APPENDIX F

Peak Hour Intersection and ILV Analysis Worksheets – Existing + Project + Cumulative Projects

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Impact Analysis Report
Level Of Service

Intersection	Base LOS	Base Del/ Veh	Base V/ C	Future LOS	Future Del/ Veh	Future V/ C	Change in
# 1 SR 78/Sycamore EB Ramps	F	124.3	1.351	F	124.3	1.351	+ 0.000 D/V
# 2 SR 78/Sycamore WB Ramps	C	28.3	0.825	C	28.3	0.825	+ 0.000 D/V
# 3 S. Santa Fe/Robelini Dr	C	29.5	0.813	C	29.5	0.813	+ 0.000 D/V
# 4 S. Santa Fe/Buena Creek	F	139.5	1.205	F	139.5	1.205	+ 0.000 D/V
# 5 Buena Creek/Monte Vista Dr	E	38.2	0.945	E	38.2	0.945	+ 0.000 V/C
# 6 Buena Creek/Sugarbush Dr	E	38.6	0.000	E	38.6	0.000	+ 0.000 D/V
# 7 Twin Oaks Valley Road/Buena Cr	D	39.7	1.229	D	39.7	1.229	+ 0.000 D/V
# 8 Deer Springs Rd/N. Twin Oaks V	F	143.4	1.325	F	143.4	1.325	+ 0.000 D/V
# 9 I-15 SB Ramps/Deer Springs Rd.	F	314.5	1.829	F	314.5	1.829	+ 0.000 D/V
# 10 I-15 NB Ramps/Deer Springs Rd.	F	95.3	1.153	F	95.3	1.153	+ 0.000 D/V

Traffix 7.8.0115 (c) 2007 Dowling Assoc. Licensed to LLG, PASADENA, CA

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

Intersection #1 SR 78/Sycamore EB Ramps

Cycle (sec):	100	Critical Vol./Cap.(X):	1.351
Loss Time (sec):	9 (Y+R=4.0 sec)	Average Delay (sec/veh):	124.3
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				Split Phase				Split Phase			
Rights:	Include				Include				Include				Include			
Min. Green:	7	20		7	7	20		7	7	20		7	7	20		7
Lanes:	0 1	2	0	1	2 0	3	0	0	1 1	0	0	1	0 0	0	0	0
Volume Module: am peak																
Base Vol:	57	718	682		319	1427		0	441	2	998		0	0		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:	57	718	682		319	1427		0	441	2	998		0	0		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:	0.92	0.92	0.92		0.92	0.92		0.92	0.92	0.92	0.92		0.92	0.92		0.92
PHF Volume:	62	780	741		347	1551		0	479	2	1085		0	0		0
Reduct Vol:	0	0	0		0	0		0	0	0	0		0	0		0
Reduced Vol:	62	780	741		347	1551		0	479	2	1085		0	0		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
FinalVolume:	62	780	741		347	1551		0	479	2	1085		0	0		0
Saturation Flow Module:																
Sat/Lane:	1900	1900	1900		1900	1900		1900	1900	1900	1900		1900	1900		1900
Adjustment:	0.91	0.91	0.85		0.92	0.91		1.00	0.95	0.95	0.85		1.00	1.00		1.00
Lanes:	0.22	2.78	1.00		2.00	3.00		0.00	1.99	0.01	1.00		0.00	0.00		0.00
Final Sat.:	380	4786	1615		3502	5187		0	3609	16	1615		0	0		0
Capacity Analysis Module:																
Vol/Sat:	0.16	0.16	0.46		0.10	0.30		0.00	0.13	0.13	0.67		0.00	0.00		0.00
Crit Moves:			****		****						****					
Green/Cycle:	0.15	0.34	0.34		0.07	0.27		0.00	0.50	0.50	0.50		0.00	0.00		0.00
Volume/Cap:	1.12	0.48	1.35		1.35	1.12		0.00	0.27	0.27	1.35		0.00	0.00		0.00
Uniform Del:	42.7	26.0	33.0		46.3	36.6		0.0	14.6	14.6	25.1		0.0	0.0		0.0
IncremntDel:	70.6	0.2	169.9		181.6	63.8		0.0	0.1	0.1	166.3		0.0	0.0		0.0
InitQueuDel:	0.0	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0		0.0	0.0		0.0
Delay Adj:	1.00	1.00	1.00		1.00	1.00		0.00	1.00	1.00	1.00		0.00	0.00		0.00
Delay/Veh:	113.3	26.3	202.9		227.9	100		0.0	14.7	14.7	191.5		0.0	0.0		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:	113.3	26.3	202.9		227.9	100		0.0	14.7	14.7	191.5		0.0	0.0		0.0
LOS by Move:	F	C	F		F	F		A	B	B	F		A	A		A
HCM2kAvgQ:	17	8	48		13	29		0	4	4	69		0	0		0

Note: Queue reported is the number of cars per lane.

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

Intersection #2 SR 78/Sycamore WB Ramps

Cycle (sec):	100	Critical Vol./Cap.(X):	0.825
Loss Time (sec):	9 (Y+R=4.0 sec)	Average Delay (sec/veh):	28.3
Optimal Cycle:	75	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:	Protected				Protected				Split Phase				Split Phase			
Rights:	Include				Include				Include				Include			
Min. Green:	7	20		7	7	20		7	7	20		7	7	20		7
Lanes:	2 0	3	0	1	0 0	3	0	1	0 0	0	0	0	1 1	0	0	2
Volume Module: am peak																
Base Vol:	449	799	0		0	823		476	0	0	0		964	0		280
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:	449	799	0		0	823		476	0	0	0		964	0		280
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		0.92	0.92		0.92	0.92	0.92	0.92		0.92	0.92		0.92
PHF Volume:	488	868	0		0	895		517	0	0	0		1048	0		304
Reduct Vol:	0	0	0		0	0		0	0	0	0		0	0		0
Reduced Vol:	488	868	0		0	895		517	0	0	0		1048	0		304
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
FinalVolume:	488	868	0		0	895		517	0	0	0		1048	0		304
Saturation Flow Module:																
Sat/Lane:	1900	1900	1900		1900	1900		1900	1900	1900	1900		1900	1900		1900
Adjustment:	0.92	0.91	1.00		1.00	0.91		0.85	1.00	1.00	1.00		0.95	1.00		0.75
Lanes:	2.00	3.00	1.00		0.00	3.00		1.00	0.00	0.00	0.00		2.00	0.00		2.00
Final Sat.:	3495	5177	1896		0	5177		1612	0	0	0		3610	0		2837
Capacity Analysis Module:																
Vol/Sat:	0.14	0.17	0.00		0.00	0.17		0.32	0.00	0.00	0.00		0.29	0.00		0.11
Crit Moves:	****							****					****			
Green/Cycle:	0.17	0.56	0.00		0.00	0.39		0.39	0.00	0.00	0.00		0.35	0.00		0.35
Volume/Cap:	0.83	0.30	0.00		0.00	0.44		0.83	0.00	0.00	0.00		0.83	0.00		0.31
Uniform Del:	40.1	11.7	0.0		0.0	22.6		27.5	0.0	0.0	0.0		29.6	0.0		23.5
IncremntDel:	9.3	0.1	0.0		0.0	0.2		8.8	0.0	0.0	0.0		4.6	0.0		0.2
InitQueuDel:	0.0	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0		0.0	0.0		0.0
Delay Adj:	1.00	1.00	0.00		0.00	1.00		1.00	0.00	0.00	0.00		1.00	0.00		1.00
Delay/Veh:	49.4	11.8	0.0		0.0	22.7		36.3	0.0	0.0	0.0		34.2	0.0		23.7
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:	49.4	11.8	0.0		0.0	22.7		36.3	0.0	0.0	0.0		34.2	0.0		23.7
LOS by Move:	D	B	A		A	C		D	A	A	A		C	A		C
HCM2kAvgQ:	10	5	0		0	8		17	0	0	0		17	0		4

Note: Queue reported is the number of cars per lane.

F.2

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

Intersection #3 S. Santa Fe/Robelini Dr

Cycle (sec): 100 Critical Vol./Cap.(X): 0.813
Loss Time (sec): 9 (Y+R=4.0 sec) Average Delay (sec/veh): 29.5
Optimal Cycle: 71 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:		Ovl				Include				Include				Include		
Min. Green:	7	20		7	7	20		7	7	20		7	7	20		7
Lanes:	0 1	0 1		0	0 0	0 0		0	0 0	1 0		1	1 0	1 0		0
Volume Module: am peak																
Base Vol:	202	1	247		0	0		0	0	395	254		616	298		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:	202	1	247		0	0		0	0	395	254		616	298		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:	0.92	0.92	0.92		0.92	0.92		0.92	0.92	0.92	0.92		0.92	0.92		0.92
PHF Volume:	220	1	268		0	0		0	0	429	276		670	324		0
Reduct Vol:	0	0	0		0	0		0	0	0	0		0	0		0
Reduced Vol:	220	1	268		0	0		0	0	429	276		670	324		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
FinalVolume:	220	1	268		0	0		0	0	429	276		670	324		0
Saturation Flow Module:																
Sat/Lane:	1900	1900	1900		1900	1900		1900	1900	1900	1900		1900	1900		1900
Adjustment:	0.81	0.81	0.81		1.00	1.00		1.00	1.00	0.85	0.95		1.00	1.00		1.00
Lanes:	0.99	0.01	1.00		0.00	0.00		0.00	1.00	1.00	1.00		1.00	1.00		0.00
Final Sat.:	1538	8	1546		0	0		0	0	1900	1615		1805	1900		0
Capacity Analysis Module:																
Vol/Sat:	0.14	0.14	0.17		0.00	0.00		0.00	0.00	0.23	0.17		0.37	0.17		0.00
Crit Moves:		****								****			****			
Green/Cycle:	0.20	0.20	0.64		0.00	0.00		0.00	0.00	0.27	0.27		0.44	0.71		0.00
Volume/Cap:	0.71	0.71	0.27		0.00	0.00		0.00	0.00	0.84	0.64		0.84	0.24		0.00
Uniform Del:	37.3	37.3	7.8		0.0	0.0		0.0	0.0	34.5	32.2		24.8	5.1		0.0
IncrematDel:	3.6	3.6	0.1		0.0	0.0		0.0	0.0	11.9	3.1		8.0	0.1		0.0
InitQueuDel:	0.0	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0		0.0	0.0		0.0
Delay Adj:	1.00	1.00	1.00		0.00	0.00		0.00	0.00	1.00	1.00		1.00	1.00		0.00
Delay/Veh:	40.9	40.9	7.9		0.0	0.0		0.0	0.0	46.4	35.4		32.8	5.2		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:	40.9	40.9	7.9		0.0	0.0		0.0	0.0	46.4	35.4		32.8	5.2		0.0
LOS by Move:	D	D	A		A	A		A	A	D	D		C	A		A
HCM2kAvgQ:	8	8	4		0	0		0	0	15	8		21	3		0

Note: Queue reported is the number of cars per lane.

