/h)	140	710	100	40	700	10	40	40	50	10	10	70
Peak Hour Factor	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84
Hourly flow rate (vph)	167	845	119	48	833	12	48	48	60	12	12	83
Pedestrians												
Lane Width (ft)												
Walking Speed (ft/s)												
Percent Blockage												
Right turn flare (veh)												
Median type								None			None	
Median storage veh)												
Upstream signal (ft)		1276										
pX, platoon unblocked				0.95			0.95	0.95	0.95	0.95	0.95	
vC, conflicting volume	845			964			1839	2179	482	1774	2232	423
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	845			910			1831	2188	403	1762	2244	423
tC, single (s)	4.1			4.1			7.5	6.5	6.9	7.5	6.5	6.9
tC, 2 stage (s)												
tF (s)	2.2			2.2			3.5	4.0	3.3	3.5	4.0	3.3
p0 queue free %	79			93			0	0	90	0	59	86
cM capacity (veh/h)	787			707			21	31	567	0	29	580

Direction, Lane #	EB 1	EB 2	EB 3	WB 1	WB 2	WB 3	NB 1	SB 1	SB 2
Volume Total	167	563	401	48	556	290	155	24	83
Volume Left	167	0	0	48	0	0	48	12	0
Volume Right	0	0	119	0	0	12	60	0	83
cSH	787	1700	1700	707	1700	1700	40	0	580
Volume to Capacity	0.21	0.33	0.24	0.07	0.33	0.17	3.86	Err	0.14
Queue Length 95th (ft)	20	0	0	5	0	0	Err	Err	12
Control Delay (s)	10.8	0.0	0.0	10.5	0.0	0.0	Err	Err	12.2
Lane LOS	B			B			F	F	B
Approach Delay (s)	1.6			0.6			Err	Err	
Approach LOS							F	F	

Intersection Summary			
Average Delay	Err		
Intersection Capacity Utilization	51.5%	ICU Level of Service	A
Analysis Period (min)	15		

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Sign Control		Free			Free			Stop			Stop	
Grade		0%			0%			0%			0%	
Volume (veh/h)	100	480	30	40	780	20	90	30	10	10	40	130
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
Hourly flow rate (vph)	110	527	33	44	857	22	99	33	11	11	44	143
Pedestrians												
Lane Width (ft)												
Walking Speed (ft/s)												
Percent Blockage												
Right turn flare (veh)												
Median type								None			None	
Median storage veh)												
Upstream signal (ft)		1290			1303							
pX, platoon unblocked												
vC, conflicting volume	879			560			1445	1731	280	1467	1736	440
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	879			560			1445	1731	280	1467	1736	440
tC, single (s)	4.1			4.1			7.5	6.5	6.9	7.5	6.5	6.9
tC, 2 stage (s)												
tF (s)	2.2			2.2			3.5	4.0	3.3	3.5	4.0	3.3
p0 queue free %	86			96			0	54	98	78	38	75
cM capacity (veh/h)	764			1007			31	71	717	49	71	565

Direction, Lane #	EB 1	EB 2	EB 3	WB 1	WB 2	WB 3	NB 1	SB 1	SB 2
Volume Total	110	352	209	44	571	308	143	55	143
Volume Left	110	0	0	44	0	0	99	11	0
Volume Right	0	0	33	0	0	22	11	0	143
cSH	764	1700	1700	1007	1700	1700	39	65	565
Volume to Capacity	0.14	0.21	0.12	0.04	0.34	0.18	3.71	0.85	0.25
Queue Length 95th (ft)	13	0	0	3	0	0	Err	99	25
Control Delay (s)	10.5	0.0	0.0	8.7	0.0	0.0	Err	174.7	13.5
Lane LOS	B			A			F	F	B
Approach Delay (s)	1.7			0.4			Err	58.3	
Approach LOS							F	F	

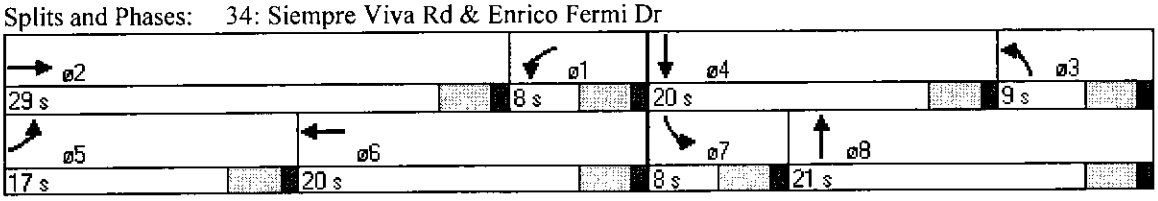
Intersection Summary			
Average Delay	745.3		
Intersection Capacity Utilization	51.6%	ICU Level of Service	A
Analysis Period (min)	15		

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Total Lost Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	0.97	1.00	1.00	1.00	0.95	0.95	1.00	0.95	0.95	1.00	0.95	0.95
Frt		0.988			0.974			0.967			0.863	
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	3433	1840	0	1770	3447	0	1770	3422	0	1770	3054	0
Flt Permitted	0.950			0.950			0.950			0.950		
Satd. Flow (perm)	3433	1840	0	1770	3447	0	1770	3422	0	1770	3054	0
Satd. Flow (RTOR)		8			35			26			403	
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Volume (vph)	410	330	30	20	380	80	60	70	20	20	30	310
Adj. Flow (vph)	532	429	39	26	494	104	78	91	26	26	39	403
Lane Group Flow (vph)	532	468	0	26	598	0	78	117	0	26	442	0
Turn Type	Prot			Prot			Prot			Prot		
Protected Phases	5	2		1	6		3	8		7	4	
Permitted Phases												
Total Split (s)	17.0	29.0	0.0	8.0	20.0	0.0	9.0	21.0	0.0	8.0	20.0	0.0
Act Effct Green (s)	14.5	36.9		5.0	21.6		7.3	14.7		4.7	8.5	
Actuated g/C Ratio	0.22	0.56		0.08	0.33		0.11	0.22		0.07	0.13	
v/c Ratio	0.70	0.45		0.19	0.52		0.40	0.15		0.21	0.59	
Control Delay	28.3	7.8		32.9	21.0		35.7	15.7		35.6	4.8	
Queue Delay	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Delay	28.3	7.8		32.9	21.0		35.7	15.7		35.6	4.8	
LOS	C	A		C	C		D	B		D	A	
Approach Delay		18.7			21.5			23.7			6.5	
Approach LOS		B			C			C			A	

Intersection Summary

Cycle Length: 66
Actuated Cycle Length: 66
Offset: 0 (0%), Referenced to phase 2:EBT and 6:WBT, Start of Green
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 0.70
Intersection Signal Delay: 17.4 — Intersection LOS: B
Intersection Capacity Utilization 52.3% — ICU Level of Service A
Analysis Period (min) 15

Splits and Phases: 34: Siempre Viva Rd & Enrico Fermi Dr

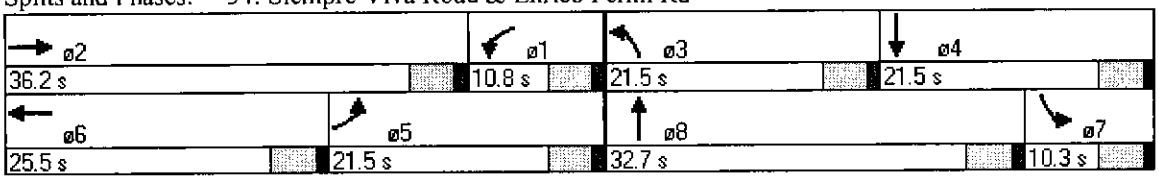


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Total Lost Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	0.97	1.00	1.00	1.00	0.95	0.95	1.00	0.95	0.95	1.00	0.95	0.95
Frt		0.966			0.980			0.978			0.855	
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	3433	1799	0	1770	3468	0	1770	3461	0	1770	3026	0
Flt Permitted	0.950			0.950			0.950			0.950		
Satd. Flow (perm)	3433	1799	0	1770	3468	0	1770	3461	0	1770	3026	0
Satd. Flow (RTOR)		19			18			21			292	
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Volume (vph)	370	100	30	30	390	60	170	120	20	20	10	280
Adj. Flow (vph)	385	104	31	31	406	62	177	125	21	21	10	292
Lane Group Flow (vph)	385	135	0	31	468	0	177	146	0	21	302	0
Turn Type	Prot			Prot			Prot			Prot		
Protected Phases	5	2		1	6		3	8		7	4	
Permitted Phases												
Total Split (s)	21.5	36.2	0.0	10.8	25.5	0.0	21.5	32.7	0.0	10.3	21.5	0.0
Act Effct Green (s)	15.4	34.4		6.5	21.5		14.0	37.0		6.2	23.1	
Actuated g/C Ratio	0.17	0.38		0.07	0.24		0.16	0.41		0.07	0.26	
v/c Ratio	0.66	0.19		0.24	0.56		0.64	0.10		0.17	0.30	
Control Delay	39.6	9.6		44.1	31.8		46.2	16.3		42.2	9.2	
Queue Delay	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Delay	39.6	9.6		44.1	31.8		46.2	16.3		42.2	9.2	
LOS	D	A		D	C		D	B		D	A	
Approach Delay		31.8			32.6			32.7			11.4	
Approach LOS		C			C			C			B	

Intersection Summary

Cycle Length: 90
Actuated Cycle Length: 90
Offset: 84 (93%), Referenced to phase 2:EBT and 6:WBT, Start of Green
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 0.66
Intersection Signal Delay: 28.2 — Intersection LOS: C
Intersection Capacity Utilization 55.4% — ICU Level of Service B
Analysis Period (min) 15

Splits and Phases: 34: Siempre Viva Road & Enrico Fermi Rd



Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Sign Control	Stop		Free			Free
Grade	0%		0%			0%
Volume (veh/h)	30	30	520	80	30	440
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	33	33	565	87	33	478
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type	TWLTL					
Median storage veh)	1					
Upstream signal (ft)			1299			
pX, platoon unblocked	0.84	0.84			0.84	
vC, conflicting volume	1152	609			652	
vC1, stage 1 conf vol	609					
vC2, stage 2 conf vol	543					
vCu, unblocked vol	1182	532			584	
tC, single (s)	6.4	6.2			4.1	
tC, 2 stage (s)	5.4					
tF (s)	3.5	3.3			2.2	
p0 queue free %	90	93			96	
cM capacity (veh/h)	315	458			828	

Direction, Lane #	WB 1	NB 1	SB 1
Volume Total	65	652	511
Volume Left	33	0	33
Volume Right	33	87	0
cSH	373	1700	828
Volume to Capacity	0.17	0.38	0.04
Queue Length 95th (ft)	16	0	3
Control Delay (s)	16.7	0.0	1.1
Lane LOS	C		A
Approach Delay (s)	16.7	0.0	1.1
Approach LOS	C		

Intersection Summary			
Average Delay	1.3		
Intersection Capacity Utilization	58.0%	ICU Level of Service	B
Analysis Period (min)	15		

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Sign Control	Stop		Free			Free
Grade	0%		0%			0%
Volume (veh/h)	50	30	530	30	30	470
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	54	33	576	33	33	511
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type	TWLTL					
Median storage veh)	1					
Upstream signal (ft)			1296			
pX, platoon unblocked	0.78	0.78			0.78	
vC, conflicting volume	1168	592			609	
vC1, stage 1 conf vol	592					
vC2, stage 2 conf vol	576					
vCu, unblocked vol	1215	480			500	
tC, single (s)	6.4	6.2			4.1	
tC, 2 stage (s)	5.4					
tF (s)	3.5	3.3			2.2	
p0 queue free %	82	93			96	
cM capacity (veh/h)	302	459			833	

Direction, Lane #	WB 1	NB 1	SB 1
Volume Total	87	609	543
Volume Left	54	0	33
Volume Right	33	33	0
cSH	347	1700	833
Volume to Capacity	0.25	0.36	0.04
Queue Length 95th (ft)	24	0	3
Control Delay (s)	18.8	0.0	1.1
Lane LOS	C		A
Approach Delay (s)	18.8	0.0	1.1
Approach LOS	C		

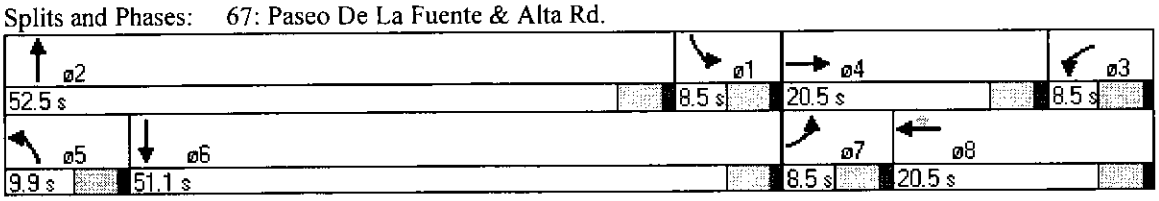
Intersection Summary			
Average Delay	1.8		
Intersection Capacity Utilization	60.6%	ICU Level of Service	B
Analysis Period (min)	15		

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Total Lost Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.925				0.850		0.983			0.989	
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1770	1723	0	1770	1863	1583	1770	1831	0	1770	1842	0
Flt Permitted	0.950			0.950			0.950			0.950		
Satd. Flow (perm)	1770	1723	0	1770	1863	1583	1770	1831	0	1770	1842	0
Satd. Flow (RTOR)		33				33		11			6	
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Volume (vph)	30	30	30	40	30	30	30	540	70	40	400	30
Adj. Flow (vph)	33	33	33	43	33	33	33	587	76	43	435	33
Lane Group Flow (vph)	33	66	0	43	33	33	33	663	0	43	468	0
Turn Type	Prot			Prot		Perm	Prot			Prot		
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases						8						
Total Split (s)	8.5	20.5	0.0	8.5	20.5	20.5	9.9	52.5	0.0	8.5	51.1	0.0
Act Effct Green (s)	4.9	8.3		5.0	10.6	10.6	6.4	51.5		5.0	53.1	
Actuated g/C Ratio	0.06	0.11		0.06	0.14	0.14	0.08	0.70		0.06	0.72	
v/c Ratio	0.30	0.31		0.38	0.13	0.13	0.23	0.52		0.38	0.35	
Control Delay	38.8	20.5		40.1	26.8	12.9	34.6	11.4		40.1	8.6	
Queue Delay	0.0	0.0		0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Total Delay	38.8	20.5		40.1	26.8	12.9	34.6	11.4		40.1	8.6	
LOS	D	C		D	C	B	C	B		D	A	
Approach Delay		26.6			27.8			12.5			11.3	
Approach LOS		C			C			B			B	

Intersection Summary

Cycle Length: 90
Actuated Cycle Length: 73.6
Control Type: Actuated-Uncoordinated
Maximum v/c Ratio: 0.52
Intersection Signal Delay: 14.2
Intersection LOS: B
Intersection Capacity Utilization 49.3%
ICU Level of Service A
Analysis Period (min) 15

Splits and Phases: 67: Paseo De La Fuente & Alta Rd.

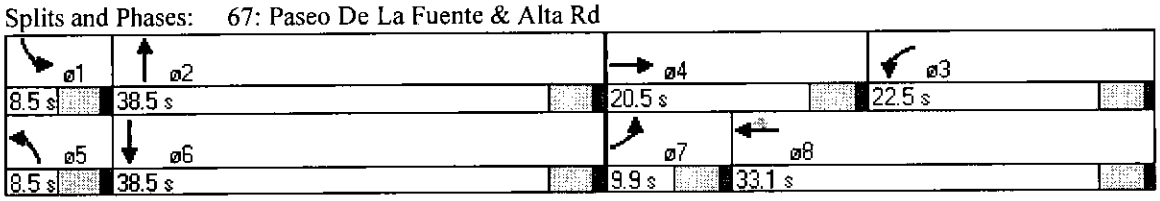


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Total Lost Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.925				0.850		0.986			0.991	
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1770	1723	0	1770	1863	1583	1770	1837	0	1770	1846	0
Flt Permitted	0.950			0.950			0.950			0.950		
Satd. Flow (perm)	1770	1723	0	1770	1863	1583	1770	1837	0	1770	1846	0
Satd. Flow (RTOR)		33				43		7			4	
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Volume (vph)	30	30	30	260	30	40	30	490	50	30	460	30
Adj. Flow (vph)	33	33	33	283	33	43	33	533	54	33	500	33
Lane Group Flow (vph)	33	66	0	283	33	43	33	587	0	33	533	0
Turn Type	Prot			Prot		Perm	Prot			Prot		
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases						8						
Total Split (s)	9.9	20.5	0.0	22.5	33.1	33.1	8.5	38.5	0.0	8.5	38.5	0.0
Act Effct Green (s)	6.3	7.8		14.8	18.1	18.1	4.8	28.5		4.8	28.5	
Actuated g/C Ratio	0.09	0.12		0.24	0.30	0.30	0.07	0.47		0.07	0.47	
v/c Ratio	0.20	0.28		0.66	0.06	0.09	0.26	0.68		0.26	0.62	
Control Delay	38.1	22.6		32.6	20.3	8.6	41.4	21.4		41.4	19.4	
Queue Delay	0.0	0.0		0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Total Delay	38.1	22.6		32.6	20.3	8.6	41.4	21.4		41.4	19.4	
LOS	D	C		C	C	A	D	C		D	B	
Approach Delay		27.7			28.6			22.4			20.7	
Approach LOS		C			C			C			C	

Intersection Summary

Cycle Length: 90
Actuated Cycle Length: 61.1
Control Type: Actuated-Uncoordinated
Maximum v/c Ratio: 0.68
Intersection Signal Delay: 23.5
Intersection LOS: C
Intersection Capacity Utilization 56.6%
ICU Level of Service B
Analysis Period (min) 15

Splits and Phases: 67: Paseo De La Fuente & Alta Rd



Cumulative w/Project– Intersection ILV Analysis

INTERSECTION

Signalized Intersection

CAPACITY ANALYSIS

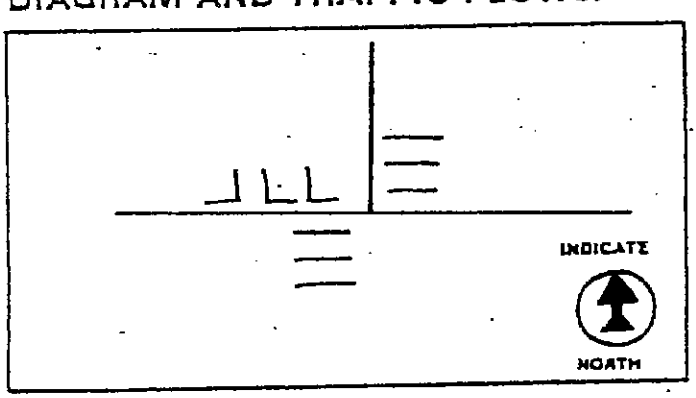
INTERSECTION Otay Mesa/SR-125 SB Cumulative (2020) w/ SR-905 (Phases 1A & 1B)

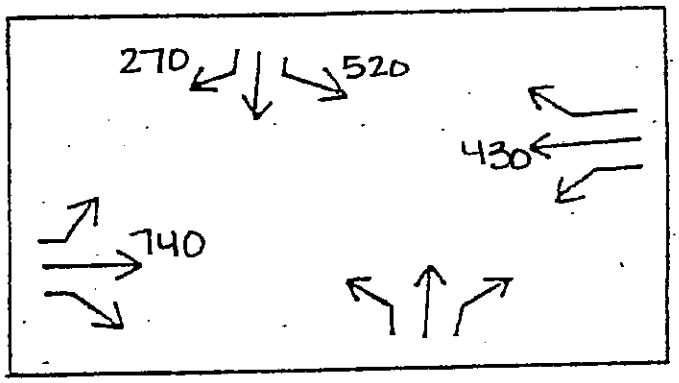
DIST. CO. RTE. P.M. 11/SD/125

BY JB DATE 3-23-10

TIME ____ (AM) PM

DIAGRAM AND TRAFFIC FLOWS:





LANE VOLUMES (ILV/hr):

Phase 1	Phase 2	Phase 3	Phase 4
143 143 144 247 247 246	270 L 260 L 260 L		

CRITICAL LANE VOLUMES (ILV/hr):

Phase 1	Phase 2	Phase 3	Phase 4
247	270		

TOTAL OPERATING LEVEL (ILV/hr):

Σ
517

Is . . .

☒ < 1200 ILV/hr.

☐ > 1200 but < 1500 ILV/hr.

☐ > 1500 ILV/hr. (CAPACITY)

REMARKS:

INTERSECTION

Signalized Intersection

CAPACITY ANALYSIS

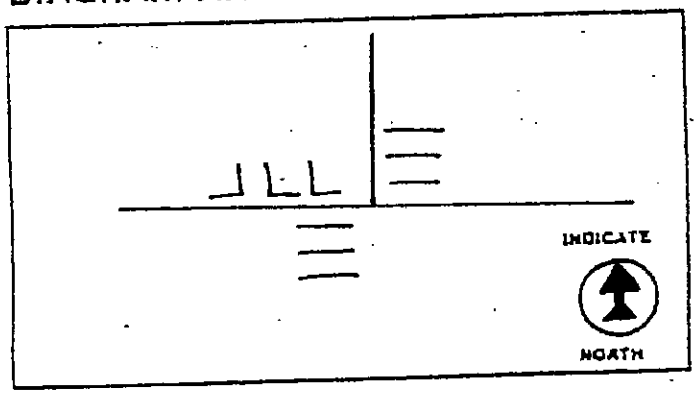
INTERSECTION Otay Mesa / SR-125 SB
Cumulative (2020) w/ SR-905 (Phases 1A & 1B)

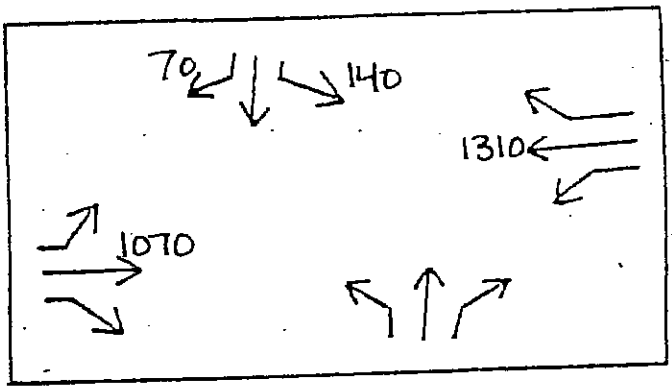
DIST. CO. RTE. P.M. 11 / SD / 125

BY JB DATE 3-23-10

TIME ____ AM (PM)

DIAGRAM AND TRAFFIC FLOWS:





LANE VOLUMES (1LV/hr):

Phase 1	Phase 2	Phase 3	Phase 4
436 437 437 357 357 356	70 70 70		

CRITICAL LANE VOLUMES (1LV/hr):

Phase 1	Phase 2	Phase 3	Phase 4
437	70		

TOTAL OPERATING LEVEL (1LV/hr): Is . . .

Σ
507

- ☒ < 1200 1LV/hr.
- ☐ > 1200 but < 1500 1LV/hr.
- ☐ > 1500 1LV/hr. (CAPACITY)

REMARKS:

INTERSECTION

Signalized Intersection

CAPACITY ANALYSIS

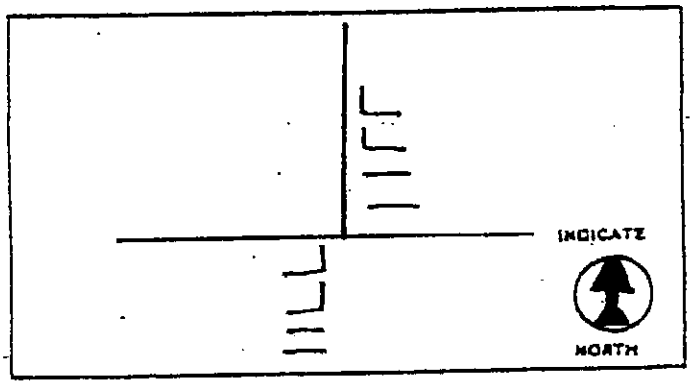
INTERSECTION Otay Mesa/SR-125 NB Ramp DIST. CO. RTE. P.M. 11/SD/905

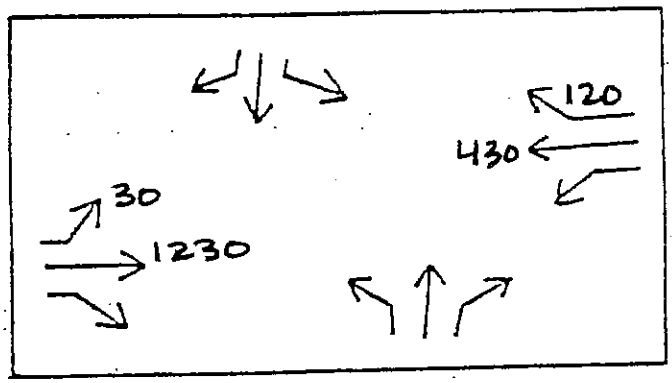
Cumulative (2020) w/ SR-905 (Phases 1A & 1B)

BY JB DATE 3-23-10

TIME ——— (AM) PM

DIAGRAM AND TRAFFIC FLOWS:





LANE VOLUMES (ILV/hr):

Phase 1	Phase 2	Phase 3	Phase 4
15 L 15 L 15 — 15 —	L 60 L 60 — 215 — 215 600 — 600 —		

CRITICAL LANE VOLUMES (ILV/hr):

Phase 1	Phase 2	Phase 3	Phase 4
15	600		

TOTAL OPERATING LEVEL (ILV/hr):

Σ
615

Is . . .

- ☑ < 1200 ILV/hr.
- ☐ > 1200 but < 1500 ILV/hr.
- ☐ > 1500 ILV/hr. (CAPACITY)

REMARKS:

INTERSECTION

Signalized Intersection

CAPACITY ANALYSIS

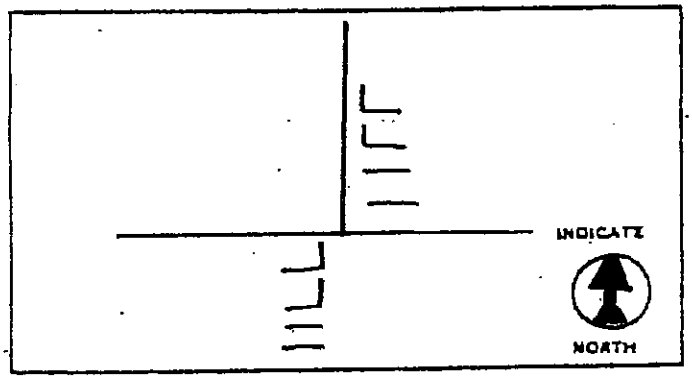
INTERSECTION Otay Mesa/SR-125NB Ramp DIST. CO. RTE. P.M. 11/SD/905

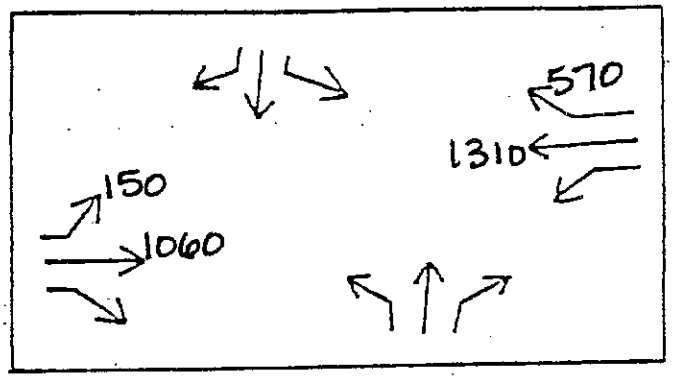
Cumulative (2020) w/ SR-905 (Phases 1A & 1B)

BY JB DATE 3-23-10

TIME ____ AM (PM)

DIAGRAM AND TRAFFIC FLOWS:





LANE VOLUMES (ILV/hr):

Phase 1	Phase 2	Phase 3	Phase 4
75 75 75 75	285 285 655 655 492 493		

CRITICAL LANE VOLUMES (ILV/hr):

Phase 1	Phase 2	Phase 3	Phase 4
75	655		

TOTAL OPERATING LEVEL (ILV/hr):

Σ
730

Is . . .

- ☒ < 1200 ILV/hr.
- ☐ > 1200 but < 1500 ILV/hr.
- ☐ > 1500 ILV/hr. (CAPACITY)

REMARKS:

Signalized Intersection
CAPACITY ANALYSIS

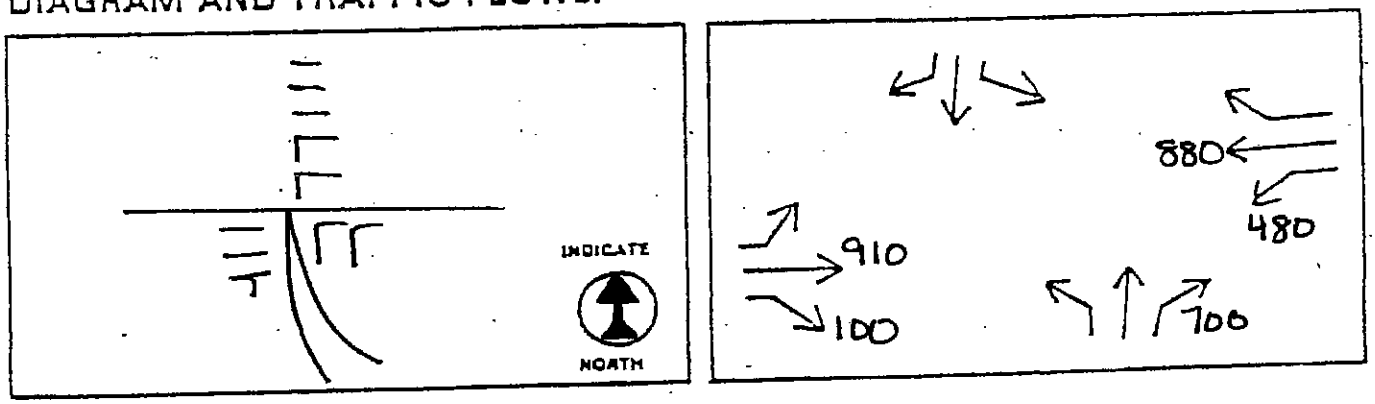
INTERSECTION Siempre Viva | SR-905 SB Ramp
Cumulative (2020) w/ SR-905 (Phases 1A & 1B)

DIST. CO. RTE. P.M. 11 | SD | 905

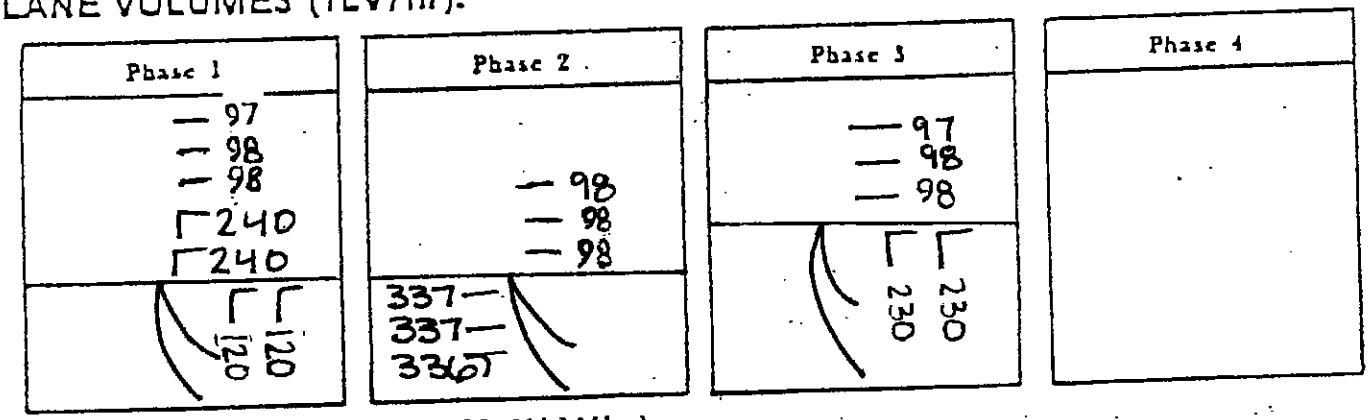
BY VB DATE 3-23-10

TIME ____ (AM) PM

DIAGRAM AND TRAFFIC FLOWS:



LANE VOLUMES (1LV/hr):



CRITICAL LANE VOLUMES (1LV/hr):

Phase 1	Phase 2	Phase 3	Phase 4
240	337	230	

TOTAL OPERATING LEVEL (1LV/hr):

Σ
807

Is . . .

☒ < 1200 1LV/hr.

☐ > 1200 but < 1500 1LV/hr.

☐ > 1500 1LV/hr. (CAPACITY)

REMARKS:

INTERSECTION

Signalized Intersection

CAPACITY ANALYSIS

INTERSECTION Siempre Viva | SR-905 SB Ramp

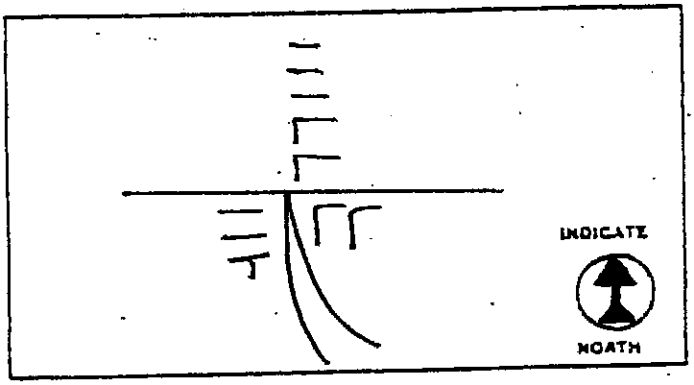
Cumulative (2020) w/ SR-905 (Phases 1A & 1B)

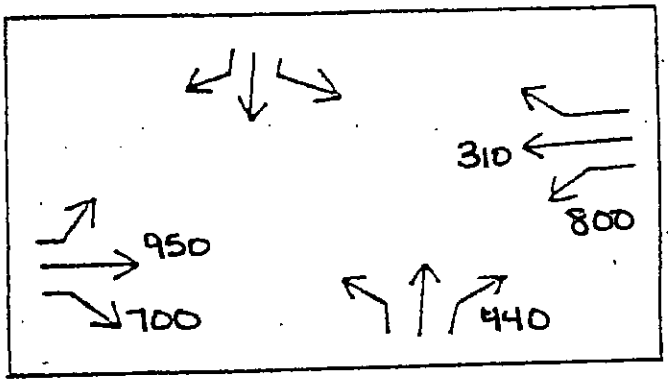
DIST. CO. RTE. P.M. 11 | SD | 905

BY VB DATE 3-23-10

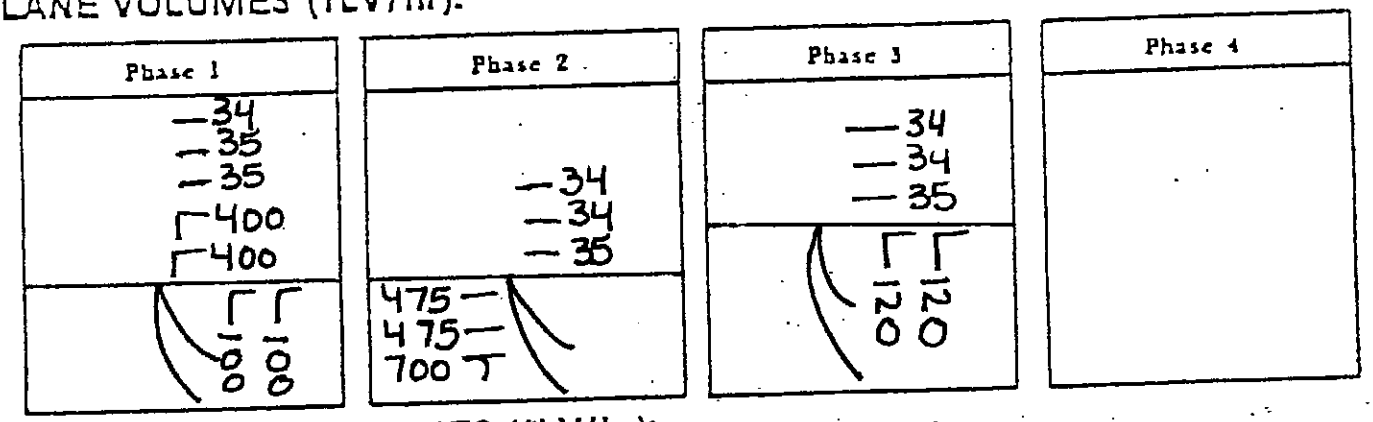
TIME ____ AM (PM)

DIAGRAM AND TRAFFIC FLOWS:





LANE VOLUMES (1LV/hr):



CRITICAL LANE VOLUMES (1LV/hr):

Phase 1	Phase 2	Phase 3	Phase 4
400	700	120	

TOTAL OPERATING LEVEL (1LV/hr):

Σ
1,220

Is . . .

- ☐ < 1200 1LV/hr.
- ☒ > 1200 but < 1500 1LV/hr.
- ☐ > 1500 1LV/hr. (CAPACITY)

REMARKS:

Signalized Intersection

CAPACITY ANALYSIS

INTERSECTION Siempre Viva / SR-905 NB Ramp

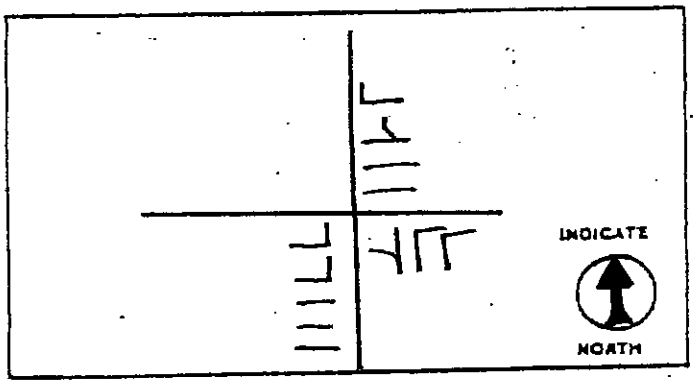
DIST. CO. RTE. P.M. 11/SD/905

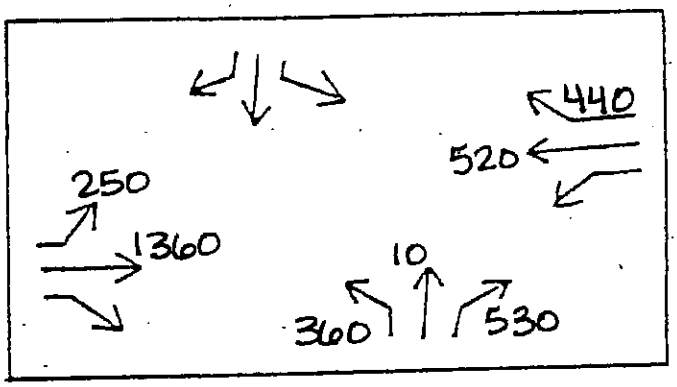
BY JB DATE 3-23-10

TIME ____ (AM) PM

Cumulative (2020) w/ SR-905 (Phases 1A & 1B)

DIAGRAM AND TRAFFIC FLOWS:





LANE VOLUMES (ILV/hr):

Phase 1	Phase 2	Phase 3	Phase 4
125 ⌊ 125 ⌊ 125 125 125	⌊240 ⌊240 240 240	⌊265 ⌊266 T370	
125	329 328 328		

CRITICAL LANE VOLUMES (ILV/hr):

Phase 1	Phase 2	Phase 3	Phase 4
125	329	370	

TOTAL OPERATING LEVEL (ILV/hr):

Σ
824

Is . . . ☒ < 1200 ILV/hr.

☐ > 1200 but < 1500 ILV/hr.

☐ > 1500 ILV/hr. (CAPACITY)

REMARKS:

INTERSECTION

Signalized Intersection

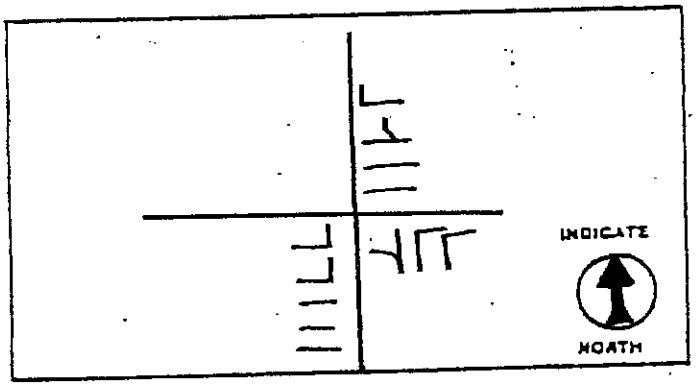
CAPACITY ANALYSIS

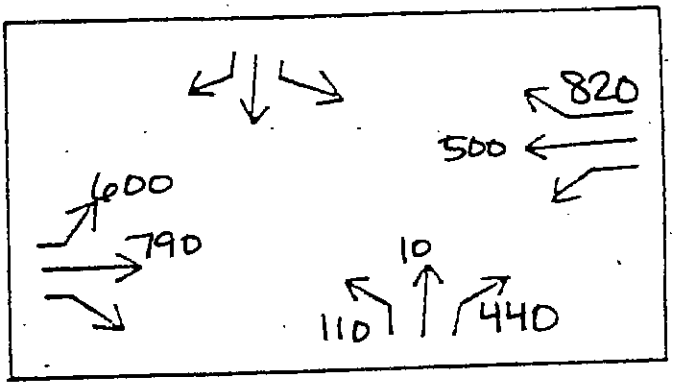
INTERSECTION Siempre Viva / SR-905 NB Ramp — DIST. CO. RTE. P.M. 11/SD/905

Cumulative (2020) w/ SR-905 (Phases 1A & 1B) — BY [illegible] DATE 3-23-10

TIME ____ AM (PM)

DIAGRAM AND TRAFFIC FLOWS:





LANE VOLUMES (1LV/hr):

Phase 1	Phase 2	Phase 3	Phase 4
300 L 300 L 131 = 132 = 132	410 L 410 L 250 — 250 — 131 — 132 — 132 —	220 L 220 L 120 T	

CRITICAL LANE VOLUMES (1LV/hr):

Phase 1	Phase 2	Phase 3	Phase 4
300	410	220	

TOTAL OPERATING LEVEL (1LV/hr):

Σ
930

Is . . .

