

DRAFT CITYWIDE TRAFFIC IMPROVEMENT PLAN TECHNICAL APPENDIX

Prepared for:



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Appendix A
Traffic Volumes

AM Peak Hour - Existing Conditions
Cotati Circulation Improvement Study
City of Cotati

Intersection Volume Report
Base Volume Alternative

Node Intersection	Northbound			Southbound			Eastbound			Westbound		
	L	--	T -- R	L	--	T -- R	L	--	T -- R	L	--	T -- R
1 Redwood Dr/He	51	277	0	0	178	27	39	0	37	0	0	0
2 Commerce Blvd	0	390	7	37	543	0	0	0	0	12	0	53
3 Old Redwood H	0	743	365	0	0	0	0	0	0	406	0	175
4 Gravenstein H	1	0	7	7	0	12	14	611	1	5	607	6
5 Gravenstein H	6	0	50	0	0	0	0	639	5	12	626	0
6 Gravenstein H	41	17	83	188	13	36	73	547	33	69	561	268
7 Gravenstein H	0	0	0	418	4	218	0	592	203	145	660	0
8 Gravenstein H	267	0	88	0	0	0	0	1013	0	0	602	0
9 Gravenstein H	254	626	9	1	119	265	420	29	604	47	45	31
10 Old Redwood H	11	832	3	4	717	25	47	1	16	5	1	22
11 W Sierra Ave/	0	0	0	24	9	1	3	135	4	134	166	21
12 W Sierra Ave/	12	0	85	0	0	0	0	146	0	0	313	0
13 W Sierra Ave/	0	0	0	18	0	20	15	308	0	0	252	16
14 Old Redwood H	8	316	1	324	389	57	93	168	6	19	186	427
15 E Cotati Ave/	1	0	111	0	0	0	0	490	3	230	615	0
16 E Cotati Ave/	127	2	51	0	0	3	8	555	87	45	717	3
17 E Cotati Ave/	0	0	0	173	0	218	98	487	0	0	586	154
18 E Cotati Ave/	200	7	281	7	4	5	10	542	98	170	614	3
19 E Cotati Ave/	0	0	0	73	0	55	59	721	0	0	645	121
20 E Cotati Ave/	10	0	10	0	0	0	0	860	14	8	702	0
21 Old Redwood H	15	271	93	6	332	9	12	15	16	197	12	16
22 Old Redwood H	26	320	41	22	557	5	16	29	63	195	41	67

PM Peak Hour - Existing Conditions
Cotati Circulation Improvement Study
City of Cotati

Intersection Volume Report
Base Volume Alternative

Node Intersection	Northbound			Southbound			Eastbound			Westbound		
	L	--	T -- R	L	--	T -- R	L	--	T -- R	L	--	T -- R
1 Redwood Dr/He	30	326	0	0	436	22	39	0	38	0	0	0
2 Commerce Blvd	0	721	13	74	538	0	0	0	0	14	0	47
3 Old Redwood H	0	549	635	0	0	0	0	0	0	353	0	74
4 Gravenstein H	1	0	3	7	0	16	2	561	4	0	777	19
5 Gravenstein H	3	0	28	0	0	0	0	601	12	40	787	0
6 Gravenstein H	32	10	85	360	35	96	69	502	19	90	742	286
7 Gravenstein H	0	0	0	587	0	176	0	693	242	89	862	0
8 Gravenstein H	358	0	172	0	0	0	0	1265	0	0	628	0
9 Gravenstein H	333	680	42	16	220	185	502	70	790	53	39	37
10 Old Redwood H	12	978	6	22	997	49	62	2	26	3	2	23
11 W Sierra Ave/	0	0	0	21	6	0	1	133	10	102	123	36
12 W Sierra Ave/	21	0	201	0	0	0	0	158	0	0	244	0
13 W Sierra Ave/	0	0	0	13	0	19	23	369	0	0	303	24
14 Old Redwood H	17	498	10	432	443	109	87	256	6	16	212	399
15 E Cotati Ave/	5	0	231	0	0	0	0	687	6	129	561	0
16 E Cotati Ave/	143	1	102	5	2	8	2	954	156	61	605	2
17 E Cotati Ave/	0	0	0	145	0	133	221	814	0	0	644	108
18 E Cotati Ave/	162	6	197	3	2	11	18	794	151	152	694	0
19 E Cotati Ave/	0	0	0	30	0	54	94	834	0	2	747	60
20 E Cotati Ave/	15	0	6	0	0	0	0	879	13	10	743	0
21 Old Redwood H	12	463	182	28	340	23	18	24	22	113	18	28
22 Old Redwood H	76	667	208	101	350	13	13	52	24	90	24	45

AM Peakhour - Buildout Conditions
Cotati Circulation Improvement Study
City of Cotati

Intersection Volume Report
Future Volume Alternative

Node Intersection	Northbound			Southbound			Eastbound			Westbound		
	L	--	T -- R	L	--	T -- R	L	--	T -- R	L	--	T -- R
1 Redwood Dr/He	181	331	0	0	230	57	53	0	61	0	0	0
2 Commerce Blvd	0	443	9	38	594	0	0	0	0	18	0	55
3 Old Redwood H	0	944	420	0	0	0	0	0	0	461	0	176
4 Gravenstein H	1	0	7	46	0	28	57	1024	1	5	896	80
5 Gravenstein H	13	0	67	0	0	0	0	1087	9	26	983	0
6 Gravenstein H	41	17	83	265	13	56	97	1034	33	69	980	456
7 Gravenstein H	0	0	0	534	4	368	0	857	502	164	1117	0
8 Gravenstein H	524	0	111	0	0	0	0	1394	0	0	821	0
9 Gravenstein H	444	787	10	1	158	289	518	31	908	51	50	34
10 Old Redwood H	11	1183	3	4	1039	28	53	1	16	5	1	22
11 W Sierra Ave/	0	0	0	25	12	2	4	183	13	187	190	27
12 W Sierra Ave/	20	0	124	0	0	0	0	195	0	0	389	0
13 W Sierra Ave/	0	0	0	35	0	23	16	395	0	0	301	24
14 Old Redwood H	8	467	32	559	464	69	122	235	6	37	226	597
15 E Cotati Ave/	1	0	140	0	0	0	0	823	3	245	843	0
16 E Cotati Ave/	135	2	81	0	0	3	8	909	93	54	932	3
17 E Cotati Ave/	0	0	0	200	0	230	107	855	0	0	794	162
18 E Cotati Ave/	226	7	309	7	4	5	10	929	106	177	804	3
19 E Cotati Ave/	0	0	0	97	0	55	59	1136	0	0	842	127
20 E Cotati Ave/	97	0	20	0	0	0	0	1159	153	25	810	0
21 Old Redwood H	15	428	122	6	415	9	12	15	16	212	12	16
22 Old Redwood H	45	500	44	23	652	5	16	29	79	198	42	70

PM Peak Hour - Buildout Conditions
Cotati Circulation Improvement Study
City of Cotati

Intersection Volume Report
Future Volume Alternative

Node Intersection	Northbound			Southbound			Eastbound			Westbound		
	L	--	T -- R	L	--	T -- R	L	--	T -- R	L	--	T -- R
1 Redwood Dr/He	87	400	0	0	512	47	78	0	115	0	0	0
2 Commerce Blvd	0	792	19	76	613	0	0	0	0	17	0	48
3 Old Redwood H	0	908	712	0	0	0	0	0	0	430	0	75
4 Gravenstein H	1	0	3	148	0	66	29	970	4	0	1115	65
5 Gravenstein H	8	0	44	0	0	0	0	1143	21	63	1166	0
6 Gravenstein H	32	10	85	533	35	128	101	1151	19	90	1211	429
7 Gravenstein H	0	0	0	779	0	310	0	1201	556	122	1340	0
8 Gravenstein H	558	0	202	0	0	0	0	1966	0	0	938	0
9 Gravenstein H	609	895	47	17	285	217	741	78	1273	56	42	39
10 Old Redwood H	12	1451	6	22	1548	57	67	2	26	3	2	23
11 W Sierra Ave/	0	0	0	23	12	1	2	191	16	159	198	42
12 W Sierra Ave/	36	0	265	0	0	0	0	218	0	0	368	0
13 W Sierra Ave/	0	0	0	27	0	21	26	466	0	0	418	44
14 Old Redwood H	17	616	53	764	629	142	109	336	6	61	302	732
15 E Cotati Ave/	5	0	260	0	0	0	0	1142	6	166	1029	0
16 E Cotati Ave/	151	1	142	5	2	8	2	1409	166	104	1093	2
17 E Cotati Ave/	0	0	0	183	0	147	238	1279	0	0	1143	148
18 E Cotati Ave/	177	6	233	3	2	11	18	1271	178	192	1218	0
19 E Cotati Ave/	0	0	0	65	0	54	94	1347	0	2	1311	96
20 E Cotati Ave/	168	0	24	0	0	0	0	1305	127	24	1186	0
21 Old Redwood H	12	595	211	28	536	23	18	24	22	150	18	28
22 Old Redwood H	99	820	211	105	574	13	13	53	49	93	25	47

Appendix B
Intersection Level of Service Calculations

AM Peak Hour - Existing Conditions
Cotati Circulation Improvement Study
City of Cotati

Level of Service Computation Report
2000 HCM Unsignalized Method (Base Volume Alternative)

Intersection #1 Redwood Dr/Helman Ln

Average Delay (sec/veh): 2.7 Worst Case Level Of Service: B[13.8]

Table with 4 columns: Approach (North Bound, South Bound, East Bound, West Bound), Movement (L-T-R), Control (Uncontrolled, Stop Sign), Rights (Include), Lanes (0-1-0-0-0)

Volume Module:

Table with 12 columns for traffic volume and delay metrics: Base Vol, Growth Adj, Initial Bse, User Adj, PHF Adj, PHF Volume, Reduct Vol, Final Vol.

Critical Gap Module:

Table with 10 columns for critical gap and follow-up time metrics: Critical Gp, FollowUpTim.

Capacity Module:

Table with 10 columns for capacity metrics: Cnflct Vol, Potent Cap., Move Cap., Volume/Cap.

Level Of Service Module:

Table with 12 columns for level of service metrics: Queue, Stopped Del, LOS by Move, Movement, Shared Cap., SharedQueue, Shrd StpDel, Shared LOS, ApproachDel, ApproachLOS.

AM Peak Hour - Existing Conditions
Cotati Circulation Improvement Study
City of Cotati

Level of Service Computation Report
2000 HCM Unsignalized Method (Base Volume Alternative)

Intersection #2 Commerce Blvd/Wilford Ln

Average Delay (sec/veh): 1.4 Worst Case Level Of Service: B[14.4]

Table with 4 columns: Approach (North Bound, South Bound, East Bound, West Bound), Movement (L-T-R), Control (Uncontrolled, Stop Sign), Rights (Include), Lanes (0-0-1-0)

Volume Module:

Table with 12 columns for traffic volume and delay metrics: Base Vol, Growth Adj, Initial Bse, User Adj, PHF Adj, PHF Volume, Reduct Vol, Final Vol.

Critical Gap Module:

Table with 10 columns for critical gap and follow-up time metrics: Critical Gp, FollowUpTim.

Capacity Module:

Table with 10 columns for capacity metrics: Cnflct Vol, Potent Cap., Move Cap., Volume/Cap.

Level Of Service Module:

Table with 12 columns for level of service metrics: Queue, Stopped Del, LOS by Move, Movement, Shared Cap., SharedQueue, Shrd StpDel, Shared LOS, ApproachDel, ApproachLOS.

AM Peak Hour - Existing Conditions
Cotati Circulation Improvement Study
City of Cotati

Level Of Service Computation Report
2000 HCM Unsignalized Method (Base Volume Alternative)

Intersection #3 Old Redwood Highway/Commerce Blvd.

Average Delay (sec/veh): 45.2 Worst Case Level Of Service: F[122.4]

Table with columns: Approach, Movement, Control, Rights, Lanes. Rows for North, South, East, West bounds.

Volume Module table with columns: Base Vol, Growth Adj, Initial Bse, User Adj, PHF Adj, PHF Volume, Reduct Vol, Final Vol.

Critical Gap Module table with columns: Critical Gap, FollowUpTim.

Capacity Module table with columns: Cnflct Vol, Potent Cap., Move Cap., Volume/Cap.

Level Of Service Module table with columns: Queue, Stopped Del, LOS by Move, Movement, Shared Cap., SharedQueue, Shrd StpDel, Shared LOS, ApproachDel, ApproachLOS.

AM Peak Hour - Existing Conditions
Cotati Circulation Improvement Study
City of Cotati

Level Of Service Computation Report
2000 HCM Unsignalized Method (Base Volume Alternative)

Intersection #4 Gravenstein Hwy/Alder Ave

Average Delay (sec/veh): 0.8 Worst Case Level Of Service: D[25.8]

Table with columns: Approach, Movement, Control, Rights, Lanes. Rows for North, South, East, West bounds.

Volume Module table with columns: Base Vol, Growth Adj, Initial Bse, User Adj, PHF Adj, PHF Volume, Reduct Vol, Final Vol.

Critical Gap Module table with columns: Critical Gap, FollowUpTim.

Capacity Module table with columns: Cnflct Vol, Potent Cap., Move Cap., Volume/Cap.

Level Of Service Module table with columns: Queue, Stopped Del, LOS by Move, Movement, Shared Cap., SharedQueue, Shrd StpDel, Shared LOS, ApproachDel, ApproachLOS.

AM Peak Hour - Existing Conditions
Cotati Circulation Improvement Study
City of Cotati

Level Of Service Computation Report
2000 HCM Unsignalized Method (Base Volume Alternative)

Intersection #5 Gravenstein Hwy/W Cotati Ave

Average Delay (sec/veh): 1.0 Worst Case Level Of Service: C[21.7]

Approach: North Bound South Bound East Bound West Bound
Movement: L - T - R L - T - R L - T - R L - T - R

Control: Stop Sign Stop Sign Uncontrolled Uncontrolled
Rights: Include Include Channel Include
Lanes: 1 0 0 0 1 0 0 0 0 0 0 0 0 1 0 0 0 0

Volume Module:
Base Vol: 6 0 50 0 0 0 0 639 5 12 626 0
Growth Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
Initial Bse: 6 0 50 0 0 0 0 639 5 12 626 0
User Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
PHF Adj: 0.86 0.86 0.86 1.00 1.00 1.00 0.80 0.80 0.80 0.89 0.89 0.89
PHF Volume: 7 0 58 0 0 0 0 799 6 13 703 0
Reduct Vol: 0 0 0 0 0 0 0 0 0 0 0 0
Final Vol.: 7 0 58 0 0 0 0 799 6 13 703 0

Critical Gap Module:
Critical Gp: 6.4 xxxxx 6.2 xxxxx xxxxx xxxxx xxxxx xxxxx 4.1 xxxxx xxxxx
FollowUpTim: 3.5 xxxxx 3.3 xxxxx xxxxx xxxxx xxxxx xxxxx 2.2 xxxxx xxxxx

Capacity Module:
Cnflct Vol: 1880 xxxxx 799 xxxxx xxxxx xxxxx xxxxx xxxxx 799 xxxxx xxxxx
Potent Cap.: 64 xxxxx 386 xxxxx xxxxx xxxxx xxxxx xxxxx 811 xxxxx xxxxx
Move Cap.: 63 xxxxx 386 xxxxx xxxxx xxxxx xxxxx xxxxx 811 xxxxx xxxxx
Volume/Cap: 0.11 xxxxx 0.15 xxxxx xxxxx xxxxx xxxxx xxxxx 0.02 xxxxx xxxxx

Level Of Service Module:
Queue: 0.4 xxxxx 0.5 xxxxx xxxxx xxxxx xxxxx xxxxx 0.1 xxxxx xxxxx
Stopped Del: 69.2 xxxxx 16.0 xxxxx xxxxx xxxxx xxxxx xxxxx 9.5 xxxxx xxxxx
LOS by Move: F * C * * * * * * * * * * * * * * * *
Movement: LT - LTR - RT LT - LTR - RT LT - LTR - RT LT - LTR - RT
Shared Cap.: xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx
SharedQueue: xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx
Shrd StpDel: xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx
Shared LOS: * * * * * * * * * * * * * * * *
ApproachDel: 21.7 xxxxxxxx xxxxxxxx xxxxxxxx
ApproachLOS: C * * * *

AM Peak Hour - Existing Conditions
Cotati Circulation Improvement Study
City of Cotati

Level Of Service Computation Report
2000 HCM Operations Method (Base Volume Alternative)

Intersection #6 Gravenstein Hwy/Redwood Dr

Cycle (sec): 100 Critical Vol./Cap. (X): 0.444

Loss Time (sec): 6 (Y+R = 4 sec) Average Delay (sec/veh): 21.3
Optimal Cycle: 25 Level Of Service: C

Approach: North Bound South Bound East Bound West Bound
Movement: L - T - R L - T - R L - T - R L - T - R

Control: Permitted Permitted Protected Protected
Rights: Include Include Include Include
Min. Green: 0 0 0 0 0 0 0 0 0 0 0 0
Lanes: 1 0 0 1 0 1 0 0 1 0 1 0 1 0 2 0 1

Volume Module:
Base Vol: 41 17 83 188 13 36 73 547 33 69 561 268
Growth Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
Initial Bse: 41 17 83 188 13 36 73 547 33 69 561 268
User Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
PHF Adj: 0.88 0.88 0.88 0.94 0.94 0.94 0.94 0.94 0.94 0.87 0.87 0.87
PHF Volume: 47 19 94 200 14 38 78 582 35 79 645 308
Reduct Vol: 0 0 0 0 0 0 0 0 0 0 0 0
Reduced Vol: 47 19 94 200 14 38 78 582 35 79 645 308
PCE Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
MLF Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
Final Vol.: 47 19 94 200 14 38 78 582 35 79 645 308

Saturation Flow Module:
Sat/Lane: 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900
Adjustment: 0.69 0.83 0.83 0.61 0.85 0.85 0.90 0.94 0.94 0.90 0.95 0.81
Lanes: 1.00 0.17 0.83 1.00 0.27 0.73 1.00 1.89 0.11 1.00 2.00 1.00
Final Sat.: 1313 269 1315 1161 427 1183 1718 3381 204 1718 3618 1537

Capacity Analysis Module:
Vol/Sat: 0.04 0.07 0.07 0.17 0.03 0.03 0.05 0.17 0.17 0.05 0.18 0.20
Crit Moves: ****
Green/Cycle: 0.39 0.39 0.39 0.39 0.39 0.39 0.10 0.44 0.44 0.12 0.45 0.45
Volume/Cap: 0.09 0.19 0.19 0.44 0.08 0.08 0.44 0.40 0.40 0.40 0.40 0.44
Delay/Veh: 19.5 20.4 20.4 23.4 19.4 19.4 44.1 19.4 19.4 42.2 18.5 19.3
User DelAdj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
AdjDel/Veh: 19.5 20.4 20.4 23.4 19.4 19.4 44.1 19.4 19.4 42.2 18.5 19.3
HCM2kAvg: 1 2 2 7 1 1 3 6 6 3 7 7

AM Peak Hour - Existing Conditions
Cotati Circulation Improvement Study
City of Cotati

Level Of Service Computation Report
2000 HCM Operations Method (Base Volume Alternative)

Intersection #7 Gravenstein Hwy/US 101 SB

Cycle (sec): 100 Critical Vol./Cap. (X): 0.469
Loss Time (sec): 6 (Y+R = 4 sec) Average Delay (sec/veh): 21.2
Optimal Cycle: 26 Level Of Service: C

Table with 4 columns: Approach (North Bound, South Bound, East Bound, West Bound) and 4 rows: Movement, Control, Rights, Min. Green, Lanes.

Volume Module: Table with 12 columns for traffic flows and 12 rows for various volume and adjustment factors.

Saturation Flow Module: Table with 12 columns for traffic flows and 4 rows for Sat/Lane, Adjustment, Lanes, Final Sat.

Capacity Analysis Module: Table with 12 columns for traffic flows and 12 rows for Vol/Sat, Crit Moves, Green/Cycle, Volume/Cap, Delay/Veh, User DelAdj, AdjDel/Veh, HCM2kAvg.

AM Peak Hour - Existing Conditions
Cotati Circulation Improvement Study
City of Cotati

Level Of Service Computation Report
2000 HCM Operations Method (Base Volume Alternative)

Intersection #8 Gravenstein Hwy/US 101 NB

Cycle (sec): 100 Critical Vol./Cap. (X): 0.536
Loss Time (sec): 4 (Y+R = 4 sec) Average Delay (sec/veh): 15.3
Optimal Cycle: 24 Level Of Service: B

Table with 4 columns: Approach (North Bound, South Bound, East Bound, West Bound) and 4 rows: Movement, Control, Rights, Min. Green, Lanes.

Volume Module: 7:30 - 8:30 am. Table with 12 columns for traffic flows and 12 rows for various volume and adjustment factors.

Saturation Flow Module: Table with 12 columns for traffic flows and 4 rows for Sat/Lane, Adjustment, Lanes, Final Sat.

Capacity Analysis Module: Table with 12 columns for traffic flows and 12 rows for Vol/Sat, Crit Moves, Green/Cycle, Volume/Cap, Delay/Veh, User DelAdj, AdjDel/Veh, HCM2kAvg.

AM Peak Hour - Existing Conditions
Cotati Circulation Improvement Study
City of Cotati

Level Of Service Computation Report

2000 HCM Operations Method (Base Volume Alternative)

Intersection #9 Gravenstein Hwy/Old Redwood Hwy

Cycle (sec): 100 Critical Vol./Cap. (X): 0.462
Loss Time (sec): 8 (Y+R = 4 sec) Average Delay (sec/veh): 25.3
Optimal Cycle: 30 Level Of Service: C

Table with 4 columns: Approach (North Bound, South Bound, East Bound, West Bound), Movement (L-T-R), Control (Protected, Split Phase), and Rights (Include, Ignore). Includes Min. Green and Lanes data.

Volume Module: 7:30 - 8:30 am

Table with 12 columns for traffic volume and 12 rows for various adjustment factors like Growth Adj, User Adj, PHF Adj, etc.

Saturation Flow Module:

Table with 12 columns for saturation flow and 4 rows for Sat/Lane, Adjustment, Lanes, and Final Sat.

Capacity Analysis Module:

Table with 12 columns for capacity analysis and 12 rows for Vol/Sat, Crit Moves, Delay/Veh, etc.

AM Peak Hour - Existing Conditions
Cotati Circulation Improvement Study
City of Cotati

Level Of Service Computation Report

2000 HCM 4-Way Stop Method (Base Volume Alternative)

Intersection #10 Old Redwood Hwy/William St-George St

Cycle (sec): 100 Critical Vol./Cap. (X): 0.742
Loss Time (sec): 0 (Y+R = 4 sec) Average Delay (sec/veh): 20.6
Optimal Cycle: 0 Level Of Service: C

Table with 4 columns: Approach (North Bound, South Bound, East Bound, West Bound), Movement (L-T-R), Control (Stop Sign), and Rights (Include). Includes Min. Green and Lanes data.

Volume Module:

Table with 12 columns for traffic volume and 12 rows for various adjustment factors like Growth Adj, User Adj, PHF Adj, etc.

Saturation Flow Module:

Table with 12 columns for saturation flow and 4 rows for Adjustment, Lanes, and Final Sat.

Capacity Analysis Module:

Table with 12 columns for capacity analysis and 12 rows for Vol/Sat, Crit Moves, Delay/Veh, etc.

AM Peak Hour - Existing Conditions
Cotati Circulation Improvement Study
City of Cotati

Level Of Service Computation Report
2000 HCM Unsignalized Method (Base Volume Alternative)

Intersection #11 W Sierra Ave/W School St-US 101 SB Ramp

Average Delay (sec/veh): 3.2 Worst Case Level Of Service: C[16.6]

Approach: North Bound South Bound East Bound West Bound
Movement: L - T - R L - T - R L - T - R L - T - R

Control: Stop Sign Stop Sign Uncontrolled Uncontrolled
Rights: Include Include Channel Include
Lanes: 0 0 0 0 0 0 0 1! 0 0 0 1 0 0 1 0 0 0 0

Volume Module:
Base Vol: 0 0 0 24 9 1 3 135 4 134 166 21
Growth Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
Initial Bse: 0 0 0 24 9 1 3 135 4 134 166 21
User Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
PHF Adj: 1.00 1.00 1.00 0.71 0.71 0.71 0.63 0.63 0.63 0.93 0.93 0.93
PHF Volume: 0 0 0 34 13 1 5 214 6 144 178 23
Reduct Vol: 0 0 0 0 0 0 0 0 0 0 0 0
Final Vol.: 0 0 0 34 13 1 5 214 6 144 178 23

Critical Gap Module:
Critical Gp:xxxxx xxxx xxxxxx 6.4 6.5 6.2 4.1 xxxx xxxxxx 4.1 xxxx xxxxxx
FollowUpTim:xxxxx xxxx xxxxxx 3.5 4.0 3.3 2.2 xxxx xxxxxx 2.2 xxxx xxxxxx

Capacity Module:
Cnflct Vol: xxxx xxxx xxxxxx 705 702 190 201 xxxx xxxxxx 214 xxxx xxxxxx
Potent Cap.: xxxx xxxx xxxxxx 403 363 852 1371 xxxx xxxxxx 1356 xxxx xxxxxx
Move Cap.: xxxx xxxx xxxxxx 366 320 852 1371 xxxx xxxxxx 1356 xxxx xxxxxx
Volume/Cap: xxxx xxxx xxxxxx 0.09 0.04 0.00 0.00 xxxx xxxxxx 0.11 xxxx xxxxxx

Level Of Service Module:
Queue: xxxxxx xxxx xxxxxx xxxxxx xxxx xxxxxx 0.0 xxxx xxxxxx 0.4 xxxx xxxxxx
Stopped Del:xxxxx xxxx xxxxxx xxxxxx xxxx xxxxxx 7.6 xxxx xxxxxx 8.0 xxxx xxxxxx
LOS by Move: *
Movement: LT - LTR - RT LT - LTR - RT LT - LTR - RT LT - LTR - RT
Shared Cap.: xxxx xxxx xxxxxx xxxx 358 xxxxxx xxxx xxxx xxxxxx xxxx xxxx xxxxxx
SharedQueue:xxxxx xxxx xxxxxx xxxxxx 0.5 xxxxxx 0.0 xxxx xxxxxx xxxxxx xxxx xxxxxx
Shrd StpDel:xxxxx xxxx xxxxxx xxxxxx 16.6 xxxxxx 7.6 xxxx xxxxxx xxxxxx xxxx xxxxxx
Shared LOS: *
ApproachDel: xxxxxxxx 16.6 C xxxxxxxx xxxxxxxx
ApproachLOS: * C * * * * * * * * * * * *

AM Peak Hour - Existing Conditions
Cotati Circulation Improvement Study
City of Cotati

Level Of Service Computation Report
2000 HCM Unsignalized Method (Base Volume Alternative)

Intersection #12 W Sierra Ave/US 101 NB Off-ramp

Average Delay (sec/veh): 1.7 Worst Case Level Of Service: B[10.2]

Approach: North Bound South Bound East Bound West Bound
Movement: L - T - R L - T - R L - T - R L - T - R

Control: Stop Sign Stop Sign Uncontrolled Uncontrolled
Rights: Include Include Include Include
Lanes: 1 0 0 0 1 0 0 0 0 0 0 0 1 0 0 0 0 1 0 0

Volume Module:
Base Vol: 12 0 85 0 0 0 0 0 146 0 0 313 0
Growth Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
Initial Bse: 12 0 85 0 0 0 0 0 146 0 0 313 0
User Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
PHF Adj: 0.87 0.87 0.87 1.00 1.00 1.00 0.73 0.73 0.73 0.86 0.86 0.86
PHF Volume: 14 0 98 0 0 0 0 200 0 0 364 0
Reduct Vol: 0 0 0 0 0 0 0 0 0 0 0 0
Final Vol.: 14 0 98 0 0 0 0 200 0 0 364 0

Critical Gap Module:
Critical Gp: 6.4 xxxxx 6.2 xxxxxx xxxx xxxxxx xxxxxx xxxx xxxxxx xxxxxx xxxx xxxxxx
FollowUpTim: 3.5 xxxxx 3.3 xxxxxx xxxx xxxxxx xxxxxx xxxx xxxxxx xxxxxx xxxx xxxxxx

Capacity Module:
Cnflct Vol: 564 xxxxx 200 xxxxx xxxx xxxxxx xxxxxx xxxx xxxxxx xxxxxx xxxx xxxxxx
Potent Cap.: 487 xxxxx 841 xxxxx xxxx xxxxxx xxxxxx xxxx xxxxxx xxxxxx xxxx xxxxxx
Move Cap.: 487 xxxxx 841 xxxxx xxxx xxxxxx xxxxxx xxxx xxxxxx xxxxxx xxxx xxxxxx
Volume/Cap: 0.03 xxxxx 0.12 xxxxx xxxx xxxxxx xxxxxx xxxx xxxxxx xxxxxx xxxx xxxxxx

Level Of Service Module:
Queue: 0.1 xxxxx 0.4 xxxxxx xxxx xxxxxx xxxxxx xxxx xxxxxx xxxxxx xxxx xxxxxx
Stopped Del: 12.6 xxxxx 9.8 xxxxxx xxxx xxxxxx xxxxxx xxxx xxxxxx xxxxxx xxxx xxxxxx
LOS by Move: B * A *
Movement: LT - LTR - RT LT - LTR - RT LT - LTR - RT LT - LTR - RT
Shared Cap.: xxxxx xxxxx xxxxxx xxxxx xxxxx xxxxxx xxxxx xxxxx xxxxxx xxxxx xxxxx xxxxxx
SharedQueue:xxxxxx xxxxx xxxxxx xxxxxx xxxxx xxxxx xxxxxx xxxxxx xxxxx xxxxx xxxxxx
Shrd StpDel:xxxxxx xxxxx xxxxxx xxxxxx xxxxx xxxxx xxxxxx xxxxxx xxxxx xxxxx xxxxxx
Shared LOS: *
ApproachDel: 10.2 xxxxxxxx xxxxxxxx xxxxxxxx
ApproachLOS: B * * * * * * * * * * * *

AM Peak Hour - Existing Conditions
Cotati Circulation Improvement Study
City of Cotati

Level Of Service Computation Report
2000 HCM 4-Way Stop Method (Base Volume Alternative)

Intersection #13 W Sierra Ave/E School St

Cycle (sec): 100 Critical Vol./Cap. (X): 0.456
Loss Time (sec): 0 (Y+R = 4 sec) Average Delay (sec/veh): 10.1
Optimal Cycle: 0 Level Of Service: B

Table with 4 columns: North Bound, South Bound, East Bound, West Bound. Rows include Movement, Control, Rights, Min. Green, and Lanes.

Volume Module table with 12 columns for traffic flows and 12 rows for various volume metrics like Base Vol, Growth Adj, etc.

Saturation Flow Module table with 12 columns for flow directions and 4 rows for Adjustment, Lanes, and Final Sat.

Capacity Analysis Module table with 12 columns for flow directions and 10 rows for Vol/Sat, Crit Moves, Delay/Veh, etc.

AM Peak Hour - Existing Conditions
Cotati Circulation Improvement Study
City of Cotati

Level Of Service Computation Report
2000 HCM Operations Method (Base Volume Alternative)

Intersection #14 Old Redwood Hwy/E Cotati Ave

Cycle (sec): 100 Critical Vol./Cap. (X): 0.803
Loss Time (sec): 8 (Y+R = 4 sec) Average Delay (sec/veh): 35.1
Optimal Cycle: 66 Level Of Service: D

Table with 4 columns: North Bound, South Bound, East Bound, West Bound. Rows include Movement, Control, Rights, Min. Green, and Lanes.

Volume Module table with 12 columns for traffic flows and 12 rows for various volume metrics like Base Vol, Growth Adj, etc.

Saturation Flow Module table with 12 columns for flow directions and 4 rows for Adjustment, Lanes, and Final Sat.

Capacity Analysis Module table with 12 columns for flow directions and 10 rows for Vol/Sat, Crit Moves, Delay/Veh, etc.

AM Peak Hour - Existing Conditions
Cotati Circulation Improvement Study
City of Cotati

Level Of Service Computation Report
2000 HCM Unsignalized Method (Base Volume Alternative)

Intersection #15 E Cotati Ave/Charles St

Average Delay (sec/veh): 2.7 Worst Case Level Of Service: B[14.7]

Approach: North Bound South Bound East Bound West Bound
Movement: L - T - R L - T - R L - T - R L - T - R

Control: Stop Sign Stop Sign Uncontrolled Uncontrolled
Rights: Include Include Include Include
Lanes: 0 0 1! 0 0 0 0 0 0 0 0 0 1 0 1 0 1 0 0

Volume Module:
Base Vol: 1 0 111 0 0 0 0 0 490 3 230 615 0
Growth Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
Initial Bse: 1 0 111 0 0 0 0 0 490 3 230 615 0
User Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
PHF Adj: 0.82 0.82 0.82 1.00 1.00 1.00 0.82 0.82 0.82 0.88 0.88 0.88
PHF Volume: 1 0 135 0 0 0 0 0 598 4 261 699 0
Reduct Vol: 0 0 0 0 0 0 0 0 0 0 0 0 0
Final Vol.: 1 0 135 0 0 0 0 0 598 4 261 699 0

Critical Gap Module:
Critical Gp: 6.4 xxxx 6.2 xxxxx xxxx xxxxx xxxxx xxxxx xxxxx 4.1 xxxx xxxxx
FollowUpTim: 3.5 xxxx 3.3 xxxxx xxxx xxxxx xxxxx xxxxx xxxxx 2.2 xxxx xxxxx

Capacity Module:
Cnflct Vol: 2296 xxxx 599 xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx 601 xxxx xxxxx
Potent Cap.: 34 xxxx 501 xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx 976 xxxx xxxxx
Move Cap.: 27 xxxx 501 xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx 976 xxxx xxxxx
Total Cap: 186 0 xxxxx 0 0 xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx
Volume/Cap: 0.01 xxxx 0.27 xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx 0.27 xxxxx xxxxx

Level Of Service Module:
Queue: xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx 1.1 xxxxx xxxxx
Stopped Del: xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx 10.0 xxxxx xxxxx
LOS by Move: * * * * * * * * * * B * *
Movement: LT - LTR - RT LT - LTR - RT LT - LTR - RT LT - LTR - RT
Shared Cap.: xxxxx 506 xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx
SharedQueue: xxxxx 1.1 xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx
Shrd StpDel: xxxxx 14.7 xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx
Shared LOS: * B * * * * * * * * * * * * * * *
ApproachDel: 14.7 xxxxxxx xxxxxxx xxxxxxx
ApproachLOS: B * * *

AM Peak Hour - Existing Conditions
Cotati Circulation Improvement Study
City of Cotati

Level Of Service Computation Report
2000 HCM 4-Way Stop Method (Base Volume Alternative)

Intersection #16 E Cotati Ave/La Salle Ave

Cycle (sec): 100 Critical Vol./Cap. (X): 0.706

Loss Time (sec): 0 (Y+R = 4 sec) Average Delay (sec/veh): 19.7
Optimal Cycle: 0 Level Of Service: C

Approach: North Bound South Bound East Bound West Bound
Movement: L - T - R L - T - R L - T - R L - T - R

Control: Stop Sign Stop Sign Stop Sign Stop Sign
Rights: Include Include Include Include
Min. Green: 0 0 0 0 0 0 0 0 0 0 0 0
Lanes: 0 0 1! 0 0 0 0 0 1 1 0 1 1 0

Volume Module: 7:30 - 8:30 am
Base Vol: 127 2 51 0 0 3 8 555 87 45 717 3
Growth Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
Initial Bse: 127 2 51 0 0 3 8 555 87 45 717 3
User Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
PHF Adj: 0.88 0.88 0.88 0.50 0.50 0.50 0.87 0.87 0.87 0.89 0.89 0.89
PHF Volume: 144 2 58 0 0 6 9 638 100 51 806 3
Reduct Vol: 0 0 0 0 0 0 0 0 0 0 0 0
Reduced Vol: 144 2 58 0 0 6 9 638 100 51 806 3
PCE Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
MLF Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
Final Vol.: 144 2 58 0 0 6 9 638 100 51 806 3

Saturation Flow Module:
Adjustment: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
Lanes: 0.71 0.01 0.28 0.00 0.00 1.00 1.00 1.73 0.27 1.00 1.99 0.01
Final Sat.: 373 6 150 0 0 485 513 980 156 527 1141 5

Capacity Analysis Module:
Vol/Sat: 0.39 0.39 0.39 xxxxx xxxxx 0.01 0.02 0.65 0.64 0.10 0.71 0.71
Crit Moves: **** *
Delay/Veh: 13.6 13.6 13.6 0.0 0.0 9.9 9.7 19.7 18.9 10.1 22.1 22.1
Delay Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
AdjDel/Veh: 13.6 13.6 13.6 0.0 0.0 9.9 9.7 19.7 18.9 10.1 22.1 22.1
LOS by Move: B B B * * A A C C B C C
ApproachDel: 13.6 9.9 19.4 21.4
Delay Adj: 1.00 1.00 1.00 1.00
ApprAdjDel: 13.6 9.9 19.4 21.4
LOS by Appr: B A C C

AM Peak Hour - Existing Conditions
Cotati Circulation Improvement Study
City of Cotati

Level Of Service Computation Report
2000 HCM Operations Method (Base Volume Alternative)

Intersection #17 E Cotati Ave/Adrian Dr

Cycle (sec): 100 Critical Vol./Cap. (X): 0.520
Loss Time (sec): 6 (Y+R = 4 sec) Average Delay (sec/veh): 20.2
Optimal Cycle: 28 Level Of Service: C

Table with 4 columns: Approach (North, South, East, West Bound) and Movement (L, T, R). Rows include Control, Rights, Min. Green, and Lanes.

Volume Module table with columns for Base Vol, Growth Adj, Initial Bse, User Adj, PHF Adj, PHF Volume, Reduct Vol, Reduced Vol, PCE Adj, MLF Adj, and Final Vol. Rows include various traffic volume metrics.

Saturation Flow Module table with columns for Sat/Lane, Adjustment, Lanes, and Final Sat. Rows include saturation flow and adjustment factors.

Capacity Analysis Module table with columns for Vol/Sat, Crit Moves, Green/Cycle, Volume/Cap, Delay/Veh, User DelAdj, AdjDel/Veh, and HCM2kAvg. Rows include capacity and delay analysis metrics.

AM Peak Hour - Existing Conditions
Cotati Circulation Improvement Study
City of Cotati

Level Of Service Computation Report
2000 HCM Operations Method (Base Volume Alternative)

Intersection #18 E Cotati Ave/Lancaster Dr

Cycle (sec): 100 Critical Vol./Cap. (X): 0.588
Loss Time (sec): 6 (Y+R = 4 sec) Average Delay (sec/veh): 23.2
Optimal Cycle: 32 Level Of Service: C

Table with 4 columns: Approach (North, South, East, West Bound) and Movement (L, T, R). Rows include Control, Rights, Min. Green, and Lanes.

Volume Module table with columns for Base Vol, Growth Adj, Initial Bse, User Adj, PHF Adj, PHF Volume, Reduct Vol, Reduced Vol, PCE Adj, MLF Adj, and Final Vol. Rows include various traffic volume metrics.

Saturation Flow Module table with columns for Sat/Lane, Adjustment, Lanes, and Final Sat. Rows include saturation flow and adjustment factors.

Capacity Analysis Module table with columns for Vol/Sat, Crit Moves, Green/Cycle, Volume/Cap, Delay/Veh, User DelAdj, AdjDel/Veh, and HCM2kAvg. Rows include capacity and delay analysis metrics.