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

Intersection #4 S. Santa Fe/Buena Creek

Cycle (sec): 100 Critical Vol./Cap.(X): 1.205
Loss Time (sec): 9 (Y+R=4.0 sec) Average Delay (sec/veh): 139.5
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				Split Phase				Split Phase			
Rights:		Include				Include				Include				Include		
Min. Green:	7	20		7	7	20		7	7	20		7	7	20		7
Lanes:	1 0	1 1		0	1 0	1 1		0	0 1	0 0		0	1 0	1 1		0
Volume Module: am peak																
Base Vol:	0	0		0	202	0		565	240	444		0	0	345		85
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	202	0		565	240	444		0	0	345		85
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	0.92	0.92		0.92	0.92	0.92		0.92	0.92	0.92		0.92
PHF Volume:	0	0		0	220	0		614	261	483		0	0	375		92
Reduct Vol:	0	0		0	0	0		0	0	0		0	0	0		0
Reduced Vol:	0	0		0	220	0		614	261	483		0	0	375		92
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
FinalVolume:	0	0		0	220	0		614	261	483		0	0	375		92
Saturation Flow Module:																
Sat/Lane:	1900	1900		1900	1900	1900		1900	1900	1900		1900	1900	1900		1900
Adjustment:	0.85	0.81		0.81	0.81	0.69		0.84	0.84	0.85		0.85	0.78	0.78		
Lanes:	1.00	2.00		0.00	1.00	1.00		1.00	0.35	0.65		0.00	1.00	1.60		0.40
Final Sat.:	1615	3069		0	1534	1534		1304	557	1031		0	1615	2388		588
Capacity Analysis Module:																
Vol/Sat:	0.00	0.00		0.00	0.14	0.00		0.47	0.47	0.47		0.00	0.00	0.16		0.16
Crit Moves:								****		****				****		
Green/Cycle:	0.00	0.00		0.00	0.36	0.00		0.36	0.35	0.35		0.00	0.00	0.20		0.20
Volume/Cap:	0.00	0.00		0.00	0.40	0.00		1.32	1.32	1.32		0.00	0.00	0.79		0.79
Uniform Del:	0.0	0.0		0.0	24.2	0.0		32.2	32.3	32.3		0.0	0.0	38.0		38.0
IncrematDel:	0.0	0.0		0.0	0.5	0.0		159.7	157.4	157		0.0	0.0	6.8		6.8
InitQueuDel:	0.0	0.0		0.0	0.0	0.0		0.0	0.0	0.0		0.0	0.0	0.0		0.0
Delay Adj:	0.00	0.00		0.00	1.00	0.00		1.00	1.00	1.00		0.00	0.00	1.00		1.00
Delay/Veh:	0.0	0.0		0.0	24.7	0.0		191.9	189.7	190		0.0	0.0	44.8		44.8
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:	0.0	0.0		0.0	24.7	0.0		191.9	189.7	190		0.0	0.0	44.8		44.8
LOS by Move:	A	A		A	C	A		F	F	F		A	A	D		D
HCM2kAvgQ:	0	0		0	5	0		41	47	47		0	0	9		9

Note: Queue reported is the number of cars per lane.

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Ex+P+Cm-AM                    Wed May 30, 2007 10:42:08                    Page 7-1
--------------------------------------------------------------------------------
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                      Level Of Service Computation Report
              2000 HCM 4-Way Stop Method (Base Volume Alternative)
********************************************************************************
Intersection #5 Buena Creek/Monte Vista Dr
********************************************************************************
Cycle (sec):          100                 Critical Vol./Cap.(X):          0.945
Loss Time (sec):        0 (Y+R=4.0 sec)   Average Delay (sec/veh):         38.2
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
Min. Green:     0    0    0     0    0    0     0    0    0     0    0    0
Lanes:        0  0  0  0  0    0  0  1! 0  0    0  1  0  0  0    0  0  1  0  1
------------|---------------||---------------||---------------||---------------|
Volume Module:
Base Vol:       0    0    0   242    0  123   121  231    0     0  537  374
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   242    0  123   121  231    0     0  537  374
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  0.92 0.92 0.92  0.92 0.92 0.92  0.92 0.92 0.92
PHF Volume:     0    0    0   263    0  134   132  251    0     0  584  407
Reduct Vol:     0    0    0     0    0    0     0    0    0     0    0    0
Reduced Vol:    0    0    0   263    0  134   132  251    0     0  584  407
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
FinalVolume:    0    0    0   263    0  134   132  251    0     0  584  407
------------|---------------||---------------||---------------||---------------|
Saturation Flow Module:
Adjustment:  1.00 1.00 1.00  1.00 1.00 1.00  1.00 1.10 1.00  1.00 1.10 1.00
Lanes:       0.00 0.00 0.00  0.66 0.00 0.34  0.34 0.66 0.00  0.00 1.00 1.00
Final Sat.:     0    0    0   372    0  189   192  403    0     0  618  631
------------|---------------||---------------||---------------||---------------|
Capacity Analysis Module:
Vol/Sat:     xxxx xxxx xxxx  0.71 xxxx  0.71  0.69 0.62 xxxx  xxxx 0.95  0.64
Crit Moves:                  ****              ****                   ****
Delay/Veh:    0.0  0.0  0.0  22.8  0.0  22.8  21.7 21.7  0.0   0.0 73.5  18.2
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  22.8  0.0  22.8  21.7 21.7  0.0   0.0 73.5  18.2
LOS by Move:   *    *    *    C    *    C     C    C    *     *    F    C
ApproachDel:    xxxxxx            22.8             21.7            50.8
Delay Adj:       xxxxx            1.00             1.00            1.00
ApprAdjDel:     xxxxxx            22.8             21.7            50.8
LOS by Appr:       *               C                C               F
AllWayAvgQ:   0.0  0.0  0.0   2.1  2.1   2.1   1.9  1.9  1.9   0.0 10.0   1.7
********************************************************************************
Note: Queue reported is the number of cars per lane.
********************************************************************************

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SUGARBUSH SUBDIVISION
TM5295RPL

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Ex+P+Cm-AM                    Wed May 30, 2007 10:42:08                    Page 8-1
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                      Level Of Service Computation Report
              2000 HCM Unsignalized Method (Base Volume Alternative)
********************************************************************************
Intersection #6 Buena Creek/Sugarbush Dr
********************************************************************************
Average Delay (sec/veh):       1.7       Worst Case Level Of Service: E[ 38.6]
********************************************************************************
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  1! 0  0    0  0  1! 0  0    0  0  1! 0  0    0  0  1! 0  0
------------|---------------||---------------||---------------||---------------|
Volume Module:
Base Vol:      29    0   15     3    0   17     7  460   12     8  779    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:   29    0   15     3    0   17     7  460   12     8  779    6
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  0.92 0.92 0.92  0.92 0.92 0.92  0.92 0.92 0.92
PHF Volume:    32    0   16     3    0   18     8  500   13     9  847    7
Reduct Vol:     0    0    0     0    0    0     0    0    0     0    0    0
FinalVolume:   32    0   16     3    0   18     8  500   13     9  847    7
------------|---------------||---------------||---------------||---------------|
Critical Gap Module:
Critical Gp:  7.1  6.5  6.2   7.1  6.5  6.2   4.1 xxxx xxxxx   4.1 xxxx xxxxx
FollowUpTim:  3.5  4.0  3.3   3.5  4.0  3.3   2.2 xxxx xxxxx   2.2 xxxx xxxxx
------------|---------------||---------------||---------------||---------------|
Capacity Module:
Cnflict Vol: 1398 1392  507  1397 1396  850   853 xxxx xxxxx   513 xxxx xxxxx
Potent Cap.:  119  143  570   120  143  363   795 xxxx xxxxx  1063 xxxx xxxxx
Move Cap.:    112  141  570   115  140  363   795 xxxx xxxxx  1063 xxxx xxxxx
Volume/Cap:  0.28 0.00 0.03  0.03 0.00 0.05  0.01 xxxx  xxxx  0.01 xxxx  xxxx
------------|---------------||---------------||---------------||---------------|
Level Of Service Module:
2Way95thQ:   xxxx xxxx xxxxx  xxxx xxxx xxxxx   0.0 xxxx xxxxx   0.0 xxxx xxxxx
Control Del:xxxxx xxxx xxxxx xxxxx xxxx xxxxx   9.6 xxxx xxxxx   8.4 xxxx xxxxx
LOS by Move:   *    *    *    *    *    *     A    *    *     A    *    *
Movement:     LT - LTR - RT   LT - LTR - RT   LT - LTR - RT   LT - LTR - RT
Shared Cap.: xxxx  154 xxxxx  xxxx  274 xxxxx  xxxx xxxx xxxxx  xxxx xxxx xxxxx
SharedQueue:xxxxx  1.2 xxxxx xxxxx  0.3 xxxxx xxxxx xxxx xxxxx xxxxx xxxx xxxxx
Shrd ConDel:xxxxx 38.6 xxxxx xxxxx 19.3 xxxxx xxxxx xxxx xxxxx xxxxx xxxx xxxxx
Shared LOS:    *    E    *    *    C    *    *    *    *    *    *    *
ApproachDel:       38.6             19.3            xxxxxx           xxxxxx
ApproachLOS:        E                C                *                *
********************************************************************************
Note: Queue reported is the number of cars per lane.
********************************************************************************

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SUGARBUSH SUBDIVISION
TM5295RPL

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

Intersection #7 Twin Oaks Valley Road/Buena Creek Road

Cycle (sec):	100	Critical Vol./Cap.(X):	1.229
Loss Time (sec):	6 (Y+R=4.0 sec)	Average Delay (sec/veh):	39.7
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				Permitted				Permitted			
Rights:	Include				Include				Include				Include			
Min. Green:	7	20		7	7	20		7	7	20		7	7	20		7
Lanes:	1 0	1	0	1	1 0	1	0	1	0 1	0	0	1	0 0	1!	0	0
Volume Module: am peak																
Base Vol:	117	485		1	0	1231		539	268		0	220	1		1	1
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:	117	485		1	0	1231		539	268		0	220	1		1	1
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	0.92	0.92		0.92	0.92	0.92		0.92	0.92	0.92		0.92
PHF Volume:	127	527		1	0	1338		586	291		0	239	1		1	1
Reduct Vol:	0	0		0	0	0		0	0	0		0	0	0		0
Reduced Vol:	127	527		1	0	1338		586	291		0	239	1		1	1
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
FinalVolume:	127	527		1	0	1338		586	291		0	239	1		1	1
Saturation Flow Module:																
Sat/Lane:	1900	1900		1900	1900	1900		1900	1900	1900		1900	1900	1900		1900
Adjustment:	0.07	0.98		0.83	0.98	0.98		0.83	0.70	0.98		0.83	0.58	0.58		0.58
Lanes:	1.00	1.00		1.00	1.00	1.00		1.00	1.00	0.00		1.00	0.34	0.33		0.33
Final Sat.:	136	1862		1583	1862	1862		1583	1326		0	1583	368	368		368
Capacity Analysis Module:																
Vol/Sat:	0.94	0.28		0.00	0.00	0.72		0.37	0.22	0.00		0.15	0.00	0.00		0.00
Crit Moves:	****								****							
Green/Cycle:	0.76	0.76		0.76	0.00	0.76		0.76	0.18	0.00		0.18	0.18	0.18		0.18
Volume/Cap:	1.23	0.37		0.00	0.00	0.94		0.49	1.23	0.00		0.85	0.02	0.02		0.02
Uniform Del:	11.9	4.0		2.9	0.0	10.1		4.5	41.1	0.0		39.7	33.8	33.8		33.8
IncremntDel:	162.5	0.2		0.0	0.0	12.9		0.3	134.5	0.0		20.3	0.0	0.0		0.0
InitQueuDel:	0.0	0.0		0.0	0.0	0.0		0.0	0.0	0.0		0.0	0.0	0.0		0.0
Delay Adj:	1.00	1.00		1.00	0.00	1.00		1.00	1.00	0.00		1.00	1.00	1.00		1.00
Delay/Veh:	174.4	4.1		2.9	0.0	23.0		4.8	175.5	0.0		60.0	33.9	33.9		33.9
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:	174.4	4.1		2.9	0.0	23.0		4.8	175.5	0.0		60.0	33.9	33.9		33.9
LOS by Move:	F	A		A	A	C		A	F	A		E	C	C		C
HCM2kAvgQ:	9	5		0	0	40		7	18	0		10	0	0		0

Note: Queue reported is the number of cars per lane.