- ☑ < 1200 1LV/hr.
- ☐ > 1200 but < 1500 1LV/hr.
- ☐ > 1500 1LV/hr. (CAPACITY)

REMARKS:

APPENDIX K

- Existing + Unit 1 Project Access – Synchro Analysis
- Existing + Units 1-2 Project Access – Synchro Analysis
- Existing + Units 1-3 Project Access – Synchro Analysis
- Existing + Units 1-4 Project Access – Synchro Analysis
- Existing + Units 1-5 Project Access – Synchro Analysis

Existing + Unit 1 Project Access – Synchro Analysis

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Sign Control		Free	Free		Stop	
Grade		0%	0%		0%	
Volume (veh/h)	285	132	33	0	0	71
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	310	143	36	0	0	77
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type					None	
Median storage veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume	36				799	36
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	36				799	36
tC, single (s)	4.1				6.4	6.2
tC, 2 stage (s)						
tF (s)	2.2				3.5	3.3
p0 queue free %	80				100	93
cM capacity (veh/h)	1575				285	1037

Direction, Lane #	EB 1	WB 1	SB 1
Volume Total	453	36	77
Volume Left	310	0	0
Volume Right	0	0	77
cSH	1575	1700	1037
Volume to Capacity	0.20	0.02	0.07
Queue Length 95th (ft)	18	0	6
Control Delay (s)	5.9	0.0	8.8
Lane LOS	A		A
Approach Delay (s)	5.9	0.0	8.8
Approach LOS			A

Intersection Summary			
Average Delay	5.9		
Intersection Capacity Utilization	40.5%	ICU Level of Service	A
Analysis Period (min)	15		

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Sign Control		Free	Free		Stop	
Grade		0%	0%		0%	
Volume (veh/h)	114	53	124	0	0	267
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	124	58	135	0	0	290
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type					None	
Median storage veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume	135				440	135
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	135				440	135
tC, single (s)	4.1				6.4	6.2
tC, 2 stage (s)						
tF (s)	2.2				3.5	3.3
p0 queue free %	91				100	68
cM capacity (veh/h)	1450				525	914

Direction, Lane #	EB 1	WB 1	SB 1
Volume Total	182	135	290
Volume Left	124	0	0
Volume Right	0	0	290
cSH	1450	1700	914
Volume to Capacity	0.09	0.08	0.32
Queue Length 95th (ft)	7	0	34
Control Delay (s)	5.5	0.0	10.8
Lane LOS	A		B
Approach Delay (s)	5.5	0.0	10.8
Approach LOS			B

Intersection Summary			
Average Delay	6.8		
Intersection Capacity Utilization	42.2%	ICU Level of Service	A
Analysis Period (min)	15		

Existing + Units 1-2 Project Access – Synchro Analysis

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Sign Control	Stop			Free	Free	
Grade	0%			0%	0%	
Volume (veh/h)	0	731	193	0	0	0
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	0	795	210	0	0	0
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type	None					
Median storage veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume	420	0	0			
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	420	0	0			
tC, single (s)	6.4	6.2	4.1			
tC, 2 stage (s)						
tF (s)	3.5	3.3	2.2			
p0 queue free %	100	27	87			
cM capacity (veh/h)	514	1085	1623			

Direction, Lane #	EB 1	NB 1	SB 1
Volume Total	795	210	0
Volume Left	0	210	0
Volume Right	795	0	0
cSH	1085	1623	1700
Volume to Capacity	0.73	0.13	0.00
Queue Length 95th (ft)	172	11	0
Control Delay (s)	16.8	7.5	0.0
Lane LOS	C	A	
Approach Delay (s)	16.8	7.5	0.0
Approach LOS	C		

Intersection Summary			
Average Delay	14.9		
Intersection Capacity Utilization	62.6%	ICU Level of Service	B
Analysis Period (min)	15		

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Sign Control	Stop			Free	Free	
Grade	0%			0%	0%	
Volume (veh/h)	0	294	723	0	0	0
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	0	320	786	0	0	0
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type	None					
Median storage veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume	1572	0	0			
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	1572	0	0			
tC, single (s)	6.4	6.2	4.1			
tC, 2 stage (s)						
tF (s)	3.5	3.3	2.2			
p0 queue free %	100	71	52			
cM capacity (veh/h)	63	1085	1623			

Direction, Lane #	EB 1	NB 1	SB 1
Volume Total	320	786	0
Volume Left	0	786	0
Volume Right	320	0	0
cSH	1085	1623	1700
Volume to Capacity	0.29	0.48	0.00
Queue Length 95th (ft)	31	69	0
Control Delay (s)	9.7	9.3	0.0
Lane LOS	A	A	
Approach Delay (s)	9.7	9.3	0.0
Approach LOS	A		

Intersection Summary			
Average Delay	9.4		
Intersection Capacity Utilization	64.9%	ICU Level of Service	C
Analysis Period (min)	15		

Movement	EBL	EBR	NBL	NBT	SBU	SBT	SBR
Lane Configurations							
Sign Control	Stop			Free		Free	
Grade	0%			0%		0%	
Volume (veh/h)	115	0	0	122	68	146	0
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	125	0	0	133	0	159	0
Pedestrians							
Lane Width (ft)							
Walking Speed (ft/s)							
Percent Blockage							
Right turn flare (veh)							
Median type	None						
Median storage veh)							
Upstream signal (ft)							
pX, platoon unblocked					0.00		
vC, conflicting volume	291	159	159		0		
vC1, stage 1 conf vol							
vC2, stage 2 conf vol							
vCu, unblocked vol	291	159	159		0		
tC, single (s)	6.4	6.2	4.1		0.0		
tC, 2 stage (s)							
tF (s)	3.5	3.3	2.2		0.0		
p0 queue free %	82	100	100		0		
cM capacity (veh/h)	699	887	1421		0		

Direction, Lane #	EB 1	NB 1	NB 2	SB 1	SB 2
Volume Total	125	0	133	159	0
Volume Left	125	0	0	0	0
Volume Right	0	0	0	0	0
cSH	699	1700	1700	1700	1700
Volume to Capacity	0.18	0.00	0.08	0.09	0.00
Queue Length 95th (ft)	16	0	0	0	0
Control Delay (s)	11.3	0.0	0.0	0.0	0.0
Lane LOS	B				
Approach Delay (s)	11.3	0.0		0.0	
Approach LOS	B				

Intersection Summary			
Average Delay	3.4		
Intersection Capacity Utilization	27.4%	ICU Level of Service	A
Analysis Period (min)	15		

Movement	EBL	EBR	NBL	NBT	SBU	SBT	SBR
Lane Configurations							
Sign Control	Stop			Free		Free	
Grade	0%			0%		0%	
Volume (veh/h)	160	0	0	457	27	92	0
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	174	0	0	497	0	100	0
Pedestrians							
Lane Width (ft)							
Walking Speed (ft/s)							
Percent Blockage							
Right turn flare (veh)							
Median type	None						
Median storage veh)							
Upstream signal (ft)							
pX, platoon unblocked					0.00		
vC, conflicting volume	597	100	100		0		
vC1, stage 1 conf vol							
vC2, stage 2 conf vol							
vCu, unblocked vol	597	100	100		0		
tC, single (s)	6.4	6.2	4.1		0.0		
tC, 2 stage (s)							
tF (s)	3.5	3.3	2.2		0.0		
p0 queue free %	63	100	100		0		
cM capacity (veh/h)	466	956	1493		0		

Direction, Lane #	EB 1	NB 1	NB 2	SB 1	SB 2
Volume Total	174	0	497	100	0
Volume Left	174	0	0	0	0
Volume Right	0	0	0	0	0
cSH	466	1700	1700	1700	1700
Volume to Capacity	0.37	0.00	0.29	0.06	0.00
Queue Length 95th (ft)	43	0	0	0	0
Control Delay (s)	17.3	0.0	0.0	0.0	0.0
Lane LOS	C				
Approach Delay (s)	17.3	0.0		0.0	
Approach LOS	C				

Intersection Summary			
Average Delay	3.9		
Intersection Capacity Utilization	39.6%	ICU Level of Service	A
Analysis Period (min)	15		

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Sign Control		Free	Free		Stop	
Grade		0%	0%		0%	
Volume (veh/h)	257	108	17	0	0	64
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	279	117	18	0	0	70
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type					None	
Median storage veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume	18				695	18
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	18				695	18
tC, single (s)	4.1				6.4	6.2
tC, 2 stage (s)						
tF (s)	2.2				3.5	3.3
p0 queue free %	83				100	93
cM capacity (veh/h)	1598				337	1060

Direction, Lane #	EB 1	WB 1	SB 1
Volume Total	397	18	70
Volume Left	279	0	0
Volume Right	0	0	70
cSH	1598	1700	1060
Volume to Capacity	0.17	0.01	0.07
Queue Length 95th (ft)	16	0	5
Control Delay (s)	5.9	0.0	8.6
Lane LOS	A		A
Approach Delay (s)	5.9	0.0	8.6
Approach LOS			A

Intersection Summary			
Average Delay	6.0		
Intersection Capacity Utilization	37.2%	ICU Level of Service	A
Analysis Period (min)	15		

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Sign Control		Free	Free		Stop	
Grade		0%	0%		0%	
Volume (veh/h)	103	44	63	0	0	241
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	112	48	68	0	0	262
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type					None	
Median storage veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume	68				340	68
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	68				340	68
tC, single (s)	4.1				6.4	6.2
tC, 2 stage (s)						
tF (s)	2.2				3.5	3.3
p0 queue free %	93				100	74
cM capacity (veh/h)	1533				608	995

Direction, Lane #	EB 1	WB 1	SB 1
Volume Total	160	68	262
Volume Left	112	0	0
Volume Right	0	0	262
cSH	1533	1700	995
Volume to Capacity	0.07	0.04	0.26
Queue Length 95th (ft)	6	0	27
Control Delay (s)	5.4	0.0	9.9
Lane LOS	A		A
Approach Delay (s)	5.4	0.0	9.9
Approach LOS			A

Intersection Summary			
Average Delay	7.1		
Intersection Capacity Utilization	36.3%	ICU Level of Service	A
Analysis Period (min)	15		

Existing + Units 1-3 Project Access – Synchro Analysis

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Sign Control	Stop			Free	Free	
Grade	0%			0%	0%	
Volume (veh/h)	0	752	211	0	0	0
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	0	817	229	0	0	0
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type	None					
Median storage veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume	459	0	0			
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	459	0	0			
tC, single (s)	6.4	6.2	4.1			
tC, 2 stage (s)						
tF (s)	3.5	3.3	2.2			
p0 queue free %	100	25	86			
cM capacity (veh/h)	481	1085	1623			

Direction, Lane #	EB 1	NB 1	SB 1
Volume Total	817	229	0
Volume Left	0	229	0
Volume Right	817	0	0
cSH	1085	1623	1700
Volume to Capacity	0.75	0.14	0.00
Queue Length 95th (ft)	187	12	0
Control Delay (s)	17.7	7.6	0.0
Lane LOS	C	A	
Approach Delay (s)	17.7	7.6	0.0
Approach LOS	C		

Intersection Summary			
Average Delay	15.5		
Intersection Capacity Utilization	64.9%	ICU Level of Service	C
Analysis Period (min)	15		

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Sign Control	Stop			Free	Free	
Grade	0%			0%	0%	
Volume (veh/h)	0	321	703	0	0	0
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	0	349	764	0	0	0
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type	None					
Median storage veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume	1528	0	0			
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	1528	0	0			
tC, single (s)	6.4	6.2	4.1			
tC, 2 stage (s)						
tF (s)	3.5	3.3	2.2			
p0 queue free %	100	68	53			
cM capacity (veh/h)	68	1085	1623			

Direction, Lane #	EB 1	NB 1	SB 1
Volume Total	349	764	0
Volume Left	0	764	0
Volume Right	349	0	0
cSH	1085	1623	1700
Volume to Capacity	0.32	0.47	0.00
Queue Length 95th (ft)	35	65	0
Control Delay (s)	9.9	9.2	0.0
Lane LOS	A	A	
Approach Delay (s)	9.9	9.2	0.0
Approach LOS	A		

Intersection Summary			
Average Delay	9.4		
Intersection Capacity Utilization	65.5%	ICU Level of Service	C
Analysis Period (min)	15		

Movement	EBL	EBT	WBT	WBR	SBU	SBL	SBR
Lane Configurations							
Sign Control		Free	Free			Stop	
Grade		0%	0%			0%	
Volume (veh/h)	30	0	0	37	149	198	26
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	33	0	0	40	0	215	28
Pedestrians							
Lane Width (ft)							
Walking Speed (ft/s)							
Percent Blockage							
Right turn flare (veh)							
Median type						None	
Median storage veh)							
Upstream signal (ft)							
pX, platoon unblocked					0.00		
vC, conflicting volume	40				0	85	20
vC1, stage 1 conf vol							
vC2, stage 2 conf vol							
vCu, unblocked vol	40				0	85	20
tC, single (s)	4.1				0.0	6.4	6.2
tC, 2 stage (s)							
tF (s)	2.2				0.0	3.5	3.3
p0 queue free %	98				0	76	97
cM capacity (veh/h)	1569				0	897	1058

Direction, Lane #	EB 1	WB 1	SB 1	SB 2
Volume Total	33	40	143	100
Volume Left	33	0	143	72
Volume Right	0	40	0	28
cSH	1569	1700	897	937
Volume to Capacity	0.02	0.02	0.16	0.11
Queue Length 95th (ft)	2	0	14	9
Control Delay (s)	7.3	0.0	9.8	9.3
Lane LOS	A		A	A
Approach Delay (s)	7.3	0.0	9.6	
Approach LOS			A	

Intersection Summary			
Average Delay	8.1		
Intersection Capacity Utilization	25.7%	ICU Level of Service	A
Analysis Period (min)	15		

Movement	EBL	EBT	WBT	WBR	SBU	SBL	SBR
Lane Configurations							
Sign Control		Free	Free			Stop	
Grade		0%	0%			0%	
Volume (veh/h)	22	0	0	139	60	245	29
Peak Hour Factor	0.95	0.95	0.95	0.95	0.92	0.95	0.95
Hourly flow rate (vph)	23	0	0	146	0	258	31
Pedestrians							
Lane Width (ft)							
Walking Speed (ft/s)							
Percent Blockage							
Right turn flare (veh)							
Median type						None	
Median storage veh)							
Upstream signal (ft)							
pX, platoon unblocked					0.00		
vC, conflicting volume	146				0	119	73
vC1, stage 1 conf vol							
vC2, stage 2 conf vol							
vCu, unblocked vol	146				0	119	73
tC, single (s)	4.1				0.0	6.4	6.2
tC, 2 stage (s)							
tF (s)	2.2				0.0	3.5	3.3
p0 queue free %	98				0	70	97
cM capacity (veh/h)	1436				0	862	989

Direction, Lane #	EB 1	WB 1	SB 1	SB 2
Volume Total	23	146	172	116
Volume Left	23	0	172	86
Volume Right	0	146	0	31
cSH	1436	1700	862	892
Volume to Capacity	0.02	0.09	0.20	0.13
Queue Length 95th (ft)	1	0	19	11
Control Delay (s)	7.5	0.0	10.2	9.6
Lane LOS	A		B	A
Approach Delay (s)	7.5	0.0	10.0	
Approach LOS			A	

Intersection Summary			
Average Delay	6.7		
Intersection Capacity Utilization	31.6%	ICU Level of Service	A
Analysis Period (min)	15		

Movement	WBL	WBR	NBT	NBR	SBU	SBL	SBT
Lane Configurations							
Sign Control	Stop		Free				Free
Grade	0%		0%				0%
Volume (veh/h)	0	148	78	0	50	594	281
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	0	161	85	0	0	646	305
Pedestrians							
Lane Width (ft)							
Walking Speed (ft/s)							
Percent Blockage							
Right turn flare (veh)							
Median type	None						
Median storage veh)							
Upstream signal (ft)							
pX, platoon unblocked					0.00		
vC, conflicting volume	1682	85			0	85	
vC1, stage 1 conf vol							
vC2, stage 2 conf vol							
vCu, unblocked vol	1682	85			0	85	
tC, single (s)	6.4	6.2			0.0	4.1	
tC, 2 stage (s)							
tF (s)	3.5	3.3			0.0	2.2	
p0 queue free %	100	83			0	57	
cM capacity (veh/h)	60	974			0	1512	

Direction, Lane #	WB 1	NB 1	SB 1	SB 2	SB 3
Volume Total	161	85	323	323	305
Volume Left	0	0	323	323	0
Volume Right	161	0	0	0	0
cSH	974	1700	1512	1512	1700
Volume to Capacity	0.17	0.05	0.43	0.43	0.18
Queue Length 95th (ft)	15	0	55	55	0
Control Delay (s)	9.4	0.0	9.1	9.1	0.0
Lane LOS	A		A	A	
Approach Delay (s)	9.4	0.0	6.2		
Approach LOS	A				

Intersection Summary			
Average Delay	6.2		
Intersection Capacity Utilization	40.9%	ICU Level of Service	A
Analysis Period (min)	15		

Movement	WBL	WBR	NBT	NBR	SBU	SBL	SBT
Lane Configurations							
Sign Control	Stop		Free				Free
Grade	0%		0%				0%
Volume (veh/h)	0	557	269	0	20	239	113
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	0	605	292	0	0	260	123
Pedestrians							
Lane Width (ft)							
Walking Speed (ft/s)							
Percent Blockage							
Right turn flare (veh)							
Median type	None						
Median storage veh)							
Upstream signal (ft)							
pX, platoon unblocked					0.00		
vC, conflicting volume	935	292			0	292	
vC1, stage 1 conf vol							
vC2, stage 2 conf vol							
vCu, unblocked vol	935	292			0	292	
tC, single (s)	6.4	6.2			0.0	4.1	
tC, 2 stage (s)							
tF (s)	3.5	3.3			0.0	2.2	
p0 queue free %	100	19			0	80	
cM capacity (veh/h)	234	747			0	1269	

Direction, Lane #	WB 1	NB 1	SB 1	SB 2	SB 3
Volume Total	605	292	130	130	123
Volume Left	0	0	130	130	0
Volume Right	605	0	0	0	0
cSH	747	1700	1269	1269	1700
Volume to Capacity	0.81	0.17	0.20	0.20	0.07
Queue Length 95th (ft)	216	0	19	19	0
Control Delay (s)	27.0	0.0	8.6	8.6	0.0
Lane LOS	D		A	A	
Approach Delay (s)	27.0	0.0	5.8		
Approach LOS	D				

Intersection Summary				
Average Delay	14.5			
Intersection Capacity Utilization	66.0%	ICU Level of Service		C
Analysis Period (min)	15			

Movement	EBL	EBR	NBL	NBT	SBU	SBT	SBR
Lane Configurations							
Sign Control	Stop			Free		Free	
Grade	0%			0%		0%	
Volume (veh/h)	70	0	0	154	99	95	0
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	76	0	0	167	0	103	0
Pedestrians							
Lane Width (ft)							
Walking Speed (ft/s)							
Percent Blockage							
Right turn flare (veh)							
Median type	None						
Median storage veh)							
Upstream signal (ft)							
pX, platoon unblocked					0.00		
vC, conflicting volume	271	103	103		0		
vC1, stage 1 conf vol							
vC2, stage 2 conf vol							
vCu, unblocked vol	271	103	103		0		
tC, single (s)	6.4	6.2	4.1		0.0		
tC, 2 stage (s)							
tF (s)	3.5	3.3	2.2		0.0		
p0 queue free %	89	100	100		0		
cM capacity (veh/h)	719	952	1489		0		

Direction, Lane #	EB 1	NB 1	NB 2	SB 1	SB 2
Volume Total	76	0	167	103	0
Volume Left	76	0	0	0	0
Volume Right	0	0	0	0	0
cSH	719	1700	1700	1700	1700
Volume to Capacity	0.11	0.00	0.10	0.06	0.00
Queue Length 95th (ft)	9	0	0	0	0
Control Delay (s)	10.6	0.0	0.0	0.0	0.0
Lane LOS	B				
Approach Delay (s)	10.6	0.0		0.0	
Approach LOS	B				

Intersection Summary			
Average Delay	2.3		
Intersection Capacity Utilization	27.5%	ICU Level of Service	A
Analysis Period (min)	15		

Movement	EBL	EBR	NBL	NBT	SBU	SBT	SBR
Lane Configurations							
Sign Control	Stop			Free		Free	
Grade	0%			0%		0%	
Volume (veh/h)	97	0	0	486	40	80	0
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	105	0	0	528	0	87	0
Pedestrians							
Lane Width (ft)							
Walking Speed (ft/s)							
Percent Blockage							
Right turn flare (veh)							
Median type	None						
Median storage veh)							
Upstream signal (ft)							
pX, platoon unblocked					0.00		
vC, conflicting volume	615	87	87		0		
vC1, stage 1 conf vol							
vC2, stage 2 conf vol							
vCu, unblocked vol	615	87	87		0		
tC, single (s)	6.4	6.2	4.1		0.0		
tC, 2 stage (s)							
tF (s)	3.5	3.3	2.2		0.0		
p0 queue free %	77	100	100		0		
cM capacity (veh/h)	455	972	1509		0		

Direction, Lane #	EB 1	NB 1	NB 2	SB 1	SB 2
Volume Total	105	0	528	87	0
Volume Left	105	0	0	0	0
Volume Right	0	0	0	0	0
cSH	455	1700	1700	1700	1700
Volume to Capacity	0.23	0.00	0.31	0.05	0.00
Queue Length 95th (ft)	22	0	0	0	0
Control Delay (s)	15.3	0.0	0.0	0.0	0.0
Lane LOS	C				
Approach Delay (s)	15.3	0.0		0.0	
Approach LOS	C				

Intersection Summary			
Average Delay	2.2		
Intersection Capacity Utilization	44.3%	ICU Level of Service	A
Analysis Period (min)	15		

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Sign Control		Free	Free		Stop	
Grade		0%	0%		0%	
Volume (veh/h)	264	132	33	0	0	66
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	287	143	36	0	0	72
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type					None	
Median storage veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume	36				753	36
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	36				753	36
tC, single (s)	4.1				6.4	6.2
tC, 2 stage (s)						
tF (s)	2.2				3.5	3.3
p0 queue free %	82				100	93
cM capacity (veh/h)	1575				309	1037

Direction, Lane #	EB 1	WB 1	SB 1
Volume Total	430	36	72
Volume Left	287	0	0
Volume Right	0	0	72
cSH	1575	1700	1037
Volume to Capacity	0.18	0.02	0.07
Queue Length 95th (ft)	17	0	6
Control Delay (s)	5.7	0.0	8.7
Lane LOS	A		A
Approach Delay (s)	5.7	0.0	8.7
Approach LOS			A

Intersection Summary			
Average Delay	5.7		
Intersection Capacity Utilization	39.0%	ICU Level of Service	A
Analysis Period (min)	15		

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Sign Control		Free	Free		Stop	
Grade		0%	0%		0%	
Volume (veh/h)	106	53	124	0	0	248
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	115	58	135	0	0	270
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type					None	
Median storage veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume	135				423	135
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	135				423	135
tC, single (s)	4.1				6.4	6.2
tC, 2 stage (s)						
tF (s)	2.2				3.5	3.3
p0 queue free %	92				100	71
cM capacity (veh/h)	1450				541	914

Direction, Lane #	EB 1	WB 1	SB 1
Volume Total	173	135	270
Volume Left	115	0	0
Volume Right	0	0	270
cSH	1450	1700	914
Volume to Capacity	0.08	0.08	0.29
Queue Length 95th (ft)	6	0	31
Control Delay (s)	5.3	0.0	10.6
Lane LOS	A		B
Approach Delay (s)	5.3	0.0	10.6
Approach LOS			B

Intersection Summary			
Average Delay	6.5		
Intersection Capacity Utilization	40.5%	ICU Level of Service	A
Analysis Period (min)	15		

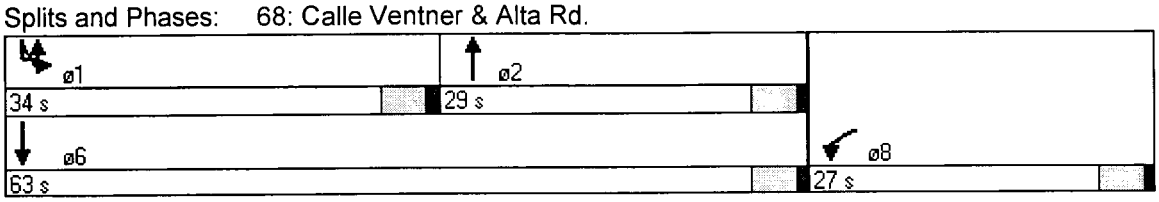
Existing + Units 1-4 Project Access – Synchro Analysis

Lane Group	WBL	WBR	NBT	NBR	SBU	SBL	SBT
Lane Configurations							
Total Lost Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	0.97	1.00
Frt	0.901		0.899				
Flt Protected	0.987					0.950	
Satd. Flow (prot)	1657	0	1675	0	0	3433	1863
Flt Permitted	0.987					0.950	
Satd. Flow (perm)	1657	0	1675	0	0	3433	1863
Satd. Flow (RTOR)	126		166				
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Volume (vph)	42	116	56	168	63	483	127
Adj. Flow (vph)	46	126	61	183	68	525	138
Lane Group Flow (vph)	172	0	244	0	0	593	138
Turn Type					Prot	Prot	
Protected Phases	8		2		1	1	6
Permitted Phases							
Total Split (s)	27.0	0.0	29.0	0.0	34.0	34.0	63.0
Act Effct Green (s)	8.0		9.1			13.5	28.6
Actuated g/C Ratio	0.19		0.22			0.33	0.70
v/c Ratio	0.42		0.49			0.52	0.11
Control Delay	10.6		10.3			14.1	3.7
Queue Delay	0.0		0.0			0.0	0.0
Total Delay	10.6		10.3			14.1	3.7
LOS	B		B			B	A
Approach Delay	10.6		10.3				12.1
Approach LOS	B		B				B

Intersection Summary

Cycle Length: 90
Actuated Cycle Length: 40.7
Control Type: Actuated-Uncoordinated
Maximum v/c Ratio: 0.52
Intersection Signal Delay: 11.5 — Intersection LOS: B
Intersection Capacity Utilization 48.3% — ICU Level of Service A
Analysis Period (min) 15

Splits and Phases: 68: Calle Ventner & Alta Rd.

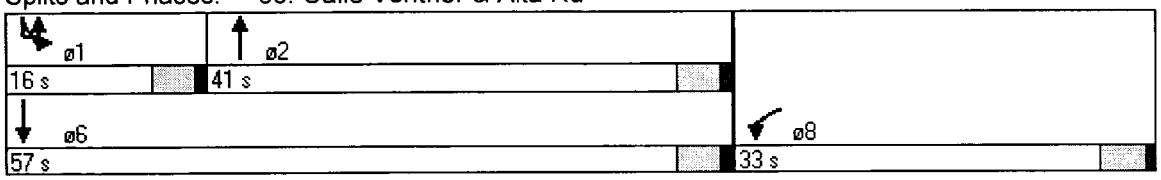


Lane Group	WBL	WBR	NBT	NBR	SBU	SBL	SBT
Lane Configurations							
Total Lost Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	0.97	1.00
Frt	0.901		0.958				
Flt Protected	0.987					0.950	
Satd. Flow (prot)	1657	0	1785	0	0	3433	1863
Flt Permitted	0.987					0.950	
Satd. Flow (perm)	1657	0	1785	0	0	3433	1863
Satd. Flow (RTOR)	162		30				
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Volume (vph)	158	434	152	68	25	194	52
Adj. Flow (vph)	172	472	165	74	27	211	57
Lane Group Flow (vph)	644	0	239	0	0	238	57
Turn Type					Prot	Prot	
Protected Phases	8		2		1	1	6
Permitted Phases							
Total Split (s)	33.0	0.0	41.0	0.0	16.0	16.0	57.0
Act Effct Green (s)	28.5		13.1			9.9	27.0
Actuated g/C Ratio	0.45		0.21			0.16	0.42
v/c Ratio	0.77		0.61			0.45	0.07
Control Delay	20.7		27.2			28.4	10.6
Queue Delay	0.0		0.0			0.0	0.0
Total Delay	20.7		27.2			28.4	10.6
LOS	C		C			C	B
Approach Delay	20.7		27.2				25.0
Approach LOS	C		C				C

Intersection Summary

Cycle Length: 90
Actuated Cycle Length: 63.6
Control Type: Actuated-Uncoordinated
Maximum v/c Ratio: 0.77
Intersection Signal Delay: 23.1 — Intersection LOS: C
Intersection Capacity Utilization 63.9% — ICU Level of Service B
Analysis Period (min) 15

Splits and Phases: 68: Calle Ventner & Alta Rd



Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Sign Control	Stop			Free	Free	
Grade	0%			0%	0%	
Volume (veh/h)	0	391	96	0	0	0
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	0	425	104	0	0	0
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type	None					
Median storage veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume	209	0	0			
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	209	0	0			
tC, single (s)	6.4	6.2	4.1			
tC, 2 stage (s)						
tF (s)	3.5	3.3	2.2			
p0 queue free %	100	61	94			
cM capacity (veh/h)	730	1085	1623			

Direction, Lane #	EB 1	NB 1	SB 1
Volume Total	425	104	0
Volume Left	0	104	0
Volume Right	425	0	0
cSH	1085	1623	1700
Volume to Capacity	0.39	0.06	0.00
Queue Length 95th (ft)	47	5	0
Control Delay (s)	10.4	7.4	0.0
Lane LOS	B	A	
Approach Delay (s)	10.4	7.4	0.0
Approach LOS	B		

Intersection Summary			
Average Delay	9.8		
Intersection Capacity Utilization	36.2%	ICU Level of Service	A
Analysis Period (min)	15		

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Sign Control	Stop			Free	Free	
Grade	0%			0%	0%	
Volume (veh/h)	0	167	356	0	0	0
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	0	182	387	0	0	0
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type	None					
Median storage veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume	774	0	0			
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	774	0	0			
tC, single (s)	6.4	6.2	4.1			
tC, 2 stage (s)						
tF (s)	3.5	3.3	2.2			
p0 queue free %	100	83	76			
cM capacity (veh/h)	279	1085	1623			

Direction, Lane #	EB 1	NB 1	SB 1
Volume Total	182	387	0
Volume Left	0	387	0
Volume Right	182	0	0
cSH	1085	1623	1700
Volume to Capacity	0.17	0.24	0.00
Queue Length 95th (ft)	15	23	0
Control Delay (s)	9.0	7.9	0.0
Lane LOS	A	A	
Approach Delay (s)	9.0	7.9	0.0
Approach LOS	A		

Intersection Summary			
Average Delay	8.3		
Intersection Capacity Utilization	36.7%	ICU Level of Service	A
Analysis Period (min)	15		

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Sign Control		Free	Free		Stop	
Grade		0%	0%		0%	
Volume (veh/h)	328	737	208	0	1	74
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93
Hourly flow rate (vph)	353	792	224	0	1	80
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type					None	
Median storage veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume	224				1722	224
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	224				1722	224
tC, single (s)	4.1				6.4	6.2
tC, 2 stage (s)						
tF (s)	2.2				3.5	3.3
p0 queue free %	74				99	90
cM capacity (veh/h)	1345				72	816

Direction, Lane #	EB 1	EB 2	WB 1	SB 1	SB 2
Volume Total	353	792	224	28	53
Volume Left	353	0	0	1	0
Volume Right	0	0	0	27	53
cSH	1345	1700	1700	583	816
Volume to Capacity	0.26	0.47	0.13	0.05	0.07
Queue Length 95th (ft)	26	0	0	4	5
Control Delay (s)	8.6	0.0	0.0	11.5	9.7
Lane LOS	A			B	A
Approach Delay (s)	2.7		0.0	10.3	
Approach LOS				B	

Intersection Summary			
Average Delay	2.7		
Intersection Capacity Utilization	48.8%	ICU Level of Service	A
Analysis Period (min)	15		

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Sign Control		Free	Free		Stop	
Grade		0%	0%		0%	
Volume (veh/h)	142	297	724	0	1	276
Peak Hour Factor	0.92	0.95	0.95	0.92	0.92	0.92
Hourly flow rate (vph)	154	313	762	0	1	300
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type					None	
Median storage veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume	762				1383	762
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	762				1383	762
tC, single (s)	4.1				6.4	6.2
tC, 2 stage (s)						
tF (s)	2.2				3.5	3.3
p0 queue free %	82				99	26
cM capacity (veh/h)	850				130	405

Direction, Lane #	EB 1	EB 2	WB 1	SB 1	SB 2
Volume Total	154	313	762	101	200
Volume Left	154	0	0	1	0
Volume Right	0	0	0	100	200
cSH	850	1700	1700	396	405
Volume to Capacity	0.18	0.18	0.45	0.26	0.49
Queue Length 95th (ft)	17	0	0	25	66
Control Delay (s)	10.2	0.0	0.0	17.2	22.3
Lane LOS	B			C	C
Approach Delay (s)	3.4		0.0	20.6	
Approach LOS				C	

Intersection Summary			
Average Delay	5.1		
Intersection Capacity Utilization	61.7%	ICU Level of Service	B
Analysis Period (min)	15		

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Sign Control		Stop			Stop			Stop			Stop	
Volume (vph)	169	252	315	0	63	0	79	0	0	0	0	60
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
Hourly flow rate (vph)	184	274	342	0	68	0	86	0	0	0	0	65

Direction, Lane #	EB 1	EB 2	WB 1	NB 1	SB 1	SB 2
Volume Total (vph)	184	616	68	86	0	65
Volume Left (vph)	184	0	0	86	0	0
Volume Right (vph)	0	342	0	0	0	65
Hadj (s)	0.53	-0.35	0.03	0.23	0.00	-0.67
Departure Headway (s)	5.6	4.7	5.8	6.6	6.6	5.9
Degree Utilization, x	0.29	0.81	0.11	0.16	0.00	0.11
Capacity (veh/h)	633	749	585	514	520	560
Control Delay (s)	9.7	23.2	9.6	10.9	8.4	8.5
Approach Delay (s)	20.1		9.6	10.9	8.5	
Approach LOS	C		A	B	A	

Intersection Summary			
Delay	17.9		
HCM Level of Service	C		
Intersection Capacity Utilization	43.6%	ICU Level of Service	A
Analysis Period (min)	15		

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Sign Control		Stop			Stop			Stop			Stop	
Volume (vph)	69	101	127	0	237	0	296	0	0	0	0	192
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
Hourly flow rate (vph)	73	106	134	0	249	0	312	0	0	0	0	202

Direction, Lane #	EB 1	EB 2	WB 1	NB 1	SB 1	SB 2
Volume Total (vph)	73	240	249	312	0	202
Volume Left (vph)	73	0	0	312	0	0
Volume Right (vph)	0	134	0	0	0	202
Hadj (s)	0.53	-0.36	0.03	0.23	0.00	-0.67
Departure Headway (s)	7.4	6.5	7.0	7.0	7.1	6.4
Degree Utilization, x	0.15	0.43	0.49	0.61	0.00	0.36
Capacity (veh/h)	452	506	468	486	476	500
Control Delay (s)	10.5	13.1	16.5	20.3	8.9	11.7
Approach Delay (s)	12.5		16.5	20.3	11.7	
Approach LOS	B		C	C	B	

Intersection Summary			
Delay	15.6		
HCM Level of Service	C		
Intersection Capacity Utilization	52.0%	ICU Level of Service	A
Analysis Period (min)	15		

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Sign Control	Stop		Free			Free
Grade	0%		0%			0%
Volume (veh/h)	32	32	202	126	126	43
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	35	35	220	137	137	47
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type	None					
Median storage veh)						
Upstream signal (ft)						1232
pX, platoon unblocked						
vC, conflicting volume	609	288			357	
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	609	288			357	
tC, single (s)	6.4	6.2			4.1	
tC, 2 stage (s)						
tF (s)	3.5	3.3			2.2	
p0 queue free %	91	95			89	
cM capacity (veh/h)	406	751			1202	

Direction, Lane #	WB 1	NB 1	SB 1
Volume Total	70	357	184
Volume Left	35	0	137
Volume Right	35	137	0
cSH	527	1700	1202
Volume to Capacity	0.13	0.21	0.11
Queue Length 95th (ft)	11	0	10
Control Delay (s)	12.9	0.0	6.5
Lane LOS	B		A
Approach Delay (s)	12.9	0.0	6.5
Approach LOS	B		

Intersection Summary			
Average Delay	3.4		
Intersection Capacity Utilization	41.3%	ICU Level of Service	A
Analysis Period (min)	15		

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Sign Control	Stop		Free			Free
Grade	0%		0%			0%
Volume (veh/h)	118	118	91	51	51	159
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	128	128	99	55	55	173
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type	None					
Median storage veh)						
Upstream signal (ft)						1232
pX, platoon unblocked						
vC, conflicting volume	410	127			154	
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	410	127			154	
tC, single (s)	6.4	6.2			4.1	
tC, 2 stage (s)						
tF (s)	3.5	3.3			2.2	
p0 queue free %	78	86			96	
cM capacity (veh/h)	574	924			1426	

Direction, Lane #	WB 1	NB 1	SB 1
Volume Total	257	154	228
Volume Left	128	0	55
Volume Right	128	55	0
cSH	708	1700	1426
Volume to Capacity	0.36	0.09	0.04
Queue Length 95th (ft)	41	0	3
Control Delay (s)	12.9	0.0	2.1
Lane LOS	B		A
Approach Delay (s)	12.9	0.0	2.1
Approach LOS	B		

Intersection Summary			
Average Delay	5.9		
Intersection Capacity Utilization	42.9%	ICU Level of Service	A
Analysis Period (min)	15		

Movement	EBL	EBR	NBL	NBT	SBU	SBT	SBR
Lane Configurations							
Sign Control	Stop			Free		Free	
Grade	0%			0%		0%	
Volume (veh/h)	100	0	0	43	63	95	0
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	109	0	0	47	0	103	0
Pedestrians							
Lane Width (ft)							
Walking Speed (ft/s)							
Percent Blockage							
Right turn flare (veh)							
Median type	None						
Median storage veh)							
Upstream signal (ft)							
pX, platoon unblocked					0.00		
vC, conflicting volume	150	103	103		0		
vC1, stage 1 conf vol							
vC2, stage 2 conf vol							
vCu, unblocked vol	150	103	103		0		
tC, single (s)	6.4	6.2	4.1		0.0		
tC, 2 stage (s)							
tF (s)	3.5	3.3	2.2		0.0		
p0 queue free %	87	100	100		0		
cM capacity (veh/h)	842	952	1489		0		

Direction, Lane #	EB 1	NB 1	NB 2	SB 1	SB 2
Volume Total	109	0	47	103	0
Volume Left	109	0	0	0	0
Volume Right	0	0	0	0	0
cSH	842	1700	1700	1700	1700
Volume to Capacity	0.13	0.00	0.03	0.06	0.00
Queue Length 95th (ft)	11	0	0	0	0
Control Delay (s)	9.9	0.0	0.0	0.0	0.0
Lane LOS	A				
Approach Delay (s)	9.9	0.0		0.0	
Approach LOS	A				

Intersection Summary			
Average Delay	4.2		
Intersection Capacity Utilization	22.4%	ICU Level of Service	A
Analysis Period (min)	15		

Movement	EBL	EBR	NBL	NBT	SBU	SBT	SBR
Lane Configurations							
Sign Control	Stop			Free		Free	
Grade	0%			0%		0%	
Volume (veh/h)	93	0	0	159	25	73	0
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	101	0	0	173	0	79	0
Pedestrians							
Lane Width (ft)							
Walking Speed (ft/s)							
Percent Blockage							
Right turn flare (veh)							
Median type	None						
Median storage veh)							
Upstream signal (ft)							
pX, platoon unblocked					0.00		
vC, conflicting volume	252	79	79		0		
vC1, stage 1 conf vol							
vC2, stage 2 conf vol							
vCu, unblocked vol	252	79	79		0		
tC, single (s)	6.4	6.2	4.1		0.0		
tC, 2 stage (s)							
tF (s)	3.5	3.3	2.2		0.0		
p0 queue free %	86	100	100		0		
cM capacity (veh/h)	736	981	1519		0		

Direction, Lane #	EB 1	NB 1	NB 2	SB 1	SB 2
Volume Total	101	0	173	79	0
Volume Left	101	0	0	0	0
Volume Right	0	0	0	0	0
cSH	736	1700	1700	1700	1700
Volume to Capacity	0.14	0.00	0.10	0.05	0.00
Queue Length 95th (ft)	12	0	0	0	0
Control Delay (s)	10.7	0.0	0.0	0.0	0.0
Lane LOS	B				
Approach Delay (s)	10.7	0.0		0.0	
Approach LOS	B				

Intersection Summary				
Average Delay	3.1			
Intersection Capacity Utilization	26.9%	ICU Level of Service		A
Analysis Period (min)	15			

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Sign Control	Stop		Free			Free
Grade	0%		0%			0%
Volume (veh/h)	0	32	26	0	126	105
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	0	35	28	0	137	114
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type	None					
Median storage veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume	416	28			28	
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	416	28			28	
tC, single (s)	6.4	6.2			4.1	
tC, 2 stage (s)						
tF (s)	3.5	3.3			2.2	
p0 queue free %	100	97			91	
cM capacity (veh/h)	542	1047			1585	

Direction, Lane #	WB 1	NB 1	SB 1	SB 2
Volume Total	35	28	137	114
Volume Left	0	0	137	0
Volume Right	35	0	0	0
cSH	1047	1700	1585	1700
Volume to Capacity	0.03	0.02	0.09	0.07
Queue Length 95th (ft)	3	0	7	0
Control Delay (s)	8.6	0.0	7.5	0.0
Lane LOS	A		A	
Approach Delay (s)	8.6	0.0	4.1	
Approach LOS	A			

Intersection Summary			
Average Delay	4.2		
Intersection Capacity Utilization	23.6%	ICU Level of Service	A
Analysis Period (min)	15		

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Sign Control	Stop		Free			Free
Grade	0%		0%			0%
Volume (veh/h)	0	118	99	0	51	42
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	0	128	108	0	55	46
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type	None					
Median storage veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume	264	108			108	
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	264	108			108	
tC, single (s)	6.4	6.2			4.1	
tC, 2 stage (s)						
tF (s)	3.5	3.3			2.2	
p0 queue free %	100	86			96	
cM capacity (veh/h)	698	946			1483	

Direction, Lane #	WB 1	NB 1	SB 1	SB 2
Volume Total	128	108	55	46
Volume Left	0	0	55	0
Volume Right	128	0	0	0
cSH	946	1700	1483	1700
Volume to Capacity	0.14	0.06	0.04	0.03
Queue Length 95th (ft)	12	0	3	0
Control Delay (s)	9.4	0.0	7.5	0.0
Lane LOS	A		A	
Approach Delay (s)	9.4	0.0	4.1	
Approach LOS	A			

Intersection Summary			
Average Delay	4.8		
Intersection Capacity Utilization	23.5%	ICU Level of Service	A
Analysis Period (min)	15		

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Sign Control		Free	Free		Stop	
Grade		0%	0%		0%	
Volume (veh/h)	273	168	37	0	0	68
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	297	183	40	0	0	74
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type					None	
Median storage veh)						
Upstream signal (ft)		1015				
pX, platoon unblocked						
vC, conflicting volume	40				816	40
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	40				816	40
tC, single (s)	4.1				6.4	6.2
tC, 2 stage (s)						
tF (s)	2.2				3.5	3.3
p0 queue free %	81				100	93
cM capacity (veh/h)	1569				281	1031

Direction, Lane #	EB 1	WB 1	SB 1
Volume Total	479	40	74
Volume Left	297	0	0
Volume Right	0	0	74
cSH	1569	1700	1031
Volume to Capacity	0.19	0.02	0.07
Queue Length 95th (ft)	17	0	6
Control Delay (s)	5.5	0.0	8.8
Lane LOS	A		A
Approach Delay (s)	5.5	0.0	8.8
Approach LOS			A

Intersection Summary			
Average Delay	5.5		
Intersection Capacity Utilization	41.5%	ICU Level of Service	A
Analysis Period (min)	15		

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Sign Control		Free	Free		Stop	
Grade		0%	0%		0%	
Volume (veh/h)	110	68	138	0	0	256
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	120	74	150	0	0	278
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type					None	
Median storage veh)						
Upstream signal (ft)		1016				
pX, platoon unblocked						
vC, conflicting volume	150				463	150
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	150				463	150
tC, single (s)	4.1				6.4	6.2
tC, 2 stage (s)						
tF (s)	2.2				3.5	3.3
p0 queue free %	92				100	69
cM capacity (veh/h)	1431				511	896

Direction, Lane #	EB 1	WB 1	SB 1
Volume Total	193	150	278
Volume Left	120	0	0
Volume Right	0	0	278
cSH	1431	1700	896
Volume to Capacity	0.08	0.09	0.31
Queue Length 95th (ft)	7	0	33
Control Delay (s)	5.0	0.0	10.8
Lane LOS	A		B
Approach Delay (s)	5.0	0.0	10.8
Approach LOS			B

Intersection Summary			
Average Delay	6.4		
Intersection Capacity Utilization	42.8%	ICU Level of Service	A
Analysis Period (min)	15		

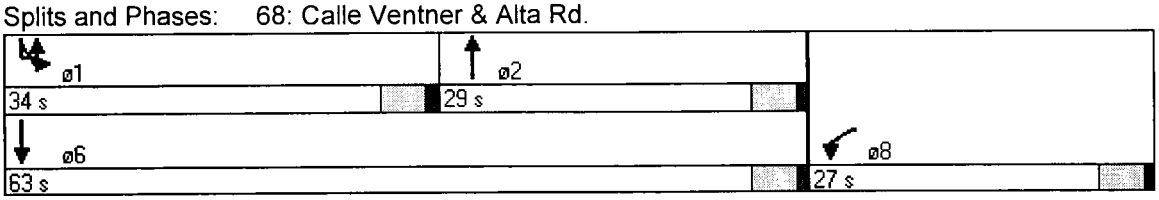
Existing + Units 1-5 Project Access – Synchro Analysis

Lane Group	WBL	WBR	NBT	NBR	SBU	SBL	SBT
Lane Configurations							
Total Lost Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	0.97	1.00
Frt	0.901		0.899				
Flt Protected	0.987					0.950	
Satd. Flow (prot)	1657	0	1675	0	0	3433	1863
Flt Permitted	0.987					0.950	
Satd. Flow (perm)	1657	0	1675	0	0	3433	1863
Satd. Flow (RTOR)	126		166				
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Volume (vph)	42	116	56	168	63	483	127
Adj. Flow (vph)	46	126	61	183	68	525	138
Lane Group Flow (vph)	172	0	244	0	0	593	138
Turn Type					Prot	Prot	
Protected Phases	8		2		1	1	6
Permitted Phases							
Total Split (s)	27.0	0.0	29.0	0.0	34.0	34.0	63.0
Act Effct Green (s)	8.0		9.1			13.5	28.6
Actuated g/C Ratio	0.19		0.22			0.33	0.70
v/c Ratio	0.42		0.49			0.52	0.11
Control Delay	10.6		10.3			14.1	3.7
Queue Delay	0.0		0.0			0.0	0.0
Total Delay	10.6		10.3			14.1	3.7
LOS	B		B			B	A
Approach Delay	10.6		10.3				12.1
Approach LOS	B		B				B

Intersection Summary

Cycle Length: 90
Actuated Cycle Length: 40.7
Control Type: Actuated-Uncoordinated
Maximum v/c Ratio: 0.52
Intersection Signal Delay: 11.5 — Intersection LOS: B
Intersection Capacity Utilization 48.3% — ICU Level of Service A
Analysis Period (min) 15

Splits and Phases: 68: Calle Ventner & Alta Rd.

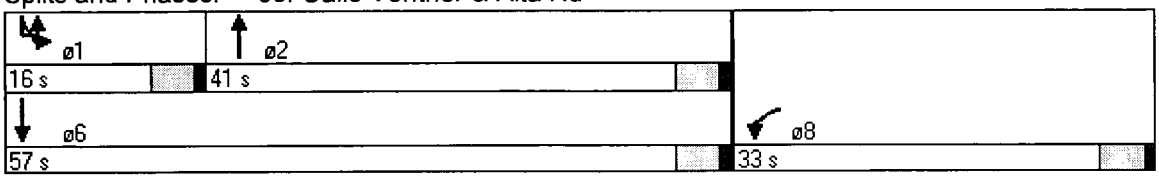


Lane Group	WBL	WBR	NBT	NBR	SBU	SBL	SBT
Lane Configurations							
Total Lost Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	0.97	1.00
Frt	0.901		0.958				
Flt Protected	0.987					0.950	
Satd. Flow (prot)	1657	0	1785	0	0	3433	1863
Flt Permitted	0.987					0.950	
Satd. Flow (perm)	1657	0	1785	0	0	3433	1863
Satd. Flow (RTOR)	162		30				
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Volume (vph)	158	434	152	68	25	194	52
Adj. Flow (vph)	172	472	165	74	27	211	57
Lane Group Flow (vph)	644	0	239	0	0	238	57
Turn Type					Prot	Prot	
Protected Phases	8		2		1	1	6
Permitted Phases							
Total Split (s)	33.0	0.0	41.0	0.0	16.0	16.0	57.0
Act Effct Green (s)	28.5		13.1			9.9	27.0
Actuated g/C Ratio	0.45		0.21			0.16	0.42
v/c Ratio	0.77		0.61			0.45	0.07
Control Delay	20.7		27.2			28.4	10.6
Queue Delay	0.0		0.0			0.0	0.0
Total Delay	20.7		27.2			28.4	10.6
LOS	C		C			C	B
Approach Delay	20.7		27.2				25.0
Approach LOS	C		C				C

Intersection Summary

Cycle Length: 90
Actuated Cycle Length: 63.6
Control Type: Actuated-Uncoordinated
Maximum v/c Ratio: 0.77
Intersection Signal Delay: 23.1 — Intersection LOS: C
Intersection Capacity Utilization 63.9% — ICU Level of Service B
Analysis Period (min) 15

Splits and Phases: 68: Calle Ventner & Alta Rd



Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Sign Control	Stop			Free	Free	
Grade	0%			0%	0%	
Volume (veh/h)	0	423	144	0	0	0
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	0	460	157	0	0	0
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type	None					
Median storage veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume	313	0	0			
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	313	0	0			
tC, single (s)	6.4	6.2	4.1			
tC, 2 stage (s)						
tF (s)	3.5	3.3	2.2			
p0 queue free %	100	58	90			
cM capacity (veh/h)	614	1085	1623			

Direction, Lane #	EB 1	NB 1	SB 1
Volume Total	460	157	0
Volume Left	0	157	0
Volume Right	460	0	0
cSH	1085	1623	1700
Volume to Capacity	0.42	0.10	0.00
Queue Length 95th (ft)	54	8	0
Control Delay (s)	10.7	7.5	0.0
Lane LOS	B	A	
Approach Delay (s)	10.7	7.5	0.0
Approach LOS	B		

Intersection Summary			
Average Delay	9.9		
Intersection Capacity Utilization	40.8%	ICU Level of Service	A
Analysis Period (min)	15		

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Sign Control	Stop			Free	Free	
Grade	0%			0%	0%	
Volume (veh/h)	0	203	392	0	0	0
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	0	221	426	0	0	0
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type	None					
Median storage veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume	852	0	0			
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	852	0	0			
tC, single (s)	6.4	6.2	4.1			
tC, 2 stage (s)						
tF (s)	3.5	3.3	2.2			
p0 queue free %	100	80	74			
cM capacity (veh/h)	243	1085	1623			

Direction, Lane #	EB 1	NB 1	SB 1
Volume Total	221	426	0
Volume Left	0	426	0
Volume Right	221	0	0
cSH	1085	1623	1700
Volume to Capacity	0.20	0.26	0.00
Queue Length 95th (ft)	19	27	0
Control Delay (s)	9.2	8.0	0.0
Lane LOS	A	A	
Approach Delay (s)	9.2	8.0	0.0
Approach LOS	A		

Intersection Summary			
Average Delay	8.4		
Intersection Capacity Utilization	41.0%	ICU Level of Service	A
Analysis Period (min)	15		

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Sign Control		Free	Free		Stop	
Grade		0%	0%		0%	
Volume (veh/h)	328	769	256	0	1	74
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93
Hourly flow rate (vph)	353	827	275	0	1	80
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type					None	
Median storage veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume	275				1808	275
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	275				1808	275
tC, single (s)	4.1				6.4	6.2
tC, 2 stage (s)						
tF (s)	2.2				3.5	3.3
p0 queue free %	73				98	90
cM capacity (veh/h)	1288				63	763

Direction, Lane #	EB 1	EB 2	WB 1	SB 1	SB 2
Volume Total	353	827	275	28	53
Volume Left	353	0	0	1	0
Volume Right	0	0	0	27	53
cSH	1288	1700	1700	533	763
Volume to Capacity	0.27	0.49	0.16	0.05	0.07
Queue Length 95th (ft)	28	0	0	4	6
Control Delay (s)	8.8	0.0	0.0	12.1	10.1
Lane LOS	A			B	B
Approach Delay (s)	2.6		0.0	10.8	
Approach LOS				B	

Intersection Summary			
Average Delay	2.6		
Intersection Capacity Utilization	50.5%	ICU Level of Service	A
Analysis Period (min)	15		

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Sign Control		Free	Free		Stop	
Grade		0%	0%		0%	
Volume (veh/h)	142	333	760	0	1	276
Peak Hour Factor	0.92	0.95	0.95	0.92	0.92	0.92
Hourly flow rate (vph)	154	351	800	0	1	300
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type					None	
Median storage veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume	800				1459	800
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	800				1459	800
tC, single (s)	4.1				6.4	6.2
tC, 2 stage (s)						
tF (s)	2.2				3.5	3.3
p0 queue free %	81				99	22
cM capacity (veh/h)	823				116	385

Direction, Lane #	EB 1	EB 2	WB 1	SB 1	SB 2
Volume Total	154	351	800	101	200
Volume Left	154	0	0	1	0
Volume Right	0	0	0	100	200
cSH	823	1700	1700	376	385
Volume to Capacity	0.19	0.21	0.47	0.27	0.52
Queue Length 95th (ft)	17	0	0	27	72
Control Delay (s)	10.4	0.0	0.0	18.1	24.0
Lane LOS	B			C	C
Approach Delay (s)	3.2		0.0	22.0	
Approach LOS				C	

Intersection Summary			
Average Delay	5.1		
Intersection Capacity Utilization	63.6%	ICU Level of Service	B
Analysis Period (min)	15		

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Sign Control		Stop			Stop			Stop			Stop	
Volume (vph)	169	252	347	0	63	0	127	48	0	0	32	60
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
Hourly flow rate (vph)	184	274	377	0	68	0	138	52	0	0	35	65

Direction, Lane #	EB 1	EB 2	WB 1	NB 1	NB 2	SB 1	SB 2
Volume Total (vph)	184	651	68	138	52	35	65
Volume Left (vph)	184	0	0	138	0	0	0
Volume Right (vph)	0	377	0	0	0	0	65
Hadj (s)	0.53	-0.37	0.03	0.53	0.03	0.03	-0.67
Departure Headway (s)	6.1	5.2	6.4	7.4	6.9	7.1	6.4
Degree Utilization, x	0.31	0.94	0.12	0.29	0.10	0.07	0.12
Capacity (veh/h)	574	688	537	474	506	487	540
Control Delay (s)	10.6	42.0	10.3	12.2	9.5	9.5	9.1
Approach Delay (s)	35.1		10.3	11.4		9.2	
Approach LOS	E		B	B		A	

Intersection Summary			
Delay	27.7		
HCM Level of Service	D		
Intersection Capacity Utilization	54.9%	ICU Level of Service	A
Analysis Period (min)	15		

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Sign Control		Stop			Stop			Stop			Stop	
Volume (vph)	69	101	163	0	237	0	332	36	0	0	36	192
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
Hourly flow rate (vph)	73	106	172	0	249	0	349	38	0	0	38	202

Direction, Lane #	EB 1	EB 2	WB 1	NB 1	NB 2	SB 1	SB 2
Volume Total (vph)	73	278	249	349	38	38	202
Volume Left (vph)	73	0	0	349	0	0	0
Volume Right (vph)	0	172	0	0	0	0	202
Hadj (s)	0.53	-0.40	0.03	0.53	0.03	0.03	-0.67
Departure Headway (s)	7.7	6.8	7.3	7.6	7.0	7.5	6.8
Degree Utilization, x	0.16	0.53	0.51	0.73	0.07	0.08	0.38
Capacity (veh/h)	435	490	451	461	485	438	478
Control Delay (s)	11.0	15.9	17.6	27.4	9.4	9.9	12.7
Approach Delay (s)	14.9		17.6	25.7		12.2	
Approach LOS	B		C	D		B	

Intersection Summary			
Delay	18.3		
HCM Level of Service	C		
Intersection Capacity Utilization	62.8%	ICU Level of Service	B
Analysis Period (min)	15		

