

## ARTERIAL MANAGEMENT/SIGNAL TIMING PROJECTS

Version 1, updated 1/8/08 (GG)

General Project Information			
<b>Project Title:</b>	City of San Jose	<b>Calculated by:</b>	D. Gianchandani
<b>Project Sponsor:</b>	Citywide Traffic Signal Project	<b>Project Sponsor Email:</b>	
<b>Project Sponsor Contact:</b>	Lily Lim-Tsao	<b>Project Sponsor City:</b>	San Jose
<b>Project Sponsor Phone #:</b>	408-975-3269	<b>Project Sponsor Zip Code:</b>	95113
<b>Project Sponsor Address:</b>	200 E. Santa Clara, San Jose, CA		

Cost Effectiveness Inputs	
<b># Years Effectiveness:</b>	3
<b>Total Project Cost:</b>	\$20,000,000
<b>TLSP Cost:</b>	\$15,000,000
<b>Total TLSP Cost:</b>	\$15,000,000

Emission Reduction Calculations											
A	B	C	D	E	F	G	H	I	J	K	L
Name of Arterial	Segment Length (miles)	Days/Yr.	Time Period	Traffic Volume	Travel Speed w/o Project	Travel Speed w/ Project	Percent Speed Increase	ROG Emission Reductions (lbs/yr)	NOx Emission Reductions (lbs/yr)	PM Emission Reductions (lbs/yr)	CO2 Emission Reductions (lbs/yr)
Aborn Road	0.94	260		47500	25	28.75	15.0%	479.45	223.74	0.00	575336
Almaden Ave (NB)	0.91	260		16000	28	32.2	15.0%	175.10	166.77	83.38	206624
Almaden Blvd	0.46	260		24000	14	16.1	15.0%	325.61	455.22	66.39	402235
Alum Rock Ave	0.99	260		34000	20	23	15.0%	289.15	385.53	0.00	520470
Bascom Ave	6	260		31000	14	16.1	15.0%	5485.77	7669.43	1118.46	6776791
Berryessa Road East	2.1	260		30500	23	26.45	15.0%	999.55	898.68	366.81	1138933
Bird Ave/Montgomery St	1.72	260		18900	17	19.55	15.0%	712.10	763.29	186.17	674119
Blossom Hill Rd	3.94	260		35125	23	26.45	15.0%	2159.72	1941.76	792.56	2460887
Branham	0.8	260		25000	20	23	15.0%	171.81	229.07	0.00	309251
Brokaw Rd	3.23	260		41000	28	32.2	15.0%	1592.66	1516.82	758.41	1879339
Camden Ave	1.9	260		45000	20	23	15.0%	734.47	979.30	0.00	1322048
Capitol Expressway	0.84	260		48000	16	18.4	15.0%	600.36	831.27	46.18	786933
Coleman	1.75	260		44000	25	28.75	15.0%	826.82	385.85	0.00	992181
Cottle Road	0.84	260		34750	16	18.4	15.0%	434.64	601.80	33.43	569707
Curtner Ave	0.97	260		34000	27	31.05	15.0%	193.59	382.47	4.72	458960
Eleventh Street	2.06	260		26000	26	29.9	15.0%	306.73	598.13	0.00	717751
First St-Monterey Road	2.55	260		23500	24	27.6	15.0%	617.73	686.37	0.00	947185
Fourth St	1.08	260		12000	19	21.85	15.0%	254.20	254.20	74.22	267564
Gaudalupe/West Valley/Santa Teresa	0.26	260		60500	13	14.95	15.0%	526.99	702.65	87.83	546313
Hamilton Ave	1.5	260		30000	20	23	15.0%	386.56	515.42	0.00	695815
Hedding St	0.27	260		19200	28	32.2	15.0%	62.35	59.38	29.69	73567
Hillsdale Ave	1.12	260		27000	27	31.05	15.0%	177.51	350.69	4.33	420829
Julian St	0.37	260		12000	11	12.65	15.0%	104.89	167.82	20.98	130480
Keyes Street	0.41	260		17000	18	20.7	15.0%	161.66	201.58	13.97	153039
King Road	3.69	260		27750	26	29.9	15.0%	586.42	1143.51	0.00	1372217
Leigh Ave	0.23	260		19000	31	35.65	15.0%	25.03	33.16	0.00	45385
Lincoln Ave	1.52	260		23500	20	23	15.0%	306.85	409.13	0.00	552322