SUGARBUSH SUBDIVISION
TM5295RPL

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

Intersection #8 Deer Springs Rd/N. Twin Oaks Valley Rd

Cycle (sec):	100	Critical Vol./Cap.(X):	1.325
Loss Time (sec):	9 (Y+R=4.0 sec)	Average Delay (sec/veh):	143.4
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:	7	20		7	7	20		7	7	20		7	7	20		7
Lanes:	1 0	1	0	0	0 0	1	0	1	1 0	0	0	1	0 0	0	0	0
Volume Module:																
Base Vol:	71	680		0	0	1777		69	49		0	74	0		0	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:	71	680		0	0	1777		69	49		0	74	0		0	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:	0.92	0.92		0.92	0.92	0.92		0.92	0.92	0.92		0.92	0.92	0.92		0.92
PHF Volume:	77	739		0	0	1932		75	53		0	80	0		0	0
Reduct Vol:	0	0		0	0	0		0	0	0		0	0	0		0
Reduced Vol:	77	739		0	0	1932		75	53		0	80	0		0	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
FinalVolume:	77	739		0	0	1932		75	53		0	80	0		0	0
Saturation Flow Module:																
Sat/Lane:	1900	1900		1900	1900	1900		1900	1900	1900		1900	1900	1900		1900
Adjustment:	0.87	0.92		0.92	0.92	0.92		0.78	0.87	0.92		0.78	0.92	0.92		0.92
Lanes:	1.00	1.00		0.00	0.00	1.00		1.00	1.00	0.00		1.00	0.00	0.00		0.00
Final Sat.:	1661	1748		0	0	1748		1486	1661		0	1486	0		0	0
Capacity Analysis Module:																
Vol/Sat:	0.05	0.42		0.00	0.00	1.10		0.05	0.03	0.00		0.05	0.00	0.00		0.00
Crit Moves:	****					****						****				
Green/Cycle:	0.07	0.84		0.00	0.00	0.77		0.77	0.07	0.00		0.07	0.00	0.00		0.00
Volume/Cap:	0.66	0.50		0.00	0.00	1.44		0.07	0.46	0.00		0.77	0.00	0.00		0.00
Uniform Del:	45.4	2.2		0.0	0.0	11.5		2.8	44.7	0.0		45.7	0.0	0.0		0.0
IncremntDel:	13.5	0.3		0.0	0.0	200		0.0	2.8	0.0		29.5	0.0	0.0		0.0
InitQueuDel:	0.0	0.0		0.0	0.0	0.0		0.0	0.0	0.0		0.0	0.0	0.0		0.0
Delay Adj:	1.00	1.00		0.00	0.00	1.00		1.00	1.00	0.00		1.00	0.00	0.00		0.00
Delay/Veh:	58.9	2.5		0.0	0.0	212		2.8	47.5	0.0		75.2	0.0	0.0		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:	58.9	2.5		0.0	0.0	212		2.8	47.5	0.0		75.2	0.0	0.0		0.0
LOS by Move:	E	A		A	A	F		A	D	A		E	A	A		A
HCM2kAvgQ:	4	7		0	0	130		1	2	0		4	0	0		0

Note: Queue reported is the number of cars per lane.

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SUGARBUSH SUBDIVISION
TM5295RPL

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

Intersection #9 I-15 SB Ramps/Deer Springs Rd.

Cycle (sec):	100	Critical Vol./Cap.(X):	1.829
Loss Time (sec):	9 (Y+R=4.0 sec)	Average Delay (sec/veh):	314.5
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:	Split Phase			Split Phase			Protected			Protected		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	7	0	7	0	20	7	7	20	0
Lanes:	0 0	0 0	0	0 0	1! 0	0	0 0	0 1	0	1 0	1 0	0
Volume Module:												
Base Vol:	0	0	0	60	5	985	0	712	704	355	1059	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:	0	0	0	60	5	985	0	712	704	355	1059	0
User Adj:	1.00	1.00	1.00	1.00	1.00	0.90	1.00	1.00	0.90	1.00	1.00	1.00
PHF Adj:	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
PHF Volume:	0	0	0	65	5	964	0	774	689	386	1151	0
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	0	0	0	65	5	964	0	774	689	386	1151	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
FinalVolume:	0	0	0	65	5	964	0	774	689	386	1151	0
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	1.00	1.00	1.00	0.87	0.87	0.87	1.00	0.94	0.94	0.95	1.00	1.00
Lanes:	0.00	0.00	0.00	0.06	0.01	0.93	0.00	0.53	0.47	1.00	1.00	0.00
Final Sat.:	0	0	0	104	9	1533	0	941	837	1805	1900	0
Capacity Analysis Module:												
Vol/Sat:	0.00	0.00	0.00	0.63	0.63	0.63	0.00	0.82	0.82	0.21	0.61	0.00
Crit Moves:					****			****		****		
Green/Cycle:	0.00	0.00	0.00	0.34	0.34	0.34	0.00	0.45	0.45	0.12	0.57	0.00
Volume/Cap:	0.00	0.00	0.00	1.83	1.83	1.83	0.00	1.83	1.83	1.83	1.07	0.00
Uniform Del:	0.0	0.0	0.0	32.8	32.8	32.8	0.0	27.5	27.5	44.2	21.7	0.0
IncremntDel:	0.0	0.0	0.0	380.1	380	380.1	0.0	378	378.1	391.1	48.0	0.0
InitQueuDel:	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Delay Adj:	0.00	0.00	0.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	0.00
Delay/Veh:	0.0	0.0	0.0	412.9	413	412.9	0.0	406	405.6	435.3	69.7	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:	0.0	0.0	0.0	412.9	413	412.9	0.0	406	405.6	435.3	69.7	0.0
LOS by Move:	A	A	A	F	F	F	A	F	F	F	E	A
HCM2kAvgQ:	0	0	0	89	89	89	0	126	126	35	50	0

Note: Queue reported is the number of cars per lane.

SUGARBUSH SUBDIVISION
TM5295RPL

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

Intersection #10 I-15 NB Ramps/Deer Springs Rd.

Cycle (sec):	110	Critical Vol./Cap.(X):	1.153
Loss Time (sec):	9 (Y+R=4.0 sec)	Average Delay (sec/veh):	95.3
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:	Split Phase			Split Phase			Protected			Protected		
Rights:	Include			Include			Include			Include		
Min. Green:	7	0	7	0	0	0	7	20	0	0	20	7
Lanes:	0 1	0 0	1	0 0	0 0	0	1 0	1 0	0	0 0	1 0	1
Volume Module:												
Base Vol:	477	6	186	0	0	0	387	396	0	0	900	100
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:	477	6	186	0	0	0	387	396	0	0	900	100
User Adj:	1.00	1.00	0.85	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.85
PHF Adj:	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
PHF Volume:	518	7	172	0	0	0	421	430	0	0	978	92
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	518	7	172	0	0	0	421	430	0	0	978	92
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
FinalVolume:	518	7	172	0	0	0	421	430	0	0	978	92
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.89	0.89	0.85	1.00	1.00	1.00	0.95	1.00	1.00	1.00	1.00	0.85
Lanes:	0.99	0.01	1.00	0.00	0.00	0.00	1.00	1.00	0.00	0.00	1.00	1.00
Final Sat.:	1666	21	1615	0	0	0	1805	1900	0	0	1900	1615
Capacity Analysis Module:												
Vol/Sat:	0.31	0.31	0.11	0.00	0.00	0.00	0.23	0.23	0.00	0.00	0.51	0.06
Crit Moves:	****						****				****	
Green/Cycle:	0.27	0.27	0.27	0.00	0.00	0.00	0.20	0.65	0.00	0.00	0.45	0.45
Volume/Cap:	1.15	1.15	0.39	0.00	0.00	0.00	1.15	0.35	0.00	0.00	1.15	0.13
Uniform Del:	40.2	40.2	32.8	0.0	0.0	0.0	43.9	8.8	0.0	0.0	30.4	17.9
IncremntDel:	91.5	91.5	0.6	0.0	0.0	0.0	95.8	0.2	0.0	0.0	82.4	0.1
InitQueuDel:	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Delay Adj:	1.00	1.00	1.00	0.00	0.00	0.00	1.00	1.00	0.00	0.00	1.00	1.00
Delay/Veh:	131.7	132	33.4	0.0	0.0	0.0	139.7	9.0	0.0	0.0	113	18.0
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:	131.7	132	33.4	0.0	0.0	0.0	139.7	9.0	0.0	0.0	113	18.0
LOS by Move:	F	F	C	A	A	A	F	A	A	A	F	B
HCM2kAvgQ:	30	30	5	0	0	0	24	7	0	0	52	2

Note: Queue reported is the number of cars per lane.

Ex+P+Cm-PM Wed May 30, 2007 10:42:50 Page 2-1

Impact Analysis Report
Level Of Service

Intersection	Base LOS	Base Del/ Veh	Base V/ C	Future LOS	Future Del/ Veh	Future V/ C	Change in	
# 1 SR 78/Sycamore EB Ramps	E	67.4	1.190	E	67.4	1.190	+ 0.000	D/V
# 2 SR 78/Sycamore WB Ramps	C	34.7	0.957	C	34.7	0.957	+ 0.000	D/V
# 3 S. Santa Fe/Robelini Dr	D	53.0	1.040	D	53.0	1.040	+ 0.000	D/V
# 4 S. Santa Fe/Buena Creek	F	217.5	1.404	F	217.5	1.404	+ 0.000	D/V
# 5 Buena Creek/Monte Vista Dr	F	160.0	1.644	F	160.0	1.644	+ 0.000	V/C
# 6 Buena Creek/Sugarbush Dr	F	92.2	0.000	F	92.2	0.000	+ 0.000	D/V
# 7 Twin Oaks Valley Road/Buena Cr	F	130.8	1.421	F	130.8	1.421	+ 0.000	D/V
# 8 Deer Springs Rd/N. Twin Oaks V	F	175.4	1.499	F	175.4	1.499	+ 0.000	D/V
# 9 I-15 SB Ramps/Deer Springs Rd.	F	417.7	2.127	F	417.7	2.127	+ 0.000	D/V
# 10 I-15 NB Ramps/Deer Springs Rd.	F	319.7	1.892	F	319.7	1.892	+ 0.000	D/V

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

Intersection #1 SR 78/Sycamore EB Ramps

Cycle (sec):	100	Critical Vol./Cap.(X):	1.190
Loss Time (sec):	9 (Y+R=4.0 sec)	Average Delay (sec/veh):	67.4
Optimal Cycle:	180	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:	Protected			Protected			Split Phase			Split Phase		
Rights:	Include			Include			Include			Include		
Min. Green:	7	20	7	7	20	7	7	20	7	7	20	7
Lanes:	0 1	2 0	1	2 0	3 0	0	1 1	0 0	1	0 0	0 0	0
Volume Module: pm peak												
Base Vol:	145	1714	946	423	1079	0	635	0	468	0	0	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:	145	1714	946	423	1079	0	635	0	468	0	0	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:	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
PHF Volume:	158	1863	1028	460	1173	0	690	0	509	0	0	0
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	158	1863	1028	460	1173	0	690	0	509	0	0	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
FinalVolume:	158	1863	1028	460	1173	0	690	0	509	0	0	0
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.91	0.91	0.85	0.92	0.91	1.00	0.95	1.00	0.85	1.00	1.00	1.00
Lanes:	0.23	2.77	1.00	2.00	3.00	0.00	2.00	0.00	1.00	0.00	0.00	0.00
Final Sat.:	403	4763	1615	3502	5187	0	3618	0	1615	0	0	0
Capacity Analysis Module:												
Vol/Sat:	0.39	0.39	0.64	0.13	0.23	0.00	0.19	0.00	0.31	0.00	0.00	0.00
Crit Moves:			****	****					****			
Green/Cycle:	0.41	0.53	0.53	0.11	0.24	0.00	0.26	0.00	0.26	0.00	0.00	0.00
Volume/Cap:	0.96	0.73	1.19	1.19	0.96	0.00	0.72	0.00	1.19	0.00	0.00	0.00
Uniform Del:	28.7	17.8	23.3	44.5	37.7	0.0	33.4	0.0	36.8	0.0	0.0	0.0
IncremntDel:	11.1	1.0	97.0	108.5	16.4	0.0	2.7	0.0	106.7	0.0	0.0	0.0
InitQueuDel:	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Delay Adj:	1.00	1.00	1.00	1.00	1.00	0.00	1.00	0.00	1.00	0.00	0.00	0.00
Delay/Veh:	39.8	18.8	120.3	153.0	54.0	0.0	36.1	0.0	143.4	0.0	0.0	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:	39.8	18.8	120.3	153.0	54.0	0.0	36.1	0.0	143.4	0.0	0.0	0.0
LOS by Move:	D	B	F	F	D	A	D	A	F	A	A	A
HCM2kAvgQ:	28	18	54	15	18	0	11	0	29	0	0	0

Note: Queue reported is the number of cars per lane.