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Sign Control	Stop		Free			Free
Grade	0%		0%			0%
Volume (veh/h)	32	32	202	126	126	43
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	35	35	220	137	137	47
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type	None					
Median storage veh)						
Upstream signal (ft)						1232
pX, platoon unblocked						
vC, conflicting volume	609	288			357	
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	609	288			357	
tC, single (s)	6.4	6.2			4.1	
tC, 2 stage (s)						
tF (s)	3.5	3.3			2.2	
p0 queue free %	91	95			89	
cM capacity (veh/h)	406	751			1202	

Direction, Lane #	WB 1	NB 1	SB 1
Volume Total	70	357	184
Volume Left	35	0	137
Volume Right	35	137	0
cSH	527	1700	1202
Volume to Capacity	0.13	0.21	0.11
Queue Length 95th (ft)	11	0	10
Control Delay (s)	12.9	0.0	6.5
Lane LOS	B		A
Approach Delay (s)	12.9	0.0	6.5
Approach LOS	B		

Intersection Summary			
Average Delay	3.4		
Intersection Capacity Utilization	41.3%	ICU Level of Service	A
Analysis Period (min)	15		

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Sign Control	Stop		Free			Free
Grade	0%		0%			0%
Volume (veh/h)	118	118	91	51	51	159
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	128	128	99	55	55	173
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type	None					
Median storage veh)						
Upstream signal (ft)						1232
pX, platoon unblocked						
vC, conflicting volume	410	127			154	
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	410	127			154	
tC, single (s)	6.4	6.2			4.1	
tC, 2 stage (s)						
tF (s)	3.5	3.3			2.2	
p0 queue free %	78	86			96	
cM capacity (veh/h)	574	924			1426	

Direction, Lane #	WB 1	NB 1	SB 1
Volume Total	257	154	228
Volume Left	128	0	55
Volume Right	128	55	0
cSH	708	1700	1426
Volume to Capacity	0.36	0.09	0.04
Queue Length 95th (ft)	41	0	3
Control Delay (s)	12.9	0.0	2.1
Lane LOS	B		A
Approach Delay (s)	12.9	0.0	2.1
Approach LOS	B		

Intersection Summary			
Average Delay	5.9		
Intersection Capacity Utilization	42.9%	ICU Level of Service	A
Analysis Period (min)	15		

Movement	EBL	EBR	NBL	NBT	SBU	SBT	SBR
Lane Configurations							
Sign Control	Stop			Free		Free	
Grade	0%			0%		0%	
Volume (veh/h)	100	0	0	91	63	95	0
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	109	0	0	99	0	103	0
Pedestrians							
Lane Width (ft)							
Walking Speed (ft/s)							
Percent Blockage							
Right turn flare (veh)							
Median type	None						
Median storage veh)							
Upstream signal (ft)							
pX, platoon unblocked					0.00		
vC, conflicting volume	202	103	103		0		
vC1, stage 1 conf vol							
vC2, stage 2 conf vol							
vCu, unblocked vol	202	103	103		0		
tC, single (s)	6.4	6.2	4.1		0.0		
tC, 2 stage (s)							
tF (s)	3.5	3.3	2.2		0.0		
p0 queue free %	86	100	100		0		
cM capacity (veh/h)	786	952	1489		0		

Direction, Lane #	EB 1	NB 1	NB 2	SB 1	SB 2
Volume Total	109	0	99	103	0
Volume Left	109	0	0	0	0
Volume Right	0	0	0	0	0
cSH	786	1700	1700	1700	1700
Volume to Capacity	0.14	0.00	0.06	0.06	0.00
Queue Length 95th (ft)	12	0	0	0	0
Control Delay (s)	10.3	0.0	0.0	0.0	0.0
Lane LOS	B				
Approach Delay (s)	10.3	0.0		0.0	
Approach LOS	B				

Intersection Summary			
Average Delay	3.6		
Intersection Capacity Utilization	22.4%	ICU Level of Service	A
Analysis Period (min)	15		

Movement	EBL	EBR	NBL	NBT	SBU	SBT	SBR
Lane Configurations							
Sign Control	Stop			Free		Free	
Grade	0%			0%		0%	
Volume (veh/h)	93	0	0	195	25	73	0
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	101	0	0	212	0	79	0
Pedestrians							
Lane Width (ft)							
Walking Speed (ft/s)							
Percent Blockage							
Right turn flare (veh)							
Median type	None						
Median storage veh)							
Upstream signal (ft)							
pX, platoon unblocked					0.00		
vC, conflicting volume	291	79	79		0		
vC1, stage 1 conf vol							
vC2, stage 2 conf vol							
vCu, unblocked vol	291	79	79		0		
tC, single (s)	6.4	6.2	4.1		0.0		
tC, 2 stage (s)							
tF (s)	3.5	3.3	2.2		0.0		
p0 queue free %	86	100	100		0		
cM capacity (veh/h)	699	981	1519		0		

Direction, Lane #	EB 1	NB 1	NB 2	SB 1	SB 2
Volume Total	101	0	212	79	0
Volume Left	101	0	0	0	0
Volume Right	0	0	0	0	0
cSH	699	1700	1700	1700	1700
Volume to Capacity	0.14	0.00	0.12	0.05	0.00
Queue Length 95th (ft)	13	0	0	0	0
Control Delay (s)	11.0	0.0	0.0	0.0	0.0
Lane LOS	B				
Approach Delay (s)	11.0	0.0		0.0	
Approach LOS	B				

Intersection Summary			
Average Delay	2.8		
Intersection Capacity Utilization	28.7%	ICU Level of Service	A
Analysis Period (min)	15		

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Sign Control	Stop		Free			Free
Grade	0%		0%			0%
Volume (veh/h)	0	32	122	0	126	169
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	0	35	133	0	137	184
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type	None					
Median storage veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume	590	133			133	
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	590	133			133	
tC, single (s)	6.4	6.2			4.1	
tC, 2 stage (s)						
tF (s)	3.5	3.3			2.2	
p0 queue free %	100	96			91	
cM capacity (veh/h)	426	917			1452	

Direction, Lane #	WB 1	NB 1	SB 1	SB 2
Volume Total	35	133	137	184
Volume Left	0	0	137	0
Volume Right	35	0	0	0
cSH	917	1700	1452	1700
Volume to Capacity	0.04	0.08	0.09	0.11
Queue Length 95th (ft)	3	0	8	0
Control Delay (s)	9.1	0.0	7.7	0.0
Lane LOS	A		A	
Approach Delay (s)	9.1	0.0	3.3	
Approach LOS	A			

Intersection Summary			
Average Delay	2.8		
Intersection Capacity Utilization	26.7%	ICU Level of Service	A
Analysis Period (min)	15		

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Sign Control	Stop		Free			Free
Grade	0%		0%			0%
Volume (veh/h)	0	118	170	0	51	113
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	0	128	185	0	55	123
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type	None					
Median storage veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume	418	185			185	
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	418	185			185	
tC, single (s)	6.4	6.2			4.1	
tC, 2 stage (s)						
tF (s)	3.5	3.3			2.2	
p0 queue free %	100	85			96	
cM capacity (veh/h)	568	857			1390	

Direction, Lane #	WB 1	NB 1	SB 1	SB 2
Volume Total	128	185	55	123
Volume Left	0	0	55	0
Volume Right	128	0	0	0
cSH	857	1700	1390	1700
Volume to Capacity	0.15	0.11	0.04	0.07
Queue Length 95th (ft)	13	0	3	0
Control Delay (s)	9.9	0.0	7.7	0.0
Lane LOS	A		A	
Approach Delay (s)	9.9	0.0	2.4	
Approach LOS	A			

Intersection Summary			
Average Delay	3.5		
Intersection Capacity Utilization	29.6%	ICU Level of Service	A
Analysis Period (min)	15		

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Sign Control		Free	Free		Stop	
Grade		0%	0%		0%	
Volume (veh/h)	273	168	37	0	0	68
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	297	183	40	0	0	74
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type					None	
Median storage veh)						
Upstream signal (ft)		1015				
pX, platoon unblocked						
vC, conflicting volume	40				816	40
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	40				816	40
tC, single (s)	4.1				6.4	6.2
tC, 2 stage (s)						
tF (s)	2.2				3.5	3.3
p0 queue free %	81				100	93
cM capacity (veh/h)	1569				281	1031

Direction, Lane #	EB 1	WB 1	SB 1
Volume Total	479	40	74
Volume Left	297	0	0
Volume Right	0	0	74
cSH	1569	1700	1031
Volume to Capacity	0.19	0.02	0.07
Queue Length 95th (ft)	17	0	6
Control Delay (s)	5.5	0.0	8.8
Lane LOS	A		A
Approach Delay (s)	5.5	0.0	8.8
Approach LOS			A

Intersection Summary			
Average Delay	5.5		
Intersection Capacity Utilization	41.5%	ICU Level of Service	A
Analysis Period (min)	15		

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Sign Control		Free	Free		Stop	
Grade		0%	0%		0%	
Volume (veh/h)	110	68	138	0	0	256
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	120	74	150	0	0	278
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type					None	
Median storage veh)						
Upstream signal (ft)		1016				
pX, platoon unblocked						
vC, conflicting volume	150				463	150
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	150				463	150
tC, single (s)	4.1				6.4	6.2
tC, 2 stage (s)						
tF (s)	2.2				3.5	3.3
p0 queue free %	92				100	69
cM capacity (veh/h)	1431				511	896

Direction, Lane #	EB 1	WB 1	SB 1
Volume Total	193	150	278
Volume Left	120	0	0
Volume Right	0	0	278
cSH	1431	1700	896
Volume to Capacity	0.08	0.09	0.31
Queue Length 95th (ft)	7	0	33
Control Delay (s)	5.0	0.0	10.8
Lane LOS	A		B
Approach Delay (s)	5.0	0.0	10.8
Approach LOS			B

Intersection Summary			
Average Delay	6.4		
Intersection Capacity Utilization	42.8%	ICU Level of Service	A
Analysis Period (min)	15		

APPENDIX L

- Freeway Analysis

Existing Conditions								
Roadway Segment	# Lanes/Direction	Capacity	ADT	Peak Hour %	Direction Split	Truck Factor	V/C	LOS
State Route 125								
North of Otay Mesa Rd	2	4,600	30,000	8.0%	60%	5.0%	0.33	A
Existing State Route 905								
South of Siempre Viva Rd	2	4,600	28,000	8.29%	60%	5.11%	0.32	A

Lanes - Number of lanes in one direction: HOV-High Occupancy Lanes
Capacity - Capacity in one direction
ADT - Average Daily Traffic
Peak Hour % - Percentage of average daily traffic occurring during the peak hour
Direction Split - Percentage of peak hour traffic traveling in peak direction.
Truck Factor - Truck/terrain factor to represent influence of heavy vehicles and/or grades.
Peak Hour Volume - Peak hour traffic in peak direction of travel/ For facilities with HOV lanes, ten percent is assumed to use HOV lanes.
v/c Ratio - Volume to Capacity Ratio

Existing + Unit 1 Conditions								
Roadway Segment	# Lanes/Direction	Capacity	ADT	Peak Hour %	Direction Split	Truck Factor	V/C	LOS
State Route 125								
North of Otay Mesa Rd	2	4,600	31,239	8.0%	60%	5.0%	0.34	A
Existing State Route 905								
South of Siempre Viva Rd	2	4,600	28,310	8.29%	60%	5.11%	0.32	A

Lanes - Number of lanes in one direction: HOV-High Occupancy Lanes
Capacity - Capacity in one direction
ADT - Average Daily Traffic
Peak Hour % - Percentage of average daily traffic occurring during the peak hour
Direction Split - Percentage of peak hour traffic traveling in peak direction.
Truck Factor - Truck/terrain factor to represent influence of heavy vehicles and/or grades.
Peak Hour Volume - Peak hour traffic in peak direction of travel/ For facilities with HOV lanes, ten percent is assumed to use HOV lanes.
v/c Ratio - Volume to Capacity Ratio

Existing + Units 1-2 Conditions								
Roadway Segment	# Lanes/Direction	Capacity	ADT	Peak Hour %	Direction Split	Truck Factor	V/C	LOS
State Route 125								
North of Otay Mesa Rd	2	4,600	32,417	8.0%	60%	5.0%	0.36	A
Existing State Route 905								
South of Siempre Viva Rd	2	4,600	28,604	8.29%	60%	5.11%	0.33	A

Lanes - Number of lanes in one direction: HOV-High Occupancy Lanes
Capacity - Capacity in one direction
ADT - Average Daily Traffic
Peak Hour % - Percentage of average daily traffic occurring during the peak hour
Direction Split - Percentage of peak hour traffic traveling in peak direction.
Truck Factor - Truck/terrain factor to represent influence of heavy vehicles and/or grades.
Peak Hour Volume - Peak hour traffic in peak direction of travel/ For facilities with HOV lanes, ten percent is assumed to use HOV lanes.
v/c Ratio - Volume to Capacity Ratio

Existing + Units 1-3 Conditions								
Roadway Segment	# Lanes/Direction	Capacity	ADT	Peak Hour %	Direction Split	Truck Factor	V/C	LOS
State Route 125								
North of Otay Mesa Rd	2	4,600	33,089	8.0%	60%	5.0%	0.36	A
Existing State Route 905								
South of Siempre Viva Rd	2	4,600	28,773	8.29%	60%	5.11%	0.33	A

Lanes - Number of lanes in one direction: HOV-High Occupancy Lanes
Capacity - Capacity in one direction
ADT - Average Daily Traffic
Peak Hour % - Percentage of average daily traffic occurring during the peak hour
Direction Split - Percentage of peak hour traffic traveling in peak direction.
Truck Factor - Truck/terrain factor to represent influence of heavy vehicles and/or grades.
Peak Hour Volume - Peak hour traffic in peak direction of travel/ For facilities with HOV lanes, ten percent is assumed to use HOV lanes.
v/c Ratio - Volume to Capacity Ratio

Existing + Units 1-4 Conditions								
Roadway Segment	# Lanes/Direction	Capacity	ADT	Peak Hour %	Direction Split	Truck Factor	V/C	LOS
State Route 125								
North of Otay Mesa Rd	2	4,600	33,901	8.0%	60%	5.0%	0.37	A
Existing State Route 905								
South of Siempre Viva Rd	2	4,600	28,975	8.29%	60%	5.11%	0.33	A

Lanes - Number of lanes in one direction: HOV-High Occupancy Lanes
Capacity - Capacity in one direction
ADT - Average Daily Traffic
Peak Hour % - Percentage of average daily traffic occurring during the peak hour
Direction Split - Percentage of peak hour traffic traveling in peak direction.
Truck Factor - Truck/terrain factor to represent influence of heavy vehicles and/or grades.
Peak Hour Volume - Peak hour traffic in peak direction of travel/ For facilities with HOV lanes, ten percent is assumed to use HOV lanes.
v/c Ratio - Volume to Capacity Ratio

Existing + Project Build Out (Units 1-5) Conditions								
Roadway Segment	# Lanes/Direction	Capacity	ADT	Peak Hour %	Direction Split	Truck Factor	V/C	LOS
State Route 125 North of Otay Mesa Rd	2	4,600	34,256	8.0%	60%	5.0%	0.38	A
Existing State Route 905 South of Siempre Viva Rd	2	4,600	29,064	8.29%	60%	5.11%	0.33	A

Lanes - Number of lanes in one direction: HOV-High Occupancy Lanes
Capacity - Capacity in one direction
ADT - Average Daily Traffic
Peak Hour % - Percentage of average daily traffic occurring during the peak hour
Direction Split - Percentage of peak hour traffic traveling in peak direction.
Truck Factor - Truck/terrain factor to represent influence of heavy vehicles and/or grades.
Peak Hour Volume - Peak hour traffic in peak direction of travel/ For facilities with HOV lanes, ten percent is assumed to use HOV lanes.
v/c Ratio - Volume to Capacity Ratio

Cumulative (Year 2020) w/ SR-905 [Phases 1A & 1B] Conditions								
Roadway Segment	# Lanes/Direction	Capacity	ADT	Peak Hour %	Direction Split	Truck Factor	V/C	LOS
State Route 125								
North of Otay Mesa Rd	2	4,600	13,490	8.0%	60%	5.0%	0.15	A
Existing State Route 905								
South of Siempre Viva Rd	3	6,900	76,130	8.29%	60%	5.11%	0.58	B
New State Route 905 Facility								
West of La Media Rd	3	6,900	102,240	8.29%	60%	5.11%	0.77	C
East of La Media Rd	3	6,900	90,160	8.29%	60%	5.11%	0.68	C

Lanes - Number of lanes in one direction: HOV-High Occupancy Lanes
Capacity - Capacity in one direction
ADT - Average Daily Traffic
Peak Hour % - Percentage of average daily traffic occurring during the peak hour
Direction Split - Percentage of peak hour traffic traveling in peak direction.
Truck Factor - Truck/terrain factor to represent influence of heavy vehicles and/or grades.
Peak Hour Volume - Peak hour traffic in peak direction of travel/ For facilities with HOV lanes, ten percent is assumed to use HOV lanes.
v/c Ratio - Volume to Capacity Ratio

2030 w/o Project Conditions								
Roadway Segment	# Lanes/Direction	Capacity	ADT	Peak Hour %	Direction Split	Truck Factor	V/C	LOS
State Route 125								
North of Otay Mesa Rd	2	4,600	76,908	8.0%	60%	5.0%	0.84	D
Existing State Route 905								
Otay Mesa Rd to Siempre Viva Rd	3	6,900	83,275	8.29%	60%	5.11%	0.63	C
South of Siempre Viva Rd	3	6,900	71,023	8.29%	60%	5.11%	0.54	B
New State Route 905 Facility								
West of La Media Rd	4	9,200	148,765	8.29%	60%	5.11%	0.84	D
East of La Media Rd	4	9,200	73,165	8.29%	60%	5.11%	0.41	A

Lanes - Number of lanes in one direction: HOV-High Occupancy Lanes
Capacity - Capacity in one direction
ADT - Average Daily Traffic
Peak Hour % - Percentage of average daily traffic occurring during the peak hour
Direction Split - Percentage of peak hour traffic traveling in peak direction.
Truck Factor - Truck/terrain factor to represent influence of heavy vehicles and/or grades.
Peak Hour Volume - Peak hour traffic in peak direction of travel/ For facilities with HOV lanes, ten percent is assumed to use HOV lanes.
v/c Ratio - Volume to Capacity Ratio

2030 + Project Build Out (Units 1-5) Conditions								
Roadway Segment	# Lanes/Direction	Capacity	ADT	Peak Hour %	Direction Split	Truck Factor	V/C	LOS
State Route 125								
North of Otay Mesa Rd	2	4,600	80,100	8.0%	60%	5.0%	0.88	D
Existing State Route 905								
Airway Rd to Siempre Viva Rd	3	6,900	83,700	8.29%	60%	5.11%	0.63	C
South of Siempre Viva Rd	3	6,900	72,300	8.29%	60%	5.11%	0.55	B
New State Route 905 Facility								
West of La Media Rd	4	9,200	156,000	8.29%	60%	5.11%	0.89	D
East of La Media Rd	4	9,200	80,400	8.29%	60%	5.11%	0.46	B

Lanes - Number of lanes in one direction: HOV-High Occupancy Lanes
Capacity - Capacity in one direction
ADT - Average Daily Traffic
Peak Hour % - Percentage of average daily traffic occurring during the peak hour
Direction Split - Percentage of peak hour traffic traveling in peak direction.
Truck Factor - Truck/terrain factor to represent influence of heavy vehicles and/or grades.
Peak Hour Volume - Peak hour traffic in peak direction of travel/ For facilities with HOV lanes, ten percent is assumed to use HOV lanes.
v/c Ratio - Volume to Capacity Ratio

APPENDIX M

- Signal Warrants
- Illustration of Driveway Spacing

Signal Warrants

Figure 4C-101 (CA). Traffic Signal Warrants Worksheet (Sheet 2 of 4)

Otay Mesa Road/Alta Road - Existing + Unit 1 Conditions

WARRANT 2 - Four Hour Vehicular Volume

SATISFIED* YES ☐ NO ☐

Record hourly vehicular volumes for any four hours of an average day.

APPROACH LANES	One	2 or More	Hour			
Both Approaches - Major Street						
Higher Approach - Minor Street						

*All plotted points fall above the curves in Figure 4C-1. (URBAN AREAS)	Yes ☐ No ☐
OR, All plotted points fall above the curves in Figure 4C-2. (RURAL AREAS)	Yes ☐ No ☐

WARRANT 3 - Peak Hour
(Part A or Part B must be satisfied)

SATISFIED YES ☒ NO ☐

PART A

SATISFIED YES ☒ NO ☐

(All parts 1, 2, and 3 below must be satisfied for the same one hour, for any four consecutive 15-minute periods)

1. The total delay experienced for traffic on one minor street approach (one direction only) controlled by a STOP sign equals or exceeds four vehicle-hours for a one-lane approach, or five vehicle-hours for a two-lane approach; AND	Yes ☒ No ☐
2. The volume on the same minor street approach (one direction only) equals or exceeds 100 vph for one moving lane of traffic or 150 vph for two moving lanes; AND	Yes ☒ No ☐
3. The total entering volume serviced during the hour equals or exceeds 800 vph for intersections with four or more approaches or 650 vph for intersections with three approaches.	Yes ☒ No ☐

PART B

SATISFIED YES ☒ NO ☐

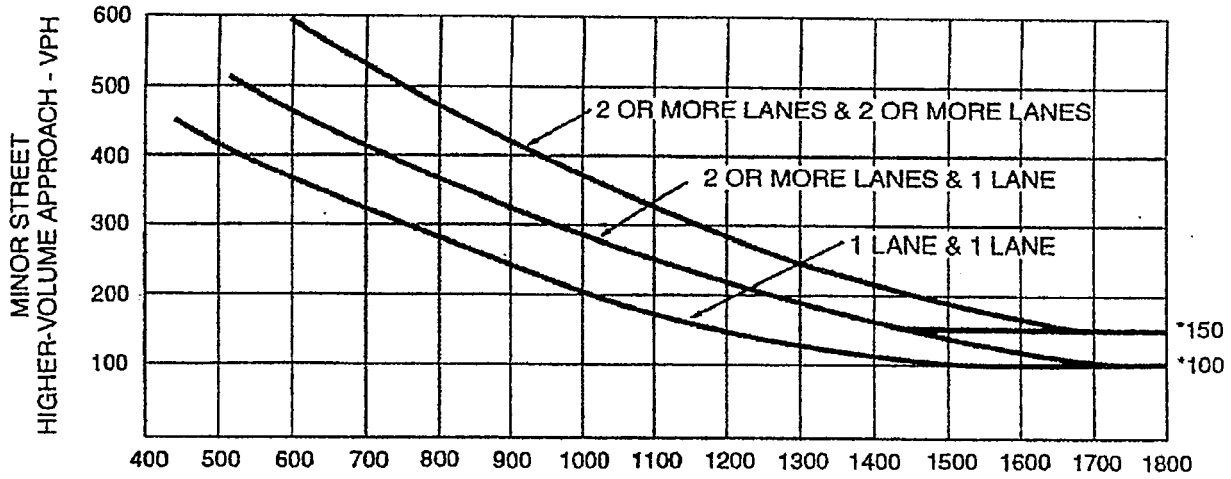
APPROACH LANES	One	2 or More	Hour AM	Hour PM
Both Approaches - Major Street		X	1,348	1,383
Higher Approach - Minor Street		X	182	101

The plotted point falls above the curve in Figure 4C-3.	Yes ☐ No ☐
OR, The plotted point falls above the curve in Figure 4C-4.	Yes ☒ No ☐

The satisfaction of a traffic signal warrant or warrants shall not in itself require the installation of a traffic control signal.

Otay Mesa Road/Alta Road - Existing + Unit 1 Conditions

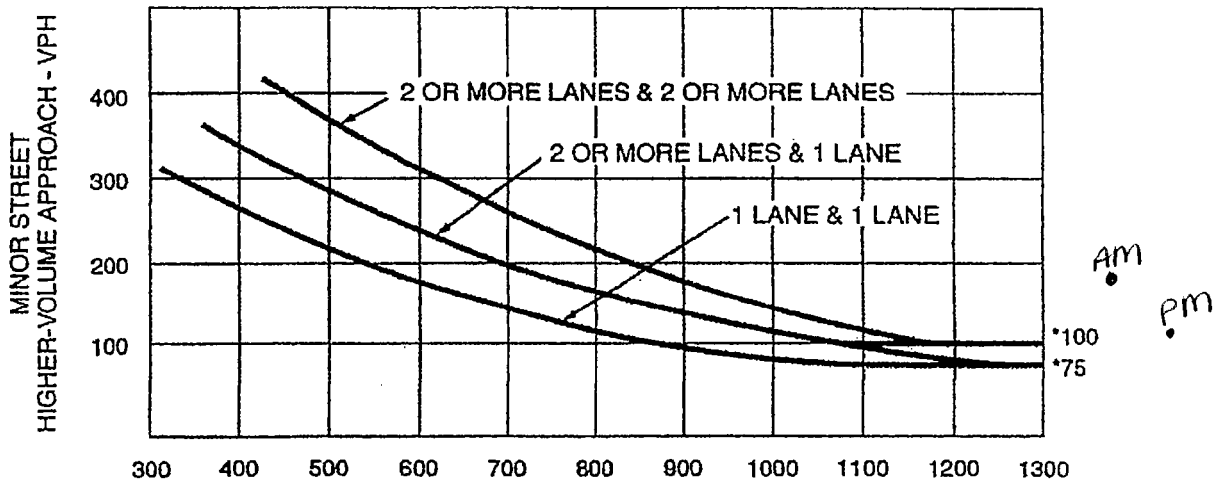
Figure 4C-3. Warrant 3, Peak Hour



*Note: 150 vph applies as the lower threshold volume for a minor-street approach with two or more lanes and 100 vph applies as the lower threshold volume for a minor-street approach with one lane.

Figure 4C-4. Warrant 3, Peak Hour (70% Factor)

(COMMUNITY LESS THAN 10,000 POPULATION OR ABOVE ~~70~~ 64 km/h OR ABOVE 40 mph ON MAJOR STREET)



*Note: 100 vph applies as the lower threshold volume for a minor-street approach with two or more lanes and 75 vph applies as the lower threshold volume for a minor-street approach with one lane.

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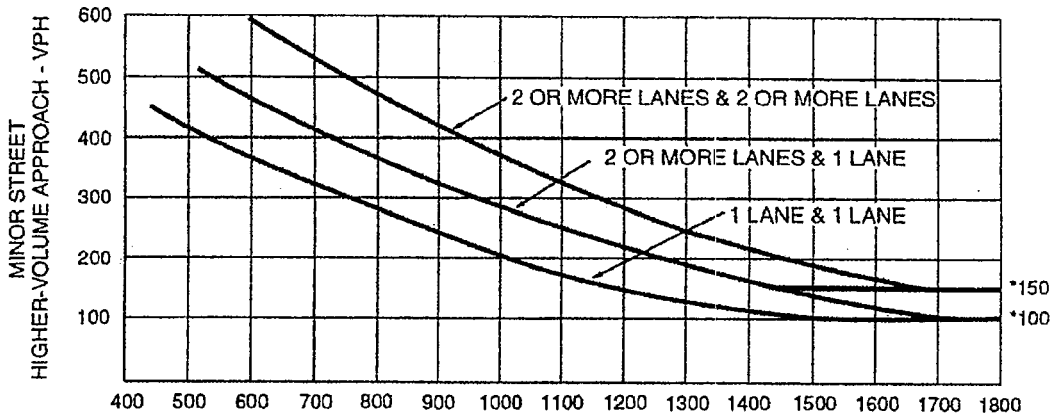
Alta Road/Calle Ventner - Existing + Units 1-4 Conditions

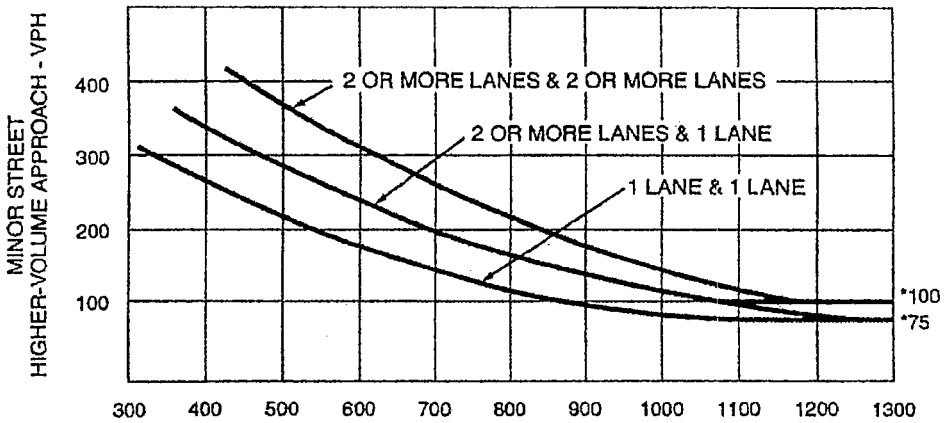
Figure 4C-3. Warrant 3, Peak Hour



*Note: 150 vph applies as the lower threshold volume for a minor-street approach with two or more lanes and 100 vph applies as the lower threshold volume for a minor-street approach with one lane.

Figure 4C-4. Warrant 3, Peak Hour (70% Factor)

(COMMUNITY LESS THAN 10,000 POPULATION OR ABOVE ~~70~~ 64 km/h OR ABOVE 40 mph ON MAJOR STREET)



*Note: 100 vph applies as the lower threshold volume for a minor-street approach with two or more lanes and 75 vph applies as the lower threshold volume for a minor-street approach with one lane.

Figure 4C-101 (CA). Traffic Signal Warrants Worksheet (Sheet 2 of 4)

WARRANT 2 - Four Hour Vehicular Volume **SATISFIED* YES ☐ NO ☐**

Record hourly vehicular volumes for any four hours of an average day.

APPROACH LANES	One	2 or More	Hour			
Both Approaches - Major Street						
Higher Approach - Minor Street						

*All plotted points fall above the curves in Figure 4C-1. (URBAN AREAS)	Yes ☐ No ☐
OR, All plotted points fall above the curves in Figure 4C-2. (RURAL AREAS)	Yes ☐ No ☐

WARRANT 3 - Peak Hour **SATISFIED YES ☒ NO ☐**
(Part A or Part B must be satisfied)

PART A **SATISFIED YES ☒ NO ☐**

(All parts 1, 2, and 3 below must be satisfied for the same one hour, for any four consecutive 15-minute periods)

1. The total delay experienced for traffic on one minor street approach (one direction only) controlled by a STOP sign equals or exceeds four vehicle-hours for a one-lane approach, or five vehicle-hours for a two-lane approach; AND	Yes ☒ No ☐
2. The volume on the same minor street approach (one direction only) equals or exceeds 100 vph for one moving lane of traffic or 150 vph for two moving lanes; AND	Yes ☒ No ☐
3. The total entering volume serviced during the hour equals or exceeds 800 vph for intersections with four or more approaches or 650 vph for intersections with three approaches.	Yes ☒ No ☐

PART B **SATISFIED YES ☒ NO ☐**

APPROACH LANES	One	2 or More	AM	PM Hour
Both Approaches - Major Street		X	897	491
Higher Approach - Minor Street	X		158	592

The plotted point falls above the curve in Figure 4C-3.	Yes ☐ No ☐
OR, The plotted point falls above the curve in Figure 4C-4.	Yes ☒ No ☐

The satisfaction of a traffic signal warrant or warrants shall not in itself require the installation of a traffic control signal.

Figure 4C-103 (CA). Traffic Signal Warrants Worksheet (Average Traffic Estimate Form)

11 SD

DIST CO RTE PM

COUNT DATE _____
CALC _____ DATE _____
CHK _____ DATE _____

Major St: Alta Road
Minor St: Calle Ventner

Critical Approach Speed _____ mph
Critical Approach Speed _____ mph

Speed limit or critical speed on major street traffic > 64 km/h (40 mph)..... ☒
or
In built up area of isolated community of < 10,000 population..... ☐
} **RURAL (R)**

☐ **URBAN (U)**

(Based on Estimated Average Daily Traffic - See Note)

URBAN..... RURAL..... X

CONDITION A - Minimum Vehicular Volume

Satisfied _____ Not Satisfied X

Number of lanes for moving traffic on each approach

Major Street	Minor Street
1..... X	1..... X
2 or More.....	1.....
2 or More.....	2 or More.....
1.....	2 or More.....

Minimum Requirements EADT			
Vehicles Per Day on Major Street (Total of Both Approaches)		Vehicles Per Day on Higher-Volume Minor Street Approach (One Direction Only)	
Urban	Rural	Urban	Rural
8,000	5,600	2,400	1,680
9,600	6,720	2,400	1,680
9,600	6,720	3,200	2,240
8,000	5,600	3,200	2,240

CONDITION B - Interruption of Continuous Traffic

Satisfied _____ Not Satisfied X

Number of lanes for moving traffic on each approach

Major Street	Minor Street
1.....	1.....
2 or More..... X	1..... X
2 or More.....	2 or More.....
1.....	2 or More.....

Vehicles Per Day on Major Street (Total of Both Approaches)		Vehicles Per Day on Higher-Volume Minor Street Approach (One Direction Only)	
4,409		2,862	
Urban	Rural	Urban	Rural
12,000	8,400	1,200	850
14,400	10,080	1,200	850
14,400	10,080	1,600	1,120
12,000	8,400	1,600	1,120

Combination of CONDITIONS A + B

Satisfied _____ Not Satisfied X

No one condition satisfied, but following conditions fulfilled 80% or more..... No (A) No (B)

2 CONDITIONS 80%	2 CONDITIONS 80%

Note: To be used only for NEW INTERSECTIONS or other locations where it is not reasonable to count actual traffic volumes.

The satisfaction of a traffic signal warrant or warrants shall not in itself require the installation of a traffic control signal.

Figure 4C-101 (CA). Traffic Signal Warrants Worksheet (Sheet 2 of 4)

Airway Rd./Sanyo Av.-Heinrich Hertz Dr. - Cum. 2020 w/ SR-905 [Phases 1A&1B] Conditions

WARRANT 2 - Four Hour Vehicular Volume

SATISFIED* YES ☐ NO ☐

Record hourly vehicular volumes for any four hours of an average day.

APPROACH LANES	One	2 or More	Hour			
Both Approaches - Major Street						
Higher Approach - Minor Street						

*All plotted points fall above the curves in Figure 4C-1. (URBAN AREAS)	Yes ☐ No ☐
OR, All plotted points fall above the curves in Figure 4C-2. (RURAL AREAS)	Yes ☐ No ☐

WARRANT 3 - Peak Hour
(Part A or Part B must be satisfied)

SATISFIED YES ☒ NO ☐

PART A

SATISFIED YES ☒ NO ☐

(All parts 1, 2, and 3 below must be satisfied for the same one hour, for any four consecutive 15-minute periods)

1. The total delay experienced for traffic on one minor street approach (one direction only) controlled by a STOP sign equals or exceeds four vehicle-hours for a one-lane approach, or five vehicle-hours for a two-lane approach; AND	Yes ☒ No ☐
2. The volume on the same minor street approach (one direction only) equals or exceeds 100 vph for one moving lane of traffic or 150 vph for two moving lanes; AND	Yes ☒ No ☐
3. The total entering volume serviced during the hour equals or exceeds 800 vph for intersections with four or more approaches or 650 vph for intersections with three approaches.	Yes ☒ No ☐

PART B

SATISFIED YES ☒ NO ☐

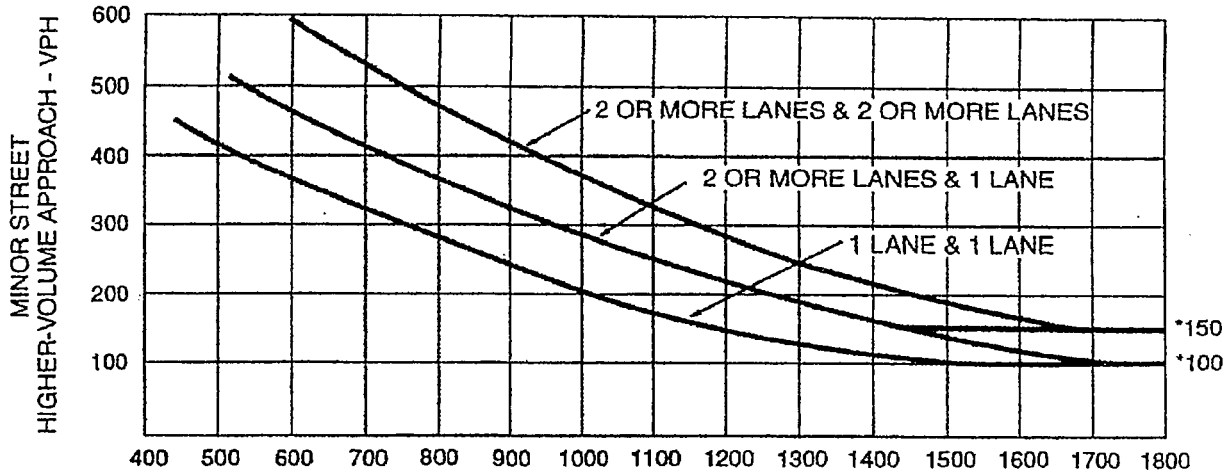
APPROACH LANES	One	2 or More	Hour	
Both Approaches - Major Street		X	950	970
Higher Approach - Minor Street		X	250	230

The plotted point falls above the curve in Figure 4C-3.	Yes ☐ No ☐
OR, The plotted point falls above the curve in Figure 4C-4.	Yes ☒ No ☐

The satisfaction of a traffic signal warrant or warrants shall not in itself require the installation of a traffic control signal.

Airway Rd./Sanyo Av.-Heinrich Hertz Dr. - Cum. 2020 w/ SR-905 [Phases 1A&1B] Conditions

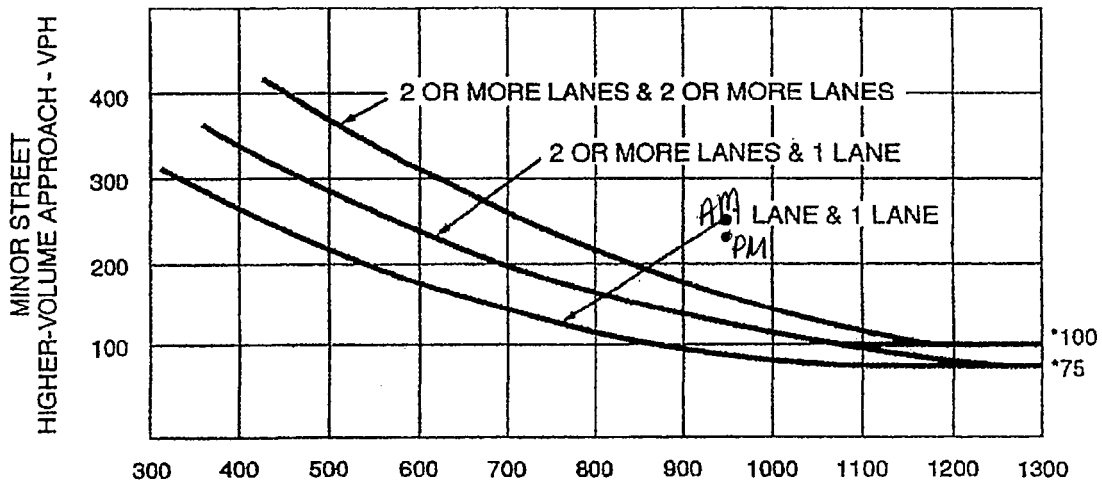
Figure 4C-3. Warrant 3, Peak Hour



*Note: 150 vph applies as the lower threshold volume for a minor-street approach with two or more lanes and 100 vph applies as the lower threshold volume for a minor-street approach with one lane.

Figure 4C-4. Warrant 3, Peak Hour (70% Factor)

(COMMUNITY LESS THAN 10,000 POPULATION OR ABOVE ~~70~~ 64 km/h OR ABOVE 40 mph ON MAJOR STREET)



*Note: 100 vph applies as the lower threshold volume for a minor-street approach with two or more lanes and 75 vph applies as the lower threshold volume for a minor-street approach with one lane.

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Figure 4C-101 (CA). Traffic Signal Warrants Worksheet (Sheet 2 of 4)

Airway Rd./Paseo De Las Americas - Cum. 2020 w/ SR-905 [Phases 1A&1B] Conditions

WARRANT 2 - Four Hour Vehicular Volume — SATISFIED* YES ☐ NO ☐

Record hourly vehicular volumes for any four hours of an average day.

APPROACH LANES	One	2 or More				Hour
Both Approaches - Major Street						
Higher Approach - Minor Street						

*All plotted points fall above the curves in Figure 4C-1. (URBAN AREAS)	Yes ☐ No ☐
OR, All plotted points fall above the curves in Figure 4C-2. (RURAL AREAS)	Yes ☐ No ☐

WARRANT 3 - Peak Hour — SATISFIED YES ☒ NO ☐
(Part A or Part B must be satisfied)

PART A — SATISFIED YES ☒ NO ☐

(All parts 1, 2, and 3 below must be satisfied for the same one hour, for any four consecutive 15-minute periods)

1. The total delay experienced for traffic on one minor street approach (one direction only) controlled by a STOP sign equals or exceeds four vehicle-hours for a one-lane approach, or five vehicle-hours for a two-lane approach; AND	Yes ☒ No ☐
2. The volume on the same minor street approach (one direction only) equals or exceeds 100 vph for one moving lane of traffic or 150 vph for two moving lanes; AND	Yes ☒ No ☐
3. The total entering volume serviced during the hour equals or exceeds 800 vph for intersections with four or more approaches or 650 vph for intersections with three approaches.	Yes ☒ No ☐

PART B — SATISFIED YES ☒ NO ☐

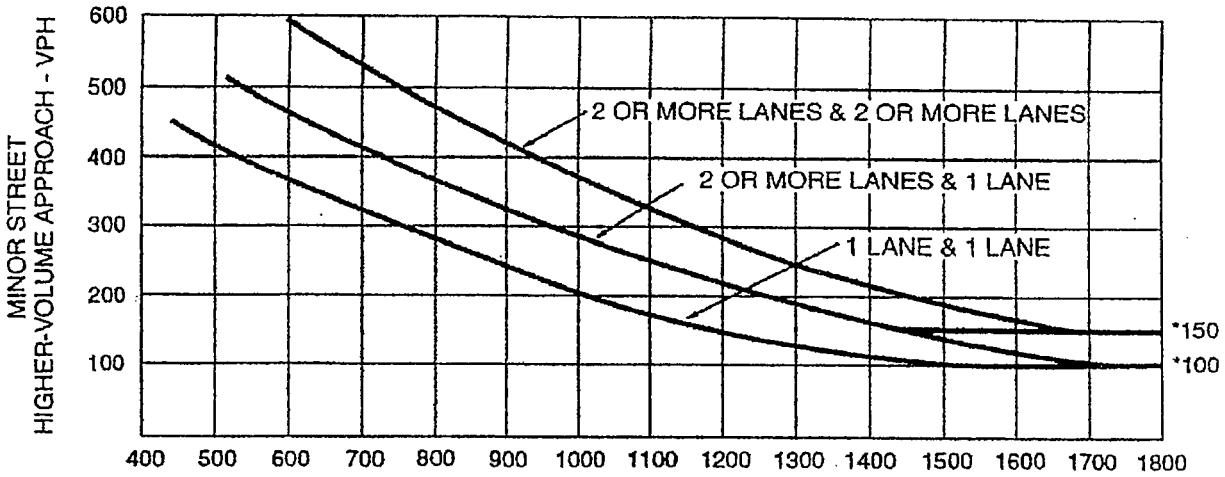
APPROACH LANES	One	2 or More		Hour
Both Approaches - Major Street		X	650	760
Higher Approach - Minor Street		X	570	580

The plotted point falls above the curve in Figure 4C-3.	Yes ☐ No ☐
OR, The plotted point falls above the curve in Figure 4C-4.	Yes ☒ No ☐

The satisfaction of a traffic signal warrant or warrants shall not in itself require the installation of a traffic control signal.

Airway Rd./Paseo De Las Americas - Cum. 2020 w/ SR-905 [Phases 1A&1B] Conditions

Figure 4C-3. Warrant 3, Peak Hour

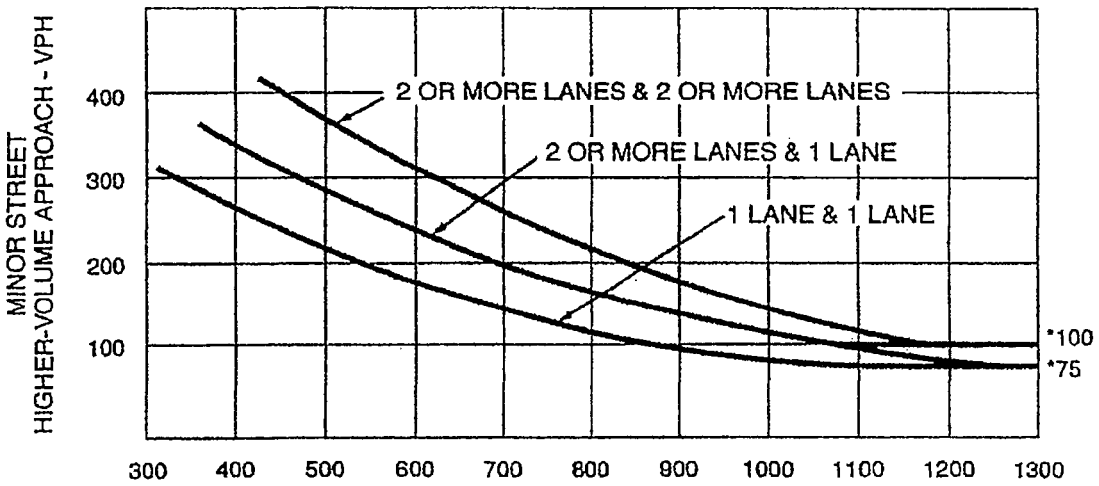


*Note: 150 vph applies as the lower threshold volume for a minor-street approach with two or more lanes and 100 vph applies as the lower threshold volume for a minor-street approach with one lane.

Figure 4C-4. Warrant 3, Peak Hour (70% Factor)

(COMMUNITY LESS THAN 10,000 POPULATION OR ABOVE ~~70~~ 64 km/h OR ABOVE 40 mph ON MAJOR STREET)

•AM •PM



*Note: 100 vph applies as the lower threshold volume for a minor-street approach with two or more lanes and 75 vph applies as the lower threshold volume for a minor-street approach with one lane.

Figure 4C-101 (CA). Traffic Signal Warrants Worksheet (Sheet 2 of 4)

Siempre Viva Rd./Michael Faraday Dr. - Cum. (2020) w/ SR-905 [Phases 1A & 1B] Conditions

WARRANT 2 - Four Hour Vehicular Volume

SATISFIED* YES ☐ NO ☐

Record hourly vehicular volumes for any four hours of an average day.

APPROACH LANES	One	2 or More				Hour
Both Approaches - Major Street						
Higher Approach - Minor Street						

*All plotted points fall above the curves in Figure 4C-1. (URBAN AREAS)	Yes ☐ No ☐
OR, All plotted points fall above the curves in Figure 4C-2. (RURAL AREAS)	Yes ☐ No ☐

WARRANT 3 - Peak Hour
(Part A or Part B must be satisfied)

SATISFIED YES ☒ NO ☐

PART A

SATISFIED YES ☒ NO ☐

(All parts 1, 2, and 3 below must be satisfied for the same one hour, for any four consecutive 15-minute periods)

1. The total delay experienced for traffic on one minor street approach (one direction only) controlled by a STOP sign equals or exceeds four vehicle-hours for a one-lane approach, or five vehicle-hours for a two-lane approach; AND	Yes ☒ No ☐
2. The volume on the same minor street approach (one direction only) equals or exceeds 100 vph for one moving lane of traffic or 150 vph for two moving lanes; AND	Yes ☒ No ☐
3. The total entering volume serviced during the hour equals or exceeds 800 vph for intersections with four or more approaches or 650 vph for intersections with three approaches.	Yes ☒ No ☐

PART B

SATISFIED YES ☒ NO ☐

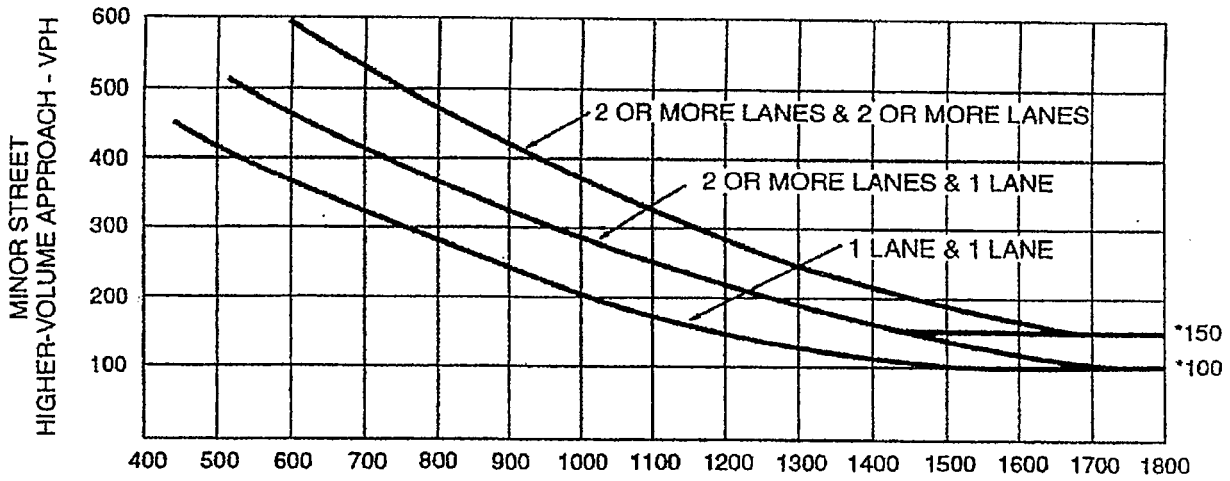
APPROACH LANES	One	2 or More	AM	PM Hour
Both Approaches - Major Street		X	1,700	1,450
Higher Approach - Minor Street	X		130	130

The plotted point falls above the curve in Figure 4C-3.	Yes ☐ No ☐
OR, The plotted point falls above the curve in Figure 4C-4.	Yes ☒ No ☐

The satisfaction of a traffic signal warrant or warrants shall not in itself require the installation of a traffic control signal.