AM Peak Hour - Existing Conditions
Cotati Circulation Improvement Study
City of Cotati

Level Of Service Computation Report
2000 HCM Unsignalized Method (Base Volume Alternative)

Intersection #19 E Cotati Ave/Beverly Dr

Average Delay (sec/veh): 1.1 Worst Case Level Of Service: B[10.6]

Approach: North Bound South Bound East Bound West Bound
Movement: L - T - R L - T - R L - T - R L - T - R

Control: Stop Sign Stop Sign Uncontrolled Uncontrolled
Rights: Include Include Include Include
Lanes: 0 0 0 0 0 0 0 1! 0 0 1 0 2 0 0 1 0 1 1 0

Volume Module: >> Count Date: 17 Nov 2004 <<
Base Vol: 0 0 0 73 0 55 59 721 0 0 645 121
Growth Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
Initial Bse: 0 0 0 73 0 55 59 721 0 0 645 121
User Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
PHF Adj: 1.00 1.00 1.00 0.76 0.76 0.76 0.81 0.81 0.81 0.81 0.81 0.81
PHF Volume: 0 0 0 96 0 72 73 890 0 0 796 149
Reduct Vol: 0 0 0 0 0 0 0 0 0 0 0 0
Final Vol.: 0 0 0 96 0 72 73 890 0 0 796 149

Critical Gap Module:
Critical Gp:xxxxx xxxx xxxxxx 6.8 xxxx 6.9 4.1 xxxx xxxxxx xxxxxx xxxx xxxxxx
FollowUpTim:xxxxx xxxx xxxxxx 3.5 xxxx 3.3 2.2 xxxx xxxxxx xxxxxx xxxx xxxxxx

Capacity Module:
Cnflct Vol: xxxx xxxx xxxxxx 1660 xxxx 537 803 xxxx xxxxxx xxxx xxxx xxxxxx
Potent Cap.: xxxx xxxx xxxxxx 78 xxxx 430 719 xxxx xxxxxx xxxx xxxx xxxxxx
Move Cap.: xxxx xxxx xxxxxx 72 xxxx 430 719 xxxx xxxxxx xxxx xxxx xxxxxx
Total Cap: 0 656 xxxxxx 245 690 xxxxxx xxxx xxxx xxxxxx xxxx xxxx xxxxxx
Volume/Cap: xxxx xxxx xxxxxx 0.39 xxxx 0.17 0.10 xxxx xxxxxx xxxx xxxx xxxxxx

Level Of Service Module:
Queue: xxxxxx xxxx xxxxxx xxxxxx xxxx xxxxxx 0.3 xxxx xxxxxx xxxxxx xxxx xxxxxx
Stopped Del:xxxxx xxxx xxxxxx xxxxxx xxxx xxxxxx 10.6 xxxx xxxxxx xxxxxx xxxx xxxxxx
LOS by Move: * * * * * B * * * * *
Movement: LT - LTR - RT LT - LTR - RT LT - LTR - RT LT - LTR - RT
Shared Cap.: xxxx xxxx xxxxxx xxxxxx 1001 xxxxxx xxxx xxxxxx xxxxxx xxxx xxxxxx
SharedQueue:xxxxx xxxx xxxxxx xxxxxx 0.6 xxxxxx xxxxxx xxxx xxxxxx xxxxxx xxxx xxxxxx
Shrd StpDel:xxxxx xxxx xxxxxx xxxxxx 9.3 xxxxxx xxxxxx xxxx xxxxxx xxxxxx xxxx xxxxxx
Shared LOS: * * * * * A * * * * *
ApproachDel: xxxxxx 9.3 xxxxxx xxxxxx
ApproachLOS: * A * *

AM Peak Hour - Existing Conditions
Cotati Circulation Improvement Study
City of Cotati

Level Of Service Computation Report
2000 HCM Unsignalized Method (Base Volume Alternative)

Intersection #20 E Cotati Ave/Santero Way

Average Delay (sec/veh): 0.3 Worst Case Level Of Service: C[17.8]

Approach: North Bound South Bound East Bound West Bound
Movement: L - T - R L - T - R L - T - R L - T - R

Control: Stop Sign Stop Sign Uncontrolled Uncontrolled
Rights: Include Include Include Include
Lanes: 0 0 1! 0 0 0 0 0 0 0 0 0 1 1 0 1 0 2 0 0

Volume Module:
Base Vol: 10 0 10 0 0 0 0 0 860 14 8 702 0
Growth Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
Initial Bse: 10 0 10 0 0 0 0 0 860 14 8 702 0
User Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
PHF Adj: 0.71 0.71 0.71 1.00 1.00 1.00 0.83 0.83 0.83 0.81 0.81 0.81
PHF Volume: 14 0 14 0 0 0 0 0 1036 17 10 867 0
Reduct Vol: 0 0 0 0 0 0 0 0 0 0 0 0
Final Vol.: 14 0 14 0 0 0 0 0 1036 17 10 867 0

Critical Gap Module:
Critical Gp: 6.8 xxxx 6.9 xxxxxx xxxx xxxxxx xxxxxx xxxx xxxxxx 4.1 xxxx xxxxxx
FollowUpTim: 3.5 xxxx 3.3 xxxxxx xxxx xxxxxx xxxxxx xxxx xxxxxx 2.2 xxxx xxxxxx

Capacity Module:
Cnflct Vol: 1498 xxxxx 527 xxxxx xxxx xxxxxx xxxxx xxxx xxxxxx 1053 xxxxx xxxxxx
Potent Cap.: 113 xxxxx 496 xxxxx xxxx xxxxxx xxxxx xxxx xxxxxx 657 xxxxx xxxxxx
Move Cap.: 112 xxxxx 496 xxxxx xxxx xxxxxx xxxxx xxxx xxxxxx 657 xxxxx xxxxxx
Total Cap: 226 0 xxxxxx 789 0 xxxxxx xxxxx xxxx xxxxxx xxxxx xxxx xxxxxx
Volume/Cap: 0.06 xxxxx 0.03 xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx 0.02 xxxxx xxxxx

Level Of Service Module:
Queue: xxxxxx xxxx xxxxxx xxxxxx xxxx xxxxxx xxxxxx xxxx xxxxxx 0.0 xxxxx xxxxxx
Stopped Del:xxxxx xxxx xxxxxx xxxxxx xxxx xxxxxx xxxxxx xxxx xxxxxx 10.6 xxxxx xxxxxx
LOS by Move: * * * * * B * * * * *
Movement: LT - LTR - RT LT - LTR - RT LT - LTR - RT LT - LTR - RT
Shared Cap.: xxxxx 310 xxxxxx xxxxx xxxx xxxxxx xxxxx xxxx xxxxxx xxxxxx xxxx xxxxxx
SharedQueue:xxxxxx 0.3 xxxxxx xxxxx xxxx xxxxxx xxxxxx xxxx xxxxxx xxxxxx xxxx xxxxxx
Shrd StpDel:xxxxxx 17.8 xxxxxx xxxxxx xxxx xxxxxx xxxxxx xxxx xxxxxx xxxxxx xxxx xxxxxx
Shared LOS: * C * * * * * * * * * *
ApproachDel: 17.8 xxxxxx xxxxxx xxxxxx
ApproachLOS: C * * *

AM Peak Hour - Existing Conditions
Cotati Circulation Improvement Study
City of Cotati

Level Of Service Computation Report

2000 HCM 4-Way Stop Method (Base Volume Alternative)

Intersection #21 Old Redwood Highway/Henry-Charles St.

Cycle (sec): 100 Critical Vol./Cap. (X): 0.637
Loss Time (sec): 0 (Y+R = 4 sec) Average Delay (sec/veh): 14.9
Optimal Cycle: 0 Level Of Service: B

Table with 4 columns: North Bound, South Bound, East Bound, West Bound. Rows include Movement, Control, Rights, Min. Green, and Lanes.

Volume Module:

Table with 12 columns representing traffic volumes and adjustments for various movements.

Saturation Flow Module:

Table with 12 columns representing saturation flow values for different lanes.

Capacity Analysis Module:

Table with 12 columns representing capacity analysis metrics like Vol/Sat, Crit Moves, Delay/Veh, etc.

AM Peak Hour - Existing Conditions
Cotati Circulation Improvement Study
City of Cotati

Level Of Service Computation Report

2000 HCM Operations Method (Base Volume Alternative)

Intersection #22 Old Redwood Hwy/Myrtle-Valparaiso Ave

Cycle (sec): 100 Critical Vol./Cap. (X): 0.561
Loss Time (sec): 6 (Y+R = 4 sec) Average Delay (sec/veh): 18.2
Optimal Cycle: 30 Level Of Service: B

Table with 4 columns: North Bound, South Bound, East Bound, West Bound. Rows include Movement, Control, Rights, Min. Green, and Lanes.

Volume Module:

Table with 12 columns representing traffic volumes and adjustments for various movements.

Saturation Flow Module:

Table with 12 columns representing saturation flow values for different lanes.

Capacity Analysis Module:

Table with 12 columns representing capacity analysis metrics like Vol/Sat, Crit Moves, Delay/Veh, etc.

PM Peak Hour - Existing Conditions
Cotati Circulation Improvement Study
City of Cotati

Level Of Service Computation Report
2000 HCM Unsignalized Method (Base Volume Alternative)

Intersection #1 Redwood Dr/Helman Ln

Average Delay (sec/veh): 2.4 Worst Case Level Of Service: C[19.9]

Table with 4 columns: Approach (North Bound, South Bound, East Bound, West Bound), Movement (L-T-R), Control (Uncontrolled, Stop Sign), Rights (Include), Lanes (0 1 0 0 0).

Volume Module: Base Vol, Growth Adj, Initial Bse, User Adj, PHF Adj, PHF Volume, Reduct Vol, Final Vol. (12 columns)

Critical Gap Module: Critical Gp, FollowUpTim (12 columns)

Capacity Module: Cnflct Vol, Potent Cap., Move Cap., Volume/Cap. (12 columns)

Level Of Service Module: Queue, Stopped Del, LOS by Move, Movement, Shared Cap., SharedQueue, Shrd StpDel, Shared LOS, ApproachDel, ApproachLOS (12 columns)

PM Peak Hour - Existing Conditions
Cotati Circulation Improvement Study
City of Cotati

Level Of Service Computation Report
2000 HCM Unsignalized Method (Base Volume Alternative)

Intersection #2 Commerce Blvd/Wilford Ln

Average Delay (sec/veh): 1.6 Worst Case Level Of Service: C[21.3]

Table with 4 columns: Approach (North Bound, South Bound, East Bound, West Bound), Movement (L-T-R), Control (Uncontrolled, Stop Sign), Rights (Include), Lanes (0 0 0 1 0).

Volume Module: Base Vol, Growth Adj, Initial Bse, User Adj, PHF Adj, PHF Volume, Reduct Vol, Final Vol. (12 columns)

Critical Gap Module: Critical Gp, FollowUpTim (12 columns)

Capacity Module: Cnflct Vol, Potent Cap., Move Cap., Volume/Cap. (12 columns)

Level Of Service Module: Queue, Stopped Del, LOS by Move, Movement, Shared Cap., SharedQueue, Shrd StpDel, Shared LOS, ApproachDel, ApproachLOS (12 columns)

PM Peak Hour - Existing Conditions
Cotati Circulation Improvement Study
City of Cotati

Level Of Service Computation Report
2000 HCM Unsignalized Method (Base Volume Alternative)

Intersection #3 Old Redwood Highway/Commerce Blvd.

Average Delay (sec/veh): 11.9 Worst Case Level Of Service: E[42.7]

Table with 5 columns: Approach, North Bound, South Bound, East Bound, West Bound. Rows include Movement, Control, Rights, and Lanes.

Table with 4 columns: Volume Module, Count, Date, and a final column. Rows include Base Vol, Growth Adj, Initial Bse, User Adj, PHF Adj, PHF Volume, Reduct Vol, and Final Vol.

Table with 4 columns: Critical Gap Module, Critical Gp, FollowUpTim, and a final column. Rows include Critical Gp and FollowUpTim.

Table with 4 columns: Capacity Module, Cnflct Vol, Potent Cap., Move Cap., and a final column. Rows include Cnflct Vol, Potent Cap., Move Cap., and Volume/Cap.

Table with 4 columns: Level Of Service Module, Queue, Stopped Del, LOS by Move, and a final column. Rows include Queue, Stopped Del, LOS by Move, Movement, Shared Cap., SharedQueue, Shrd StpDel, Shared LOS, ApproachDel, and ApproachLOS.

PM Peak Hour - Existing Conditions
Cotati Circulation Improvement Study
City of Cotati

Level Of Service Computation Report
2000 HCM Unsignalized Method (Base Volume Alternative)

Intersection #4 Gravenstein Hwy/Alder Ave

Average Delay (sec/veh): 0.7 Worst Case Level Of Service: D[25.1]

Table with 5 columns: Approach, North Bound, South Bound, East Bound, West Bound. Rows include Movement, Control, Rights, and Lanes.

Table with 4 columns: Volume Module, Count, Date, and a final column. Rows include Base Vol, Growth Adj, Initial Bse, User Adj, PHF Adj, PHF Volume, Reduct Vol, and Final Vol.

Table with 4 columns: Critical Gap Module, Critical Gp, FollowUpTim, and a final column. Rows include Critical Gp and FollowUpTim.

Table with 4 columns: Capacity Module, Cnflct Vol, Potent Cap., Move Cap., and a final column. Rows include Cnflct Vol, Potent Cap., Move Cap., and Volume/Cap.

Table with 4 columns: Level Of Service Module, Queue, Stopped Del, LOS by Move, and a final column. Rows include Queue, Stopped Del, LOS by Move, Movement, Shared Cap., SharedQueue, Shrd StpDel, Shared LOS, ApproachDel, and ApproachLOS.

PM Peak Hour - Existing Conditions
Cotati Circulation Improvement Study
City of Cotati

Level Of Service Computation Report
2000 HCM Unsignalized Method (Base Volume Alternative)

Intersection #5 Gravenstein Hwy/W Cotati Ave

Average Delay (sec/veh): 0.9 Worst Case Level Of Service: D[31.0]

Approach: North Bound South Bound East Bound West Bound
Movement: L - T - R L - T - R L - T - R L - T - R

Control: Stop Sign Stop Sign Uncontrolled Uncontrolled
Rights: Include Include Channel Include
Lanes: 1 0 0 0 1 0 0 0 0 0 0 0 1 0 0 1 0 0 0 0 0

Volume Module: >> Count Date: 16 Nov 2004 <<
Base Vol: 3 0 28 0 0 0 0 601 12 40 787 0
Growth Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00

Critical Gap Module:
Critical Gp: 6.4 xxxxx 6.2 xxxxx xxxxx xxxxx xxxxx xxxxx 4.1 xxxxx xxxxx
FollowUpTim: 3.5 xxxxx 3.3 xxxxx xxxxx xxxxx xxxxx xxxxx 2.2 xxxxx xxxxx

Capacity Module:
Cnflct Vol: 2447 xxxxx 751 xxxxx xxxxx xxxxx xxxxx xxxxx 751 xxxxx xxxxx
Potent Cap.: 24 xxxxx 411 xxxxx xxxxx xxxxx xxxxx xxxxx 845 xxxxx xxxxx
Move Cap.: 23 xxxxx 411 xxxxx xxxxx xxxxx xxxxx xxxxx 845 xxxxx xxxxx

Level Of Service Module:
Queue: 0.4 xxxxx 0.3 xxxxx xxxxx xxxxx xxxxx xxxxx 0.2 xxxxx xxxxx
Stopped Del:185.2 xxxxx 14.5 xxxxx xxxxx xxxxx xxxxx xxxxx 9.5 xxxxx xxxxx
LOS by Move: F * B * * * * * A * * *
Movement: LT - LTR - RT LT - LTR - RT LT - LTR - RT LT - LTR - RT
Shared Cap.: xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx
SharedQueue: xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx
Shrd StpDel: xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx
Shared LOS: * * * * * A * * *
ApproachDel: 31.0 xxxxxxxx xxxxxxxx xxxxxxxx
ApproachLOS: D * * *

PM Peak Hour - Existing Conditions
Cotati Circulation Improvement Study
City of Cotati

Level Of Service Computation Report
2000 HCM Operations Method (Base Volume Alternative)

Intersection #6 Gravenstein Hwy/Redwood Dr

Cycle (sec): 100 Critical Vol./Cap. (X): 0.647
Loss Time (sec): 6 (Y+R = 4 sec) Average Delay (sec/veh): 26.7
Optimal Cycle: 37 Level Of Service: C

Approach: North Bound South Bound East Bound West Bound
Movement: L - T - R L - T - R L - T - R L - T - R

Control: Permitted Permitted Protected Protected
Rights: Include Include Include Include
Min. Green: 0 0 0 0 0 0 0 0 0 0 0 0
Lanes: 1 0 0 1 0 1 0 0 1 0 1 0 1 1 0 1 0 2 0 1

Volume Module:
Base Vol: 32 10 85 360 35 96 69 502 19 90 742 286
Growth Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
Initial Bse: 32 10 85 360 35 96 69 502 19 90 742 286
User Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
PHF Adj: 0.88 0.88 0.88 0.88 0.88 0.88 0.97 0.97 0.97 0.90 0.90 0.90
PHF Volume: 36 11 97 409 40 109 71 518 20 100 824 318
Reduct Vol: 0 0 0 0 0 0 0 0 0 0 0 0
Reduced Vol: 36 11 97 409 40 109 71 518 20 100 824 318
PCE Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
MLF Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
Final Vol.: 36 11 97 409 40 109 71 518 20 100 824 318

Saturation Flow Module:
Sat/Lane: 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900
Adjustment: 0.60 0.82 0.82 0.63 0.85 0.84 0.90 0.95 0.95 0.90 0.95 0.81
Lanes: 1.00 0.10 0.90 1.00 0.27 0.73 1.00 1.93 0.07 1.00 2.00 1.00
Final Sat.: 1131 164 1395 1206 429 1176 1718 3468 131 1718 3618 1537

Capacity Analysis Module:
Vol/Sat: 0.03 0.07 0.07 0.34 0.09 0.09 0.04 0.15 0.15 0.06 0.23 0.21
Crit Moves: ****
Green/Cycle: 0.52 0.52 0.52 0.52 0.52 0.52 0.06 0.30 0.30 0.12 0.35 0.35
Volume/Cap: 0.06 0.13 0.13 0.65 0.18 0.18 0.65 0.50 0.50 0.50 0.65 0.59
Delay/Veh: 11.7 12.2 12.2 19.5 12.6 12.6 58.4 29.2 29.2 43.4 28.4 28.1
User DelAdj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
AdjDel/Veh: 11.7 12.2 12.2 19.5 12.6 12.6 58.4 29.2 29.2 43.4 28.4 28.1
HCM2kAvg: 1 2 2 14 2 2 3 7 7 4 11 9

PM Peak Hour - Existing Conditions
Cotati Circulation Improvement Study
City of Cotati

Level Of Service Computation Report
2000 HCM Operations Method (Base Volume Alternative)

Intersection #7 Gravenstein Hwy/US 101 SB

Cycle (sec): 100 Critical Vol./Cap. (X): 0.478
Loss Time (sec): 6 (Y+R = 4 sec) Average Delay (sec/veh): 19.5
Optimal Cycle: 26 Level Of Service: B

Table with 4 columns: Approach (North, South, East, West Bound) and Movement (L, T, R). Rows include Control, Rights, Min. Green, and Lanes.

Volume Module table with columns for Base Vol, Growth Adj, Initial Bse, User Adj, PHF Adj, PHF Volume, Reduct Vol, Reduced Vol, PCE Adj, MLF Adj, and Final Vol. Rows include various traffic volume metrics.

Saturation Flow Module table with columns for Sat/Lane, Adjustment, Lanes, and Final Sat. Rows include saturation flow and adjustment factors.

Capacity Analysis Module table with columns for Vol/Sat, Crit Moves, Green/Cycle, Volume/Cap, Delay/Veh, User DelAdj, AdjDel/Veh, and HCM2kAvg. Rows include capacity and delay analysis.

PM Peak Hour - Existing Conditions
Cotati Circulation Improvement Study
City of Cotati

Level Of Service Computation Report
2000 HCM Operations Method (Base Volume Alternative)

Intersection #8 Gravenstein Hwy/US 101 NB

Cycle (sec): 100 Critical Vol./Cap. (X): 0.637
Loss Time (sec): 4 (Y+R = 4 sec) Average Delay (sec/veh): 16.2
Optimal Cycle: 30 Level Of Service: B

Table with 4 columns: Approach (North, South, East, West Bound) and Movement (L, T, R). Rows include Control, Rights, Min. Green, and Lanes.

Volume Module table with columns for Base Vol, Growth Adj, Initial Bse, User Adj, PHF Adj, PHF Volume, Reduct Vol, Reduced Vol, PCE Adj, MLF Adj, and Final Vol. Rows include various traffic volume metrics.

Saturation Flow Module table with columns for Sat/Lane, Adjustment, Lanes, and Final Sat. Rows include saturation flow and adjustment factors.

Capacity Analysis Module table with columns for Vol/Sat, Crit Moves, Green/Cycle, Volume/Cap, Delay/Veh, User DelAdj, AdjDel/Veh, and HCM2kAvg. Rows include capacity and delay analysis.

PM Peak Hour - Existing Conditions
Cotati Circulation Improvement Study
City of Cotati

Level Of Service Computation Report

2000 HCM Operations Method (Base Volume Alternative)

Intersection #9 Gravenstein Hwy/Old Redwood Hwy

Cycle (sec): 100 Critical Vol./Cap. (X): 0.612
Loss Time (sec): 8 (Y+R = 4 sec) Average Delay (sec/veh): 27.0
Optimal Cycle: 39 Level Of Service: C

Table with 4 columns: Approach (North Bound, South Bound, East Bound, West Bound) and 4 rows: Movement, Control, Rights, Lanes.

Volume Module: 5:00 - 6:00 pm

Table with 11 columns for traffic volume and 11 rows for various metrics: Base Vol, Growth Adj, Initial Bse, User Adj, PHF Adj, PHF Volume, Reduct Vol, Reduced Vol, PCE Adj, MLF Adj, Final Vol.

Saturation Flow Module:

Table with 11 columns for saturation flow and 4 rows: Sat/Lane, Adjustment, Lanes, Final Sat.

Capacity Analysis Module:

Table with 11 columns for capacity analysis and 11 rows: Vol/Sat, Crit Moves, Green/Cycle, Volume/Cap, Delay/Veh, User DelAdj, AdjDel/Veh, HCM2kAvg.

PM Peak Hour - Existing Conditions
Cotati Circulation Improvement Study
City of Cotati

Level Of Service Computation Report

2000 HCM 4-Way Stop Method (Base Volume Alternative)

Intersection #10 Old Redwood Hwy/William St-George St

Cycle (sec): 100 Critical Vol./Cap. (X): 0.970
Loss Time (sec): 0 (Y+R = 4 sec) Average Delay (sec/veh): 48.1
Optimal Cycle: 0 Level Of Service: E

Table with 4 columns: Approach (North Bound, South Bound, East Bound, West Bound) and 4 rows: Movement, Control, Rights, Lanes.

Volume Module:

Table with 11 columns for traffic volume and 11 rows for various metrics: Base Vol, Growth Adj, Initial Bse, User Adj, PHF Adj, PHF Volume, Reduct Vol, Reduced Vol, PCE Adj, MLF Adj, Final Vol.

Saturation Flow Module:

Table with 11 columns for saturation flow and 4 rows: Adjustment, Lanes, Final Sat.

Capacity Analysis Module:

Table with 11 columns for capacity analysis and 11 rows: Vol/Sat, Crit Moves, Delay/Veh, Delay Adj, AdjDel/Veh, LOS by Move, ApproachDel, Delay Adj, ApprAdjDel, LOS by Appr.

PM Peak Hour - Existing Conditions
Cotati Circulation Improvement Study
City of Cotati

Level Of Service Computation Report
2000 HCM Unsignalized Method (Base Volume Alternative)

Intersection #11 W Sierra Ave/W School St-US 101 SB Ramp

Average Delay (sec/veh): 2.7 Worst Case Level Of Service: B[13.8]

Approach: North Bound South Bound East Bound West Bound
Movement: L - T - R L - T - R L - T - R L - T - R

Control: Stop Sign Stop Sign Uncontrolled Uncontrolled
Rights: Include Include Channel Include
Lanes: 0 0 0 0 0 0 1 0 0 0 0 1 0 0 1 0 0 1 0 0

Volume Module:
Base Vol: 0 0 0 21 6 0 1 133 10 102 123 36
Growth Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
Initial Bse: 0 0 0 21 6 0 1 133 10 102 123 36
User Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
PHF Adj: 1.00 1.00 1.00 0.84 0.84 0.84 0.82 0.82 0.82 0.88 0.88 0.88
PHF Volume: 0 0 0 25 7 0 1 162 12 116 140 41
Reduct Vol: 0 0 0 0 0 0 0 0 0 0 0 0
Final Vol.: 0 0 0 25 7 0 1 162 12 116 140 41

Critical Gap Module:
Critical Gp:xxxxx xxxx xxxxxx 6.4 6.5 xxxxxx 4.1 xxxx xxxxxx 4.1 xxxx xxxxxx
FollowUpTim:xxxxx xxxx xxxxxx 3.5 4.0 xxxxxx 2.2 xxxx xxxxxx 2.2 xxxx xxxxxx

Capacity Module:
Cnflct Vol: xxxx xxxx xxxxxx 563 557 xxxxxx 181 xxxx xxxxxx 162 xxxx xxxxxx
Potent Cap.: xxxx xxxx xxxxxx 488 439 xxxxxx 1395 xxxx xxxxxx 1417 xxxx xxxxxx
Move Cap.: xxxx xxxx xxxxxx 455 400 xxxxxx 1395 xxxx xxxxxx 1417 xxxx xxxxxx
Volume/Cap: xxxx xxxx xxxxxx 0.05 0.02 xxxxxx 0.00 xxxx xxxxxx 0.08 xxxx xxxxxx

Level Of Service Module:
Queue: xxxxxx xxxx xxxxxx xxxxxx xxxx xxxxxx 0.0 xxxx xxxxxx 0.3 xxxx xxxxxx
Stopped Del:xxxxx xxxx xxxxxx xxxxxx xxxx xxxxxx 7.6 xxxx xxxxxx 7.8 xxxx xxxxxx
LOS by Move: * * * * * A * * * A * * *
Movement: LT - LTR - RT LT - LTR - RT LT - LTR - RT LT - LTR - RT
Shared Cap.: xxxx xxxx xxxxxx 441 xxxx xxxxxx xxxx xxxx xxxxxx xxxx xxxx xxxxxx
SharedQueue:xxxxx xxxx xxxxxx 0.2 xxxx xxxxxx 0.0 xxxx xxxxxx xxxxxx xxxx xxxxxx
Shrd StpDel:xxxxx xxxx xxxxxx 13.8 xxxx xxxxxx 7.6 xxxx xxxxxx xxxxxx xxxx xxxxxx
Shared LOS: * * * * * B * * * A * * * * * * *
ApproachDel: xxxxxxxx 13.8 xxxxxxxx xxxxxxxx
ApproachLOS: * B * * *

PM Peak Hour - Existing Conditions
Cotati Circulation Improvement Study
City of Cotati

Level Of Service Computation Report
2000 HCM Unsignalized Method (Base Volume Alternative)

Intersection #12 W Sierra Ave/US 101 NB Off-ramp

Average Delay (sec/veh): 3.8 Worst Case Level Of Service: B[10.8]

Approach: North Bound South Bound East Bound West Bound
Movement: L - T - R L - T - R L - T - R L - T - R

Control: Stop Sign Stop Sign Uncontrolled Uncontrolled
Rights: Include Include Include Include
Lanes: 1 0 0 0 1 0 0 0 0 0 0 0 1 0 0 0 0 1 0 0

Volume Module:
Base Vol: 21 0 201 0 0 0 0 158 0 0 244 0
Growth Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
Initial Bse: 21 0 201 0 0 0 0 158 0 0 244 0
User Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
PHF Adj: 0.84 0.84 0.84 1.00 1.00 1.00 0.90 0.90 0.90 0.88 0.80 0.88
PHF Volume: 25 0 239 0 0 0 0 176 0 0 305 0
Reduct Vol: 0 0 0 0 0 0 0 0 0 0 0 0
Final Vol.: 25 0 239 0 0 0 0 176 0 0 305 0

Critical Gap Module:
Critical Gp: 6.4 xxxxx 6.2 xxxxxx xxxx xxxxxx xxxxxx xxxx xxxxxx xxxxxx xxxx xxxxxx
FollowUpTim: 3.5 xxxxx 3.3 xxxxxx xxxx xxxxxx xxxxxx xxxx xxxxxx xxxxxx xxxx xxxxxx

Capacity Module:
Cnflct Vol: 481 xxxxx 176 xxxxx xxxx xxxxxx xxxxxx xxxx xxxxxx xxxxxx xxxx xxxxxx
Potent Cap.: 544 xxxxx 868 xxxxx xxxx xxxxxx xxxxxx xxxx xxxxxx xxxxxx xxxx xxxxxx
Move Cap.: 544 xxxxx 868 xxxxx xxxx xxxxxx xxxxxx xxxx xxxxxx xxxxxx xxxx xxxxxx
Volume/Cap: 0.05 xxxxx 0.28 xxxxx xxxx xxxxxx xxxxxx xxxx xxxxxx xxxxxx xxxx xxxxxx

Level Of Service Module:
Queue: 0.1 xxxxx 1.1 xxxxxx xxxx xxxxxx xxxxxx xxxx xxxxxx xxxxxx xxxx xxxxxx
Stopped Del: 11.9 xxxxx 10.7 xxxxxx xxxx xxxxxx xxxxxx xxxx xxxxxx xxxxxx xxxx xxxxxx
LOS by Move: B * B * * * * * * * * * *
Movement: LT - LTR - RT LT - LTR - RT LT - LTR - RT LT - LTR - RT
Shared Cap.: xxxx xxxx xxxxxx xxxx xxxx xxxxxx xxxx xxxx xxxxxx xxxx xxxx xxxxxx
SharedQueue:xxxxx xxxx xxxxxx xxxxxx xxxx xxxxxx xxxxxx xxxx xxxxxx xxxxxx xxxx xxxxxx
Shrd StpDel:xxxxx xxxx xxxxxx xxxxxx xxxx xxxxxx xxxxxx xxxx xxxxxx xxxxxx xxxx xxxxxx
Shared LOS: * * * * * * * * * * * * *
ApproachDel: 10.8 xxxxxxxx xxxxxxxx xxxxxxxx
ApproachLOS: B * * *

PM Peak Hour - Existing Conditions
Cotati Circulation Improvement Study
City of Cotati

Level Of Service Computation Report
2000 HCM 4-Way Stop Method (Base Volume Alternative)

Intersection #13 W Sierra Ave/E School St

Cycle (sec): 100 Critical Vol./Cap. (X): 0.539
Loss Time (sec): 0 (Y+R = 4 sec) Average Delay (sec/veh): 11.3
Optimal Cycle: 0 Level Of Service: B

Table with 4 columns: Approach (North Bound, South Bound, East Bound, West Bound) and 4 rows: Movement, Control, Rights, Min. Green, Lanes.

Volume Module: Base Vol, Growth Adj, Initial Bse, User Adj, PHF Adj, PHF Volume, Reduct Vol, Reduced Vol, PCE Adj, MLF Adj, Final Vol.

Saturation Flow Module: Adjustment, Lanes, Final Sat.

Capacity Analysis Module: Vol/Sat, Crit Moves, Delay/Veh, Delay Adj, AdjDel/Veh, LOS by Move, ApproachDel, Delay Adj, ApprAdjDel, LOS by Appr.

PM Peak Hour - Existing Conditions
Cotati Circulation Improvement Study
City of Cotati

Level Of Service Computation Report
2000 HCM Operations Method (Base Volume Alternative)

Intersection #14 Old Redwood Hwy/E Cotati Ave

Cycle (sec): 100 Critical Vol./Cap. (X): 0.863
Loss Time (sec): 8 (Y+R = 4 sec) Average Delay (sec/veh): 37.5
Optimal Cycle: 83 Level Of Service: D

Table with 4 columns: Approach (North Bound, South Bound, East Bound, West Bound) and 4 rows: Movement, Control, Rights, Min. Green, Lanes.

Volume Module: >> Count Date: 17 Nov 2004 << 4:45 - 5:45 pm. Base Vol, Growth Adj, Initial Bse, User Adj, PHF Adj, PHF Volume, Reduct Vol, Reduced Vol, PCE Adj, MLF Adj, Final Vol.

Saturation Flow Module: Sat/Lane, Adjustment, Lanes, Final Sat.

Capacity Analysis Module: Vol/Sat, Crit Moves, Green/Cycle, Volume/Cap, Delay/Veh, User DelAdj, AdjDel/Veh, HCM2kAvg.

PM Peak Hour - Existing Conditions
Cotati Circulation Improvement Study
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Level Of Service Computation Report
2000 HCM Unsignalized Method (Base Volume Alternative)

Intersection #15 E Cotati Ave/Charles St

Average Delay (sec/veh): 4.3 Worst Case Level Of Service: C[24.7]

Approach: North Bound South Bound East Bound West Bound
Movement: L - T - R L - T - R L - T - R L - T - R

Control: Stop Sign Stop Sign Uncontrolled Uncontrolled
Rights: Include Include Include Include
Lanes: 0 0 1! 0 0 0 0 0 0 0 0 0 1 0 1 0 1 0 0

Volume Module:
Base Vol: 5 0 231 0 0 0 0 0 687 6 129 561 0
Growth Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
Initial Bse: 5 0 231 0 0 0 0 0 687 6 129 561 0
User Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
PHF Adj: 0.95 0.95 0.95 1.00 1.00 1.00 0.94 0.94 0.94 0.88 0.88 0.88
PHF Volume: 5 0 243 0 0 0 0 0 731 6 147 638 0
Reduct Vol: 0 0 0 0 0 0 0 0 0 0 0 0 0
Final Vol.: 5 0 243 0 0 0 0 0 731 6 147 638 0

Critical Gap Module:
Critical Gp: 6.4 xxxx 6.2 xxxxx xxxx xxxxxx xxxxx xxxx xxxxxx 4.1 xxxx xxxxxx
FollowUpTim: 3.5 xxxxx 3.3 xxxxx xxxx xxxxxx xxxxx xxxx xxxxxx 2.2 xxxx xxxxxx

Capacity Module:
Cnflct Vol: 2454 xxxxx 734 xxxxx xxxx xxxxxx xxxxx xxxx xxxxxx 737 xxxxx xxxxxx
Potent Cap.: 23 xxxxx 420 xxxxx xxxx xxxxxx xxxxx xxxx xxxxxx 869 xxxxx xxxxxx
Move Cap.: 20 xxxxx 420 xxxxx xxxx xxxxxx xxxxx xxxx xxxxxx 869 xxxxx xxxxxx
Total Cap: 286 0 xxxxxx 221 0 xxxxxx xxxxx xxxx xxxxxx xxxxx xxxx xxxxxx
Volume/Cap: 0.02 xxxxx 0.58 xxxxx xxxxx xxxxx xxxxx xxxx xxxxxx 0.17 xxxxx xxxxx

Level Of Service Module:
Queue: xxxxxx xxxx xxxxxx xxxxxx xxxx xxxxxx xxxxxx xxxx xxxxxx 0.6 xxxxx xxxxxx
Stopped Del: xxxxxx xxxx xxxxxx xxxxxx xxxx xxxxxx xxxxxx xxxx xxxxxx 10.0 xxxxx xxxxxx
LOS by Move: * * * * * * * * * * A * *
Movement: LT - LTR - RT LT - LTR - RT LT - LTR - RT LT - LTR - RT
Shared Cap.: xxxxx 425 xxxxxx xxxxx xxxx xxxxxx xxxxx xxxx xxxxxx xxxxx xxxx xxxxxx
SharedQueue: xxxxxx 3.6 xxxxxx xxxxxx xxxx xxxxxx xxxxxx xxxx xxxxxx xxxxxx xxxx xxxxxx
Shrd StpDel: xxxxxx 24.7 xxxxxx xxxxxx xxxx xxxxxx xxxxxx xxxx xxxxxx xxxxxx xxxx xxxxxx
Shared LOS: * C * * * * * * * * * * * * * * *
ApproachDel: 24.7 xxxxxxxx xxxxxxxx xxxxxxxx
ApproachLOS: C * * *

PM Peak Hour - Existing Conditions
Cotati Circulation Improvement Study
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Level Of Service Computation Report
2000 HCM 4-Way Stop Method (Base Volume Alternative)

Intersection #16 E Cotati Ave/La Salle Ave

Cycle (sec): 100 Critical Vol./Cap. (X): 1.035
Loss Time (sec): 0 (Y+R = 4 sec) Average Delay (sec/veh): 47.2
Optimal Cycle: 0 Level Of Service: E

Approach: North Bound South Bound East Bound West Bound
Movement: L - T - R L - T - R L - T - R L - T - R

Control: Stop Sign Stop Sign Stop Sign Stop Sign
Rights: Include Include Include Include
Lanes: 0 0 1! 0 0 0 0 1! 0 0 1 0 1 1 0 1 0 1 1 0

Volume Module: >> Count Date: 17 Nov 2004 << 4:15 - 5:15 pm
Base Vol: 143 1 102 5 2 8 2 954 156 61 605 2
Growth Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
Initial Bse: 143 1 102 5 2 8 2 954 156 61 605 2
User Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
PHF Adj: 0.93 0.93 0.93 0.50 0.50 0.50 0.97 0.97 0.97 0.96 0.96 0.96
PHF Volume: 154 1 110 10 4 16 2 984 161 64 630 2
Reduct Vol: 0 0 0 0 0 0 0 0 0 0 0 0
Reduced Vol: 154 1 110 10 4 16 2 984 161 64 630 2
PCE Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
MLF Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
Final Vol.: 154 1 110 10 4 16 2 984 161 64 630 2

Saturation Flow Module:
Adjustment: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
Lanes: 0.58 0.01 0.41 0.33 0.13 0.54 1.00 1.72 0.28 1.00 1.99 0.01
Final Sat.: 307 2 219 149 60 239 501 950 158 476 1016 3

Capacity Analysis Module:
Vol/Sat: 0.50 0.50 0.50 0.07 0.07 0.07 0.00 1.03 1.02 0.13 0.62 0.62
Crit Moves: **** **** ****
Delay/Veh: 16.2 16.2 16.2 11.0 11.0 11.0 9.8 72.9 67.2 11.4 20.5 20.5
Delay Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
AdjDel/Veh: 16.2 16.2 16.2 11.0 11.0 11.0 9.8 72.9 67.2 11.4 20.5 20.5
LOS by Move: C C C B B B A F F B C C
ApproachDel: 16.2 11.0 72.0 19.6
Delay Adj: 1.00 1.00 1.00 1.00
ApprAdjDel: 16.2 11.0 72.0 19.6
LOS by Appr: C B F C

PM Peak Hour - Existing Conditions
Cotati Circulation Improvement Study
City of Cotati

Level Of Service Computation Report

2000 HCM Operations Method (Base Volume Alternative)

Intersection #17 E Cotati Ave/Adrian Dr

Cycle (sec): 100 Critical Vol./Cap. (X): 0.478
Loss Time (sec): 6 (Y+R = 4 sec) Average Delay (sec/veh): 17.1
Optimal Cycle: 26 Level Of Service: B

Table with 4 columns: Approach (North Bound, South Bound, East Bound, West Bound), Movement (L-T-R), Control (Split Phase, Protected), and Rights (Include, Include, Include, Include). Includes Min. Green and Lanes data.

Volume Module:

Table with 12 columns for traffic volumes and 12 columns for adjustment factors (Growth Adj, Initial Bse, User Adj, PHF Adj, PCE Adj, MLF Adj, Final Vol.).

Saturation Flow Module:

Table with 12 columns for Sat/Lane, Adjustment, Lanes, and Final Sat. values.

Capacity Analysis Module:

Table with 12 columns for Vol/Sat, Crit Moves, Green/Cycle, Volume/Cap, Delay/Veh, User DelAdj, AdjDel/Veh, and HCM2kAvg.

PM Peak Hour - Existing Conditions
Cotati Circulation Improvement Study
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Level Of Service Computation Report

2000 HCM Operations Method (Base Volume Alternative)

Intersection #18 E Cotati Ave/Lancaster Dr

Cycle (sec): 100 Critical Vol./Cap. (X): 0.572
Loss Time (sec): 6 (Y+R = 4 sec) Average Delay (sec/veh): 19.0
Optimal Cycle: 31 Level Of Service: B

Table with 4 columns: Approach (North Bound, South Bound, East Bound, West Bound), Movement (L-T-R), Control (Permitted, Protected), and Rights (Include, Include, Include, Include). Includes Min. Green and Lanes data.

Volume Module:

Table with 12 columns for traffic volumes and 12 columns for adjustment factors (Growth Adj, Initial Bse, User Adj, PHF Adj, PCE Adj, MLF Adj, Final Vol.).

Saturation Flow Module:

Table with 12 columns for Sat/Lane, Adjustment, Lanes, and Final Sat. values.

Capacity Analysis Module:

Table with 12 columns for Vol/Sat, Crit Moves, Green/Cycle, Volume/Cap, Delay/Veh, User DelAdj, AdjDel/Veh, and HCM2kAvg.