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

Intersection #2 SR 78/Sycamore WB Ramps

Cycle (sec):	100	Critical Vol./Cap.(X):	0.957
Loss Time (sec):	9 (Y+R=4.0 sec)	Average Delay (sec/veh):	34.7
Optimal Cycle:	144	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:	Protected			Protected			Split Phase			Split Phase		
Rights:	Include			Include			Include			Include		
Min. Green:	7	20	7	7	20	7	7	20	7	7	20	7
Lanes:	2 0	3 0	1	0 0	3 0	1	0 0	0 0	0	1 1	0 0	2
Volume Module: pm peak												
Base Vol:	851	1623	0	0	782	560	0	0	0	725	4	536
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:	851	1623	0	0	782	560	0	0	0	725	4	536
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	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
PHF Volume:	925	1764	0	0	850	609	0	0	0	788	4	583
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	925	1764	0	0	850	609	0	0	0	788	4	583
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
FinalVolume:	925	1764	0	0	850	609	0	0	0	788	4	583
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.92	0.91	1.00	1.00	0.91	0.85	1.00	1.00	1.00	0.91	0.91	0.75
Lanes:	2.00	3.00	1.00	0.00	3.00	1.00	0.00	0.00	0.00	1.99	0.01	2.00
Final Sat.:	3495	5177	1896	0	5177	1612	0	0	0	3447	19	2837
Capacity Analysis Module:												
Vol/Sat:	0.26	0.34	0.00	0.00	0.16	0.38	0.00	0.00	0.00	0.23	0.23	0.21
Crit Moves:	****					****					****	
Green/Cycle:	0.28	0.67	0.00	0.00	0.39	0.39	0.00	0.00	0.00	0.24	0.24	0.24
Volume/Cap:	0.96	0.51	0.00	0.00	0.42	0.96	0.00	0.00	0.00	0.96	0.96	0.86
Uniform Del:	35.6	8.2	0.0	0.0	21.9	29.4	0.0	0.0	0.0	37.6	37.6	36.5
IncremntDel:	19.3	0.1	0.0	0.0	0.1	25.4	0.0	0.0	0.0	21.4	21.4	10.8
InitQueuDel:	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Delay Adj:	1.00	1.00	0.00	0.00	1.00	1.00	0.00	0.00	0.00	1.00	1.00	1.00
Delay/Veh:	54.9	8.3	0.0	0.0	22.1	54.8	0.0	0.0	0.0	59.0	59.0	47.3
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:	54.9	8.3	0.0	0.0	22.1	54.8	0.0	0.0	0.0	59.0	59.0	47.3
LOS by Move:	D	A	A	A	C	D	A	A	A	E	E	D
HCM2kAvgQ:	20	10	0	0	7	24	0	0	0	17	17	13

Note: Queue reported is the number of cars per lane.

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

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Intersection #3 S. Santa Fe/Robelini Dr

****

Cycle (sec): 100 Critical Vol./Cap.(X): 1.040
Loss Time (sec): 9 (Y+R=4.0 sec) Average Delay (sec/veh): 53.0
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:	Split Phase				Split Phase				Protected				Protected			
Rights:	Ovl				Include				Include				Include			
Min. Green:	7	20		7	7	20		7	7	20		7	7	20		7
Lanes:	1 0	0	0	1	0 0	0	0	0	0 0	1	0	1	1 0	1	0	0
Volume Module: pm peak																
Base Vol:	484	0	801		0	0		0	0	589	285		528	623		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:	484	0	801		0	0		0	0	589	285		528	623		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:	0.92	0.92	0.92		0.92	0.92		0.92	0.92	0.92	0.92		0.92	0.92		0.92
PHF Volume:	526	0	871		0	0		0	0	640	310		574	677		0
Reduct Vol:	0	0	0		0	0		0	0	0	0		0	0		0
Reduced Vol:	526	0	871		0	0		0	0	640	310		574	677		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
FinalVolume:	526	0	871		0	0		0	0	640	310		574	677		0
Saturation Flow Module:																
Sat/Lane:	1900	1900	1900		1900	1900		1900	1900	1900	1900		1900	1900		1900
Adjustment:	0.95	1.00	0.85		1.00	1.00		1.00	1.00	0.85	0.95		1.00	1.00		1.00
Lanes:	1.00	0.00	1.00		0.00	0.00		0.00	1.00	1.00	1.00		1.00	1.00		0.00
Final Sat.:	1805	0	1615		0	0		0	0	1900	1615		1805	1900		0
Capacity Analysis Module:																
Vol/Sat:	0.29	0.00	0.54		0.00	0.00		0.00	0.00	0.34	0.19		0.32	0.36		0.00
Crit Moves:	****									****			****			
Green/Cycle:	0.28	0.00	0.59		0.00	0.00		0.00	0.00	0.32	0.32		0.31	0.63		0.00
Volume/Cap:	1.04	0.00	0.92		0.00	0.00		0.00	0.00	1.04	0.59		1.04	0.57		0.00
Uniform Del:	36.0	0.0	18.6		0.0	0.0		0.0	0.0	33.8	28.3		34.7	10.7		0.0
IncremntDel:	50.8	0.0	13.8		0.0	0.0		0.0	0.0	47.1	1.8		49.1	0.6		0.0
InitQueuDel:	0.0	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0		0.0	0.0		0.0
Delay Adj:	1.00	0.00	1.00		0.00	0.00		0.00	0.00	1.00	1.00		1.00	1.00		0.00
Delay/Veh:	86.8	0.0	32.4		0.0	0.0		0.0	0.0	80.9	30.1		83.8	11.3		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:	86.8	0.0	32.4		0.0	0.0		0.0	0.0	80.9	30.1		83.8	11.3		0.0
LOS by Move:	F	A	C		A	A		A	A	F	C		F	B		A
HCM2kAvgQ:	24	0	28		0	0		0	0	28	9		26	12		0

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Note: Queue reported is the number of cars per lane.

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SUGARBUSH SUBDIVISION
TM5295RPL

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

****

Intersection #4 S. Santa Fe/Buena Creek

****

Cycle (sec): 100 Critical Vol./Cap.(X): 1.404
Loss Time (sec): 9 (Y+R=4.0 sec) Average Delay (sec/veh): 217.5
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				Split Phase				Split Phase			
Rights:	Include				Include				Include				Include			
Min. Green:	7	20		7	7	20		7	7	20		7	7	20		7
Lanes:	1 0	1	1	0	1 0	1	1	0	0 1	0	0	0	1 0	1	1	0
Volume Module: pm peak																
Base Vol:	0	0		0	153	0		30	765	514		0	0	540		224
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	153	0		30	765	514		0	0	540		224
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	0.92	0.92		0.92	0.92	0.92		0.92	0.92	0.92		0.92
PHF Volume:	0	0		0	166	0		33	832	559		0	0	587		243
Reduct Vol:	0	0		0	0	0		0	0	0		0	0	0		0
Reduced Vol:	0	0		0	166	0		33	832	559		0	0	587		243
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
FinalVolume:	0	0		0	166	0		33	832	559		0	0	587		243
Saturation Flow Module:																
Sat/Lane:	1900	1900		1900	1900	1900		1900	1900	1900		1900	1900	1900		1900
Adjustment:	0.85	0.81		0.81	0.81	0.69		0.83	0.83	0.85		0.85	0.77	0.77		
Lanes:	1.00	2.00		0.00	1.00	1.00		1.00	0.60	0.40		0.00	1.00	1.41		0.59
Final Sat.:	1615	3069		0	1534	1534		1304	938	630		0	1615	2073		860
Capacity Analysis Module:																
Vol/Sat:	0.00	0.00		0.00	0.11	0.00		0.03	0.89	0.89		0.00	0.00	0.28		0.28
Crit Moves:					****				****							****
Green/Cycle:	0.00	0.00		0.00	0.08	0.00		0.08	0.63	0.63		0.00	0.00	0.20		0.20
Volume/Cap:	0.00	0.00		0.00	1.40	0.00		0.32	1.40	1.40		0.00	0.00	1.40		1.40
Uniform Del:	0.0	0.0		0.0	46.1	0.0		43.7	18.4	18.4		0.0	0.0	39.9		39.9
IncremntDel:	0.0	0.0		0.0	224.7	0.0		1.9	188.1	188		0.0	0.0	192		192.0
InitQueuDel:	0.0	0.0		0.0	0.0	0.0		0.0	0.0	0.0		0.0	0.0	0.0		0.0
Delay Adj:	0.00	0.00		0.00	1.00	0.00		1.00	1.00	1.00		0.00	0.00	1.00		1.00
Delay/Veh:	0.0	0.0		0.0	270.9	0.0		45.5	206.5	207		0.0	0.0	232		231.9
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:	0.0	0.0		0.0	270.9	0.0		45.5	206.5	207		0.0	0.0	232		231.9
LOS by Move:	A	A		A	F	A		D	F	F		A	A	F		F
HCM2kAvgQ:	0	0		0	13	0		1	92	92		0	0	31		31

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Note: Queue reported is the number of cars per lane.

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F.9

Ex+P+Cm-PM Wed May 30, 2007 10:42:51 Page 7-1

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

Intersection #5 Buena Creek/Monte Vista Dr

Cycle (sec): 100 Critical Vol./Cap.(X): 1.644
Loss Time (sec): 0 (Y+R=4.0 sec) Average Delay (sec/veh): 160.0
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		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Lanes:	0 0	0 0	0	0 0	1! 0	0	0 1	0 0	0	0 0	1 0	1
Volume Module:												
Base Vol:	0	0	0	412	0	141	153	637	0	0	317	342
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	412	0	141	153	637	0	0	317	342
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	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
PHF Volume:	0	0	0	448	0	153	166	692	0	0	345	372
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	0	0	0	448	0	153	166	692	0	0	345	372
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
FinalVolume:	0	0	0	448	0	153	166	692	0	0	345	372
Saturation Flow Module:												
Adjustment:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.10	1.00	1.00	1.10	1.00
Lanes:	0.00	0.00	0.00	0.74	0.01	0.25	0.19	0.81	0.00	0.00	1.00	1.00
Final Sat.:	0	0	0	403	0	138	101	463	0	0	532	534
Capacity Analysis Module:												
Vol/Sat:	xxxx	xxxx	xxxx	1.11	0.00	1.11	1.64	1.49	xxxx	xxxx	0.65	0.70
Crit Moves:				****			****					****
Delay/Veh:	0.0	0.0	0.0	97.8	97.8	97.8	316.3	316	0.0	0.0	26.5	23.5
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:	0.0	0.0	0.0	97.8	97.8	97.8	316.3	316	0.0	0.0	26.5	23.5
LOS by Move:	*	*	*	F	F	F	F	F	*	*	D	C
ApproachDel:	xxxxxx				97.8			316.3			24.9	
Delay Adj:	xxxxx				1.00			1.00			1.00	
ApprAdjDel:	xxxxxx				97.8			316.3			24.9	
LOS by Appr:	*				F			F			C	
AllWayAvgQ:	0.0	0.0	0.0	13.2	13.2	13.2	44.5	44.5	44.5	0.0	2.2	2.1

Note: Queue reported is the number of cars per lane.