Siempre Viva Rd./Michael Faraday Dr. - Cum. (2020) w/ SR-905 [Phases 1A & 1B] Conditions

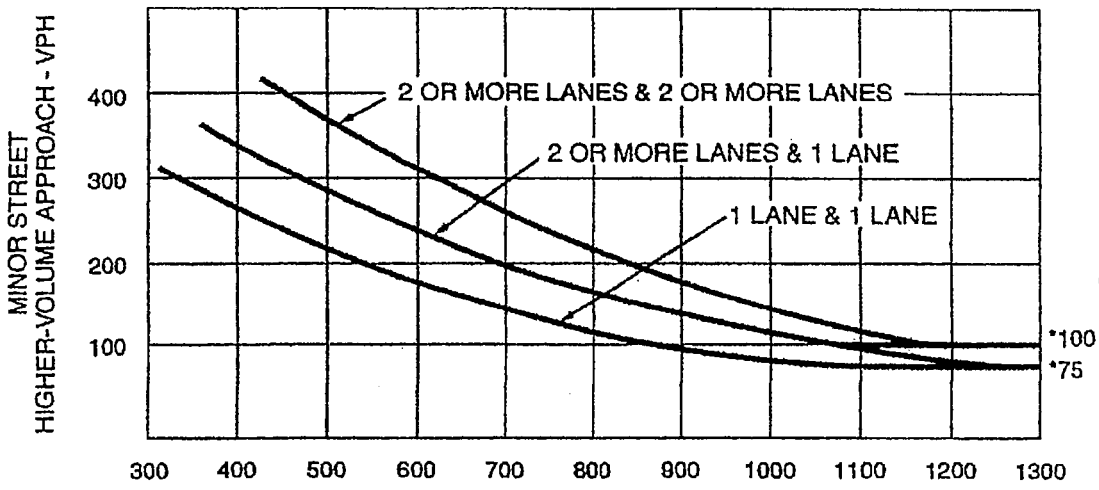
Figure 4C-3. Warrant 3, Peak Hour



*Note: 150 vph applies as the lower threshold volume for a minor-street approach with two or more lanes and 100 vph applies as the lower threshold volume for a minor-street approach with one lane.

Figure 4C-4. Warrant 3, Peak Hour (70% Factor)

(COMMUNITY LESS THAN 10,000 POPULATION OR ABOVE ~~70~~ 64 km/h OR ABOVE 40 mph ON MAJOR STREET)

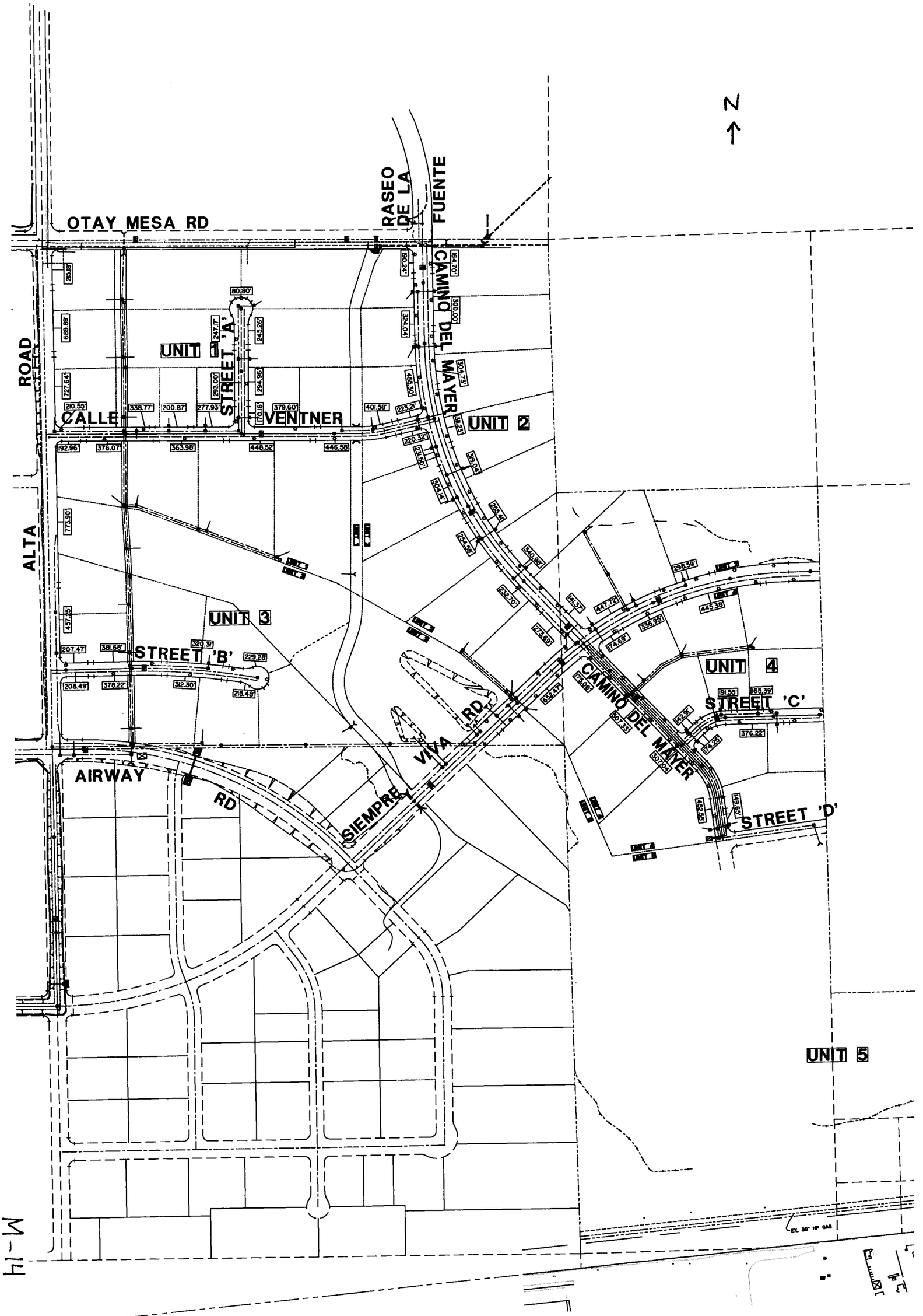


PM AM

*Note: 100 vph applies as the lower threshold volume for a minor-street approach with two or more lanes and 75 vph applies as the lower threshold volume for a minor-street approach with one lane.

M-12

Illustration of Driveway Spacing



Driveway Spacing

APPENDIX N

- Existing + Project – Recommended Mitigation

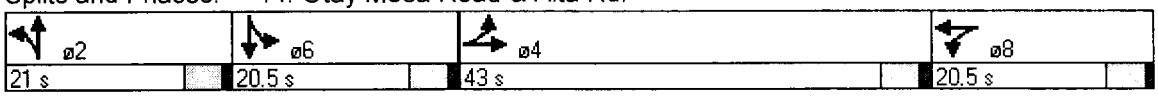
Existing + Unit 1 – Recommended Mitigation

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Total Lost Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	0.97	1.00	1.00	1.00	1.00	1.00	0.97	1.00	1.00	1.00	1.00	1.00
Frt		0.850									0.868	
Flt Protected	0.950						0.950					
Satd. Flow (prot)	3433	1583	0	0	1863	0	3433	1863	0	0	1617	0
Flt Permitted	0.950						0.950					
Satd. Flow (perm)	3433	1583	0	0	1863	0	3433	1863	0	0	1617	0
Satd. Flow (RTOR)		1080									183	
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Volume (vph)	652	0	696	0	0	0	182	1	0	0	4	168
Adj. Flow (vph)	709	0	757	0	0	0	198	1	0	0	4	183
Lane Group Flow (vph)	709	757	0	0	0	0	198	1	0	0	187	0
Turn Type	Split			Split			Split			Split		
Protected Phases	4	4		8	8		2	2		6	6	
Permitted Phases												
Total Split (s)	43.0	43.0	0.0	20.5	20.5	0.0	21.0	21.0	0.0	20.5	20.5	0.0
Act Effct Green (s)	30.2	30.2					54.7	54.7			8.1	
Actuated g/C Ratio	0.29	0.29					0.52	0.52			0.08	
v/c Ratio	0.72	0.62					0.11	0.00			0.64	
Control Delay	37.4	2.3					15.1	18.0			17.5	
Queue Delay	0.0	0.0					0.0	0.0			0.0	
Total Delay	37.4	2.3					15.1	18.0			17.5	
LOS	D	A					B	B			B	
Approach Delay		19.3						15.1			17.5	
Approach LOS		B						B			B	

Intersection Summary

Cycle Length: 105
Actuated Cycle Length: 105
Offset: 0 (0%), Referenced to phase 2:NBTL, Start of Green
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 0.72
Intersection Signal Delay: 18.6 Intersection LOS: B
Intersection Capacity Utilization 68.9% ICU Level of Service C
Analysis Period (min) 15

Splits and Phases: 14: Otay Mesa Road & Alta Rd.

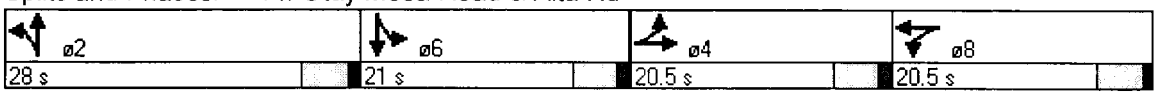


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Total Lost Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	0.97	1.00	1.00	1.00	1.00	1.00	0.97	1.00	1.00	1.00	1.00	1.00
Frt		0.850									0.865	
Flt Protected	0.950						0.950					
Satd. Flow (prot)	3433	1583	0	0	1863	0	3433	1863	0	0	1611	0
Flt Permitted	0.950						0.950					
Satd. Flow (perm)	3433	1583	0	0	1863	0	3433	1863	0	0	1611	0
Satd. Flow (RTOR)		322									639	
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Volume (vph)	101	1	280	0	0	0	656	0	0	0	1	726
Adj. Flow (vph)	116	1	322	0	0	0	754	0	0	0	1	834
Lane Group Flow (vph)	116	323	0	0	0	0	754	0	0	0	835	0
Turn Type	Split			Split			Split			Split		
Protected Phases	4	4		8	8		2	2		6	6	
Permitted Phases												
Total Split (s)	20.5	20.5	0.0	20.5	20.5	0.0	28.0	28.0	0.0	21.0	21.0	0.0
Act Effct Green (s)	10.0	10.0					50.1				17.9	
Actuated g/C Ratio	0.11	0.11					0.56				0.20	
v/c Ratio	0.31	0.70					0.39				1.00	
Control Delay	37.8	13.1					12.4				42.7	
Queue Delay	0.0	0.0					0.0				0.0	
Total Delay	37.8	13.1					12.4				42.7	
LOS	D	B					B				D	
Approach Delay		19.6									42.7	
Approach LOS		B									D	

Intersection Summary

Cycle Length: 90
Actuated Cycle Length: 90
Offset: 0 (0%), Referenced to phase 2:NBTL, Start of Green
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 1.00
Intersection Signal Delay: 26.5 Intersection LOS: C
Intersection Capacity Utilization 91.1% ICU Level of Service F
Analysis Period (min) 15

Splits and Phases: 14: Otay Mesa Road & Alta Rd



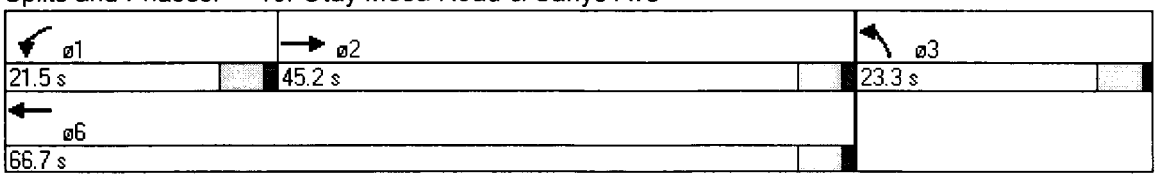
Existing + Units 1-2 – Recommended Mitigation

Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Total Lost Time (s)	4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	0.95	0.95	1.00	0.95	0.97	0.95
Frt	0.984				0.965	
Flt Protected			0.950		0.963	
Satd. Flow (prot)	3483	0	1770	3539	3358	0
Flt Permitted			0.950		0.963	
Satd. Flow (perm)	3483	0	1770	3539	3358	0
Satd. Flow (RTOR)	19				12	
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Volume (vph)	1635	200	24	505	32	10
Adj. Flow (vph)	2044	250	30	631	40	12
Lane Group Flow (vph)	2294	0	30	631	52	0
Turn Type			Prot			
Protected Phases	2		1	6	3	
Permitted Phases						
Total Split (s)	45.2	0.0	21.5	66.7	23.3	0.0
Act Effct Green (s)	75.5		7.4	80.7	7.0	
Actuated g/C Ratio	0.84		0.08	0.90	0.08	
v/c Ratio	0.78		0.21	0.20	0.19	
Control Delay	7.5		41.4	1.3	33.1	
Queue Delay	0.0		0.0	0.0	0.0	
Total Delay	7.5		41.4	1.3	33.1	
LOS	A		D	A	C	
Approach Delay	7.5			3.1	33.1	
Approach LOS	A			A	C	

Intersection Summary

Cycle Length: 90
Actuated Cycle Length: 90
Offset: 0 (0%), Referenced to phase 2:EBT and 6:WBT, Start of Green
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 0.78
Intersection Signal Delay: 7.0 — Intersection LOS: A
Intersection Capacity Utilization 61.6% — ICU Level of Service B
Analysis Period (min) 15

Splits and Phases: 10: Otay Mesa Road & Sanyo Ave

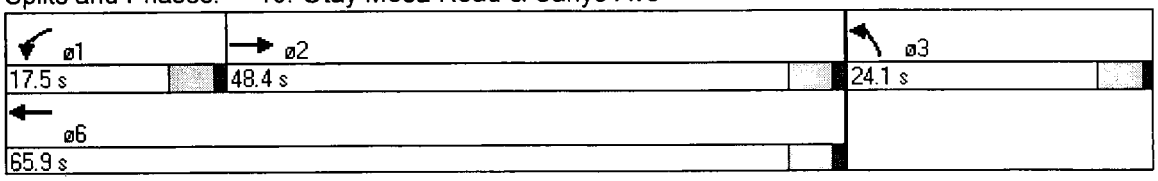


Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Total Lost Time (s)	4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	0.95	0.95	1.00	0.95	0.97	0.95
Frt	0.987				0.996	
Flt Protected			0.950		0.954	
Satd. Flow (prot)	3493	0	1770	3539	3434	0
Flt Permitted			0.950		0.954	
Satd. Flow (perm)	3493	0	1770	3539	3434	0
Satd. Flow (RTOR)	16				3	
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Volume (vph)	559	54	12	1670	185	5
Adj. Flow (vph)	690	67	15	2062	228	6
Lane Group Flow (vph)	757	0	15	2062	234	0
Turn Type			Prot			
Protected Phases	2		1	6	3	
Permitted Phases						
Total Split (s)	48.4	0.0	17.5	65.9	24.1	0.0
Act Effct Green (s)	68.0		6.7	70.4	11.6	
Actuated g/C Ratio	0.76		0.07	0.78	0.13	
v/c Ratio	0.29		0.11	0.74	0.53	
Control Delay	13.6		40.4	7.6	40.2	
Queue Delay	0.0		0.0	0.0	0.0	
Total Delay	13.6		40.4	7.6	40.2	
LOS	B		D	A	D	
Approach Delay	13.6			7.9	40.2	
Approach LOS	B			A	D	

Intersection Summary

Cycle Length: 90
Actuated Cycle Length: 90
Offset: 0 (0%), Referenced to phase 2:EBT and 6:WBT, Start of Green
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 0.74
Intersection Signal Delay: 11.7 Intersection LOS: B
Intersection Capacity Utilization 58.3% ICU Level of Service B
Analysis Period (min) 15

Splits and Phases: 10: Otay Mesa Road & Sanyo Ave

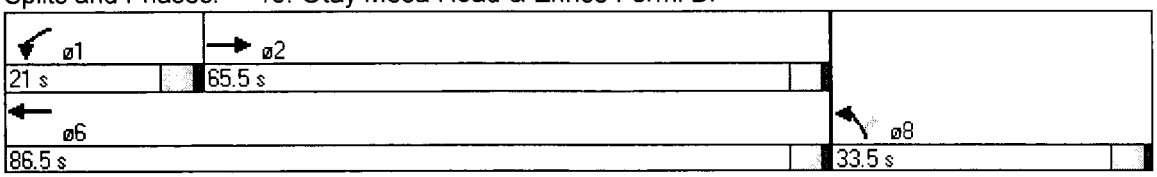


Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Total Lost Time (s)	4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	0.95	0.95	1.00	0.95	1.00	1.00
Frt	0.999					0.850
Flt Protected			0.950		0.950	
Satd. Flow (prot)	3536	0	1770	3539	1770	1583
Flt Permitted			0.950		0.950	
Satd. Flow (perm)	3536	0	1770	3539	1770	1583
Satd. Flow (RTOR)	1					215
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Volume (vph)	1679	11	43	392	55	183
Adj. Flow (vph)	1975	13	51	461	65	215
Lane Group Flow (vph)	1988	0	51	461	65	215
Turn Type			Prot			Perm
Protected Phases	2		1	6	8	
Permitted Phases						8
Total Split (s)	65.5	0.0	21.0	86.5	33.5	33.5
Act Effct Green (s)	62.3		8.5	70.0	9.3	9.3
Actuated g/C Ratio	0.71		0.09	0.80	0.11	0.11
v/c Ratio	0.79		0.31	0.16	0.34	0.60
Control Delay	13.9		44.5	2.3	43.1	13.1
Queue Delay	0.0		0.0	0.0	0.0	0.0
Total Delay	13.9		44.5	2.3	43.1	13.1
LOS	B		D	A	D	B
Approach Delay	13.9			6.5	20.1	
Approach LOS	B			A	C	

Intersection Summary

Cycle Length: 120
Actuated Cycle Length: 87.4
Control Type: Actuated-Uncoordinated
Maximum v/c Ratio: 0.79
Intersection Signal Delay: 13.1 — Intersection LOS: B
Intersection Capacity Utilization 64.8% — ICU Level of Service C
Analysis Period (min) 15

Splits and Phases: 13: Otay Mesa Road & Enrico Fermi Dr

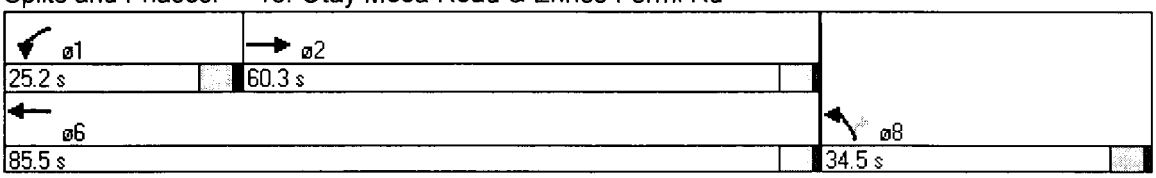


Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Total Lost Time (s)	4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	0.95	0.95	1.00	0.95	1.00	1.00
Frt	0.999					0.850
Flt Protected			0.950		0.950	
Satd. Flow (prot)	3536	0	1770	3539	1770	1583
Flt Permitted			0.950		0.950	
Satd. Flow (perm)	3536	0	1770	3539	1770	1583
Satd. Flow (RTOR)	1					87
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Volume (vph)	543	4	167	709	36	80
Adj. Flow (vph)	590	4	182	771	39	87
Lane Group Flow (vph)	594	0	182	771	39	87
Turn Type			Prot			Perm
Protected Phases	2		1	6	8	
Permitted Phases						8
Total Split (s)	60.3	0.0	25.2	85.5	34.5	34.5
Act Effct Green (s)	13.3		10.2	24.4	7.6	7.6
Actuated g/C Ratio	0.33		0.24	0.60	0.19	0.19
v/c Ratio	0.51		0.43	0.36	0.12	0.24
Control Delay	14.1		18.6	4.2	19.1	7.7
Queue Delay	0.0		0.0	0.0	0.0	0.0
Total Delay	14.1		18.6	4.2	19.1	7.7
LOS	B		B	A	B	A
Approach Delay	14.1			6.9	11.2	
Approach LOS	B			A	B	

Intersection Summary

Cycle Length: 120
Actuated Cycle Length: 40.8
Control Type: Actuated-Uncoordinated
Maximum v/c Ratio: 0.51
Intersection Signal Delay: 9.8 — Intersection LOS: A
Intersection Capacity Utilization 37.7% — ICU Level of Service A
Analysis Period (min) 15

Splits and Phases: 13: Otay Mesa Road & Enrico Fermi Rd

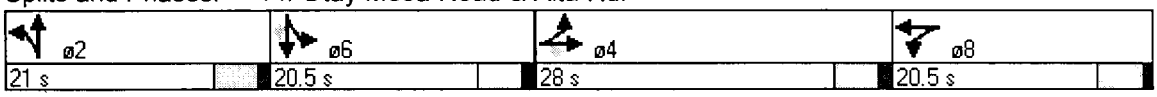


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Total Lost Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	0.97	1.00	1.00	0.95	0.95	0.95	0.97	1.00	1.00	1.00	0.95	0.95
Frt			0.850								0.856	0.850
Flt Protected	0.950						0.950					
Satd. Flow (prot)	3433	1863	1583	0	3539	0	3433	1863	0	0	1515	1504
Flt Permitted	0.950						0.950					
Satd. Flow (perm)	3433	1863	1583	0	3539	0	3433	1863	0	0	1515	1504
Satd. Flow (RTOR)			512								91	92
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Volume (vph)	652	731	625	0	193	0	154	1	0	0	4	168
Adj. Flow (vph)	709	795	679	0	210	0	167	1	0	0	4	183
Lane Group Flow (vph)	709	795	679	0	210	0	167	1	0	0	95	92
Turn Type	Split		Perm	Split			Split			Split		Perm
Protected Phases	4	4		8	8		2	2		6	6	
Permitted Phases			4									6
Total Split (s)	28.0	28.0	28.0	20.5	20.5	0.0	21.0	21.0	0.0	20.5	20.5	20.5
Act Effct Green (s)	40.0	40.0	40.0		10.9		15.6	15.6			7.4	7.4
Actuated g/C Ratio	0.44	0.44	0.44		0.12		0.17	0.17			0.08	0.08
v/c Ratio	0.46	0.96	0.69		0.49		0.28	0.00			0.46	0.44
Control Delay	19.5	49.7	9.4		40.5		33.9	31.0			16.7	15.5
Queue Delay	0.0	0.0	0.0		0.0		0.0	0.0			0.0	0.0
Total Delay	19.5	49.7	9.4		40.5		33.9	31.0			16.7	15.5
LOS	B	D	A		D		C	C			B	B
Approach Delay		27.3			40.5			33.8			16.1	
Approach LOS		C			D			C			B	

Intersection Summary

Cycle Length: 90
Actuated Cycle Length: 90
Offset: 0 (0%), Referenced to phase 2:NBTL, Start of Green
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 0.96
Intersection Signal Delay: 28.0 — Intersection LOS: C
Intersection Capacity Utilization 64.9% — ICU Level of Service C
Analysis Period (min) 15

Splits and Phases: 14: Otay Mesa Road & Alta Rd.

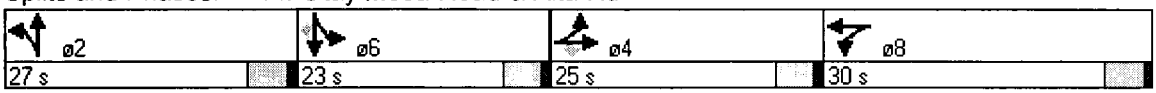


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Total Lost Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	0.97	1.00	1.00	0.95	0.95	0.95	0.97	1.00	1.00	1.00	0.95	0.95
Frt			0.850								0.850	0.850
Flt Protected	0.950						0.950					
Satd. Flow (prot)	3433	1863	1583	0	3539	0	3433	1863	0	0	1504	1504
Flt Permitted	0.950						0.950					
Satd. Flow (perm)	3433	1863	1583	0	3539	0	3433	1863	0	0	1504	1504
Satd. Flow (RTOR)			279								339	339
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Volume (vph)	101	295	251	0	723	0	552	0	0	0	1	726
Adj. Flow (vph)	112	328	279	0	803	0	613	0	0	0	1	807
Lane Group Flow (vph)	112	328	279	0	803	0	613	0	0	0	404	404
Turn Type	Split		Perm	Split			Split			Split		Perm
Protected Phases	4	4		8	8		2	2		6	6	
Permitted Phases			4									6
Total Split (s)	25.0	25.0	25.0	30.0	30.0	0.0	27.0	27.0	0.0	23.0	23.0	23.0
Act Effct Green (s)	22.1	22.1	22.1		26.4		27.7				12.8	12.8
Actuated g/C Ratio	0.21	0.21	0.21		0.25		0.26				0.12	0.12
v/c Ratio	0.15	0.83	0.50		0.90		0.68				0.84	0.84
Control Delay	34.3	59.2	7.9		53.0		40.7				24.6	24.6
Queue Delay	0.0	0.0	0.0		0.0		0.0				0.0	0.0
Total Delay	34.3	59.2	7.9		53.0		40.7				24.6	24.6
LOS	C	E	A		D		D				C	C
Approach Delay		35.4			53.0						24.6	
Approach LOS		D			D						C	

Intersection Summary

Cycle Length: 105
Actuated Cycle Length: 105
Offset: 0 (0%), Referenced to phase 2:NBTL, Start of Green
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 0.90
Intersection Signal Delay: 38.3 Intersection LOS: D
Intersection Capacity Utilization 79.6% ICU Level of Service D
Analysis Period (min) 15

Splits and Phases: 14: Otay Mesa Road & Alta Rd



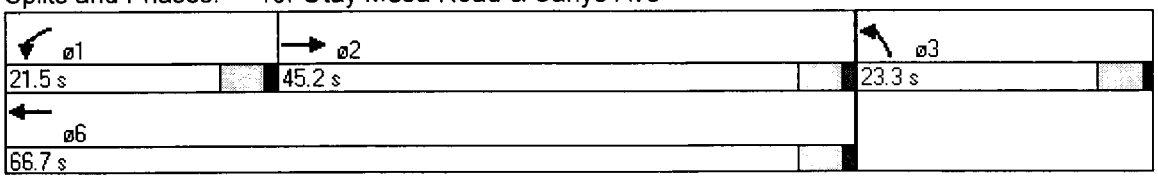
Existing + Units 1-3 – Recommended Mitigation

Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Total Lost Time (s)	4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	0.95	0.95	1.00	0.95	0.97	0.95
Frt	0.986				0.965	
Flt Protected			0.950		0.963	
Satd. Flow (prot)	3490	0	1770	3539	3358	0
Flt Permitted			0.950		0.963	
Satd. Flow (perm)	3490	0	1770	3539	3358	0
Satd. Flow (RTOR)	16				12	
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Volume (vph)	1925	200	24	606	32	10
Adj. Flow (vph)	2406	250	30	758	40	12
Lane Group Flow (vph)	2656	0	30	758	52	0
Turn Type			Prot			
Protected Phases	2		1	6	3	
Permitted Phases						
Total Split (s)	45.2	0.0	21.5	66.7	23.3	0.0
Act Effct Green (s)	75.5		7.4	80.7	7.0	
Actuated g/C Ratio	0.84		0.08	0.90	0.08	
v/c Ratio	0.91		0.21	0.24	0.19	
Control Delay	9.5		41.4	1.4	33.1	
Queue Delay	0.0		0.0	0.0	0.0	
Total Delay	9.5		41.4	1.4	33.1	
LOS	A		D	A	C	
Approach Delay	9.5			2.9	33.1	
Approach LOS	A			A	C	

Intersection Summary

Cycle Length: 90
Actuated Cycle Length: 90
Offset: 0 (0%), Referenced to phase 2:EBT and 6:WBT, Start of Green
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 0.91
Intersection Signal Delay: 8.4 Intersection LOS: A
Intersection Capacity Utilization 69.6% ICU Level of Service C
Analysis Period (min) 15

Splits and Phases: 10: Otay Mesa Road & Sanyo Ave

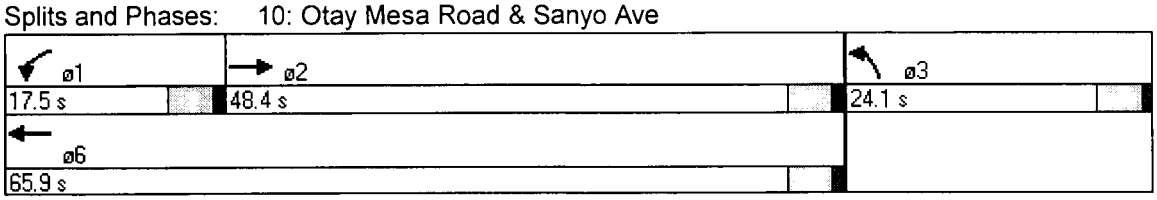


Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Total Lost Time (s)	4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	0.95	0.95	1.00	0.95	0.97	0.95
Frt	0.989				0.996	
Flt Protected			0.950		0.954	
Satd. Flow (prot)	3500	0	1770	3539	3434	0
Flt Permitted			0.950		0.954	
Satd. Flow (perm)	3500	0	1770	3539	3434	0
Satd. Flow (RTOR)	13				3	
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Volume (vph)	692	54	12	1946	185	5
Adj. Flow (vph)	854	67	15	2402	228	6
Lane Group Flow (vph)	921	0	15	2402	234	0
Turn Type			Prot			
Protected Phases	2		1	6	3	
Permitted Phases						
Total Split (s)	48.4	0.0	17.5	65.9	24.1	0.0
Act Effct Green (s)	68.0		6.7	70.4	11.6	
Actuated g/C Ratio	0.76		0.07	0.78	0.13	
v/c Ratio	0.35		0.11	0.87	0.53	
Control Delay	1.6		40.4	11.9	40.2	
Queue Delay	0.0		0.0	0.0	0.0	
Total Delay	1.6		40.4	11.9	40.2	
LOS	A		D	B	D	
Approach Delay	1.6			12.1	40.2	
Approach LOS	A			B	D	

Intersection Summary

Cycle Length: 90
Actuated Cycle Length: 90
Offset: 0 (0%), Referenced to phase 2:EBT and 6:WBT, Start of Green
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 0.87
Intersection Signal Delay: 11.2 Intersection LOS: B
Intersection Capacity Utilization 65.9% ICU Level of Service C
Analysis Period (min) 15

Splits and Phases: 10: Otay Mesa Road & Sanyo Ave

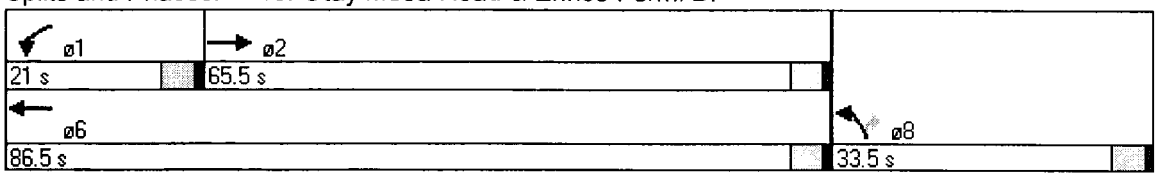


Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Total Lost Time (s)	4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	0.95	0.95	1.00	0.95	1.00	1.00
Frt	0.999					0.850
Flt Protected			0.950		0.950	
Satd. Flow (prot)	3536	0	1770	3539	1770	1583
Flt Permitted			0.950		0.950	
Satd. Flow (perm)	3536	0	1770	3539	1770	1583
Satd. Flow (RTOR)	1					234
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Volume (vph)	1969	11	54	493	55	216
Adj. Flow (vph)	2316	13	64	580	65	254
Lane Group Flow (vph)	2329	0	64	580	65	254
Turn Type			Prot			Perm
Protected Phases	2		1	6	8	
Permitted Phases						8
Total Split (s)	65.5	0.0	21.0	86.5	33.5	33.5
Act Effct Green (s)	62.2		9.2	73.0	9.8	9.8
Actuated g/C Ratio	0.68		0.10	0.80	0.11	0.11
v/c Ratio	0.96		0.37	0.20	0.34	0.67
Control Delay	28.0		46.0	2.5	43.6	16.5
Queue Delay	0.0		0.0	0.0	0.0	0.0
Total Delay	28.0		46.0	2.5	43.6	16.5
LOS	C		D	A	D	B
Approach Delay	28.0			6.9	22.0	
Approach LOS	C			A	C	

Intersection Summary

Cycle Length: 120
Actuated Cycle Length: 90.9
Control Type: Actuated-Uncoordinated
Maximum v/c Ratio: 0.96
Intersection Signal Delay: 23.3 Intersection LOS: C
Intersection Capacity Utilization 74.8% ICU Level of Service D
Analysis Period (min) 15

Splits and Phases: 13: Otay Mesa Road & Enrico Fermi Dr

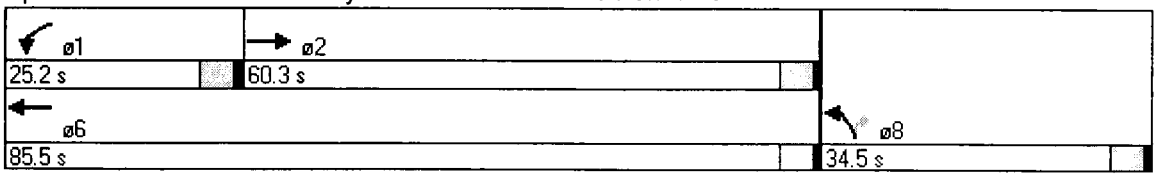


Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Total Lost Time (s)	4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	0.95	0.95	1.00	0.95	1.00	1.00
Frt	0.999					0.850
Flt Protected			0.950		0.950	
Satd. Flow (prot)	3536	0	1770	3539	1770	1583
Flt Permitted			0.950		0.950	
Satd. Flow (perm)	3536	0	1770	3539	1770	1583
Satd. Flow (RTOR)	1					103
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Volume (vph)	676	4	198	1985	36	95
Adj. Flow (vph)	735	4	215	2158	39	103
Lane Group Flow (vph)	739	0	215	2158	39	103
Turn Type			Prot			Perm
Protected Phases	2		1	6	8	
Permitted Phases						8
Total Split (s)	60.3	0.0	25.2	85.5	34.5	34.5
Act Effct Green (s)	36.0		13.3	50.2	8.0	8.0
Actuated g/C Ratio	0.54		0.19	0.75	0.12	0.12
v/c Ratio	0.39		0.63	0.81	0.18	0.37
Control Delay	11.0		36.8	7.9	35.9	12.8
Queue Delay	0.0		0.0	0.0	0.0	0.0
Total Delay	11.0		36.8	7.9	35.9	12.8
LOS	B		D	A	D	B
Approach Delay	11.0			10.5	19.1	
Approach LOS	B			B	B	

Intersection Summary

Cycle Length: 120
Actuated Cycle Length: 67
Control Type: Actuated-Uncoordinated
Maximum v/c Ratio: 0.81
Intersection Signal Delay: 11.0 Intersection LOS: B
Intersection Capacity Utilization 64.9% ICU Level of Service C
Analysis Period (min) 15

Splits and Phases: 13: Otay Mesa Road & Enrico Fermi Rd

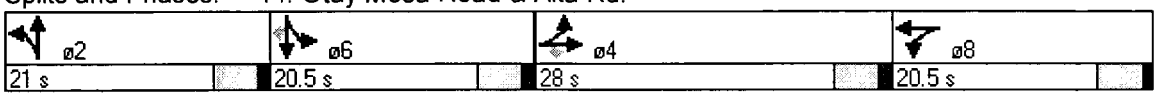


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Total Lost Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	0.97	1.00	1.00	0.95	0.95	0.95	0.97	1.00	1.00	1.00	0.95	0.95
Frt			0.850								0.856	0.850
Flt Protected	0.950						0.950					
Satd. Flow (prot)	3433	1863	1583	0	3539	0	3433	1863	0	0	1515	1504
Flt Permitted	0.950						0.950					
Satd. Flow (perm)	3433	1863	1583	0	3539	0	3433	1863	0	0	1515	1504
Satd. Flow (RTOR)			740								91	92
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Volume (vph)	652	752	927	0	211	0	248	1	0	0	4	168
Adj. Flow (vph)	709	817	1008	0	229	0	270	1	0	0	4	183
Lane Group Flow (vph)	709	817	1008	0	229	0	270	1	0	0	95	92
Turn Type	Split		Perm	Split			Split			Split		Perm
Protected Phases	4	4		8	8		2	2		6	6	
Permitted Phases			4									6
Total Split (s)	28.0	28.0	28.0	20.5	20.5	0.0	21.0	21.0	0.0	20.5	20.5	20.5
Act Effct Green (s)	37.5	37.5	37.5		11.4		17.7	17.7			7.4	7.4
Actuated g/C Ratio	0.42	0.42	0.42		0.13		0.20	0.20			0.08	0.08
v/c Ratio	0.50	1.05	0.92		0.51		0.40	0.00			0.46	0.44
Control Delay	21.7	75.9	22.7		40.5		32.5	29.0			16.7	15.5
Queue Delay	0.0	0.0	0.0		0.0		0.0	0.0			0.0	0.0
Total Delay	21.7	75.9	22.7		40.5		32.5	29.0			16.7	15.5
LOS	C	E	C		D		C	C			B	B
Approach Delay		39.6			40.5			32.5			16.1	
Approach LOS		D			D			C			B	

Intersection Summary

Cycle Length: 90
Actuated Cycle Length: 90
Offset: 0 (0%), Referenced to phase 2:NBTL, Start of Green
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 1.05
Intersection Signal Delay: 37.7 — Intersection LOS: D
Intersection Capacity Utilization 76.9% — ICU Level of Service D
Analysis Period (min) 15

Splits and Phases: 14: Otay Mesa Road & Alta Rd.

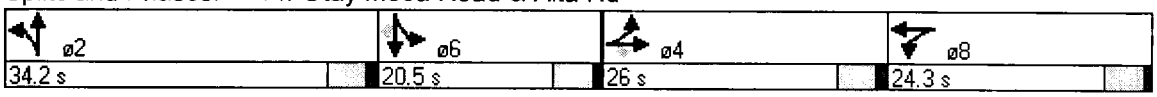


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Total Lost Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	0.97	1.00	1.00	0.95	0.95	0.95	0.97	1.00	1.00	1.00	0.95	0.95
Frt			0.850								0.850	0.850
Flt Protected	0.950						0.950					
Satd. Flow (prot)	3433	1863	1583	0	3539	0	3433	1863	0	0	1504	1504
Flt Permitted	0.950						0.950					
Satd. Flow (perm)	3433	1863	1583	0	3539	0	3433	1863	0	0	1504	1504
Satd. Flow (RTOR)			413								336	336
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Volume (vph)	101	322	372	0	703	0	879	0	0	0	1	726
Adj. Flow (vph)	112	358	413	0	781	0	977	0	0	0	1	807
Lane Group Flow (vph)	112	358	413	0	781	0	977	0	0	0	404	404
Turn Type	Split		Perm	Split			Split			Split		Perm
Protected Phases	4	4		8	8		2	2		6	6	
Permitted Phases			4									6
Total Split (s)	26.0	26.0	26.0	24.3	24.3	0.0	34.2	34.2	0.0	20.5	20.5	20.5
Act Effct Green (s)	23.3	23.3	23.3		23.2		30.2				12.3	12.3
Actuated g/C Ratio	0.22	0.22	0.22		0.22		0.29				0.12	0.12
v/c Ratio	0.15	0.86	0.61		1.00		0.99				0.85	0.85
Control Delay	33.6	61.4	8.0		74.5		64.3				27.0	27.0
Queue Delay	0.0	0.0	0.0		0.0		0.0				0.0	0.0
Total Delay	33.6	61.4	8.0		74.5		64.3				27.0	27.0
LOS	C	E	A		E		E				C	C
Approach Delay		32.9			74.5						27.0	
Approach LOS		C			E						C	

Intersection Summary

Cycle Length: 105
Actuated Cycle Length: 105
Offset: 0 (0%), Referenced to phase 2:NBTL, Start of Green
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 1.00
Intersection Signal Delay: 49.8 Intersection LOS: D
Intersection Capacity Utilization 89.8% ICU Level of Service E
Analysis Period (min) 15

Splits and Phases: 14: Otay Mesa Road & Alta Rd



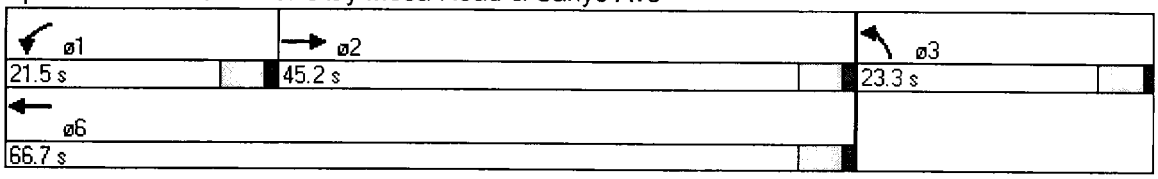
Existing + Units 1-4 – Recommended Mitigation

Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Total Lost Time (s)	4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	0.95	0.95	1.00	0.95	0.97	0.95
Frt	0.988				0.965	
Flt Protected			0.950		0.963	
Satd. Flow (prot)	3497	0	1770	3539	3358	0
Flt Permitted			0.950		0.963	
Satd. Flow (perm)	3497	0	1770	3539	3358	0
Satd. Flow (RTOR)	14				12	
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Volume (vph)	2226	200	24	680	32	10
Adj. Flow (vph)	2782	250	30	850	40	12
Lane Group Flow (vph)	3032	0	30	850	52	0
Turn Type			Prot			
Protected Phases	2		1	6	3	
Permitted Phases						
Total Split (s)	45.2	0.0	21.5	66.7	23.3	0.0
Act Effct Green (s)	75.5		7.4	80.7	7.0	
Actuated g/C Ratio	0.84		0.08	0.90	0.08	
v/c Ratio	1.03		0.21	0.27	0.19	
Control Delay	28.8		41.4	1.5	33.1	
Queue Delay	0.0		0.0	0.0	0.0	
Total Delay	28.8		41.4	1.5	33.1	
LOS	C		D	A	C	
Approach Delay	28.8			2.8	33.1	
Approach LOS	C			A	C	

Intersection Summary

Cycle Length: 90
Actuated Cycle Length: 90
Offset: 0 (0%), Referenced to phase 2:EBT and 6:WBT, Start of Green
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 1.03
Intersection Signal Delay: 23.1 Intersection LOS: C
Intersection Capacity Utilization 77.9% ICU Level of Service D
Analysis Period (min) 15

Splits and Phases: 10: Otay Mesa Road & Sanyo Ave

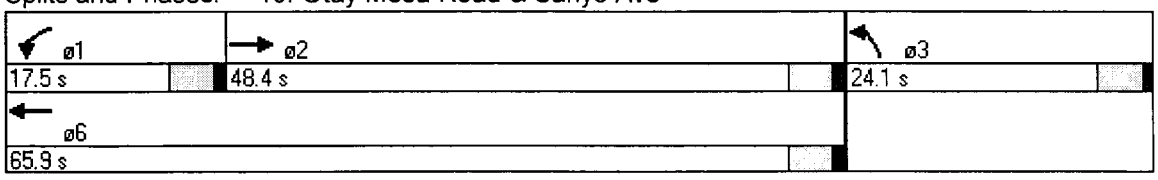


Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Total Lost Time (s)	4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	0.95	0.95	1.00	0.95	0.97	0.95
Frt	0.991				0.996	
Flt Protected			0.950		0.954	
Satd. Flow (prot)	3507	0	1770	3539	3434	0
Flt Permitted			0.950		0.954	
Satd. Flow (perm)	3507	0	1770	3539	3434	0
Satd. Flow (RTOR)	11				3	
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Volume (vph)	813	54	12	2228	185	5
Adj. Flow (vph)	1004	67	15	2751	228	6
Lane Group Flow (vph)	1071	0	15	2751	234	0
Turn Type			Prot			
Protected Phases	2		1	6	3	
Permitted Phases						
Total Split (s)	48.4	0.0	17.5	65.9	24.1	0.0
Act Effct Green (s)	68.0		6.7	70.4	11.6	
Actuated g/C Ratio	0.76		0.07	0.78	0.13	
v/c Ratio	0.40		0.11	0.99	0.53	
Control Delay	13.7		40.4	27.0	40.2	
Queue Delay	0.0		0.0	0.0	0.0	
Total Delay	13.7		40.4	27.0	40.2	
LOS	B		D	C	D	
Approach Delay	13.7			27.0	40.2	
Approach LOS	B			C	D	

Intersection Summary

Cycle Length: 90
Actuated Cycle Length: 90
Offset: 0 (0%), Referenced to phase 2:EBT and 6:WBT, Start of Green
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 0.99
Intersection Signal Delay: 24.3 Intersection LOS: C
Intersection Capacity Utilization 73.7% ICU Level of Service D
Analysis Period (min) 15

Splits and Phases: 10: Otay Mesa Road & Sanyo Ave

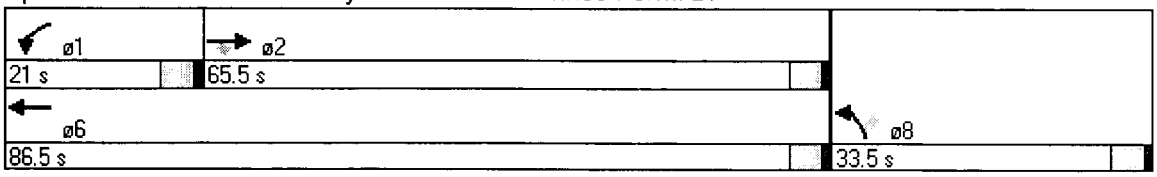


Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Total Lost Time (s)	4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	0.95	1.00	1.00	0.95	0.97	1.00
Frt		0.850				0.850
Flt Protected			0.950		0.950	
Satd. Flow (prot)	3539	1583	1770	3539	3433	1583
Flt Permitted			0.950		0.950	
Satd. Flow (perm)	3539	1583	1770	3539	3433	1583
Satd. Flow (RTOR)		637				56
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Volume (vph)	1525	756	37	342	280	48
Adj. Flow (vph)	1794	889	44	402	329	56
Lane Group Flow (vph)	1794	889	44	402	329	56
Turn Type		Perm	Prot			Perm
Protected Phases	2		1	6	8	
Permitted Phases		2				8
Total Split (s)	65.5	65.5	21.0	86.5	33.5	33.5
Act Effct Green (s)	56.3	56.3	8.3	63.4	14.0	14.0
Actuated g/C Ratio	0.66	0.66	0.09	0.74	0.16	0.16
v/c Ratio	0.77	0.71	0.27	0.15	0.59	0.18
Control Delay	15.5	6.8	46.2	3.6	40.2	11.6
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	15.5	6.8	46.2	3.6	40.2	11.6
LOS	B	A	D	A	D	B
Approach Delay	12.6			7.8	36.0	
Approach LOS	B			A	D	

Intersection Summary

Cycle Length: 120
Actuated Cycle Length: 85.8
Control Type: Actuated-Uncoordinated
Maximum v/c Ratio: 0.77
Intersection Signal Delay: 14.6 Intersection LOS: B
Intersection Capacity Utilization 56.8% ICU Level of Service B
Analysis Period (min) 15

Splits and Phases: 13: Otay Mesa Road & Enrico Fermi Dr

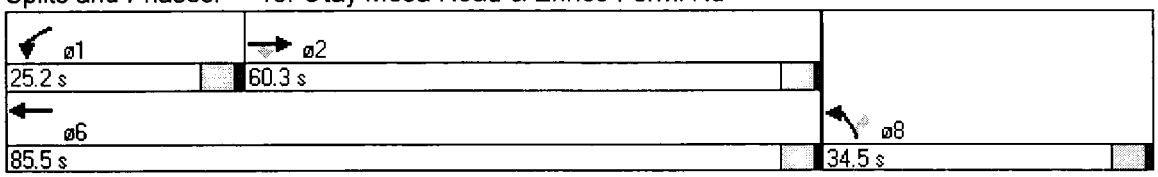


Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Total Lost Time (s)	4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	0.95	1.00	1.00	0.95	0.97	1.00
Frt		0.850				0.850
Flt Protected			0.950		0.950	
Satd. Flow (prot)	3539	1583	1770	3539	3433	1583
Flt Permitted			0.950		0.950	
Satd. Flow (perm)	3539	1583	1770	3539	3433	1583
Satd. Flow (RTOR)		337				26
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Volume (vph)	492	310	140	1468	835	26
Adj. Flow (vph)	535	337	152	1596	908	28
Lane Group Flow (vph)	535	337	152	1596	908	28
Turn Type		Perm	Prot			Perm
Protected Phases	2		1	6	8	
Permitted Phases		2				8
Total Split (s)	60.3	60.3	25.2	85.5	34.5	34.5
Act Effct Green (s)	31.9	31.9	12.7	45.9	31.0	31.0
Actuated g/C Ratio	0.38	0.38	0.15	0.54	0.36	0.36
v/c Ratio	0.40	0.42	0.59	0.84	0.73	0.05
Control Delay	21.6	4.1	45.0	20.5	29.7	10.2
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	21.6	4.1	45.0	20.5	29.7	10.2
LOS	C	A	D	C	C	B
Approach Delay	14.8			22.6	29.2	
Approach LOS	B			C	C	

Intersection Summary

Cycle Length: 120
Actuated Cycle Length: 85
Control Type: Actuated-Uncoordinated
Maximum v/c Ratio: 0.84
Intersection Signal Delay: 22.4 — Intersection LOS: C
Intersection Capacity Utilization 71.1% — ICU Level of Service C
Analysis Period (min) 15

Splits and Phases: 13: Otay Mesa Road & Enrico Fermi Rd

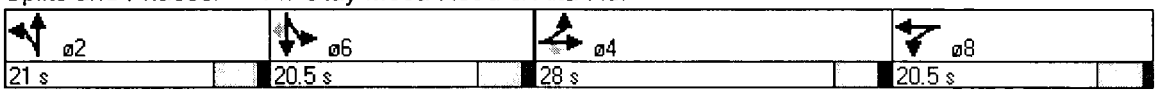


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Total Lost Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	0.97	1.00	1.00	0.95	0.95	0.95	0.97	1.00	1.00	1.00	0.95	0.95
Frt			0.850								0.856	0.850
Flt Protected	0.950						0.950					
Satd. Flow (prot)	3433	1863	1583	0	3539	0	3433	1863	0	0	1515	1504
Flt Permitted	0.950						0.950					
Satd. Flow (perm)	3433	1863	1583	0	3539	0	3433	1863	0	0	1515	1504
Satd. Flow (RTOR)			735								91	92
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Volume (vph)	652	391	676	0	96	0	196	1	0	0	4	168
Adj. Flow (vph)	709	425	735	0	104	0	213	1	0	0	4	183
Lane Group Flow (vph)	709	425	735	0	104	0	213	1	0	0	95	92
Turn Type	Split		Perm	Split			Split			Split		Perm
Protected Phases	4	4		8	8		2	2		6	6	
Permitted Phases			4									6
Total Split (s)	28.0	28.0	28.0	20.5	20.5	0.0	21.0	21.0	0.0	20.5	20.5	20.5
Act Effct Green (s)	31.5	31.5	31.5		8.4		28.7	28.7			7.4	7.4
Actuated g/C Ratio	0.35	0.35	0.35		0.09		0.32	0.32			0.08	0.08
v/c Ratio	0.59	0.65	0.71		0.32		0.19	0.00			0.46	0.44
Control Delay	25.8	29.3	6.1		40.2		26.3	27.0			16.7	15.5
Queue Delay	0.0	0.0	0.0		0.0		0.0	0.0			0.0	0.0
Total Delay	25.8	29.3	6.1		40.2		26.3	27.0			16.7	15.5
LOS	C	C	A		D		C	C			B	B
Approach Delay		18.8			40.2			26.3			16.1	
Approach LOS		B			D			C			B	

Intersection Summary

Cycle Length: 90
Actuated Cycle Length: 90
Offset: 0 (0%), Referenced to phase 2:NBTL, Start of Green
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 0.71
Intersection Signal Delay: 20.2 — Intersection LOS: C
Intersection Capacity Utilization 58.9% — ICU Level of Service B
Analysis Period (min) 15

Splits and Phases: 14: Otay Mesa Road & Alta Rd.