PM Peak Hour - Existing Conditions
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Level Of Service Computation Report
2000 HCM Unsignalized Method (Base Volume Alternative)

Intersection #19 E Cotati Ave/Beverly Dr

Average Delay (sec/veh): 1.6 Worst Case Level Of Service: C[20.7]

Approach: North Bound South Bound East Bound West Bound
Movement: L - T - R L - T - R L - T - R L - T - R

Control: Stop Sign Stop Sign Uncontrolled Uncontrolled
Rights: Include Include Include Include
Lanes: 0 0 0 0 0 0 0 1! 0 0 1 0 2 0 0 1 0 1 1 0

Volume Module:
Base Vol: 0 0 0 30 0 54 94 834 0 2 747 60
Growth Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
Initial Bse: 0 0 0 30 0 54 94 834 0 2 747 60
User Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
PHF Adj: 1.00 1.00 1.00 0.82 0.82 0.82 0.87 0.87 0.87 0.95 0.95 0.95
PHF Volume: 0 0 0 37 0 66 108 959 0 2 786 63
Reduct Vol: 0 0 0 0 0 0 0 0 0 0 0 0
Final Vol.: 0 0 0 37 0 66 108 959 0 2 786 63

Critical Gap Module:
Critical Gp: 6.8 6.9 4.1 4.1
FollowUpTim: 3.5 3.3 2.2 2.2

Capacity Module:
Cnflct Vol: 1794 502 640 959
Potent Cap.: 61 435 795 713
Move Cap.: 54 435 795 713
Total Cap: 231 649
Volume/Cap: 0.16 0.15 0.14 0.00

Level Of Service Module:
Queue: 0.5 0.0
Stopped Del: 10.2 10.1
LOS by Move: B B
Movement: LT - LTR - RT LT - LTR - RT LT - LTR - RT LT - LTR - RT
Shared Cap.: 331
SharedQueue: 1.3
Shrd StpDel: 20.7
Shared LOS: C C
ApproachDel: 20.7
ApproachLOS: C

PM Peak Hour - Existing Conditions
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Level Of Service Computation Report
2000 HCM Unsignalized Method (Base Volume Alternative)

Intersection #20 E Cotati Ave/Santero Way

Average Delay (sec/veh): 0.4 Worst Case Level Of Service: C[19.1]

Approach: North Bound South Bound East Bound West Bound
Movement: L - T - R L - T - R L - T - R L - T - R

Control: Stop Sign Stop Sign Uncontrolled Uncontrolled
Rights: Include Include Include Include
Lanes: 0 0 1! 0 0 0 0 0 0 0 0 1 1 0 1 0 2 0 0

Volume Module:
Base Vol: 15 0 6 0 0 0 0 879 13 10 743 0
Growth Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
Initial Bse: 15 0 6 0 0 0 0 879 13 10 743 0
User Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
PHF Adj: 0.75 0.75 0.75 1.00 1.00 1.00 0.88 0.88 0.88 0.97 0.97 0.97
PHF Volume: 20 0 8 0 0 0 0 999 15 10 766 0
Reduct Vol: 0 0 0 0 0 0 0 0 0 0 0 0
Final Vol.: 20 0 8 0 0 0 0 999 15 10 766 0

Critical Gap Module:
Critical Gp: 6.8 6.9
FollowUpTim: 3.5 3.3

Capacity Module:
Cnflct Vol: 1410 507
Potent Cap.: 129 511
Move Cap.: 128 511
Total Cap: 241 0
Volume/Cap: 0.08 0.02

Level Of Service Module:
Queue: 0.0
Stopped Del: 10.4
LOS by Move: B
Movement: LT - LTR - RT LT - LTR - RT LT - LTR - RT LT - LTR - RT
Shared Cap.: 284
SharedQueue: 0.3
Shrd StpDel: 19.1
Shared LOS: C C
ApproachDel: 19.1
ApproachLOS: C

PM Peak Hour - Existing Conditions
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Level Of Service Computation Report

2000 HCM 4-Way Stop Method (Base Volume Alternative)

Intersection #21 Old Redwood Highway/Henry-Charles St.

Cycle (sec): 100 Critical Vol./Cap. (X): 0.896
Loss Time (sec): 0 (Y+R = 4 sec) Average Delay (sec/veh): 25.2
Optimal Cycle: 0 Level Of Service: D

Table with 4 columns: Approach (North Bound, South Bound, East Bound, West Bound) and 4 rows: Movement, Control, Rights, Min. Green, Lanes.

Volume Module:

Table with 12 columns for traffic volumes and 12 rows for various adjustment factors like Growth Adj, User Adj, PHF, etc.

Saturation Flow Module:

Table with 12 columns for saturation flow and 3 rows for Adjustment, Lanes, and Final Sat.

Capacity Analysis Module:

Table with 12 columns for capacity analysis and 12 rows for Vol/Sat, Crit Moves, Delay/Veh, etc.

PM Peak Hour - Existing Conditions
Cotati Circulation Improvement Study
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Level Of Service Computation Report

2000 HCM Operations Method (Base Volume Alternative)

Intersection #22 Old Redwood Hwy/Myrtle-Valparaiso Ave

Cycle (sec): 100 Critical Vol./Cap. (X): 0.595
Loss Time (sec): 6 (Y+R = 4 sec) Average Delay (sec/veh): 17.4
Optimal Cycle: 33 Level Of Service: B

Table with 4 columns: Approach (North Bound, South Bound, East Bound, West Bound) and 4 rows: Movement, Control, Rights, Min. Green, Lanes.

Volume Module:

Table with 12 columns for traffic volumes and 12 rows for various adjustment factors like Growth Adj, User Adj, PHF, etc.

Saturation Flow Module:

Table with 12 columns for saturation flow and 3 rows for Sat/Lane, Adjustment, Lanes, and Final Sat.

Capacity Analysis Module:

Table with 12 columns for capacity analysis and 12 rows for Vol/Sat, Crit Moves, Green/Cycle, etc.

AM Peakhour - Buildout Conditions
Cotati Circulation Improvement Study
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2000 HCM Unsignalized Method (Future Volume Alternative)

Intersection #1 Redwood Dr/Helman Ln

Average Delay (sec/veh): 6.3 Worst Case Level Of Service: D[30.9]

Table with 4 columns: Approach, Movement, Control, Rights, Lanes. Rows include North Bound, South Bound, East Bound, West Bound with various traffic signals and lane configurations.

Volume Module:

Table with 12 columns representing traffic volume components: Base Vol, Growth Adj, Initial Bse, Added Vol, PasserByVol, Initial Fut, User Adj, PHF Adj, PHF Volume, Reduct Vol, Final Vol.

Critical Gap Module:

Table with 12 columns for Critical Gap Module values, including Critical Gp and FollowUpTim.

Capacity Module:

Table with 12 columns for Capacity Module values, including Cnflct Vol, Potent Cap., Move Cap., and Volume/Cap.

Level Of Service Module:

Table with 12 columns for Level Of Service Module values, including Queue, Stopped Del, LOS by Move, Movement, Shared Cap., SharedQueue, Shrd StpDel, Shared LOS, ApproachDel, and ApproachLOS.

AM Peakhour - Buildout Conditions
Cotati Circulation Improvement Study
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2000 HCM Unsignalized Method (Future Volume Alternative)

Intersection #2 Commerce Blvd/Wilford Ln

Average Delay (sec/veh): 1.6 Worst Case Level Of Service: C[17.1]

Table with 4 columns: Approach, Movement, Control, Rights, Lanes. Rows include North Bound, South Bound, East Bound, West Bound with various traffic signals and lane configurations.

Volume Module:

Table with 12 columns representing traffic volume components: Base Vol, Growth Adj, Initial Bse, Added Vol, PasserByVol, Initial Fut, User Adj, PHF Adj, PHF Volume, Reduct Vol, Final Vol.

Critical Gap Module:

Table with 12 columns for Critical Gap Module values, including Critical Gp and FollowUpTim.

Capacity Module:

Table with 12 columns for Capacity Module values, including Cnflct Vol, Potent Cap., Move Cap., and Volume/Cap.

Level Of Service Module:

Table with 12 columns for Level Of Service Module values, including Queue, Stopped Del, LOS by Move, Movement, Shared Cap., SharedQueue, Shrd StpDel, Shared LOS, ApproachDel, and ApproachLOS.

AM Peakhour - Buildout Conditions
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Level Of Service Computation Report

2000 HCM Unsignalized Method (Future Volume Alternative)

Intersection #3 Old Redwood Highway/Commerce Blvd.

Average Delay (sec/veh): 113.3 Worst Case Level Of Service: F[330.2]

Approach: North Bound South Bound East Bound West Bound
Movement: L - T - R L - T - R L - T - R L - T - R

Control: Uncontrolled Uncontrolled Stop Sign Stop Sign
Rights: Include Include Include Include
Lanes: 0 0 1 0 1 0 0 0 0 0 0 0 0 0 1 0 0 0 1

Volume Module:
Base Vol: 0 743 365 0 0 0 0 0 0 0 406 0 175
Growth Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
Initial Bse: 0 743 365 0 0 0 0 0 0 0 406 0 175
Added Vol: 0 201 55 0 0 0 0 0 0 0 55 0 1
PasserByVol: 0 0 0 0 0 0 0 0 0 0 0 0 0
Initial Fut: 0 944 420 0 0 0 0 0 0 0 461 0 176
User Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
PHF Adj: 0.98 0.98 0.98 1.00 1.00 1.00 1.00 1.00 1.00 0.88 0.88 0.88
PHF Volume: 0 964 429 0 0 0 0 0 0 0 527 0 201
Reduct Vol: 0 0 0 0 0 0 0 0 0 0 0 0 0
Final Vol.: 0 964 429 0 0 0 0 0 0 0 527 0 201

Critical Gap Module:
Critical Gp:xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx 6.4 xxxxx 6.3
FollowUpTim:xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx 3.5 xxxxx 3.3

Capacity Module:
Cnflct Vol: xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx 964 xxxxx 964
Potent Cap.: xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx 279 xxxxx 305
Move Cap.: xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx 279 xxxxx 305
Volume/Cap: xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx 1.89 xxxxx 0.66

Level Of Service Module:
Queue: xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx 36.4 xxxxx 4.3
Stopped Del:xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx 442.1 xxxxx 36.9
LOS by Move: * * * * * * * * * * F * E
Movement: LT - LTR - RT LT - LTR - RT LT - LTR - RT LT - LTR - RT
Shared Cap.: xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx
SharedQueue:xxxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx
Shrd StpDel:xxxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx
Shared LOS: * * * * * * * * * * * * * *
ApproachDel: xxxxxxx xxxxxxx xxxxxxx 330.2
ApproachLOS: * * * * F

AM Peakhour - Buildout Conditions
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Level Of Service Computation Report

2000 HCM Unsignalized Method (Future Volume Alternative)

Intersection #4 Gravenstein Hwy/Alder Ave

Average Delay (sec/veh): 7.7 Worst Case Level Of Service: F[158.9]

Approach: North Bound South Bound East Bound West Bound
Movement: L - T - R L - T - R L - T - R L - T - R

Control: Stop Sign Stop Sign Uncontrolled Uncontrolled
Rights: Include Include Include Include
Lanes: 0 0 1! 0 0 0 0 1! 0 0 0 0 1! 0 0 0 0 1! 0 0

Volume Module:
Base Vol: 1 0 7 7 0 12 14 611 1 5 607 6
Growth Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
Initial Bse: 1 0 7 7 0 12 14 611 1 5 607 6
Added Vol: 0 0 0 39 0 16 43 413 0 0 289 74
PasserByVol: 0 0 0 0 0 0 0 0 0 0 0 0
Initial Fut: 1 0 7 46 0 28 57 1024 1 5 896 80
User Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
PHF Adj: 0.50 0.50 0.50 0.68 0.68 0.68 0.94 0.94 0.94 0.84 0.84 0.84
PHF Volume: 2 0 14 68 0 41 61 1089 1 6 1067 95
Reduct Vol: 0 0 0 0 0 0 0 0 0 0 0 0
Final Vol.: 2 0 14 68 0 41 61 1089 1 6 1067 95

Critical Gap Module:
Critical Gp: 7.1 xxxxx 6.2 7.2 xxxxx 6.3 4.1 xxxxx xxxxx 4.1 xxxxx xxxxx
FollowUpTim: 3.5 xxxxx 3.3 3.5 xxxxx 3.3 2.2 xxxxx xxxxx 2.2 xxxxx xxxxx

Capacity Module:
Cnflct Vol: 2358 xxxxx 1090 2344 xxxxx 1114 1162 xxxxx xxxxx 1090 xxxxx xxxxx
Potent Cap.: 25 xxxxx 264 25 xxxxx 250 591 xxxxx xxxxx 629 xxxxx xxxxx
Move Cap.: 19 xxxxx 264 21 xxxxx 250 591 xxxxx xxxxx 629 xxxxx xxxxx
Volume/Cap: 0.10 xxxxx 0.05 3.17 xxxxx 0.17 0.10 xxxxx xxxxx 0.01 xxxxx xxxxx

Level Of Service Module:
Queue: xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx 0.3 xxxxx xxxxx 0.0 xxxxx xxxxx
Stopped Del:xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx 11.8 xxxxx xxxxx 10.8 xxxxx xxxxx
LOS by Move: * * * * * * * * * * B * * * B * * *
Movement: LT - LTR - RT LT - LTR - RT LT - LTR - RT LT - LTR - RT
Shared Cap.: xxxxx 101 xxxxx xxxxx 109 xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx
SharedQueue:xxxxxx 0.5 xxxxx xxxxx 6.4 xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx
Shrd StpDel:xxxxxx 47.1 xxxxx xxxxx 159 xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx
Shared LOS: * E * * F * * * * * * * *
ApproachDel: 47.1 158.9 xxxxxxx xxxxxxx
ApproachLOS: E F * *

AM Peakhour - Buildout Conditions
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2000 HCM Unsignalized Method (Future Volume Alternative)

Intersection #5 Gravenstein Hwy/W Cotati Ave

Average Delay (sec/veh): OVERFLOW Worst Case Level Of Service: F[xxxxx]

Approach: North Bound South Bound East Bound West Bound
Movement: L - T - R L - T - R L - T - R L - T - R

Control: Stop Sign Stop Sign Uncontrolled Uncontrolled
Rights: Include Include Channel Include
Lanes: 1 0 0 0 1 0 0 0 0 0 0 0 1 0 0 1 0 0 0 0 0

Volume Module:

Base Vol: 6 0 50 0 0 0 0 0 639 5 12 626 0
Growth Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
Initial Bse: 6 0 50 0 0 0 0 0 639 5 12 626 0
Added Vol: 7 0 17 0 0 0 0 0 448 4 14 357 0
PasserByVol: 0 0 0 0 0 0 0 0 0 0 0 0 0
Initial Fut: 13 0 67 0 0 0 0 0 1087 9 26 983 0
User Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
PHF Adj: 0.86 0.86 0.86 1.00 1.00 1.00 0.80 0.80 0.80 0.89 0.89 0.89
PHF Volume: 15 0 78 0 0 0 0 0 1359 11 29 1104 0
Reduct Vol: 0 0 0 0 0 0 0 0 0 0 0 0 0
Final Vol.: 15 0 78 0 0 0 0 0 1359 11 29 1104 0

Critical Gap Module:

Critical Gp: 6.4 xxxxx 6.2 xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx 4.1 xxxxx xxxxx
FollowUpTim: 3.5 xxxxx 3.3 xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx 2.2 xxxxx xxxxx

Capacity Module:

Cnflct Vol: xxxxx xxxxx 1359 xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx 1359 xxxxx xxxxx
Potent Cap.: 0 xxxxx 182 xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx 496 xxxxx xxxxx
Move Cap.: 0 xxxxx 182 xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx 496 xxxxx xxxxx
Volume/StpDel: xxxxx xxxxx 0.43 xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx 0.06 xxxxx xxxxx

Level Of Service Module:

Queue: 3.5 xxxxx 2.0 xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx 0.2 xxxxx xxxxx
Stopped Del: xxxxx xxxxx 38.9 xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx 12.7 xxxxx xxxxx
LOS by Move: F * E * * * * * B * *
Movement: LT - LTR - RT LT - LTR - RT LT - LTR - RT LT - LTR - RT
Shared Cap.: xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx
SharedQueue: xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx 0.2 xxxxx xxxxx
Shrd StpDel: xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx 12.7 xxxxx xxxxx
Shared LOS: * * * * * * * * B * *
ApproachDel: xxxxxxx xxxxxxx xxxxxxx xxxxxxx
ApproachLOS: F * * *

AM Peakhour - Buildout Conditions
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2000 HCM Operations Method (Future Volume Alternative)

Intersection #6 Gravenstein Hwy/Redwood Dr

Cycle (sec): 100 Critical Vol./Cap. (X): 0.688
Loss Time (sec): 6 (Y+R = 4 sec) Average Delay (sec/veh): 22.5
Optimal Cycle: 41 Level Of Service: C

Approach: North Bound South Bound East Bound West Bound
Movement: L - T - R L - T - R L - T - R L - T - R

Control: Permitted Permitted Protected Protected
Rights: Include Include Include Include
Min. Green: 0 0 0 0 0 0 0 0 0 0 0 0
Lanes: 1 0 0 1 0 1 0 0 1 0 1 0 1 1 0 1 0 2 0 1

Volume Module:

Base Vol: 41 17 83 188 13 36 73 547 33 69 561 268
Growth Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
Initial Bse: 41 17 83 188 13 36 73 547 33 69 561 268
Added Vol: 0 0 0 77 0 20 24 487 0 0 419 188
PasserByVol: 0 0 0 0 0 0 0 0 0 0 0 0
Initial Fut: 41 17 83 265 13 56 97 1034 33 69 980 456
User Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
PHF Adj: 0.88 0.88 0.88 0.94 0.94 0.94 0.94 0.94 0.94 0.87 0.87 0.87
PHF Volume: 47 19 94 282 14 60 103 1100 35 79 1126 524
Reduct Vol: 0 0 0 0 0 0 0 0 0 0 0 0
Reduced Vol: 47 19 94 282 14 60 103 1100 35 79 1126 524
PCE Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
MLF Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
Final Vol.: 47 19 94 282 14 60 103 1100 35 79 1126 524

Saturation Flow Module:

Sat/Lane: 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900
Adjustment: 0.66 0.83 0.83 0.60 0.84 0.84 0.90 0.95 0.95 0.90 0.95 0.81
Lanes: 1.00 0.17 0.83 1.00 0.19 0.81 1.00 1.94 0.06 1.00 2.00 1.00
Final Sat.: 1257 269 1315 1149 299 1289 1718 3488 111 1718 3618 1537

Capacity Analysis Module:

Vol/Sat: 0.04 0.07 0.07 0.25 0.05 0.05 0.06 0.32 0.32 0.05 0.31 0.34
Crit Moves: ****
Green/Cycle: 0.36 0.36 0.36 0.36 0.36 0.36 0.09 0.51 0.51 0.07 0.50 0.50
Volume/Cap: 0.10 0.20 0.20 0.69 0.13 0.13 0.69 0.62 0.62 0.62 0.63 0.69
Delay/Veh: 21.6 22.5 22.5 32.3 21.8 21.8 56.9 18.3 18.3 53.9 19.2 21.9
User DelAdj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
AdjDel/Veh: 21.6 22.5 22.5 32.3 21.8 21.8 56.9 18.3 18.3 53.9 19.2 21.9
HCM2kAvg: 1 2 2 13 2 2 5 13 13 4 13 13

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2000 HCM Operations Method (Future Volume Alternative)

Intersection #7 Gravenstein Hwy/US 101 SB

Cycle (sec): 100 Critical Vol./Cap. (X): 0.785
Loss Time (sec): 6 (Y+R = 4 sec) Average Delay (sec/veh): 24.3
Optimal Cycle: 55 Level Of Service: C

Table with 4 columns: Approach (North, South, East, West Bound) and Movement (L, T, R). Rows include Control, Rights, Min. Green, and Lanes.

Volume Module table with 12 columns for traffic flows and 12 rows for various metrics like Base Vol, Growth Adj, Initial Bse, etc.

Saturation Flow Module table with 12 columns for traffic flows and 4 rows for Sat/Lane, Adjustment, Lanes, and Final Sat.

Capacity Analysis Module table with 12 columns for traffic flows and 12 rows for Vol/Sat, Crit Moves, Green/Cycle, etc.

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2000 HCM Operations Method (Future Volume Alternative)

Intersection #8 Gravenstein Hwy/US 101 NB

Cycle (sec): 100 Critical Vol./Cap. (X): 0.868
Loss Time (sec): 4 (Y+R = 4 sec) Average Delay (sec/veh): 26.1
Optimal Cycle: 70 Level Of Service: C

Table with 4 columns: Approach (North, South, East, West Bound) and Movement (L, T, R). Rows include Control, Rights, Min. Green, and Lanes.

Volume Module table with 12 columns for traffic flows and 12 rows for various metrics like Base Vol, Growth Adj, Initial Bse, etc.

Saturation Flow Module table with 12 columns for traffic flows and 4 rows for Sat/Lane, Adjustment, Lanes, and Final Sat.

Capacity Analysis Module table with 12 columns for traffic flows and 12 rows for Vol/Sat, Crit Moves, Green/Cycle, etc.

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2000 HCM Operations Method (Future Volume Alternative)

Intersection #9 Gravenstein Hwy/Old Redwood Hwy

Cycle (sec): 100 Critical Vol./Cap. (X): 0.656
Loss Time (sec): 8 (Y+R = 4 sec) Average Delay (sec/veh): 26.5
Optimal Cycle: 43 Level Of Service: C

Table with 4 columns: Approach (North Bound, South Bound, East Bound, West Bound) and 4 sub-columns for movement (L, T, R). Includes Control, Rights, Min. Green, and Lanes.

Volume Module: 7:30 - 8:30 am. Table with 12 columns for volume and 12 columns for saturation flow.

Saturation Flow Module. Table with 12 columns for Sat/Lane, Adjustment, Lanes, and Final Sat.

Capacity Analysis Module. Table with 12 columns for Vol/Sat, Crit Moves, Green/Cycle, Volume/Cap, Delay/Veh, User DelAdj, AdjDel/Veh, and HCM2kAvg.

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2000 HCM 4-Way Stop Method (Future Volume Alternative)

Intersection #10 Old Redwood Hwy/William St-George St

Cycle (sec): 100 Critical Vol./Cap. (X): 1.165
Loss Time (sec): 0 (Y+R = 4 sec) Average Delay (sec/veh): 89.5
Optimal Cycle: 0 Level Of Service: F

Table with 4 columns: Approach (North Bound, South Bound, East Bound, West Bound) and 4 sub-columns for movement (L, T, R). Includes Control, Rights, Min. Green, and Lanes.

Volume Module. Table with 12 columns for volume and 12 columns for saturation flow.

Saturation Flow Module. Table with 12 columns for Sat/Lane, Adjustment, Lanes, and Final Sat.

Capacity Analysis Module. Table with 12 columns for Vol/Sat, Crit Moves, Delay/Veh, Delay Adj, AdjDel/Veh, LOS by Move, ApproachDel, Delay Adj, ApprAdjDel, and LOS by Appr.

AM Peakhour - Buildout Conditions
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2000 HCM Unsignalized Method (Future Volume Alternative)

Intersection #11 W Sierra Ave/W School St-US 101 SB Ramp

Average Delay (sec/veh): 3.7 Worst Case Level Of Service: C[23.3]

Approach: North Bound South Bound East Bound West Bound
Movement: L - T - R L - T - R L - T - R L - T - R

Control: Stop Sign Stop Sign Uncontrolled Uncontrolled
Rights: Include Include Channel Include
Lanes: 0 0 0 0 0 0 0 1! 0 0 0 1 0 0 1 0 0 1 0 0

Volume Module:

Base Vol: 0 0 0 24 9 1 3 135 4 134 166 21
Growth Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
Initial Bse: 0 0 0 24 9 1 3 135 4 134 166 21
Added Vol: 0 0 0 1 3 1 1 48 9 53 24 6
PasserByVol: 0 0 0 0 0 0 0 0 0 0 0 0
Initial Fut: 0 0 0 25 12 2 4 183 13 187 190 27
User Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
PHF Adj: 1.00 1.00 1.00 0.71 0.71 0.71 0.63 0.63 0.63 0.93 0.93 0.93
PHF Volume: 0 0 0 35 17 3 6 290 21 201 204 29
Reduct Vol: 0 0 0 0 0 0 0 0 0 0 0 0
Final Vol.: 0 0 0 35 17 3 6 290 21 201 204 29

Critical Gap Module:

Critical Gp:xxxxx xxxxx xxxxx 6.4 6.5 6.2 4.1 xxxxx xxxxx 4.1 xxxxx xxxxx
FollowUpTim:xxxxx xxxxx xxxxx 3.5 4.0 3.3 2.2 xxxxx xxxxx 2.2 xxxxx xxxxx

Capacity Module:

Cnflct Vol: xxxxx xxxxx xxxxx 934 924 219 233 xxxxx xxxxx 290 xxxxx xxxxx
Potent Cap.: xxxxx xxxxx xxxxx 295 269 821 1334 xxxxx xxxxx 1271 xxxxx xxxxx
Move Cap.: xxxxx xxxxx xxxxx 254 220 821 1334 xxxxx xxxxx 1271 xxxxx xxxxx
Volume/Cap: xxxxx xxxxx xxxxx 0.14 0.08 0.00 0.00 xxxxx xxxxx 0.16 xxxxx xxxxx

Level Of Service Module:

Queue: xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx 0.0 xxxxx xxxxx 0.6 xxxxx xxxxx
Stopped Del:xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx 7.7 xxxxx xxxxx 8.4 xxxxx xxxxx
LOS by Move: * * * * * A * * *
Movement: LT - LTR - RT LT - LTR - RT LT - LTR - RT LT - LTR - RT
Shared Cap.: xxxxx xxxxx xxxxx xxxxx 251 xxxxx xxxxx xxxxx xxxxx xxxxx
SharedQueue:xxxxxx xxxxx xxxxx xxxxx 0.8 xxxxx 0.0 xxxxx xxxxx xxxxx xxxxx xxxxx
Shrd StpDel:xxxxxx xxxxx xxxxx xxxxx 23.3 xxxxx 7.7 xxxxx xxxxx xxxxx xxxxx xxxxx
Shared LOS: * * * * * C * A * * * * *
ApproachDel: xxxxxxx 23.3 xxxxxxx xxxxxxx
ApproachLOS: * C * * *

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2000 HCM Unsignalized Method (Future Volume Alternative)

Intersection #12 W Sierra Ave/US 101 NB Off-ramp

Average Delay (sec/veh): 2.1 Worst Case Level Of Service: B[11.3]

Approach: North Bound South Bound East Bound West Bound
Movement: L - T - R L - T - R L - T - R L - T - R

Control: Stop Sign Stop Sign Uncontrolled Uncontrolled
Rights: Include Include Include Include
Lanes: 1 0 0 0 1 0 0 0 0 0 0 0 1 0 0 0 0 1 0 0

Volume Module:

Base Vol: 12 0 85 0 0 0 0 0 146 0 0 0 313 0
Growth Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
Initial Bse: 12 0 85 0 0 0 0 0 146 0 0 0 313 0
Added Vol: 8 0 39 0 0 0 0 0 49 0 0 0 76 0
PasserByVol: 0 0 0 0 0 0 0 0 0 0 0 0 0 0
Initial Fut: 20 0 124 0 0 0 0 0 195 0 0 0 389 0
User Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
PHF Adj: 0.87 0.87 0.87 1.00 1.00 1.00 0.73 0.73 0.73 0.86 0.86 0.86
PHF Volume: 23 0 143 0 0 0 0 0 267 0 0 0 452 0
Reduct Vol: 0 0 0 0 0 0 0 0 0 0 0 0 0 0
Final Vol.: 23 0 143 0 0 0 0 0 267 0 0 0 452 0

Critical Gap Module:

Critical Gp: 6.4 xxxxx 6.2 xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx
FollowUpTim: 3.5 xxxxx 3.3 xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx

Capacity Module:

Cnflct Vol: 719 xxxxx 267 xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx
Potent Cap.: 395 xxxxx 772 xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx
Move Cap.: 395 xxxxx 772 xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx
Volume/Cap: 0.06 xxxxx 0.18 xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx

Level Of Service Module:

Queue: 0.2 xxxxx 0.7 xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx
Stopped Del: 14.7 xxxxx 10.7 xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx
LOS by Move: B * B * * * * * * * *
Movement: LT - LTR - RT LT - LTR - RT LT - LTR - RT LT - LTR - RT
Shared Cap.: xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx
SharedQueue:xxxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx
Shrd StpDel:xxxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx
Shared LOS: * * * * * * * * * * * * * *
ApproachDel: 11.3 xxxxxxx xxxxxxx xxxxxxx
ApproachLOS: B * * *

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2000 HCM 4-Way Stop Method (Future Volume Alternative)

Intersection #13 W Sierra Ave/E School St

Cycle (sec): 100 Critical Vol./Cap. (X): 0.600
Loss Time (sec): 0 (Y+R = 4 sec) Average Delay (sec/veh): 12.3
Optimal Cycle: 0 Level Of Service: B

Table with 4 columns: Approach (North Bound, South Bound, East Bound, West Bound) and 4 rows: Movement, Control, Rights, Min. Green, Lanes.

Volume Module: Table with 12 columns for volume metrics and 12 rows for various traffic conditions like Base Vol, Growth Adj, etc.

Saturation Flow Module: Table with 12 columns for saturation flow metrics and 4 rows for Adjustment, Lanes, Final Sat.

Capacity Analysis Module: Table with 12 columns for capacity metrics and 12 rows for Vol/Sat, Crit Moves, Delay/Veh, etc.

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2000 HCM Operations Method (Future Volume Alternative)

Intersection #14 Old Redwood Hwy/E Cotati Ave

Cycle (sec): 100 Critical Vol./Cap. (X): 1.224
Loss Time (sec): 8 (Y+R = 4 sec) Average Delay (sec/veh): 107.0
Optimal Cycle: 180 Level Of Service: F

Table with 4 columns: Approach (North Bound, South Bound, East Bound, West Bound) and 4 rows: Movement, Control, Rights, Min. Green, Lanes.

Volume Module: 7:30 - 8:30 am. Table with 12 columns for volume metrics and 12 rows for various traffic conditions.

Saturation Flow Module: Table with 12 columns for saturation flow metrics and 4 rows for Sat/Lane, Adjustment, Lanes, Final Sat.

Capacity Analysis Module: Table with 12 columns for capacity metrics and 12 rows for Vol/Sat, Crit Moves, Delay/Veh, etc.

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2000 HCM Unsignalized Method (Future Volume Alternative)

Intersection #15 E Cotati Ave/Charles St

Average Delay (sec/veh): 4.0 Worst Case Level Of Service: D[33.4]

Approach: North Bound South Bound East Bound West Bound
Movement: L - T - R L - T - R L - T - R L - T - R

Control: Stop Sign Stop Sign Uncontrolled Uncontrolled
Rights: Include Include Include Include
Lanes: 0 0 1! 0 0 0 0 0 0 0 0 0 1 0 1 0 1 0 0

Volume Module:

Base Vol: 1 0 111 0 0 0 0 0 490 3 230 615 0
Growth Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
Initial Bse: 1 0 111 0 0 0 0 0 490 3 230 615 0
Added Vol: 0 0 29 0 0 0 0 0 333 0 15 228 0
PasserByVol: 0 0 0 0 0 0 0 0 0 0 0 0 0
Initial Fut: 1 0 140 0 0 0 0 0 823 3 245 843 0
User Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
PHF Adj: 0.82 0.82 0.82 1.00 1.00 1.00 0.82 0.82 0.88 0.88 0.88
PHF Volume: 1 0 171 0 0 0 0 0 1004 4 278 958 0
Reduct Vol: 0 0 0 0 0 0 0 0 0 0 0 0 0
Final Vol.: 1 0 171 0 0 0 0 0 1004 4 278 958 0

Critical Gap Module:

Critical Gp: 6.4 xxx 6.2 xxx xxx xxx xxx xxx xxx 4.1 xxx xxx
FollowUpTim: 3.5 xxx 3.3 xxx xxx xxx xxx xxx xxx 2.2 xxx xxx

Capacity Module:

Cnflct Vol: 4063 xxx 1005 xxx xxx xxx xxx xxx xxx 1007 xxx xxx
Potent Cap.: 2 xxx 293 xxx xxx xxx xxx xxx xxx 688 xxx xxx
Move Cap.: 1 xxx 293 xxx xxx xxx xxx xxx xxx 688 xxx xxx
Total Cap: 97 0 xxx 0 0 xxx xxx xxx xxx xxx xxx xxx xxx
Volume/Cap: 0.01 xxx 0.58 xxx xxx xxx xxx xxx xxx 0.40 xxx xxx

Level Of Service Module:

Queue: xxx xxx xxx xxx xxx xxx xxx xxx xxx 2.0 xxx xxx
Stopped Del: xxx xxx xxx xxx xxx xxx xxx xxx xxx 13.7 xxx xxx
LOS by Move: * * * * * * * * * * B * * *
Movement: LT - LTR - RT LT - LTR - RT LT - LTR - RT LT - LTR - RT
Shared Cap.: xxx 293 xxx xxx xxx xxx xxx xxx xxx xxx xxx
SharedQueue: xxx 3.5 xxx xxx xxx xxx xxx xxx xxx xxx xxx
Shrd StpDel: xxx 33.4 xxx xxx xxx xxx xxx xxx xxx xxx xxx
Shared LOS: * D * * * * * * * * * * * * *
ApproachDel: 33.4 xxx xxx xxx xxx xxx xxx xxx xxx
ApproachLOS: D * * * * *

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2000 HCM 4-Way Stop Method (Future Volume Alternative)

Intersection #16 E Cotati Ave/La Salle Ave

Cycle (sec): 100 Critical Vol./Cap. (X): 1.109

Loss Time (sec): 0 (Y+R = 4 sec) Average Delay (sec/veh): 74.8

Optimal Cycle: 0 Level Of Service: F

Approach: North Bound South Bound East Bound West Bound
Movement: L - T - R L - T - R L - T - R L - T - R

Control: Stop Sign Stop Sign Stop Sign Stop Sign
Rights: Include Include Include Include
Lanes: 0 0 1! 0 0 0 0 0 0 1 1 0 1 1 0

Volume Module: 7:30 - 8:30 am

Base Vol: 127 2 51 0 0 3 8 555 87 45 717 3
Growth Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
Initial Bse: 127 2 51 0 0 3 8 555 87 45 717 3
Added Vol: 8 0 30 0 0 0 0 354 6 9 215 0
PasserByVol: 0 0 0 0 0 0 0 0 0 0 0 0
Initial Fut: 135 2 81 0 0 3 8 909 93 54 932 3
User Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
PHF Adj: 0.88 0.88 0.88 0.50 0.50 0.50 0.87 0.87 0.87 0.89 0.89
PHF Volume: 153 2 92 0 0 6 9 1045 107 61 1047 3
Reduct Vol: 0 0 0 0 0 0 0 0 0 0 0 0
Reduced Vol: 153 2 92 0 0 6 9 1045 107 61 1047 3
PCE Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
MLF Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
Final Vol.: 153 2 92 0 0 6 9 1045 107 61 1047 3

Saturation Flow Module:

Adjustment: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
Lanes: 0.62 0.01 0.37 0.00 0.00 1.00 1.00 1.81 0.19 1.00 1.99 0.01
Final Sat.: 327 5 196 0 0 467 480 942 97 484 1036 3

Capacity Analysis Module:

Vol/Sat: 0.47 0.47 0.47 xxx xxx 0.01 0.02 1.11 1.10 0.13 1.01 1.01
Crit Moves: **** * * * *
Delay/Veh: 15.7 15.7 15.7 0.0 0.0 10.4 10.3 98.0 93.8 11.2 68.4 68.3
Delay Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
AdjDel/Veh: 15.7 15.7 15.7 0.0 0.0 10.4 10.3 98.0 93.8 11.2 68.4 68.3
LOS by Move: C C C * * B B F F B F F
ApproachDel: 15.7 10.4 96.9 65.3
Delay Adj: 1.00 1.00 1.00 1.00
ApprAdjDel: 15.7 10.4 96.9 65.3
LOS by Appr: C B F F

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2000 HCM Operations Method (Future Volume Alternative)

Intersection #17 E Cotati Ave/Adrian Dr

Cycle (sec): 100 Critical Vol./Cap. (X): 0.624
Loss Time (sec): 6 (Y+R = 4 sec) Average Delay (sec/veh): 19.4
Optimal Cycle: 35 Level Of Service: B

Table with 4 columns: Approach (North, South, East, West Bound) and Movement (L, T, R). Rows include Control, Rights, Min. Green, and Lanes.

Volume Module table with columns for Base Vol, Growth Adj, Initial Bse, Added Vol, PasserByVol, Initial Fut, User Adj, PHF Adj, PHF Volume, Reduct Vol, Reduced Vol, PCE Adj, MLF Adj, Final Vol.

Saturation Flow Module table with columns for Sat/Lane, Adjustment, Lanes, Final Sat.

Capacity Analysis Module table with columns for Vol/Sat, Crit Moves, Green/Cycle, Volume/Cap, Delay/Veh, User DelAdj, AdjDel/Veh, HCM2kAvg.

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Cotati Circulation Improvement Study
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2000 HCM Operations Method (Future Volume Alternative)

Intersection #18 E Cotati Ave/Lancaster Dr

Cycle (sec): 100 Critical Vol./Cap. (X): 0.775
Loss Time (sec): 6 (Y+R = 4 sec) Average Delay (sec/veh): 24.7
Optimal Cycle: 53 Level Of Service: C

Table with 4 columns: Approach (North, South, East, West Bound) and Movement (L, T, R). Rows include Control, Rights, Min. Green, and Lanes.

Volume Module table with columns for Base Vol, Growth Adj, Initial Bse, Added Vol, PasserByVol, Initial Fut, User Adj, PHF Adj, PHF Volume, Reduct Vol, Reduced Vol, PCE Adj, MLF Adj, Final Vol.

Saturation Flow Module table with columns for Sat/Lane, Adjustment, Lanes, Final Sat.

Capacity Analysis Module table with columns for Vol/Sat, Crit Moves, Green/Cycle, Volume/Cap, Delay/Veh, User DelAdj, AdjDel/Veh, HCM2kAvg.

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2000 HCM Unsignalized Method (Future Volume Alternative)

Intersection #19 E Cotati Ave/Beverly Dr

Average Delay (sec/veh): 1.3 Worst Case Level Of Service: B[14.6]

Approach: North Bound South Bound East Bound West Bound
Movement: L - T - R L - T - R L - T - R L - T - R

Control: Stop Sign Stop Sign Uncontrolled Uncontrolled
Rights: Include Include Include Include
Lanes: 0 0 0 0 0 0 0 1! 0 0 1 0 2 0 0 1 0 1 1 0

Volume Module: >> Count Date: 17 Nov 2004 <<

Base Vol: 0 0 0 73 0 55 59 721 0 0 645 121
Growth Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
Initial Bse: 0 0 0 73 0 55 59 721 0 0 645 121
Added Vol: 0 0 0 24 0 0 0 415 0 0 197 6
PasserByVol: 0 0 0 0 0 0 0 0 0 0 0 0
Initial Fut: 0 0 0 97 0 55 59 1136 0 0 842 127
User Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
PHF Adj: 1.00 1.00 1.00 0.76 0.76 0.76 0.81 0.81 0.81 0.81 0.81 0.81
PHF Volume: 0 0 0 128 0 72 73 1402 0 0 1040 157
Reduct Vol: 0 0 0 0 0 0 0 0 0 0 0 0
Final Vol.: 0 0 0 128 0 72 73 1402 0 0 1040 157

Critical Gap Module:

Critical Gp:xxxxx xxxx xxxxx 6.8 xxxxx 6.9 4.1 xxxxx xxxxx xxxxx xxxxx xxxxx
FollowUpTim:xxxxx xxxx xxxxx 3.5 xxxxx 3.3 2.2 xxxxx xxxxx xxxxx xxxxx xxxxx

Capacity Module:

Cnflct Vol: xxxxx xxxxx xxxxx 2498 xxxxx 761 978 xxxxx xxxxx xxxxx xxxxx xxxxx
Potent Cap.: xxxxx xxxxx xxxxx 19 xxxxx 274 551 xxxxx xxxxx xxxxx xxxxx xxxxx
Move Cap.: xxxxx xxxxx xxxxx 17 xxxxx 274 551 xxxxx xxxxx xxxxx xxxxx xxxxx
Total Cap: 0 577 xxxxx 175 615 xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx
Volume/Cap: xxxxx xxxxx xxxxx 0.73 xxxxx 0.26 0.13 xxxxx xxxxx xxxxx xxxxx xxxxx

Level Of Service Module:

Queue: xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx 0.5 xxxxx xxxxx xxxxx xxxxx xxxxx
Stopped Del:xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx 12.5 xxxxx xxxxx xxxxx xxxxx xxxxx
LOS by Move: * * * * * B * * * * *
Movement: LT - LTR - RT LT - LTR - RT LT - LTR - RT LT - LTR - RT
Shared Cap.: xxxxx xxxxx xxxxx xxxxx 572 xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx
SharedQueue:xxxxx xxxxx xxxxx xxxxx 1.6 xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx
Shrd StpDel:xxxxx xxxxx xxxxx xxxxx 14.6 xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx
Shared LOS: * * * * * B * * * * *
ApproachDel: xxxxxxx 14.6 xxxxxxx xxxxxxx
ApproachLOS: * B * * *

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2000 HCM Unsignalized Method (Future Volume Alternative)

Intersection #20 E Cotati Ave/Santero Way

Average Delay (sec/veh): 10.2 Worst Case Level Of Service: F[169.2]

Approach: North Bound South Bound East Bound West Bound
Movement: L - T - R L - T - R L - T - R L - T - R

Control: Stop Sign Stop Sign Uncontrolled Uncontrolled
Rights: Include Include Include Include
Lanes: 0 0 1! 0 0 0 0 0 0 0 0 0 1 1 0 1 0 2 0 0

Volume Module:

Base Vol: 10 0 10 0 0 0 0 0 860 14 8 702 0
Growth Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
Initial Bse: 10 0 10 0 0 0 0 0 860 14 8 702 0
Added Vol: 87 0 10 0 0 0 0 0 299 139 17 108 0
PasserByVol: 0 0 0 0 0 0 0 0 0 0 0 0 0
Initial Fut: 97 0 20 0 0 0 0 0 1159 153 25 810 0
User Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
PHF Adj: 0.71 0.71 0.71 1.00 1.00 1.00 0.83 0.83 0.83 0.81 0.81 0.81
PHF Volume: 137 0 28 0 0 0 0 0 1396 184 31 1000 0
Reduct Vol: 0 0 0 0 0 0 0 0 0 0 0 0 0
Final Vol.: 137 0 28 0 0 0 0 0 1396 184 31 1000 0

Critical Gap Module:

Critical Gp: 6.8 xxxxx 6.9 xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx 4.1 xxxxx xxxxx
FollowUpTim: 3.5 xxxxx 3.3 xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx 2.2 xxxxx xxxxx

Capacity Module:

Cnflct Vol: 2050 xxxxx 790 xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx 1581 xxxxx xxxxx
Potent Cap.: 48 xxxxx 333 xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx 412 xxxxx xxxxx
Move Cap.: 45 xxxxx 333 xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx 412 xxxxx xxxxx
Total Cap: 132 0 xxxxx 720 0 xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx
Volume/Cap: 1.03 xxxxx 0.08 xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx 0.07 xxxxx xxxxx

Level Of Service Module:

Queue: xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx 0.2 xxxxx xxxxx
Stopped Del:xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx 14.4 xxxxx xxxxx
LOS by Move: * * * * * B * * * * *
Movement: LT - LTR - RT LT - LTR - RT LT - LTR - RT LT - LTR - RT
Shared Cap.: xxxxx 148 xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx
SharedQueue:xxxxx 9.0 xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx
Shrd StpDel:xxxxx 169 xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx
Shared LOS: * F * * * * * * * * *
ApproachDel: 169.2 xxxxxxx xxxxxxx xxxxxxx
ApproachLOS: F * * * *

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2000 HCM 4-Way Stop Method (Future Volume Alternative)

Intersection #21 Old Redwood Highway/Henry-Charles St.