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

Intersection #6 Buena Creek/Sugarbush Dr

Average Delay (sec/veh): 1.8 Worst Case Level Of Service: F[92.2]

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	1! 0	0	0 0	1! 0	0	0 0	1! 0	0
Volume Module:												
Base Vol:	20	0	8	1	0	9	12	971	31	19	656	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:	20	0	8	1	0	9	12	971	31	19	656	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:	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
PHF Volume:	22	0	9	1	0	10	13	1055	34	21	713	3
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
FinalVolume:	22	0	9	1	0	10	13	1055	34	21	713	3
Critical Gap Module:												
Critical Gp:	7.1	6.5	6.2	7.1	6.5	6.2	4.1	xxxx	xxxxx	4.1	xxxx	xxxxx
FollowUpTim:	3.5	4.0	3.3	3.5	4.0	3.3	2.2	xxxx	xxxxx	2.2	xxxx	xxxxx
Capacity Module:												
Cnflict Vol:	1859	1856	1072	1859	1871	715	716	xxxx	xxxxx	1089	xxxx	xxxxx
Potent Cap.:	57	75	270	57	73	434	894	xxxx	xxxxx	648	xxxx	xxxxx
Move Cap.:	54	71	270	53	70	434	894	xxxx	xxxxx	648	xxxx	xxxxx
Volume/Cap:	0.41	0.00	0.03	0.02	0.00	0.02	0.01	xxxx	xxxx	0.03	xxxx	xxxx
Level Of Service Module:												
2Way95thQ:	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	0.0	xxxx	xxxxx	0.1	xxxx	xxxxx
Control Del:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	9.1	xxxx	xxxxx	10.7	xxxx	xxxxx
LOS by Move:	*	*	*	*	*	*	A	*	*	B	*	*
Movement:	LT	- LTR	- RT	LT	- LTR	- RT	LT	- LTR	- RT	LT	- LTR	- RT
Shared Cap.:	xxxx	70	xxxxx	xxxx	253	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx
SharedQueue:	xxxxx	1.7	xxxxx	xxxxx	0.1	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx
Shrd ConDel:	xxxxx	92.2	xxxxx	xxxxx	19.9	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx
Shared LOS:	*	F	*	*	C	*	*	*	*	*	*	*
ApproachDel:		92.2			19.9			xxxxxx			xxxxxx	
ApproachLOS:		F			C			*			*	

Note: Queue reported is the number of cars per lane.

F.9

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                        Level Of Service Computation Report
              2000 HCM Operations Method (Base Volume Alternative)
********************************************************************************
Intersection #7 Twin Oaks Valley Road/Buena Creek Road
********************************************************************************
Cycle (sec):          100                  Critical Vol./Cap.(X):          1.421
Loss Time (sec):        6 (Y+R=4.0 sec)    Average Delay (sec/veh):        130.8
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:          Permitted        Permitted        Permitted        Permitted
Rights:             Include          Include          Include          Include
Min. Green:     7   20    7    7   20    7    7   20    7    7   20    7
Lanes:        1  0  1  0  1    1  0  1  0  1    0  1  0  0  1|  0  0  0  0  0
------------|---------------||---------------||---------------||---------------|
Volume Module:pm peak
Base Vol:     188 1137    1    1  839  419  756    0  257    2    0    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:  188 1137    1    1  839  419  756    0  257    2    0    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:     0.92 0.92 0.92 0.92 0.92 0.92 0.92 0.92 0.92 0.92 0.92 0.92
PHF Volume:   204 1236    1    1  912  455  822    0  279    2    0    2
Reduct Vol:     0    0    0    0    0    0    0    0    0    0    0    0
Reduced Vol:  204 1236    1    1  912  455  822    0  279    2    0    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
FinalVolume:  204 1236    1    1  912  455  822    0  279    2    0    2
------------|---------------||---------------||---------------||---------------|
Saturation Flow Module:
Sat/Lane:    1900 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900
Adjustment:  0.15 0.98 0.83 0.06 0.98 0.83 0.70 0.98 0.83 0.67 0.98 0.67
Lanes:       1.00 1.00 1.00 1.00 1.00 1.00 1.00 0.00 1.00 0.50 0.00 0.50
Final Sat.:   286 1862 1583  116 1862 1583 1324    0 1583  637    0  637
------------|---------------||---------------||---------------||---------------|
Capacity Analysis Module:
Vol/Sat:     0.72 0.66 0.00 0.01 0.49 0.29 0.62 0.00 0.18 0.00 0.00 0.00
Crit Moves:  ****                          ****
Green/Cycle: 0.50 0.50 0.50 0.50 0.50 0.50 0.44 0.00 0.44 0.44 0.00 0.44
Volume/Cap:  1.42 1.32 0.00 0.02 0.97 0.57 1.42 0.00 0.40 0.01 0.00 0.01
Uniform Del: 24.8 24.8 12.3 12.4 24.2 17.3 28.2  0.0 19.3 15.9  0.0 15.9
IncremntDel:225.0  151  0.0  0.1 22.9  1.0 199.5  0.0  0.4  0.0  0.0  0.0
InitQueuDel:  0.0  0.0  0.0  0.0  0.0  0.0  0.0  0.0  0.0  0.0  0.0  0.0
Delay Adj:   1.00 1.00 1.00 1.00 1.00 1.00 1.00 0.00 1.00 1.00 0.00 1.00
Delay/Veh:  249.9  176 12.3 12.5 47.1 18.3 227.6  0.0 19.7 15.9  0.0 15.9
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: 249.9  176 12.3 12.5 47.1 18.3 227.6  0.0 19.7 15.9  0.0 15.9
LOS by Move:   F    F    B    B    D    B    F    A    B    B    A    B
HCM2kAvgQ:    16   75    0    0   34   10   56    0    6    0    0    0
********************************************************************************
Note: Queue reported is the number of cars per lane.
********************************************************************************

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                        Level Of Service Computation Report
              2000 HCM Operations Method (Base Volume Alternative)
********************************************************************************
Intersection #8 Deer Springs Rd/N. Twin Oaks Valley Rd
********************************************************************************
Cycle (sec):          100                  Critical Vol./Cap.(X):          1.499
Loss Time (sec):        9 (Y+R=4.0 sec)    Average Delay (sec/veh):        175.4
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:     7   20    7    7   20    7    7   20    7    7   20    7
Lanes:        1  0  1  0  0    0  0  1  0  1    1  0  0  0  1    0  0  0  0  0
------------|---------------||---------------||---------------||---------------|
Volume Module:
Base Vol:      61 2104    0    0  886   76   59    0   76    0    0    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:   61 2104    0    0  886   76   59    0   76    0    0    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:     0.92 0.92 0.92 0.92 0.92 0.92 0.92 0.92 0.92 0.92 0.92 0.92
PHF Volume:    66 2287    0    0  963   83   64    0   83    0    0    0
Reduct Vol:     0    0    0    0    0    0    0    0    0    0    0    0
Reduced Vol:   66 2287    0    0  963   83   64    0   83    0    0    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
FinalVolume:   66 2287    0    0  963   83   64    0   83    0    0    0
------------|---------------||---------------||---------------||---------------|
Saturation Flow Module:
Sat/Lane:    1900 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900
Adjustment:  0.87 0.92 0.92 0.92 0.92 0.78 0.87 0.92 0.78 0.92 0.92 0.92
Lanes:       1.00 1.00 0.00 0.00 1.00 1.00 1.00 0.00 1.00 0.00 0.00 0.00
Final Sat.:  1661 1748    0    0 1748 1486 1661    0 1486    0    0    0
------------|---------------||---------------||---------------||---------------|
Capacity Analysis Module:
Vol/Sat:     0.04 1.31 0.00 0.00 0.55 0.06 0.04 0.00 0.06 0.00 0.00 0.00
Crit Moves:       ****           ****                     ****
Green/Cycle: 0.09 0.84 0.00 0.00 0.75 0.75 0.07 0.00 0.07 0.00 0.00 0.00
Volume/Cap:  0.42 1.56 0.00 0.00 0.74 0.07 0.55 0.00 0.79 0.00 0.00 0.00
Uniform Del: 42.7  8.0  0.0  0.0  7.2  3.4 45.0  0.0 45.8  0.0  0.0  0.0
IncremntDel:  1.8  254  0.0  0.0  2.3  0.0  5.6  0.0 33.1  0.0  0.0  0.0
InitQueuDel:  0.0  0.0  0.0  0.0  0.0  0.0  0.0  0.0  0.0  0.0  0.0  0.0
Delay Adj:   1.00 1.00 0.00 0.00 1.00 1.00 1.00 0.00 1.00 0.00 0.00 0.00
Delay/Veh:   44.5  262  0.0  0.0  9.5  3.5 50.6  0.0 78.9  0.0  0.0  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:  44.5  262  0.0  0.0  9.5  3.5 50.6  0.0 78.9  0.0  0.0  0.0
LOS by Move:   D    F    A    A    A    A    D    A    E    A    A    A
HCM2kAvgQ:     2  169    0    0   18    1    3    0    4    0    0    0
********************************************************************************
Note: Queue reported is the number of cars per lane.
********************************************************************************

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SUGARBUSH SUBDIVISION
TM5295RPL

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

Intersection #9 I-15 SB Ramps/Deer Springs Rd.

Cycle (sec): 100 Critical Vol./Cap.(X): 2.127
Loss Time (sec): 9 (Y+R=4.0 sec) Average Delay (sec/veh): 417.7
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:	Split Phase						Split Phase						Protected						Protected					
Rights:	Include						Include						Include						Include					
Min. Green:	0		0		0		7		0		7		0		20		7		7		20		0	
Lanes:	0	0	0	0	0		0	0	1!	0	0		0	0	0	1	0		1	0	1	0	0	
Volume Module:																								
Base Vol:		0		0		0		110		2		642		0	1539		629		385	1650			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	1.00		1.00		1.00
Initial Bse:		0		0		0		110		2		642		0	1539		629		385	1650			0	
User Adj:	1.00	1.00		1.00		1.00	1.00	1.00		1.00		0.90	1.00	1.00		0.90		1.00	1.00	1.00		1.00		1.00
PHF Adj:	0.92	0.92		0.92		0.92	0.92	0.92		0.92		0.92	0.92	0.92		0.92		0.92	0.92	0.92		0.92		0.92
PHF Volume:		0		0		0		120		2		628		0	1673		615		418	1793			0	
Reduct Vol:		0		0		0		0		0		0		0	0		0		0	0			0	
Reduced Vol:		0		0		0		120		2		628		0	1673		615		418	1793			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	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	1.00	1.00		1.00		1.00
FinalVolume:		0		0		0		120		2		628		0	1673		615		418	1793			0	
Saturation Flow Module:																								
Sat/Lane:	1900	1900		1900		1900	1900	1900		1900		1900	1900	1900		1900		1900	1900	1900		1900		1900
Adjustment:	1.00	1.00		1.00		1.00	0.87	0.87		0.87		0.87	1.00	0.96		0.96		0.95	1.00	1.00		1.00		1.00
Lanes:	0.00	0.00		0.00		0.00	0.16	0.01		0.83		0.00	0.00	0.73		0.27		1.00	1.00	0.00		0.00		0.00
Final Sat.:		0		0		0		263		5		1382		0	1339		493		1805	1900			0	
Capacity Analysis Module:																								
Vol/Sat:	0.00	0.00		0.00		0.00	0.45	0.45		0.45		0.45	0.00	1.25		1.25		0.23	0.94	0.00				
Crit Moves:								****						****				****						
Green/Cycle:	0.00	0.00		0.00		0.00	0.21	0.21		0.21		0.21	0.00	0.59		0.59		0.11	0.70	0.00				
Volume/Cap:	0.00	0.00		0.00		0.00	2.13	2.13		2.13		2.13	0.00	2.13		2.13		2.13	1.36	0.00				
Uniform Del:	0.0	0.0		0.0		0.0	39.3	39.3		39.3		39.3	0.0	20.6		20.6		44.5	15.2	0.0				
IncremntDel:	0.0	0.0		0.0		0.0	516.6	517		516.6		0.0	510	510.3		523.9		165	0.0					
InitQueuDel:	0.0	0.0		0.0		0.0	0.0	0.0		0.0		0.0	0.0	0.0		0.0		0.0	0.0	0.0				
Delay Adj:	0.00	0.00		0.00		0.00	1.00	1.00		1.00		1.00	0.00	1.00		1.00		1.00	1.00	0.00				
Delay/Veh:	0.0	0.0		0.0		0.0	555.9	556		555.9		0.0	531	530.9		568.4		180	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	1.00	1.00				
AdjDel/Veh:	0.0	0.0		0.0		0.0	555.9	556		555.9		0.0	531	530.9		568.4		180	0.0					
LOS by Move:	A	A		A		A	F	F		F		A	F	F		F		F	A					
HCM2kAvgQ:		0		0		0		72		72		72		0	217		217		41	112			0	

Note: Queue reported is the number of cars per lane.