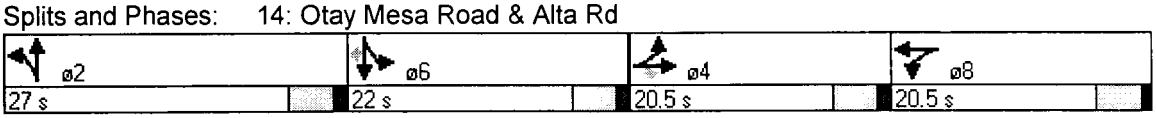


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Total Lost Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	0.97	1.00	1.00	0.95	0.95	0.95	0.97	1.00	1.00	1.00	0.95	0.95
Frt			0.850								0.850	0.850
Flt Protected	0.950						0.950					
Satd. Flow (prot)	3433	1863	1583	0	3539	0	3433	1863	0	0	1504	1504
Flt Permitted	0.950						0.950					
Satd. Flow (perm)	3433	1863	1583	0	3539	0	3433	1863	0	0	1504	1504
Satd. Flow (RTOR)			313								345	345
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Volume (vph)	101	168	272	0	356	0	651	0	0	0	1	726
Adj. Flow (vph)	116	193	313	0	409	0	748	0	0	0	1	834
Lane Group Flow (vph)	116	193	313	0	409	0	748	0	0	0	418	417
Turn Type	Split		Perm	Split			Split			Split		Perm
Protected Phases	4	4		8	8		2	2		6	6	
Permitted Phases			4									6
Total Split (s)	20.5	20.5	20.5	20.5	20.5	0.0	27.0	27.0	0.0	22.0	22.0	22.0
Act Effct Green (s)	14.0	14.0	14.0		15.0		32.5				12.6	12.6
Actuated g/C Ratio	0.16	0.16	0.16		0.17		0.36				0.14	0.14
v/c Ratio	0.22	0.67	0.61		0.70		0.60				0.82	0.82
Control Delay	33.4	47.1	9.7		41.9		28.8				21.9	21.7
Queue Delay	0.0	0.0	0.0		0.0		0.0				0.0	0.0
Total Delay	33.4	47.1	9.7		41.9		28.8				21.9	21.7
LOS	C	D	A		D		C				C	C
Approach Delay		25.7			41.9						21.8	
Approach LOS		C			D						C	

Intersection Summary

Cycle Length: 90
Actuated Cycle Length: 90
Offset: 0 (0%), Referenced to phase 2:NBTL, Start of Green
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 0.82
Intersection Signal Delay: 27.9 — Intersection LOS: C
Intersection Capacity Utilization 68.4% — ICU Level of Service C
Analysis Period (min) 15

Splits and Phases: 14: Otay Mesa Road & Alta Rd



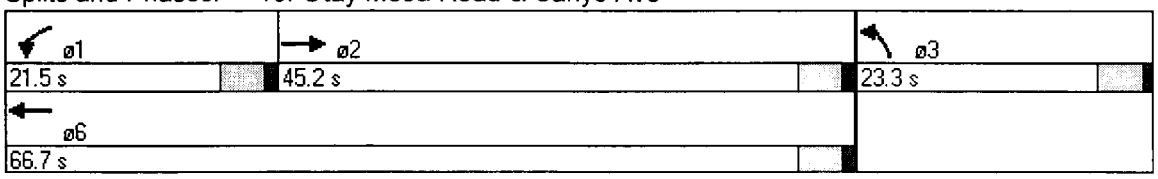
Existing + Units 1-5 – Recommended Mitigation

Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Total Lost Time (s)	4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	0.95	0.95	1.00	0.95	0.97	0.95
Frt	0.988				0.965	
Flt Protected			0.950		0.963	
Satd. Flow (prot)	3497	0	1770	3539	3358	0
Flt Permitted			0.950		0.963	
Satd. Flow (perm)	3497	0	1770	3539	3358	0
Satd. Flow (RTOR)	13				12	
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Volume (vph)	2280	200	24	762	32	10
Adj. Flow (vph)	2850	250	30	952	40	12
Lane Group Flow (vph)	3100	0	30	952	52	0
Turn Type			Prot			
Protected Phases	2		1	6	3	
Permitted Phases						
Total Split (s)	45.2	0.0	21.5	66.7	23.3	0.0
Act Effct Green (s)	75.5		7.4	80.7	7.0	
Actuated g/C Ratio	0.84		0.08	0.90	0.08	
v/c Ratio	1.06		0.21	0.30	0.19	
Control Delay	39.2		41.4	1.6	33.1	
Queue Delay	0.0		0.0	0.0	0.0	
Total Delay	39.2		41.4	1.6	33.1	
LOS	D		D	A	C	
Approach Delay	39.2			2.8	33.1	
Approach LOS	D			A	C	

Intersection Summary

Cycle Length: 90
Actuated Cycle Length: 90
Offset: 0 (0%), Referenced to phase 2:EBT and 6:WBT, Start of Green
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 1.06
Intersection Signal Delay: 30.5 Intersection LOS: C
Intersection Capacity Utilization 79.4% ICU Level of Service D
Analysis Period (min) 15

Splits and Phases: 10: Otay Mesa Road & Sanyo Ave

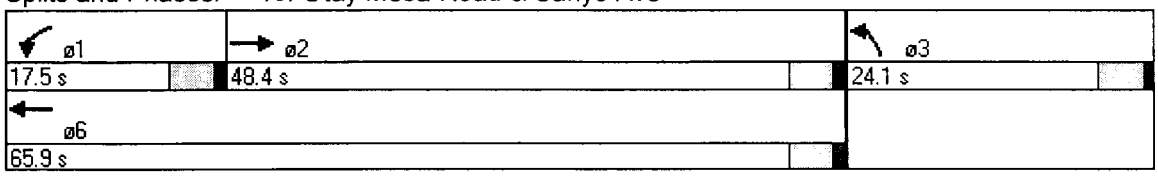


Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Total Lost Time (s)	4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	0.95	0.95	1.00	0.95	0.97	0.95
Frt	0.991				0.996	
Flt Protected			0.950		0.954	
Satd. Flow (prot)	3507	0	1770	3539	3434	0
Flt Permitted			0.950		0.954	
Satd. Flow (perm)	3507	0	1770	3539	3434	0
Satd. Flow (RTOR)	10				3	
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Volume (vph)	873	54	12	2288	185	5
Adj. Flow (vph)	1078	67	15	2825	228	6
Lane Group Flow (vph)	1145	0	15	2825	234	0
Turn Type			Prot			
Protected Phases	2		1	6	3	
Permitted Phases						
Total Split (s)	48.4	0.0	17.5	65.9	24.1	0.0
Act Effct Green (s)	68.0		6.7	70.4	11.6	
Actuated g/C Ratio	0.76		0.07	0.78	0.13	
v/c Ratio	0.43		0.11	1.02	0.53	
Control Delay	5.5		40.4	34.3	40.2	
Queue Delay	0.0		0.0	0.0	0.0	
Total Delay	5.5		40.4	34.3	40.2	
LOS	A		D	C	D	
Approach Delay	5.5			34.4	40.2	
Approach LOS	A			C	D	

Intersection Summary

Cycle Length: 90
Actuated Cycle Length: 90
Offset: 0 (0%), Referenced to phase 2:EBT and 6:WBT, Start of Green
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 1.02
Intersection Signal Delay: 26.8 Intersection LOS: C
Intersection Capacity Utilization 75.3% ICU Level of Service D
Analysis Period (min) 15

Splits and Phases: 10: Otay Mesa Road & Sanyo Ave

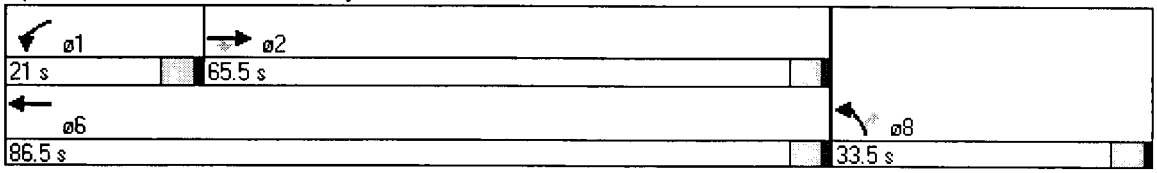


Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Total Lost Time (s)	4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	0.95	1.00	1.00	0.95	0.97	1.00
Frt		0.850				0.850
Flt Protected			0.950		0.950	
Satd. Flow (prot)	3539	1583	1770	3539	3433	1583
Flt Permitted			0.950		0.950	
Satd. Flow (perm)	3539	1583	1770	3539	3433	1583
Satd. Flow (RTOR)		643				56
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Volume (vph)	1557	778	42	385	318	48
Adj. Flow (vph)	1832	915	49	453	374	56
Lane Group Flow (vph)	1832	915	49	453	374	56
Turn Type		Perm	Prot			Perm
Protected Phases	2		1	6	8	
Permitted Phases		2				8
Total Split (s)	65.5	65.5	21.0	86.5	33.5	33.5
Act Effct Green (s)	60.7	60.7	8.6	68.4	15.8	15.8
Actuated g/C Ratio	0.66	0.66	0.09	0.74	0.17	0.17
v/c Ratio	0.79	0.73	0.31	0.17	0.64	0.18
Control Delay	17.2	7.8	48.6	4.0	41.9	11.1
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	17.2	7.8	48.6	4.0	41.9	11.1
LOS	B	A	D	A	D	B
Approach Delay	14.1			8.4	37.9	
Approach LOS	B			A	D	

Intersection Summary

Cycle Length: 120
Actuated Cycle Length: 92.4
Control Type: Actuated-Uncoordinated
Maximum v/c Ratio: 0.79
Intersection Signal Delay: 16.1 Intersection LOS: B
Intersection Capacity Utilization 58.8% ICU Level of Service B
Analysis Period (min) 15

Splits and Phases: 13: Otay Mesa Road & Enrico Fermi Dr

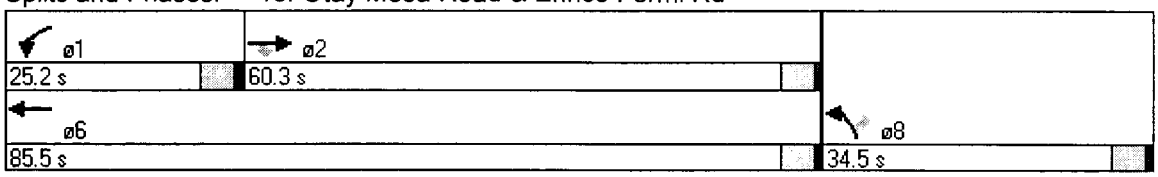


Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Total Lost Time (s)	4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	0.95	1.00	1.00	0.95	0.97	1.00
Frt		0.850				0.850
Flt Protected			0.950		0.950	
Satd. Flow (prot)	3539	1583	1770	3539	3433	1583
Flt Permitted			0.950		0.950	
Satd. Flow (perm)	3539	1583	1770	3539	3433	1583
Satd. Flow (RTOR)		364				26
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Volume (vph)	528	335	144	1500	863	26
Adj. Flow (vph)	574	364	157	1630	938	28
Lane Group Flow (vph)	574	364	157	1630	938	28
Turn Type		Perm	Prot			Perm
Protected Phases	2		1	6	8	
Permitted Phases		2				8
Total Split (s)	60.3	60.3	25.2	85.5	34.5	34.5
Act Effct Green (s)	30.1	30.1	13.1	47.2	31.0	31.0
Actuated g/C Ratio	0.35	0.35	0.15	0.55	0.36	0.36
v/c Ratio	0.47	0.46	0.59	0.84	0.76	0.05
Control Delay	23.2	4.3	44.8	20.6	31.7	10.5
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	23.2	4.3	44.8	20.6	31.7	10.5
LOS	C	A	D	C	C	B
Approach Delay	15.9			22.8	31.1	
Approach LOS	B			C	C	

Intersection Summary

Cycle Length: 120
Actuated Cycle Length: 86.4
Control Type: Actuated-Uncoordinated
Maximum v/c Ratio: 0.84
Intersection Signal Delay: 23.2 — Intersection LOS: C
Intersection Capacity Utilization 72.8% — ICU Level of Service C
Analysis Period (min) 15

Splits and Phases: 13: Otay Mesa Road & Enrico Fermi Rd

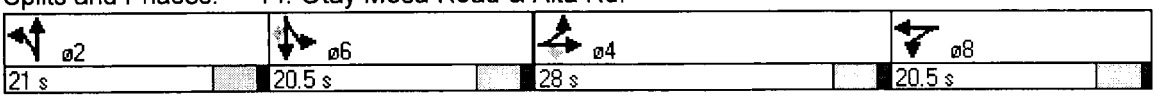


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Total Lost Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	0.97	1.00	1.00	0.95	0.95	0.95	0.97	1.00	1.00	1.00	0.95	0.95
Frt			0.850								0.856	0.850
Flt Protected	0.950						0.950					
Satd. Flow (prot)	3433	1863	1583	0	3539	0	3433	1863	0	0	1515	1504
Flt Permitted	0.950						0.950					
Satd. Flow (perm)	3433	1863	1583	0	3539	0	3433	1863	0	0	1515	1504
Satd. Flow (RTOR)			735								91	92
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Volume (vph)	652	423	676	0	144	0	196	1	0	0	4	168
Adj. Flow (vph)	709	460	735	0	157	0	213	1	0	0	4	183
Lane Group Flow (vph)	709	460	735	0	157	0	213	1	0	0	95	92
Turn Type	Split		Perm	Split			Split			Split		Perm
Protected Phases	4	4		8	8		2	2		6	6	
Permitted Phases			4									6
Total Split (s)	28.0	28.0	28.0	20.5	20.5	0.0	21.0	21.0	0.0	20.5	20.5	20.5
Act Effct Green (s)	34.1	34.1	34.1		9.7		22.8	22.8			7.4	7.4
Actuated g/C Ratio	0.38	0.38	0.38		0.11		0.25	0.25			0.08	0.08
v/c Ratio	0.55	0.65	0.70		0.41		0.24	0.00			0.46	0.44
Control Delay	23.6	28.0	5.7		40.4		29.6	29.0			16.7	15.5
Queue Delay	0.0	0.0	0.0		0.0		0.0	0.0			0.0	0.0
Total Delay	23.6	28.0	5.7		40.4		29.6	29.0			16.7	15.5
LOS	C	C	A		D		C	C			B	B
Approach Delay		17.7			40.4			29.6			16.1	
Approach LOS		B			D			C			B	

Intersection Summary

Cycle Length: 90
Actuated Cycle Length: 90
Offset: 0 (0%), Referenced to phase 2:NBTL, Start of Green
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 0.70
Intersection Signal Delay: 20.1 — Intersection LOS: C
Intersection Capacity Utilization 59.5% — ICU Level of Service B
Analysis Period (min) 15

Splits and Phases: 14: Otay Mesa Road & Alta Rd.

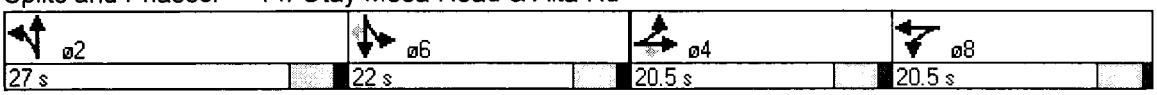


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Total Lost Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	0.97	1.00	1.00	0.95	0.95	0.95	0.97	1.00	1.00	1.00	0.95	0.95
Frt			0.850								0.850	0.850
Flt Protected	0.950						0.950					
Satd. Flow (prot)	3433	1863	1583	0	3539	0	3433	1863	0	0	1504	1504
Flt Permitted	0.950						0.950					
Satd. Flow (perm)	3433	1863	1583	0	3539	0	3433	1863	0	0	1504	1504
Satd. Flow (RTOR)			302								343	343
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Volume (vph)	101	204	272	0	392	0	651	0	0	0	1	726
Adj. Flow (vph)	112	227	302	0	436	0	723	0	0	0	1	807
Lane Group Flow (vph)	112	227	302	0	436	0	723	0	0	0	404	404
Turn Type	Split		Perm	Split			Split			Split		Perm
Protected Phases	4	4		8	8		2	2		6	6	
Permitted Phases			4									6
Total Split (s)	20.5	20.5	20.5	20.5	20.5	0.0	27.0	27.0	0.0	22.0	22.0	22.0
Act Effct Green (s)	15.1	15.1	15.1		15.4		31.6				11.9	11.9
Actuated g/C Ratio	0.17	0.17	0.17		0.17		0.35				0.13	0.13
v/c Ratio	0.19	0.73	0.58		0.72		0.60				0.81	0.81
Control Delay	32.3	49.3	9.1		42.5		29.0				20.8	20.8
Queue Delay	0.0	0.0	0.0		0.0		0.0				0.0	0.0
Total Delay	32.3	49.3	9.1		42.5		29.0				20.8	20.8
LOS	C	D	A		D		C				C	C
Approach Delay		27.4			42.5						20.8	
Approach LOS		C			D						C	

Intersection Summary

Cycle Length: 90
Actuated Cycle Length: 90
Offset: 0 (0%), Referenced to phase 2:NBTL, Start of Green
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 0.81
Intersection Signal Delay: 28.3 Intersection LOS: C
Intersection Capacity Utilization 69.4% ICU Level of Service C
Analysis Period (min) 15

Splits and Phases: 14: Otay Mesa Road & Alta Rd



APPENDIX O

- Cumulative + Project – Recommended Mitigation

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Sign Control		Free	Free		Stop	
Grade		0%	0%		0%	
Volume (veh/h)	40	730	350	50	20	20
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	43	793	380	54	22	22
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type					TWLTL	
Median storage veh)					0	
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume	435				891	217
vC1, stage 1 conf vol					408	
vC2, stage 2 conf vol					484	
vCu, unblocked vol	435				891	217
tC, single (s)	4.1				6.8	6.9
tC, 2 stage (s)					5.8	
tF (s)	2.2				3.5	3.3
p0 queue free %	96				93	97
cM capacity (veh/h)	1121				295	787

Direction, Lane #	EB 1	EB 2	EB 3	WB 1	WB 2	SB 1
Volume Total	43	397	397	254	181	43
Volume Left	43	0	0	0	0	22
Volume Right	0	0	0	0	54	22
cSH	1121	1700	1700	1700	1700	429
Volume to Capacity	0.04	0.23	0.23	0.15	0.11	0.10
Queue Length 95th (ft)	3	0	0	0	0	8
Control Delay (s)	8.3	0.0	0.0	0.0	0.0	14.3
Lane LOS	A					B
Approach Delay (s)	0.4			0.0		14.3
Approach LOS						B

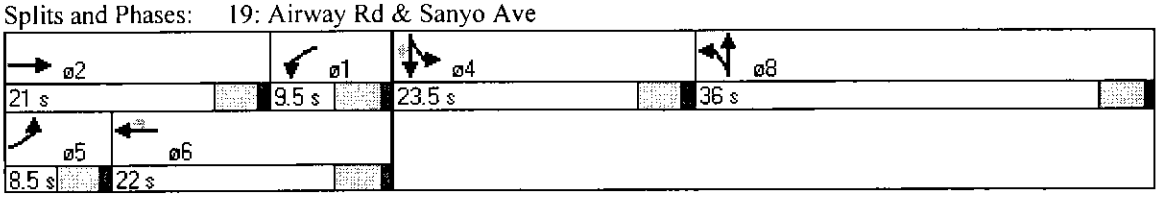
Intersection Summary			
Average Delay	0.7		
Intersection Capacity Utilization	30.2%	ICU Level of Service	A
Analysis Period (min)	15		

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Total Lost Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	1.00	0.95	0.95	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.947				0.850		0.982				0.850
Flt Protected	0.950			0.950			0.950				0.965	
Satd. Flow (prot)	1770	3352	0	1770	1863	1583	1770	1829	0	0	1798	1583
Flt Permitted	0.950			0.950			0.950				0.965	
Satd. Flow (perm)	1770	3352	0	1770	1863	1583	1770	1829	0	0	1798	1583
Satd. Flow (RTOR)		57				518		8				138
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Volume (vph)	20	90	50	10	230	570	70	450	60	230	90	120
Adj. Flow (vph)	23	103	57	11	264	655	80	517	69	264	103	138
Lane Group Flow (vph)	23	160	0	11	264	655	80	586	0	0	367	138
Turn Type	Prot			Prot		Perm	Split			Split		Perm
Protected Phases	5	2		1	6		8	8		4	4	
Permitted Phases						6						4
Total Split (s)	8.5	21.0	0.0	9.5	22.0	22.0	36.0	36.0	0.0	23.5	23.5	23.5
Act Effct Green (s)	4.8	25.8		5.5	24.3	24.3	30.8	30.8			19.5	19.5
Actuated g/C Ratio	0.05	0.29		0.06	0.27	0.27	0.34	0.34			0.22	0.22
v/c Ratio	0.24	0.16		0.10	0.52	0.81	0.13	0.93			0.94	0.31
Control Delay	47.6	17.4		25.1	19.0	16.7	20.5	51.3			69.6	7.4
Queue Delay	0.0	0.0		0.0	0.0	0.0	0.0	0.0			0.0	0.0
Total Delay	47.6	17.4		25.1	19.0	16.7	20.5	51.3			69.6	7.4
LOS	D	B		C	B	B	C	D			E	A
Approach Delay		21.2			17.5			47.6			52.6	
Approach LOS		C			B			D			D	

Intersection Summary

Cycle Length: 90
Actuated Cycle Length: 90
Offset: 59 (66%), Referenced to phase 2:EBT and 6:WBT, Start of Green
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 0.94
Intersection Signal Delay: 34.3 — Intersection LOS: C
Intersection Capacity Utilization 76.0% — ICU Level of Service D
Analysis Period (min) 15

Splits and Phases: 19: Airway Rd & Sanyo Ave



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Sign Control		Free	Free		Stop	
Grade		0%	0%		0%	
Volume (veh/h)	20	450	1010	30	50	40
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	22	489	1098	33	54	43
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type					TWLTL	
Median storage veh)					0	
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume	1130				1402	565
vC1, stage 1 conf vol					1114	
vC2, stage 2 conf vol					288	
vCu, unblocked vol	1130				1402	565
tC, single (s)	4.1				6.8	6.9
tC, 2 stage (s)					5.8	
tF (s)	2.2				3.5	3.3
p0 queue free %	96				67	91
cM capacity (veh/h)	614				167	468

Direction, Lane #	EB 1	EB 2	EB 3	WB 1	WB 2	SB 1
Volume Total	22	245	245	732	399	98
Volume Left	22	0	0	0	0	54
Volume Right	0	0	0	0	33	43
cSH	614	1700	1700	1700	1700	233
Volume to Capacity	0.04	0.14	0.14	0.43	0.23	0.42
Queue Length 95th (ft)	3	0	0	0	0	49
Control Delay (s)	11.1	0.0	0.0	0.0	0.0	31.1
Lane LOS	B					D
Approach Delay (s)	0.5			0.0		31.1
Approach LOS						D

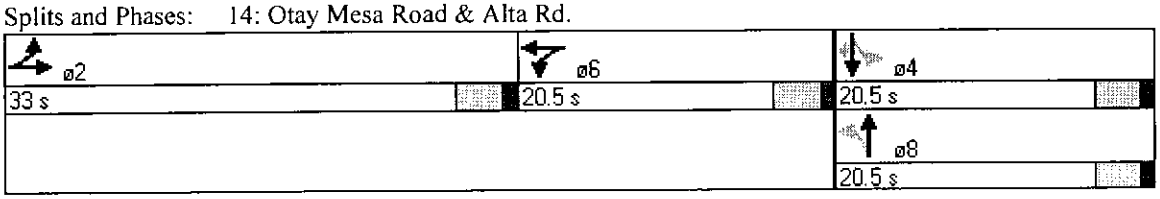
Intersection Summary			
Average Delay	1.9		
Intersection Capacity Utilization	40.8%	ICU Level of Service	A
Analysis Period (min)	15		

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Total Lost Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.913			0.973			0.971				0.850
Flt Protected	0.950				0.990			0.972			0.976	
Satd. Flow (prot)	1770	1701	0	0	1794	0	0	1758	0	0	1818	1583
Flt Permitted	0.950				0.990			0.800			0.847	
Satd. Flow (perm)	1770	1701	0	0	1794	0	0	1447	0	0	1578	1583
Satd. Flow (RTOR)		110			16			17				432
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Volume (vph)	600	80	110	30	90	30	80	30	30	30	30	410
Adj. Flow (vph)	632	84	116	32	95	32	84	32	32	32	32	432
Lane Group Flow (vph)	632	200	0	0	159	0	0	148	0	0	64	432
Turn Type	Split			Split			Perm			Perm		Perm
Protected Phases	2	2		6	6			8			4	
Permitted Phases							8			4		4
Total Split (s)	33.0	33.0	0.0	20.5	20.5	0.0	20.5	20.5	0.0	20.5	20.5	20.5
Act Effct Green (s)	39.3	39.3			10.8			11.9			11.9	11.9
Actuated g/C Ratio	0.53	0.53			0.15			0.16			0.16	0.16
v/c Ratio	0.67	0.21			0.58			0.60			0.25	0.70
Control Delay	10.0	1.1			34.0			34.9			27.9	9.6
Queue Delay	0.0	0.0			0.0			0.0			0.0	0.0
Total Delay	10.0	1.1			34.0			34.9			27.9	9.6
LOS	B	A			C			C			C	A
Approach Delay		7.9			34.0			34.9			12.0	
Approach LOS		A			C			C			B	

Intersection Summary

Cycle Length: 74
Actuated Cycle Length: 74
Offset: 50 (68%), Referenced to phase 2:EBTL, Start of Green
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 0.70
Intersection Signal Delay: 14.1 — Intersection LOS: B
Intersection Capacity Utilization 61.1% — ICU Level of Service B
Analysis Period (min) 15

Splits and Phases: 14: Otay Mesa Road & Alta Rd.

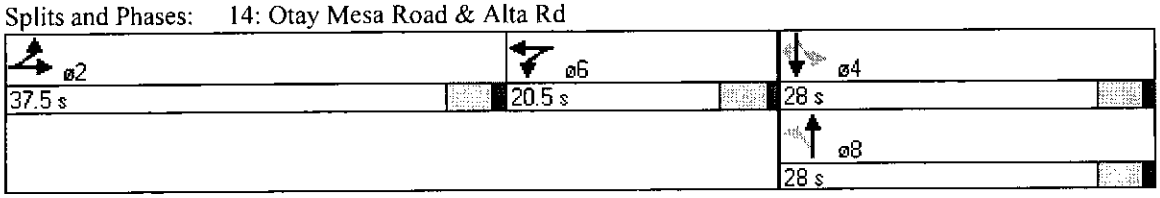


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Total Lost Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.904			0.976			0.984				0.850
Flt Protected	0.950				0.991			0.964			0.976	
Satd. Flow (prot)	1770	1684	0	0	1802	0	0	1767	0	0	1818	1583
Flt Permitted	0.950				0.991			0.736			0.826	
Satd. Flow (perm)	1770	1684	0	0	1802	0	0	1349	0	0	1539	1583
Satd. Flow (RTOR)		95			11			8				758
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Volume (vph)	520	50	90	30	110	30	190	30	30	30	30	720
Adj. Flow (vph)	547	53	95	32	116	32	200	32	32	32	32	758
Lane Group Flow (vph)	547	148	0	0	180	0	0	264	0	0	64	758
Turn Type	Split			Split			Perm			Perm		Perm
Protected Phases	2	2		6	6			8			4	
Permitted Phases							8			4		4
Total Split (s)	37.5	37.5	0.0	20.5	20.5	0.0	28.0	28.0	0.0	28.0	28.0	28.0
Act Effct Green (s)	40.5	40.5			13.1			20.4			20.4	20.4
Actuated g/C Ratio	0.47	0.47			0.15			0.24			0.24	0.24
v/c Ratio	0.66	0.18			0.63			0.81			0.18	0.79
Control Delay	26.0	11.5			42.1			49.2			25.6	9.3
Queue Delay	0.0	0.0			0.0			0.0			0.0	0.0
Total Delay	26.0	11.5			42.1			49.2			25.6	9.3
LOS	C	B			D			D			C	A
Approach Delay		22.9			42.1			49.2			10.5	
Approach LOS		C			D			D			B	

Intersection Summary

Cycle Length: 86
Actuated Cycle Length: 86
Offset: 71 (83%), Referenced to phase 2:EBTL, Start of Green
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 0.81
Intersection Signal Delay: 23.0 — Intersection LOS: C
Intersection Capacity Utilization 77.8% — ICU Level of Service D
Analysis Period (min) 15

Splits and Phases: 14: Otay Mesa Road & Alta Rd

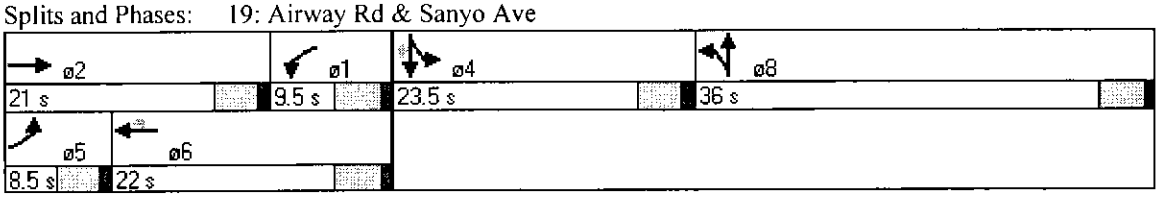


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Total Lost Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	1.00	0.95	0.95	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.947				0.850		0.982				0.850
Flt Protected	0.950			0.950			0.950				0.965	
Satd. Flow (prot)	1770	3352	0	1770	1863	1583	1770	1829	0	0	1798	1583
Flt Permitted	0.950			0.950			0.950				0.965	
Satd. Flow (perm)	1770	3352	0	1770	1863	1583	1770	1829	0	0	1798	1583
Satd. Flow (RTOR)		57				518		8				138
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Volume (vph)	20	90	50	10	230	570	70	450	60	230	90	120
Adj. Flow (vph)	23	103	57	11	264	655	80	517	69	264	103	138
Lane Group Flow (vph)	23	160	0	11	264	655	80	586	0	0	367	138
Turn Type	Prot			Prot		Perm	Split			Split		Perm
Protected Phases	5	2		1	6		8	8		4	4	
Permitted Phases						6						4
Total Split (s)	8.5	21.0	0.0	9.5	22.0	22.0	36.0	36.0	0.0	23.5	23.5	23.5
Act Effct Green (s)	4.8	25.8		5.5	24.3	24.3	30.8	30.8			19.5	19.5
Actuated g/C Ratio	0.05	0.29		0.06	0.27	0.27	0.34	0.34			0.22	0.22
v/c Ratio	0.24	0.16		0.10	0.52	0.81	0.13	0.93			0.94	0.31
Control Delay	47.6	17.4		25.1	19.0	16.7	20.5	51.3			69.6	7.4
Queue Delay	0.0	0.0		0.0	0.0	0.0	0.0	0.0			0.0	0.0
Total Delay	47.6	17.4		25.1	19.0	16.7	20.5	51.3			69.6	7.4
LOS	D	B		C	B	B	C	D			E	A
Approach Delay		21.2			17.5			47.6			52.6	
Approach LOS		C			B			D			D	

Intersection Summary

Cycle Length: 90
Actuated Cycle Length: 90
Offset: 59 (66%), Referenced to phase 2:EBT and 6:WBT, Start of Green
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 0.94
Intersection Signal Delay: 34.3 — Intersection LOS: C
Intersection Capacity Utilization 76.0% — ICU Level of Service D
Analysis Period (min) 15

Splits and Phases: 19: Airway Rd & Sanyo Ave

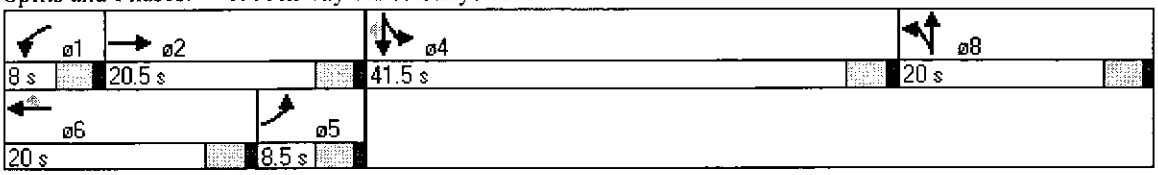


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Total Lost Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	1.00	0.95	0.95	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.934				0.850		0.920				0.850
Flt Protected	0.950			0.950			0.950				0.982	
Satd. Flow (prot)	1770	3306	0	1770	1863	1583	1770	1714	0	0	1829	1583
Flt Permitted	0.950			0.950			0.950				0.982	
Satd. Flow (perm)	1770	3306	0	1770	1863	1583	1770	1714	0	0	1829	1583
Satd. Flow (RTOR)		86				548		56				43
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Volume (vph)	50	100	80	10	200	510	30	60	70	250	450	40
Adj. Flow (vph)	54	108	86	11	215	548	32	65	75	269	484	43
Lane Group Flow (vph)	54	194	0	11	215	548	32	140	0	0	753	43
Turn Type	Prot			Prot		Perm	Split			Split		Perm
Protected Phases	5	2		1	6		8	8		4	4	
Permitted Phases						6						4
Total Split (s)	8.5	20.5	0.0	8.0	20.0	20.0	20.0	20.0	0.0	41.5	41.5	41.5
Act Effct Green (s)	4.5	28.8		5.8	23.8	23.8	9.9	9.9			37.5	37.5
Actuated g/C Ratio	0.05	0.32		0.06	0.26	0.26	0.11	0.11			0.42	0.42
v/c Ratio	0.61	0.17		0.10	0.44	0.67	0.16	0.59			0.99	0.06
Control Delay	71.0	14.6		43.0	25.5	6.9	36.3	32.7			57.6	5.4
Queue Delay	0.0	0.0		0.0	0.0	0.0	0.0	0.0			0.0	0.0
Total Delay	71.0	14.6		43.0	25.5	6.9	36.3	32.7			57.6	5.4
LOS	E	B		D	C	A	D	C			E	A
Approach Delay		26.9			12.6			33.4			54.8	
Approach LOS		C			B			C			D	

Intersection Summary

Cycle Length: 90
Actuated Cycle Length: 90
Offset: 63 (70%), Referenced to phase 2:EBT and 6:WBT, Start of Green
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 0.99
Intersection Signal Delay: 33.1 Intersection LOS: C
Intersection Capacity Utilization 72.1% ICU Level of Service C
Analysis Period (min) 15

Splits and Phases: 19: Airway Rd & Sanyo Ave

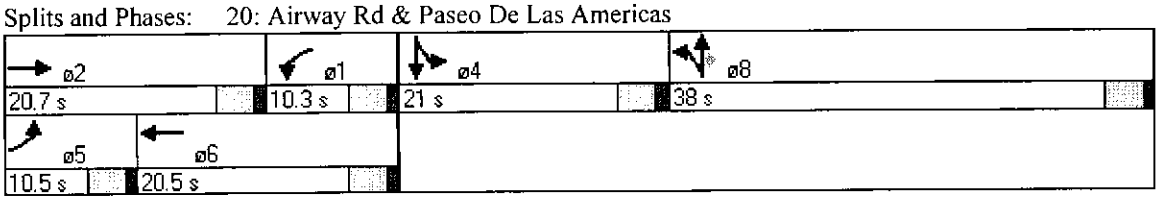


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Total Lost Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	1.00	0.95	0.95	1.00	0.95	0.95	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.916			0.994				0.850		0.942	
Flt Protected	0.950			0.950				0.957			0.996	
Satd. Flow (prot)	1770	3242	0	1770	3518	0	0	1783	1583	0	1748	0
Flt Permitted	0.950			0.950				0.957			0.996	
Satd. Flow (perm)	1770	3242	0	1770	3518	0	0	1783	1583	0	1748	0
Satd. Flow (RTOR)		211			4				222		37	
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Volume (vph)	60	150	190	10	230	10	570	60	200	10	70	60
Adj. Flow (vph)	67	167	211	11	256	11	633	67	222	11	78	67
Lane Group Flow (vph)	67	378	0	11	267	0	0	700	222	0	156	0
Turn Type	Prot			Prot			Split		Perm	Split		
Protected Phases	5	2		1	6		8	8		4	4	
Permitted Phases									8			
Total Split (s)	10.5	20.7	0.0	10.3	20.5	0.0	38.0	38.0	38.0	21.0	21.0	0.0
Act Effct Green (s)	6.3	24.9		5.8	18.6			39.7	39.7		11.3	
Actuated g/C Ratio	0.07	0.28		0.06	0.21			0.44	0.44		0.13	
v/c Ratio	0.54	0.36		0.10	0.37			0.89	0.27		0.62	
Control Delay	48.6	7.0		41.3	32.9			40.3	3.6		38.3	
Queue Delay	0.0	0.0		0.0	0.0			0.0	0.0		0.0	
Total Delay	48.6	7.0		41.3	32.9			40.3	3.6		38.3	
LOS	D	A		D	C			D	A		D	
Approach Delay		13.3			33.2			31.4			38.3	
Approach LOS		B			C			C			D	

Intersection Summary

Cycle Length: 90
Actuated Cycle Length: 90
Offset: 58 (64%), Referenced to phase 2:EBT and 6:WBT, Start of Green
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 0.89
Intersection Signal Delay: 27.8 — Intersection LOS: C
Intersection Capacity Utilization 69.6% — ICU Level of Service C
Analysis Period (min) 15

Splits and Phases: 20: Airway Rd & Paseo De Las Americas

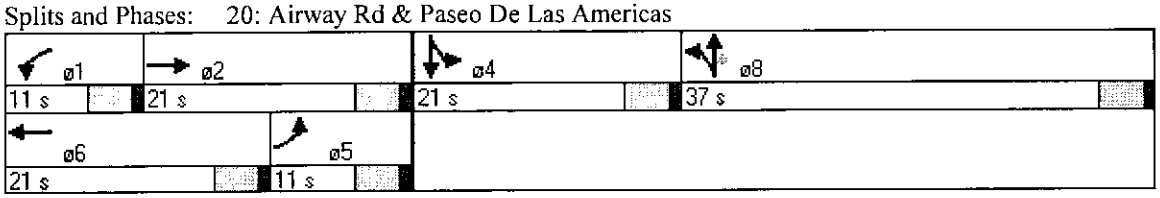


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Total Lost Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	1.00	0.95	0.95	1.00	0.95	0.95	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.888			0.991				0.850		0.942	
Flt Protected	0.950			0.950				0.957			0.997	
Satd. Flow (prot)	1770	3143	0	1770	3507	0	0	1783	1583	0	1749	0
Flt Permitted	0.950			0.950				0.957			0.997	
Satd. Flow (perm)	1770	3143	0	1770	3507	0	0	1783	1583	0	1749	0
Satd. Flow (RTOR)		276			7				235		37	
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Volume (vph)	70	80	240	50	300	20	580	70	220	10	70	60
Adj. Flow (vph)	80	92	276	57	345	23	667	80	253	11	80	69
Lane Group Flow (vph)	80	368	0	57	368	0	0	747	253	0	160	0
Turn Type	Prot			Prot			Split		Perm	Split		
Protected Phases	5	2		1	6		8	8		4	4	
Permitted Phases									8			
Total Split (s)	11.0	21.0	0.0	11.0	21.0	0.0	37.0	37.0	37.0	21.0	21.0	0.0
Act Effct Green (s)	6.9	19.2		6.8	19.2			38.0	38.0		12.0	
Actuated g/C Ratio	0.08	0.21		0.08	0.21			0.42	0.42		0.13	
v/c Ratio	0.59	0.41		0.43	0.49			0.99	0.31		0.60	
Control Delay	45.1	7.0		43.7	27.2			41.7	6.1		37.1	
Queue Delay	0.0	0.0		0.0	0.0			0.0	0.0		0.0	
Total Delay	45.1	7.0		43.7	27.2			41.7	6.1		37.1	
LOS	D	A		D	C			D	A		D	
Approach Delay		13.8			29.4			32.7			37.1	
Approach LOS		B			C			C			D	

Intersection Summary

Cycle Length: 90
Actuated Cycle Length: 90
Offset: 42 (47%), Referenced to phase 2:EBT and 6:WBT, Start of Green
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 0.99
Intersection Signal Delay: 28.2 — Intersection LOS: C
Intersection Capacity Utilization 70.3% — ICU Level of Service C
Analysis Period (min) 15

Splits and Phases: 20: Airway Rd & Paseo De Las Americas

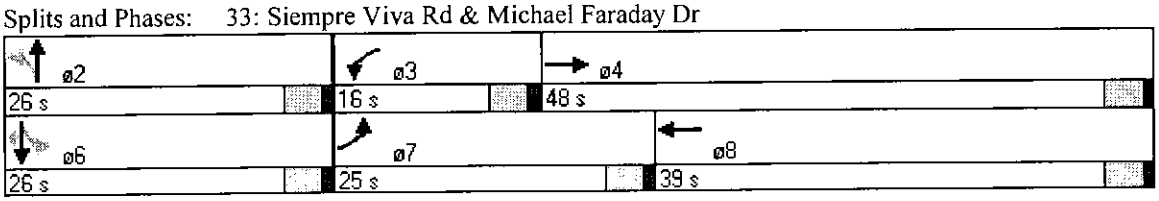


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Total Lost Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	1.00	0.95	0.95	1.00	0.95	0.95	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.981			0.998			0.948				0.850
Flt Protected	0.950			0.950				0.985			0.976	
Satd. Flow (prot)	1770	3472	0	1770	3532	0	0	1739	0	0	1818	1583
Flt Permitted	0.950			0.950				0.910			0.878	
Satd. Flow (perm)	1770	3472	0	1770	3532	0	0	1607	0	0	1635	1583
Satd. Flow (RTOR)		24			2			33				83
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Volume (vph)	140	710	100	40	700	10	40	40	50	10	10	70
Adj. Flow (vph)	167	845	119	48	833	12	48	48	60	12	12	83
Lane Group Flow (vph)	167	964	0	48	845	0	0	156	0	0	24	83
Turn Type	Prot			Prot			Perm			Perm		Perm
Protected Phases	7	4		3	8			2			6	
Permitted Phases							2			6		6
Total Split (s)	25.0	48.0	0.0	16.0	39.0	0.0	26.0	26.0	0.0	26.0	26.0	26.0
Act Effct Green (s)	13.3	36.3		7.8	26.8			37.8			37.8	37.8
Actuated g/C Ratio	0.15	0.40		0.09	0.30			0.42			0.42	0.42
v/c Ratio	0.64	0.68		0.31	0.80			0.22			0.03	0.12
Control Delay	46.6	24.1		43.3	35.0			16.9			18.4	4.5
Queue Delay	0.0	0.0		0.0	0.0			0.0			0.0	0.0
Total Delay	46.6	24.1		43.3	35.0			16.9			18.4	4.5
LOS	D	C		D	C			B			B	A
Approach Delay		27.4			35.4			16.9			7.6	
Approach LOS		C			D			B			A	

Intersection Summary

Cycle Length: 90
Actuated Cycle Length: 90
Offset: 7 (8%), Referenced to phase 2:NBTL and 6:SBTL, Start of Green
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 0.80
Intersection Signal Delay: 28.9 — Intersection LOS: C
Intersection Capacity Utilization 51.5% — ICU Level of Service A
Analysis Period (min) 15

Splits and Phases: 33: Siempre Viva Rd & Michael Faraday Dr

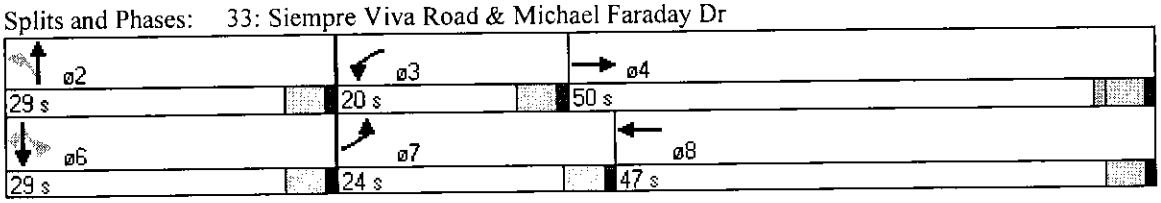


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Total Lost Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	1.00	0.95	0.95	1.00	0.95	0.95	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.991			0.996			0.990				0.850
Flt Protected	0.950			0.950				0.967			0.990	
Satd. Flow (prot)	1770	3507	0	1770	3525	0	0	1783	0	0	1844	1583
Flt Permitted	0.950			0.950				0.767			0.945	
Satd. Flow (perm)	1770	3507	0	1770	3525	0	0	1414	0	0	1760	1583
Satd. Flow (RTOR)		9			3			4				143
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Volume (vph)	100	480	30	40	780	20	90	30	10	10	40	130
Adj. Flow (vph)	110	527	33	44	857	22	99	33	11	11	44	143
Lane Group Flow (vph)	110	560	0	44	879	0	0	143	0	0	55	143
Turn Type	Prot			Prot			Perm			Perm		Perm
Protected Phases	7	4		3	8			2			6	
Permitted Phases							2			6		6
Total Split (s)	24.0	50.0	0.0	20.0	47.0	0.0	29.0	29.0	0.0	29.0	29.0	29.0
Act Effct Green (s)	11.6	35.5		8.3	30.2			48.3			48.3	48.3
Actuated g/C Ratio	0.12	0.36		0.08	0.30			0.48			0.48	0.48
v/c Ratio	0.53	0.45		0.30	0.82			0.21			0.06	0.17
Control Delay	50.4	24.9		47.7	39.0			19.2			19.0	4.4
Queue Delay	0.0	0.0		0.0	0.0			0.0			0.0	0.0
Total Delay	50.4	24.9		47.7	39.0			19.2			19.0	4.4
LOS	D	C		D	D			B			B	A
Approach Delay		29.1			39.4			19.2			8.4	
Approach LOS		C			D			B			A	

Intersection Summary

Cycle Length: 100
Actuated Cycle Length: 100
Offset: 0 (0%), Referenced to phase 2:NBTL and 6:SBTL, Start of Green
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 0.82
Intersection Signal Delay: 31.2 — Intersection LOS: C
Intersection Capacity Utilization 51.6% — ICU Level of Service A
Analysis Period (min) 15

Splits and Phases: 33: Siempre Viva Road & Michael Faraday Dr



APPENDIX P

- Caltrans Striping Concepts for Otay Mesa btwn Piper Ranch Rod &Harvest Rd
  - Proposed Sunroad Improvements for Otay Mesa btwn Harvest Rd & Vann Centre Blvd
  - Caltrans Striping Concepts for Airway Rd btwn Harvest Rd & Sanyo Ave
- Fair-Share Memo for Otay Crossings Mitigation at Otay Mesa Rd/Harvest Rd
- Caltrans Striping Concept for La Media Rd btwn Otay Mesa Rd &Airway Rd
  - Conceptual Striping Concept for Airway Rd btwn SR-905 & Sanyo Ave

Caltrans Striping Concepts for Otay Mesa Rd btwn. Piper Ranch Rd & Harvest Rd

DIST	COUNTY	ROUTE	KILOMETER POST TOTAL PROJECT	SHEET No.	TOTAL SHEETS
11	SD	125	2.7/8.2		

Ronald R Fromknecht 08SEP06
REGISTERED CIVIL ENGINEER DATE

Ronald R. Fromknecht No. 45704 Exp. 12-31-06 CIVIL — REGISTERED PROFESSIONAL ENGINEER — STATE OF CALIFORNIA

PLANS APPROVAL DATE

California Transportation Ventures, Inc.
680 Kuhn Drive
Chula Vista, CA 91914

FPL and Associates, Inc.
10 Corporate Park, Suite 310
Irvine, CA 92606

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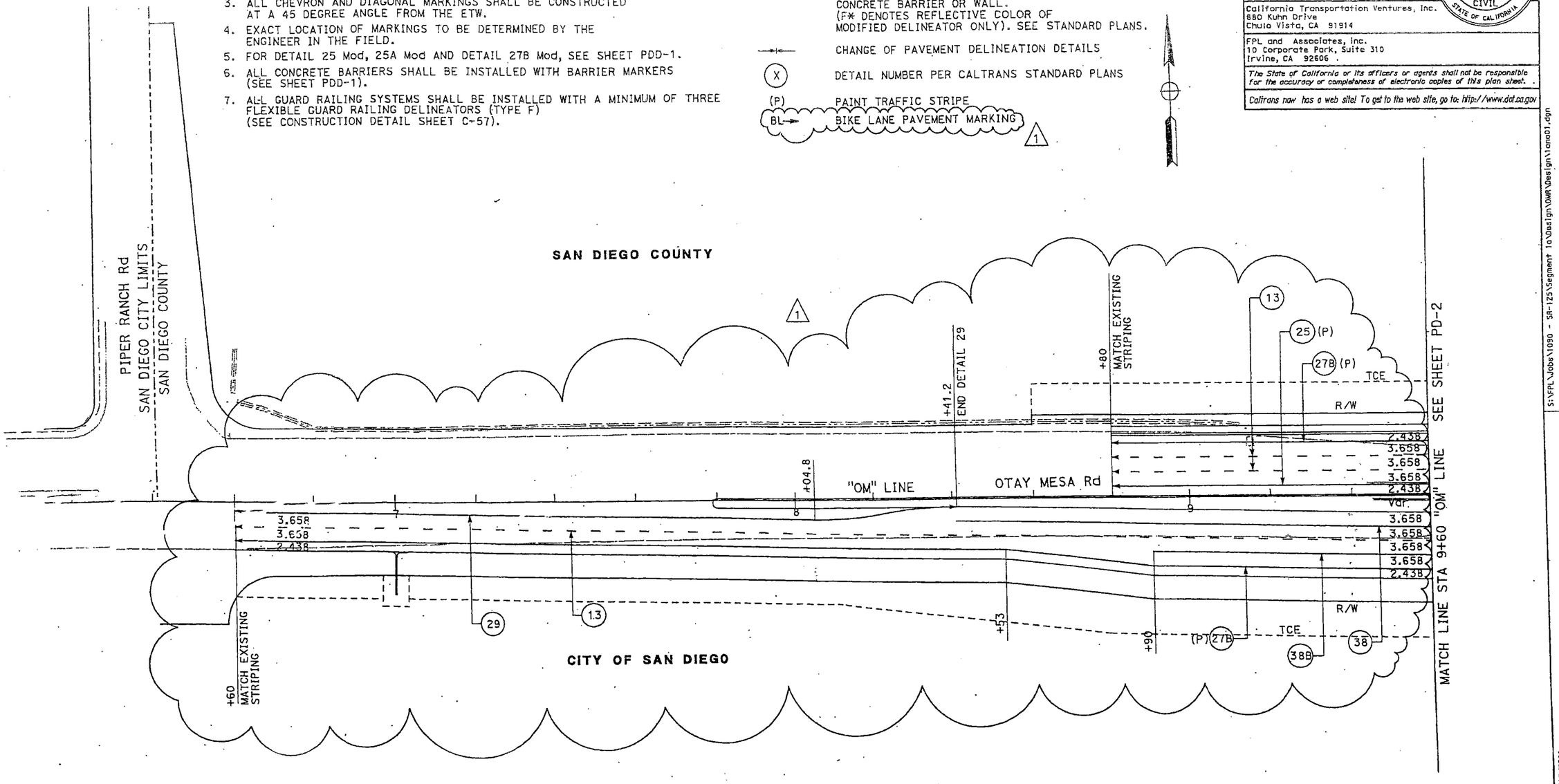
Caltrans Metric

NOTES:

1. ALL STRIPING AND PAVEMENT MARKINGS SHALL BE THERMOPLASTIC, UNLESS OTHERWISE NOTED.
2. ALL CROSSWALKS SHALL BE 3 METERS WIDE, INSIDE WIDTH.
3. ALL CHEVRON AND DIAGONAL MARKINGS SHALL BE CONSTRUCTED AT A 45 DEGREE ANGLE FROM THE ETW.
4. EXACT LOCATION OF MARKINGS TO BE DETERMINED BY THE ENGINEER IN THE FIELD.
5. FOR DETAIL 25 Mod, 25A Mod AND DETAIL 27B Mod, SEE SHEET PDD-1.
6. ALL CONCRETE BARRIERS SHALL BE INSTALLED WITH BARRIER MARKERS (SEE SHEET PDD-1).
7. ALL GUARD RAILING SYSTEMS SHALL BE INSTALLED WITH A MINIMUM OF THREE FLEXIBLE GUARD RAILING DELINEATORS (TYPE F) (SEE CONSTRUCTION DETAIL SHEET C-57).

