APPENDIX C

Peak Hour Intersection and ILV Analysis Worksheets - Existing

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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	89.7	1.301	F	89.7	1.301	+ 0.000	D/V
# 2 SR 78/Sycamore WB Ramps	C	26.5	0.704	C	26.5	0.704	+ 0.000	D/V
# 3 S. Santa Fe/Robelini Dr	C	23.4	0.615	C	23.4	0.615	+ 0.000	D/V
# 4 S. Santa Fe/Buena Creek	E	65.9	0.985	E	65.9	0.985	+ 0.000	D/V
# 5 Buena Creek/Monte Vista Dr	B	14.6	0.566	B	14.6	0.566	+ 0.000	V/C
# 6 Buena Creek/Sugarbush Dr	C	19.4	0.000	C	19.4	0.000	+ 0.000	D/V
# 7 Twin Oaks Valley Road/Buena Cr	B	12.6	0.660	B	12.6	0.660	+ 0.000	D/V
# 8 Deer Springs Rd/N. Twin Oaks V	B	19.3	0.872	B	19.3	0.872	+ 0.000	D/V
# 9 I-15 SB Ramps/Deer Springs Rd.	D	46.5	0.919	D	46.5	0.919	+ 0.000	D/V
# 10 I-15 NB Ramps/Deer Springs Rd.	C	27.8	0.533	C	27.8	0.533	+ 0.000	D/V
# 11 Buena Creek/S. Santa Fe (4-Leg		0.0	0.000		0.0	0.000	+ 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):	1.301
Loss Time (sec):	9 (Y+R=4.0 sec)	Average Delay (sec/veh):	89.7
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:	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	0	3	0	1		2	0	3	0	0		1	1	0	0	1		0	0	0	0	0	
Volume Module: am peak																								
Base Vol:	0	688		682			193	1401			0		399		2		988		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:	0	688		682			193	1401			0		399		2		988		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:	0	748		741			210	1523			0		434		2		1074		0		0		0	
Reduct Vol:	0	0		0			0	0			0		0		0		0		0		0		0	
Reduced Vol:	0	748		741			210	1523			0		434		2		1074		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:	0	748		741			210	1523			0		434		2		1074		0		0		0	
Saturation Flow Module:																								
Sat/Lane:	1900	1900		1900			1900	1900			1900		1900		1900		1900		1900		1900		1900	
Adjustment:	1.00	0.91		0.85			0.92	0.91			1.00		0.96		0.96		0.85		1.00		1.00		1.00	
Lanes:	0.00	3.00		1.00			2.00	3.00			0.00		1.99		0.01		1.00		0.00		0.00		0.00	
Final Sat.:	0	5187		1615			3502	5187			0		3618		18		1615		0		0		0	
Capacity Analysis Module:																								
Vol/Sat:	0.00	0.14		0.46			0.06	0.29			0.00		0.12		0.12		0.66		0.00		0.00		0.00	
Crit Moves:				****			****										****							
Green/Cycle:	0.00	0.34		0.34			0.07	0.41			0.00		0.50		0.50		0.50		0.00		0.00		0.00	
Volume/Cap:	0.00	0.42		1.34			0.86	0.71			0.00		0.24		0.24		1.34		0.00		0.00		0.00	
Uniform Del:	0.0	25.2		32.8			46.0	24.4			0.0		14.4		14.4		25.2		0.0		0.0		0.0	
IncremntDel:	0.0	0.2		164.1			24.4	1.1			0.0		0.1		0.1		160.5		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:	0.00	1.00		1.00			1.00	1.00			0.00		1.00		1.00		1.00		0.00		0.00		0.00	
Delay/Veh:	0.0	25.4		196.9			70.4	25.5			0.0		14.4		14.4		185.7		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:	0.0	25.4		196.9			70.4	25.5			0.0		14.4		14.4		185.7		0.0		0.0		0.0	
LOS by Move:	A		C		F		E	C			A		B		B		F		A		A		A	
HCM2kAvgQ:	0		7		47		6	15			0		4		4		67		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):	0.704
Loss Time (sec):	9 (Y+R=4.0 sec)	Average Delay (sec/veh):	26.5
Optimal Cycle:	52	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:	440	668		0			0	739			334		0		0		0		924		0		266	
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:	440	668		0			0	739			334		0		0		0		924		0		266	
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:	478	726		0			0	803			363		0		0		0		1004		0		289	
Reduct Vol:	0	0		0			0	0			0		0		0		0		0		0		0	
Reduced Vol:	478	726		0			0	803			363		0		0		0		1004		0		289	
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:	478	726		0			0	803			363		0		0		0		1004		0		289	
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	0.14		0.00			0.00	0.16			0.23		0.00		0.00		0.00		0.28		0.00		0.10	
Crit Moves:	****										****								****					
Green/Cycle:	0.19	0.51		0.00			0.00	0.32			0.32		0.00		0.00		0.00		0.40		0.00		0.40	
Volume/Cap:	0.70	0.27		0.00			0.00	0.48			0.70		0.00		0.00		0.00		0.70		0.00		0.26	
Uniform Del:	37.6	13.7		0.0			0.0	27.4			29.8		0.0		0.0		0.0		25.3		0.0		20.4	
IncremntDel:	3.3	0.1		0.0			0.0	0.2			4.4		0.0		0.0		0.0		1.6		0.0		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		0.00			0.00	1.00			1.00		0.00		0.00		0.00		1.00		0.00		1.00	
Delay/Veh:	40.9	13.8		0.0			0.0	27.6			34.2		0.0		0.0		0.0		26.9		0.0		20.5	
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:	40.9	13.8		0.0			0.0	27.6			34.2		0.0		0.0		0.0		26.9		0.0		20.5	
LOS by Move:	D		B		A		A	C			C		A		A		A		C		A		C	
HCM2kAvgQ:	8		5		0		0	7			11		0		0		0		14		0		3	