SUGARBUSH SUBDIVISION
TM5295RPL

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

Intersection #10 I-15 NB Ramps/Deer Springs Rd.

Cycle (sec): 110 Critical Vol./Cap.(X): 1.892
Loss Time (sec): 9 (Y+R=4.0 sec) Average Delay (sec/veh): 319.7
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:	Split Phase						Split Phase						Protected						Protected					
Rights:	Include						Include						Include						Include					
Min. Green:	7		0		7		0		0		0		7		20		0		0		20		7	
Lanes:	0	1	0	0	1		0	0	0	0	0		1	0	1	0	0		0	0	1	0	1	
Volume Module:																								
Base Vol:	1001		7		631		0		0		0		873		767		0		0		1002		61	
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	1.00		1.00		1.00
Initial Bse:	1001		7		631		0		0		0		873		767		0		0		1002		61	
User Adj:	1.00	1.00		0.85		1.00	1.00	1.00		1.00		1.00	1.00	1.00		1.00		1.00	1.00	1.00		1.00		0.85
PHF Adj:	0.92	0.92		0.92		0.92	0.92	0.92		0.92		0.92	0.92	0.92		0.92		0.92	0.92	0.92		0.92		0.92
PHF Volume:	1088		8		583		0		0		0		949		834		0		0		1089		56	
Reduct Vol:	0		0		0		0		0		0		0		0		0		0		0		0	
Reduced Vol:	1088		8		583		0		0		0		949		834		0		0		1089		56	
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	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	1.00	1.00		1.00		1.00
FinalVolume:	1088		8		583		0		0		0		949		834		0		0		1089		56	
Saturation Flow Module:																								
Sat/Lane:	1900	1900		1900		1900	1900	1900		1900		1900	1900	1900		1900		1900	1900	1900		1900		1900
Adjustment:	0.90	0.90		0.85		1.00	1.00	1.00		1.00		1.00	0.95	1.00		1.00		1.00	1.00	1.00		1.00		0.85
Lanes:	0.99	0.01		1.00		0.00	0.00	0.00		0.00		0.00	1.00	1.00		0.00		0.00	0.00	1.00		1.00		1.00
Final Sat.:	1704		12		1615		0		0		0		1805	1900			0		0		1900		1615	
Capacity Analysis Module:																								
Vol/Sat:	0.64	0.64		0.36		0.00	0.00	0.00					0.53	0.44		0.00		0.00	0.00	0.57		0.03		
Crit Moves:		****											****							****				
Green/Cycle:	0.34	0.34		0.34		0.00	0.00	0.00					0.28	0.58		0.00		0.00	0.00	0.30		0.30		
Volume/Cap:	1.89	1.89		1.07		0.00	0.00	0.00					1.89	0.76		0.00		0.00	1.89	0.12				
Uniform Del:	36.4	36.4		36.4		0.0	0.0	0.0					39.7	17.2		0.0		0.0	38.3	27.7				
IncremntDel:	408.1	408		58.5		0.0	0.0	0.0					409.0	3.0		0.0		0.0	408	0.1				
InitQueuDel:	0.0	0.0		0.0		0.0	0.0	0.0					0.0	0.0		0.0		0.0	0.0	0.0				
Delay Adj:	1.00	1.00		1.00		0.00	0.00	0.00					1.00	1.00		0.00		0.00	1.00	1.00				
Delay/Veh:	444.5	444		95.0		0.0	0.0	0.0					448.8	20.3		0.0		0.0	446	27.8				
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:	444.5	444		95.0		0.0	0.0	0.0					448.8	20.3		0.0		0.0	446	27.8				
LOS by Move:	F	F		F		A	A	A					F	C		A		A	F	C				
HCM2kAvgQ:	100	100		29		0		0					87	22		0		0	100			1		

Note: Queue reported is the number of cars per lane.

T.P

Existing + Project + Cumul. Projects – AM

INTERSECTION

Signalized Intersection
CAPACITY ANALYSIS

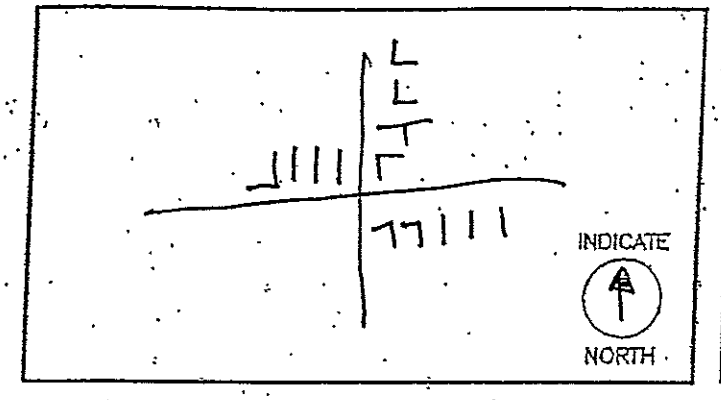
INTERSECTION SR 78/Sycamore Ave WB Ramps

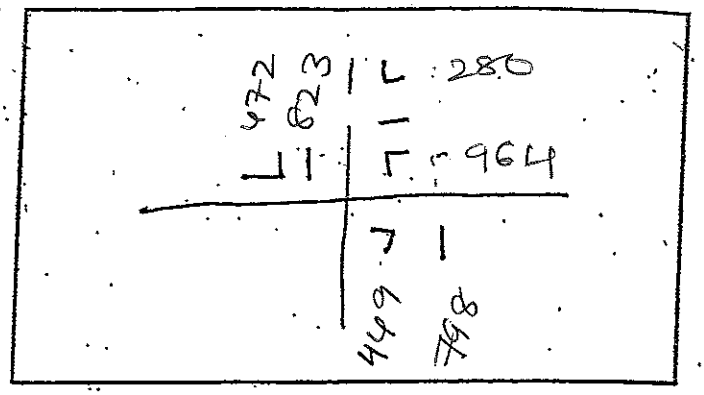
DIST. CO. RTE. P.M. _____

BY LK DATE 12/5/06

TIME AM AM PM

DIAGRAM AND TRAFFIC FLOWS:





LANE VOLUMES (ILV/HR)

PHASE 1	PHASE 2	PHASE 3	PHASE 4
L 411 411 411	L 61 255 266 266 266	L 140 L 140 T 482 T 482	

CRITICAL LANE VOLUMES (ILV/HR)

PHASE 1	PHASE 2	PHASE 3	PHASE 4
411	266	482	

TOTAL OPERATING LEVEL (ILV/HR) IS . . .

Σ
1,159

☑ < 1200 ILV/HR.

☐ > 1200 BUT < 1500 ILV/HR.

☐ > 1500 ILV/HR (CAPACITY)

REMARKS:

Under Capacity

F.13

Existing + Project + Cumlat Projects - PM

INTERSECTION

Signalized Intersection
CAPACITY ANALYSIS

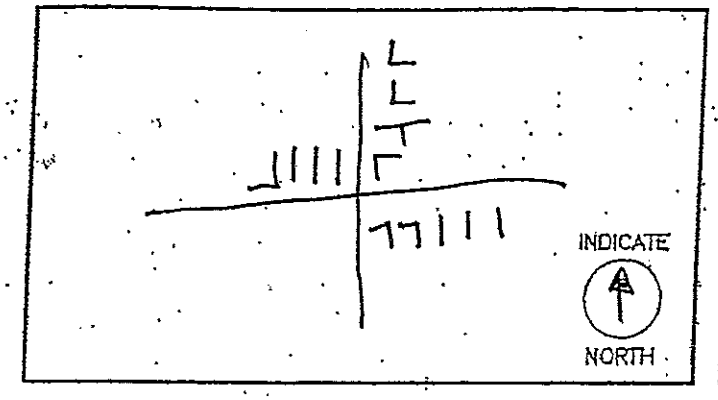
INTERSECTION SR 78/Sycamore Ave WB Ramps

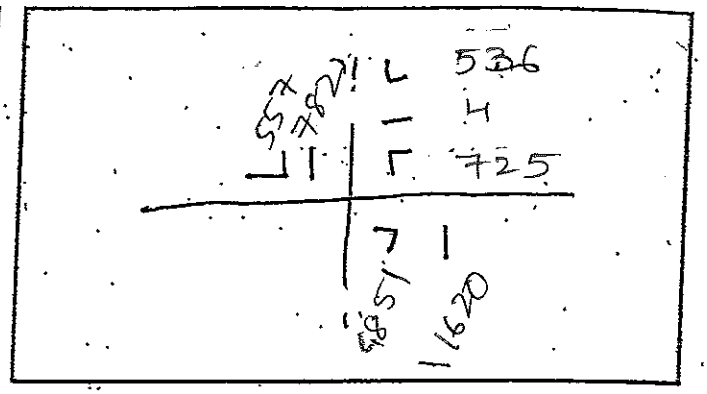
DIST. CO. RTE. P.M. _____

BY LK DATE 12/5/06

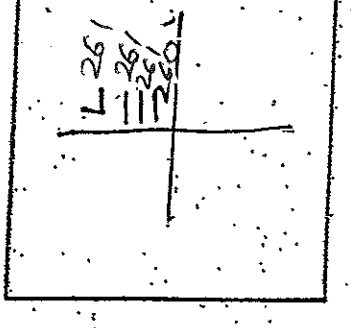
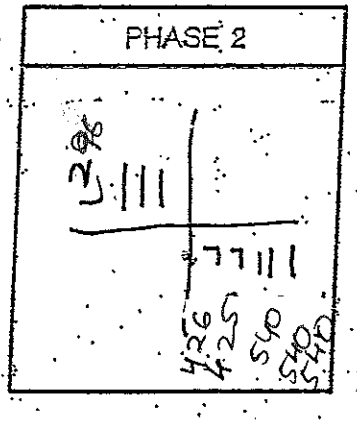
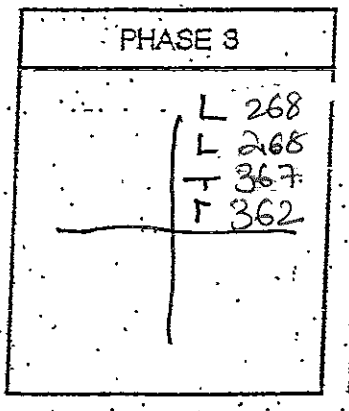
TIME PM AM PM

DIAGRAM AND TRAFFIC FLOWS:





LANE VOLUMES (ILV/HR)

PHASE 1	PHASE 2	PHASE 3	PHASE 4
			

CRITICAL LANE VOLUMES (ILV/HR)

PHASE 1	PHASE 2	PHASE 3	PHASE 4
261	540	367	

TOTAL OPERATING LEVEL (ILV/HR) IS . . .

Σ 1,168

☑ < 1200 ILV/HR.

☐ > 1200 BUT < 1500 ILV/HR.