LEGEND:

- OBJECT MARKER, TYPE Q
- TYPE F DELINEATOR, CLASS 1
- MODIFIED DELINEATOR TO BE MOUNTED ON CONCRETE BARRIER OR WALL. (F* DENOTES REFLECTIVE COLOR OF MODIFIED DELINEATOR ONLY). SEE STANDARD PLANS.
- CHANGE OF PAVEMENT DELINEATION DETAILS
- (X) DETAIL NUMBER PER CALTRANS STANDARD PLANS
- (P) PAINT TRAFFIC STRIPE
- BL→ BIKE LANE PAVEMENT MARKING



PAVEMENT DELINEATION PLAN

SCALE 1:500

P-2

PD-1

THIS PLAN ACCURATE FOR PAVEMENT DELINEATION WORK ONLY

ALL DIMENSIONS ARE IN METERS UNLESS OTHERWISE SHOWN

FOR REDUCED PLANS ORIGINAL 0 20 40 60 80

USERNAME => Eddie Tang

SEGMENT 1A

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans
DESIGN OVERSIGHT
RAMON MARTINEZ
CALCULATED/DESIGNED BY
CHECKED BY

ISSUE RECORD		
No.	PURPOSE	DATE
0	RELEASED FOR CONSTRUCTION	09SEP05
1	RFR C-044	XXXXX06

DATE	REVISED BY
	DATE REVISED

LAST REVISION DATE PLOTTED => 9/12/2006
09-08-06 TIME PLOTTED => 10:42:48 AM

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DIST	COUNTY	ROUTE	KILOMETER POST TOTAL PROJECT	SHEET No.	TOTAL SHEETS
11	SD	125	2.7/8.2		

Ronald R Fromknecht — 08SEP06
REGISTERED CIVIL ENGINEER — DATE

Ronald R. Fromknecht, No. 45704, Exp. 12-31-06, CIVIL — Registered Professional Engineer — State of California

PLANS APPROVAL DATE

California Transportation Ventures, Inc.
880 Kuhn Drive
Chula Vista, CA 91914

FPL and Associates, Inc.
10 Corporate Park, Suite 310
Irvine, CA 92606

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	DATE	REVISED BY
CALCULATED/ DESIGNED BY		DATE REVISED
CHECKED BY		

DESIGN OVERSIGHT — RAMON MARTINEZ

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION — Caltrans

MATCH LINE STA 28+20 "A" LINE SEE SHEET PD-4

"A" LINE

ROUTE 125

"OM" LINE

R/W

SAN DIEGO COUNTY

CITY OF SAN DIEGO

OTAY MESA ROAD

SR-905

MATCH LINE STA 9+60 "OM" LINE (SEE SHEET PD-1)

MATCH LINE STA 12+50 "OM" LINE (SEE SHEET PD-3)

TYPE III (R) ARROW

TYPE III (L) ARROW

TYPE I (7.32) ARROW

300 mm SOLID WHITE STRIPE

100 mm SOLID WHITE STRIPE

TYPE F DELINEATORS AT 28 m SPACING (Typ)

BARRICADE (TYPE III)

FLEXIBLE POST DELINEATOR @ 13.7 m SPACING

MATCH EXISTING STRIPING

TCE

DIRT

ASPH

8.0'
16.0'
12.0'
12.0'
12.0'
8'

ISSUE RECORD		
No.	PURPOSE	DATE
0	RELEASED FOR CONSTRUCTION	09SEP05
1	RFR C-044	XXXXX06

THIS PLAN ACCURATE FOR PAVEMENT DELINEATION WORK ONLY

ALL DIMENSIONS ARE IN METERS UNLESS OTHERWISE SHOWN

PAVEMENT DELINEATION PLAN

SCALE 1:500

P-3

PD-2

LAST REVISION — DATE PLOTTED => 9/12/2006 — TIME PLOTTED => 10:56:26 AM — 09-08-06

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DIST	COUNTY	ROUTE	KILOMETER POST TOTAL PROJECT	SHEET No.	TOTAL SHEETS
11	SD	125	2.7/8.2		

Ronald R Fromknecht — REGISTERED CIVIL ENGINEER — DATE 08SEP06

REGISTERED PROFESSIONAL ENGINEER — Ronald R. Fromknecht — No. 45704 — Exp. 12-31-06 — CIVIL — STATE OF CALIFORNIA

PLANS APPROVAL DATE

California Transportation Ventures, Inc.
880 Kuhn Drive
Chula Vista, CA 91914

FPL and Associates, Inc.
10 Corporate Park, Suite 310
Irvine, CA 92606

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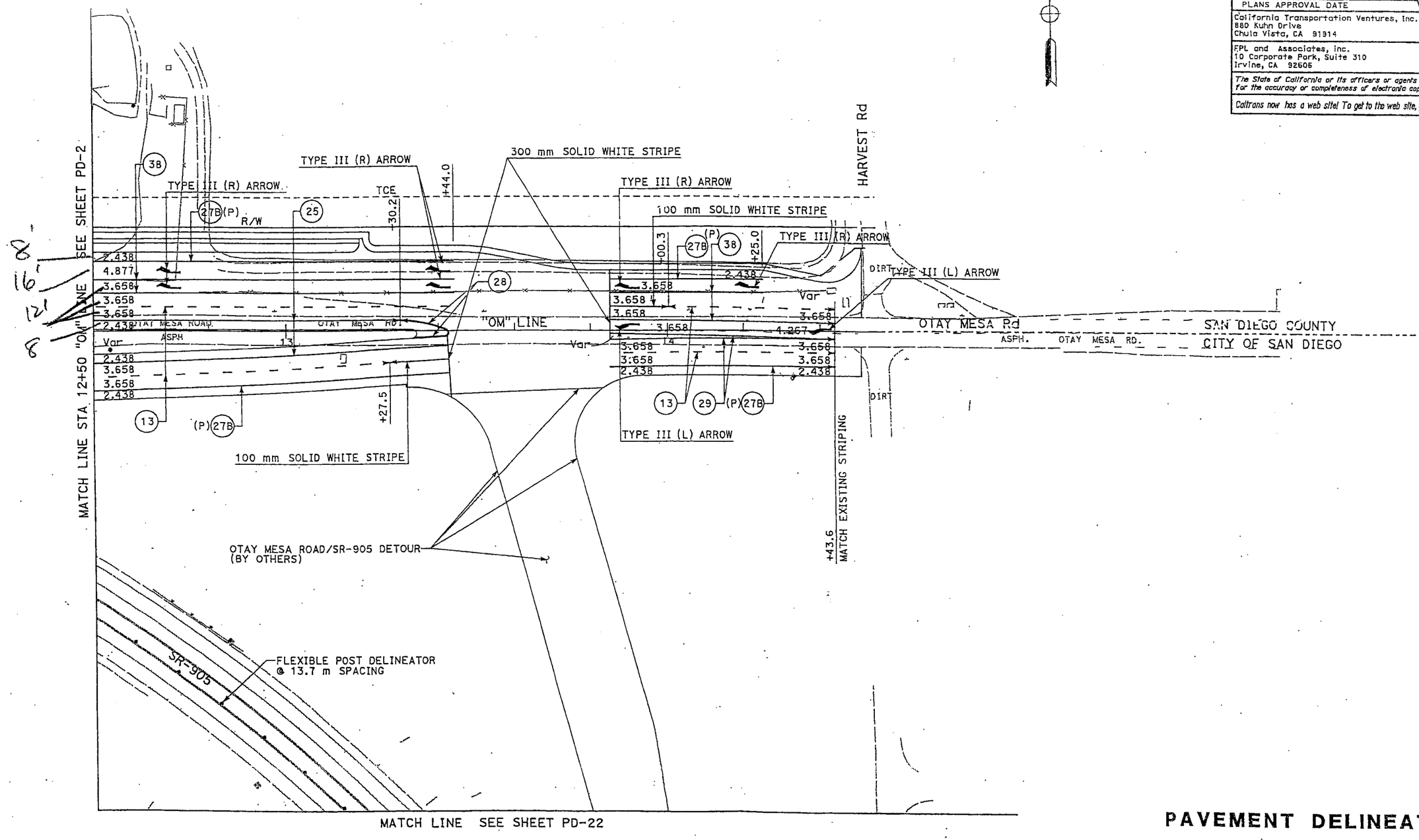

ISSUE RECORD		
No.	PURPOSE	DATE
0	RELEASED FOR CONST. (RFR C-044)	XXXXX06

THIS PLAN ACCURATE FOR PAVEMENT DELINEATION WORK ONLY

ALL DIMENSIONS ARE IN METERS UNLESS OTHERWISE SHOWN

FOR REDUCED PLANS ORIGINAL SCALE IS IN MILLIMETERS 0 20 40 60 80

USERNAME => Eddie Tang
OGN FILE => ...\tana03.dgn

CU 11274 | EA 232301

PAVEMENT DELINEATION PLAN

SCALE 1:500

P-4

PD-3

SEGMENT 1A

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION — Caltrans

DESIGN OVERSIGHT — RAMON MARTINEZ

DATE	REVISED BY	DATE REVISED

CALCULATED/DESIGNED BY

CHECKED BY

LAST REVISION — DATE PLOTTED => 9/12/2006 — TIME PLOTTED => 10:44:12 AM — 09-08-06

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Proposed Sunroad Improvements for Otay Mesa Rd btwn. Harvest Rd and Vann Centre Blvd

MATCHLINE STA. 552+50, SEE SHEET 1

EXISTING R/W

EXISTING E.P.

EXISTING AC BERM

EXISTING R/W

OTAY MESA RD

EXISTING R/W

EXISTING E.P.

MATCHLINE SEE STA. 565+50

MATCHLINE SEE STA. 565+50

EXISTING R/W

EXISTING E.P.

OTAY MESA RD

EXISTING AC BERM

EXISTING R/W

OTAY MESA RD

ENRICO FERMI DRIVE

SIGNING & STRIPING LEGEND

- (N) = INSTALL TRAFFIC STRIPE PER CALTRANS STANDARD PLAN A-20.
  REPRESENTS DETAIL NUMBER. (PER CALTRANS STD. PLAN A-20)
- (ES XX) = EXISTING SIGN SEE CALIFORNIA MUTCD
  REPRESENTS SIGN. (PER CALTRANS MUTCD)
- (S XX) = INSTALL SIGN PER CALIFORNIA MUTCD
  REPRESENTS SIGN. (PER CALTRANS MUTCD)
- (PA) = INSTALL TYPE IV (LT OR RT) ARROW PER CALTRANS STANDARD PLAN A24A.
- (PM) = PAINT STOP LEGEND AND 12" WHITE LIMIT LINE.
- (11) = INSTALL 4" WHITE SKIP LINE, PER DETAIL 11 OF CALTRANS STANDARD PLAN.
- (22) = INSTALL DOUBLE YELLOW CENTERLINE WITH PAVEMENT MARKERS PER DETAIL 22 OF CALTRANS STANDARD PLAN.
- (29) = INSTALL DOUBLE YELLOW MEDIAN WITH PAVEMENT MARKERS PER DETAIL 29 OF CALTRANS STANDARD PLAN.
- (32) = INSTALL TWO WAY LEFT TURN LANE PER DETAIL 32 OF CALTRANS STANDARD PLAN.
- (38) = INSTALL CHANNELIZING LANE WITH PAVEMENT MARKERS PER DETAIL 38 CALTRANS STANDARD PLAN.

SIGNS LEGEND

R1-1

W4-2(RT)

SCALE: 1" = 40'

0 40 80

PLANS PREPARED UNDER THE SUPERVISION OF:

BILL E. DARNELL R.C.E. No. 22338 DATE
DESIGN ENGINEER LICENSE EXPIRES 9-30-09

Darnell & ASSOCIATES, INC.
1448 FRONT STREET, THIRD FLOOR
SAN DIEGO, CA 92101
(619) 233-6373

DWG:051202CP-1A.dwg | DATE 02-08-06 BY:SN/JM/SN

COUNTY APPROVED CHANGES

No.	Description	Approved by	Date

BENCH MARK

DESCRIPTION X
LOCATION X
X
RECOS FROM X
ELEVATION X DATUM X

PRIVATE CONTRACT

SHEET 2 | COUNTY OF SAN DIEGO DEPARTMENT OF PUBLIC WORKS | 2 SHEETS

CHANNELIZATION CONCEPT

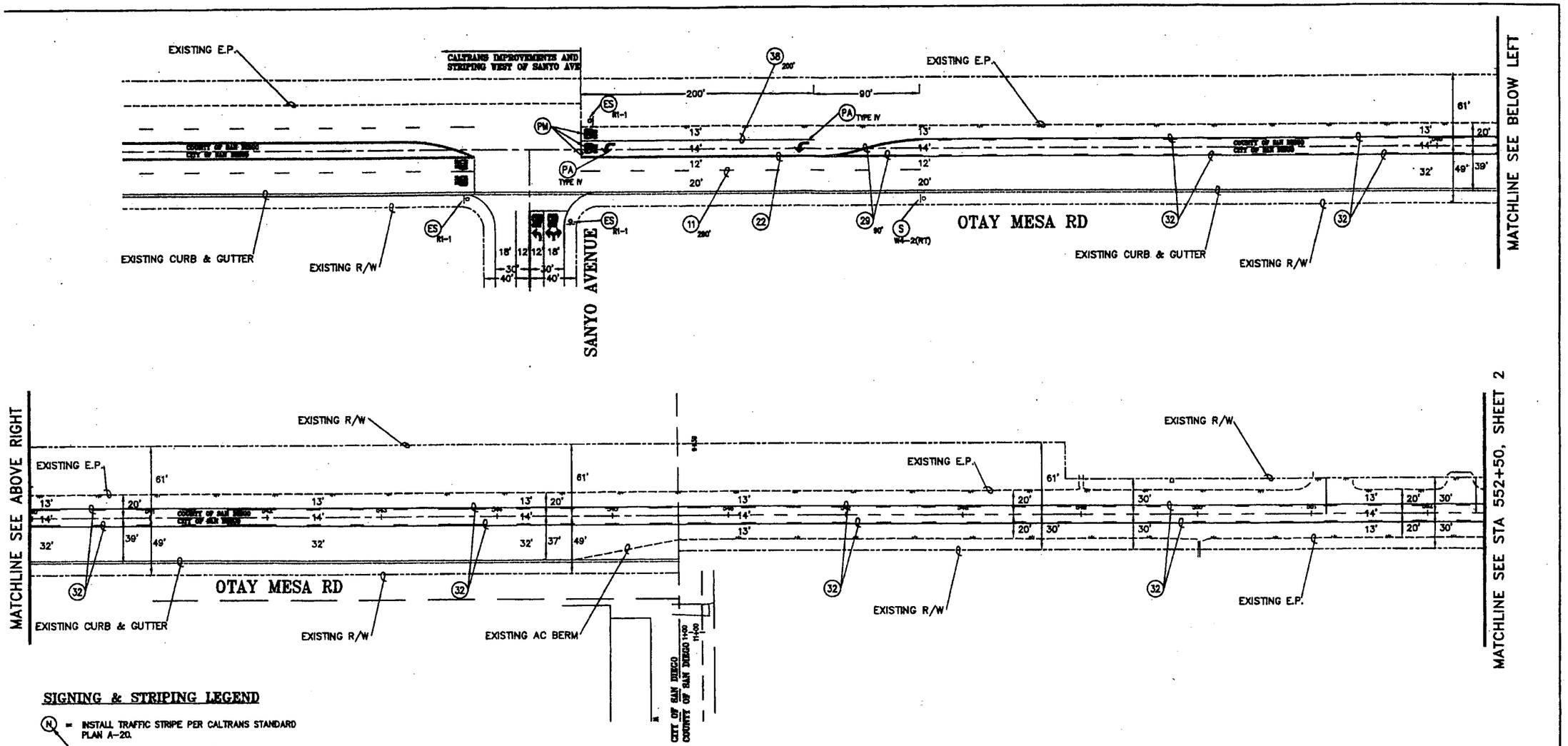
BANYO AVE TO ENRICO FERMI DRIVE

CALIFORNIA COORDINATE INDEX 208-1791

Recommended for approval | Approved FOR DIRECTOR OF PUBLIC WORKS

Engineer of work By Date R.C.E. | Checked by | Approved Date

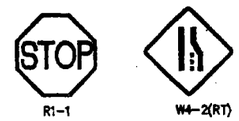
P-6



SIGNING & STRIPING LEGEND

- (N) = INSTALL TRAFFIC STRIPE PER CALTRANS STANDARD PLAN A-20. — REPRESENTS DETAIL NUMBER. (PER CALTRANS STD. PLAN A-20)
- (ES) = EXISTING SIGN SEE CALIFORNIA MUTCD — XX REPRESENTS SIGN. (PER CALTRANS MUTCD)
- (S) = INSTALL SIGN PER CALIFORNIA MUTCD — XX REPRESENTS SIGN. (PER CALTRANS MUTCD)
- (PA) = INSTALL TYPE IV (LT OR RT) ARROW PER CALTRANS STANDARD PLAN A24A.
- (PM) = PAINT STOP LEGEND AND 12" WHITE LIMIT LINE.
- (11) = INSTALL 4" WHITE SKIP LINE, PER DETAIL 11 OF CALTRANS STANDARD PLAN.
- (22) = INSTALL DOUBLE YELLOW CENTERLINE WITH PAVEMENT MARKERS PER DETAIL 22 OF CALTRANS STANDARD PLAN.
- (29) = INSTALL DOUBLE YELLOW MEDIAN WITH PAVEMENT MARKERS PER DETAIL 29 OF CALTRANS STANDARD PLAN.
- (32) = INSTALL TWO WAY LEFT TURN LANE PER DETAIL 32 OF CALTRANS STANDARD PLAN.
- (38) = INSTALL CHANNELIZING LANE WITH PAVEMENT MARKERS PER DETAIL 38 CALTRANS STANDARD PLAN.

SIGNS LEGEND



R1-1 W4-2(RT)

SCALE: 1" = 40'

0 40 80

PLANS PREPARED UNDER THE SUPERVISION OF:

BILL E. DARNELL R.C.E. No. 22338 DATE
DESIGN ENGINEER LICENSE EXPIRES 9-30-09

Darnell & ASSOCIATES, INC.
1446 FRONT STREET, THIRD FLOOR
SAN DIEGO, CA 92101
(619) 233-9373

DWG:001202CP-1A.dwg DATE: 02-06-09 BY:SN/JM/SN

COUNTY APPROVED CHANGES			
No.	Description	Approved by	Date

BENCH MARK

DESCRIPTION: X
LOCATION: X
X
RECORD FROM: X
ELEVATION: X DATUM: X

PRIVATE CONTRACT

SHEET 1 | COUNTY OF SAN DIEGO DEPARTMENT OF PUBLIC WORKS | 2 SHEETS

CHANNELIZATION CONCEPT

SANYO AVE TO ENRICO FERMI DRIVE

CALIFORNIA COORDIANTE INDEX 206-1791

Recommended for approval: | Approved: FOR DIRECTOR OF PUBLIC WORKS

Engineer of work: By _____ Date _____ R.C.E. | Checked by: | Approval date:

P-7

Caltrans Striping Concepts for Airway Rd between Harvest Rd and Sanyo Av

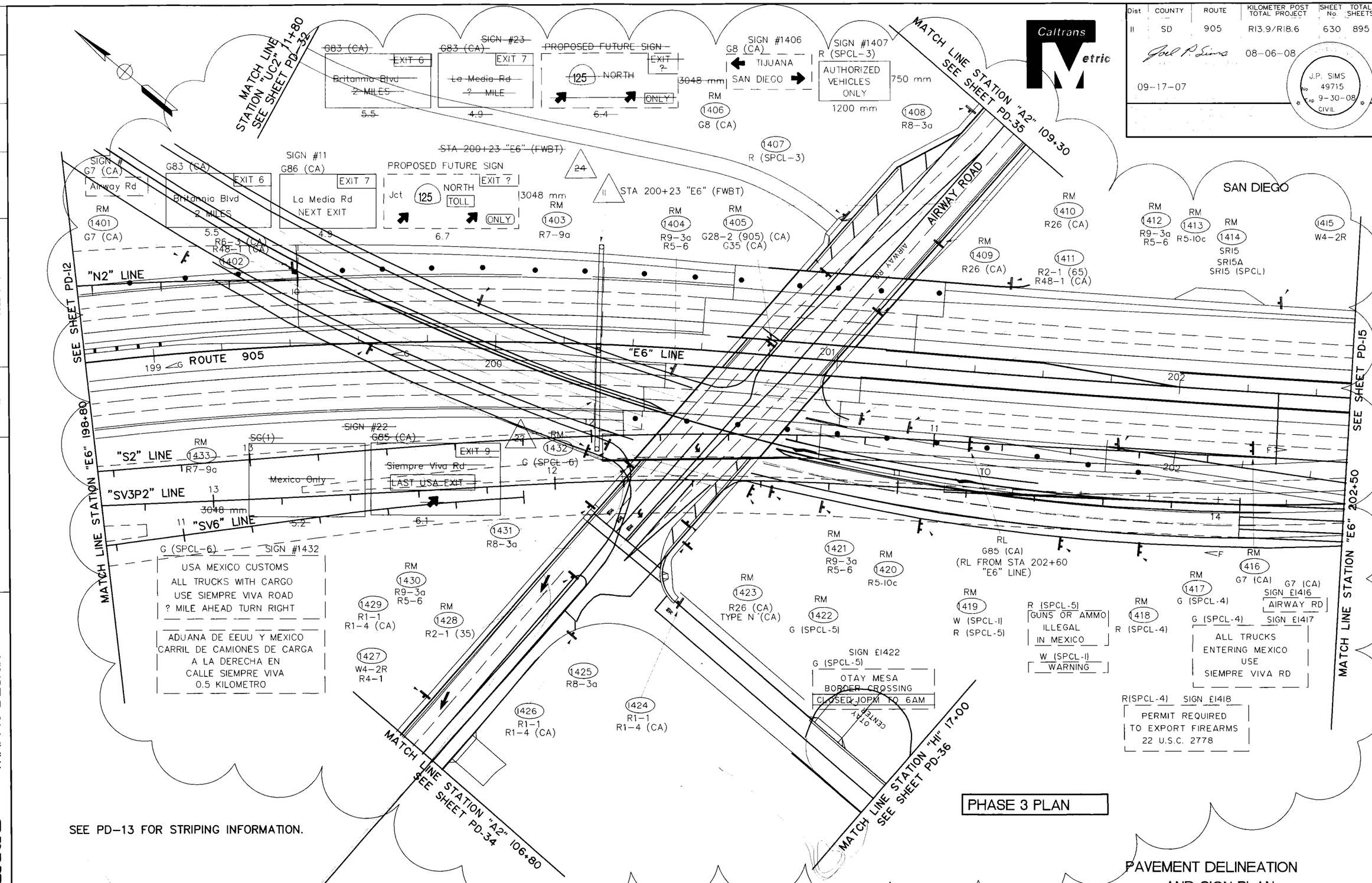
Dist	COUNTY	ROUTE	KILOMETER POST TOTAL PROJECT	SHEET No.	TOTAL SHEETS
II	SD	905	R13.9/R18.6	630	895

Joel P. Sims 08-06-08

09-17-07

J.P. SIMS No 49715 Exp 9-30-08 CIVIL

Caltrans Metric



PHASE 3 PLAN

SEE PD-13 FOR STRIPING INFORMATION.

THIS SHEET ACCURATE FOR SIGN WORK ONLY

ALL DIMENSIONS ARE IN METERS UNLESS OTHERWISE SHOWN

SCALE 1:500

PAVEMENT DELINEATION AND SIGN PLAN

P-9

PD-14

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION

Caltrans TRAFFIC DESIGN

MARY BETH HAYES

JOEL SIMS

CAMILLE ABOUFADEL

BORDER LAST REVISED 3/1/2007

RELATIVE BORDER SCALE IN MILLIMETERS 0 20 40 60 80

USERNAME => $USER

DGN FILE => $REQUEST

CU 11223

EA 091821

LAST REVISION 08-12-08

DATE PLOTTED => $DATE

TIME PLOTTED => $TIME

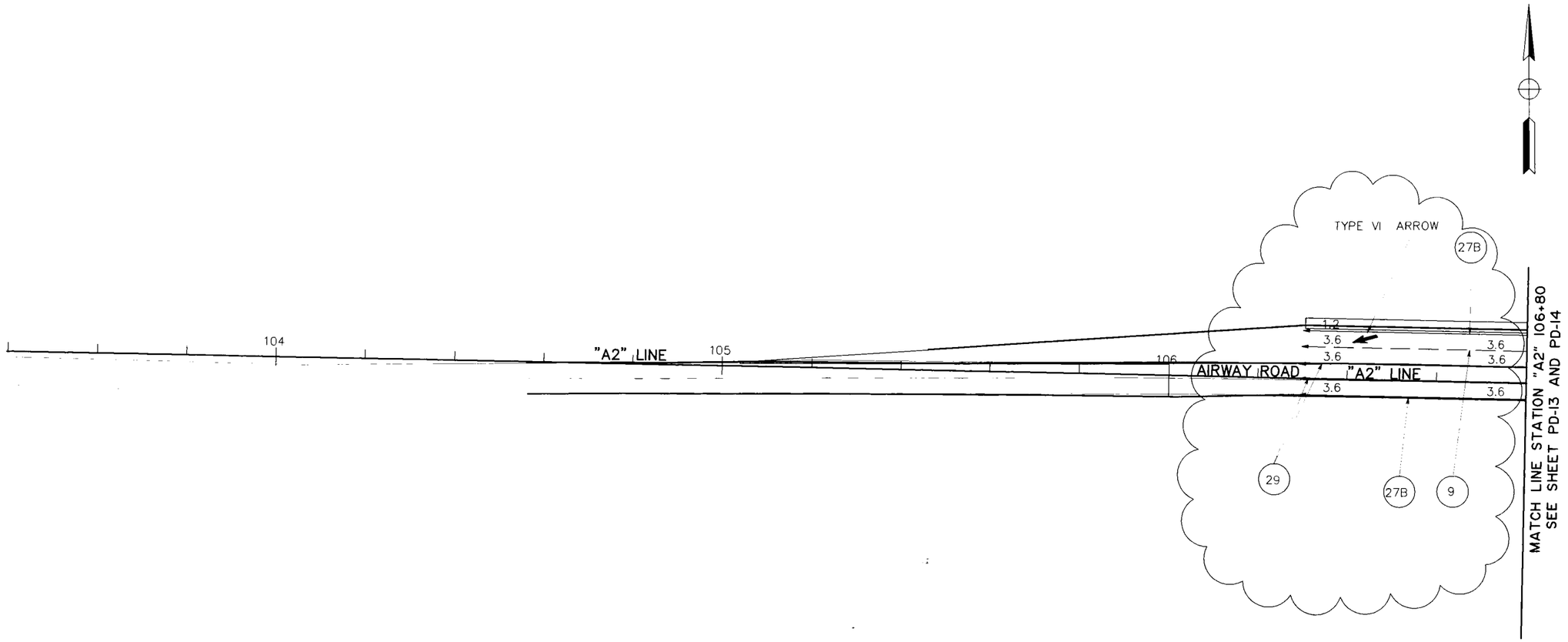
Dist	COUNTY	ROUTE	KILOMETER POST TOTAL PROJECT	SHEET No.	TOTAL SHEETS
11	SD	905	R13.9/R18.6	650	895

Joel P. Sims 08-06-08

09-17-07

J.P. SIMS No 49715 Exp 9-30-08 CIVIL

Caltrans Metric



PHASE 3 PLAN

PAVEMENT DELINEATION AND SIGN PLAN

SCALE 1:500

P-10

PD- 34

THIS SHEET ACCURATE FOR PAVEMENT DELINEATION AND SIGN WORK ONLY

ALL DIMENSIONS ARE IN METERS UNLESS OTHERWISE SHOWN

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION

Caltrans TRAFFIC DESIGN

PLANNING DESIGN

CAMILLE ABOUFADEL

JOEL SIMS

MARY BETH HAYES

LAST REVISION 08-12-08 DATE PLOTTED => $DATE
TIME PLOTTED => $TIME

BORDER LAST REVISED 3/1/2007

RELATIVE BORDER SCALE IN MILLIMETERS 0 20 40 60 80

USERNAME => $USER
DGN FILE => $FILE

CU 11223

EA 091821

Dist	COUNTY	ROUTE	KILOMETER POST TOTAL PROJECT	SHEET No.	TOTAL SHEETS
11	SD	905	R13.9/R18.6	651	895

Joel P. Sims 08-06-08

09-17-07

J.P. SIMS No 49715 Exp 9-30-08 CIVIL

Caltrans Metric

MATCH LINE STATION "SNY1" 91+00 SEE SHEET PD-33

MATCH LINE STATION "A2" 109+30 SEE SHEET PD-13 AND PD-14

AIRWAY ROAD

"SNY1" LINE

SANYO AVENUE

"A2" LINE

RM 3505 R3-7L

RM 3504 G56 (CA) G28-2 (905) (CA)

EP 3503 R8-3a

EP 3502 R8-3a

3501 R3-7R

RM 3507 R26 (CA)

EP 3506 R8-3a

TYPE IV ARROW (R) (2 EA)

TYPE VII ARROW (L) (2 EA)

"STOP" (2 EA)

300 mm WHITE LIMIT LINE

PHASE 3 PLAN

PAVEMENT DELINEATION AND SIGN PLAN

SCALE 1:500 P-11 PD- 35

THIS SHEET ACCURATE FOR PAVEMENT DELINEATION AND SIGN WORK ONLY

ALL DIMENSIONS ARE IN METERS UNLESS OTHERWISE SHOWN

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION

Caltrans TRAFFIC DESIGN

MARY BETH HAYES JOEL SIMS CAMILLE ABOUFADEL

LAST REVISION 08-12-08 DATE PLOTTED => $DATE TIME PLOTTED => $TIME

BORDER LAST REVISED 3/1/2007

RELATIVE BORDER SCALE IS IN MILLIMETERS 0 20 40 60 80

USERNAME =>$USER DGN FILE => $MODEL

CU 11223 EA 091821

Fair-Share Memo for Otay Crossings Mitigation at Otay Mesa Rd/Harvest Rd

Darnell & ASSOCIATES, INC.
TRANSPORTATION PLANNING & TRAFFIC ENGINEERING

MEMORANDUM

April 9, 2009

To: Jerry Moriarity; County of San Diego

From: Bill E. Darnell

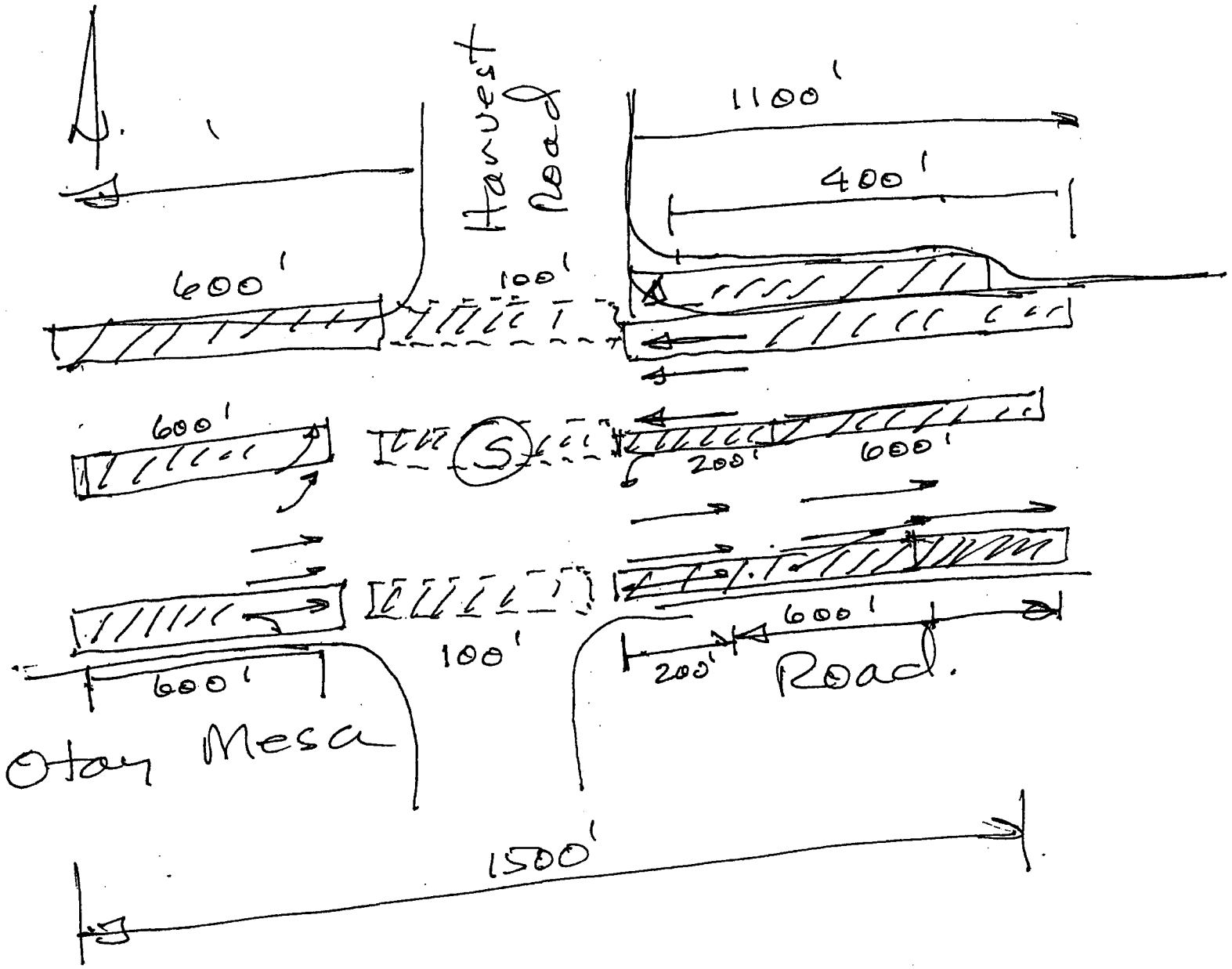
D&A Ref. No: 040501

Subject: Fair Share Calculation for Otay Crossings Commerce Park Mitigation at Otay Mesa Road and Harvest Road.

Attached is a rough sketch and cost estimate to add intersection improvements at Otay Mesa Road and Harvest Road. I have estimated the improvements based on $1,000,000 per lane mile. This estimate is based on the San Bernardino County CMP Preliminary Cost Estimating Process used for mitigating projects impacts (copy attached). I have included the additional lanes required and the cost of a traffic signal. The projects fair share is 9.85% and equates to $108,574.

Otay Crossings Commerce Park Fair Share Construct Cost Estimate Otay Mesa Road at Harvest Road			
Westbound			
Add	1,100 Ft of lane		
Add	400 Ft of Right Turn Lane		
Total	**1,500 Ft**		
Eastbound			
Add	1,500 Ft of Left Turn Lane and Transition		
Add	1,500 Ft of Thru Lane		
Total	**3,000 Ft**		
Based on SANBAG Estimate of $1,000,000 mile per lane			
Westbound	= 1,500 Ft x $1,000,000 = 5,280	=	$284,091.00
Eastbound	= 3,000 Ft x $1,000,000 = 5,280 Ft	=	$568,182.00
Signal Installation		=	$250,000.00
	Total Cost Estimate	=	**$1,102.273.00**
Project Fair Share		=	($1,102,273.00 x 0.0985)
	Project Fair Share Total	=	**$108,574.00**

1446 Front Street • Suite 300 • San Diego, CA 92101
PHONE: 619-233-9373 • FAX: 619-233-4034
E-mail: office@darnell-assoc.com
43300 Business Park Drive • Suite A-204 • Temecula, CA 92590
PHONE: 951-699-8209 • FAX: 951-699-8269
office@darnell-assoc.com


Harvest Road
1100'
400'
600'
100'
600'
600'
200'
600'
100'
600'
200'
600'
Road.
Otay Mesa
1500'

APPENDIX G

PRELIMINARY CONSTRUCTION COST ESTIMATES FOR CONGESTION MANAGEMENT PLAN

G-2PRELIMINARY CONSTRUCTION COST ESTIMATES FOR CONGESTION MANAGEMENT PLAN

Add One Lane Each Direction on Freeway	
Asphalt Concrete Pavement Portland Cement Concrete Pavement **Includes:** Excavation Paving Section Barrier Shoulder Upgrade Drainage System Traffic Control Mobilization @10% Design @11% Construction Mgt. @12.5%	$2,300,000 Per Mile $2,800,000 Per Mile **Excludes:** Environmental Costs Right of Way Widening of Bridge Structures Added Retaining Walls Added Sound Walls

Widen Existing UC Structures	
Total Cost = **Includes:** Structure Mobilization @10% Design @11% Construction Mgt. @12.5%	$160 Per Square Foot **Excludes:** Environmental Costs Right of Way Traffic Control Ramp Modifications Signal/Lighting Up Grades Drainage Upgrades Added Retaining Walls Added Sound Walls

Diamond Interchanges			
$10,000,000	EACH	NEW IC	Minimal Row/Environmental
$15,000,000	EACH	NEW IC	Includes Row/Environmental
$20,000,000	EACH	EXISTING	Minimal Row/Environmental
$25,000,000	EACH	EXISTING	Includes Row/ Environmental
Includes: Structure Retaining Walls Soil Nail Walls Drainage System Ramps Mobilization @ 10% Design @ 11% Construction Mgt. @ 12.5%		**Excludes:** As listed	

Retaining Walls

Height Feet	Structure Cost $/LF	Mobilization Design Constr. Mgt. $/LF	Total $/LF
4	$190	$70	$260
6	$260	$90	$350
8	$380	$140	$520
10	$430	$150	$580
12	$480	$170	$650
14	$590	$210	$800
16	$660	$240	$900

Excludes: Environmental Costs
Right of Way

12' High Sound Walls (Masonry Block on Footing)

Structure Cost $/Mile	Mobilization Design Constr. Mgt. $/Mile	Total $/Mile
$800,000	$300,000	$1,100,000

Widen Conventional Highway

1. Add one outside lane (Work includes earthwork, modify existing drainage system and construct AC shoulder section.	
Asphalt Concrete Pavement	$1,000,000/Mile
2. Add one outside lane each direction (Work includes earthwork, modify existing drainage system and construct AC shoulder section)	
Asphalt Concrete Pavement	$2,000,000/Mile
With Median Concrete Barrier	$2,200,000/Mile
With Median Double Thrie Beam Barrier	$2,300,000/Mile

Local Interchange Improvements

1. New Interchange	
Urban Interchange	$10,000,000 to $17,000,000
Partial – Cloverleaf Interchange (Work includes new OC structure, earthwork, signal)	$6,000,000
Diamond Interchange (Work includes new OC structure, earthwork, signal)	$5,000,000

Local Interchange Improvements CONT...	
2. Reconstruct Existing Interchange	
Realign and widen existing ramps (to 2 lanes)	$750,000/Each Ramp
Construct Loop on – ramps (Does not include realigning existing ramp)	$700,000/Each Ramp
Upgrade existing Diamond IC to Partial – Cloverleaf	$6,000,000
3. Improve Existing Interchange	
Widen ramps (From one to two lanes)	$350,000/Each Ramp
Widen existing OC structure	$110/Sq. Ft.
Signalize ramp intersection	$90,000/Location
Upgrade existing signal at ramp terminal	$75,000/Intersection
Upgrade existing signal at ramp terminal (Add lights only)	$25,000/Each
4. Ramp Metering System	$60,000/Each location

Intersection Improvements	
1. Signalization of local intersection (with some roadwork)	$250,000
2. Upgrade existing intersection signalization	$75,000
3. Upgrade existing Traffic Controller/Assembles	$40,000/Each
4. Install new signal	$90,000/location
5. Add signal heads	$25,000/Intersection
6. Construct left – turn lane (240' long)	$50,000/Each Location
7. Street widening (12' wide) (Pavement only)	$180,000/Mile
8. Curb and gutter (Type A2-8)	$15/LF

Other Improvements		
1.	Construct new OC structure (Does not include roadway work)	$100/Sq. Ft.
2.	Construct Retaining Walls (Type 1)	$285/LF (H=8') $360/LF (H=10') $460/LF (H=12') $560/LF (H=14')
3.	Construct Soundwall	$1,000,000/Mile (H=12')
4.	Traffic Management Plan	10% of total construction costs

NOTE: This cost estimate does not include the following items:

1. R/W engineering, appraisal, acquisition and utilities relocation costs.
2. Minor items and supplemental work (10%).
3. Mobilization (10%).
4. Contingencies (25%).
5. Landscaping costs.

General Note: **When adding a through lane, the minimum distance is 600' approach and 600' departure to the next intersection.**

Caltrans Striping Concept for La Media Rd between Otay Mesa Rd and Airway Rd

Dist	COUNTY	ROUTE	KILOMETER POST TOTAL PROJECT	SHEET No.	TOTAL SHEETS
11	SD	905	R13.9/R18.6	623	895

Carl P. Sims 08-06-08
REGISTERED CIVIL ENGINEER DATE

09-17-07
PLANS APPROVAL DATE

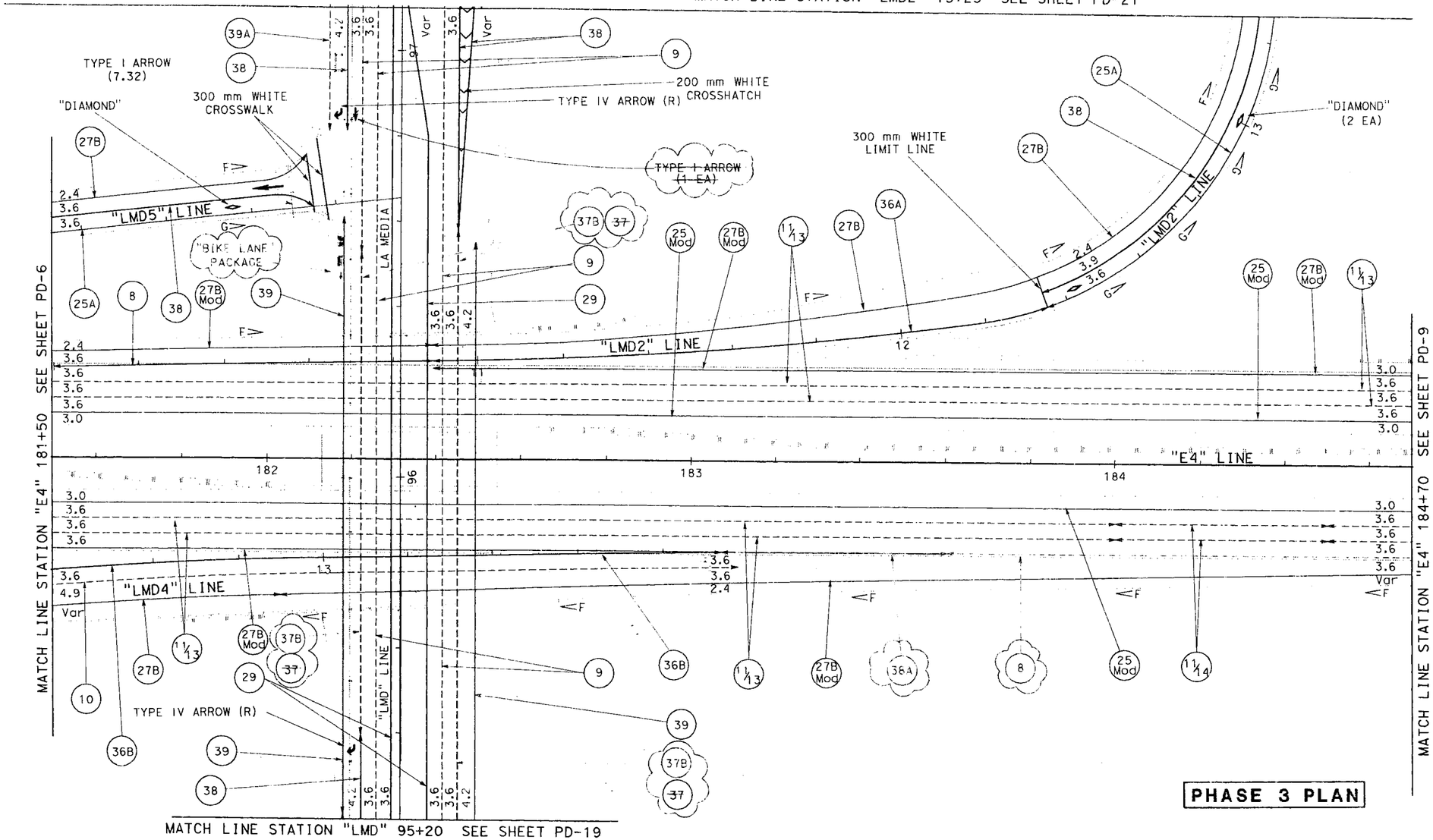
J.P. SIMS No. 49715 Exp. 9-30-08 CIVIL — REGISTERED PROFESSIONAL ENGINEER — STATE OF CALIFORNIA

THE STATE OF CALIFORNIA OR ITS OFFICERS OR AGENTS SHALL NOT BE RESPONSIBLE FOR THE ACCURACY OR COMPLETENESS OF ELECTRONIC COPIES OF THIS PLAN SHEET.