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 #3 S. Santa Fe/Robelini Dr

Cycle (sec):	100	Critical Vol./Cap.(X):	0.618
Loss Time (sec):	9 (Y+R=4.0 sec)	Average Delay (sec/veh):	23.4
Optimal Cycle:	56	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:	134	1	195	0	0	0	0	382	254	409	270	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:	134	1	195	0	0	0	0	382	254	409	270	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:	146	1	212	0	0	0	0	415	276	445	293	0
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	146	1	212	0	0	0	0	415	276	445	293	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:	146	1	212	0	0	0	0	415	276	445	293	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	1.00	0.85	0.95	1.00	1.00
Lanes:	0.99	0.01	1.00	0.00	0.00	0.00	0.00	1.00	1.00	1.00	1.00	0.00
Final Sat.:	1533	11	1544	0	0	0	0	1900	1615	1805	1900	0
Capacity Analysis Module:												
Vol/Sat:	0.10	0.10	0.14	0.00	0.00	0.00	0.00	0.22	0.17	0.25	0.15	0.00
Crit Moves:		****						****		****		
Green/Cycle:	0.20	0.20	0.58	0.00	0.00	0.00	0.00	0.33	0.33	0.38	0.71	0.00
Volume/Cap:	0.48	0.48	0.24	0.00	0.00	0.00	0.00	0.65	0.51	0.65	0.22	0.00
Uniform Del:	35.4	35.4	10.4	0.0	0.0	0.0	0.0	28.4	26.8	25.8	5.0	0.0
IncremntDel:	0.5	0.5	0.1	0.0	0.0	0.0	0.0	2.5	0.8	2.3	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:	35.8	35.8	10.5	0.0	0.0	0.0	0.0	30.9	27.6	28.1	5.1	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:	35.8	35.8	10.5	0.0	0.0	0.0	0.0	30.9	27.6	28.1	5.1	0.0
LOS by Move:	D	D	B	A	A	A	A	C	C	C	A	A
HCM2kAvgQ:	5	5	3	0	0	0	0	12	7	12	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):	0.985
Loss Time (sec):	9 (Y+R=4.0 sec)	Average Delay (sec/veh):	65.9
Optimal Cycle:	179	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:	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	194	0	382	174	444	0	0	345	83
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	194	0	382	174	444	0	0	345	83
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	211	0	415	189	483	0	0	375	90
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	0	0	0	211	0	415	189	483	0	0	375	90
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	211	0	415	189	483	0	0	375	90
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	0.81	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	0.28	0.72	0.00	1.00	1.61	0.39
Final Sat.:	1615	3069	0	1534	1534	1304	448	1144	0	1615	2402	578
Capacity Analysis Module:												
Vol/Sat:	0.00	0.00	0.00	0.14	0.00	0.32	0.42	0.42	0.00	0.00	0.16	0.16
Crit Moves:						****	****				****	
Green/Cycle:	0.00	0.00	0.00	0.31	0.00	0.31	0.40	0.40	0.00	0.00	0.20	0.20
Volume/Cap:	0.00	0.00	0.00	0.45	0.00	1.04	1.04	1.04	0.00	0.00	0.78	0.78
Uniform Del:	0.0	0.0	0.0	28.0	0.0	34.7	29.8	29.8	0.0	0.0	37.9	37.9
IncremntDel:	0.0	0.0	0.0	0.7	0.0	56.6	47.0	47.0	0.0	0.0	6.6	6.6
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	28.7	0.0	91.3	76.8	76.8	0.0	0.0	44.5	44.5
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:	0.0	0.0	0.0	28.7	0.0	91.3	76.8	76.8	0.0	0.0	44.5	44.5
LOS by Move:	A	A	A	C	A	F	E	E	A	A	D	D
HCM2kAvgQ:	0	0	0	6	0	21	30	30	0	0	9	9