Cycle (sec): 100 Critical Vol./Cap. (X): 0.864
Loss Time (sec): 0 (Y+R = 4 sec) Average Delay (sec/veh): 28.3
Optimal Cycle: 0 Level Of Service: D

Table with 4 columns: North Bound, South Bound, East Bound, West Bound. Rows include Movement, Control, Rights, Min. Green, and Lanes.

Volume Module table with 12 columns representing different traffic movements and 10 rows of volume and delay data.

Saturation Flow Module table with 12 columns and 4 rows of adjustment and saturation data.

Capacity Analysis Module table with 12 columns and 10 rows of capacity, delay, and LOS data.

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2000 HCM Operations Method (Future Volume Alternative)

Intersection #22 Old Redwood Hwy/Myrtle-Valparaiso Ave

Cycle (sec): 100 Critical Vol./Cap. (X): 0.648
Loss Time (sec): 6 (Y+R = 4 sec) Average Delay (sec/veh): 19.2
Optimal Cycle: 37 Level Of Service: B

Table with 4 columns: North Bound, South Bound, East Bound, West Bound. Rows include Movement, Control, Rights, Min. Green, and Lanes.

Volume Module table with 12 columns representing different traffic movements and 10 rows of volume and delay data.

Saturation Flow Module table with 12 columns and 4 rows of adjustment and saturation data.

Capacity Analysis Module table with 12 columns and 10 rows of capacity, delay, and LOS data.

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2000 HCM Unsignalized Method (Future Volume Alternative)

Intersection #3 Old Redwood Highway/Commerce Blvd.

Average Delay (sec/veh): 90.9 Worst Case Level Of Service: F[363.0]

Table with 4 columns: North Bound, South Bound, East Bound, West Bound. Rows include Movement, Control, Rights, and Lanes.

Table with 4 columns: Count, Date, and two unlabeled columns. Rows include Volume Module, Base Vol, Growth Adj, Initial Bse, Added Vol, PasserByVol, Initial Fut, User Adj, PHF Adj, PHF Volume, Reduct Vol, and Final Vol.

Table with 4 columns: Critical Gap, FollowUpTim, and two unlabeled columns.

Table with 4 columns: Cnflct Vol, Potent Cap., Move Cap., and Volume/Cap.

Table with 4 columns: Queue, Stopped Del, LOS by Move, and Shared Cap. Rows include Level Of Service Module, Queue, Stopped Del, LOS by Move, Movement, Shared Cap., SharedQueue, Shrd StpDel, Shared LOS, ApproachDel, and ApproachLOS.

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2000 HCM Unsignalized Method (Future Volume Alternative)

Intersection #4 Gravenstein Hwy/Alder Ave

Average Delay (sec/veh): 321.6 Worst Case Level Of Service: F[2834.9]

Table with 4 columns: North Bound, South Bound, East Bound, West Bound. Rows include Movement, Control, Rights, and Lanes.

Table with 4 columns: Count, Date, and two unlabeled columns. Rows include Volume Module, Base Vol, Growth Adj, Initial Bse, Added Vol, PasserByVol, Initial Fut, User Adj, PHF Adj, PHF Volume, Reduct Vol, and Final Vol.

Table with 4 columns: Critical Gap, FollowUpTim, and two unlabeled columns.

Table with 4 columns: Cnflct Vol, Potent Cap., Move Cap., and Volume/Cap.

Table with 4 columns: Queue, Stopped Del, LOS by Move, and Shared Cap. Rows include Level Of Service Module, Queue, Stopped Del, LOS by Move, Movement, Shared Cap., SharedQueue, Shrd StpDel, Shared LOS, ApproachDel, and ApproachLOS.

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2000 HCM Unsignalized Method (Future Volume Alternative)

Intersection #5 Gravenstein Hwy/W Cotati Ave

Average Delay (sec/veh): OVERFLOW Worst Case Level Of Service: F[xxxxx]

Approach: North Bound South Bound East Bound West Bound
Movement: L - T - R L - T - R L - T - R L - T - R

Control: Stop Sign Stop Sign Uncontrolled Uncontrolled
Rights: Include Include Channel Include
Lanes: 1 0 0 0 1 0 0 0 0 0 0 0 1 0 0 1 0 0 0 0 0

Volume Module: >> Count Date: 16 Nov 2004 <<
Base Vol: 3 0 28 0 0 0 0 0 601 12 40 787 0
Growth Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00

Critical Gap Module:
Critical Gp: 6.4 xxxxx 6.2 xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx 4.1 xxxxx xxxxx
FollowUpTim: 3.5 xxxxx 3.3 xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx 2.2 xxxxx xxxxx

Capacity Module:
Cnflct Vol: xxxxx xxxxx 1429 xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx 1429 xxxxx xxxxx
Potent Cap.: 0 xxxxx 165 xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx 467 xxxxx xxxxx
Move Cap.: 0 xxxxx 165 xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx 467 xxxxx xxxxx

Level Of Service Module:
Queue: 2.5 xxxxx 1.2 xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx 0.5 xxxxx xxxxx
Stopped Del: xxxxx xxxxx 36.2 xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx 14.1 xxxxx xxxxx
LOS by Move: F * E * * * * * B * *
Movement: LT - LTR - RT LT - LTR - RT LT - LTR - RT LT - LTR - RT
Shared Cap.: xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx
SharedQueue: xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx 0.5 xxxxx xxxxx
Shrd StpDel: xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx 14.1 xxxxx xxxxx
Shared LOS: * * * * * * * * * * B * *
ApproachDel: xxxxxxx xxxxxxx xxxxxxx xxxxxxx
ApproachLOS: F * * *

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2000 HCM Operations Method (Future Volume Alternative)

Intersection #6 Gravenstein Hwy/Redwood Dr

Cycle (sec): 100 Critical Vol./Cap. (X): 0.996

Loss Time (sec): 6 (Y+R = 4 sec) Average Delay (sec/veh): 48.9

Optimal Cycle: 180 Level Of Service: D

Approach: North Bound South Bound East Bound West Bound
Movement: L - T - R L - T - R L - T - R L - T - R

Control: Permitted Permitted Protected Protected
Rights: Include Include Include Include
Min. Green: 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0
Lanes: 1 0 0 1 0 1 0 0 1 0 1 0 1 1 0 1 0 2 0 1

Volume Module:
Base Vol: 32 10 85 360 35 96 69 502 19 90 742 286
Growth Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
Initial Bse: 32 10 85 360 35 96 69 502 19 90 742 286
Added Vol: 0 0 0 173 0 32 32 649 0 0 469 143
PasserByVol: 0 0 0 0 0 0 0 0 0 0 0 0 0
Initial Fut: 32 10 85 533 35 128 101 1151 19 90 1211 429
User Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
PHF Adj: 0.88 0.88 0.88 0.88 0.88 0.88 0.97 0.97 0.97 0.90 0.90 0.90
PHF Volume: 36 11 97 606 40 145 104 1187 20 100 1346 477
Reduct Vol: 0 0 0 0 0 0 0 0 0 0 0 0 0
Reduced Vol: 36 11 97 606 40 145 104 1187 20 100 1346 477
PCE Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
MLF Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
Final Vol.: 36 11 97 606 40 145 104 1187 20 100 1346 477

Saturation Flow Module:
Sat/Lane: 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900
Adjustment: 0.56 0.82 0.82 0.63 0.84 0.84 0.90 0.95 0.95 0.90 0.95 0.81
Lanes: 1.00 0.10 0.90 1.00 0.21 0.79 1.00 1.97 0.03 1.00 2.00 1.00
Final Sat.: 1059 164 1395 1202 341 1248 1718 3552 59 1718 3618 1537

Capacity Analysis Module:
Vol/Sat: 0.03 0.07 0.07 0.50 0.12 0.12 0.06 0.33 0.33 0.06 0.37 0.31
Crit Moves: ****
Green/Cycle: 0.51 0.51 0.51 0.51 0.51 0.51 0.06 0.37 0.37 0.06 0.37 0.37
Volume/Cap: 0.07 0.14 0.14 1.00 0.23 0.23 1.00 0.90 0.90 0.90 1.00 0.83
Delay/Veh: 12.7 13.2 13.2 60.1 14.0 14.0 133.7 38.7 38.7 102.6 54.8 38.3
User DelAdj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
AdjDel/Veh: 12.7 13.2 13.2 60.1 14.0 14.0 133.7 38.7 38.7 102.6 54.8 38.3
HCM2kAvg: 1 2 2 36 3 3 7 21 21 6 28 16

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2000 HCM Operations Method (Future Volume Alternative)

Intersection #7 Gravenstein Hwy/US 101 SB

Cycle (sec): 100 Critical Vol./Cap. (X): 0.751
Loss Time (sec): 6 (Y+R = 4 sec) Average Delay (sec/veh): 22.6
Optimal Cycle: 49 Level Of Service: C

Table with 4 columns: Approach (North Bound, South Bound, East Bound, West Bound) and 3 rows: Movement, Control, Rights, Min. Green, Lanes.

Volume Module table with 12 columns for different traffic movements and 12 rows for various volume and delay metrics.

Saturation Flow Module table with 12 columns for movements and 4 rows for Sat/Lane, Adjustment, Lanes, and Final Sat.

Capacity Analysis Module table with 12 columns for movements and 10 rows for Vol/Sat, Crit Moves, Green/Cycle, Volume/Cap, Delay/Veh, User DelAdj, AdjDel/Veh, and HCM2kAvg.

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Intersection #8 Gravenstein Hwy/US 101 NB

Cycle (sec): 100 Critical Vol./Cap. (X): 0.992
Loss Time (sec): 4 (Y+R = 4 sec) Average Delay (sec/veh): 34.9
Optimal Cycle: 180 Level Of Service: C

Table with 4 columns: Approach (North Bound, South Bound, East Bound, West Bound) and 3 rows: Movement, Control, Rights, Min. Green, Lanes.

Volume Module table with 12 columns for different traffic movements and 12 rows for various volume and delay metrics.

Saturation Flow Module table with 12 columns for movements and 4 rows for Sat/Lane, Adjustment, Lanes, and Final Sat.

Capacity Analysis Module table with 12 columns for movements and 10 rows for Vol/Sat, Crit Moves, Green/Cycle, Volume/Cap, Delay/Veh, User DelAdj, AdjDel/Veh, and HCM2kAvg.

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2000 HCM Operations Method (Future Volume Alternative)

Intersection #9 Gravenstein Hwy/Old Redwood Hwy

Cycle (sec): 100 Critical Vol./Cap. (X): 0.931
Loss Time (sec): 8 (Y+R = 4 sec) Average Delay (sec/veh): 41.4
Optimal Cycle: 120 Level Of Service: D

Table with 4 columns: Approach (North Bound, South Bound, East Bound, West Bound) and 4 rows: Movement, Control, Rights, Min. Green, Lanes.

Volume Module: 5:00 - 6:00 pm
Table with 12 columns for volume and 12 rows for various traffic metrics like Base Vol, Growth Adj, Initial Bse, etc.

Saturation Flow Module:
Table with 12 columns for saturation flow and 4 rows for Sat/Lane, Adjustment, Lanes, Final Sat.

Capacity Analysis Module:
Table with 12 columns for capacity and 12 rows for Vol/Sat, Crit Moves, Green/Cycle, etc.

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2000 HCM 4-Way Stop Method (Future Volume Alternative)

Intersection #10 Old Redwood Hwy/William St-George St

Cycle (sec): 100 Critical Vol./Cap. (X): 1.527
Loss Time (sec): 0 (Y+R = 4 sec) Average Delay (sec/veh): 221.8
Optimal Cycle: 0 Level Of Service: F

Table with 4 columns: Approach (North Bound, South Bound, East Bound, West Bound) and 4 rows: Movement, Control, Rights, Min. Green, Lanes.

Volume Module:
Table with 12 columns for volume and 12 rows for various traffic metrics like Base Vol, Growth Adj, Initial Bse, etc.

Saturation Flow Module:
Table with 12 columns for saturation flow and 4 rows for Adj, Lanes, Final Sat.

Capacity Analysis Module:
Table with 12 columns for capacity and 12 rows for Vol/Sat, Crit Moves, Delay/Veh, etc.

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Cotati Circulation Improvement Study
City of Cotati

Level Of Service Computation Report
2000 HCM Unsignalized Method (Future Volume Alternative)

Intersection #11 W Sierra Ave/W School St-US 101 SB Ramp

Average Delay (sec/veh): 3.1 Worst Case Level Of Service: C[20.1]

Approach: North Bound South Bound East Bound West Bound
Movement: L - T - R L - T - R L - T - R L - T - R

Control: Stop Sign Stop Sign Uncontrolled Uncontrolled
Rights: Include Include Channel Include
Lanes: 0 0 0 0 0 0 0 1! 0 0 0 1 0 0 1 0 0 1 0 0

Volume Module:
Base Vol: 0 0 0 21 6 0 1 133 10 102 123 36
Growth Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
Initial Bse: 0 0 0 21 6 0 1 133 10 102 123 36
Added Vol: 0 0 0 2 6 1 1 58 6 57 75 6
PasserByVol: 0 0 0 0 0 0 0 0 0 0 0 0
Initial Fut: 0 0 0 23 12 1 2 191 16 159 198 42
User Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
PHF Adj: 1.00 1.00 1.00 0.84 0.84 0.84 0.82 0.82 0.82 0.88 0.88 0.88
PHF Volume: 0 0 0 27 14 1 2 233 20 181 225 48
Reduct Vol: 0 0 0 0 0 0 0 0 0 0 0 0
Final Vol.: 0 0 0 27 14 1 2 233 20 181 225 48

Critical Gap Module:
Critical Gp:xxxxx xxxxx xxxxx 6.4 6.5 6.2 4.1 xxxxx xxxxx 4.1 xxxxx xxxxx
FollowUpTim:xxxxx xxxxx xxxxx 3.5 4.0 3.3 2.2 xxxxx xxxxx 2.2 xxxxx xxxxx

Capacity Module:
Cnflct Vol: xxxxx xxxxx xxxxx 858 848 249 273 xxxxx xxxxx 233 xxxxx xxxxx
Potent Cap.: xxxxx xxxxx xxxxx 327 298 790 1291 xxxxx xxxxx 1335 xxxxx xxxxx
Move Cap.: xxxxx xxxxx xxxxx 289 253 790 1291 xxxxx xxxxx 1335 xxxxx xxxxx
Volume/Cap: xxxxx xxxxx xxxxx 0.09 0.06 0.00 0.00 xxxxx xxxxx 0.14 xxxxx xxxxx

Level Of Service Module:
Queue: xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx 0.0 xxxxx xxxxx 0.5 xxxxx xxxxx
Stopped Del:xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx 7.8 xxxxx xxxxx 8.1 xxxxx xxxxx
LOS by Move: * * * * * A * * *
Movement: LT - LTR - RT LT - LTR - RT LT - LTR - RT LT - LTR - RT
Shared Cap.: xxxxx xxxxx xxxxx xxxxx 281 xxxxx xxxxx xxxxx xxxxx xxxxx
SharedQueue:xxxxxx xxxxx xxxxx xxxxx 0.5 xxxxx 0.0 xxxxx xxxxx xxxxx xxxxx
Shrd StpDel:xxxxxx xxxxx xxxxx xxxxx 20.1 xxxxx 7.8 xxxxx xxxxx xxxxx xxxxx
Shared LOS: * * * * * C * A * * * *
ApproachDel: xxxxxxx 20.1 xxxxxxx xxxxxxx
ApproachLOS: * C * * *

PM Peak Hour - Buildout Conditions
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2000 HCM Unsignalized Method (Future Volume Alternative)

Intersection #12 W Sierra Ave/US 101 NB Off-ramp

Average Delay (sec/veh): 4.3 Worst Case Level Of Service: B[12.8]

Approach: North Bound South Bound East Bound West Bound
Movement: L - T - R L - T - R L - T - R L - T - R

Control: Stop Sign Stop Sign Uncontrolled Uncontrolled
Rights: Include Include Include Include
Lanes: 1 0 0 0 1 0 0 0 0 0 0 0 1 0 0 0 0 1 0 0

Volume Module:
Base Vol: 21 0 201 0 0 0 0 0 158 0 0 244 0
Growth Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
Initial Bse: 21 0 201 0 0 0 0 0 158 0 0 244 0
Added Vol: 15 0 64 0 0 0 0 0 60 0 0 124 0
PasserByVol: 0 0 0 0 0 0 0 0 0 0 0 0 0
Initial Fut: 36 0 265 0 0 0 0 0 218 0 0 368 0
User Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
PHF Adj: 0.84 0.84 0.84 1.00 1.00 1.00 0.90 0.90 0.90 0.88 0.80 0.88
PHF Volume: 43 0 315 0 0 0 0 0 242 0 0 460 0
Reduct Vol: 0 0 0 0 0 0 0 0 0 0 0 0 0
Final Vol.: 43 0 315 0 0 0 0 0 242 0 0 460 0

Critical Gap Module:
Critical Gp: 6.4 xxxxx 6.2 xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx
FollowUpTim: 3.5 xxxxx 3.3 xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx

Capacity Module:
Cnflct Vol: 702 xxxxx 242 xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx
Potent Cap.: 404 xxxxx 797 xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx
Move Cap.: 404 xxxxx 797 xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx
Volume/Cap: 0.11 xxxxx 0.40 xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx

Level Of Service Module:
Queue: 0.4 xxxxx 1.9 xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx
Stopped Del: 15.0 xxxxx 12.5 xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx
LOS by Move: B * B * * * * * * * *
Movement: LT - LTR - RT LT - LTR - RT LT - LTR - RT LT - LTR - RT
Shared Cap.: xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx
SharedQueue:xxxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx
Shrd StpDel:xxxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx
Shared LOS: * * * * * * * * * * *
ApproachDel: 12.8 xxxxxxx xxxxxxx xxxxxxx
ApproachLOS: B * * *

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Level Of Service Computation Report
2000 HCM 4-Way Stop Method (Future Volume Alternative)

Intersection #13 W Sierra Ave/E School St

Cycle (sec): 100 Critical Vol./Cap. (X): 0.710
Loss Time (sec): 0 (Y+R = 4 sec) Average Delay (sec/veh): 15.7
Optimal Cycle: 0 Level Of Service: C

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Stop Sign			Stop Sign			Stop Sign			Stop Sign		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Lanes:	0	0	0	0	0	1	0	1	0	0	0	1

Volume Module:

	North Bound			South Bound			East Bound			West Bound		
Base Vol:	0	0	0	13	0	19	23	369	0	0	303	24
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	0	0	0	13	0	19	23	369	0	0	303	24
Added Vol:	0	0	0	14	0	2	3	97	0	0	115	20
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	0	0	0	27	0	21	26	466	0	0	418	44
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	0.89	0.89	0.89	0.92	0.92	0.92	0.89	0.89	0.89	1.00	1.00	1.00
PHF Volume:	0	0	0	29	0	23	29	524	0	0	418	44
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	0	0	0	29	0	23	29	524	0	0	418	44
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Final Vol.:	0	0	0	29	0	23	29	524	0	0	418	44

Saturation Flow Module:

Adjustment:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Lanes:	0.00	0.00	0.00	0.56	0.00	0.44	0.05	0.95	0.00	0.00	0.90	0.10
Final Sat.:	0	0	0	311	0	242	41	737	0	0	698	73

Capacity Analysis Module:

Vol/Sat:	xxxx	xxxx	xxxx	0.09	xxxx	0.09	0.71	0.71	xxxx	xxxx	0.60	0.60
Crit Moves:	****			****			****			****		
Delay/Veh:	0.0	0.0	0.0	9.3	0.0	9.3	17.7	17.7	0.0	0.0	14.1	14.1
Delay Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	0.0	0.0	0.0	9.3	0.0	9.3	17.7	17.7	0.0	0.0	14.1	14.1
LOS by Move:	*	*	*	A	*	A	C	C	*	*	B	B
ApproachDel:	xxxxxx			9.3			17.7			14.1		
Delay Adj:	xxxxxx			1.00			1.00			1.00		
ApprAdjDel:	xxxxxx			9.3			17.7			14.1		
LOS by Appr:	*			A			C			B		

PM Peak Hour - Buildout Conditions
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2000 HCM Operations Method (Future Volume Alternative)

Intersection #14 Old Redwood Hwy/E Cotati Ave

Cycle (sec): 100 Critical Vol./Cap. (X): 1.440
Loss Time (sec): 8 (Y+R = 4 sec) Average Delay (sec/veh): 159.2
Optimal Cycle: 180 Level Of Service: F

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Protected			Protected			Protected			Protected		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Lanes:	1	0	1	1	0	1	1	0	1	1	0	1

Volume Module: >> Count Date: 17 Nov 2004 << 4:45 - 5:45 pm

	North Bound			South Bound			East Bound			West Bound		
Base Vol:	17	498	10	432	443	109	87	256	6	16	212	399
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	17	498	10	432	443	109	87	256	6	16	212	399
Added Vol:	0	118	43	332	186	33	22	80	0	45	90	333
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	17	616	53	764	629	142	109	336	6	61	302	732
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	0.94	0.94	0.94	0.97	0.97	0.97	0.88	0.88	0.88	0.91	0.91	0.91
PHF Volume:	18	655	56	788	648	146	124	382	7	67	332	804
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	18	655	56	788	648	146	124	382	7	67	332	804
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Final Vol.:	18	655	56	788	648	146	124	382	7	67	332	804

Saturation Flow Module:

Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.84	0.87	0.87	0.84	0.88	0.75	0.84	0.88	0.88	0.84	0.79	0.79
Lanes:	1.00	1.84	0.16	1.00	1.00	1.00	1.00	1.96	0.04	1.00	1.00	1.00
Final Sat.:	1592	3049	262	1592	1676	1424	1592	3283	59	1592	1498	1498

Capacity Analysis Module:

Vol/Sat:	0.01	0.21	0.21	0.49	0.39	0.10	0.08	0.12	0.12	0.04	0.22	0.54
Crit Moves:	****			****			****			****		
Green/Cycle:	0.01	0.15	0.15	0.34	0.48	0.48	0.05	0.31	0.31	0.11	0.37	0.37
Volume/Cap:	0.81	1.44	1.44	1.44	0.81	0.21	1.44	0.37	0.37	0.37	0.59	1.44
Delay/Veh:	154.7	252	251.6	240.9	28.3	15.3	298.9	26.9	26.9	42.3	25.8	236.4
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	154.7	252	251.6	240.9	28.3	15.3	298.9	26.9	26.9	42.3	25.8	236.4
HCM2kAvg:	2	26	26	58	19	3	11	5	5	2	9	56

PM Peak Hour - Buildout Conditions
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2000 HCM Unsignalized Method (Future Volume Alternative)

Intersection #15 E Cotati Ave/Charles St

Average Delay (sec/veh): 20.9 Worst Case Level Of Service: F[204.3]

Approach: North Bound South Bound East Bound West Bound
Movement: L - T - R L - T - R L - T - R L - T - R

Control: Stop Sign Stop Sign Uncontrolled Uncontrolled
Rights: Include Include Include Include
Lanes: 0 0 1! 0 0 0 0 0 0 0 0 0 1 0 1 0 1 0 0

Volume Module:

Base Vol: 5 0 231 0 0 0 0 0 687 6 129 561 0
Growth Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
Initial Bse: 5 0 231 0 0 0 0 0 687 6 129 561 0
Added Vol: 0 0 29 0 0 0 0 0 455 0 37 468 0
PasserByVol: 0 0 0 0 0 0 0 0 0 0 0 0 0 0
Initial Fut: 5 0 260 0 0 0 0 0 1142 6 166 1029 0
User Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
PHF Adj: 0.95 0.95 0.95 1.00 1.00 1.00 0.94 0.94 0.94 0.88 0.88 0.88 0.88
PHF Volume: 5 0 274 0 0 0 0 0 1215 6 189 1169 0
Reduct Vol: 0 0 0 0 0 0 0 0 0 0 0 0 0 0
Final Vol.: 5 0 274 0 0 0 0 0 1215 6 189 1169 0

Critical Gap Module:

Critical Gp: 6.4 xxx 6.2 xxx xxx xxx xxx xxx xxx 4.1 xxx xxx
FollowUpTim: 3.5 xxx 3.3 xxx xxx xxx xxx xxx xxx 2.2 xxx xxx

Capacity Module:

Cnflct Vol: 4930 xxx 1218 xxx xxx xxx xxx xxx xxx 1221 xxx xxx
Potent Cap.: 0 xxx 220 xxx xxx xxx xxx xxx xxx 571 xxx xxx
Move Cap.: 0 xxx 220 xxx xxx xxx xxx xxx xxx 571 xxx xxx
Total Cap: 100 0 xxx 0 0 xxx xxx xxx xxx xxx xxx xxx xxx
Volume/Cap: 0.05 xxx 1.24 xxx xxx xxx xxx xxx xxx 0.33 xxx xxx

Level Of Service Module:

Queue: xxx xxx xxx xxx xxx xxx xxx xxx xxx 1.4 xxx xxx
Stopped Del: xxx xxx xxx xxx xxx xxx xxx xxx xxx 14.4 xxx xxx
LOS by Move: * * * * * * * * * * B * * *
Movement: LT - LTR - RT LT - LTR - RT LT - LTR - RT LT - LTR - RT
Shared Cap.: xxx 216 xxx xxx xxx xxx xxx xxx xxx xxx xxx xxx
SharedQueue: xxx 14.9 xxx xxx xxx xxx xxx xxx xxx xxx xxx xxx
Shrd StpDel: xxx 204 xxx xxx xxx xxx xxx xxx xxx xxx xxx xxx
Shared LOS: * F * * * * * * * * * * * * * *
ApproachDel: 204.3 xxx xxx xxx xxx xxx xxx
ApproachLOS: F * * * * *

PM Peak Hour - Buildout Conditions
Cotati Circulation Improvement Study
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2000 HCM 4-Way Stop Method (Future Volume Alternative)

Intersection #16 E Cotati Ave/La Salle Ave

Cycle (sec): 100 Critical Vol./Cap. (X): 1.648

Loss Time (sec): 0 (Y+R = 4 sec) Average Delay (sec/veh): 201.6

Optimal Cycle: 0 Level Of Service: F

Approach: North Bound South Bound East Bound West Bound
Movement: L - T - R L - T - R L - T - R L - T - R

Control: Stop Sign Stop Sign Stop Sign Stop Sign
Rights: Include Include Include Include
Lanes: 0 0 1! 0 0 0 0 1! 0 0 1 0 1 1 0 1 0 1 1 0

Volume Module: >> Count Date: 17 Nov 2004 << 4:15 - 5:15 pm

Base Vol: 143 1 102 5 2 8 2 954 156 61 605 2
Growth Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
Initial Bse: 143 1 102 5 2 8 2 954 156 61 605 2
Added Vol: 8 0 40 0 0 0 0 0 455 10 43 488 0
PasserByVol: 0 0 0 0 0 0 0 0 0 0 0 0 0 0
Initial Fut: 151 1 142 5 2 8 2 1409 166 104 1093 2
User Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
PHF Adj: 0.93 0.93 0.93 0.50 0.50 0.50 0.97 0.97 0.97 0.96 0.96 0.96
PHF Volume: 162 1 153 10 4 16 2 1453 171 108 1139 2
Reduct Vol: 0 0 0 0 0 0 0 0 0 0 0 0 0 0
Reduced Vol: 162 1 153 10 4 16 2 1453 171 108 1139 2
PCE Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
MLF Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
Final Vol.: 162 1 153 10 4 16 2 1453 171 108 1139 2

Saturation Flow Module:

Adjustment: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
Lanes: 0.51 0.01 0.48 0.33 0.13 0.54 1.00 1.79 0.21 1.00 1.99 0.01
Final Sat.: 269 2 253 142 57 228 457 881 105 467 997 2

Capacity Analysis Module:

Vol/Sat: 0.60 0.60 0.60 0.07 0.07 0.07 0.00 1.65 1.63 0.23 1.14 1.14
Crit Moves: **** **** ****
Delay/Veh: 19.6 19.6 19.6 11.6 11.6 11.6 10.6 318 310.1 12.7 110 110.1
Delay Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
AdjDel/Veh: 19.6 19.6 19.6 11.6 11.6 11.6 10.6 318 310.1 12.7 110 110.1
LOS by Move: C C C B B B B F F B F F
ApproachDel: 19.6 11.6 317.2 101.7
Delay Adj: 1.00 1.00 1.00 1.00
ApprAdjDel: 19.6 11.6 317.2 101.7
LOS by Appr: C B F F

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2000 HCM Operations Method (Future Volume Alternative)

Intersection #17 E Cotati Ave/Adrian Dr

Cycle (sec): 100 Critical Vol./Cap. (X): 0.698
Loss Time (sec): 6 (Y+R = 4 sec) Average Delay (sec/veh): 16.9
Optimal Cycle: 42 Level Of Service: B

Table with 4 columns: Approach (North, South, East, West Bound) and Movement (L, T, R). Rows include Control, Rights, Min. Green, and Lanes.

Volume Module table with 12 columns for different traffic movements and 12 rows for various volume metrics like Base Vol, Growth Adj, etc.

Saturation Flow Module table with 12 columns for movements and 4 rows for Sat/Lane, Adjustment, Lanes, and Final Sat.

Capacity Analysis Module table with 12 columns for movements and 12 rows for Vol/Sat, Crit Moves, Green/Cycle, etc.

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2000 HCM Operations Method (Future Volume Alternative)

Intersection #18 E Cotati Ave/Lancaster Dr

Cycle (sec): 100 Critical Vol./Cap. (X): 0.818
Loss Time (sec): 6 (Y+R = 4 sec) Average Delay (sec/veh): 21.2
Optimal Cycle: 62 Level Of Service: C

Table with 4 columns: Approach (North, South, East, West Bound) and Movement (L, T, R). Rows include Control, Rights, Min. Green, and Lanes.

Volume Module table with 12 columns for different traffic movements and 12 rows for various volume metrics like Base Vol, Growth Adj, etc.

Saturation Flow Module table with 12 columns for movements and 4 rows for Sat/Lane, Adjustment, Lanes, and Final Sat.

Capacity Analysis Module table with 12 columns for movements and 12 rows for Vol/Sat, Crit Moves, Green/Cycle, etc.

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2000 HCM Unsignalized Method (Future Volume Alternative)

Intersection #19 E Cotati Ave/Beverly Dr

Average Delay (sec/veh): 2.0 Worst Case Level Of Service: D[30.9]

Table with 4 columns: Approach, North Bound, South Bound, East Bound, West Bound. Rows include Movement, Control, Rights, and Lanes.

Volume Module:

Table with 11 columns for traffic metrics: Base Vol, Growth Adj, Initial Bse, Added Vol, PasserByVol, Initial Fut, User Adj, PHF Adj, PHF Volume, Reduct Vol, Final Vol.

Critical Gap Module:

Table with 4 columns for gap metrics: Critical Gp, FollowUpTim.

Capacity Module:

Table with 11 columns for capacity metrics: Cnflct Vol, Potent Cap, Move Cap, Total Cap, Volume/Cap.

Level Of Service Module:

Table with 11 columns for LOS metrics: Queue, Stopped Del, LOS by Move, Movement, Shared Cap, SharedQueue, Shrd StpDel, Shared LOS, ApproachDel, ApproachLOS.

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2000 HCM Unsignalized Method (Future Volume Alternative)

Intersection #20 E Cotati Ave/Santero Way

Average Delay (sec/veh): 42.8 Worst Case Level Of Service: F[522.5]

Table with 4 columns: Approach, North Bound, South Bound, East Bound, West Bound. Rows include Movement, Control, Rights, and Lanes.

Volume Module:

Table with 11 columns for traffic metrics: Base Vol, Growth Adj, Initial Bse, Added Vol, PasserByVol, Initial Fut, User Adj, PHF Adj, PHF Volume, Reduct Vol, Final Vol.

Critical Gap Module:

Table with 4 columns for gap metrics: Critical Gp, FollowUpTim.

Capacity Module:

Table with 11 columns for capacity metrics: Cnflct Vol, Potent Cap, Move Cap, Total Cap, Volume/Cap.

Level Of Service Module:

Table with 11 columns for LOS metrics: Queue, Stopped Del, LOS by Move, Movement, Shared Cap, SharedQueue, Shrd StpDel, Shared LOS, ApproachDel, ApproachLOS.

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Level Of Service Computation Report
2000 HCM 4-Way Stop Method (Future Volume Alternative)

Intersection #21 Old Redwood Highway/Henry-Charles St.

Cycle (sec): 100 Critical Vol./Cap. (X): 1.249
Loss Time (sec): 0 (Y+R = 4 sec) Average Delay (sec/veh): 95.1
Optimal Cycle: 0 Level Of Service: F

Table with 4 columns: North Bound, South Bound, East Bound, West Bound. Rows include Movement, Control, Rights, Min. Green, and Lanes.

Volume Module table with 12 columns representing different traffic movements and 11 rows of volume data.

Saturation Flow Module table with 12 columns and 4 rows of saturation flow data.

Capacity Analysis Module table with 12 columns and 11 rows of capacity analysis data.

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2000 HCM Operations Method (Future Volume Alternative)

Intersection #22 Old Redwood Hwy/Myrtle-Valparaiso Ave

Cycle (sec): 100 Critical Vol./Cap. (X): 0.716
Loss Time (sec): 6 (Y+R = 4 sec) Average Delay (sec/veh): 18.7
Optimal Cycle: 44 Level Of Service: B

Table with 4 columns: North Bound, South Bound, East Bound, West Bound. Rows include Movement, Control, Rights, Min. Green, and Lanes.

Volume Module table with 12 columns representing different traffic movements and 11 rows of volume data.

Saturation Flow Module table with 12 columns and 4 rows of saturation flow data.

Capacity Analysis Module table with 12 columns and 11 rows of capacity analysis data.

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2000 HCM Unsignalized Method (Future Volume Alternative)

Intersection #1 Redwood Dr/Helman Ln

Average Delay (sec/veh): 24.1 Worst Case Level Of Service: F[125.5]

Table with 4 columns: Approach (North Bound, South Bound, East Bound, West Bound), Movement (L-T-R), Control (Uncontrolled, Stop Sign), Rights (Include), Lanes (0 1 0 0 0).

Volume Module:

Table with 12 columns representing traffic volumes for Base Vol, Growth Adj, Initial Bse, Added Vol, PasserByVol, Initial Fut, User Adj, PHF Adj, PHF Volume, Reduct Vol, Final Vol.

Critical Gap Module:

Table with 12 columns for Critical Gap, FollowUpTim, and Capacity Module.

Capacity Module:

Table with 12 columns for Cnflct Vol, Potent Cap., Move Cap., Volume/Cap.

Level Of Service Module:

Table with 12 columns for Queue, Stopped Del, LOS by Move, Movement, Shared Cap., SharedQueue, Shrd StpDel, Shared LOS, ApproachDel, ApproachLOS.

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2000 HCM Unsignalized Method (Future Volume Alternative)

Intersection #2 Commerce Blvd/Wilford Ln

Average Delay (sec/veh): 1.8 Worst Case Level Of Service: D[26.9]

Table with 4 columns: Approach (North Bound, South Bound, East Bound, West Bound), Movement (L-T-R), Control (Uncontrolled, Stop Sign), Rights (Include), Lanes (0 0 0 1 0).

Volume Module:

Table with 12 columns representing traffic volumes for Base Vol, Growth Adj, Initial Bse, Added Vol, PasserByVol, Initial Fut, User Adj, PHF Adj, PHF Volume, Reduct Vol, Final Vol.

Critical Gap Module:

Table with 12 columns for Critical Gap, FollowUpTim, and Capacity Module.

Capacity Module:

Table with 12 columns for Cnflct Vol, Potent Cap., Move Cap., Volume/Cap.

Level Of Service Module:

Table with 12 columns for Queue, Stopped Del, LOS by Move, Movement, Shared Cap., SharedQueue, Shrd StpDel, Shared LOS, ApproachDel, ApproachLOS.

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Intersection #1 Redwood Dr/Helman Ln

Cycle (sec): 100 Critical Vol./Cap. (X): 0.419
Loss Time (sec): 0 (Y+R = 4 sec) Average Delay (sec/veh): 17.5
Optimal Cycle: 39 Level Of Service: B

Table with 4 columns: North Bound, South Bound, East Bound, West Bound. Rows include Movement, Control, Rights, Lanes, Min. Green, and Lanes.

Volume Module:

Table with 12 columns representing traffic volumes and 12 rows for various metrics like Base Vol, Growth Adj, Initial Bse, etc.

Saturation Flow Module:

Table with 12 columns for saturation flow and 5 rows for Sat/Lane, Adjustment, Lanes, and Final Sat.

Capacity Analysis Module:

Table with 12 columns for capacity analysis and 10 rows for Vol/Sat, Crit Moves, Green/Cycle, etc.

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Intersection #2 Commerce Blvd/Wilford Ln

Average Delay (sec/veh): 1.6 Worst Case Level Of Service: C [17.1]

Table with 4 columns: North Bound, South Bound, East Bound, West Bound. Rows include Movement, Control, Rights, Lanes.

Volume Module:

Table with 12 columns representing traffic volumes and 12 rows for various metrics like Base Vol, Growth Adj, Initial Bse, etc.

Critical Gap Module:

Table with 12 columns for critical gap and 2 rows for Critical Gp and FollowUpTim.

Capacity Module:

Table with 12 columns for capacity and 4 rows for Conflict Vol, Potent Cap, Move Cap, and Volume/Cap.

Level of Service Module:

Table with 12 columns for level of service and 8 rows for Queue, Stopped Del, LOS by Move, etc.

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Intersection #3 Old Redwood Highway/Commerce Blvd.

Cycle (sec): 100 Critical Vol./Cap. (X): 0.840
Loss Time (sec): 0 (Y+R = 4 sec) Average Delay (sec/veh): 22.1
Optimal Cycle: 142 Level Of Service: C

Table with 4 columns: Approach (North, South, East, West Bound) and Movement (L, T, R). Includes Control, Rights, Min. Green, and Lanes.