Caltrans Metric

MATCH LINE STATION "LMD" 97+10 SEE SHEET PD-21

MATCH LINE STATION "LMD2" 13+25 SEE SHEET PD-21



PHASE 3 PLAN

SEE PD-8 FOR SIGNING INFORMATION.

PAVEMENT DELINEATION AND SIGN PLAN

SCALE 1:500 P-21 PD-7

THIS SHEET ACCURATE FOR PAVEMENT DELINEATION ONLY

ALL DIMENSIONS ARE IN METERS UNLESS OTHERWISE SHOWN

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION	FUNCTIONAL SUPERVISOR	CALCULATED-DESIGNED BY	REVISED BY	DATE REVISED
Caltrans TRAFFIC DESIGN	CAMILLE ABOUFADEL	CHECKED BY	MARY BETH HAYES	JOEL SIMS

LAST REVISION 08-13-08
DATE PLOTTED => 26-DEC-2008
TIME PLOTTED => 09:46

BORDER LAST REVISED 3/1/2007

RELATIVE BORDER SCALE IS IN MILLIMETERS 0 20 40 60 80

USERNAME => s108638
DGN FILE => b09182na007_p3.dgn

CU 11223 EA 091821

Dist	COUNTY	ROUTE	KILOMETER POST TOTAL PROJECT	SHEET No.	TOTAL SHEETS
11	SD	905	R13.9/R18.6	624	895

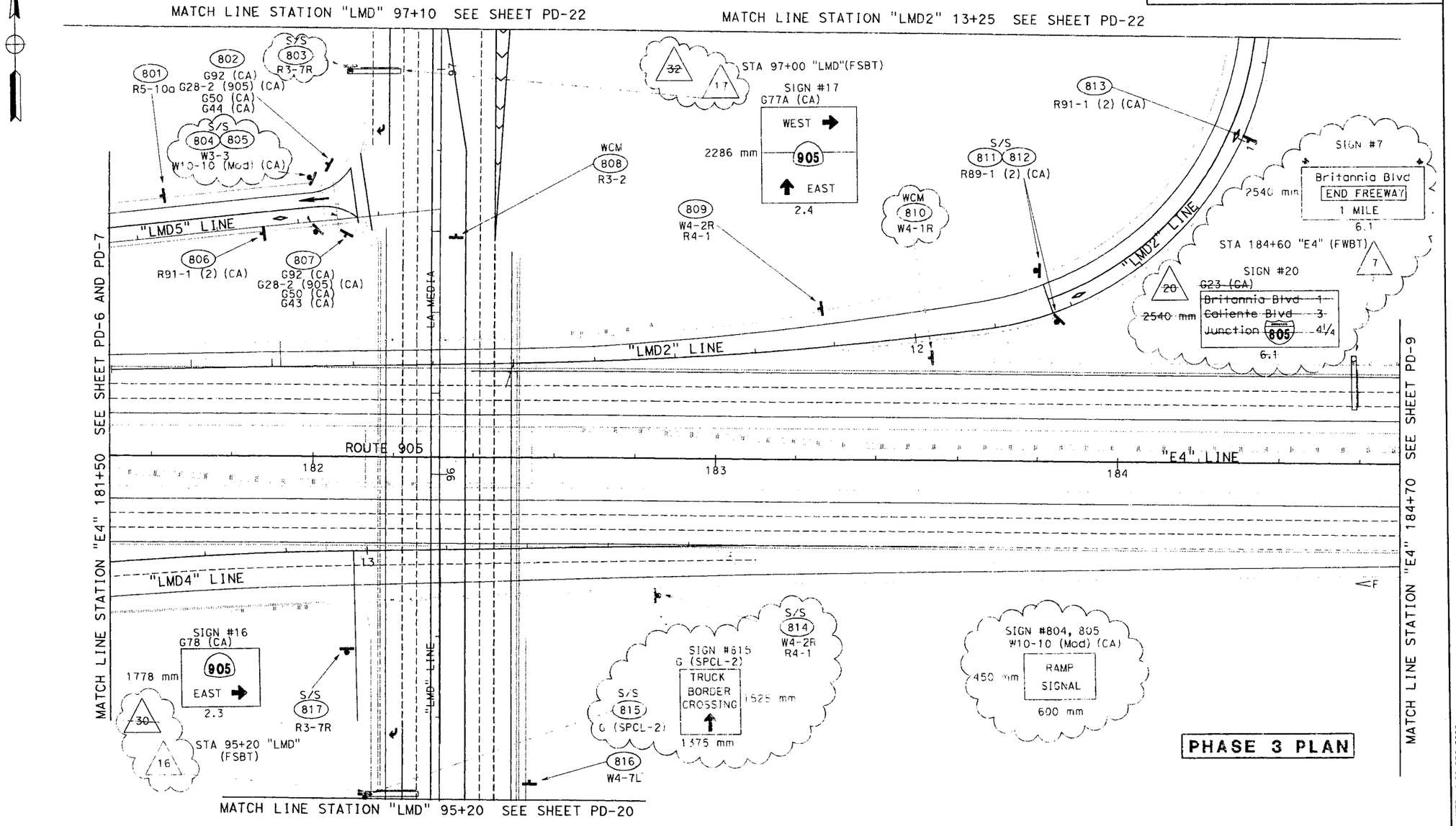
Joel P Sims 08-06-08
REGISTERED CIVIL ENGINEER DATE

09-17-07
PLANS APPROVAL DATE

J.P. SIMS No. 49715 Exp. 9-30-08 CIVIL STATE OF CALIFORNIA REGISTERED PROFESSIONAL ENGINEER

THE STATE OF CALIFORNIA OR ITS OFFICERS OR AGENTS SHALL NOT BE RESPONSIBLE FOR THE ACCURACY OR COMPLETENESS OF ELECTRONIC COPIES OF THIS PLAN SHEET.

Caltrans Metric



PHASE 3 PLAN

SEE PD-7 FOR STRIPING INFORMATION.

PAVEMENT DELINEATION AND SIGN PLAN

SCALE 1:500 P-22 PD-8

THIS SHEET ACCURATE FOR SIGN WORK ONLY

ALL DIMENSIONS ARE IN METERS UNLESS OTHERWISE SHOWN

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION	MARY BETH HAYES		
Caltrans TRAFFIC DESIGN	JOEL SIMS		
FUNCTIONAL SUPERVISOR: CAMILLE ABOUFADEL	CALCULATED-DESIGNED BY	CHECKED BY	
	REVISED BY	DATE REVISED	

LAST REVISION 08-12-08 DATE PLOTTED => 26-DEC-2008 TIME PLOTTED => 09:46

BORDER LAST REVISED 3/1/2007

RELATIVE BORDER SCALE IS IN MILLIMETERS 0 20 40 60 80

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DGN FILE => b09182na008_pd.dgn

CU 11223 EA 091821

Dist	COUNTY	ROUTE	KILOMETER POST TOTAL PROJECT	SHEET No.	TOTAL SHEETS
11	SD	905	R13.9/R18.6	635	895

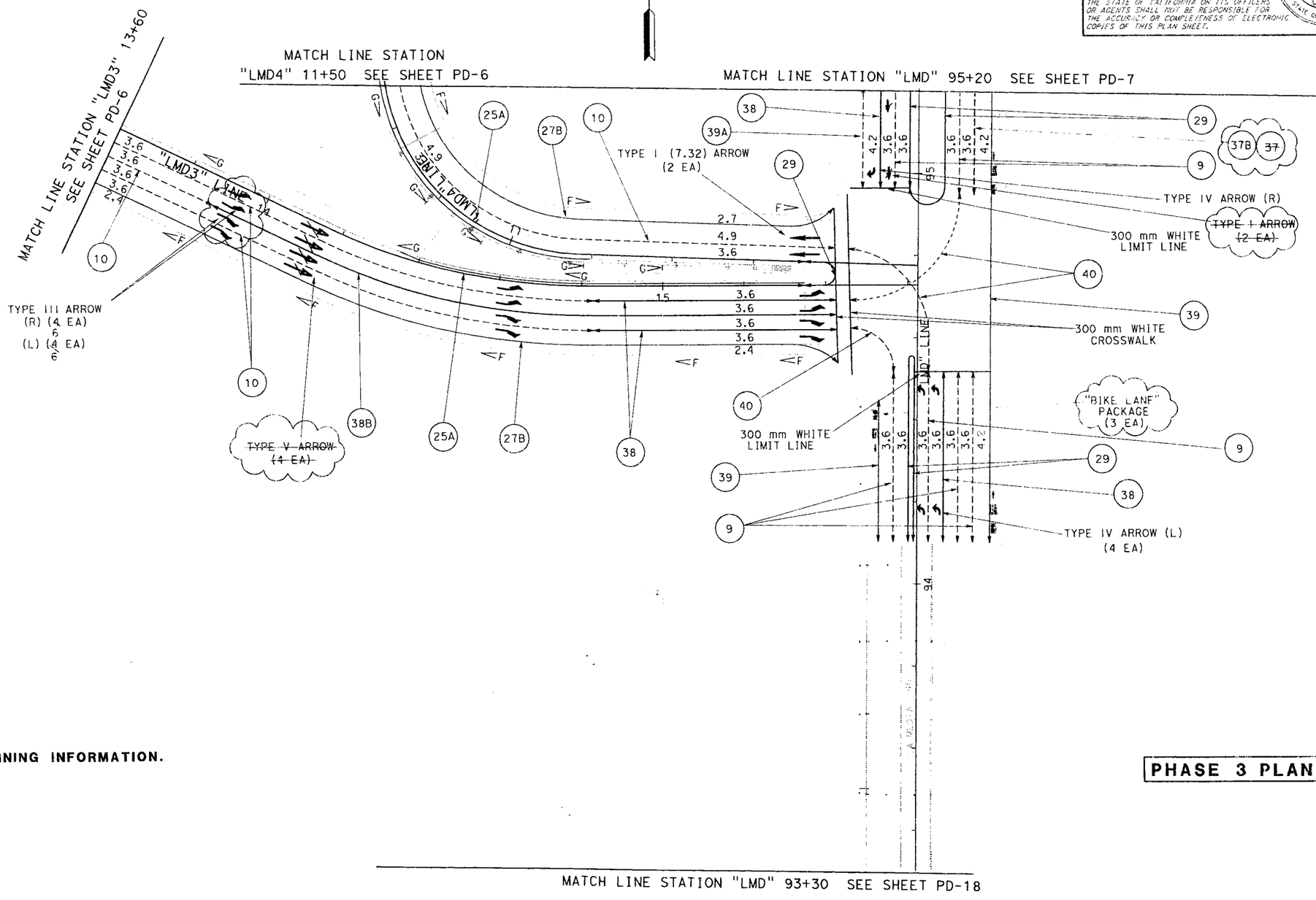
Joel P. Sims 08-06-08
REGISTERED CIVIL ENGINEER DATE

09-17-07
PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER — J. P. SIMS No. 49715 Exp. 9-30-08 CIVIL — STATE OF CALIFORNIA

THE STATE OF CALIFORNIA OR ITS OFFICERS OR AGENTS SHALL NOT BE RESPONSIBLE FOR THE ACCURACY OR COMPLETENESS OF ELECTRONIC COPIES OF THIS PLAN SHEET.

Caltrans Metric



SEE PD-20 FOR SIGNING INFORMATION.

PHASE 3 PLAN

PAVEMENT DELINEATION AND SIGN PLAN

SCALE 1:500 P-23 **PD-19**

THIS SHEET ACCURATE FOR PAVEMENT DELINEATION ONLY

ALL DIMENSIONS ARE IN METERS UNLESS OTHERWISE SHOWN

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION	MARY BETH HAYES	
Caltrans TRAFFIC DESIGN	JOEL SIMS	
FUNCTIONAL SUPERVISOR: CAMILLE ABOUFADEL	CALCULATED-DESIGNED BY	DATE REVISED
	CHECKED RY	REVISED BY

LAST REVISION 08-12-08 DATE PLOTTED => 26-DEC-2008 TIME PLOTTED => 09:49

BORDER LAST REVISED 3/1/2007 | RELATIVE BORDER SCALE IS IN MILLIMETERS 0 20 40 60 80 | USERNAME => s108638 DGN FILE => b09182no019_p3.dgn | CU 11223 | EA 091821

Dist	COUNTY	ROUTE	KILOMETER POST TOTAL PROJECT	SHEET No.	TOTAL SHEETS
11	SD	905	R13.9/R18.6	636	895

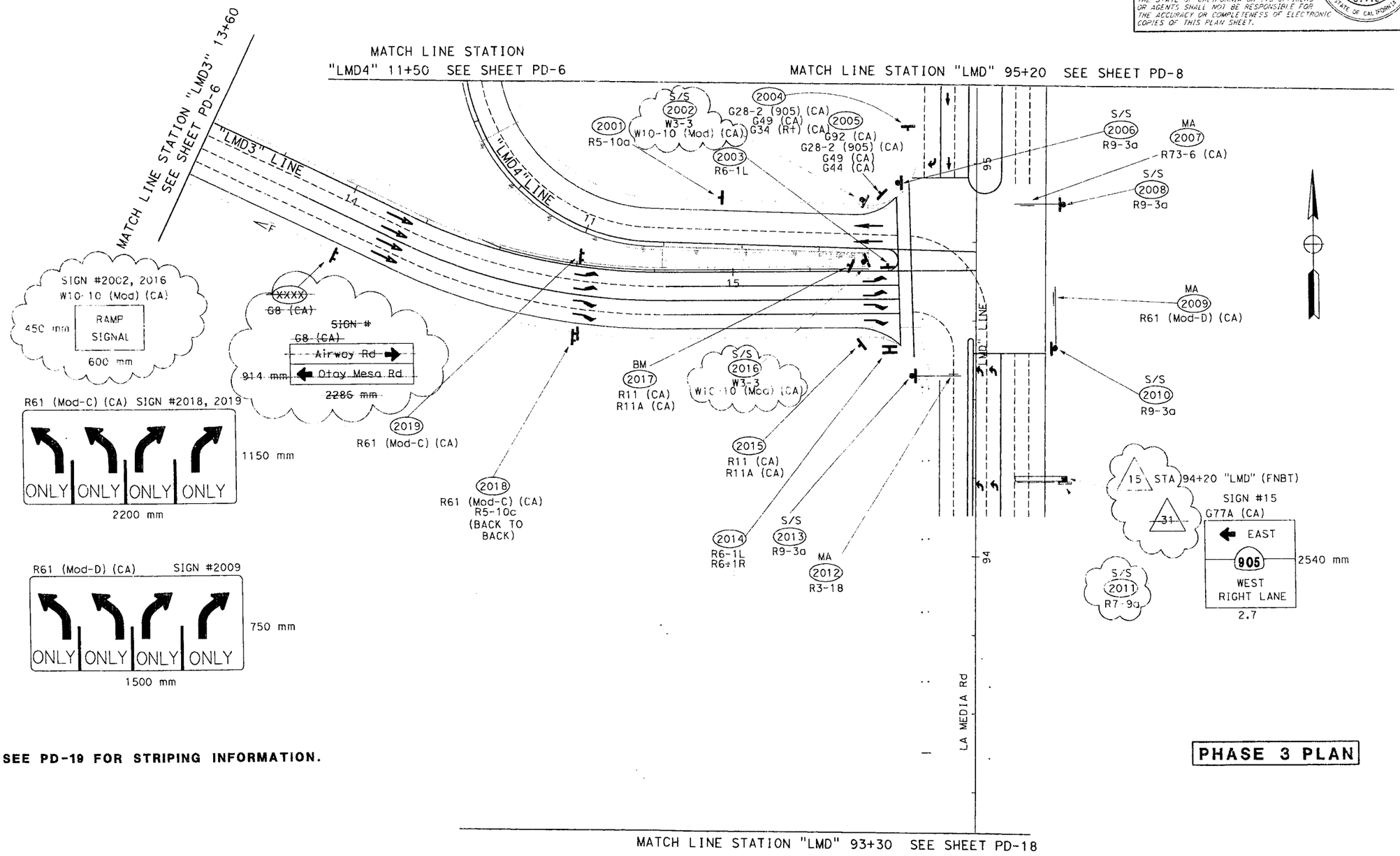
Caltrans Metric

Joel P. Sims 08-06-08
REGISTERED CIVIL ENGINEER DATE

09-17-07
PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER J.P. SIMS No. 49715 Exp. 9-30-08 CIVIL STATE OF CALIFORNIA

THE STATE OF CALIFORNIA OR ITS OFFICERS OR AGENTS SHALL NOT BE RESPONSIBLE FOR THE ACCURACY OR COMPLETENESS OF ELECTRONIC COPIES OF THIS PLAN SHEET.



SEE PD-19 FOR STRIPING INFORMATION.

PHASE 3 PLAN

PAVEMENT DELINEATION AND SIGN PLAN

SCALE 1:500

P-24

PD-20

THIS SHEET ACCURATE FOR SIGN WORK ONLY

ALL DIMENSIONS ARE IN METERS UNLESS OTHERWISE SHOWN

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans TRAFFIC DESIGN

FUNCTIONAL SUPERVISOR: CAMILLE ABOUFADEL
CALCULATED-DESIGNED BY: MARY BETH HAYES
CHECKED BY: JOEL SIMS
REVISED BY
DATE REVISED

LAST REVISION 08-12-08
DATE PLOTTED => 26-DEC-2008
TIME PLOTTED => 09:49

BORDER LAST REVISED 3/1/2007
RELATIVE BORDER SCALE IS IN MILLIMETERS 0 20 40 60 80
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DGN FILE => b09182na020_p3.dgn
CU 11223
EA 091821

Dist	COUNTY	ROUTE	KILOMETER POST TOTAL PROJECT	SHEET No.	TOTAL SHEETS
11	SD	905	R13.9/R18.6	637	895

Caltrans Metric

Joel P. Sims 08-06-08
REGISTERED CIVIL ENGINEER DATE

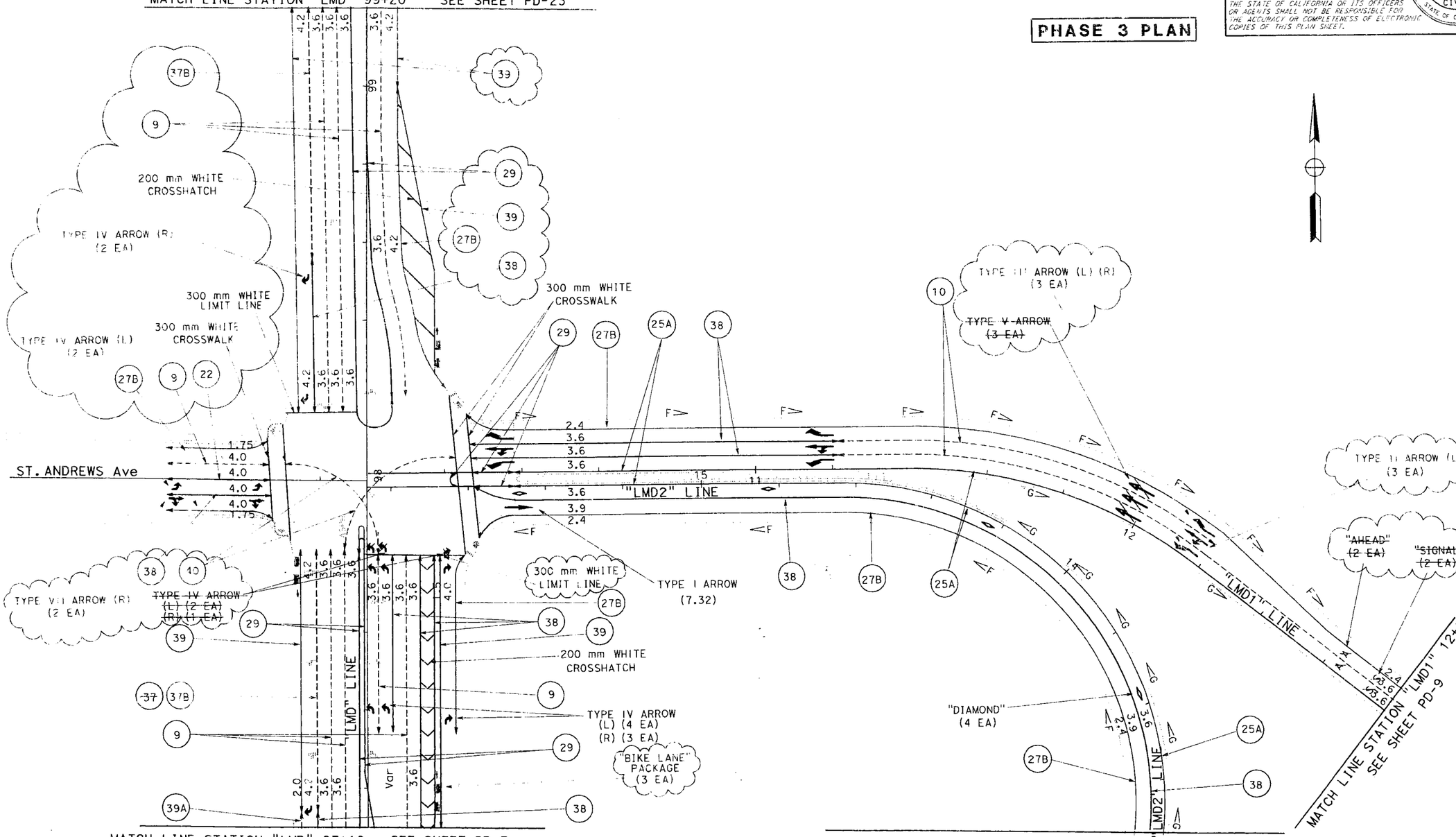
09-17-07
PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER J.P. SIMS No. 49715 Exp. 9-30-08 CIVIL STATE OF CALIFORNIA

THE STATE OF CALIFORNIA OR ITS OFFICERS OR AGENTS SHALL NOT BE RESPONSIBLE FOR THE ACCURACY OR COMPLETENESS OF ELECTRONIC COPIES OF THIS PLAN SHEET.

PHASE 3 PLAN

MATCH LINE STATION "LMD" 99+20 SEE SHEET PD-23



MATCH LINE STATION "LMD" 97+10 SEE SHEET PD-7

MATCH LINE STATION "LMD2" 13+25 SEE SHEET PD-7

SEE PD-22 FOR SIGNING INFORMATION.

THIS SHEET ACCURATE FOR PAVEMENT DELINEATION ONLY

ALL DIMENSIONS ARE IN METERS UNLESS OTHERWISE SHOWN

SCALE 1:500

PAVEMENT DELINEATION AND SIGN PLAN

P-25 PD-21

CALCULATED-DESIGNED BY	MARY BETH HAYES	REVISED BY	
CHECKED BY	JOEL SIMS	DATE REVISED	
FUNCTIONAL SUPERVISOR	CAMILLE ABOUFADEL		

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans
TRAFFIC DESIGN

LAST REVISION DATE PLOTTED => 26-DEC-2006
08-12-08 TIME PLOTTED => 09:49

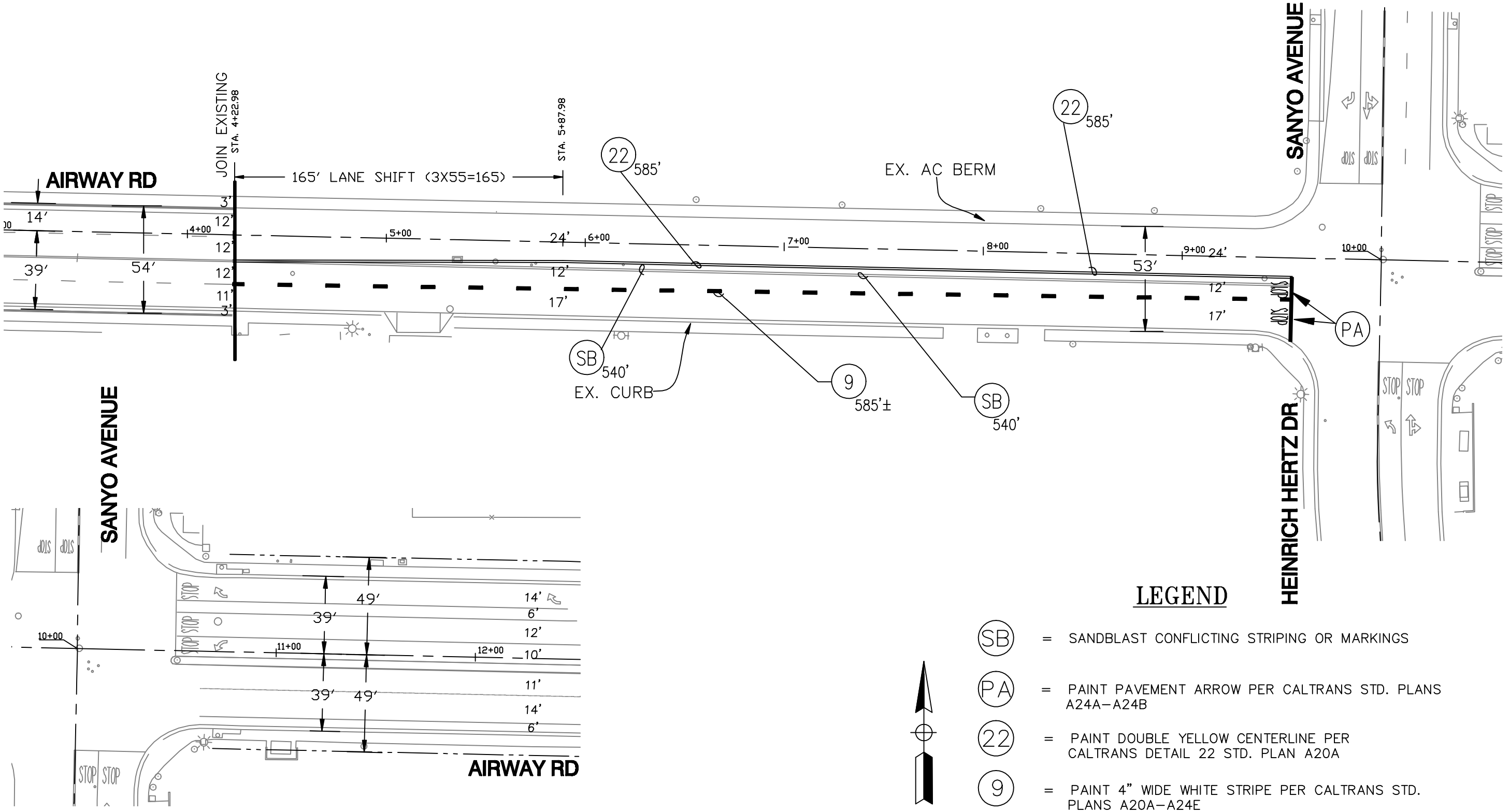
BORDER LAST REVISED 3/1/2007

RELATIVE BORDER SCALE IS IN MILLIMETERS 0 20 40 60 80

USERNAME => s108638
DGN FILE => b09182na021_p3.dgn

CU 11223 EA 091821

Conceptual Striping Concept for Airway Rd between SR-905 and Sanyo Ave



LEGEND

- (SB) = SANDBLAST CONFLICTING STRIPING OR MARKINGS
- (PA) = PAINT PAVEMENT ARROW PER CALTRANS STD. PLANS A24A–A24B
- (22) = PAINT DOUBLE YELLOW CENTERLINE PER CALTRANS DETAIL 22 STD. PLAN A20A
- (9) = PAINT 4" WIDE WHITE STRIPE PER CALTRANS STD. PLANS A20A–A24E

SCALE: 1" = 50'

0 50 100

Darnell & ASSOCIATES, INC.

040501SS–E.dwg 8–15–11 JMM

EXHIBIT 1

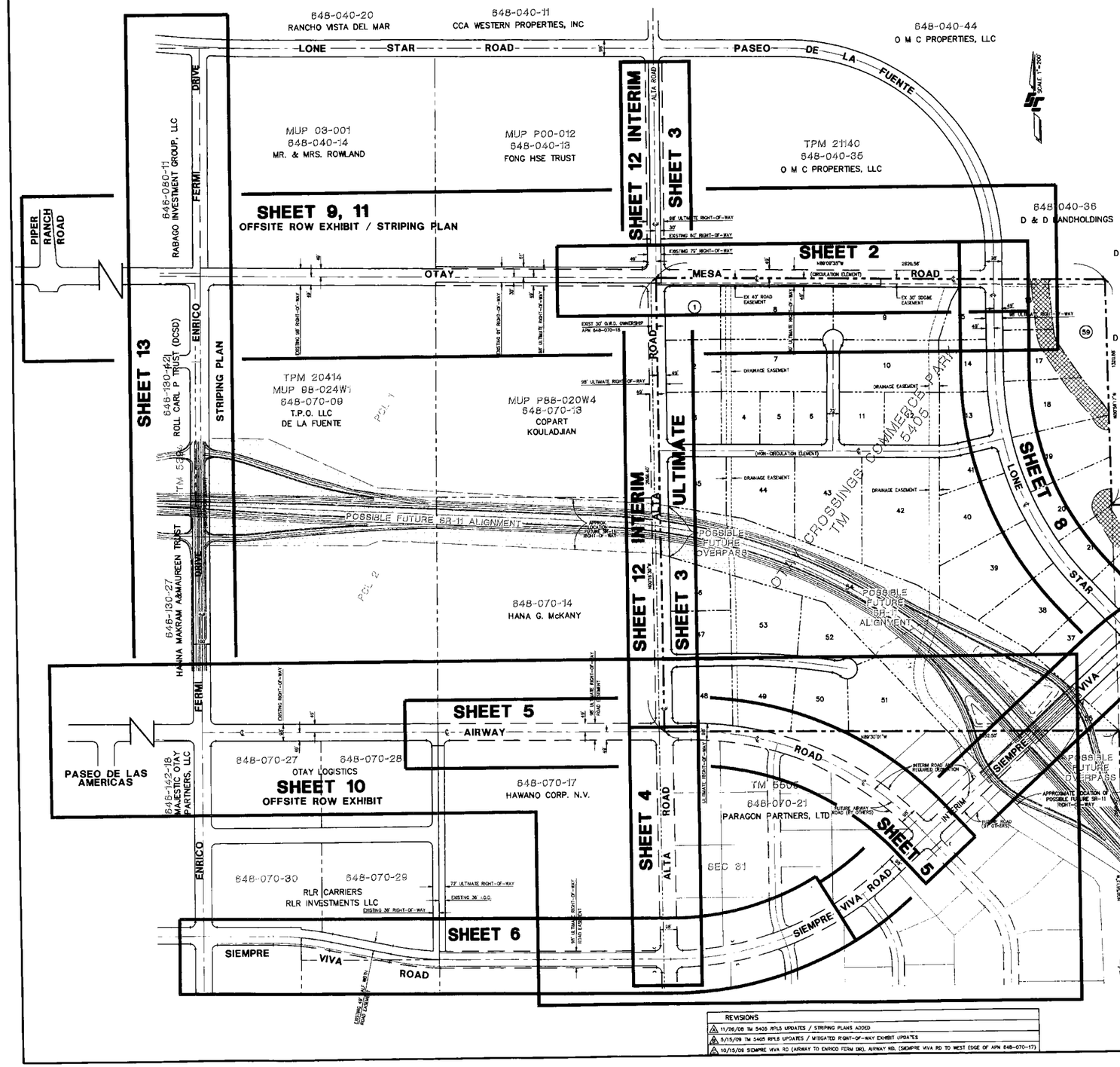
CHANNELIZATION CONCEPT AIRWAY RD

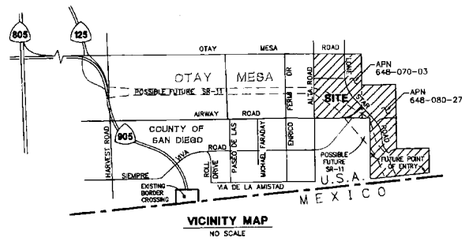
530' W/O SANYO AVE

APPENDIX Q

- Stevens Cresto Engineering, Inc. – Preliminary Route Study for Otay Crossings

COUNTY OF SAN DIEGO TRACT 5405 RPL6
OTAY MESA, CALIFORNIA
PRELIMINARY ROUTE STUDY





VICINITY MAP
NO SCALE

LEGEND

DESCRIPTION	SYMBOL
PROPOSED LOT NUMBER	1 THRU 59
SUBDIVISION BOUNDARY	
PROPOSED RIGHT-OF-WAY	
PROPOSED LOT LINE	
EXISTING RIGHT-OF-WAY	
EXISTING LOT LINES	
EASEMENT LINE	
PROPOSED SLOPE (2:1 MAX)	
PROPOSED CUT/FILL TRANSITION BOUNDARY	
PROPOSED CONTOUR	(630)
EXISTING CONTOUR	630
STORM DRAIN PIPE AND STRUCTURE	SD, C/CO, HDWL
PROPOSED OPEN DRAINAGE CHANNEL	
PROPOSED WATER	W
EXISTING WATER	W
PROPOSED SEWER	S
PROPOSED FORCE MAIN	SFM

SHEET INDEX

1. TITLE SHEET
2. OTAY MESA ROAD (ON-SITE)
3. ALTA ROAD (ON-SITE)
4. ALTA ROAD (OFF-SITE AIRWAY ROAD TO SIEMPRE VIVA ROAD)
5. AIRWAY ROAD (OFF-SITE)
6. SIEMPRE VIVA ROAD (OFF-SITE)
7. SIEMPRE VIVA ROAD (ON-SITE)
8. CAMINO DEL MAYER (ON-SITE)

ULTIMATE ROADWAY FEASIBILITY STUDY

9. RIGHT-OF-WAY EXHIBIT – OTAY MESA ROAD (OFF-SITE)

INTERIM RIGHT-OF-WAY REQUIREMENTS

10. RIGHT-OF-WAY EXHIBIT – AIRWAY ROAD, SIEMPRE VIVA ROAD (OFF-SITE)

T1. STRIPING PLAN – OTAY MESA ROAD

INTERIM IMPROVEMENT REQUIREMENTS

12. STRIPING PLAN – ON-SITE ROADS, AIRWAY & SIEMPRE VIVA ROADS
13. STRIPING PLAN – OFF-SITE ROADS, ENRICO FERMI DR, AIRWAY & SIEMPRE VIVA ROADS

REVISIONS

1. 11/26/08 TM 5405 RPL5 UPDATES / STRIPING PLANS ADDED
2. 5/15/09 TM 5405 RPL6 UPDATES / MITIGATED RIGHT-OF-WAY EXHIBIT UPDATES
3. 10/15/09 SIEMPRE VIVA RD (AIRWAY TO ENRICO FERMI DR), AIRWAY RD, (SIEMPRE VIVA RD TO WEST EDGE OF APN 648-070-17)

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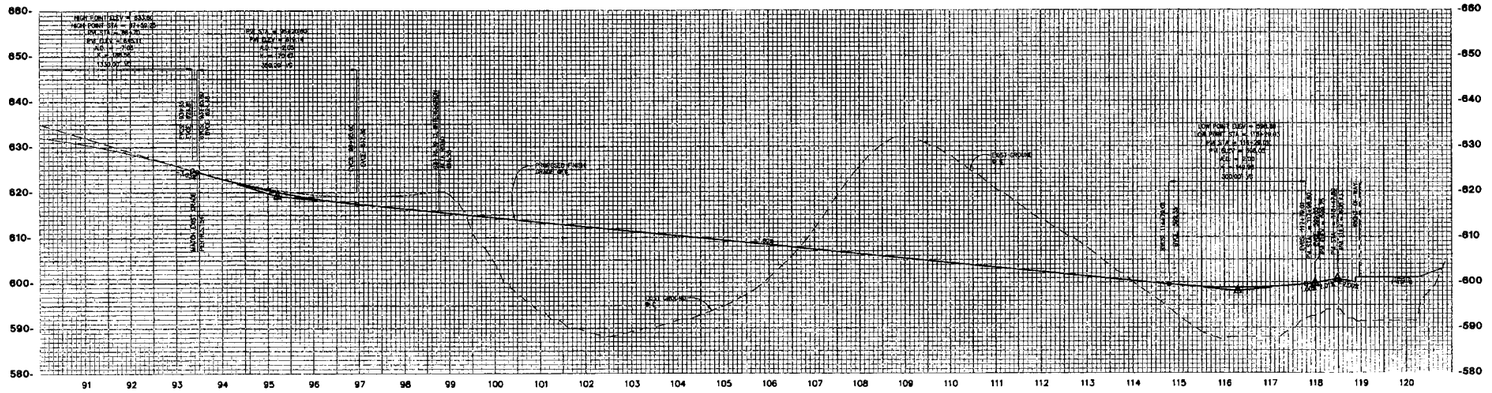
COUNTY OF SAN DIEGO TRACT 5405 RPL6
OTAY CROSSINGS COMMERCE PARK
SAN DIEGO, CALIFORNIA

PRELIMINARY ROUTE STUDY
COUNTY OF SAN DIEGO (CIRCULATION ELEMENT ROADWAYS)

DATE: 08/01/08
SCE NO. 03043.03
SHEET 1
1 OF 13 SHEETS

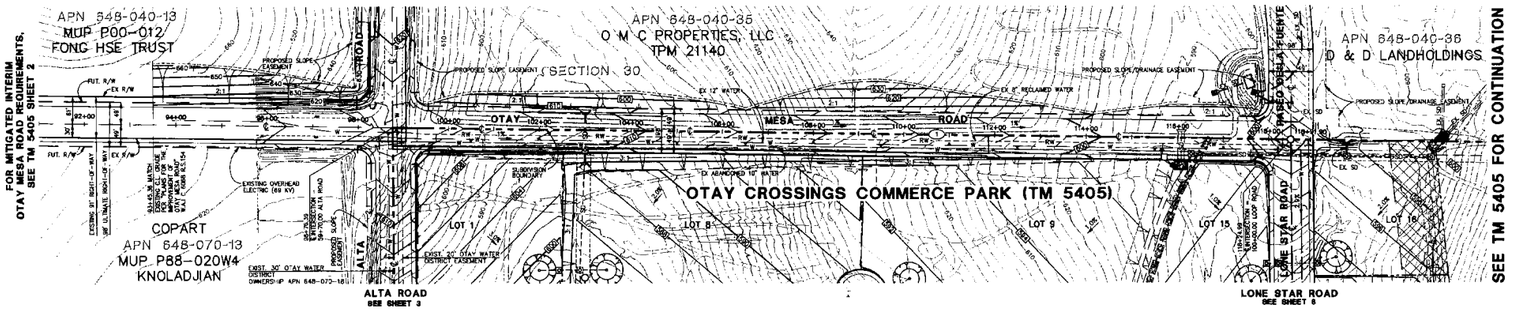
Q-1



PROFILE: OTAY MESA ROAD
SCALE: 1"= 100' HORIZ.; 1"= 10' VERT.

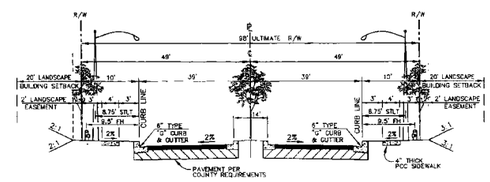
NOTE:
EXISTING IMPROVEMENTS TO OTAY MESA ROAD WEST OF ALTA AND ALTA ROAD NORTH OF OTAY MESA ROAD PER CG-4414, CG-4530, CG-4540

NOTE:
EXISTING IMPROVEMENTS SHOWN HEREON PER CG-4530



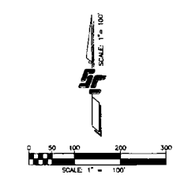
CENTERLINE DATA				
NO.	BEARING-DELTA	RADIUS	LENGTH	REMARKS
1	N69°08'35"W		1,946.60'	85+78.39 TO 115+24.99

ROADWAY DESIGN CRITERIA: OTAY MESA ROAD
(ULTIMATE ROADWAY WIDTH)
PROPOSED CLASSIFICATION: MAJOR ROAD (EAST OF ENRICO FERMI DRIVE)
RIGHT OF WAY: 98FT
DESIGN SPEED: 55 MPH
DAYLIGHT SLOPE GRADIENT: 2:1 MAX



4 LANE MAJOR ROAD
TYPICAL SECTION (PUBLIC)
OTAY MESA ROAD
NO SCALE

NOTE:
ROAD DESIGN SHOWN FOR ROUTE STUDY ALIGNMENT AND GRADE ONLY; DESIGN OF ROADWAY AND GRADING APPURTENANCES TO FOLLOW APPROVAL OF ROUTE STUDY



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SAN DIEGO, CALIFORNIA

ULTIMATE
PRELIMINARY ROUTE STUDY
OTAY MESA ROAD

DATE: 08/01/08
SCE NO. 03043.03
SHEET
2
2 OF 13 SHEETS

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PROFILE: ALTA ROAD
SCALE: 1"= 100' HORIZ.; 1"= 10' VERT.

NOTE:
EXISTING IMPROVEMENTS TO ALTA ROAD PER CG-4414, CG-4530, CG-4540

FOR MITIGATED INTERIM OTAY MESA ROAD REQUIREMENTS, SEE TM 5405 SHEET 2

TYPICAL SECTION (PUBLIC)
ALTA ROAD
NO SCALE

ROADWAY DESIGN CRITERIA: ALTA ROAD
(ULTIMATE ROADWAY WIDTH)
PROPOSED CLASSIFICATION: MAJOR ROAD
RIGHT OF WAY: 98FT
DESIGN SPEED: 55 MPH
DAYLIGHT SLOPE GRADIENT: 2:1 MAX

CENTERLINE DATA

NO.	BEARING-DELTA	RADIUS	LENGTH	REMARKS
1	N00°18'30"W		2656.40'	59+70 TO 33+13.60

NOTE:
ROAD DESIGN SHOWN FOR ROUTE STUDY ALIGNMENT AND GRADE ONLY; DESIGN OF ROADWAY AND GRADING APPURTENANCES TO FOLLOW APPROVAL OF ROUTE STUDY

SCALE: 1" = 100'

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ULTIMATE
PRELIMINARY ROUTE STUDY
ALTA ROAD

DATE: 08/01/08
SCE NO. 03043.03
SHEET **3**
3 OF 13 SHEETS

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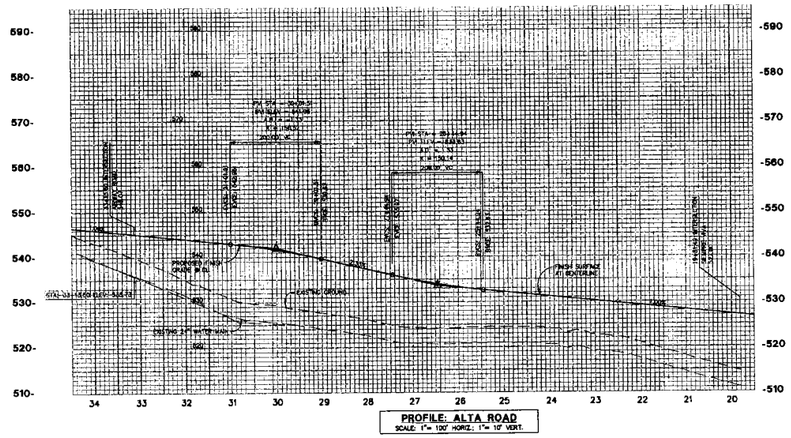
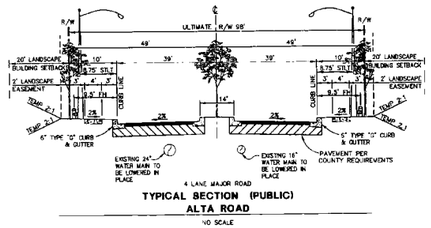
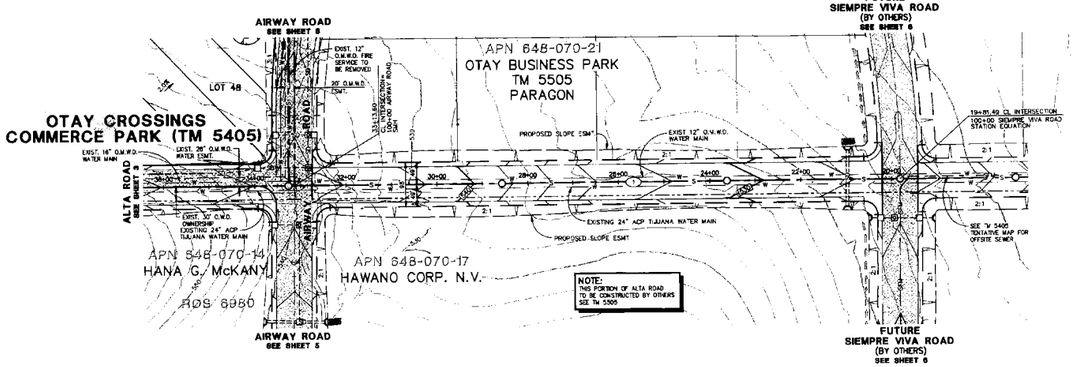




TYPICAL SECTION (PUBLIC)
ALTA ROAD
NO SCALE



CENTERLINE DATA				
NO.	BEARING-DELTA	RADIUS	LENGTH	REMARKS
1	N00°01'30"W		1,552.12'	33+13.80 TO 18+81.69

ROADWAY DESIGN CRITERIA: ALTA ROAD (ULTIMATE ROADWAY WIDTH)

PROPOSED CLASSIFICATION: MAJOR ROAD
RIGHT OF WAY: 98'
DESIGN SPEED: 55 MPH
DAYLIGHT SLOPE GRADIENT: 2:1 MAX

NOTE:
ROAD DESIGN SHOWN FOR ROUTE STUDY ALIGNMENT AND GRADE ONLY. DESIGN OF ROADWAY AND GRADING APPURTENANCES TO FOLLOW APPROVAL OF ROUTE STUDY

SCALE 1"= 100'
0 50 100 200 300
SCALE: 1" = 100'

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SAN DIEGO, CALIFORNIA

ULTIMATE
PRELIMINARY ROUTE STUDY
ALTA ROAD

DATE: 08/01/08
SCE NO. 03043-03
SHEET 4
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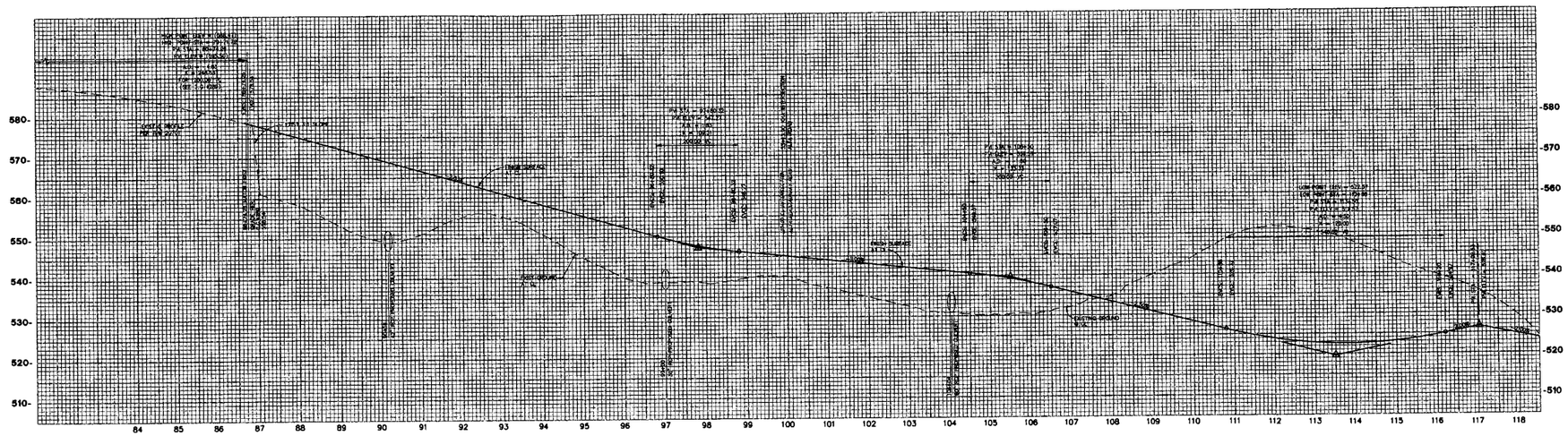
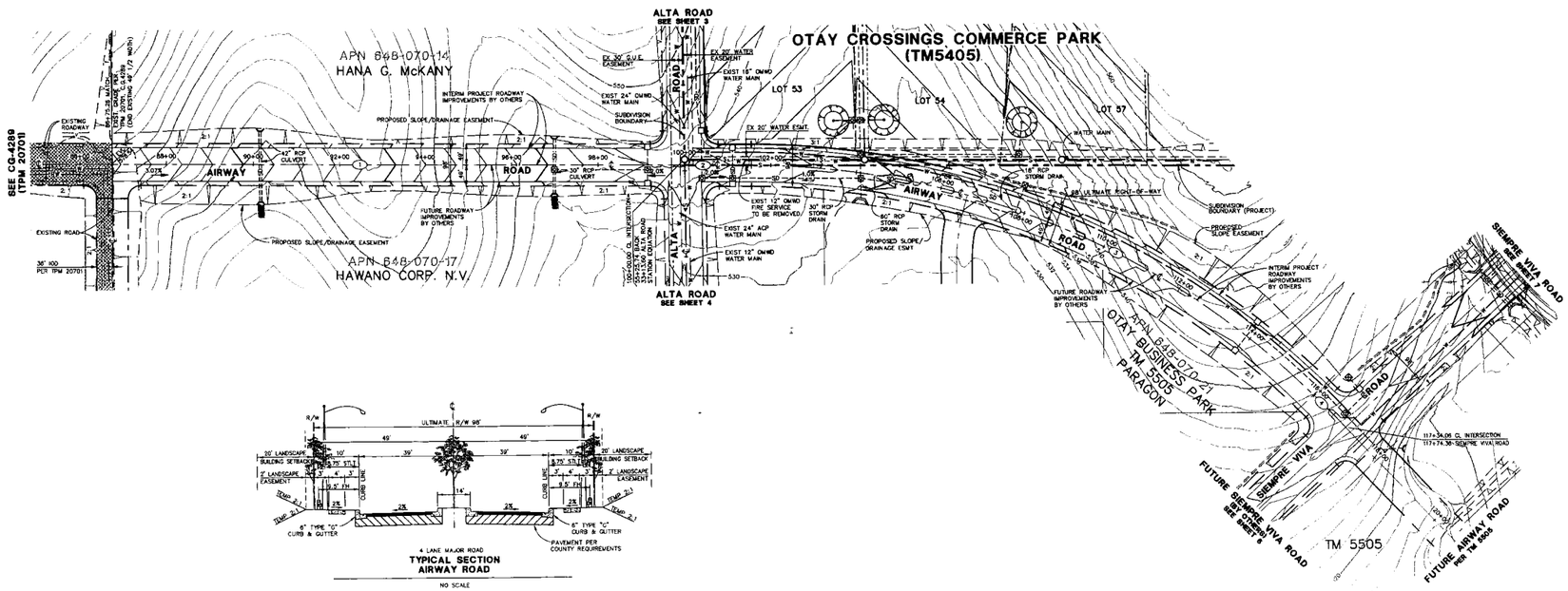
Q-4



PROFILE: AIRWAY ROAD
SCALE: 1"= 100' HORIZ.; 1"= 10' VERT.