☐ > 1500 ILV/HR (CAPACITY)

REMARKS:

Under Capacity

Ex+Proj + C.P. – AM

INTERSECTION

Signalized Intersection
CAPACITY ANALYSIS

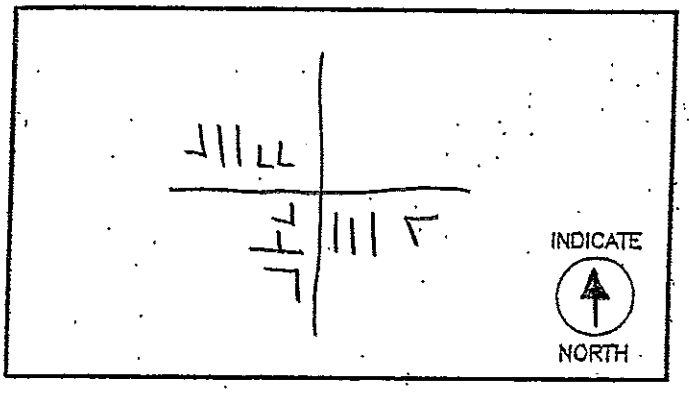
INTERSECTION SR78/Sycamore Ave
EB Ramps

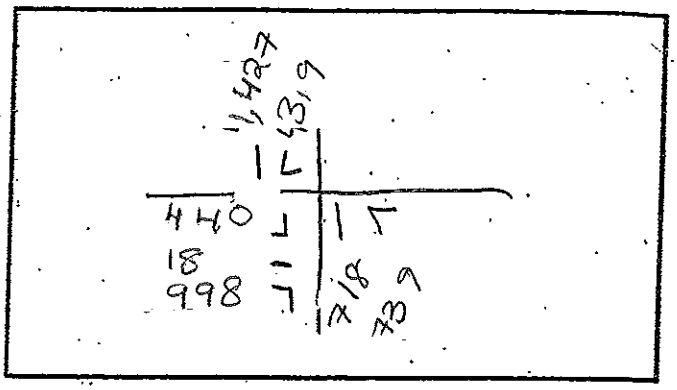
DIST. CO. RTE. P.M. _____

BY LK DATE 12/5/06

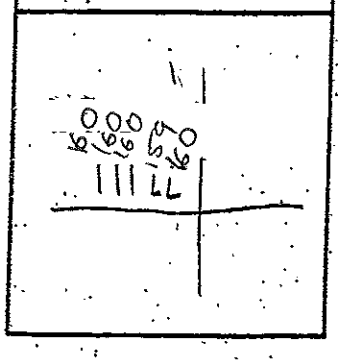
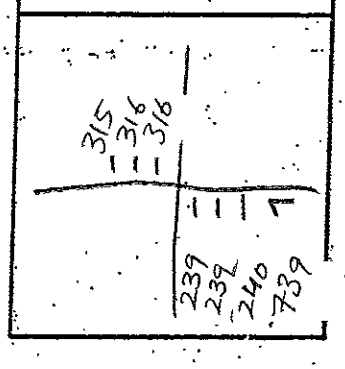
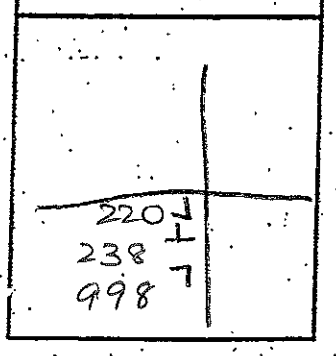
TIME AM AM PM

DIAGRAM AND TRAFFIC FLOWS:





LANE VOLUMES (ILV/HR)

PHASE 1	PHASE 2	PHASE 3	PHASE 4
			

CRITICAL LANE VOLUMES (ILV/HR)

PHASE 1	PHASE 2	PHASE 3	PHASE 4
160	739	998	

TOTAL OPERATING LEVEL (ILV/HR) IS . . .

Σ
1,897

- ☐ < 1200 ILV/HR.
- ☐ > 1200 BUT < 1500 ILV/HR.
- ☒ > 1500 ILV/HR (CAPACITY)

REMARKS:

over capacity

F.15

Ext + Proj + C.P. – PM

INTERSECTION

Signalized Intersection
CAPACITY ANALYSIS

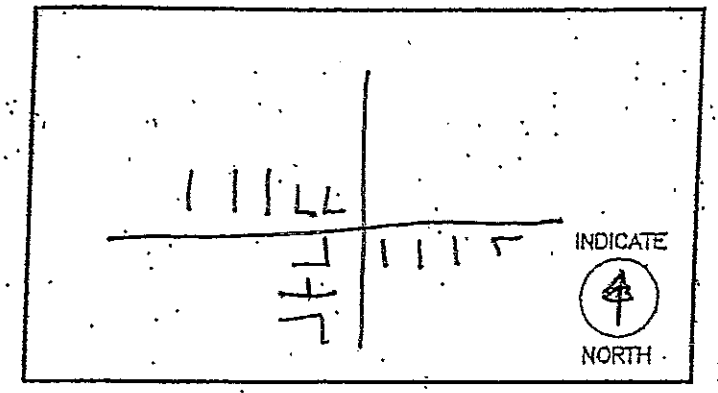
INTERSECTION SR 78/Sycamore Ave
EB Ramps

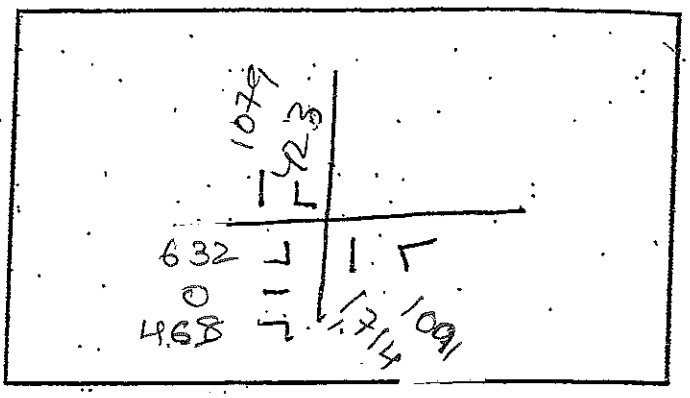
DIST. CO. RTE. P.M. _____

BY LK DATE 5/12/06

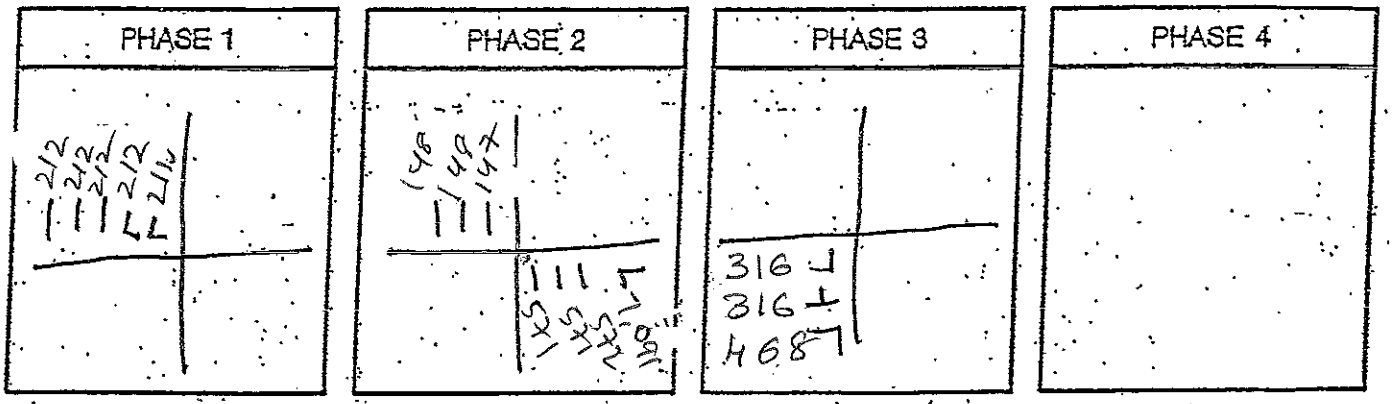
TIME PM AM PM

DIAGRAM AND TRAFFIC FLOWS:





LANE VOLUMES (ILV/HR)



CRITICAL LANE VOLUMES (ILV/HR)

PHASE 1	PHASE 2	PHASE 3	PHASE 4
212	1,091	468	

TOTAL OPERATING LEVEL (ILV/HR) IS . . .

Σ
1,771

☑ < 1200 ILV/HR.

☐ > 1200 BUT < 1500 ILV/HR.

☑ > 1500 ILV/HR (CAPACITY)

REMARKS:

Over Capacity

F·16

ext+p+cp - AM

INTERSECTION

Signalized Intersection
CAPACITY ANALYSIS

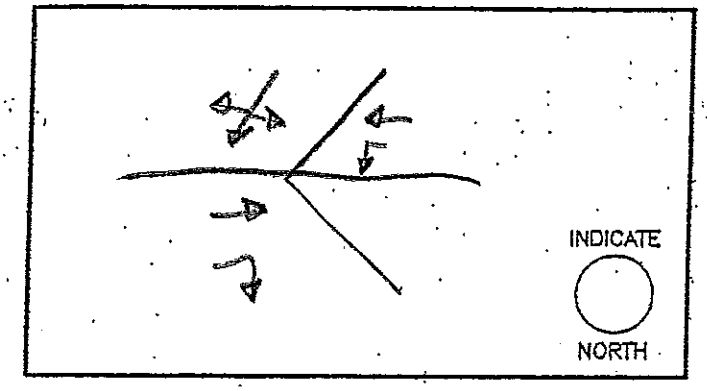
INTERSECTION Deer Springs / I-15 SB Ramps

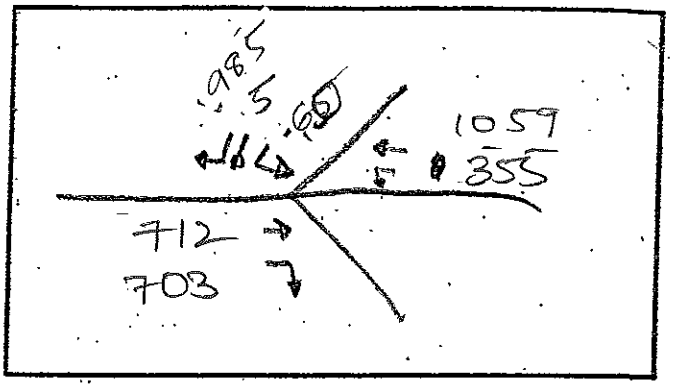
DIST. CO. RTE. P.M. _____

BY LK DATE 12/5/06

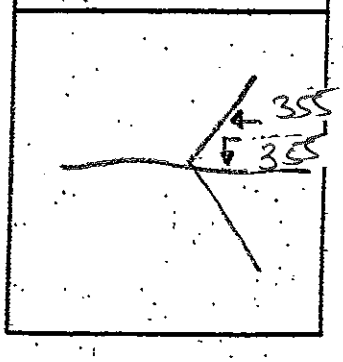
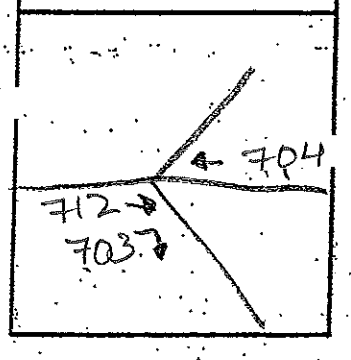
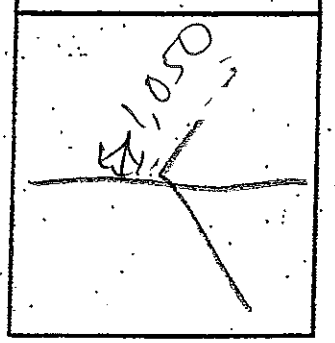
TIME AM AM PM

DIAGRAM AND TRAFFIC FLOWS:





LANE VOLUMES (ILV/HR)

PHASE 1	PHASE 2	PHASE 3	PHASE 4
			

CRITICAL LANE VOLUMES (ILV/HR)

PHASE 1	PHASE 2	PHASE 3	PHASE 4
355	712	1,050	

TOTAL OPERATING LEVEL (ILV/HR) IS . . .

Σ 2,117

☐ < 1200 ILV/HR.