Volume Module table with 12 columns for different traffic volumes and 12 rows for various metrics like Base Vol, Growth Adj, etc.

Saturation Flow Module table with 12 columns for saturation flow and 4 rows for Sat/Lane, Adjustment, Lanes, and Final Sat.

Capacity Analysis Module table with 12 columns for capacity analysis and 12 rows for Vol/Sat, Crit Moves, Green/Cycle, etc.

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Intersection #4 Gravenstein Hwy/Alder Ave

Cycle (sec): 100 Critical Vol./Cap. (X): 0.701
Loss Time (sec): 0 (Y+R = 4 sec) Average Delay (sec/veh): 8.2
Optimal Cycle: 62 Level Of Service: A

Table with 4 columns: Approach (North, South, East, West Bound) and Movement (L, T, R). Includes Control, Rights, Min. Green, and Lanes.

Volume Module table with 12 columns for different traffic volumes and 12 rows for various metrics like Base Vol, Growth Adj, etc.

Saturation Flow Module table with 12 columns for saturation flow and 4 rows for Sat/Lane, Adjustment, Lanes, and Final Sat.

Capacity Analysis Module table with 12 columns for capacity analysis and 12 rows for Vol/Sat, Crit Moves, Green/Cycle, etc.

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2000 HCM Unsignalized Method (Future Volume Alternative)

Intersection #5 Gravenstein Hwy/W Cotati Ave

Average Delay (sec/veh): 0.8 Worst Case Level Of Service: C[18.1]

Approach: North Bound South Bound East Bound West Bound
Movement: L - T - R L - T - R L - T - R L - T - R

Control: Stop Sign Stop Sign Uncontrolled Uncontrolled
Rights: Include Include Channel Include
Lanes: 1 0 0 0 1 0 0 0 0 0 0 0 1 1 0 1 0 2 0 0

Volume Module:

Base Vol: 6 0 50 0 0 0 0 639 5 12 626 0
Growth Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
Initial Bse: 6 0 50 0 0 0 0 639 5 12 626 0
Added Vol: 7 0 17 0 0 0 0 448 4 14 357 0
PasserByVol: 0 0 0 0 0 0 0 0 0 0 0 0
Initial Fut: 13 0 67 0 0 0 0 1087 9 26 983 0
User Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
PHF Adj: 0.86 0.86 0.86 1.00 1.00 1.00 0.80 0.80 0.80 0.89 0.89 0.89
PHF Volume: 15 0 78 0 0 0 0 1359 11 29 1104 0
Reduct Vol: 0 0 0 0 0 0 0 0 0 0 0 0
Final Vol.: 15 0 78 0 0 0 0 1359 11 29 1104 0

Critical Gap Module:

Critical Gp: 6.8 xxx 6.9 xxx xxx xxx xxx xxx 4.2 xxx xxx
FollowUpTim: 3.5 xxx 3.3 xxx xxx xxx xxx xxx 2.3 xxx xxx

Capacity Module:

Cnflct Vol: 1975 xxx 679 xxx xxx xxx xxx xxx 1359 xxx xxx
Potent Cap.: 54 xxx 394 xxx xxx xxx xxx xxx 487 xxx xxx
Move Cap.: 52 xxx 394 xxx xxx xxx xxx xxx 487 xxx xxx
Total Cap: 180 0 xxx 658 0 xxx xxx xxx xxx xxx xxx xxx
Volume/Cap: 0.08 xxx 0.20 xxx xxx xxx xxx xxx 0.06 xxx xxx

Level Of Service Module:

Queue: 0.3 xxx 0.7 xxx xxx xxx xxx xxx xxx 0.2 xxx xxx
Stopped Del: 26.8 xxx 16.4 xxx xxx xxx xxx xxx xxx 12.9 xxx xxx
LOS by Move: D * C * * * * * B * *
Movement: LT - LTR - RT LT - LTR - RT LT - LTR - RT LT - LTR - RT
Shared Cap.: xxx xxx xxx xxx xxx xxx xxx xxx xxx xxx xxx
SharedQueue: xxx xxx xxx xxx xxx xxx xxx xxx xxx xxx xxx
Shrd StpDel: xxx xxx xxx xxx xxx xxx xxx xxx xxx xxx xxx
Shared LOS: * * * * * * * * * *
ApproachDel: 18.1 xxx xxx xxx xxx
ApproachLOS: C * * * *

AM Peakhour - Buildout Conditions(Mitigated)
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2000 HCM Operations Method (Future Volume Alternative)

Intersection #6 Gravenstein Hwy/Redwood Dr

Cycle (sec): 100 Critical Vol./Cap. (X): 0.637

Loss Time (sec): 6 (Y+R = 4 sec) Average Delay (sec/veh): 14.2

Optimal Cycle: 36 Level Of Service: B

Approach: North Bound South Bound East Bound West Bound
Movement: L - T - R L - T - R L - T - R L - T - R

Control: Split Phase Split Phase Protected Protected
Rights: Include Include Include Include
Min. Green: 0 0 0 0 0 0 0 0 0 0 0 0
Lanes: 1 0 0 1 0 1 0 1 0 0 1 0 1 1 0 1 0 2 0 1

Volume Module:

Base Vol: 41 17 83 188 13 36 73 547 33 69 561 268
Growth Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
Initial Bse: 41 17 83 188 13 36 73 547 33 69 561 268
Added Vol: 0 0 0 77 0 20 24 487 0 0 419 188
PasserByVol: 0 0 0 0 0 0 0 0 0 0 0 0
Initial Fut: 41 17 83 265 13 56 97 1034 33 69 980 456
User Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
PHF Adj: 0.88 0.88 0.88 0.94 0.94 0.94 0.94 0.94 0.94 0.87 0.87 0.87
PHF Volume: 47 19 94 282 14 60 103 1100 35 79 1126 524
Reduct Vol: 0 0 0 0 0 0 0 0 0 0 0 0
Reduced Vol: 47 19 94 282 14 60 103 1100 35 79 1126 524
PCE Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
MLF Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
Final Vol.: 47 19 94 282 14 60 103 1100 35 79 1126 524

Saturation Flow Module:

Sat/Lane: 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900
Adjustment: 0.90 0.83 0.83 0.89 0.89 0.89 0.90 0.95 0.95 0.90 0.95 0.81
Lanes: 1.00 0.17 0.83 1.66 0.06 0.28 1.00 1.94 0.06 1.00 2.00 1.00
Final Sat.: 1718 269 1315 2812 109 472 1718 3488 111 1718 3618 1537

Capacity Analysis Module:

Vol/Sat: 0.03 0.07 0.07 0.10 0.13 0.13 0.06 0.32 0.32 0.05 0.31 0.34
Crit Moves: **** **
Green/Cycle: 0.11 0.11 0.11 0.20 0.20 0.20 0.09 0.55 0.55 0.08 0.53 0.53
Volume/Cap: 0.24 0.64 0.64 0.51 0.64 0.64 0.64 0.57 0.57 0.57 0.58 0.64
Delay/Veh: 41.1 49.9 49.9 36.3 39.2 39.2 51.8 10.6 10.6 47.6 4.1 5.5
User DelAdj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
AdjDel/Veh: 41.1 49.9 49.9 36.3 39.2 39.2 51.8 10.6 10.6 47.6 4.1 5.5
HCM2kAvg: 2 5 5 5 7 7 4 9 9 3 5 5

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Intersection #7 Gravenstein Hwy/US 101 SB

Cycle (sec): 100 Critical Vol./Cap. (X): 0.785
Loss Time (sec): 6 (Y+R = 4 sec) Average Delay (sec/veh): 15.7
Optimal Cycle: 55 Level Of Service: B

Table with 4 columns: Approach (North, South, East, West Bound), Movement (L, T, R), Control (Split Phase, Protected), and Lanes.

Volume Module:

Table with 12 columns for traffic volume and 12 columns for saturation flow, including rows for Base Vol, Growth Adj, Initial Bse, etc.

Saturation Flow Module:

Table with 12 columns for saturation flow and 12 columns for capacity, including rows for Sat/Lane, Adjustment, Lanes, Final Sat.

Capacity Analysis Module:

Table with 12 columns for capacity analysis, including rows for Vol/Sat, Crit Moves, Green/Cycle, Volume/Cap, Delay/Veh, etc.

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2000 HCM Operations Method (Future Volume Alternative)

Intersection #8 Gravenstein Hwy/US 101 NB

Cycle (sec): 100 Critical Vol./Cap. (X): 0.650
Loss Time (sec): 4 (Y+R = 4 sec) Average Delay (sec/veh): 8.0
Optimal Cycle: 31 Level Of Service: A

Table with 4 columns: Approach (North, South, East, West Bound), Movement (L, T, R), Control (Split Phase, Permitted), and Lanes.

Volume Module: 7:30 - 8:30 am

Table with 12 columns for traffic volume and 12 columns for saturation flow, including rows for Base Vol, Growth Adj, Initial Bse, etc.

Saturation Flow Module:

Table with 12 columns for saturation flow and 12 columns for capacity, including rows for Sat/Lane, Adjustment, Lanes, Final Sat.

Capacity Analysis Module:

Table with 12 columns for capacity analysis, including rows for Vol/Sat, Crit Moves, Green/Cycle, Volume/Cap, Delay/Veh, etc.

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Intersection #9 Gravenstein Hwy/Old Redwood Hwy

Cycle (sec): 100 Critical Vol./Cap. (X): 0.626
Loss Time (sec): 8 (Y+R = 4 sec) Average Delay (sec/veh): 25.6
Optimal Cycle: 41 Level Of Service: C

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Split Phase			Split Phase			Split Phase			Split Phase		
Rights:	Include			Ovl			Ignore			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Lanes:	1	1	0	1	0	1	1	1	0	1	0	1

Volume Module: 7:30 - 8:30 am

Base Vol:	254	626	9	1	119	265	420	29	604	47	45	31
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	254	626	9	1	119	265	420	29	604	47	45	31
Added Vol:	190	161	1	0	39	24	98	2	304	4	5	3
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	444	787	10	1	158	289	518	31	908	51	50	34
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	0.94	0.94	0.94	0.90	0.90	0.90	0.91	0.91	0.90	0.81	0.81	0.81
PHF Volume:	472	837	11	1	176	321	569	34	0	63	62	42
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	472	837	11	1	176	321	569	34	0	63	62	42
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00
Final Vol.:	472	837	11	1	176	321	569	34	0	63	62	42

Saturation Flow Module:

Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.93	0.93	0.93	0.93	0.98	0.83	0.91	0.91	1.00	0.93	0.92	0.92
Lanes:	1.07	1.91	0.02	1.00	1.00	1.00	1.89	0.11	1.00	1.00	0.60	0.40
Final Sat.:	1905	3376	43	1769	1862	1583	3260	195	1900	1769	1041	708

Capacity Analysis Module:

Vol/Sat:	0.25	0.25	0.25	0.00	0.09	0.20	0.17	0.17	0.00	0.04	0.06	0.06
Crit Moves:	****	****	****	****	****	****	****	****	****	****	****	****
Green/Cycle:	0.40	0.40	0.40	0.15	0.15	0.43	0.28	0.28	0.00	0.09	0.09	0.09
Volume/Cap:	0.63	0.63	0.63	0.00	0.63	0.47	0.63	0.63	0.00	0.38	0.63	0.63
Delay/Veh:	22.4	22.4	22.4	36.1	44.3	18.1	24.7	24.7	0.0	43.9	50.9	50.9
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	22.4	22.4	22.4	36.1	44.3	18.1	24.7	24.7	0.0	43.9	50.9	50.9
HCM2kAvg:	10	10	10	0	6	6	8	8	0	2	4	4

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Intersection #10 Old Redwood Hwy/William St-George St

Cycle (sec): 100 Critical Vol./Cap. (X): 0.418
Loss Time (sec): 0 (Y+R = 4 sec) Average Delay (sec/veh): 3.9
Optimal Cycle: 32 Level Of Service: A

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Protected			Protected			Permitted			Permitted		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Lanes:	1	0	1	1	0	1	0	0	1	0	0	1

Volume Module:

Base Vol:	11	832	3	4	717	25	47	1	16	5	1	22
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	11	832	3	4	717	25	47	1	16	5	1	22
Added Vol:	0	351	0	0	322	3	6	0	0	0	0	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	11	1183	3	4	1039	28	53	1	16	5	1	22
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	0.93	0.93	0.93	0.95	0.95	0.95	0.84	0.84	0.84	0.70	0.70	0.70
PHF Volume:	12	1272	3	4	1094	29	63	1	19	7	1	31
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	12	1272	3	4	1094	29	63	1	19	7	1	31
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Final Vol.:	12	1272	3	4	1094	29	63	1	19	7	1	31

Saturation Flow Module:

Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.93	0.93	0.93	0.93	0.93	0.93	0.79	0.79	0.79	0.85	0.85	0.85
Lanes:	1.00	1.99	0.01	1.00	1.95	0.05	0.76	0.01	0.23	0.18	0.04	0.78
Final Sat.:	1769	3529	9	1769	3431	92	1135	21	343	287	57	1263

Capacity Analysis Module:

Vol/Sat:	0.01	0.36	0.36	0.00	0.32	0.32	0.06	0.06	0.06	0.02	0.02	0.02
Crit Moves:	****	****	****	****	****	****	****	****	****	****	****	****
Green/Cycle:	0.02	0.86	0.86	0.01	0.85	0.85	0.13	0.13	0.13	0.13	0.13	0.13
Volume/Cap:	0.38	0.42	0.42	0.42	0.38	0.38	0.42	0.42	0.42	0.19	0.19	0.19
Delay/Veh:	55.9	1.6	1.6	75.3	1.7	1.7	41.2	41.2	41.2	39.0	39.0	39.0
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	55.9	1.6	1.6	75.3	1.7	1.7	41.2	41.2	41.2	39.0	39.0	39.0
HCM2kAvg:	1	-4	-4	1	-3	-3	3	3	3	1	1	1

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2000 HCM Unsignalized Method (Future Volume Alternative)

Intersection #11 W Sierra Ave/W School St-US 101 SB Ramp

Average Delay (sec/veh): 3.7 Worst Case Level Of Service: C[23.3]

Approach: North Bound South Bound East Bound West Bound
Movement: L - T - R L - T - R L - T - R L - T - R

Control: Stop Sign Stop Sign Uncontrolled Uncontrolled
Rights: Include Include Channel Include
Lanes: 0 0 0 0 0 0 0 1! 0 0 0 1 0 0 1 0 0 1 0 0

Volume Module:

Base Vol: 0 0 0 24 9 1 3 135 4 134 166 21
Growth Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
Initial Bse: 0 0 0 24 9 1 3 135 4 134 166 21
Added Vol: 0 0 0 1 3 1 1 48 9 53 24 6
PasserByVol: 0 0 0 0 0 0 0 0 0 0 0 0
Initial Fut: 0 0 0 25 12 2 4 183 13 187 190 27
User Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
PHF Adj: 1.00 1.00 1.00 0.71 0.71 0.71 0.63 0.63 0.63 0.93 0.93 0.93
PHF Volume: 0 0 0 35 17 3 6 290 21 201 204 29
Reduct Vol: 0 0 0 0 0 0 0 0 0 0 0 0
Final Vol.: 0 0 0 35 17 3 6 290 21 201 204 29

Critical Gap Module:

Critical Gp:xxxxx xxxx xxxxx 6.4 6.5 6.2 4.1 xxxx xxxxx 4.1 xxxx xxxxx
FollowUpTim:xxxxx xxxx xxxxx 3.5 4.0 3.3 2.2 xxxx xxxxx 2.2 xxxx xxxxx

Capacity Module:

Cnflct Vol: xxxx xxxx xxxxx 934 924 219 233 xxxx xxxxx 290 xxxx xxxxx
Potent Cap.: xxxx xxxx xxxxx 295 269 821 1334 xxxx xxxxx 1271 xxxx xxxxx
Move Cap.: xxxx xxxx xxxxx 254 220 821 1334 xxxx xxxxx 1271 xxxx xxxxx
Volume/Cap: xxxx xxxx xxxxx 0.14 0.08 0.00 0.00 xxxx xxxxx 0.16 xxxx xxxxx

Level Of Service Module:

Queue: xxxxx xxxx xxxxx xxxxx xxxx xxxxx 0.0 xxxx xxxxx 0.6 xxxx xxxxx
Stopped Del:xxxxx xxxx xxxxx xxxxx xxxx xxxxx 7.7 xxxx xxxxx 8.4 xxxx xxxxx
LOS by Move: * * * * * A * * *
Movement: LT - LTR - RT LT - LTR - RT LT - LTR - RT LT - LTR - RT
Shared Cap.: xxxx xxxx xxxxx xxxx 251 xxxxx xxxx xxxx xxxxx xxxx xxxx xxxxx
SharedQueue:xxxxx xxxx xxxxx xxxxx 0.8 xxxxx 0.0 xxxx xxxxx xxxxx xxxx xxxxx
Shrd StpDel:xxxxx xxxx xxxxx xxxxx 23.3 xxxxx 7.7 xxxx xxxxx xxxxx xxxx xxxxx
Shared LOS: * * * * * C * A * * * * *
ApproachDel: xxxxxx 23.3 xxxxxx xxxxxx
ApproachLOS: * C * * *

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2000 HCM Unsignalized Method (Future Volume Alternative)

Intersection #12 W Sierra Ave/US 101 NB Off-ramp

Average Delay (sec/veh): 2.1 Worst Case Level Of Service: B[11.3]

Approach: North Bound South Bound East Bound West Bound
Movement: L - T - R L - T - R L - T - R L - T - R

Control: Stop Sign Stop Sign Uncontrolled Uncontrolled
Rights: Include Include Include Include
Lanes: 1 0 0 0 1 0 0 0 0 0 0 0 1 0 0 0 0 1 0 0

Volume Module:

Base Vol: 12 0 85 0 0 0 0 0 146 0 0 0 313 0
Growth Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
Initial Bse: 12 0 85 0 0 0 0 0 146 0 0 0 313 0
Added Vol: 8 0 39 0 0 0 0 0 49 0 0 0 76 0
PasserByVol: 0 0 0 0 0 0 0 0 0 0 0 0 0 0
Initial Fut: 20 0 124 0 0 0 0 0 195 0 0 0 389 0
User Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
PHF Adj: 0.87 0.87 0.87 1.00 1.00 1.00 0.73 0.73 0.73 0.86 0.86 0.86
PHF Volume: 23 0 143 0 0 0 0 0 267 0 0 0 452 0
Reduct Vol: 0 0 0 0 0 0 0 0 0 0 0 0 0 0
Final Vol.: 23 0 143 0 0 0 0 0 267 0 0 0 452 0

Critical Gap Module:

Critical Gp: 6.4 xxxxx 6.2 xxxxx xxxx xxxxx xxxxx xxxx xxxxx xxxxx xxxx xxxxx
FollowUpTim: 3.5 xxxxx 3.3 xxxxx xxxx xxxxx xxxxx xxxx xxxxx xxxxx xxxx xxxxx

Capacity Module:

Cnflct Vol: 719 xxxxx 267 xxxxx xxxx xxxxx xxxxx xxxx xxxxx xxxxx xxxx xxxxx
Potent Cap.: 395 xxxxx 772 xxxxx xxxx xxxxx xxxxx xxxx xxxxx xxxxx xxxx xxxxx
Move Cap.: 395 xxxxx 772 xxxxx xxxx xxxxx xxxxx xxxx xxxxx xxxxx xxxx xxxxx
Volume/Cap: 0.06 xxxxx 0.18 xxxxx xxxx xxxxx xxxxx xxxx xxxxx xxxxx xxxx xxxxx

Level Of Service Module:

Queue: 0.2 xxxxx 0.7 xxxxx xxxx xxxxx xxxxx xxxx xxxxx xxxxx xxxx xxxxx
Stopped Del: 14.7 xxxxx 10.7 xxxxx xxxx xxxxx xxxxx xxxx xxxxx xxxxx xxxx xxxxx
LOS by Move: B * B * * * * * * * *
Movement: LT - LTR - RT LT - LTR - RT LT - LTR - RT LT - LTR - RT
Shared Cap.: xxxx xxxx xxxxx xxxx xxxx xxxxx xxxxx xxxx xxxxx xxxxx xxxx xxxxx
SharedQueue:xxxxx xxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx
Shrd StpDel:xxxxx xxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx
Shared LOS: * * * * * * * * * * * * *
ApproachDel: 11.3 xxxxxx xxxxxx xxxxxx
ApproachLOS: B * * *

AM Peakhour - Buildout Conditions(Mitigated)
Cotati Circulation Improvement Study
City of Cotati

Level Of Service Computation Report
2000 HCM 4-Way Stop Method (Future Volume Alternative)

Intersection #13 W Sierra Ave/E School St

Cycle (sec): 100 Critical Vol./Cap. (X): 0.600
Loss Time (sec): 0 (Y+R = 4 sec) Average Delay (sec/veh): 12.3
Optimal Cycle: 0 Level Of Service: B

Table with 4 columns: Approach (North, South, East, West Bound) and Movement (L, T, R). Rows include Control, Rights, Min. Green, and Lanes.

Volume Module table with 12 columns for different traffic movements and 12 rows for various volume metrics like Base Vol, Growth Adj, etc.

Saturation Flow Module table with 12 columns for movements and 4 rows for Adjustment, Lanes, and Final Sat.

Capacity Analysis Module table with 12 columns for movements and 12 rows for Vol/Sat, Crit Moves, Delay/Veh, etc.

AM Peakhour - Buildout Conditions(Mitigated)
Cotati Circulation Improvement Study
City of Cotati

Level Of Service Computation Report
2000 HCM Operations Method (Future Volume Alternative)

Intersection #14 Old Redwood Hwy/E Cotati Ave

Cycle (sec): 100 Critical Vol./Cap. (X): 0.793
Loss Time (sec): 8 (Y+R = 4 sec) Average Delay (sec/veh): 32.9
Optimal Cycle: 64 Level Of Service: C

Table with 4 columns: Approach (North, South, East, West Bound) and Movement (L, T, R). Rows include Control, Rights, Min. Green, and Lanes.

Volume Module table with 12 columns for different traffic movements and 12 rows for various volume metrics like Base Vol, Growth Adj, etc.

Saturation Flow Module table with 12 columns for movements and 4 rows for Sat/Lane, Adjustment, Lanes, and Final Sat.

Capacity Analysis Module table with 12 columns for movements and 12 rows for Vol/Sat, Crit Moves, Delay/Veh, etc.

AM Peakhour - Buildout Conditions(Mitigated)
Cotati Circulation Improvement Study
City of Cotati

Level Of Service Computation Report

2000 HCM Unsignalized Method (Future Volume Alternative)

Intersection #15 E Cotati Ave/Charles St

Average Delay (sec/veh): 2.7 Worst Case Level Of Service: C[15.4]

Approach: North Bound South Bound East Bound West Bound
Movement: L - T - R L - T - R L - T - R L - T - R

Control: Stop Sign Stop Sign Uncontrolled Uncontrolled
Rights: Include Include Include Include
Lanes: 0 0 1! 0 0 0 0 0 0 0 0 0 1 1 0 1 0 2 0 0

Volume Module:
Base Vol: 1 0 111 0 0 0 0 0 490 3 230 615 0
Growth Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
Initial Bse: 1 0 111 0 0 0 0 0 490 3 230 615 0
Added Vol: 0 0 29 0 0 0 0 0 333 0 15 228 0
PasserByVol: 0 0 0 0 0 0 0 0 0 0 0 0 0
Initial Fut: 1 0 140 0 0 0 0 0 823 3 245 843 0
User Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
PHF Adj: 0.82 0.82 0.82 1.00 1.00 1.00 0.82 0.82 0.88 0.88 0.88
PHF Volume: 1 0 171 0 0 0 0 0 1004 4 278 958 0
Reduct Vol: 0 0 0 0 0 0 0 0 0 0 0 0 0
Final Vol.: 1 0 171 0 0 0 0 0 1004 4 278 958 0

Critical Gap Module:
Critical Gp: 6.8 xxx 6.9 xxxxx xxx xxxxxx xxxxxx xxx xxx xxxxxx 4.1 xxx xxxxxx
FollowUpTim: 3.5 xxx 3.3 xxxxx xxx xxxxxx xxxxxx xxx xxx xxxxxx 2.2 xxx xxxxxx

Capacity Module:
Cnflct Vol: 2416 xxx 504 xxx xxx xxxxxx xxx xxx xxxxxx 1007 xxx xxxxxx
Potent Cap.: 23 xxx 513 xxx xxx xxxxxx xxx xxx xxxxxx 684 xxx xxxxxx
Move Cap.: 16 xxx 513 xxx xxx xxxxxx xxx xxx xxxxxx 684 xxx xxxxxx
Total Cap: 178 0 xxx 0 0 xxxxxx xxx xxx xxxxxx xxx xxx xxxxxx
Volume/Cap: 0.01 xxx 0.33 xxx xxx xxxxxx xxx xxx xxxxxx 0.41 xxx xxxxxx

Level Of Service Module:
Queue: xxxxxx xxx xxxxxx xxxxxx xxx xxxxxx xxxxxx xxx xxx xxxxxx 2.0 xxx xxxxxx
Stopped Del: xxxxxx xxx xxxxxx xxxxxx xxx xxxxxx xxxxxx xxx xxx xxxxxx 13.8 xxx xxxxxx
LOS by Move: *
Movement: LT - LTR - RT LT - LTR - RT LT - LTR - RT LT - LTR - RT
Shared Cap.: xxx 517 xxxxxx xxx xxx xxxxxx xxx xxx xxxxxx xxx xxx xxxxxx
SharedQueue: xxx 1.4 xxxxxx xxx xxx xxxxxx xxx xxx xxxxxx xxx xxx xxxxxx
Shrd StpDel: xxx 15.4 xxxxxx xxx xxx xxxxxx xxx xxx xxxxxx xxx xxx xxxxxx
Shared LOS: * C *
ApproachDel: 15.4 xxxxxx xxxxxx xxxxxx xxxxxx xxxxxx
ApproachLOS: C *

AM Peakhour - Buildout Conditions(Mitigated)
Cotati Circulation Improvement Study
City of Cotati

Level Of Service Computation Report

2000 HCM Operations Method (Future Volume Alternative)

Intersection #16 E Cotati Ave/La Salle Ave

Cycle (sec): 100 Critical Vol./Cap. (X): 0.535
Loss Time (sec): 0 (Y+R = 4 sec) Average Delay (sec/veh): 12.7
Optimal Cycle: 40 Level Of Service: B

Approach: North Bound South Bound East Bound West Bound
Movement: L - T - R L - T - R L - T - R L - T - R

Control: Permitted Permitted Protected Protected
Rights: Include Include Include Include
Lanes: 0 0 1! 0 0 0 0 0 0 0 0 0 1 1 0 1 0 1 1 0

Volume Module: 7:30 - 8:30 am
Base Vol: 127 2 51 0 0 3 8 555 87 45 717 3
Growth Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
Initial Bse: 127 2 51 0 0 3 8 555 87 45 717 3
Added Vol: 8 0 30 0 0 0 0 354 6 9 215 0
PasserByVol: 0 0 0 0 0 0 0 0 0 0 0 0
Initial Fut: 135 2 81 0 0 3 8 909 93 54 932 3
User Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
PHF Adj: 0.88 0.88 0.88 0.50 0.50 0.50 0.87 0.87 0.87 0.89 0.89 0.89
PHF Volume: 153 2 92 0 0 6 9 1045 107 61 1047 3
Reduct Vol: 0 0 0 0 0 0 0 0 0 0 0 0
Reduced Vol: 153 2 92 0 0 6 9 1045 107 61 1047 3
PCE Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
MLF Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
Final Vol.: 153 2 92 0 0 6 9 1045 107 61 1047 3

Saturation Flow Module:
Sat/Lane: 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900
Adjustment: 0.77 0.77 0.77 1.00 1.00 0.85 0.93 0.92 0.92 0.93 0.93 0.93
Lanes: 0.62 0.01 0.37 0.00 0.00 1.00 1.00 1.81 0.19 1.00 1.99 0.01
Final Sat.: 900 13 540 0 0 1611 1769 3165 324 1769 3526 11

Capacity Analysis Module:
Vol/Sat: 0.17 0.17 0.17 0.00 0.00 0.00 0.01 0.33 0.33 0.03 0.30 0.30
Crit Moves: ****
Green/Cycle: 0.32 0.32 0.32 0.00 0.00 0.32 0.01 0.62 0.62 0.06 0.67 0.67
Volume/Cap: 0.53 0.53 0.53 0.00 0.00 0.01 0.44 0.53 0.53 0.53 0.44 0.44
Delay/Veh: 29.2 29.2 29.2 0.0 0.0 23.3 63.5 11.2 11.2 50.3 7.9 7.9
User DelAdj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
AdjDel/Veh: 29.2 29.2 29.2 0.0 0.0 23.3 63.5 11.2 11.2 50.3 7.9 7.9
HCM2kAvg: 8 8 8 0 0 0 1 10 10 3 8 8

AM Peakhour - Buildout Conditions(Mitigated)
Cotati Circulation Improvement Study
City of Cotati

Level Of Service Computation Report
2000 HCM Operations Method (Future Volume Alternative)

Intersection #17 E Cotati Ave/Adrian Dr

Cycle (sec): 100 Critical Vol./Cap. (X): 0.624
Loss Time (sec): 6 (Y+R = 4 sec) Average Delay (sec/veh): 19.4
Optimal Cycle: 35 Level Of Service: B

Table with 4 columns: Approach (North, South, East, West Bound), Movement (L, T, R), Control (Split Phase, Protected), and Lanes.

Volume Module: Base Vol, Growth Adj, Initial Bse, Added Vol, PasserByVol, Initial Fut, User Adj, PHF Adj, PHF Volume, Reduct Vol, Reduced Vol, PCE Adj, MLF Adj, Final Vol.

Saturation Flow Module: Sat/Lane, Adjustment, Lanes, Final Sat.

Capacity Analysis Module: Vol/Sat, Crit Moves, Green/Cycle, Volume/Cap, Delay/Veh, User DelAdj, AdjDel/Veh, HCM2kAvg.

AM Peakhour - Buildout Conditions(Mitigated)
Cotati Circulation Improvement Study
City of Cotati

Level Of Service Computation Report
2000 HCM Operations Method (Future Volume Alternative)

Intersection #18 E Cotati Ave/Lancaster Dr

Cycle (sec): 100 Critical Vol./Cap. (X): 0.775
Loss Time (sec): 6 (Y+R = 4 sec) Average Delay (sec/veh): 24.7
Optimal Cycle: 53 Level Of Service: C

Table with 4 columns: Approach (North, South, East, West Bound), Movement (L, T, R), Control (Permitted, Protected), and Lanes.

Volume Module: >> Count Date: 17 Nov 2004 << Base Vol, Growth Adj, Initial Bse, Added Vol, PasserByVol, Initial Fut, User Adj, PHF Adj, PHF Volume, Reduct Vol, Reduced Vol, PCE Adj, MLF Adj, Final Vol.

Saturation Flow Module: Sat/Lane, Adjustment, Lanes, Final Sat.

Capacity Analysis Module: Vol/Sat, Crit Moves, Green/Cycle, Volume/Cap, Delay/Veh, User DelAdj, AdjDel/Veh, HCM2kAvg.

AM Peakhour - Buildout Conditions(Mitigated)
Cotati Circulation Improvement Study
City of Cotati

Level Of Service Computation Report
2000 HCM Unsignalized Method (Future Volume Alternative)

Intersection #19 E Cotati Ave/Beverly Dr

Average Delay (sec/veh): 1.5 Worst Case Level Of Service: C[16.3]

Approach: North Bound South Bound East Bound West Bound
Movement: L - T - R L - T - R L - T - R L - T - R

Control: Stop Sign Stop Sign Uncontrolled Uncontrolled
Rights: Include Include Include Include
Lanes: 0 0 0 0 0 0 0 1 0 0 0 1 0 1 1 0

Volume Module: >> Count Date: 17 Nov 2004 <<
Base Vol: 0 0 0 73 0 55 59 721 0 0 645 121
Growth Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00

Critical Gap Module:
Critical Gp:xxxxx xxxxx xxxxxx 6.8 xxxxx 6.9 4.1 xxxxx xxxxxx xxxxxx xxxxx xxxxxx
FollowUpTim:xxxxxx xxxxx xxxxxx 3.5 xxxxx 3.3 2.2 xxxxx xxxxxx xxxxxx xxxxx xxxxxx

Capacity Module:
Cnflct Vol: xxxxx xxxxx xxxxxx 2391 xxxxx 728 1022 xxxxx xxxxxx xxxxx xxxxx xxxxxx
Potent Cap.: xxxxx xxxxx xxxxxx 23 xxxxx 301 555 xxxxx xxxxxx xxxxx xxxxx xxxxxx

Level Of Service Module:
Queue: xxxxxx xxxxx xxxxxx xxxxxx xxxxx xxxxxx 0.5 xxxxx xxxxxx xxxxxx xxxxx xxxxxx
Stopped Del:xxxxxx xxxxx xxxxxx xxxxxx xxxxx xxxxxx 12.5 xxxxx xxxxxx xxxxxx xxxxx xxxxxx

AM Peakhour - Buildout Conditions(Mitigated)
Cotati Circulation Improvement Study
City of Cotati

Level Of Service Computation Report
2000 HCM Operations Method (Future Volume Alternative)

Intersection #20 E Cotati Ave/Santero Way

Cycle (sec): 100 Critical Vol./Cap. (X): 0.550
Loss Time (sec): 0 (Y+R = 4 sec) Average Delay (sec/veh): 5.3
Optimal Cycle: 51 Level Of Service: A

Approach: North Bound South Bound East Bound West Bound
Movement: L - T - R L - T - R L - T - R L - T - R

Control: Split Phase Split Phase Protected Protected
Rights: Include Include Include Include
Lanes: 1 0 0 0 1 0 0 0 0 0 0 0 1 1 0 1 0 2 0 0

Volume Module:
Base Vol: 10 0 10 0 0 0 0 0 860 14 8 702 0
Growth Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00

Capacity Module:
Sat/Lane: 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900
Adjustment: 0.93 1.00 0.83 1.00 1.00 1.00 1.00 0.91 0.91 0.93 0.93 1.00

Saturation Flow Module:
Sat/Lane: 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900
Adjustment: 0.93 1.00 0.83 1.00 1.00 1.00 1.00 0.91 0.91 0.93 0.93 1.00

Capacity Analysis Module:
Vol/Sat: 0.08 0.00 0.02 0.00 0.00 0.00 0.00 0.45 0.45 0.02 0.28 0.00
Crit Moves: ****
Green/Cycle: 0.14 0.00 0.14 0.00 0.00 0.00 0.00 0.83 0.83 0.03 0.86 0.00

AM Peakhour - Buildout Conditions(Mitigated)
Cotati Circulation Improvement Study
City of Cotati

Level Of Service Computation Report
FHWA Roundabout Method (Future Volume Alternative)

Intersection #21 Old Redwood Highway/Henry-Charles St.

Average Delay (sec/veh): 6.1 Level Of Service: A

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Yield Sign			Yield Sign			Yield Sign			Yield Sign		
Lanes:	1			1			1			1		

Volume Module:	North Bound			South Bound			East Bound			West Bound		
Base Vol:	15	271	93	6	332	9	12	15	16	197	12	16
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	15	271	93	6	332	9	12	15	16	197	12	16
Added Vol:	0	157	29	0	83	0	0	0	0	15	0	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	15	428	122	6	415	9	12	15	16	212	12	16
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	0.93	0.93	0.93	0.87	0.87	0.87	0.83	0.83	0.83	0.84	0.84	0.84
PHF Volume:	16	460	131	7	477	10	14	18	19	252	14	19
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	16	460	131	7	477	10	14	18	19	252	14	19
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Final Vol.:	16	460	131	7	477	10	14	18	19	252	14	19

PCE Module:	North Bound			South Bound			East Bound			West Bound		
AutoPCE:	16	460	131	7	477	10	14	18	19	252	14	19
TruckPCE:	0	0	0	0	0	0	0	0	0	0	0	0
ComboPCE:	0	0	0	0	0	0	0	0	0	0	0	0
BicyclePCE:	0	0	0	0	0	0	0	0	0	0	0	0
AdjVolume:	16	460	131	7	477	10	14	18	19	252	14	19

Delay Module:	>> Time Period: 0.25 hours <<												
CircVolume:	39	283			736			491					
MaxVolume:	1179	1047			802			935					
PedVolume:	0	0			0			0					
AdjMaxVol:	1179	1047			802			935					
ApproachVol:	608	494			52			286					
ApproachDel:	6.3	6.5			4.8			5.5					
Queue:	3.1	2.6			0.2			1.3					

AM Peakhour - Buildout Conditions(Mitigated)
Cotati Circulation Improvement Study
City of Cotati

Level Of Service Computation Report
2000 HCM Operations Method (Future Volume Alternative)

Intersection #22 Old Redwood Hwy/Myrtle-Valparaiso Ave

Cycle (sec): 100 Critical Vol./Cap. (X): 0.648

Loss Time (sec): 6 (Y+R = 4 sec) Average Delay (sec/veh): 19.2

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Protected			Protected			Permitted			Permitted		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Lanes:	1	0	1	0	1	0	1	0	1	0	1	0

Volume Module:	North Bound			South Bound			East Bound			West Bound		
Base Vol:	26	320	41	22	557	5	16	29	63	195	41	67
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	26	320	41	22	557	5	16	29	63	195	41	67
Added Vol:	19	180	3	1	95	0	0	0	16	3	1	3
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	45	500	44	23	652	5	16	29	79	198	42	70
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	0.87	0.87	0.87	0.90	0.90	0.90	0.87	0.87	0.87	0.92	0.92	0.92
PHF Volume:	52	574	50	26	723	6	18	33	91	214	45	76
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	52	574	50	26	723	6	18	33	91	214	45	76
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Final Vol.:	52	574	50	26	723	6	18	33	91	214	45	76

Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.93	0.98	0.83	0.93	0.98	0.83	0.59	0.87	0.87	0.59	0.89	0.89
Lanes:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.27	0.73	1.00	0.38	0.62
Final Sat.:	1769	1862	1583	1769	1862	1583	1127	445	1212	1117	633	1054

Capacity Analysis Module:												
Vol/Sat:	0.03	0.31	0.03	0.01	0.39	0.00	0.02	0.07	0.07	0.19	0.07	0.07
Crit Moves:	****			****			****			****		
Green/Cycle:	0.05	0.62	0.62	0.03	0.60	0.60	0.30	0.30	0.30	0.30	0.30	0.30
Volume/Cap:	0.65	0.50	0.05	0.50	0.65	0.01	0.06	0.25	0.25	0.65	0.24	0.24
Delay/Veh:	64.2	11.0	7.7	55.4	14.5	8.1	25.3	27.1	27.1	35.1	27.0	27.0
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	64.2	11.0	7.7	55.4	14.5	8.1	25.3	27.1	27.1	35.1	27.0	27.0
HCM2kAvg:	3	10	1	2	15	0	1	3	3	10	3	3

PM Peak Hour - Buildout Conditions-(Mitigated)
Cotati Circulation Improvement Study
City of Cotati

Level of Service Computation Report

2000 HCM Operations Method (Future Volume Alternative)

Intersection #1 Redwood Dr/Helman Ln

Cycle (sec): 100 Critical Vol./Cap. (X): 0.595
Loss Time (sec): 0 (Y+R = 4 sec) Average Delay (sec/veh): 17.1
Optimal Cycle: 56 Level Of Service: B

Table with 4 columns: North Bound, South Bound, East Bound, West Bound. Rows include Movement, Control, Rights, Lanes, Min. Green, and Volume Module.

Table with 12 columns for traffic flow metrics. Rows include Base Vol, Growth Adj, Initial Bse, Added Vol, PasserByVol, Initial Fut, User Adj, PHF Adj, PHF Volume, Reduct Vol, Reduced Vol, PCE Adj, MLF Adj, Final Vol.

Saturation Flow Module table with 10 columns for Sat/Lane, Adjustment, Lanes, and Final Sat.

Capacity Analysis Module table with 10 columns for Vol/Sat, Crit Moves, Green/Cycle, Volume/Cap, Delay/Veh, User DelAdj, AdjDel/Veh, HCM2kAvg.

PM Peak Hour - Buildout Conditions-(Mitigated)
Cotati Circulation Improvement Study
City of Cotati

Level of Service Computation Report

2000 HCM Unsignalized Method (Future Volume Alternative)

Intersection #2 Commerce Blvd/Wilford Ln

Average Delay (sec/veh): 1.8 Worst Case Level Of Service: D[26.9]

Table with 4 columns: North Bound, South Bound, East Bound, West Bound. Rows include Movement, Control, Rights, Lanes.

Table with 12 columns for traffic flow metrics. Rows include Base Vol, Growth Adj, Initial Bse, Added Vol, PasserByVol, Initial Fut, User Adj, PHF Adj, PHF Volume, Reduct Vol, Final Vol, Critical Gap Module, FollowUpTim.