TYPICAL SECTION
AIRWAY ROAD

NO SCALE

NOTE:
ROAD DESIGN SHOWN FOR ROUTE STUDY. ALIGNMENT AND GRADE ONLY. DESIGN OF ROADWAY AND GRADING APPURTENANCES TO FOLLOW APPROVAL OF ROUTE STUDY

ROADWAY DESIGN CRITERIA: AIRWAY ROAD (ULTIMATE ROADWAY WIDTH)

PROPOSED CLASSIFICATION: MAJOR ROAD
RIGHT OF WAY: 98'
DESIGN SPEED: 55 MPH
DAYLIGHT SLOPE GRADIENT: 2:1 MAX

CENTERLINE DATA

NO.	BEARING-DELTA	RADIUS	LENGTH	REMARKS
1	N89°23'35"W	--	2700.00'	
2	N89°00'01"W	--	135.13'	
3	Δ=46°40'22"	1850.00'	1507.00'	
4	N42°49'39"W	--	570.64'	

0 50 100 200 300
SCALE: 1" = 100'

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SAN DIEGO, CALIFORNIA

ULTIMATE
PRELIMINARY ROUTE STUDY
AIRWAY ROAD

DATE: 08/01/08
SCE NO. 03043.03
SHEET 5
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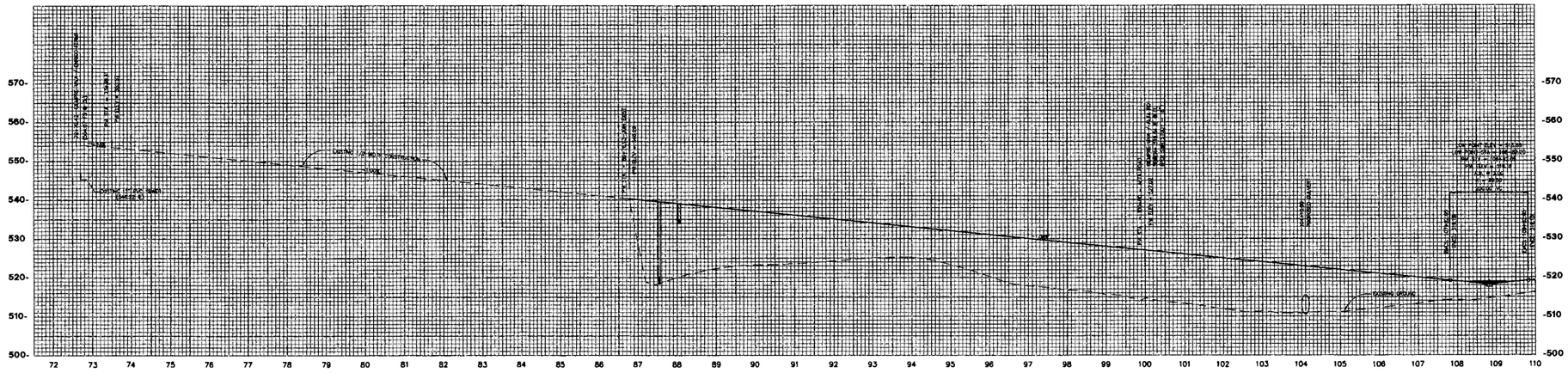
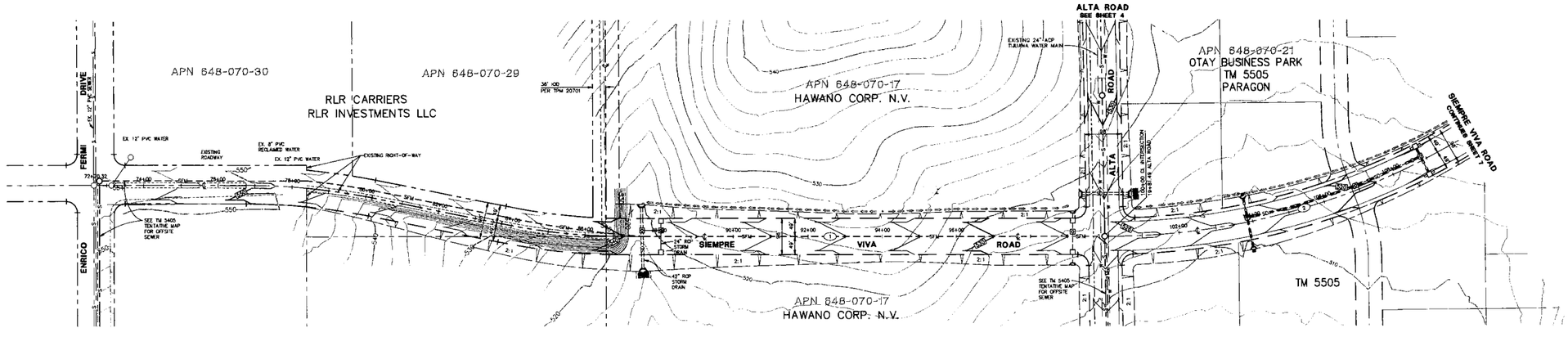
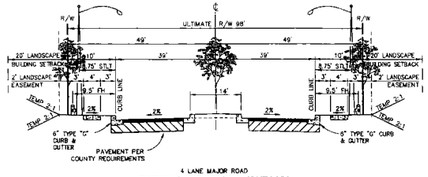


PROFILE: SIEMPRE VIVA ROAD
SCALE: 1"= 100' HORIZ., 1"= 10' VERT.





4 LANE MAJOR ROAD
TYPICAL SECTION (PUBLIC)
SIEMPRE VIVA ROAD
NO SCALE

ROADWAY DESIGN CRITERIA: SIEMPRE VIVA ROAD (ULTIMATE ROADWAY WIDTH)
PROPOSED CLASSIFICATION: MAJOR ROAD
RIGHT OF WAY 98FT
DESIGN SPEED: 55 MPH
DAYLIGHT SLOPE GRADIENT: 2:1 MAX

NOTE:
ROAD DESIGN SHOWN FOR ROUTE STUDY ALIGNMENT AND GRADE ONLY. DESIGN OF ROADWAY AND GRADING APPURTENANCES TO FOLLOW APPROVAL OF ROUTE STUDY

CENTERLINE DATA

NO.	BEARING-DELTA	RADIUS	LENGTH	REMARKS
1				
2	Δ=43°20'04"	1850.00'	1409.63'	

SCALE: 1" = 100'

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SAN DIEGO, CALIFORNIA

ULTIMATE
PRELIMINARY ROUTE STUDY
SIEMPRE VIVA ROAD

DATE: 08/01/08
SCE NO. 03043.03
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6 OF 13 SHEETS

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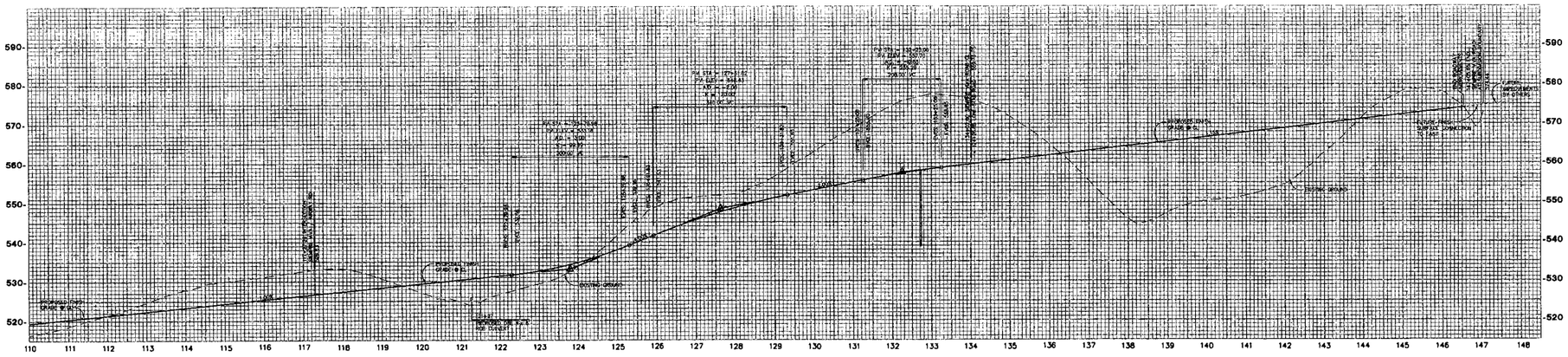
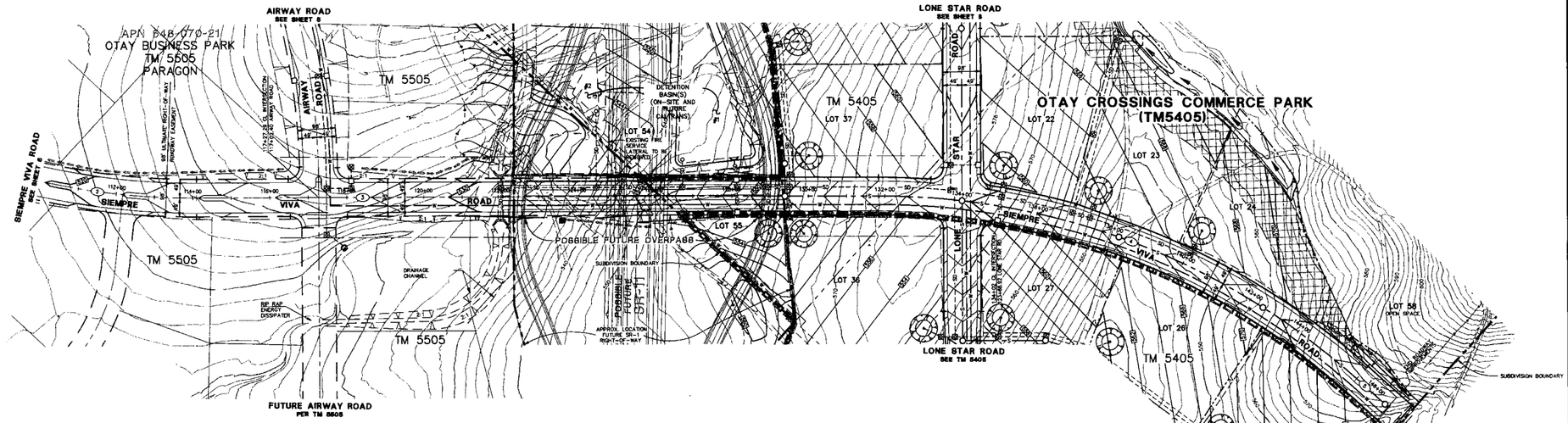
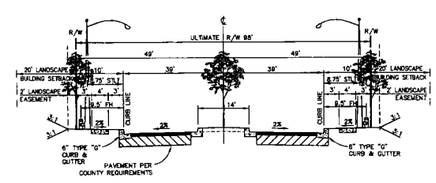


PROFILE: SIEMPRE VIVA ROAD
SCALE: 1"= 100' HORIZ.; 1"= 10' VERT.





4 LANE MAJOR ROAD
TYPICAL SECTION (PUBLIC)
SIEMPRE VIVA ROAD
NO SCALE

NOTE:
ROAD DESIGN SHOWN FOR ROUTE STUDY ALIGNMENT AND GRADE ONLY; DESIGN OF ROADWAY AND GRADING APPURTENANCES TO FOLLOW APPROVAL OF ROUTE STUDY

CENTERLINE DATA

NO.	BEARING-DELTA	RADIUS	LENGTH	REMARKS
2	Δ=43°20'04"	1850.00'	1406.63'	FROM 100+10.42
3	N47°10'21"E	--	1774.13'	
4	Δ=42°29'23"	1850.00'	1361.17'	
8	N89°19'44"E	--	160.73'	

ROADWAY DESIGN CRITERIA: SIEMPRE VIVA ROAD (ULTIMATE ROADWAY WIDTH)
PROPOSED CLASSIFICATION: MAJOR ROAD
RIGHT OF WAY: 98FT
DESIGN SPEED: 55 MPH
DAYLIGHT SLOPE GRADIENT: 2:1 MAX

SCALE: 1" = 100'

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SAN DIEGO, CALIFORNIA

ULTIMATE
PRELIMINARY ROUTE STUDY
SIEMPRE VIVA ROAD

DATE: 08/01/08
SCE NO. 03043.03
SHEET
7
7 OF 13 SHEETS

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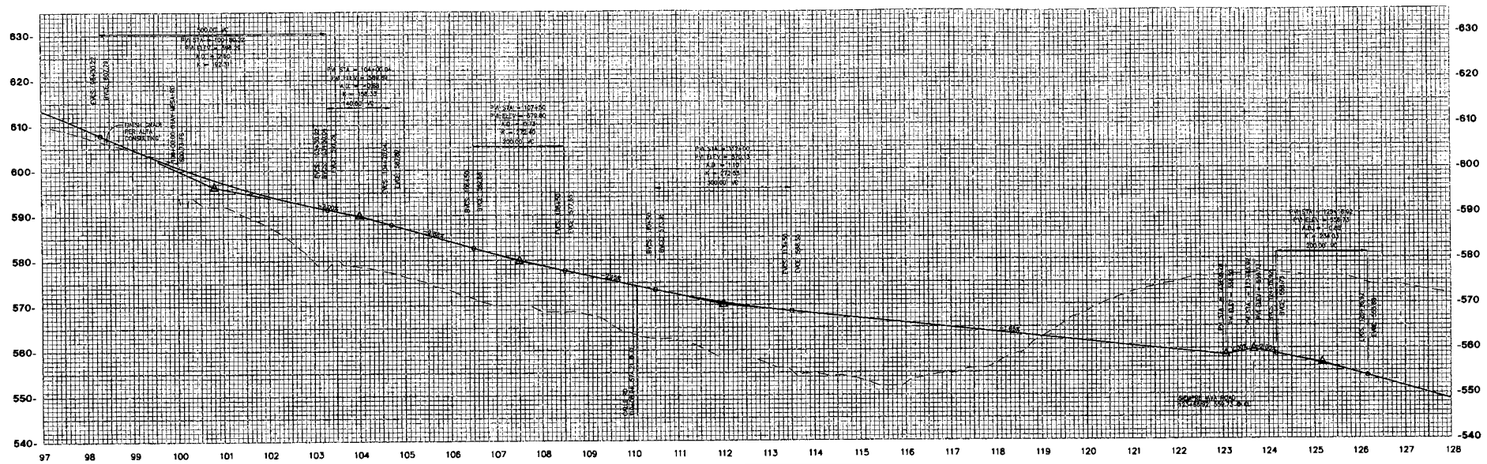
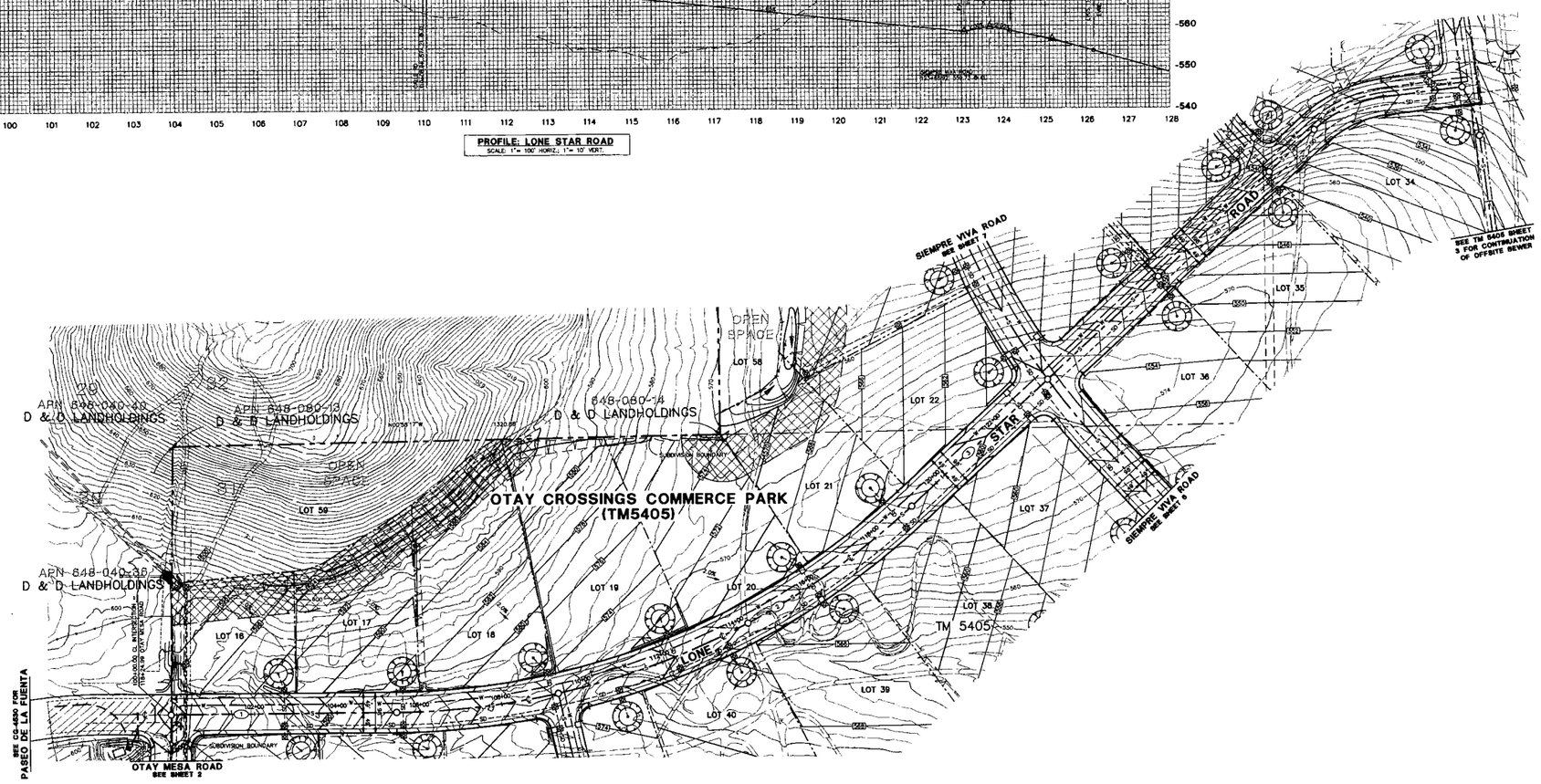


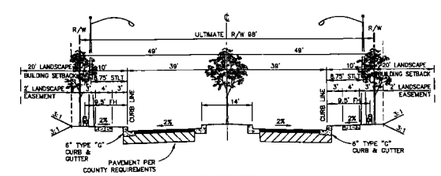
PROFILE: LONE STAR ROAD
SCALE: 1"= 100' HORIZ.; 1"= 10' VERT.



CENTERLINE DATA				
NO.	BEARING-DELTA	RADIUS	LENGTH	REMARKS
1	N00°16'30"W		543.82'	
2	Δ=42°33'08"	1850.00'	1373.95'	
3	N42°49'38"W		425.42'	

ROADWAY DESIGN CRITERIA: LONE STAR ROAD (ULTIMATE ROADWAY WIDTH)

PROPOSED CLASSIFICATION: MAJOR ROAD – GATEWAY TO SIEMPRE VIVA ROAD
RIGHT OF WAY: 98FT
DESIGN SPEED: 55 MPH
DAYLIGHT SLOPE GRADIENT: 2:1 MAX



4 LANE MAJOR ROAD
TYPICAL SECTION (PUBLIC)
LONE STAR ROAD
NO SCALE

NOTE:
ROAD DESIGN SHOWN FOR ROUTE STUDY ALIGNMENT AND GRADE ONLY; DESIGN OF ROADWAY AND GRADING APPURTENANCES TO FOLLOW APPROVAL OF ROUTE STUDY

SCALE: 1"= 100'
0 50 100 200 300
SCALE: 1" = 100'

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SAN DIEGO, CALIFORNIA

ULTIMATE
PRELIMINARY ROUTE STUDY
LONE STAR ROAD

DATE: 08/01/08
SCE NO. 03043.03
SHEET
8
8 OF 13 SHEETS

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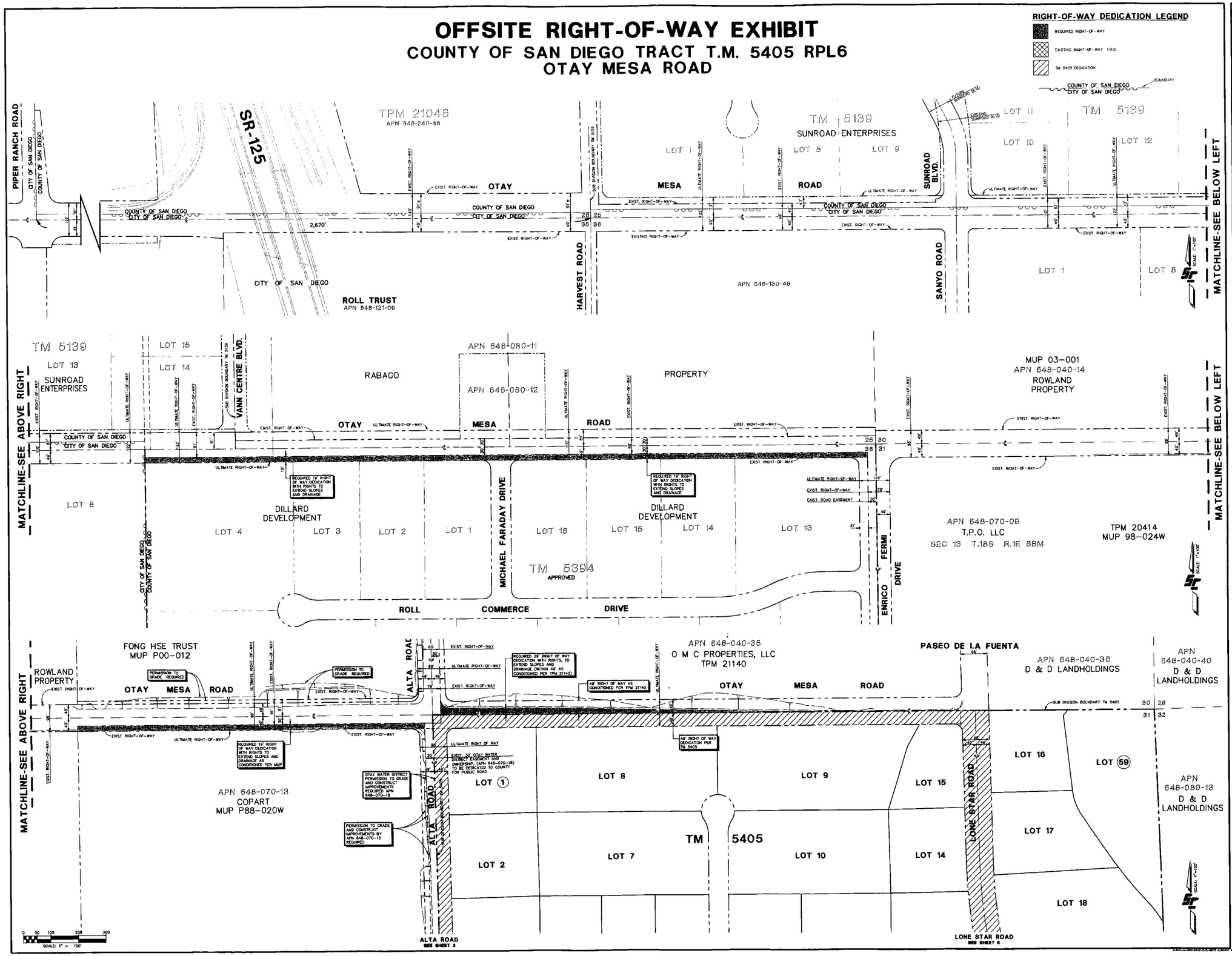
OFFSITE RIGHT-OF-WAY EXHIBIT
COUNTY OF SAN DIEGO TRACT T.M. 5405 RPL6
OTAY MESA ROAD



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INTERIM
PRELIMINARY ROUTE STUDY
COUNTY OF SAN DIEGO (CIRCULATION ELEMENT ROADWAYS)

DATE: 08/01/08
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9 OF 13 SHEETS

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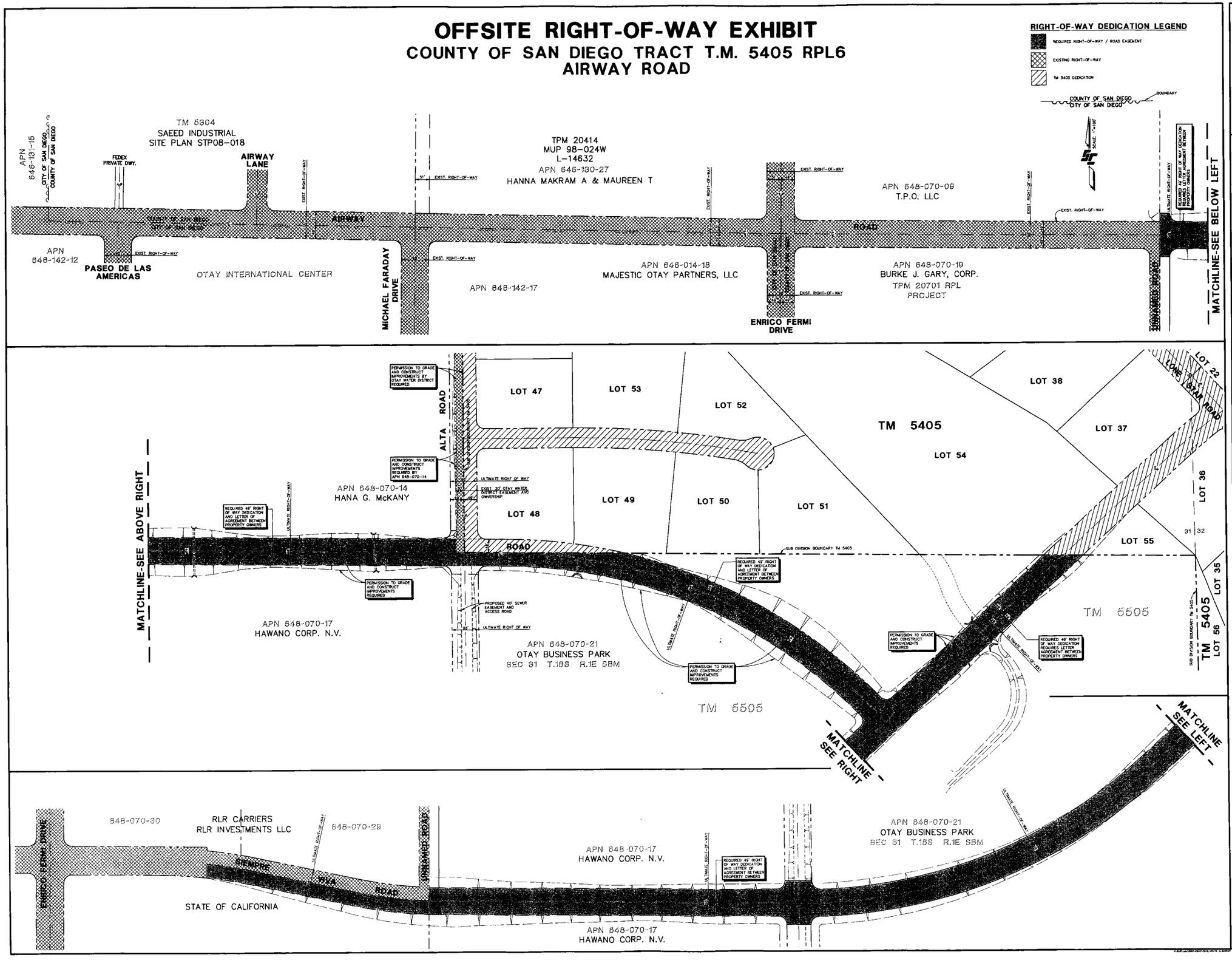
OFFSITE RIGHT-OF-WAY EXHIBIT
COUNTY OF SAN DIEGO TRACT T.M. 5405 RPL6
AIRWAY ROAD



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SAN DIEGO, CALIFORNIA

INTERIM
PRELIMINARY ROUTE STUDY
COUNTY OF SAN DIEGO (CIRCULATION ELEMENT ROADWAYS)

DATE: 08/01/08
SCE NO. 03043.03
SHEET 10
10 OF 13 SHEETS

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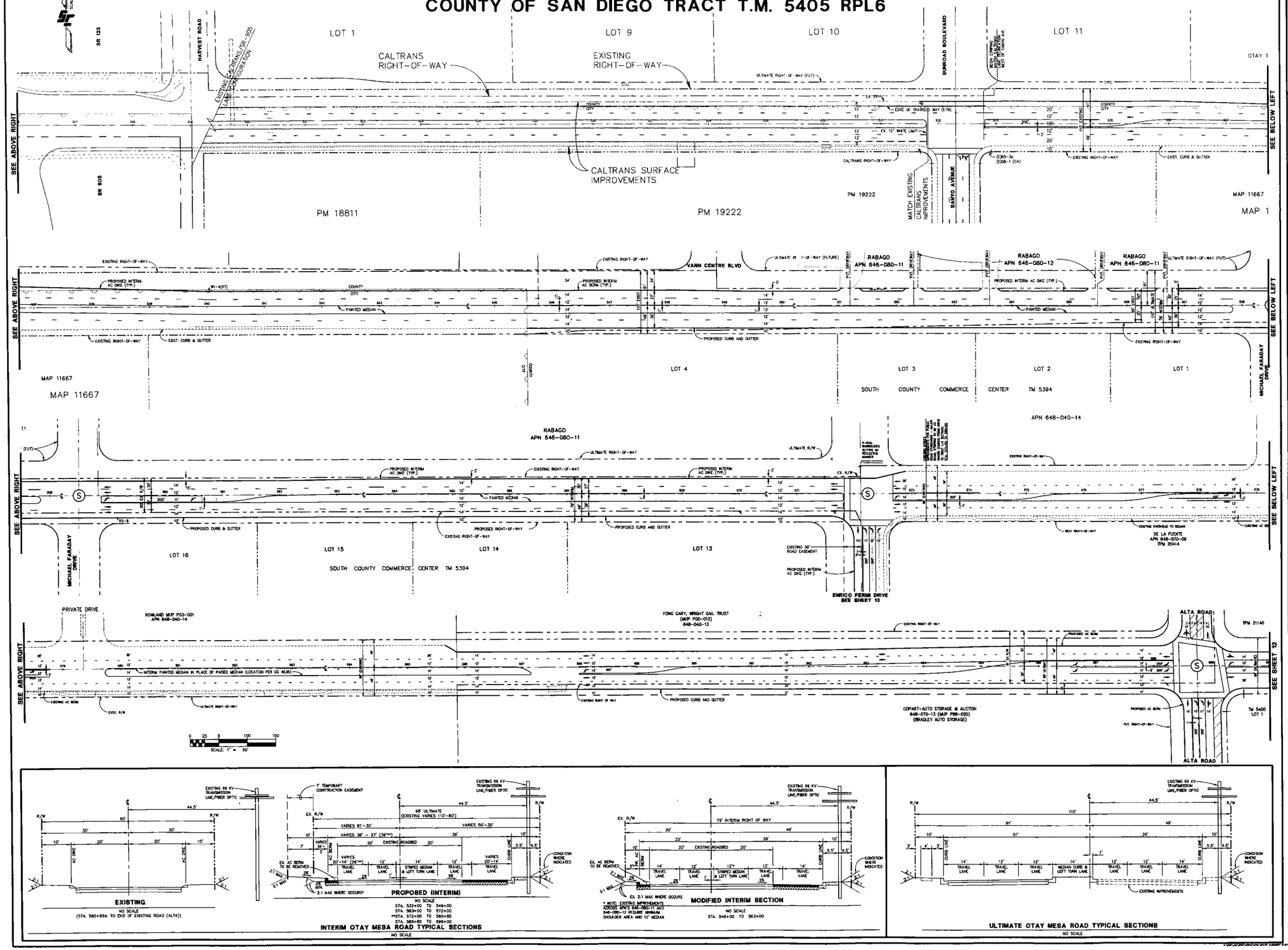
STRIPING PLAN
COUNTY OF SAN DIEGO TRACT T.M. 5405 RPL6



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COUNTY OF SAN DIEGO TRACT 5405 RPL6
OTAY CROSSINGS COMMERCE PARK
SAN DIEGO, CALIFORNIA

OTAY MESA ROAD (SANYO AVENUE TO ALTA ROAD)
INTERIM STRIPING (DIRECT IMPACTS)
PRELIMINARY ROUTE STUDY
COUNTY OF SAN DIEGO (CIRCULATION ELEMENT ROADWAYS)

DATE: 11/25/08
SCE NO. 03043.03
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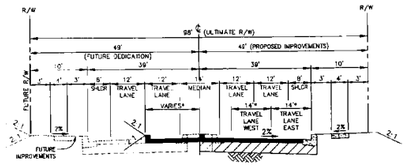
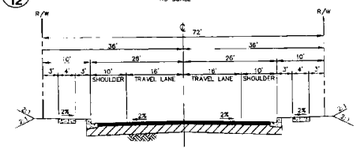
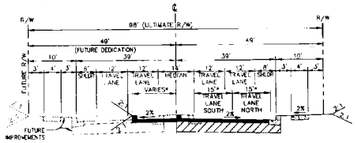
STRIPING PLAN
COUNTY OF SAN DIEGO TRACT T.M. 5405 RPL6



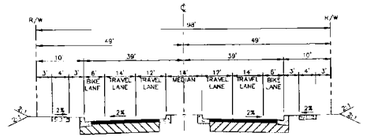
4 LANE MAJOR ROAD
TYPICAL SECTION (PUBLIC)
OTAY MESA ROAD
NO SCALE



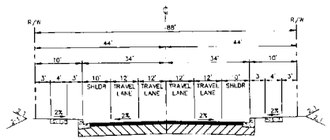
2 LANE INDUSTRIAL/COMMERCIAL LOCAL ROAD
TYPICAL SECTION (PUBLIC)
INTERIOR STREETS "CALLE VENTNER"
STREETS A, B, C AND D
NO SCALE



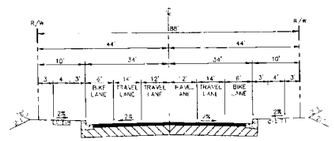
4 LANE MAJOR ROAD
TYPICAL SECTION (PUBLIC)
ALTA ROAD
NO SCALE



4 LANE MAJOR ROAD
TYPICAL SECTION (PUBLIC)
SIEMPRE VIVA ROAD (WEST OF LONE STAR ROAD)
LONE STAR ROAD (NORTH OF SIEMPRE VIVA ROAD)
AIRWAY ROAD
NO SCALE

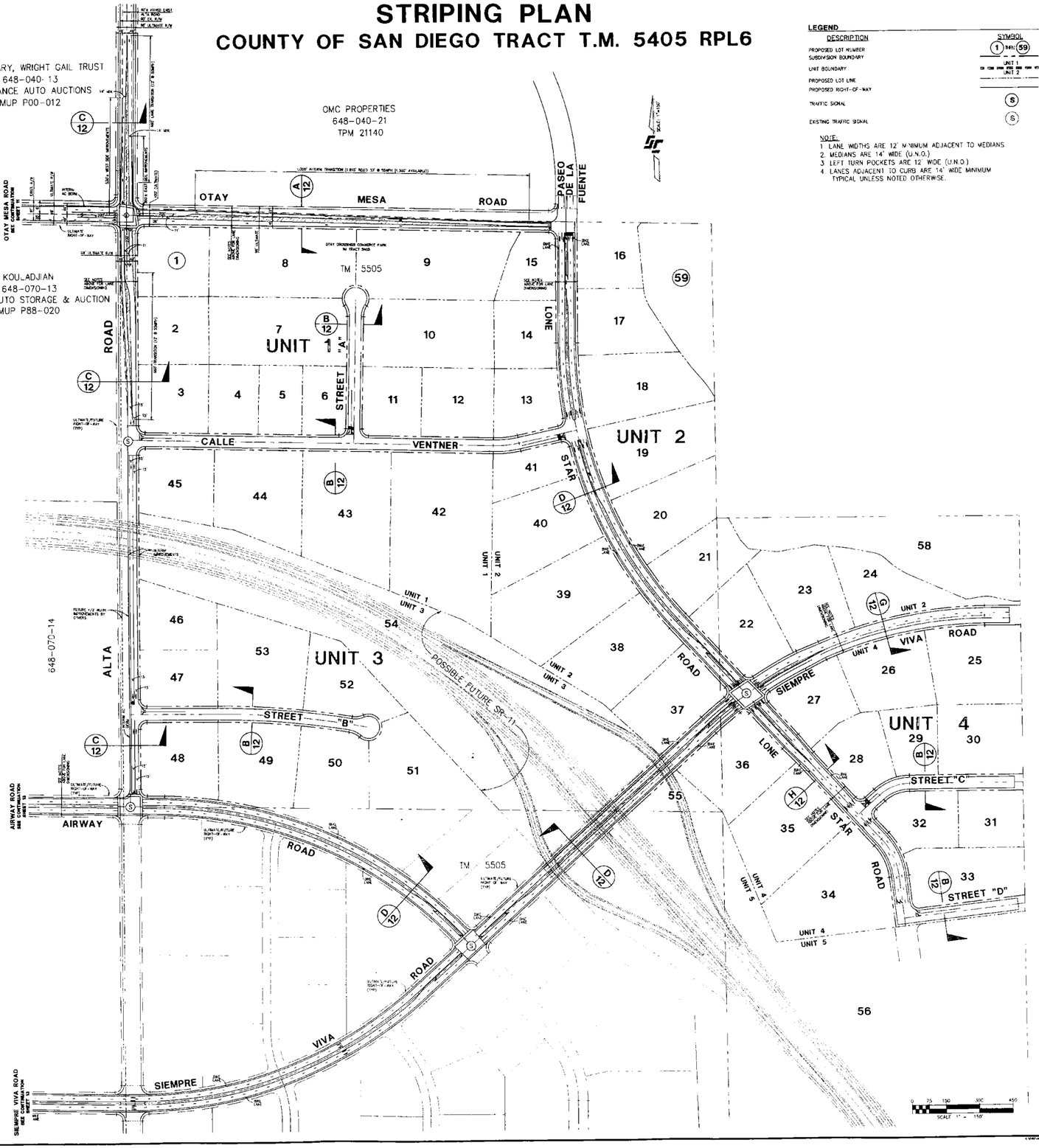


4 LANE INDUSTRIAL/COMMERCIAL COLLECTOR
TYPICAL SECTION (PUBLIC)
SIEMPRE VIVA ROAD (EAST OF LONE STAR ROAD)
NO SCALE



4 LANE INDUSTRIAL/COMMERCIAL COLLECTOR
TYPICAL SECTION (PUBLIC)
LONE STAR ROAD (SOUTH OF SIEMPRE VIVA ROAD)
NO SCALE

NOTE:
SEE TM 5405 FOR FULL DETAIL ON TYPICAL SECTIONS INCLUDING LANDSCAPE EASEMENTS



LEGEND

DESCRIPTION	SYMBOL
PROPOSED LOT NUMBER	(1) SEE: (59)
SUBDIVISION BOUNDARY	
UNIT BOUNDARY	UNIT 1 / UNIT 2
PROPOSED LOT LINE	
PROPOSED RIGHT-OF-WAY	
TRAFFIC SIGNAL	(S)
EXISTING TRAFFIC SIGNAL	(S)

NOTE:
1. LANE WIDTHS ARE 12' MINIMUM ADJACENT TO MEDIANS
2. MEDIANS ARE 14' WIDE (U.N.O.)
3. LEFT TURN POCKETS ARE 12' WIDE (U.N.O.)
4. LANES ADJACENT TO CURB ARE 14' WIDE MINIMUM TYPICAL UNLESS NOTED OTHERWISE.

STEVENS CRESTO ENGINEERING, INC.
CIVIL ENGINEERS - PLANNERS - LAND SURVEYORS
9665 CHESAPEAKE DRIVE SUITE 350
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PHONE: 858.614.5000
FAX: 858.614.5001
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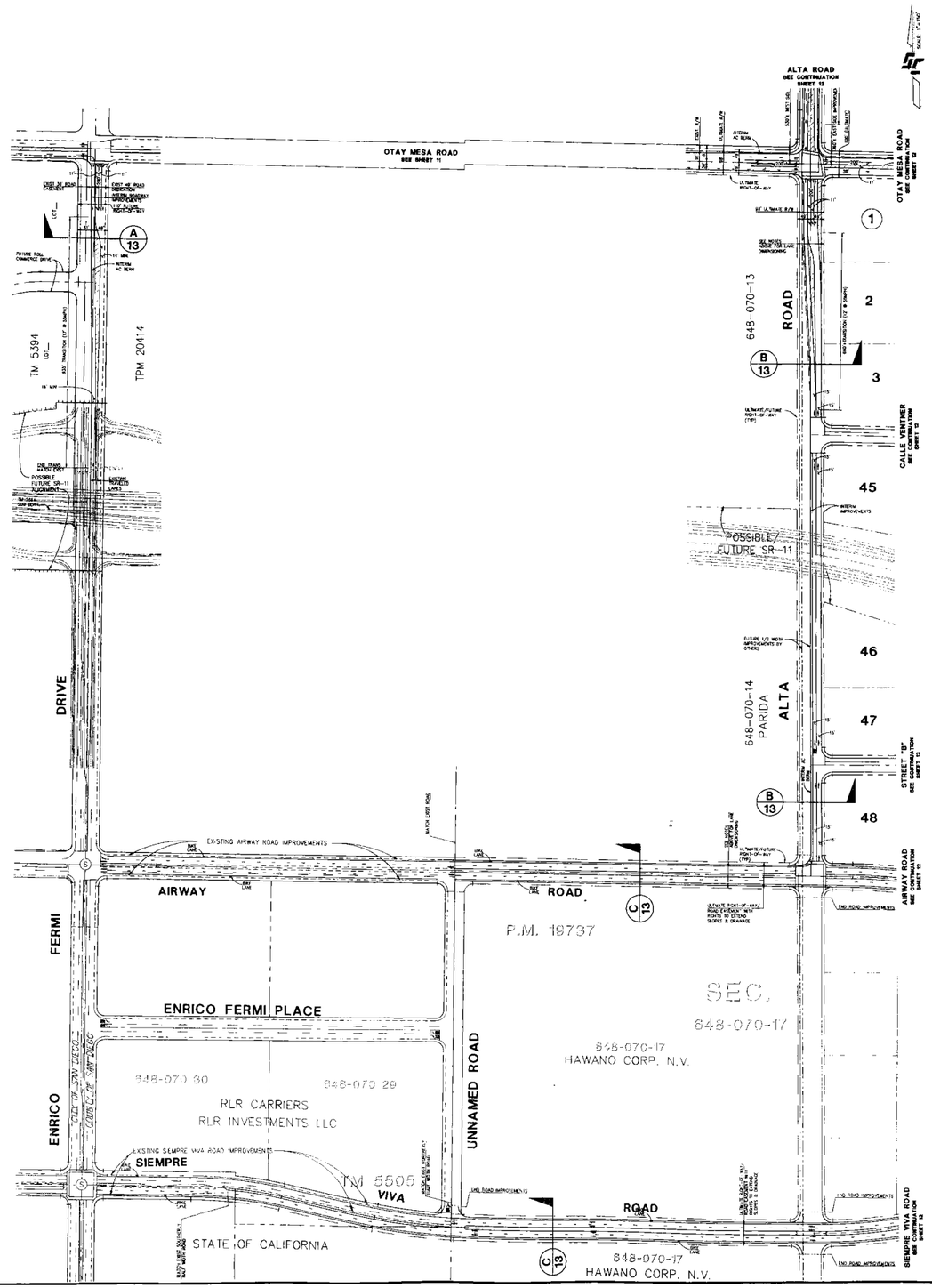
COUNTY OF SAN DIEGO TRACT 5405 RPL6
OTAY CROSSINGS COMMERCE PARK
SAN DIEGO, CALIFORNIA

AIRWAY, SIEMPRE VIVA, ENRICO FERMI DRIVE, & ALTA ROAD
INTERIM STRIPING (DIRECT IMPACTS)
PRELIMINARY ROUTE STUDY
COUNTY OF SAN DIEGO (CIRCULATION ELEMENT ROADWAYS)

DATE: 11/26/08
SCE NO. 03043.03
SHEET 12
12 OF 13 SHEETS

Q-12

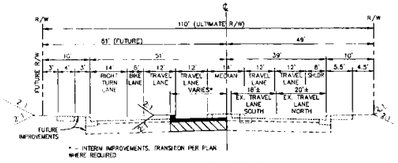
STRIPING PLAN
COUNTY OF SAN DIEGO TRACT T.M. 5405 RPL6



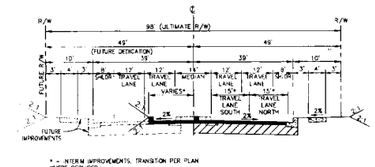
LEGEND

DESCRIPTION	SYMBOL
PROPOSED LOT NUMBER	1 THRU 59
SUBDIVISION BOUNDARY	
UNIT BOUNDARY	UNIT 1 / UNIT 2
PROPOSED LOT LINE	
PROPOSED RIGHT-OF-WAY	
TRAFFIC SIGNAL	S
EXISTING TRAFFIC SIGNAL	S

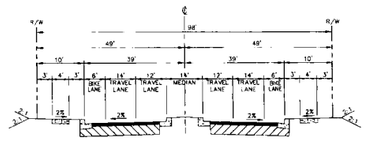
NOTE:
1. LANE WIDTHS ARE 12' MINIMUM ADJACENT TO MEDIANS
2. MEDIANS ARE 14' WIDE (U.N.O.)
3. LEFT TURN POCKETS ARE 12' WIDE (U.N.O.)
4. LANES ADJACENT TO CURB ARE 14' WIDE MINIMUM TYPICAL UNLESS NOTED OTHERWISE.



4 LANE MAJOR ROAD
TYPICAL SECTION (PUBLIC)
ENRICO FERMI DRIVE
A/13
NO SCALE



4 LANE MAJOR ROAD
TYPICAL SECTION (PUBLIC)
ALTA ROAD
B/13
NO SCALE



4 LANE MAJOR ROAD
TYPICAL SECTION (PUBLIC)
SIEMPRE VIVA ROAD
AIRWAY ROAD
C/13
NO SCALE

NOTE:
SEE TM 5405 FOR FULL DETAILED TYPICAL SECTIONS, INCLUDING LANDSCAPE EASEMENTS

0 75 150 300 450
SCALE: 1" = 150'

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INTERIM STRIPING (DIRECT IMPACTS)
PRELIMINARY ROUTE STUDY
COUNTY OF SAN DIEGO (CIRCULATION ELEMENT ROADWAYS)

DATE: 11/28/06
SCE NO. 03043.03
SHEET 13
13 OF 13 SHEETS

Q-13