☐ > 1200 BUT < 1500 ILV/HR.

☒ > 1500 ILV/HR (CAPACITY)

REMARKS: over capacity

F.17

ext+tcp - PM

INTERSECTION

Signalized Intersection
CAPACITY ANALYSIS

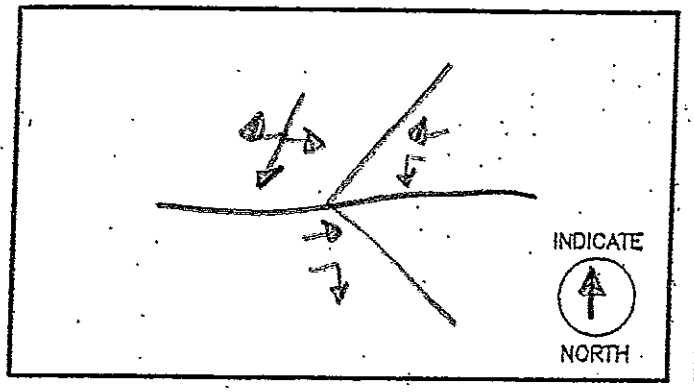
INTERSECTION Deer Springs / I-5 SB Ramps

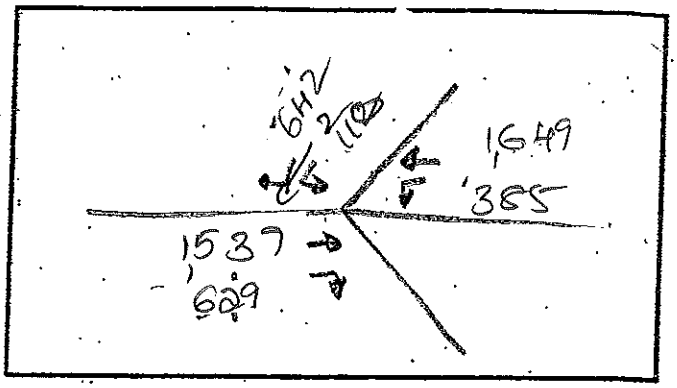
DIST. CO. RTE. P.M. _____

BY LK DATE 12/5/06

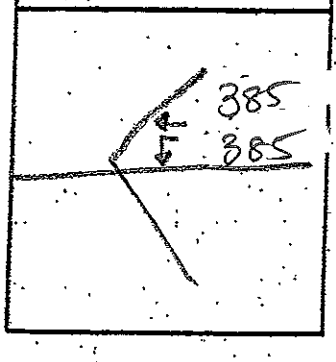
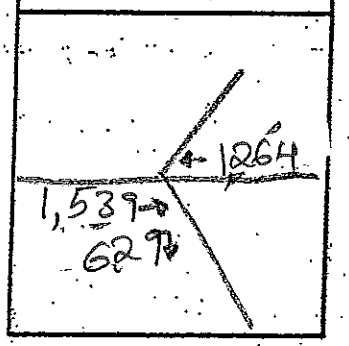
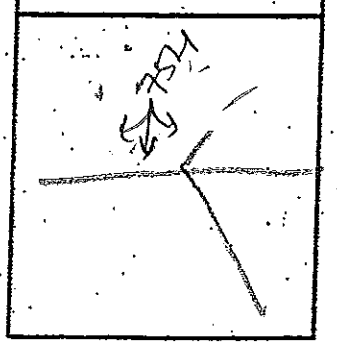
TIME PM AM PM

DIAGRAM AND TRAFFIC FLOWS:





LANE VOLUMES (ILV/HR)

PHASE 1	PHASE 2	PHASE 3	PHASE 4
			

CRITICAL LANE VOLUMES (ILV/HR)

PHASE 1	PHASE 2	PHASE 3	PHASE 4
385	1,539	754	

TOTAL OPERATING LEVEL (ILV/HR) IS . . .

Σ
2,566

- ☐ < 1200 ILV/HR.
- ☐ > 1200 BUT < 1500 ILV/HR.
- ☒ > 1500 ILV/HR (CAPACITY)

REMARKS:

Over capacity

ext+p+cp - AM

INTERSECTION

Signalized Intersection
CAPACITY ANALYSIS

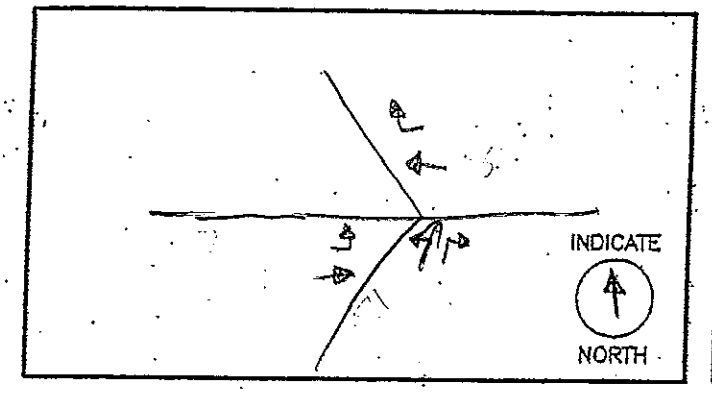
INTERSECTION Deer Spring / I-15 NB Ramp

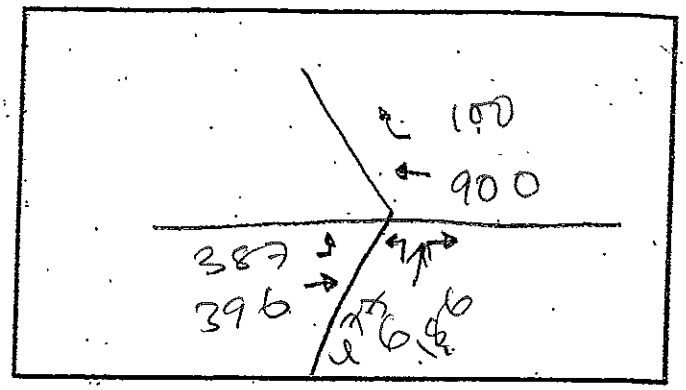
DIST. CO. RTE. P.M. _____

BY LK DATE 6/5/06

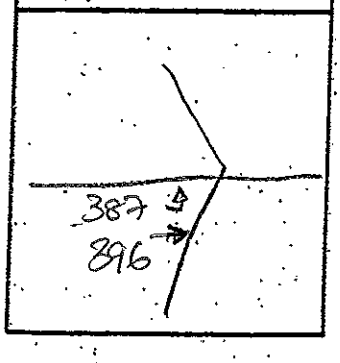
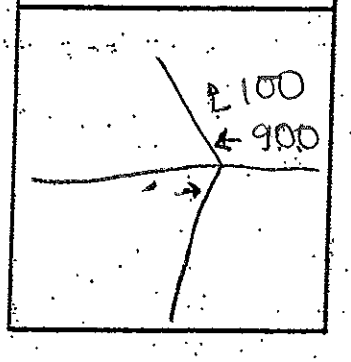
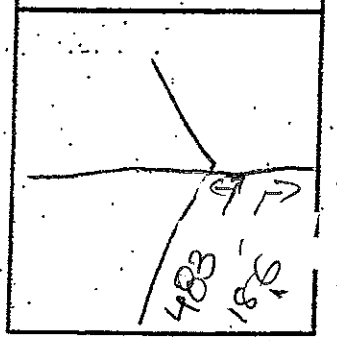
TIME _____ AM PM

DIAGRAM AND TRAFFIC FLOWS:





LANE VOLUMES (ILV/HR)

PHASE 1	PHASE 2	PHASE 3	PHASE 4
			

CRITICAL LANE VOLUMES (ILV/HR)

PHASE 1	PHASE 2	PHASE 3	PHASE 4
396	900	483	

TOTAL OPERATING LEVEL (ILV/HR) IS . . .

Σ
1,779

☐ < 1200 ILV/HR.

☐ 1200 BUT < 1500 ILV/HR.

☑ > 1500 ILV/HR (CAPACITY)

REMARKS: Over capacity

ext+p+cp - PM

INTERSECTION

Signalized Intersection
CAPACITY ANALYSIS

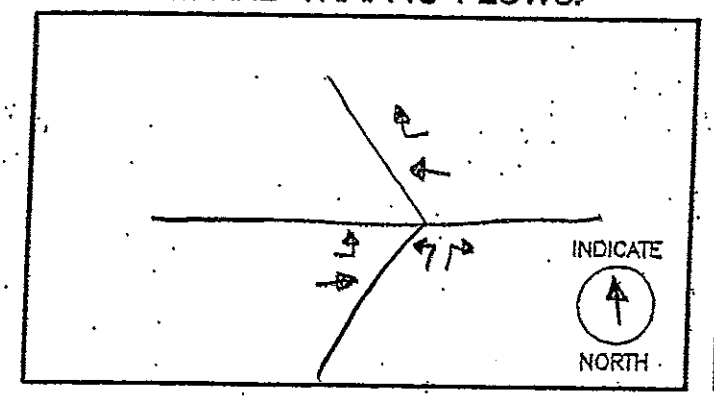
INTERSECTION Deer Springs / I-15 NB Ramp

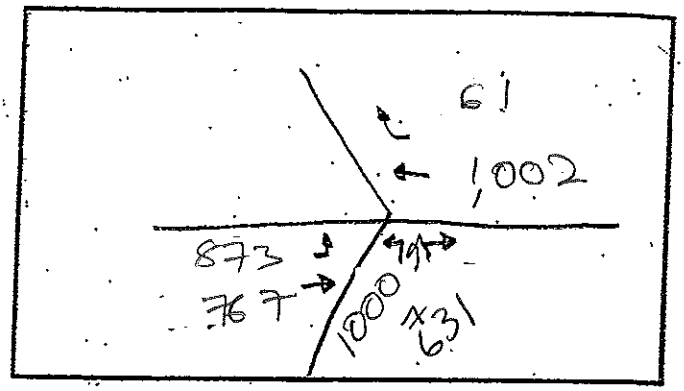
DIST. CO. RTE. P.M. _____

BY _____ DATE _____

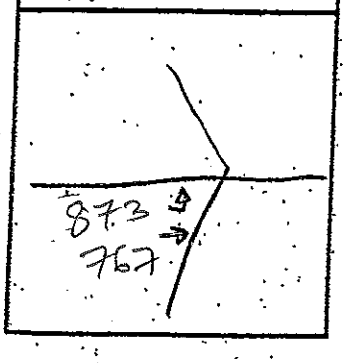
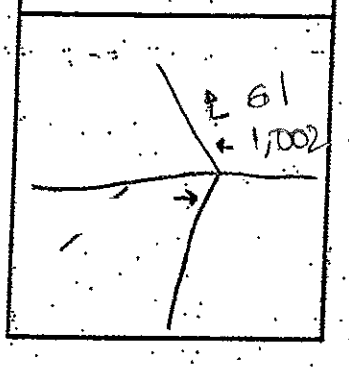
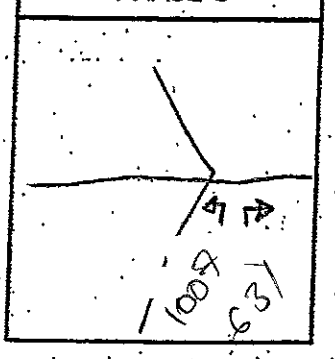
TIME PM AM PM

DIAGRAM AND TRAFFIC FLOWS:





LANE VOLUMES (ILV/HR)

PHASE 1	PHASE 2	PHASE 3	PHASE 4
			

CRITICAL LANE VOLUMES (ILV/HR)

PHASE 1	PHASE 2	PHASE 3	PHASE 4
873	1,002	1,007	

TOTAL OPERATING LEVEL (ILV/HR) IS . . .

Σ 2,882

☐ < 1200 ILV/HR.

☐ > 1200 BUT < 1500 ILV/HR.

☑ > 1500 ILV/HR (CAPACITY)

REMARKS:

over capacity

F·20