Capacity Module table with 10 columns for Cnflct Vol, Potent Cap., Move Cap., Volume/Cap.

Level of Service Module table with 10 columns for Queue, Stopped Del, LOS by Move, Movement, Shared Cap., SharedQueue, Shrd StpDel, Shared LOS, ApproachDel, ApproachLOS.

PM Peak Hour - Buildout Conditions-(Mitigated)
Cotati Circulation Improvement Study
City of Cotati

Level Of Service Computation Report
2000 HCM Operations Method (Future Volume Alternative)

Intersection #3 Old Redwood Highway/Commerce Blvd.

Cycle (sec): 100 Critical Vol./Cap. (X): 0.835
Loss Time (sec): 0 (Y+R = 4 sec) Average Delay (sec/veh): 20.9
Optimal Cycle: 138 Level Of Service: C

Table with 4 columns: Approach (North Bound, South Bound, East Bound, West Bound) and 3 rows: Movement, Control, Rights. Includes lane counts and control types like Protected and Split Phase.

Volume Module: >> Count Date: 16 Nov 2004 <<. Grid of traffic volume data for various approaches and movements.

Saturation Flow Module: Grid of saturation flow data for different approaches and movements.

Capacity Analysis Module: Grid of capacity analysis data including Vol/Sat, Crit Moves, Green/Cycle, and Delay/Veh.

PM Peak Hour - Buildout Conditions-(Mitigated)
Cotati Circulation Improvement Study
City of Cotati

Level Of Service Computation Report
2000 HCM Operations Method (Future Volume Alternative)

Intersection #4 Gravenstein Hwy/Alder Ave

Cycle (sec): 100 Critical Vol./Cap. (X): 0.883
Loss Time (sec): 0 (Y+R = 4 sec) Average Delay (sec/veh): 20.4
Optimal Cycle: 158 Level Of Service: C

Table with 4 columns: Approach (North Bound, South Bound, East Bound, West Bound) and 3 rows: Movement, Control, Rights. Includes lane counts and control types like Permitted and Protected.

Volume Module: >> Count Date: 16 Nov 2004 <<. Grid of traffic volume data for various approaches and movements.

Saturation Flow Module: Grid of saturation flow data for different approaches and movements.

Capacity Analysis Module: Grid of capacity analysis data including Vol/Sat, Crit Moves, Green/Cycle, and Delay/Veh.

PM Peak Hour - Buildout Conditions-(Mitigated)
Cotati Circulation Improvement Study
City of Cotati

Level Of Service Computation Report

2000 HCM Unsignalized Method (Future Volume Alternative)

Intersection #5 Gravenstein Hwy/W Cotati Ave

Average Delay (sec/veh): 0.7 Worst Case Level Of Service: C[18.3]

Approach: North Bound South Bound East Bound West Bound
Movement: L - T - R L - T - R L - T - R L - T - R

Control: Stop Sign Stop Sign Uncontrolled Uncontrolled
Rights: Include Include Channel Include
Lanes: 1 0 0 0 1 0 0 0 0 0 0 0 1 1 0 1 0 2 0 0

Volume Module: >> Count Date: 16 Nov 2004 <<

Base Vol: 3 0 28 0 0 0 0 601 12 40 787 0
Growth Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
Initial Bse: 3 0 28 0 0 0 0 601 12 40 787 0
Added Vol: 5 0 16 0 0 0 0 542 9 23 379 0
PasserByVol: 0 0 0 0 0 0 0 0 0 0 0 0
Initial Fut: 8 0 44 0 0 0 0 1143 21 63 1166 0
User Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
PHF Adj: 0.86 0.86 0.86 1.00 1.00 1.00 0.80 0.80 0.80 0.89 0.89 0.89
PHF Volume: 9 0 51 0 0 0 0 1429 26 71 1310 0
Reduct Vol: 0 0 0 0 0 0 0 0 0 0 0 0
Final Vol.: 9 0 51 0 0 0 0 1429 26 71 1310 0

Critical Gap Module:

Critical Gp: 6.8 xxx 6.9 xxx xxx xxx xxx xxx 4.2 xxx xxx
FollowUpTim: 3.5 xxx 3.3 xxx xxx xxx xxx xxx 2.3 xxx xxx

Capacity Module:

Cnflct Vol: 2239 xxx 714 xxx xxx xxx xxx xxx 1429 xxx xxx
Potent Cap.: 36 xxx 374 xxx xxx xxx xxx xxx 457 xxx xxx
Move Cap.: 32 xxx 374 xxx xxx xxx xxx xxx 457 xxx xxx
Total Cap: 154 0 xxx 669 0 xxx xxx xxx xxx xxx xxx xxx
Volume/Cap: 0.06 xxx 0.14 xxx xxx xxx xxx xxx 0.15 xxx xxx

Level Of Service Module:

Queue: 0.2 xxx 0.5 xxx xxx xxx xxx xxx xxx 0.5 xxx xxx
Stopped Del: 29.8 xxx 16.2 xxx xxx xxx xxx xxx xxx 14.3 xxx xxx
LOS by Move: D * C * * * * * * * B * *
Movement: LT - LTR - RT LT - LTR - RT LT - LTR - RT LT - LTR - RT
Shared Cap.: xxx xxx xxx xxx xxx xxx xxx xxx xxx xxx xxx
SharedQueue: xxx xxx xxx xxx xxx xxx xxx xxx xxx xxx xxx
Shrd StpDel: xxx xxx xxx xxx xxx xxx xxx xxx xxx xxx xxx
Shared LOS: * * * * * * * * * * * *
ApproachDel: 18.3 xxx xxx xxx xxx xxx
ApproachLOS: C * * * * *

PM Peak Hour - Buildout Conditions-(Mitigated)
Cotati Circulation Improvement Study
City of Cotati

Level Of Service Computation Report

2000 HCM Operations Method (Future Volume Alternative)

Intersection #6 Gravenstein Hwy/Redwood Dr

Cycle (sec): 100 Critical Vol./Cap. (X): 0.840

Loss Time (sec): 6 (Y+R = 4 sec) Average Delay (sec/veh): 25.1

Optimal Cycle: 68 Level Of Service: C

Approach: North Bound South Bound East Bound West Bound
Movement: L - T - R L - T - R L - T - R L - T - R

Control: Split Phase Split Phase Protected Protected
Rights: Include Include Include Include
Min. Green: 0 0 0 0 0 0 0 0 0 0 0 0

Lanes: 1 0 0 1 0 1 0 1 0 0 1 0 1 1 0 1 0 2 0 1

Volume Module:

Base Vol: 32 10 85 360 35 96 69 502 19 90 742 286
Growth Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
Initial Bse: 32 10 85 360 35 96 69 502 19 90 742 286
Added Vol: 0 0 0 173 0 32 32 649 0 0 469 143
PasserByVol: 0 0 0 0 0 0 0 0 0 0 0 0
Initial Fut: 32 10 85 533 35 128 101 1151 19 90 1211 429
User Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
PHF Adj: 0.88 0.88 0.88 0.88 0.88 0.88 0.97 0.97 0.97 0.90 0.90 0.90
PHF Volume: 36 11 97 606 40 145 104 1187 20 100 1346 477
Reduct Vol: 0 0 0 0 0 0 0 0 0 0 0 0
Reduced Vol: 36 11 97 606 40 145 104 1187 20 100 1346 477
PCE Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
MLF Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
Final Vol.: 36 11 97 606 40 145 104 1187 20 100 1346 477

Saturation Flow Module:

Sat/Lane: 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900
Adjustment: 0.90 0.82 0.82 0.89 0.89 0.89 0.90 0.95 0.95 0.90 0.95 0.81
Lanes: 1.00 0.11 0.89 1.62 0.08 0.30 1.00 1.97 0.03 1.00 2.00 1.00
Final Sat.: 1718 165 1402 2744 138 505 1718 3552 59 1718 3618 1537

Capacity Analysis Module:

Vol/Sat: 0.02 0.07 0.07 0.22 0.29 0.29 0.06 0.33 0.33 0.06 0.37 0.31
Crit Moves: **** *
Green/Cycle: 0.08 0.08 0.08 0.34 0.34 0.34 0.07 0.44 0.44 0.08 0.44 0.44
Volume/Cap: 0.26 0.84 0.84 0.64 0.84 0.84 0.84 0.76 0.76 0.76 0.84 0.70
Delay/Veh: 44.0 81.6 81.6 28.9 37.1 37.1 83.2 22.4 22.4 65.5 15.8 13.8
User DelAdj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
AdjDel/Veh: 44.0 81.6 81.6 28.9 37.1 37.1 83.2 22.4 22.4 65.5 15.8 13.8
HCM2kAvg: 1 6 6 11 17 17 6 15 15 5 17 9

PM Peak Hour - Buildout Conditions-(Mitigated)
Cotati Circulation Improvement Study
City of Cotati

Level Of Service Computation Report
2000 HCM Operations Method (Future Volume Alternative)

Intersection #7 Gravenstein Hwy/US 101 SB

Cycle (sec): 100 Critical Vol./Cap. (X): 0.751
Loss Time (sec): 6 (Y+R = 4 sec) Average Delay (sec/veh): 13.2
Optimal Cycle: 49 Level Of Service: B

Table with 4 columns: Approach (North Bound, South Bound, East Bound, West Bound) and 4 sub-columns for movement (L, T, R). Includes Control, Rights, Min. Green, and Lanes.

Volume Module:

Table with 12 columns for traffic volume and 12 columns for saturation flow. Rows include Base Vol, Growth Adj, Initial Bse, Added Vol, PasserByVol, Initial Fut, User Adj, PHF Adj, PHF Volume, Reduct Vol, Reduced Vol, PCE Adj, MLF Adj, and Final Vol.

Saturation Flow Module:

Table with 12 columns for Sat/Lane, Adjustment, Lanes, and Final Sat.

Capacity Analysis Module:

Table with 12 columns for Vol/Sat, Crit Moves, Green/Cycle, Volume/Cap, Delay/Veh, User DelAdj, AdjDel/Veh, and HCM2kAvg.

PM Peak Hour - Buildout Conditions-(Mitigated)
Cotati Circulation Improvement Study
City of Cotati

Level Of Service Computation Report
2000 HCM Operations Method (Future Volume Alternative)

Intersection #8 Gravenstein Hwy/US 101 NB

Cycle (sec): 100 Critical Vol./Cap. (X): 0.797
Loss Time (sec): 4 (Y+R = 4 sec) Average Delay (sec/veh): 9.9
Optimal Cycle: 49 Level Of Service: A

Table with 4 columns: Approach (North Bound, South Bound, East Bound, West Bound) and 4 sub-columns for movement (L, T, R). Includes Control, Rights, Min. Green, and Lanes.

Volume Module: >> Count Date: 16 Nov 2004 << 4:45 - 5:45 pm

Table with 12 columns for traffic volume and 12 columns for saturation flow. Rows include Base Vol, Growth Adj, Initial Bse, Added Vol, PasserByVol, Initial Fut, User Adj, PHF Adj, PHF Volume, Reduct Vol, Reduced Vol, PCE Adj, MLF Adj, and Final Vol.

Saturation Flow Module:

Table with 12 columns for Sat/Lane, Adjustment, Lanes, and Final Sat.

Capacity Analysis Module:

Table with 12 columns for Vol/Sat, Crit Moves, Green/Cycle, Volume/Cap, Delay/Veh, User DelAdj, AdjDel/Veh, and HCM2kAvg.

PM Peak Hour - Buildout Conditions-(Mitigated)
Cotati Circulation Improvement Study
City of Cotati

Level Of Service Computation Report
2000 HCM Operations Method (Future Volume Alternative)

Intersection #9 Gravenstein Hwy/Old Redwood Hwy

Cycle (sec): 100 Critical Vol./Cap. (X): 0.857
Loss Time (sec): 8 (Y+R = 4 sec) Average Delay (sec/veh): 34.0
Optimal Cycle: 81 Level Of Service: C

Table with 4 columns: Approach (North Bound, South Bound, East Bound, West Bound), Movement (L-T-R), Control (Split Phase, Split Phase, Split Phase, Split Phase), Rights (Include, Ovl, Ignore, Include), Min. Green (0 0 0, 0 0 0, 0 0 0, 0 0 0), Lanes (1 1 0 1 0, 1 0 1 0 1, 1 1 0 0 1, 1 0 0 1 0)

Volume Module: 5:00 - 6:00 pm
Base Vol: 333 680 42 16 220 185 502 70 790 53 39 37
Growth Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
Initial Bse: 333 680 42 16 220 185 502 70 790 53 39 37
Added Vol: 276 215 5 1 65 32 239 8 483 3 3 2
PasserByVol: 0 0 0 0 0 0 0 0 0 0 0 0
Initial Fut: 609 895 47 17 285 217 741 78 1273 56 42 39
User Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
PHF Adj: 0.91 0.91 0.91 0.92 0.92 0.92 0.94 0.94 0.00 0.95 0.95 0.95
PHF Volume: 669 984 52 18 310 236 788 83 0 59 44 41
Reduct Vol: 0 0 0 0 0 0 0 0 0 0 0 0
Reduced Vol: 669 984 52 18 310 236 788 83 0 59 44 41
PCE Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 0.00 1.00 1.00 1.00
MLF Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 0.00 1.00 1.00 1.00
Final Vol.: 669 984 52 18 310 236 788 83 0 59 44 41

Saturation Flow Module:
Sat/Lane: 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900
Adjustment: 0.93 0.93 0.93 0.93 0.98 0.83 0.91 0.91 1.00 0.93 0.91 0.91
Lanes: 1.18 1.73 0.09 1.00 1.00 1.00 1.81 0.19 1.00 1.00 0.52 0.48
Final Sat.: 2082 3060 161 1769 1862 1583 3132 330 1900 1769 896 832

Capacity Analysis Module:
Vol/Sat: 0.32 0.32 0.32 0.01 0.17 0.15 0.25 0.25 0.00 0.03 0.05 0.05
Crit Moves: ****
Green/Cycle: 0.37 0.37 0.37 0.19 0.19 0.49 0.29 0.29 0.00 0.06 0.06 0.06
Volume/Cap: 0.86 0.86 0.86 0.05 0.86 0.31 0.86 0.86 0.00 0.58 0.86 0.86
Delay/Veh: 30.5 30.5 30.5 32.9 57.0 12.3 31.5 31.5 0.0 54.0 94.8 94.8
User DelAdj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
AdjDel/Veh: 30.5 30.5 30.5 32.9 57.0 12.3 31.5 31.5 0.0 54.0 94.8 94.8
HCM2kAvg: 18 18 18 0 12 3 15 15 0 3 5 5

PM Peak Hour - Buildout Conditions-(Mitigated)
Cotati Circulation Improvement Study
City of Cotati

Level Of Service Computation Report
2000 HCM Operations Method (Future Volume Alternative)

Intersection #10 Old Redwood Hwy/William St-George St

Cycle (sec): 100 Critical Vol./Cap. (X): 0.557
Loss Time (sec): 0 (Y+R = 4 sec) Average Delay (sec/veh): 5.0
Optimal Cycle: 42 Level Of Service: A

Table with 4 columns: Approach (North Bound, South Bound, East Bound, West Bound), Movement (L-T-R), Control (Protected, Protected, Permitted, Permitted), Rights (Include, Include, Include, Include), Min. Green (0 0 0, 0 0 0, 0 0 0, 0 0 0), Lanes (1 0 1 1 0, 1 0 1 1 0, 0 0 1! 0 0, 0 0 1! 0 0)

Volume Module:
Base Vol: 12 978 6 22 997 49 62 2 26 3 2 23
Growth Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
Initial Bse: 12 978 6 22 997 49 62 2 26 3 2 23
Added Vol: 0 473 0 0 551 8 5 0 0 0 0 0
PasserByVol: 0 0 0 0 0 0 0 0 0 0 0 0
Initial Fut: 12 1451 6 22 1548 57 67 2 26 3 2 23
User Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
PHF Adj: 0.98 0.98 0.98 0.97 0.97 0.97 0.80 0.80 0.80 0.78 0.78 0.78
PHF Volume: 12 1481 6 23 1596 59 84 3 33 4 3 29
Reduct Vol: 0 0 0 0 0 0 0 0 0 0 0 0
Reduced Vol: 12 1481 6 23 1596 59 84 3 33 4 3 29
PCE Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
MLF Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
Final Vol.: 12 1481 6 23 1596 59 84 3 33 4 3 29

Saturation Flow Module:
Sat/Lane: 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900
Adjustment: 0.93 0.93 0.93 0.93 0.93 0.93 0.78 0.78 0.78 0.86 0.86 0.86
Lanes: 1.00 1.99 0.01 1.00 1.93 0.07 0.71 0.02 0.27 0.11 0.07 0.82
Final Sat.: 1769 3520 15 1769 3395 125 1047 31 406 175 116 1338

Capacity Analysis Module:
Vol/Sat: 0.01 0.42 0.42 0.01 0.47 0.47 0.08 0.08 0.08 0.02 0.02 0.02
Crit Moves: ****
Green/Cycle: 0.01 0.83 0.83 0.03 0.84 0.84 0.14 0.14 0.14 0.14 0.14 0.14
Volume/Cap: 0.56 0.51 0.51 0.51 0.56 0.56 0.56 0.56 0.56 0.15 0.15 0.15
Delay/Veh: 77.2 2.6 2.6 57.2 2.5 2.5 43.1 43.1 43.1 37.8 37.8 37.8
User DelAdj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
AdjDel/Veh: 77.2 2.6 2.6 57.2 2.5 2.5 43.1 43.1 43.1 37.8 37.8 37.8
HCM2kAvg: 1 -4 -4 1 -6 -6 5 5 5 1 1 1

PM Peak Hour - Buildout Conditions-(Mitigated)
Cotati Circulation Improvement Study
City of Cotati

Level Of Service Computation Report

2000 HCM Unsignalized Method (Future Volume Alternative)

Intersection #11 W Sierra Ave/W School St-US 101 SB Ramp

Average Delay (sec/veh): 3.1 Worst Case Level Of Service: C[20.1]

Approach: North Bound South Bound East Bound West Bound
Movement: L - T - R L - T - R L - T - R L - T - R

Control: Stop Sign Stop Sign Uncontrolled Uncontrolled
Rights: Include Include Channel Include
Lanes: 0 0 0 0 0 0 0 1! 0 0 0 1 0 0 1 0 0 1 0 0

Volume Module:
Base Vol: 0 0 0 21 6 0 1 133 10 102 123 36
Growth Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
Initial Bse: 0 0 0 21 6 0 1 133 10 102 123 36
Added Vol: 0 0 0 2 6 1 1 58 6 57 75 6
PasserByVol: 0 0 0 0 0 0 0 0 0 0 0 0
Initial Fut: 0 0 0 23 12 1 2 191 16 159 198 42
User Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
PHF Adj: 1.00 1.00 1.00 0.84 0.84 0.84 0.82 0.82 0.82 0.88 0.88 0.88
PHF Volume: 0 0 0 27 14 1 2 233 20 181 225 48
Reduct Vol: 0 0 0 0 0 0 0 0 0 0 0 0
Final Vol.: 0 0 0 27 14 1 2 233 20 181 225 48

Critical Gap Module:
Critical Gp:xxxxx xxxxx xxxxx 6.4 6.5 6.2 4.1 xxxxx xxxxx 4.1 xxxxx xxxxx
FollowUpTim:xxxxx xxxxx xxxxx 3.5 4.0 3.3 2.2 xxxxx xxxxx 2.2 xxxxx xxxxx

Capacity Module:
Cnflct Vol: xxxxx xxxxx xxxxx 858 848 249 273 xxxxx xxxxx 233 xxxxx xxxxx
Potent Cap.: xxxxx xxxxx xxxxx 327 298 790 1291 xxxxx xxxxx 1335 xxxxx xxxxx
Move Cap.: xxxxx xxxxx xxxxx 289 253 790 1291 xxxxx xxxxx 1335 xxxxx xxxxx
Volume/Cap: xxxxx xxxxx xxxxx 0.09 0.06 0.00 0.00 xxxxx xxxxx 0.14 xxxxx xxxxx

Level Of Service Module:
Queue: xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx 0.0 xxxxx xxxxx 0.5 xxxxx xxxxx
Stopped Del:xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx 7.8 xxxxx xxxxx 8.1 xxxxx xxxxx
LOS by Move: * * * * * A * * *
Movement: LT - LTR - RT LT - LTR - RT LT - LTR - RT LT - LTR - RT
Shared Cap.: xxxxx xxxxx xxxxx xxxxx 281 xxxxx xxxxx xxxxx xxxxx xxxxx
SharedQueue:xxxxxx xxxxx xxxxx xxxxx 0.5 xxxxx 0.0 xxxxx xxxxx xxxxx xxxxx
Shrd StpDel:xxxxxx xxxxx xxxxx xxxxx 20.1 xxxxx 7.8 xxxxx xxxxx xxxxx xxxxx
Shared LOS: * * * * * C * A * * * *
ApproachDel: xxxxxxx 20.1 xxxxxxx xxxxxxx
ApproachLOS: * C * * *

PM Peak Hour - Buildout Conditions-(Mitigated)
Cotati Circulation Improvement Study
City of Cotati

Level Of Service Computation Report

2000 HCM Unsignalized Method (Future Volume Alternative)

Intersection #12 W Sierra Ave/US 101 NB Off-ramp

Average Delay (sec/veh): 4.3 Worst Case Level Of Service: B[12.8]

Approach: North Bound South Bound East Bound West Bound
Movement: L - T - R L - T - R L - T - R L - T - R

Control: Stop Sign Stop Sign Uncontrolled Uncontrolled
Rights: Include Include Include Include
Lanes: 1 0 0 0 1 0 0 0 0 0 0 0 1 0 0 0 0 1 0 0

Volume Module:
Base Vol: 21 0 201 0 0 0 0 0 158 0 0 244 0
Growth Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
Initial Bse: 21 0 201 0 0 0 0 0 158 0 0 244 0
Added Vol: 15 0 64 0 0 0 0 0 60 0 0 124 0
PasserByVol: 0 0 0 0 0 0 0 0 0 0 0 0 0
Initial Fut: 36 0 265 0 0 0 0 0 218 0 0 368 0
User Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
PHF Adj: 0.84 0.84 0.84 1.00 1.00 1.00 0.90 0.90 0.90 0.88 0.80 0.88
PHF Volume: 43 0 315 0 0 0 0 0 242 0 0 460 0
Reduct Vol: 0 0 0 0 0 0 0 0 0 0 0 0 0
Final Vol.: 43 0 315 0 0 0 0 0 242 0 0 460 0

Critical Gap Module:
Critical Gp: 6.4 xxxxx 6.2 xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx
FollowUpTim: 3.5 xxxxx 3.3 xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx

Capacity Module:
Cnflct Vol: 702 xxxxx 242 xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx
Potent Cap.: 404 xxxxx 797 xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx
Move Cap.: 404 xxxxx 797 xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx
Volume/Cap: 0.11 xxxxx 0.40 xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx

Level Of Service Module:
Queue: 0.4 xxxxx 1.9 xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx
Stopped Del: 15.0 xxxxx 12.5 xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx
LOS by Move: B * B * * * * * * * *
Movement: LT - LTR - RT LT - LTR - RT LT - LTR - RT LT - LTR - RT
Shared Cap.: xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx
SharedQueue:xxxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx
Shrd StpDel:xxxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx
Shared LOS: * * * * * * * * * *
ApproachDel: 12.8 xxxxxxx xxxxxxx xxxxxxx
ApproachLOS: B * * *

PM Peak Hour - Buildout Conditions-(Mitigated)
Cotati Circulation Improvement Study
City of Cotati

Level Of Service Computation Report
2000 HCM 4-Way Stop Method (Future Volume Alternative)

Intersection #13 W Sierra Ave/E School St

Cycle (sec): 100 Critical Vol./Cap. (X): 0.710
Loss Time (sec): 0 (Y+R = 4 sec) Average Delay (sec/veh): 15.7
Optimal Cycle: 0 Level Of Service: C

Table with 4 columns: North Bound, South Bound, East Bound, West Bound. Rows include Movement, Control, Rights, Min. Green, and Lanes.

Volume Module table with columns for Base Vol, Growth Adj, Initial Bse, Added Vol, PasserByVol, Initial Fut, User Adj, PHF Adj, PHF Volume, Reduct Vol, Reduced Vol, PCE Adj, MLF Adj, Final Vol.

Saturation Flow Module table with columns for Adjustment, Lanes, Final Sat.

Capacity Analysis Module table with columns for Vol/Sat, Crit Moves, Delay/Veh, Delay Adj, AdjDel/Veh, LOS by Move, ApproachDel, Delay Adj, ApprAdjDel, LOS by Appr.

PM Peak Hour - Buildout Conditions-(Mitigated)
Cotati Circulation Improvement Study
City of Cotati

Level Of Service Computation Report
2000 HCM Operations Method (Future Volume Alternative)

Intersection #14 Old Redwood Hwy/E Cotati Ave

Cycle (sec): 100 Critical Vol./Cap. (X): 0.942
Loss Time (sec): 8 (Y+R = 4 sec) Average Delay (sec/veh): 40.9
Optimal Cycle: 129 Level Of Service: D

Table with 4 columns: North Bound, South Bound, East Bound, West Bound. Rows include Movement, Control, Rights, Min. Green, and Lanes.

Volume Module table with columns for Base Vol, Growth Adj, Initial Bse, Added Vol, PasserByVol, Initial Fut, User Adj, PHF Adj, PHF Volume, Reduct Vol, Reduced Vol, PCE Adj, MLF Adj, Final Vol.

Saturation Flow Module table with columns for Sat/Lane, Adjustment, Lanes, Final Sat.

Capacity Analysis Module table with columns for Vol/Sat, Crit Moves, Green/Cycle, Volume/Cap, Delay/Veh, User DelAdj, AdjDel/Veh, HCM2kAvg.

PM Peak Hour - Buildout Conditions-(Mitigated)
Cotati Circulation Improvement Study
City of Cotati

Level Of Service Computation Report

2000 HCM Unsignalized Method (Future Volume Alternative)

Intersection #15 E Cotati Ave/Charles St

Average Delay (sec/veh): 3.5 Worst Case Level Of Service: D[26.4]

Approach: North Bound South Bound East Bound West Bound
Movement: L - T - R L - T - R L - T - R L - T - R

Control: Stop Sign Stop Sign Uncontrolled Uncontrolled
Rights: Include Include Include Include
Lanes: 0 0 1! 0 0 0 0 0 0 0 0 0 1 1 0 1 0 2 0 0

Volume Module:
Base Vol: 5 0 231 0 0 0 0 0 687 6 129 561 0
Growth Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
Initial Bse: 5 0 231 0 0 0 0 0 687 6 129 561 0
Added Vol: 0 0 29 0 0 0 0 0 455 0 37 468 0
PasserByVol: 0 0 0 0 0 0 0 0 0 0 0 0 0 0
Initial Fut: 5 0 260 0 0 0 0 0 1142 6 166 1029 0
User Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
PHF Adj: 0.95 0.95 0.95 1.00 1.00 1.00 0.94 0.94 0.94 0.88 0.88 0.88 0.88
PHF Volume: 5 0 274 0 0 0 0 0 1215 6 189 1169 0
Reduct Vol: 0 0 0 0 0 0 0 0 0 0 0 0 0 0
Final Vol.: 5 0 274 0 0 0 0 0 1215 6 189 1169 0

Critical Gap Module:
Critical Gp: 6.8 xxxxx 6.9 xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx 4.1 xxxxx xxxxx
FollowUpTim: 3.5 xxxxx 3.3 xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx 2.2 xxxxx xxxxx

Capacity Module:
Cnflct Vol: 2983 xxxxx 611 xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx 1221 xxxxx xxxxx
Potent Cap.: 8 xxxxx 437 xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx 567 xxxxx xxxxx
Move Cap.: 6 xxxxx 437 xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx 567 xxxxx xxxxx
Total Cap: 193 0 xxxxx 0 0 xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx
Volume/Cap: 0.03 xxxxx 0.63 xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx 0.33 xxxxx xxxxx

Level Of Service Module:
Queue: xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx 1.5 xxxxx xxxxx
Stopped Del: xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx 14.5 xxxxx xxxxx
LOS by Move: * * * * * * * * * * B * * *
Movement: LT - LTR - RT LT - LTR - RT LT - LTR - RT LT - LTR - RT
Shared Cap.: xxxxx 439 xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx
SharedQueue: xxxxx 4.3 xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx
Shrd StpDel: xxxxx 26.4 xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx
Shared LOS: * D * * * * * * * * * * * * * *
ApproachDel: 26.4 xxxxxxxx xxxxxxxx xxxxxxxx
ApproachLOS: D * * * *

PM Peak Hour - Buildout Conditions-(Mitigated)
Cotati Circulation Improvement Study
City of Cotati

Level Of Service Computation Report

2000 HCM Operations Method (Future Volume Alternative)

Intersection #16 E Cotati Ave/La Salle Ave

Cycle (sec): 100 Critical Vol./Cap. (X): 0.746

Loss Time (sec): 0 (Y+R = 4 sec) Average Delay (sec/veh): 16.0

Optimal Cycle: 73 Level Of Service: B

Approach: North Bound South Bound East Bound West Bound
Movement: L - T - R L - T - R L - T - R L - T - R

Control: Permitted Permitted Protected Protected
Rights: Include Include Include Include
Min. Green: 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0
Lanes: 0 0 1! 0 0 0 0 1! 0 0 1 0 1 1 0 1 0 1 1 0

Volume Module: >> Count Date: 17 Nov 2004 << 4:15 - 5:15 pm
Base Vol: 143 1 102 5 2 8 2 954 156 61 605 2
Growth Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
Initial Bse: 143 1 102 5 2 8 2 954 156 61 605 2
Added Vol: 8 0 40 0 0 0 0 0 455 10 43 488 0
PasserByVol: 0 0 0 0 0 0 0 0 0 0 0 0 0 0
Initial Fut: 151 1 142 5 2 8 2 1409 166 104 1093 2
User Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
PHF Adj: 0.93 0.93 0.93 0.50 0.50 0.50 0.97 0.97 0.97 0.96 0.96 0.96
PHF Volume: 162 1 153 10 4 16 2 1453 171 108 1139 2
Reduct Vol: 0 0 0 0 0 0 0 0 0 0 0 0 0 0
Reduced Vol: 162 1 153 10 4 16 2 1453 171 108 1139 2
PCE Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
MLF Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
Final Vol.: 162 1 153 10 4 16 2 1453 171 108 1139 2

Saturation Flow Module:
Sat/Lane: 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900
Adjustment: 0.76 0.76 0.76 0.83 0.83 0.83 0.93 0.92 0.92 0.93 0.93 0.93
Lanes: 0.51 0.01 0.48 0.33 0.13 0.54 1.00 1.79 0.21 1.00 1.99 0.01
Final Sat.: 745 5 700 523 209 837 1769 3114 367 1769 3531 6

Capacity Analysis Module:
Vol/Sat: 0.22 0.22 0.22 0.02 0.02 0.02 0.00 0.47 0.47 0.06 0.32 0.32
Crit Moves: ****
Green/Cycle: 0.29 0.29 0.29 0.29 0.29 0.29 0.00 0.63 0.63 0.08 0.71 0.71
Volume/Cap: 0.75 0.75 0.75 0.07 0.07 0.07 0.46 0.75 0.75 0.75 0.46 0.46
Delay/Veh: 39.1 39.1 39.1 25.6 25.6 25.6 109.3 14.6 14.6 63.7 6.6 6.6
User DelAdj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
AdjDel/Veh: 39.1 39.1 39.1 25.6 25.6 25.6 109.3 14.6 14.6 63.7 6.6 6.6
HCM2kAvg: 12 12 12 1 1 1 0 19 19 5 8 8

PM Peak Hour - Buildout Conditions-(Mitigated)
Cotati Circulation Improvement Study
City of Cotati

Level Of Service Computation Report
2000 HCM Operations Method (Future Volume Alternative)

Intersection #17 E Cotati Ave/Adrian Dr

Cycle (sec): 100 Critical Vol./Cap. (X): 0.698
Loss Time (sec): 6 (Y+R = 4 sec) Average Delay (sec/veh): 16.9
Optimal Cycle: 42 Level Of Service: B

Table with 4 columns: Approach (North, South, East, West Bound) and 4 rows: Movement, Control, Rights, Min. Green, Lanes.

Volume Module table with 12 columns and 15 rows including Base Vol, Growth Adj, Initial Bse, etc.

Saturation Flow Module table with 12 columns and 4 rows including Sat/Lane, Adjustment, Lanes, Final Sat.

Capacity Analysis Module table with 12 columns and 10 rows including Vol/Sat, Crit Moves, Green/Cycle, etc.

PM Peak Hour - Buildout Conditions-(Mitigated)
Cotati Circulation Improvement Study
City of Cotati

Level Of Service Computation Report
2000 HCM Operations Method (Future Volume Alternative)

Intersection #18 E Cotati Ave/Lancaster Dr

Cycle (sec): 100 Critical Vol./Cap. (X): 0.818
Loss Time (sec): 6 (Y+R = 4 sec) Average Delay (sec/veh): 21.2
Optimal Cycle: 62 Level Of Service: C

Table with 4 columns: Approach (North, South, East, West Bound) and 4 rows: Movement, Control, Rights, Min. Green, Lanes.

Volume Module table with 12 columns and 15 rows including Base Vol, Growth Adj, Initial Bse, etc.

Saturation Flow Module table with 12 columns and 4 rows including Sat/Lane, Adjustment, Lanes, Final Sat.

Capacity Analysis Module table with 12 columns and 10 rows including Vol/Sat, Crit Moves, Green/Cycle, etc.

PM Peak Hour - Buildout Conditions-(Mitigated)
Cotati Circulation Improvement Study
City of Cotati

Level Of Service Computation Report
2000 HCM Unsignalized Method (Future Volume Alternative)

Intersection #19 E Cotati Ave/Beverly Dr

Average Delay (sec/veh): 1.6 Worst Case Level Of Service: C[22.5]

Approach: North Bound South Bound East Bound West Bound
Movement: L - T - R L - T - R L - T - R L - T - R

Control: Stop Sign Stop Sign Uncontrolled Uncontrolled
Rights: Include Include Include Include
Lanes: 0 0 0 0 0 0 0 1! 0 0 1 0 2 0 0 1 0 1 1 0

Volume Module:
Base Vol: 0 0 0 30 0 54 94 834 0 2 747 60
Growth Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
Initial Bse: 0 0 0 30 0 54 94 834 0 2 747 60
Added Vol: 0 0 0 35 0 0 0 513 0 0 564 36
PasserByVol: 0 0 0 0 0 0 0 0 0 0 0 0
Initial Fut: 0 0 0 65 0 54 94 1347 0 2 1311 96
User Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
PHF Adj: 1.00 1.00 1.00 0.82 0.82 0.82 0.87 0.87 0.87 0.95 0.95 0.95
PHF Volume: 0 0 0 79 0 66 108 1548 0 2 1380 101
Reduct Vol: 0 0 0 0 0 0 0 0 0 0 0 0
Final Vol.: 0 0 0 79 0 66 108 1548 0 2 1380 101

Critical Gap Module:
Critical Gp:xxxxx xxxxx xxxxxx 6.8 xxxxx 6.9 4.1 xxxxx xxxxxx 4.1 xxxxx xxxxxx
FollowUpTim:xxxxxx xxxxx xxxxxx 3.5 xxxxx 3.3 2.2 xxxxx xxxxxx 2.2 xxxxx xxxxxx

Capacity Module:
Cnflct Vol: xxxxx xxxxx xxxxxx 3098 xxxxx 946 1337 xxxxx xxxxxx 1548 xxxxx xxxxxx
Potent Cap.: xxxxx xxxxx xxxxxx 7 xxxxx 205 401 xxxxx xxxxxx 424 xxxxx xxxxxx
Move Cap.: xxxxx xxxxx xxxxxx 6 xxxxx 205 401 xxxxx xxxxxx 424 xxxxx xxxxxx
Total Cap: 0 515 xxxxxx 112 542 xxxxxx xxxxx xxxxx xxxxxx xxxxx xxxxx xxxxxx
Volume/Cap: xxxxx xxxxx xxxxx 0.71 xxxxx 0.32 0.27 xxxxx xxxxx 0.00 xxxxx xxxxx

Level Of Service Module:
Queue: xxxxxx xxxxx xxxxxx xxxxxx xxxxx xxxxxx 1.1 xxxxx xxxxxx 0.0 xxxxx xxxxxx
Stopped Del:xxxxxx xxxxx xxxxxx xxxxxx xxxxx xxxxxx 17.3 xxxxx xxxxxx 13.5 xxxxx xxxxxx
LOS by Move: * * * * * C * * * * * B * * * * *
Movement: LT - LTR - RT LT - LTR - RT LT - LTR - RT LT - LTR - RT
Shared Cap.: xxxxx xxxxx xxxxxx xxxxx 349 xxxxxx xxxxx xxxxx xxxxxx xxxxx xxxxx xxxxxx
SharedQueue:xxxxxx xxxxx xxxxxx xxxxxx 2.0 xxxxxx xxxxxx xxxxx xxxxxx xxxxxx xxxxxx xxxxxx
Shrd StpDel:xxxxxx xxxxx xxxxxx xxxxxx 22.5 xxxxxx xxxxxx xxxxx xxxxxx xxxxxx xxxxx xxxxxx
Shared LOS: * * * * * C * * * * * * * * * *
ApproachDel: xxxxxxxx 22.5 xxxxxxxx xxxxxxxx
ApproachLOS: * C * * *

PM Peak Hour - Buildout Conditions-(Mitigated)
Cotati Circulation Improvement Study
City of Cotati

Level Of Service Computation Report
2000 HCM Operations Method (Future Volume Alternative)

Intersection #20 E Cotati Ave/Santero Way

Cycle (sec): 100 Critical Vol./Cap. (X): 0.607
Loss Time (sec): 0 (Y+R = 4 sec) Average Delay (sec/veh): 7.8
Optimal Cycle: 58 Level Of Service: A

Approach: North Bound South Bound East Bound West Bound
Movement: L - T - R L - T - R L - T - R L - T - R

Control: Split Phase Split Phase Protected Protected
Rights: Include Include Include Include
Min. Green: 0 0 0 0 0 0 0 0 0 0 0 0
Lanes: 1 0 0 0 1 0 0 0 0 0 0 0 1 1 0 1 0 2 0 0

Volume Module:
Base Vol: 15 0 6 0 0 0 0 0 879 13 10 743 0
Growth Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
Initial Bse: 15 0 6 0 0 0 0 0 879 13 10 743 0
Added Vol: 153 0 18 0 0 0 0 0 426 114 14 443 0
PasserByVol: 0 0 0 0 0 0 0 0 0 0 0 0 0
Initial Fut: 168 0 24 0 0 0 0 0 1305 127 24 1186 0
User Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
PHF Adj: 0.75 0.75 0.75 1.00 1.00 1.00 0.88 0.88 0.88 0.97 0.97 0.97
PHF Volume: 224 0 32 0 0 0 0 0 1483 144 25 1223 0
Reduct Vol: 0 0 0 0 0 0 0 0 0 0 0 0 0
Reduced Vol: 224 0 32 0 0 0 0 0 1483 144 25 1223 0
PCE Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
MLF Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
Final Vol.: 224 0 32 0 0 0 0 0 1483 144 25 1223 0

Saturation Flow Module:
Sat/Lane: 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900
Adjustment: 0.93 1.00 0.83 1.00 1.00 1.00 1.00 0.92 0.92 0.93 0.93 1.00
Lanes: 1.00 0.00 1.00 0.00 0.00 0.00 0.00 1.82 0.18 1.00 2.00 0.00
Final Sat.: 1769 0 1583 0 0 0 0 3182 310 1769 3538 0

Capacity Analysis Module:
Vol/Sat: 0.13 0.00 0.02 0.00 0.00 0.00 0.00 0.47 0.47 0.01 0.35 0.00
Crit Moves: ****
Green/Cycle: 0.21 0.00 0.21 0.00 0.00 0.00 0.00 0.77 0.77 0.02 0.79 0.00
Volume/Cap: 0.61 0.00 0.10 0.00 0.00 0.00 0.00 0.61 0.61 0.61 0.44 0.00
Delay/Veh: 38.7 0.0 32.1 0.0 0.0 0.0 0.0 5.4 5.4 71.9 3.4 0.0
User DelAdj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
AdjDel/Veh: 38.7 0.0 32.1 0.0 0.0 0.0 0.0 5.4 5.4 71.9 3.4 0.0
HCM2kAvg: 7 0 1 0 0 0 0 11 11 2 6 0

PM Peak Hour - Buildout Conditions-(Mitigated)
Cotati Circulation Improvement Study
City of Cotati

Level Of Service Computation Report
FHWA Roundabout Method (Future Volume Alternative)

Intersection #21 Old Redwood Highway/Henry-Charles St.