Market	0.62	260		15600	11	12.65	15.0%	228.49	365.58	45.70	284235
McKee Rd	1.31	260		33500	20	23	15.0%	376.99	502.65	0.00	678574
McLaughlin Ave	1.2	260		24600	13	14.95	15.0%	988.99	1318.65	164.83	1025248
Meridian Ave	3.99	260		39900	46	52.9	15.0%	0.00	-1823.45	-911.72	-314545
Monterey Road	5.92	260		33000	56	64.4	15.0%	-1342.56	-7160.33	0.00	-3378781
Moorpark Ave	1	260		23500	32	36.8	15.0%	188.41	188.41	0.00	251937
Oakland Road	1.01	260		29500	14	16.1	15.0%	878.76	1228.55	179.16	1085562
Park Ave	1.22	260		11500	41	47.15	15.0%	80.35	-6.03	80.35	39531
Piedmont Road	0.69	260		18000	42	48.3	15.0%	0.00	-71.13	0.00	33074
Prospect Road	1.25	260		26500	20	23	15.0%	284.55	379.41	0.00	512197
San Carlos	1.64	260		26500	20	23	15.0%	373.33	497.78	0.00	672003
Santa Clara Street	2.5	260		24000	15	17.25	15.0%	1116.74	1503.30	343.61	1097841
Santa Teresa Blvd	5.88	260		35000	28	32.2	15.0%	2475.04	2357.18	1178.59	2920547
Saratoga Ave	1.86	260		41500	25	28.75	15.0%	828.86	386.80	0.00	994629
Second St	0.35	260		4000	7	8.05	15.0%	33.67	50.51	4.21	18268
Senter Road	0.89	260		35000	19	21.85	15.0%	610.99	610.99	178.39	643103
Seventh Street	0.31	260		17000	30	34.5	15.0%	37.73	30.18	0.00	52967
Snell Ave	1.72	260		25500	34	39.1	15.0%	251.18	251.18	0.00	367226
St. James Street	0.36	260		10500	9	10.35	15.0%	131.51	175.35	14.61	63417
St. John Street	0.31	260		10400	10	11.5	15.0%	69.24	110.78	13.85	86132
Stevens Creek Blvd	2.37	260		36500	16	18.4	15.0%	1288.05	1783.45	99.08	1688334
Stockton	0.63	260		11000	19	21.85	15.0%	135.93	135.93	39.69	143072
Story Road	2.66	260		37600	21	24.15	15.0%	902.13	1474.91	0.00	1623828
Taylor St	0.59	260		13000	21	24.15	15.0%	69.18	113.11	0.00	124528
Tenth Street	1.58	260		25000	16	18.4	15.0%	588.15	814.36	45.24	770929
The Alameda	1.25	260		34000	28	32.2	15.0%	511.12	486.78	243.39	603126
Third St	1.08	260		9250	26	29.9	15.0%	57.21	111.56	0.00	133875
Thirteenth Street	0.8	260		7600	38	43.7	15.0%	0.00	0.00	0.00	35376
Trimble Rd	0.77	260		34500	19	21.85	15.0%	521.06	521.06	152.13	548444
Tully Road	2.57	260		47700	19	21.85	15.0%	2404.53	2404.53	702.05	2530896
Vine St (SB)	0.89	260		14700	33	37.95	15.0%	74.92	149.85	0.00	132542
White Road	3.54	260		28000	38	43.7	15.0%	0.00	0.00	0.00	576730
Winchester Blvd	2.23	260		31000	20	23	15.0%	593.85	791.80	0.00	1068926
<b>Total Emission Reductions</b>								33456.08	32236.72	6260.69	42110051

Cost Effectiveness Results	Annual	Lifetime	
1. VMT Reduced	-429,909	-1,289,727	Miles
2. Trips Reduced	-126,444	-379,332	Trips
3. Annual ROG Emissions	16.73	50.18	Tons
4. Annual NOx Emissions	16.12	48.36	Tons
5. Annual PM Emissions	3.13	9.39	Tons
6. Weighted PM Emissions	62.61	187.82	Tons
7. CO2 Emissions Reduced	21055.03	63165.08	Tons
8. Emission Reductions (ROG, NOx & PM)	35.98	107.93	Tons
9. TSLP Project Cost - Cost Effectiveness (ROG, NOx & PM)		\$138,979	/Ton
10. TSLP Project Cost - Cost Effectiveness (ROG, NOx & Weighted PM)		<b>\$52,382</b>	/Ton