Average Delay (sec/veh): 10.0 Level Of Service: B

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Yield Sign			Yield Sign			Yield Sign			Yield Sign		
Lanes:	1			1			1			1		

Volume Module:	North Bound			South Bound			East Bound			West Bound		
Base Vol:	12	463	182	28	340	23	18	24	22	113	18	28
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	12	463	182	28	340	23	18	24	22	113	18	28
Added Vol:	0	132	29	0	196	0	0	0	0	37	0	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	12	595	211	28	536	23	18	24	22	150	18	28
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	0.92	0.92	0.92	0.91	0.91	0.91	0.73	0.73	0.73	0.72	0.72	0.72
PHF Volume:	13	647	229	31	589	25	25	33	30	208	25	39
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	13	647	229	31	589	25	25	33	30	208	25	39
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Final Vol.:	13	647	229	31	589	25	25	33	30	208	25	39

PCE Module:	North Bound			South Bound			East Bound			West Bound		
AutoPCE:	13	647	229	31	589	25	25	33	30	208	25	39
TruckPCE:	0	0	0	0	0	0	0	0	0	0	0	0
ComboPCE:	0	0	0	0	0	0	0	0	0	0	0	0
BicyclePCE:	0	0	0	0	0	0	0	0	0	0	0	0
AdjVolume:	13	647	229	31	589	25	25	33	30	208	25	39

Delay Module:	North Bound			South Bound			East Bound			West Bound		
CircVolume:	88			246			828			684		
MaxVolume:	1152			1067			753			830		
PedVolume:	0			0			0			0		
AdjMaxVol:	1152			1067			753			830		
ApproachVol:	889			645			88			272		
ApproachDel:	12.8			8.4			5.4			6.4		
Queue:	8.1			4.2			0.4			1.4		

PM Peak Hour - Buildout Conditions-(Mitigated)
Cotati Circulation Improvement Study
City of Cotati

Level Of Service Computation Report
2000 HCM Operations Method (Future Volume Alternative)

Intersection #22 Old Redwood Hwy/Myrtle-Valparaiso Ave

Cycle (sec): 100 Critical Vol./Cap. (X): 0.716

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Protected			Protected			Permitted			Permitted		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Lanes:	1	0	1	0	1	0	1	0	0	1	0	1

Volume Module:	North Bound			South Bound			East Bound			West Bound		
Base Vol:	76	667	208	101	350	13	13	52	24	90	24	45
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	76	667	208	101	350	13	13	52	24	90	24	45
Added Vol:	23	153	3	4	224	0	0	1	25	3	1	2
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	99	820	211	105	574	13	13	53	49	93	25	47
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	0.90	0.90	0.90	0.88	0.88	0.88	0.86	0.86	0.86	0.86	0.86	0.86
PHF Volume:	110	911	234	119	652	15	15	62	57	108	29	55
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	110	911	234	119	652	15	15	62	57	108	29	55
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Final Vol.:	110	911	234	119	652	15	15	62	57	108	29	55

Saturation Flow Module:	North Bound			South Bound			East Bound			West Bound		
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.93	0.98	0.83	0.93	0.98	0.83	0.58	0.91	0.90	0.49	0.88	0.87
Lanes:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.52	0.48	1.00	0.34	0.66
Final Sat.:	1769	1862	1583	1769	1862	1583	1107	891	824	931	575	1082

Capacity Analysis Module:	North Bound			South Bound			East Bound			West Bound		
Vol/Sat:	0.06	0.49	0.15	0.07	0.35	0.01	0.01	0.07	0.07	0.12	0.05	0.05
Crit Moves:	****			****			****			****		
Green/Cycle:	0.12	0.68	0.68	0.09	0.66	0.66	0.16	0.16	0.16	0.16	0.16	0.16
Volume/Cap:	0.53	0.72	0.22	0.72	0.53	0.01	0.08	0.43	0.43	0.72	0.31	0.31
Delay/Veh:	44.1	11.8	6.0	57.8	9.3	5.8	35.8	38.8	38.8	54.8	37.6	37.6
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	44.1	11.8	6.0	57.8	9.3	5.8	35.8	38.8	38.8	54.8	37.6	37.6
HCM2kAvg:	4	18	3	5	11	0	1	4	4	8	3	2

Appendix C
Traffic Signal Warrant Analysis

AM Peak Hour - Existing Conditions
Cotati Circulation Improvement Study
City of Cotati

Signal Warrant Summary Report

Intersection	Base Met	Future Met
# 1 Redwood Dr/Helman Ln	No	???
# 2 Commerce Blvd/Wilford Ln	No	???
# 3 Old Redwood Highway/Commerce Blvd.	Yes	???
# 4 Gravenstein Hwy/Alder Ave	No	???
# 5 Gravenstein Hwy/W Cotati Ave	No	???
# 10 Old Redwood Hwy/William St-George S	Yes	???
# 11 W Sierra Ave/W School St-US 101 SB	No	???
# 12 W Sierra Ave/US 101 NB Off-ramp	No	???
# 13 W Sierra Ave/E School St	No	???
# 15 E Cotati Ave/Charles St	No	???
# 16 E Cotati Ave/La Salle Ave	Yes	???
# 19 E Cotati Ave/Beverly Dr	No	???
# 20 E Cotati Ave/Santero Way	No	???
# 21 Old Redwood Highway/Henry-Charles S	No	???

AM Peak Hour - Existing Conditions
Cotati Circulation Improvement Study
City of Cotati

Signal Warrant Report

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*****
Intersection #1 Redwood Dr/Helman Ln
*****
Base Volume Alternative: Peak Hour Warrant NOT Met
-----|-----|-----|-----|
Approach:   North Bound   South Bound   East Bound   West Bound
Movement:   L - T - R     L - T - R     L - T - R     L - T - R
-----|-----|-----|-----|
Control:    Uncontrolled   Uncontrolled   Stop Sign     Stop Sign
Lanes:      0 1 0 0 0         0 0 0 1 0         0 0 1 0 0         0 0 0 0 0
Final Vol.: 63 342 0       0 202 31         57 0 54          0 0 0 0
ApproachDel: xxxxxx       xxxxxx          13.8           xxxxxx
-----|-----|-----|-----|
Approach[eastbound][lanes=1][control=Stop]
Signal Warrant Rule #1: [vehicle-hours=0.4]
      FAIL - Vehicle-hours less than 4 for one lane approach.
Signal Warrant Rule #2: [approach volume=112]
      SUCCEED - Approach volume greater than or equal to 100 for one lane approach.
Signal Warrant Rule #3: [approach count=3][total volume=750]
      SUCCEED - Total volume greater than or equal to 650 for intersection
                    with less than four approaches.

```

AM Peak Hour - Existing Conditions
Cotati Circulation Improvement Study
City of Cotati

Signal Warrant Report

Intersection #2 Commerce Blvd/Wilford Ln

Base Volume Alternative: Peak Hour Warrant NOT Met

Approach:	North Bound			South Bound			East Bound			West Bound					
Movement:	L	T	R	L	T	R	L	T	R	L	T	R			
Control:	Uncontrolled			Uncontrolled			Stop Sign			Stop Sign					
Lanes:	0	0	1	0	1	0	0	0	0	0	0	0	1	0	0
Final Vol.:	0	487	9	41	601	0	0	0	0	17	0	75			
ApproachDel:	xxxxxx			xxxxxx			xxxxxx			14.4					

Approach[westbound][lanes=2][control=Stop]
 Signal Warrant Rule #1: [vehicle-hours=0.4]
 FAIL - Vehicle-hours less than 5 for two or more lane approach.
 Signal Warrant Rule #2: [approach volume=92]
 FAIL - Approach volume less than 150 for two or more lane approach.
 Signal Warrant Rule #3: [approach count=3][total volume=1230]
 SUCCEED - Total volume greater than or equal to 650 for intersection with less than four approaches.

AM Peak Hour - Existing Conditions
Cotati Circulation Improvement Study
City of Cotati

Signal Warrant Report

Intersection #3 Old Redwood Highway/Commerce Blvd.

Base Volume Alternative: Peak Hour Warrant Met

Approach:	North Bound			South Bound			East Bound			West Bound					
Movement:	L	T	R	L	T	R	L	T	R	L	T	R			
Control:	Uncontrolled			Uncontrolled			Stop Sign			Stop Sign					
Lanes:	0	0	1	0	0	0	0	0	0	0	0	0	1	0	0
Final Vol.:	0	759	373	0	0	0	0	0	0	464	0	200			
ApproachDel:	xxxxxx			xxxxxx			xxxxxx			122.4					

Approach[westbound][lanes=2][control=Stop]
 Signal Warrant Rule #1: [vehicle-hours=22.6]
 SUCCEED - Vehicle-hours >= 5 for two or more lane approach.
 Signal Warrant Rule #2: [approach volume=664]
 SUCCEED - Approach volume >= 150 for two or more lane approach.
 Signal Warrant Rule #3: [approach count=2][total volume=1796]
 SUCCEED - Total volume greater than or equal to 650 for intersection with less than four approaches.

AM Peak Hour - Existing Conditions
Cotati Circulation Improvement Study
City of Cotati

Signal Warrant Report

Intersection #4 Gravenstein Hwy/Alder Ave

Base Volume Alternative: Peak Hour Warrant NOT Met

Table with 4 columns: North Bound, South Bound, East Bound, West Bound. Rows include Approach, Movement, Control, Lanes, Final Vol., and ApproachDel.

Approach[northbound][lanes=1][control=Stop]
Signal Warrant Rule #1: [vehicle-hours=0.1]
FAIL - Vehicle-hours less than 4 for one lane approach.
Signal Warrant Rule #2: [approach volume=16]
FAIL - Approach volume less than 100 for one lane approach.
Signal Warrant Rule #3: [approach count=4][total volume=1446]
SUCCEED - Total volume greater than or equal to 800 for intersection with four or more approaches.

Approach[southbound][lanes=1][control=Stop]
Signal Warrant Rule #1: [vehicle-hours=0.2]
FAIL - Vehicle-hours less than 4 for one lane approach.
Signal Warrant Rule #2: [approach volume=28]
FAIL - Approach volume less than 100 for one lane approach.
Signal Warrant Rule #3: [approach count=4][total volume=1446]
SUCCEED - Total volume greater than or equal to 800 for intersection with four or more approaches.

AM Peak Hour - Existing Conditions
Cotati Circulation Improvement Study
City of Cotati

Signal Warrant Report

Intersection #5 Gravenstein Hwy/W Cotati Ave

Base Volume Alternative: Peak Hour Warrant NOT Met

Table with 4 columns: North Bound, South Bound, East Bound, West Bound. Rows include Approach, Movement, Control, Lanes, Final Vol., and ApproachDel.

Approach[northbound][lanes=2][control=Stop]
Signal Warrant Rule #1: [vehicle-hours=0.4]
FAIL - Vehicle-hours less than 5 for two or more lane approach.
Signal Warrant Rule #2: [approach volume=65]
FAIL - Approach volume less than 150 for two or more lane approach.
Signal Warrant Rule #3: [approach count=3][total volume=1587]
SUCCEED - Total volume greater than or equal to 650 for intersection with less than four approaches.

AM Peak Hour - Existing Conditions
Cotati Circulation Improvement Study
City of Cotati

Signal Warrant Report

Intersection #10 Old Redwood Hwy/William St-George St
Base Volume Alternative: Peak Hour Warrant Met

Table with 5 columns: Approach, North Bound, South Bound, East Bound, West Bound. Rows include Movement, Control, Lanes, Final Vol., and ApprAdjDel.

Approach[northbound][lanes=3][control=Stop]
Signal Warrant Rule #1: [vehicle-hours=5.8]
SUCCEED - Vehicle-hours >= 5 for two or more lane approach.

Approach[southbound][lanes=3][control=Stop]
Signal Warrant Rule #1: [vehicle-hours=4.2]
FAIL - Vehicle-hours less than 5 for two or more lane approach.

Approach[eastbound][lanes=1][control=Stop]
Signal Warrant Rule #1: [vehicle-hours=0.2]
FAIL - Vehicle-hours less than 4 for one lane approach.

Approach[westbound][lanes=1][control=Stop]
Signal Warrant Rule #1: [vehicle-hours=0.1]
FAIL - Vehicle-hours less than 4 for one lane approach.

AM Peak Hour - Existing Conditions
Cotati Circulation Improvement Study
City of Cotati

Signal Warrant Report

Intersection #11 W Sierra Ave/W School St-US 101 SB Ramp
Base Volume Alternative: Peak Hour Warrant NOT Met

Table with 5 columns: Approach, North Bound, South Bound, East Bound, West Bound. Rows include Movement, Control, Lanes, Final Vol., and ApproachDel.

Approach[southbound][lanes=1][control=Stop]
Signal Warrant Rule #1: [vehicle-hours=0.2]
FAIL - Vehicle-hours less than 4 for one lane approach.

Approach[eastbound][lanes=1][control=Stop]
Signal Warrant Rule #1: [vehicle-hours=0.2]
FAIL - Vehicle-hours less than 4 for one lane approach.

Approach[westbound][lanes=1][control=Stop]
Signal Warrant Rule #1: [vehicle-hours=0.1]
FAIL - Vehicle-hours less than 4 for one lane approach.

Approach[southbound][lanes=1][control=Stop]
Signal Warrant Rule #1: [vehicle-hours=0.2]
FAIL - Vehicle-hours less than 4 for one lane approach.

AM Peak Hour - Existing Conditions
Cotati Circulation Improvement Study
City of Cotati

Signal Warrant Report

Intersection #12 W Sierra Ave/US 101 NB Off-ramp

Base Volume Alternative: Peak Hour Warrant NOT Met

Table with 4 columns: Approach, Movement, Control, and Final Vol. for North, South, East, and West bounds.

Approach[northbound][lanes=2][control=Stop]
Signal Warrant Rule #1: [vehicle-hours=0.3]
FAIL - Vehicle-hours less than 5 for two or more lane approach.
Signal Warrant Rule #2: [approach volume=111]
FAIL - Approach volume less than 150 for two or more lane approach.
Signal Warrant Rule #3: [approach count=3][total volume=675]
SUCCEED - Total volume greater than or equal to 650 for intersection with less than four approaches.

AM Peak Hour - Existing Conditions
Cotati Circulation Improvement Study
City of Cotati

Signal Warrant Report

Intersection #13 W Sierra Ave/E School St

Base Volume Alternative: Peak Hour Warrant NOT Met

Table with 4 columns: Approach, Movement, Control, and Final Vol. for North, South, East, and West bounds.

Approach[southbound][lanes=1][control=Stop]
Signal Warrant Rule #1: [vehicle-hours=0.1]
FAIL - Vehicle-hours less than 4 for one lane approach.
Signal Warrant Rule #2: [approach volume=44]
FAIL - Approach volume less than 100 for one lane approach.
Signal Warrant Rule #3: [approach count=3][total volume=688]
SUCCEED - Total volume greater than or equal to 650 for intersection with less than four approaches.

Approach[eastbound][lanes=1][control=Stop]
Signal Warrant Rule #1: [vehicle-hours=1.1]
FAIL - Vehicle-hours less than 4 for one lane approach.
Signal Warrant Rule #2: [approach volume=376]
SUCCEED - Approach volume greater than or equal to 100 for one lane approach.
Signal Warrant Rule #3: [approach count=3][total volume=688]
SUCCEED - Total volume greater than or equal to 650 for intersection with less than four approaches.

Approach[westbound][lanes=1][control=Stop]
Signal Warrant Rule #1: [vehicle-hours=0.7]
FAIL - Vehicle-hours less than 4 for one lane approach.
Signal Warrant Rule #2: [approach volume=268]
SUCCEED - Approach volume greater than or equal to 100 for one lane approach.
Signal Warrant Rule #3: [approach count=3][total volume=688]
SUCCEED - Total volume greater than or equal to 650 for intersection with less than four approaches.

AM Peak Hour - Existing Conditions
Cotati Circulation Improvement Study
City of Cotati

Signal Warrant Report

Intersection #15 E Cotati Ave/Charles St

Base Volume Alternative: Peak Hour Warrant NOT Met

Table with 5 columns: Approach, North Bound, South Bound, East Bound, West Bound. Rows include Movement, Control, Lanes, Final Vol., and ApproachDel.

Approach[northbound][lanes=1][control=Stop]
Signal Warrant Rule #1: [vehicle-hours=0.6]
FAIL - Vehicle-hours less than 4 for one lane approach.
Signal Warrant Rule #2: [approach volume=137]
SUCCEED - Approach volume greater than or equal to 100 for one lane approach.
Signal Warrant Rule #3: [approach count=3][total volume=1698]
SUCCEED - Total volume greater than or equal to 650 for intersection with less than four approaches.

AM Peak Hour - Existing Conditions
Cotati Circulation Improvement Study
City of Cotati

Signal Warrant Report

Intersection #16 E Cotati Ave/La Salle Ave

Base Volume Alternative: Peak Hour Warrant Met

Table with 5 columns: Approach, North Bound, South Bound, East Bound, West Bound. Rows include Movement, Control, Lanes, Final Vol., and ApproachDel.

Approach[northbound][lanes=1][control=Stop]
Signal Warrant Rule #1: [vehicle-hours=0.8]
FAIL - Vehicle-hours less than 4 for one lane approach.
Signal Warrant Rule #2: [approach volume=205]
SUCCEED - Approach volume greater than or equal to 100 for one lane approach.
Signal Warrant Rule #3: [approach count=4][total volume=1817]
SUCCEED - Total volume greater than or equal to 800 for intersection with four or more approaches.

Approach[southbound][lanes=1][control=Stop]
Signal Warrant Rule #1: [vehicle-hours=0.0]
FAIL - Vehicle-hours less than 4 for one lane approach.
Signal Warrant Rule #2: [approach volume=6]
FAIL - Approach volume less than 100 for one lane approach.
Signal Warrant Rule #3: [approach count=4][total volume=1817]
SUCCEED - Total volume greater than or equal to 800 for intersection with four or more approaches.

Approach[eastbound][lanes=3][control=Stop]
Signal Warrant Rule #1: [vehicle-hours=4.0]
FAIL - Vehicle-hours less than 5 for two or more lane approach.
Signal Warrant Rule #2: [approach volume=747]
SUCCEED - Approach volume >= 150 for two or more lane approach.
Signal Warrant Rule #3: [approach count=4][total volume=1817]
SUCCEED - Total volume greater than or equal to 800 for intersection with four or more approaches.

Approach[westbound][lanes=3][control=Stop]
Signal Warrant Rule #1: [vehicle-hours=5.1]
SUCCEED - Vehicle-hours >= 5 for two or more lane approach.
Signal Warrant Rule #2: [approach volume=860]
SUCCEED - Approach volume >= 150 for two or more lane approach.
Signal Warrant Rule #3: [approach count=4][total volume=1817]
SUCCEED - Total volume greater than or equal to 800 for intersection with four or more approaches.

AM Peak Hour - Existing Conditions
Cotati Circulation Improvement Study
City of Cotati

Signal Warrant Report

Intersection #19 E Cotati Ave/Beverly Dr

Base Volume Alternative: Peak Hour Warrant NOT Met

Table with 4 columns: North Bound, South Bound, East Bound, West Bound. Rows include Approach, Movement, Control, Lanes, Final Vol., and ApproachDel.

Approach[southbound][lanes=1][control=Stop]
Signal Warrant Rule #1: [vehicle-hours=0.4]
FAIL - Vehicle-hours less than 4 for one lane approach.
Signal Warrant Rule #2: [approach volume=168]
SUCCEED - Approach volume greater than or equal to 100 for one lane approach.
Signal Warrant Rule #3: [approach count=3][total volume=2077]
SUCCEED - Total volume greater than or equal to 650 for intersection with less than four approaches.

AM Peak Hour - Existing Conditions
Cotati Circulation Improvement Study
City of Cotati

Signal Warrant Report

Intersection #20 E Cotati Ave/Santero Way

Base Volume Alternative: Peak Hour Warrant NOT Met

Table with 4 columns: North Bound, South Bound, East Bound, West Bound. Rows include Approach, Movement, Control, Lanes, Final Vol., and ApproachDel.

Approach[northbound][lanes=1][control=Stop]
Signal Warrant Rule #1: [vehicle-hours=0.1]
FAIL - Vehicle-hours less than 4 for one lane approach.
Signal Warrant Rule #2: [approach volume=28]
FAIL - Approach volume less than 100 for one lane approach.
Signal Warrant Rule #3: [approach count=3][total volume=1958]
SUCCEED - Total volume greater than or equal to 650 for intersection with less than four approaches.

AM Peak Hour - Existing Conditions
Cotati Circulation Improvement Study
City of Cotati

Signal Warrant Report

Intersection #21 Old Redwood Highway/Henry-Charles St.

Base Volume Alternative: Peak Hour Warrant NOT Met

Approach:	North Bound	South Bound	East Bound	West Bound
Movement:	L - T - R	L - T - R	L - T - R	L - T - R
Control:	Stop Sign	Stop Sign	Stop Sign	Stop Sign
Lanes:	0 1 0 0 1	0 0 1 1 0 0	0 0 1 1 0 0	0 0 1 1 0 0
Final Vol.:	16 291 100	7 382 10	14 18 19	235 14 19
ApprAdjDel:	13.6	17.3	10.1	14.3

Approach[northbound][lanes=2][control=Stop]
Signal Warrant Rule #1: [vehicle-hours=1.5]
FAIL - Vehicle-hours less than 5 for two or more lane approach.
Signal Warrant Rule #2: [approach volume=408]
SUCCEED - Approach volume >= 150 for two or more lane approach.
Signal Warrant Rule #3: [approach count=4][total volume=1126]
SUCCEED - Total volume greater than or equal to 800 for intersection with four or more approaches.

Approach[southbound][lanes=1][control=Stop]
Signal Warrant Rule #1: [vehicle-hours=1.9]
FAIL - Vehicle-hours less than 4 for one lane approach.
Signal Warrant Rule #2: [approach volume=399]
SUCCEED - Approach volume greater than or equal to 100 for one lane approach.
Signal Warrant Rule #3: [approach count=4][total volume=1126]
SUCCEED - Total volume greater than or equal to 800 for intersection with four or more approaches.

Approach[eastbound][lanes=1][control=Stop]
Signal Warrant Rule #1: [vehicle-hours=0.1]
FAIL - Vehicle-hours less than 4 for one lane approach.
Signal Warrant Rule #2: [approach volume=52]
FAIL - Approach volume less than 100 for one lane approach.
Signal Warrant Rule #3: [approach count=4][total volume=1126]
SUCCEED - Total volume greater than or equal to 800 for intersection with four or more approaches.

Approach[westbound][lanes=1][control=Stop]
Signal Warrant Rule #1: [vehicle-hours=1.1]
FAIL - Vehicle-hours less than 4 for one lane approach.
Signal Warrant Rule #2: [approach volume=268]
SUCCEED - Approach volume greater than or equal to 100 for one lane approach.
Signal Warrant Rule #3: [approach count=4][total volume=1126]
SUCCEED - Total volume greater than or equal to 800 for intersection with four or more approaches.

PM Peak Hour - Existing Conditions
Cotati Circulation Improvement Study
City of Cotati

Signal Warrant Summary Report

Intersection	Base Met	Future Met
# 1 Redwood Dr/Helman Ln	No	???
# 2 Commerce Blvd/Wilford Ln	No	???
# 3 Old Redwood Highway/Commerce Blvd.	Yes	???
# 4 Gravenstein Hwy/Alder Ave	No	???
# 5 Gravenstein Hwy/W Cotati Ave	No	???
# 10 Old Redwood Hwy/William St-George S	Yes	???
# 11 W Sierra Ave/W School St-US 101 SB	No	???
# 12 W Sierra Ave/US 101 NB Off-ramp	No	???
# 13 W Sierra Ave/E School St	No	???
# 15 E Cotati Ave/Charles St	No	???
# 16 E Cotati Ave/La Salle Ave	Yes	???
# 19 E Cotati Ave/Beverly Dr	No	???
# 20 E Cotati Ave/Santero Way	No	???
# 21 Old Redwood Highway/Henry-Charles S	Yes	???

PM Peak Hour - Existing Conditions
Cotati Circulation Improvement Study
City of Cotati

Signal Warrant Report

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*****
Intersection #1 Redwood Dr/Helman Ln
*****
Base Volume Alternative: Peak Hour Warrant NOT Met
-----|-----|-----|-----|
Approach:      North Bound      South Bound      East Bound      West Bound
Movement:      L - T - R      L - T - R      L - T - R      L - T - R
-----|-----|-----|-----|
Control:        Uncontrolled      Uncontrolled      Stop Sign      Stop Sign
Lanes:          0 1 0 0 0      0 0 0 1 0      0 0 1! 0 0      0 0 0 0 0
Final Vol.:     37 402 0      0 495 25      57 0 56      0 0 0 0
ApproachDel:    xxxxxx      xxxxxx      19.9      xxxxxx
-----|-----|-----|-----|
Approach[eastbound][lanes=1][control=Stop]
Signal Warrant Rule #1: [vehicle-hours=0.6]
  FAIL - Vehicle-hours less than 4 for one lane approach.
Signal Warrant Rule #2: [approach volume=113]
  SUCCEED - Approach volume greater than or equal to 100 for one lane approach.
Signal Warrant Rule #3: [approach count=3][total volume=1073]
  SUCCEED - Total volume greater than or equal to 650 for intersection
  with less than four approaches.

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PM Peak Hour - Existing Conditions
Cotati Circulation Improvement Study
City of Cotati

Signal Warrant Report

Intersection #2 Commerce Blvd/Wilford Ln

Base Volume Alternative: Peak Hour Warrant NOT Met

Table with 4 columns: Approach, Movement, Control, Lanes. Rows include North Bound, South Bound, East Bound, West Bound with various traffic movement and volume data.

Approach[westbound][lanes=2][control=Stop]
Signal Warrant Rule #1: [vehicle-hours=0.5]
FAIL - Vehicle-hours less than 5 for two or more lane approach.
Signal Warrant Rule #2: [approach volume=80]
FAIL - Approach volume less than 150 for two or more lane approach.
Signal Warrant Rule #3: [approach count=3][total volume=1528]
SUCCEED - Total volume greater than or equal to 650 for intersection with less than four approaches.

PM Peak Hour - Existing Conditions
Cotati Circulation Improvement Study
City of Cotati

Signal Warrant Report

Intersection #3 Old Redwood Highway/Commerce Blvd.

Base Volume Alternative: Peak Hour Warrant Met

Table with 4 columns: Approach, Movement, Control, Lanes. Rows include North Bound, South Bound, East Bound, West Bound with various traffic movement and volume data.

Approach[westbound][lanes=2][control=Stop]
Signal Warrant Rule #1: [vehicle-hours=5.9]
SUCCEED - Vehicle-hours >= 5 for two or more lane approach.
Signal Warrant Rule #2: [approach volume=496]
SUCCEED - Approach volume >= 150 for two or more lane approach.
Signal Warrant Rule #3: [approach count=2][total volume=1780]
SUCCEED - Total volume greater than or equal to 650 for intersection with less than four approaches.

PM Peak Hour - Existing Conditions
Cotati Circulation Improvement Study
City of Cotati

Signal Warrant Report

Intersection #4 Gravenstein Hwy/Alder Ave

Base Volume Alternative: Peak Hour Warrant NOT Met

Table with 4 columns: Approach (North Bound, South Bound, East Bound, West Bound) and Movement (L, T, R). Rows include Control, Lanes, Final Vol., and ApproachDel.

Approach[northbound][lanes=1][control=Stop]
Signal Warrant Rule #1: [vehicle-hours=0.0]
FAIL - Vehicle-hours less than 4 for one lane approach.
Signal Warrant Rule #2: [approach volume=8]
FAIL - Approach volume less than 100 for one lane approach.
Signal Warrant Rule #3: [approach count=4][total volume=1488]
SUCCEED - Total volume greater than or equal to 800 for intersection with four or more approaches.

Approach[southbound][lanes=1][control=Stop]
Signal Warrant Rule #1: [vehicle-hours=0.2]
FAIL - Vehicle-hours less than 4 for one lane approach.
Signal Warrant Rule #2: [approach volume=32]
FAIL - Approach volume less than 100 for one lane approach.
Signal Warrant Rule #3: [approach count=4][total volume=1488]
SUCCEED - Total volume greater than or equal to 800 for intersection with four or more approaches.

PM Peak Hour - Existing Conditions
Cotati Circulation Improvement Study
City of Cotati

Signal Warrant Report

Intersection #5 Gravenstein Hwy/W Cotati Ave

Base Volume Alternative: Peak Hour Warrant NOT Met

Table with 4 columns: Approach (North Bound, South Bound, East Bound, West Bound) and Movement (L, T, R). Rows include Control, Lanes, Final Vol., and ApproachDel.

Approach[northbound][lanes=2][control=Stop]
Signal Warrant Rule #1: [vehicle-hours=0.3]
FAIL - Vehicle-hours less than 5 for two or more lane approach.
Signal Warrant Rule #2: [approach volume=36]
FAIL - Approach volume less than 150 for two or more lane approach.
Signal Warrant Rule #3: [approach count=3][total volume=1732]
SUCCEED - Total volume greater than or equal to 650 for intersection with less than four approaches.

PM Peak Hour - Existing Conditions
Cotati Circulation Improvement Study
City of Cotati

Signal Warrant Report

Intersection #10 Old Redwood Hwy/William St-George St

Base Volume Alternative: Peak Hour Warrant Met

Table with 4 columns: Approach (North Bound, South Bound, East Bound, West Bound) and Movement (L, T, R). Rows include Control (Stop Sign), Lanes, Final Vol., and ApproachDel.

Approach[northbound][lanes=3][control=Stop]
Signal Warrant Rule #1: [vehicle-hours=13.0]
SUCCEED - Vehicle-hours >= 5 for two or more lane approach.

Approach[southbound][lanes=3][control=Stop]
Signal Warrant Rule #1: [vehicle-hours=16.8]
SUCCEED - Vehicle-hours >= 5 for two or more lane approach.

Approach[eastbound][lanes=1][control=Stop]
Signal Warrant Rule #1: [vehicle-hours=0.4]
FAIL - Vehicle-hours less than 4 for one lane approach.

Approach[westbound][lanes=1][control=Stop]
Signal Warrant Rule #1: [vehicle-hours=0.1]
FAIL - Vehicle-hours less than 4 for one lane approach.

PM Peak Hour - Existing Conditions
Cotati Circulation Improvement Study
City of Cotati

Signal Warrant Report

Intersection #11 W Sierra Ave/W School St-US 101 SB Ramp

Base Volume Alternative: Peak Hour Warrant NOT Met

Table with 4 columns: Approach (North Bound, South Bound, East Bound, West Bound) and Movement (L, T, R). Rows include Control (Stop Sign, Uncontrolled), Lanes, Final Vol., and ApproachDel.

Approach[southbound][lanes=1][control=Stop]
Signal Warrant Rule #1: [vehicle-hours=0.1]
FAIL - Vehicle-hours less than 4 for one lane approach.

Approach[eastbound][lanes=1][control=Stop]
Signal Warrant Rule #1: [vehicle-hours=0.4]
FAIL - Vehicle-hours less than 4 for one lane approach.

Approach[westbound][lanes=1][control=Stop]
Signal Warrant Rule #1: [vehicle-hours=0.1]
FAIL - Vehicle-hours less than 4 for one lane approach.

Approach[northbound][lanes=1][control=Stop]
Signal Warrant Rule #1: [vehicle-hours=0.1]
FAIL - Vehicle-hours less than 4 for one lane approach.

PM Peak Hour - Existing Conditions
Cotati Circulation Improvement Study
City of Cotati

Signal Warrant Report

Intersection #12 W Sierra Ave/US 101 NB Off-ramp

Base Volume Alternative: Peak Hour Warrant NOT Met

Table with 4 columns: Approach, Movement, Control, and Final Vol. for North, South, East, and West bounds.

Approach[northbound][lanes=2][control=Stop]
Signal Warrant Rule #1: [vehicle-hours=0.8]
FAIL - Vehicle-hours less than 5 for two or more lane approach.
Signal Warrant Rule #2: [approach volume=264]
SUCCEED - Approach volume >= 150 for two or more lane approach.
Signal Warrant Rule #3: [approach count=3][total volume=745]
SUCCEED - Total volume greater than or equal to 650 for intersection with less than four approaches.

PM Peak Hour - Existing Conditions
Cotati Circulation Improvement Study
City of Cotati

Signal Warrant Report

Intersection #13 W Sierra Ave/E School St

Base Volume Alternative: Peak Hour Warrant NOT Met

Table with 4 columns: Approach, Movement, Control, and Final Vol. for North, South, East, and West bounds.

Approach[southbound][lanes=1][control=Stop]
Signal Warrant Rule #1: [vehicle-hours=0.1]
FAIL - Vehicle-hours less than 4 for one lane approach.
Signal Warrant Rule #2: [approach volume=35]
FAIL - Approach volume less than 100 for one lane approach.
Signal Warrant Rule #3: [approach count=3][total volume=802]
SUCCEED - Total volume greater than or equal to 650 for intersection with less than four approaches.

Approach[eastbound][lanes=1][control=Stop]
Signal Warrant Rule #1: [vehicle-hours=1.5]
FAIL - Vehicle-hours less than 4 for one lane approach.
Signal Warrant Rule #2: [approach volume=440]
SUCCEED - Approach volume greater than or equal to 100 for one lane approach.
Signal Warrant Rule #3: [approach count=3][total volume=802]
SUCCEED - Total volume greater than or equal to 650 for intersection with less than four approaches.

Approach[westbound][lanes=1][control=Stop]
Signal Warrant Rule #1: [vehicle-hours=0.9]
FAIL - Vehicle-hours less than 4 for one lane approach.
Signal Warrant Rule #2: [approach volume=327]
SUCCEED - Approach volume greater than or equal to 100 for one lane approach.
Signal Warrant Rule #3: [approach count=3][total volume=802]
SUCCEED - Total volume greater than or equal to 650 for intersection with less than four approaches.

PM Peak Hour - Existing Conditions
Cotati Circulation Improvement Study
City of Cotati

Signal Warrant Report

Intersection #15 E Cotati Ave/Charles St

Base Volume Alternative: Peak Hour Warrant NOT Met

Table with 5 columns: Approach, North Bound, South Bound, East Bound, West Bound. Rows include Movement, Control, Lanes, Final Vol., and ApproachDel.

Approach[northbound][lanes=1][control=Stop]
Signal Warrant Rule #1: [vehicle-hours=1.7]
FAIL - Vehicle-hours less than 4 for one lane approach.
Signal Warrant Rule #2: [approach volume=248]
SUCCEED - Approach volume greater than or equal to 100 for one lane approach.
Signal Warrant Rule #3: [approach count=3][total volume=1770]
SUCCEED - Total volume greater than or equal to 650 for intersection with less than four approaches.

PM Peak Hour - Existing Conditions
Cotati Circulation Improvement Study
City of Cotati

Signal Warrant Report

Intersection #16 E Cotati Ave/La Salle Ave

Base Volume Alternative: Peak Hour Warrant Met

Table with 5 columns: Approach, North Bound, South Bound, East Bound, West Bound. Rows include Movement, Control, Lanes, Final Vol., and ApproachDel.

Approach[northbound][lanes=1][control=Stop]
Signal Warrant Rule #1: [vehicle-hours=1.2]
FAIL - Vehicle-hours less than 4 for one lane approach.
Signal Warrant Rule #2: [approach volume=265]
SUCCEED - Approach volume greater than or equal to 100 for one lane approach.
Signal Warrant Rule #3: [approach count=4][total volume=2137]
SUCCEED - Total volume greater than or equal to 800 for intersection with four or more approaches.

Approach[southbound][lanes=1][control=Stop]
Signal Warrant Rule #1: [vehicle-hours=0.1]
FAIL - Vehicle-hours less than 4 for one lane approach.
Signal Warrant Rule #2: [approach volume=30]
FAIL - Approach volume less than 100 for one lane approach.
Signal Warrant Rule #3: [approach count=4][total volume=2137]
SUCCEED - Total volume greater than or equal to 800 for intersection with four or more approaches.

Approach[eastbound][lanes=3][control=Stop]
Signal Warrant Rule #1: [vehicle-hours=22.9]
SUCCEED - Vehicle-hours >= 5 for two or more lane approach.
Signal Warrant Rule #2: [approach volume=1146]
SUCCEED - Approach volume >= 150 for two or more lane approach.
Signal Warrant Rule #3: [approach count=4][total volume=2137]
SUCCEED - Total volume greater than or equal to 800 for intersection with four or more approaches.

Approach[westbound][lanes=3][control=Stop]
Signal Warrant Rule #1: [vehicle-hours=3.8]
FAIL - Vehicle-hours less than 5 for two or more lane approach.
Signal Warrant Rule #2: [approach volume=696]
SUCCEED - Approach volume >= 150 for two or more lane approach.
Signal Warrant Rule #3: [approach count=4][total volume=2137]
SUCCEED - Total volume greater than or equal to 800 for intersection with four or more approaches.

PM Peak Hour - Existing Conditions
Cotati Circulation Improvement Study
City of Cotati

Signal Warrant Report

Intersection #19 E Cotati Ave/Beverly Dr

Base Volume Alternative: Peak Hour Warrant NOT Met

Table with 4 columns: North Bound, South Bound, East Bound, West Bound. Rows include Approach, Movement, Control, Lanes, Final Vol., and ApproachDel.

Approach[southbound][lanes=1][control=Stop]
Signal Warrant Rule #1: [vehicle-hours=0.6]
FAIL - Vehicle-hours less than 4 for one lane approach.
Signal Warrant Rule #2: [approach volume=102]
SUCCEED - Approach volume greater than or equal to 100 for one lane approach.
Signal Warrant Rule #3: [approach count=3][total volume=2021]
SUCCEED - Total volume greater than or equal to 650 for intersection with less than four approaches.

PM Peak Hour - Existing Conditions
Cotati Circulation Improvement Study
City of Cotati

Signal Warrant Report

Intersection #20 E Cotati Ave/Santero Way

Base Volume Alternative: Peak Hour Warrant NOT Met

Table with 4 columns: North Bound, South Bound, East Bound, West Bound. Rows include Approach, Movement, Control, Lanes, Final Vol., and ApproachDel.

Approach[northbound][lanes=1][control=Stop]
Signal Warrant Rule #1: [vehicle-hours=0.1]
FAIL - Vehicle-hours less than 4 for one lane approach.
Signal Warrant Rule #2: [approach volume=28]
FAIL - Approach volume less than 100 for one lane approach.
Signal Warrant Rule #3: [approach count=3][total volume=1818]
SUCCEED - Total volume greater than or equal to 650 for intersection with less than four approaches.

PM Peak Hour - Existing Conditions
Cotati Circulation Improvement Study
City of Cotati

Signal Warrant Report

Intersection #21 Old Redwood Highway/Henry-Charles St.

Base Volume Alternative: Peak Hour Warrant Met

Table with 4 columns: North Bound, South Bound, East Bound, West Bound. Rows include Movement, Control, Lanes, Final Vol., and ApprAdjDel.

Approach[northbound][lanes=2][control=Stop]
Signal Warrant Rule #1: [vehicle-hours=6.3]
SUCCEED - Vehicle-hours >= 5 for two or more lane approach.

Approach[southbound][lanes=1][control=Stop]
Signal Warrant Rule #1: [vehicle-hours=2.7]
FAIL - Vehicle-hours less than 4 for one lane approach.

Approach[eastbound][lanes=1][control=Stop]
Signal Warrant Rule #1: [vehicle-hours=0.3]
FAIL - Vehicle-hours less than 4 for one lane approach.

Approach[westbound][lanes=1][control=Stop]
Signal Warrant Rule #1: [vehicle-hours=0.9]
FAIL - Vehicle-hours less than 4 for one lane approach.

AM Peakhour - Buildout Conditions
Cotati Circulation Improvement Study
City of Cotati

Signal Warrant Summary Report

Intersection	Base Met	Future Met
# 1 Redwood Dr/Helman Ln	???	No
# 2 Commerce Blvd/Wilford Ln	???	No
# 3 Old Redwood Highway/Commerce Blvd.	???	Yes
# 4 Gravenstein Hwy/Alder Ave	???	Yes
# 5 Gravenstein Hwy/W Cotati Ave	???	No
# 10 Old Redwood Hwy/William St-George S	???	Yes
# 11 W Sierra Ave/W School St-US 101 SB	???	No
# 12 W Sierra Ave/US 101 NB Off-ramp	???	No
# 13 W Sierra Ave/E School St	???	No
# 15 E Cotati Ave/Charles St	???	No
# 16 E Cotati Ave/La Salle Ave	???	Yes
# 19 E Cotati Ave/Beverly Dr	???	No
# 20 E Cotati Ave/Santero Way	???	Yes
# 21 Old Redwood Highway/Henry-Charles S	???	Yes

AM Peakhour - Buildout Conditions
Cotati Circulation Improvement Study
City of Cotati

Signal Warrant Report

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*****
Intersection #1 Redwood Dr/Helman Ln
*****
Future Volume Alternative: Peak Hour Warrant NOT Met
-----|-----|-----|-----|
Approach:   North Bound   South Bound   East Bound   West Bound
Movement:   L - T - R     L - T - R     L - T - R     L - T - R
-----|-----|-----|-----|
Control:    Uncontrolled  Uncontrolled  Stop Sign     Stop Sign
Lanes:      0 1 0 0 0         0 0 0 1 0         0 0 1 0 0         0 0 0 0 0
Final Vol.: 223 409 0         0 261 65         78 0 90         0 0 0 0
ApproachDel:  xxxxxx         xxxxxx         30.9         xxxxxx
-----|-----|-----|-----|
Approach[eastbound][lanes=1][control=Stop]
Signal Warrant Rule #1: [vehicle-hours=1.4]
      FAIL - Vehicle-hours less than 4 for one lane approach.
Signal Warrant Rule #2: [approach volume=168]
      SUCCEED - Approach volume greater than or equal to 100 for one lane approach.
Signal Warrant Rule #3: [approach count=3][total volume=1126]
      SUCCEED - Total volume greater than or equal to 650 for intersection
                    with less than four approaches.

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AM Peakhour - Buildout Conditions
Cotati Circulation Improvement Study
City of Cotati

Signal Warrant Report

Intersection #2 Commerce Blvd/Wilford Ln
Future Volume Alternative: Peak Hour Warrant NOT Met

Table with 5 columns: Approach, North Bound, South Bound, East Bound, West Bound. Rows include Movement, Control, Lanes, Final Vol., and ApproachDel.

Approach[westbound][lanes=2][control=Stop]
Signal Warrant Rule #1: [vehicle-hours=0.5]
FAIL - Vehicle-hours less than 5 for two or more lane approach.
Signal Warrant Rule #2: [approach volume=103]
FAIL - Approach volume less than 150 for two or more lane approach.
Signal Warrant Rule #3: [approach count=3][total volume=1367]
SUCCEED - Total volume greater than or equal to 650 for intersection with less than four approaches.

AM Peakhour - Buildout Conditions
Cotati Circulation Improvement Study
City of Cotati

Signal Warrant Report

Intersection #3 Old Redwood Highway/Commerce Blvd.
Future Volume Alternative: Peak Hour Warrant Met

Table with 5 columns: Approach, North Bound, South Bound, East Bound, West Bound. Rows include Movement, Control, Lanes, Final Vol., and ApproachDel.

Approach[westbound][lanes=2][control=Stop]
Signal Warrant Rule #1: [vehicle-hours=66.8]
SUCCEED - Vehicle-hours >= 5 for two or more lane approach.
Signal Warrant Rule #2: [approach volume=728]
SUCCEED - Approach volume >= 150 for two or more lane approach.
Signal Warrant Rule #3: [approach count=2][total volume=2122]
SUCCEED - Total volume greater than or equal to 650 for intersection with less than four approaches.

AM Peakhour - Buildout Conditions
Cotati Circulation Improvement Study
City of Cotati

Signal Warrant Report

Intersection #4 Gravenstein Hwy/Alder Ave

Future Volume Alternative: Peak Hour Warrant Met

Table with 5 columns: Approach, North Bound, South Bound, East Bound, West Bound. Rows include Movement, Control, Lanes, Final Vol., and ApproachDel.

Approach[northbound][lanes=1][control=Stop]
Signal Warrant Rule #1: [vehicle-hours=0.2]
FAIL - Vehicle-hours less than 4 for one lane approach.
Signal Warrant Rule #2: [approach volume=16]
FAIL - Approach volume less than 100 for one lane approach.
Signal Warrant Rule #3: [approach count=4][total volume=2444]
SUCCEED - Total volume greater than or equal to 800 for intersection with four or more approaches.

Approach[southbound][lanes=1][control=Stop]
Signal Warrant Rule #1: [vehicle-hours=4.8]
SUCCEED - Vehicle-hours greater than or equal to 4 for one lane approach.
Signal Warrant Rule #2: [approach volume=109]
SUCCEED - Approach volume greater than or equal to 100 for one lane approach.
Signal Warrant Rule #3: [approach count=4][total volume=2444]
SUCCEED - Total volume greater than or equal to 800 for intersection with four or more approaches.

AM Peakhour - Buildout Conditions
Cotati Circulation Improvement Study
City of Cotati

Signal Warrant Report

Intersection #5 Gravenstein Hwy/W Cotati Ave

Future Volume Alternative: Peak Hour Warrant NOT Met

Table with 5 columns: Approach, North Bound, South Bound, East Bound, West Bound. Rows include Movement, Control, Lanes, Final Vol., and ApproachDel.

Approach[northbound][lanes=2][control=Stop]
Signal Warrant Rule #1: [vehicle-hours=OVERFLOW]
SUCCEED - Vehicle-hours >= 5 for two or more lane approach.
Signal Warrant Rule #2: [approach volume=93]
FAIL - Approach volume less than 150 for two or more lane approach.
Signal Warrant Rule #3: [approach count=3][total volume=2597]
SUCCEED - Total volume greater than or equal to 650 for intersection with less than four approaches.

AM Peakhour - Buildout Conditions
Cotati Circulation Improvement Study
City of Cotati

Signal Warrant Report

Intersection #10 Old Redwood Hwy/William St-George St
Future Volume Alternative: Peak Hour Warrant Met

Table with 5 columns: Approach, Movement, Control, Lanes, Final Vol., ApprAdjDel. Rows for North, South, East, and West bounds.

Approach[northbound][lanes=3][control=Stop]
Signal Warrant Rule #1: [vehicle-hours=41.0]
SUCCEED - Vehicle-hours >= 5 for two or more lane approach.

Approach[southbound][lanes=3][control=Stop]
Signal Warrant Rule #1: [vehicle-hours=21.8]
SUCCEED - Vehicle-hours >= 5 for two or more lane approach.

Approach[eastbound][lanes=1][control=Stop]
Signal Warrant Rule #1: [vehicle-hours=0.3]
FAIL - Vehicle-hours less than 4 for one lane approach.

Approach[westbound][lanes=1][control=Stop]
Signal Warrant Rule #1: [vehicle-hours=0.1]
FAIL - Vehicle-hours less than 4 for one lane approach.

AM Peakhour - Buildout Conditions
Cotati Circulation Improvement Study
City of Cotati

Signal Warrant Report

Intersection #11 W Sierra Ave/W School St-US 101 SB Ramp
Future Volume Alternative: Peak Hour Warrant NOT Met

Table with 5 columns: Approach, Movement, Control, Lanes, Final Vol., ApproachDel. Rows for North, South, East, and West bounds.

Approach[southbound][lanes=1][control=Stop]
Signal Warrant Rule #1: [vehicle-hours=0.4]
FAIL - Vehicle-hours less than 4 for one lane approach.

Approach[eastbound][lanes=1][control=Stop]
Signal Warrant Rule #1: [vehicle-hours=0.3]
FAIL - Vehicle-hours less than 4 for one lane approach.

Approach[westbound][lanes=1][control=Stop]
Signal Warrant Rule #1: [vehicle-hours=0.1]
FAIL - Vehicle-hours less than 4 for one lane approach.

Approach[northbound][lanes=1][control=Stop]
Signal Warrant Rule #1: [vehicle-hours=0.4]
FAIL - Vehicle-hours less than 4 for one lane approach.

AM Peakhour - Buildout Conditions
Cotati Circulation Improvement Study
City of Cotati

Signal Warrant Report

Intersection #12 W Sierra Ave/US 101 NB Off-ramp

Future Volume Alternative: Peak Hour Warrant NOT Met

Table with 4 columns: Approach, Movement, Control, and Final Vol. for North, South, East, and West bounds.

Approach[northbound][lanes=2][control=Stop]
Signal Warrant Rule #1: [vehicle-hours=0.5]
FAIL - Vehicle-hours less than 5 for two or more lane approach.
Signal Warrant Rule #2: [approach volume=166]
SUCCEED - Approach volume >= 150 for two or more lane approach.
Signal Warrant Rule #3: [approach count=3][total volume=885]
SUCCEED - Total volume greater than or equal to 650 for intersection with less than four approaches.

AM Peakhour - Buildout Conditions
Cotati Circulation Improvement Study
City of Cotati

Signal Warrant Report

Intersection #13 W Sierra Ave/E School St

Future Volume Alternative: Peak Hour Warrant NOT Met

Table with 4 columns: Approach, Movement, Control, and Final Vol. for North, South, East, and West bounds.

Approach[southbound][lanes=1][control=Stop]
Signal Warrant Rule #1: [vehicle-hours=0.2]
FAIL - Vehicle-hours less than 4 for one lane approach.
Signal Warrant Rule #2: [approach volume=67]
FAIL - Approach volume less than 100 for one lane approach.
Signal Warrant Rule #3: [approach count=3][total volume=870]
SUCCEED - Total volume greater than or equal to 650 for intersection with less than four approaches.

Approach[eastbound][lanes=1][control=Stop]
Signal Warrant Rule #1: [vehicle-hours=1.8]
FAIL - Vehicle-hours less than 4 for one lane approach.
Signal Warrant Rule #2: [approach volume=478]
SUCCEED - Approach volume greater than or equal to 100 for one lane approach.
Signal Warrant Rule #3: [approach count=3][total volume=870]
SUCCEED - Total volume greater than or equal to 650 for intersection with less than four approaches.

Approach[westbound][lanes=1][control=Stop]
Signal Warrant Rule #1: [vehicle-hours=1.0]
FAIL - Vehicle-hours less than 4 for one lane approach.
Signal Warrant Rule #2: [approach volume=325]
SUCCEED - Approach volume greater than or equal to 100 for one lane approach.
Signal Warrant Rule #3: [approach count=3][total volume=870]
SUCCEED - Total volume greater than or equal to 650 for intersection with less than four approaches.

AM Peakhour - Buildout Conditions
Cotati Circulation Improvement Study
City of Cotati

Signal Warrant Report

Intersection #15 E Cotati Ave/Charles St

Future Volume Alternative: Peak Hour Warrant NOT Met

Table with 5 columns: Approach, North Bound, South Bound, East Bound, West Bound. Rows include Movement, Control, Lanes, Final Vol., and ApproachDel.

Approach[northbound][lanes=1][control=Stop]
Signal Warrant Rule #1: [vehicle-hours=1.6]
FAIL - Vehicle-hours less than 4 for one lane approach.
Signal Warrant Rule #2: [approach volume=172]
SUCCEED - Approach volume greater than or equal to 100 for one lane approach.
Signal Warrant Rule #3: [approach count=3][total volume=2416]
SUCCEED - Total volume greater than or equal to 650 for intersection with less than four approaches.

AM Peakhour - Buildout Conditions
Cotati Circulation Improvement Study
City of Cotati

Signal Warrant Report

Intersection #16 E Cotati Ave/La Salle Ave

Future Volume Alternative: Peak Hour Warrant Met

Table with 5 columns: Approach, North Bound, South Bound, East Bound, West Bound. Rows include Movement, Control, Lanes, Final Vol., and ApproachDel.

Approach[northbound][lanes=1][control=Stop]
Signal Warrant Rule #1: [vehicle-hours=1.1]
FAIL - Vehicle-hours less than 4 for one lane approach.
Signal Warrant Rule #2: [approach volume=248]
SUCCEED - Approach volume greater than or equal to 100 for one lane approach.
Signal Warrant Rule #3: [approach count=4][total volume=2526]
SUCCEED - Total volume greater than or equal to 800 for intersection with four or more approaches.

Approach[southbound][lanes=1][control=Stop]
Signal Warrant Rule #1: [vehicle-hours=0.0]
FAIL - Vehicle-hours less than 4 for one lane approach.
Signal Warrant Rule #2: [approach volume=6]
FAIL - Approach volume less than 100 for one lane approach.
Signal Warrant Rule #3: [approach count=4][total volume=2526]
SUCCEED - Total volume greater than or equal to 800 for intersection with four or more approaches.

Approach[eastbound][lanes=3][control=Stop]
Signal Warrant Rule #1: [vehicle-hours=31.3]
SUCCEED - Vehicle-hours >= 5 for two or more lane approach.
Signal Warrant Rule #2: [approach volume=1161]
SUCCEED - Approach volume >= 150 for two or more lane approach.
Signal Warrant Rule #3: [approach count=4][total volume=2526]
SUCCEED - Total volume greater than or equal to 800 for intersection with four or more approaches.

Approach[westbound][lanes=3][control=Stop]
Signal Warrant Rule #1: [vehicle-hours=20.1]
SUCCEED - Vehicle-hours >= 5 for two or more lane approach.
Signal Warrant Rule #2: [approach volume=1111]
SUCCEED - Approach volume >= 150 for two or more lane approach.
Signal Warrant Rule #3: [approach count=4][total volume=2526]
SUCCEED - Total volume greater than or equal to 800 for intersection with four or more approaches.

AM Peakhour - Buildout Conditions
Cotati Circulation Improvement Study
City of Cotati

Signal Warrant Report

Intersection #19 E Cotati Ave/Beverly Dr

Future Volume Alternative: Peak Hour Warrant NOT Met

Table with 5 columns: Approach, Movement, Control, Lanes, Final Vol., ApproachDel. Rows include North Bound, South Bound, East Bound, West Bound with various traffic movement and volume data.

Approach[southbound][lanes=1][control=Stop]
Signal Warrant Rule #1: [vehicle-hours=0.8]
FAIL - Vehicle-hours less than 4 for one lane approach.
Signal Warrant Rule #2: [approach volume=200]
SUCCEED - Approach volume greater than or equal to 100 for one lane approach.
Signal Warrant Rule #3: [approach count=3][total volume=2872]
SUCCEED - Total volume greater than or equal to 650 for intersection with less than four approaches.

AM Peakhour - Buildout Conditions
Cotati Circulation Improvement Study
City of Cotati

Signal Warrant Report

Intersection #20 E Cotati Ave/Santero Way

Future Volume Alternative: Peak Hour Warrant Met

Table with 5 columns: Approach, Movement, Control, Lanes, Final Vol., ApproachDel. Rows include North Bound, South Bound, East Bound, West Bound with various traffic movement and volume data.

Approach[northbound][lanes=1][control=Stop]
Signal Warrant Rule #1: [vehicle-hours=7.7]
SUCCEED - Vehicle-hours greater than or equal to 4 for one lane approach.
Signal Warrant Rule #2: [approach volume=165]
SUCCEED - Approach volume greater than or equal to 100 for one lane approach.
Signal Warrant Rule #3: [approach count=3][total volume=2776]
SUCCEED - Total volume greater than or equal to 650 for intersection with less than four approaches.

AM Peakhour - Buildout Conditions
Cotati Circulation Improvement Study
City of Cotati

Signal Warrant Report

Intersection #21 Old Redwood Highway/Henry-Charles St.

Future Volume Alternative: Peak Hour Warrant Met

Approach:	North Bound	South Bound	East Bound	West Bound
Movement:	L - T - R	L - T - R	L - T - R	L - T - R
Control:	Stop Sign	Stop Sign	Stop Sign	Stop Sign
Lanes:	0 1 0 0 1	0 0 1 1 0 0	0 0 1 1 0 0	0 0 1 1 0 0
Final Vol.:	16 460 131	7 477 10	14 18 19	252 14 19
ApprAdjDel:	30.6	33.2	11.4	18.0

Approach[northbound][lanes=2][control=Stop]
Signal Warrant Rule #1: [vehicle-hours=5.2]
SUCCEED - Vehicle-hours >= 5 for two or more lane approach.
Signal Warrant Rule #2: [approach volume=608]
SUCCEED - Approach volume >= 150 for two or more lane approach.
Signal Warrant Rule #3: [approach count=4][total volume=1439]
SUCCEED - Total volume greater than or equal to 800 for intersection with four or more approaches.

Approach[southbound][lanes=1][control=Stop]
Signal Warrant Rule #1: [vehicle-hours=4.6]
SUCCEED - Vehicle-hours greater than or equal to 4 for one lane approach.
Signal Warrant Rule #2: [approach volume=494]
SUCCEED - Approach volume greater than or equal to 100 for one lane approach.
Signal Warrant Rule #3: [approach count=4][total volume=1439]
SUCCEED - Total volume greater than or equal to 800 for intersection with four or more approaches.

Approach[eastbound][lanes=1][control=Stop]
Signal Warrant Rule #1: [vehicle-hours=0.2]
FAIL - Vehicle-hours less than 4 for one lane approach.
Signal Warrant Rule #2: [approach volume=52]
FAIL - Approach volume less than 100 for one lane approach.
Signal Warrant Rule #3: [approach count=4][total volume=1439]
SUCCEED - Total volume greater than or equal to 800 for intersection with four or more approaches.

Approach[westbound][lanes=1][control=Stop]
Signal Warrant Rule #1: [vehicle-hours=1.4]
FAIL - Vehicle-hours less than 4 for one lane approach.
Signal Warrant Rule #2: [approach volume=286]
SUCCEED - Approach volume greater than or equal to 100 for one lane approach.
Signal Warrant Rule #3: [approach count=4][total volume=1439]
SUCCEED - Total volume greater than or equal to 800 for intersection with four or more approaches.

PM Peak Hour - Buildout Conditions
Cotati Circulation Improvement Study
City of Cotati

Signal Warrant Summary Report

Intersection	Base Met	Future Met
# 1 Redwood Dr/Helman Ln	???	Yes
# 2 Commerce Blvd/Wilford Ln	???	No
# 3 Old Redwood Highway/Commerce Blvd.	???	Yes
# 4 Gravenstein Hwy/Alder Ave	???	Yes
# 5 Gravenstein Hwy/W Cotati Ave	???	No
# 10 Old Redwood Hwy/William St-George S	???	Yes
# 11 W Sierra Ave/W School St-US 101 SB	???	No
# 12 W Sierra Ave/US 101 NB Off-ramp	???	No
# 13 W Sierra Ave/E School St	???	No
# 15 E Cotati Ave/Charles St	???	Yes
# 16 E Cotati Ave/La Salle Ave	???	Yes
# 19 E Cotati Ave/Beverly Dr	???	No
# 20 E Cotati Ave/Santero Way	???	Yes
# 21 Old Redwood Highway/Henry-Charles S	???	Yes

PM Peak Hour - Buildout Conditions
Cotati Circulation Improvement Study
City of Cotati

Signal Warrant Report

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*****
Intersection #1 Redwood Dr/Helman Ln
*****
Future Volume Alternative: Peak Hour Warrant Met
-----|-----|-----|-----|
Approach:      North Bound      South Bound      East Bound      West Bound
Movement:      L - T - R      L - T - R      L - T - R      L - T - R
-----|-----|-----|-----|
Control:        Uncontrolled      Uncontrolled      Stop Sign      Stop Sign
Lanes:          0 1 0 0 0      0 0 0 1 0      0 0 1! 0 0      0 0 0 0 0
Final Vol.:    107 494      0 582 53      115 0 169      0 0 0 0
ApproachDel:    xxxxxx      xxxxxx      125.5      xxxxxx
-----|-----|-----|-----|
Approach[eastbound][lanes=1][control=Stop]
Signal Warrant Rule #1: [vehicle-hours=9.9]
SUCCEED - Vehicle-hours greater than or equal to 4 for one lane approach.
Signal Warrant Rule #2: [approach volume=284]
SUCCEED - Approach volume greater than or equal to 100 for one lane approach.
Signal Warrant Rule #3: [approach count=3][total volume=1520]
SUCCEED - Total volume greater than or equal to 650 for intersection
with less than four approaches.

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PM Peak Hour - Buildout Conditions
Cotati Circulation Improvement Study
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Signal Warrant Report

Intersection #2 Commerce Blvd/Wilford Ln

Future Volume Alternative: Peak Hour Warrant NOT Met

Table with 4 columns: Approach, Movement, Control, Lanes. Rows include North Bound, South Bound, East Bound, West Bound with various traffic movement and volume data.

Approach[westbound][lanes=2][control=Stop]
Signal Warrant Rule #1: [vehicle-hours=0.6]
FAIL - Vehicle-hours less than 5 for two or more lane approach.
Signal Warrant Rule #2: [approach volume=85]
FAIL - Approach volume less than 150 for two or more lane approach.
Signal Warrant Rule #3: [approach count=3][total volume=1699]
SUCCEED - Total volume greater than or equal to 650 for intersection with less than four approaches.

PM Peak Hour - Buildout Conditions
Cotati Circulation Improvement Study
City of Cotati

Signal Warrant Report

Intersection #3 Old Redwood Highway/Commerce Blvd.

Future Volume Alternative: Peak Hour Warrant Met

Table with 4 columns: Approach, Movement, Control, Lanes. Rows include North Bound, South Bound, East Bound, West Bound with various traffic movement and volume data.

Approach[westbound][lanes=2][control=Stop]
Signal Warrant Rule #1: [vehicle-hours=59.2]
SUCCEED - Vehicle-hours >= 5 for two or more lane approach.
Signal Warrant Rule #2: [approach volume=587]
SUCCEED - Approach volume >= 150 for two or more lane approach.
Signal Warrant Rule #3: [approach count=2][total volume=2343]
SUCCEED - Total volume greater than or equal to 650 for intersection with less than four approaches.

PM Peak Hour - Buildout Conditions
Cotati Circulation Improvement Study
City of Cotati

Signal Warrant Report

Intersection #4 Gravenstein Hwy/Alder Ave

Future Volume Alternative: Peak Hour Warrant Met

Table with 5 columns: Approach, North Bound, South Bound, East Bound, West Bound. Rows include Movement, Control, Lanes, Final Vol., and ApproachDel.

Approach[northbound][lanes=1][control=Stop]
Signal Warrant Rule #1: [vehicle-hours=0.2]
FAIL - Vehicle-hours less than 4 for one lane approach.

Approach[southbound][lanes=1][control=Stop]
Signal Warrant Rule #1: [vehicle-hours=234.4]
SUCCEED - Vehicle-hours greater than or equal to 4 for one lane approach.

PM Peak Hour - Buildout Conditions
Cotati Circulation Improvement Study
City of Cotati

Signal Warrant Report

Intersection #5 Gravenstein Hwy/W Cotati Ave

Future Volume Alternative: Peak Hour Warrant NOT Met

Table with 5 columns: Approach, North Bound, South Bound, East Bound, West Bound. Rows include Movement, Control, Lanes, Final Vol., and ApproachDel.

Approach[northbound][lanes=2][control=Stop]
Signal Warrant Rule #1: [vehicle-hours=OVERFLOW]
SUCCEED - Vehicle-hours >= 5 for two or more lane approach.

Approach[southbound][lanes=1][control=Stop]
Signal Warrant Rule #1: [vehicle-hours=234.4]
SUCCEED - Vehicle-hours greater than or equal to 4 for one lane approach.

PM Peak Hour - Buildout Conditions
Cotati Circulation Improvement Study
City of Cotati

Signal Warrant Report

Intersection #10 Old Redwood Hwy/William St-George St
Future Volume Alternative: Peak Hour Warrant Met

Table with 5 columns: Approach, Movement, Control, Lanes, Final Vol., and ApproachDel. Rows include North Bound, South Bound, East Bound, and West Bound.

Approach[northbound][lanes=3][control=Stop]
Signal Warrant Rule #1: [vehicle-hours=83.1]
SUCCEED - Vehicle-hours >= 5 for two or more lane approach.

Approach[southbound][lanes=3][control=Stop]
Signal Warrant Rule #1: [vehicle-hours=121.6]
SUCCEED - Vehicle-hours >= 5 for two or more lane approach.

Approach[eastbound][lanes=1][control=Stop]
Signal Warrant Rule #1: [vehicle-hours=0.4]
FAIL - Vehicle-hours less than 4 for one lane approach.

Approach[westbound][lanes=1][control=Stop]
Signal Warrant Rule #1: [vehicle-hours=0.1]
FAIL - Vehicle-hours less than 4 for one lane approach.

PM Peak Hour - Buildout Conditions
Cotati Circulation Improvement Study
City of Cotati

Signal Warrant Report

Intersection #11 W Sierra Ave/W School St-US 101 SB Ramp
Future Volume Alternative: Peak Hour Warrant NOT Met

Table with 5 columns: Approach, Movement, Control, Lanes, Final Vol., and ApproachDel. Rows include North Bound, South Bound, East Bound, and West Bound.

Approach[southbound][lanes=1][control=Stop]
Signal Warrant Rule #1: [vehicle-hours=0.2]
FAIL - Vehicle-hours less than 4 for one lane approach.

Approach[eastbound][lanes=1][control=Stop]
Signal Warrant Rule #1: [vehicle-hours=0.4]
FAIL - Vehicle-hours less than 4 for one lane approach.

Approach[westbound][lanes=1][control=Stop]
Signal Warrant Rule #1: [vehicle-hours=0.1]
FAIL - Vehicle-hours less than 4 for one lane approach.

Approach[northbound][lanes=1][control=Stop]
Signal Warrant Rule #1: [vehicle-hours=0.2]
FAIL - Vehicle-hours less than 4 for one lane approach.

PM Peak Hour - Buildout Conditions
Cotati Circulation Improvement Study
City of Cotati

Signal Warrant Report

Intersection #12 W Sierra Ave/US 101 NB Off-ramp

Future Volume Alternative: Peak Hour Warrant NOT Met

Table with 5 columns: Approach, North Bound, South Bound, East Bound, West Bound. Rows include Movement, Control, Lanes, Final Vol., and ApproachDel.

Approach[northbound][lanes=2][control=Stop]
Signal Warrant Rule #1: [vehicle-hours=1.3]
FAIL - Vehicle-hours less than 5 for two or more lane approach.
Signal Warrant Rule #2: [approach volume=358]
SUCCEED - Approach volume >= 150 for two or more lane approach.
Signal Warrant Rule #3: [approach count=3][total volume=1061]
SUCCEED - Total volume greater than or equal to 650 for intersection with less than four approaches.

PM Peak Hour - Buildout Conditions
Cotati Circulation Improvement Study
City of Cotati

Signal Warrant Report

Intersection #13 W Sierra Ave/E School St

Future Volume Alternative: Peak Hour Warrant NOT Met

Table with 5 columns: Approach, North Bound, South Bound, East Bound, West Bound. Rows include Movement, Control, Lanes, Final Vol., and ApproachDel.

Approach[southbound][lanes=1][control=Stop]
Signal Warrant Rule #1: [vehicle-hours=0.1]
FAIL - Vehicle-hours less than 4 for one lane approach.
Signal Warrant Rule #2: [approach volume=52]
FAIL - Approach volume less than 100 for one lane approach.
Signal Warrant Rule #3: [approach count=3][total volume=1067]
SUCCEED - Total volume greater than or equal to 650 for intersection with less than four approaches.

Approach[eastbound][lanes=1][control=Stop]
Signal Warrant Rule #1: [vehicle-hours=2.7]
FAIL - Vehicle-hours less than 4 for one lane approach.
Signal Warrant Rule #2: [approach volume=553]
SUCCEED - Approach volume greater than or equal to 100 for one lane approach.
Signal Warrant Rule #3: [approach count=3][total volume=1067]
SUCCEED - Total volume greater than or equal to 650 for intersection with less than four approaches.

Approach[westbound][lanes=1][control=Stop]
Signal Warrant Rule #1: [vehicle-hours=1.8]
FAIL - Vehicle-hours less than 4 for one lane approach.
Signal Warrant Rule #2: [approach volume=462]
SUCCEED - Approach volume greater than or equal to 100 for one lane approach.
Signal Warrant Rule #3: [approach count=3][total volume=1067]
SUCCEED - Total volume greater than or equal to 650 for intersection with less than four approaches.

PM Peak Hour - Buildout Conditions
Cotati Circulation Improvement Study
City of Cotati

Signal Warrant Report

Intersection #15 E Cotati Ave/Charles St

Future Volume Alternative: Peak Hour Warrant Met

Table with 5 columns: Approach, North Bound, South Bound, East Bound, West Bound. Rows include Movement, Control, Lanes, Final Vol., and ApproachDel.

Approach[northbound][lanes=1][control=Stop]
Signal Warrant Rule #1: [vehicle-hours=15.8]
SUCCEED - Vehicle-hours greater than or equal to 4 for one lane approach.

PM Peak Hour - Buildout Conditions
Cotati Circulation Improvement Study
City of Cotati

Signal Warrant Report

Intersection #16 E Cotati Ave/La Salle Ave

Future Volume Alternative: Peak Hour Warrant Met

Table with 5 columns: Approach, North Bound, South Bound, East Bound, West Bound. Rows include Movement, Control, Lanes, Final Vol., and ApproachDel.

Approach[northbound][lanes=1][control=Stop]
Signal Warrant Rule #1: [vehicle-hours=1.7]
FAIL - Vehicle-hours less than 4 for one lane approach.

Approach[southbound][lanes=1][control=Stop]
Signal Warrant Rule #1: [vehicle-hours=0.1]
FAIL - Vehicle-hours less than 4 for one lane approach.

Approach[eastbound][lanes=3][control=Stop]
Signal Warrant Rule #1: [vehicle-hours=143.2]
SUCCEED - Vehicle-hours >= 5 for two or more lane approach.

Approach[westbound][lanes=3][control=Stop]
Signal Warrant Rule #1: [vehicle-hours=35.3]
SUCCEED - Vehicle-hours >= 5 for two or more lane approach.

PM Peak Hour - Buildout Conditions
Cotati Circulation Improvement Study
City of Cotati

Signal Warrant Report

Intersection #19 E Cotati Ave/Beverly Dr

Future Volume Alternative: Peak Hour Warrant NOT Met

Table with 4 columns: North Bound, South Bound, East Bound, West Bound. Rows include Approach, Movement, Control, Lanes, Final Vol., and ApproachDel.

Approach[southbound][lanes=1][control=Stop]
Signal Warrant Rule #1: [vehicle-hours=1.2]
FAIL - Vehicle-hours less than 4 for one lane approach.
Signal Warrant Rule #2: [approach volume=145]
SUCCEED - Approach volume greater than or equal to 100 for one lane approach.
Signal Warrant Rule #3: [approach count=3][total volume=3285]
SUCCEED - Total volume greater than or equal to 650 for intersection with less than four approaches.

PM Peak Hour - Buildout Conditions
Cotati Circulation Improvement Study
City of Cotati

Signal Warrant Report

Intersection #20 E Cotati Ave/Santero Way

Future Volume Alternative: Peak Hour Warrant Met

Table with 4 columns: North Bound, South Bound, East Bound, West Bound. Rows include Approach, Movement, Control, Lanes, Final Vol., and ApproachDel.

Approach[northbound][lanes=1][control=Stop]
Signal Warrant Rule #1: [vehicle-hours=37.2]
SUCCEED - Vehicle-hours greater than or equal to 4 for one lane approach.
Signal Warrant Rule #2: [approach volume=256]
SUCCEED - Approach volume greater than or equal to 100 for one lane approach.
Signal Warrant Rule #3: [approach count=3][total volume=3131]
SUCCEED - Total volume greater than or equal to 650 for intersection with less than four approaches.

PM Peak Hour - Buildout Conditions
Cotati Circulation Improvement Study
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Signal Warrant Report

Intersection #21 Old Redwood Highway/Henry-Charles St.

Future Volume Alternative: Peak Hour Warrant Met

Table with 4 columns: Approach, Movement, Control, Lanes, Final Vol., ApprAdjDel. Rows include North Bound, South Bound, East Bound, and West Bound with various movement and volume data.

Approach[northbound][lanes=2][control=Stop]
Signal Warrant Rule #1: [vehicle-hours=28.1]
SUCCEED - Vehicle-hours >= 5 for two or more lane approach.
Signal Warrant Rule #2: [approach volume=889]
SUCCEED - Approach volume >= 150 for two or more lane approach.
Signal Warrant Rule #3: [approach count=4][total volume=1894]
SUCCEED - Total volume greater than or equal to 800 for intersection with four or more approaches.

Approach[southbound][lanes=1][control=Stop]
Signal Warrant Rule #1: [vehicle-hours=20.1]
SUCCEED - Vehicle-hours greater than or equal to 4 for one lane approach.
Signal Warrant Rule #2: [approach volume=645]
SUCCEED - Approach volume greater than or equal to 100 for one lane approach.
Signal Warrant Rule #3: [approach count=4][total volume=1894]
SUCCEED - Total volume greater than or equal to 800 for intersection with four or more approaches.

Approach[eastbound][lanes=1][control=Stop]
Signal Warrant Rule #1: [vehicle-hours=0.3]
FAIL - Vehicle-hours less than 4 for one lane approach.
Signal Warrant Rule #2: [approach volume=88]
FAIL - Approach volume less than 100 for one lane approach.
Signal Warrant Rule #3: [approach count=4][total volume=1894]
SUCCEED - Total volume greater than or equal to 800 for intersection with four or more approaches.

Approach[westbound][lanes=1][control=Stop]
Signal Warrant Rule #1: [vehicle-hours=1.5]
FAIL - Vehicle-hours less than 4 for one lane approach.
Signal Warrant Rule #2: [approach volume=272]
SUCCEED - Approach volume greater than or equal to 100 for one lane approach.
Signal Warrant Rule #3: [approach count=4][total volume=1894]
SUCCEED - Total volume greater than or equal to 800 for intersection with four or more approaches.

Appendix D
Traffic Model Network

Appendix E
Citywide Buildout Trip Generation

AM Peakhour - Buildout Conditions
Cotati Circulation Improvement Study
City of Cotati

Trip Generation Report

Forecast for AM

Zone #	Subzone	Amount	Units	Rate In	Rate Out	Trips In	Trips Out	Total Trips	% Of Total
1	1.00 zone trips			19.00	4.00	19	4	23	1.0
	Zone 1 Subtotal					19	4	23	1.0
2	1.00 zone trips			213.00	42.00	213	42	255	10.7
	Zone 2 Subtotal					213	42	255	10.7
3	1.00 zone trips			205.00	162.00	205	162	367	15.5
	Zone 3 Subtotal					205	162	367	15.5
4	1.00 zone trips			141.00	78.00	141	78	219	9.2
	Zone 4 Subtotal					141	78	219	9.2
5	1.00 zone trips			18.00	22.00	18	22	40	1.7
	Zone 5 Subtotal					18	22	40	1.7
6	1.00 zone trips			12.00	36.00	12	36	48	2.0
	Zone 6 Subtotal					12	36	48	2.0
7	1.00 zone trips			6.00	20.00	6	20	26	1.1
	Zone 7 Subtotal					6	20	26	1.1
8	1.00 zone trips			14.00	15.00	14	15	29	1.2
	Zone 8 Subtotal					14	15	29	1.2
9	1.00 zone trips			108.00	70.00	108	70	178	7.5
	Zone 9 Subtotal					108	70	178	7.5
10	1.00 zone trips			5.00	7.00	5	7	12	0.5
	Zone 10 Subtotal					5	7	12	0.5
11	1.00 zone trips			3.00	9.00	3	9	12	0.5
	Zone 11 Subtotal					3	9	12	0.5
12	1.00 zone trips			11.00	33.00	11	33	44	1.9
	Zone 12 Subtotal					11	33	44	1.9
13	1.00 zone trips			24.00	73.00	24	73	97	4.1
	Zone 13 Subtotal					24	73	97	4.1
14	1.00 zone trips			2.00	5.00	2	5	7	0.3
	Zone 14 Subtotal					2	5	7	0.3
15	1.00 zone trips			7.00	25.00	7	25	32	1.3

AM Peakhour - Buildout Conditions
Cotati Circulation Improvement Study
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Zone #	Subzone	Amount	Units	Rate In	Rate Out	Trips In	Trips Out	Total Trips	% Of Total
	Zone 15 Subtotal					7	25	32	1.3
16	1.00 zone trips			9.00	6.00	9	6	15	0.6
	Zone 16 Subtotal					9	6	15	0.6
17	1.00 zone trips			9.00	30.00	9	30	39	1.6
	Zone 17 Subtotal					9	30	39	1.6
18	1.00 zone trips			2.00	9.00	2	9	11	0.5
	Zone 18 Subtotal					2	9	11	0.5
19	1.00 zone trips			153.00	95.00	153	95	248	10.5
	Zone 19 Subtotal					153	95	248	10.5
TOTAL						961	741	1702	71.7

AM Peakhour - Buildout Conditions
Cotati Circulation Improvement Study
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Trip Generation Report

Forecast for AM Regional

Zone #	Subzone	Amount	Units	Rate In	Rate Out	Trips In	Trips Out	Total Trips	% Of Total
20	SSU/Regional	1.00	SSU-Growth	242.00	56.00	242	56	298	12.6
	Zone 20 Subtotal					242	56	298	12.6
21	ORH Regional	1.00	ORH Regional G	24.00	50.00	24	50	74	3.1
	Zone 21 Subtotal					24	50	74	3.1
22	Gravenstein	1.00	Gravenstein Re	79.00	220.00	79	220	299	12.6
	Zone 22 Subtotal					79	220	299	12.6
TOTAL						345	326	671	28.3

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Trip Distribution Report

Percent Of Trips Default

Zone	To Gates										
	1	2	3	4	5	6	7	8	9	10	11
1	25.0	41.0	8.0	6.0	2.0	1.0	2.0	5.0	2.0	6.0	1.0
2	25.0	41.0	8.0	6.0	2.0	1.0	2.0	5.0	2.0	6.0	1.0
3	30.0	25.0	10.0	5.0	7.0	1.0	4.0	5.0	2.0	8.0	1.0
4	28.0	23.0	10.0	5.0	7.0	4.0	4.0	5.0	2.0	8.0	1.0
5	28.0	23.0	10.0	5.0	7.0	4.0	4.0	5.0	2.0	8.0	1.0
6	20.0	25.0	15.0	15.0	12.0	0.0	0.0	0.0	5.0	5.0	1.0
7	18.0	19.0	15.0	15.0	12.0	1.0	15.0	0.0	0.0	2.0	1.0
8	18.0	19.0	15.0	15.0	12.0	1.0	15.0	0.0	0.0	2.0	1.0
9	15.0	15.0	13.0	10.0	9.0	3.0	8.0	7.0	1.0	2.0	5.0
10	18.0	18.0	15.0	15.0	12.0	1.0	7.0	6.0	3.0	2.0	1.0
11	18.0	18.0	17.0	15.0	13.0	0.0	7.0	6.0	1.0	2.0	1.0
12	18.0	18.0	17.0	15.0	13.0	0.0	7.0	6.0	1.0	2.0	1.0
13	18.0	18.0	17.0	15.0	12.0	1.0	7.0	6.0	1.0	2.0	1.0
14	18.0	18.0	17.0	15.0	12.0	1.0	7.0	6.0	0.0	2.0	1.0
15	18.0	20.0	13.0	15.0	10.0	0.0	8.0	7.0	3.0	1.0	2.0
16	18.0	20.0	13.0	15.0	10.0	0.0	8.0	6.0	3.0	1.0	2.0
17	18.0	20.0	13.0	15.0	11.0	0.0	8.0	6.0	3.0	1.0	2.0
18	18.0	20.0	13.0	15.0	11.0	0.0	8.0	6.0	3.0	1.0	2.0
19	18.0	19.0	14.0	15.0	11.0	0.0	8.0	6.0	3.0	1.0	2.0
20	15.0	0.0	15.0	5.0	0.0	5.0	0.0	5.0	0.0	10.0	10.0
21	75.0	0.0	0.0	0.0	0.0	0.0	25.0	0.0	0.0	0.0	0.0
22	0.0	100.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Zone	To Gates				
	12	13	14	15	16
1	0.0	0.0	1.0	0.0	0.0
2	0.0	0.0	1.0	0.0	0.0
3	0.0	1.0	1.0	0.0	0.0
4	1.0	1.0	1.0	0.0	0.0
5	1.0	1.0	1.0	0.0	0.0
6	1.0	0.0	0.0	1.0	0.0
7	1.0	0.0	0.0	1.0	0.0
8	1.0	0.0	0.0	1.0	0.0
9	5.0	2.0	4.0	1.0	0.0
10	1.0	0.0	0.0	1.0	0.0
11	1.0	0.0	0.0	1.0	0.0
12	1.0	0.0	0.0	1.0	0.0
13	0.0	0.0	1.0	1.0	0.0
14	0.0	1.0	1.0	1.0	0.0
15	2.0	0.0	0.0	1.0	0.0
16	2.0	1.0	0.0	1.0	0.0
17	2.0	1.0	0.0	0.0	0.0

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Zone	To Gates				
	12	13	14	15	16
18	2.0	1.0	0.0	0.0	0.0
19	2.0	1.0	0.0	0.0	0.0
20	20.0	5.0	0.0	0.0	10.0
21	0.0	0.0	0.0	0.0	0.0
22	0.0	0.0	0.0	0.0	0.0