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

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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):          0.566
Loss Time (sec):        0 (Y+R=4.0 sec)   Average Delay (sec/veh):        14.6
Optimal Cycle:          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:        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   194    0  120   120  140    0     0  338  273
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   194    0  120   120  140    0     0  338  273
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   211    0  130   130  152    0     0  367  297
Reduct Vol:     0    0    0     0    0    0     0    0    0     0    0    0
Reduced Vol:    0    0    0   211    0  130   130  152    0     0  367  297
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   211    0  130   130  152    0     0  367  297
------------|---------------||---------------||---------------||---------------|
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 0.62 0.00 0.38 0.46 0.54 0.00  0.00 1.00 1.00
Final Sat.:     0    0    0   373    0  231   276  354    0     0  663  682
------------|---------------||---------------||---------------||---------------|
Capacity Analysis Module:
Vol/Sat:     xxxx xxxx xxxx 0.57 xxxx 0.57 0.47 0.43 xxxx  xxxx 0.55 0.43
Crit Moves:                            ****  ****                 ****
Delay/Veh:    0.0  0.0  0.0 15.4  0.0 15.4 13.7 13.7  0.0   0.0 17.0 11.7
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 15.4  0.0 15.4 13.7 13.7  0.0   0.0 17.0 11.7
LOS by Move:    *    *    *    C    *    C    B    B    *     *    C    B
ApproachDel:     xxxxxx            15.4            13.7            14.6
Delay Adj:        xxxxx            1.00            1.00            1.00
ApprAdjDel:      xxxxxx            15.4            13.7            14.6
LOS by Appr:          *              C               B               B
AllWayAvgQ:   0.0  0.0  0.0  1.1  1.1  1.1  0.8  0.8  0.8   0.0  1.4  0.7
*******************************************************************************
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):       0.6        Worst Case Level Of Service: C[ 19.4]
*******************************************************************************
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  1! 0  0    0  0  1! 0  0    0  0  1! 0  0
------------|---------------||---------------||---------------||---------------|
Volume Module:
Base Vol:       7    0    1     3    0   17     7  330    3     2  501    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:    7    0    1     3    0   17     7  330    3     2  501    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:     8    0    1     3    0   18     8  359    3     2  545    7
Reduct Vol:     0    0    0     0    0    0     0    0    0     0    0    0
FinalVolume:    8    0    1     3    0   18     8  359    3     2  545    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:  937  931  360   928  929  548   551 xxxx xxxxx   362 xxxx xxxxx
Potent Cap.:  247  269  689   250  270  540  1029 xxxx xxxxx  1208 xxxx xxxxx
Move Cap.:    237  266  689   248  267  540  1029 xxxx xxxxx  1208 xxxx xxxxx
Volume/Cap:  0.03 0.00 0.00  0.01 0.00 0.03  0.01 xxxx  xxxx  0.00 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   8.5 xxxx xxxxx   8.0 xxxx xxxxx
LOS by Move:    *    *    *     *    *    *     A    *    *     A    *    *
Movement:     LT - LTR - RT    LT - LTR - RT    LT - LTR - RT    LT - LTR - RT
Shared Cap.: xxxx  258 xxxxx  xxxx  459 xxxxx  xxxx xxxx xxxxx  xxxx xxxx xxxxx
SharedQueue:xxxxx  0.1 xxxxx xxxxx  0.1 xxxxx xxxxx xxxx xxxxx xxxxx xxxx xxxxx
Shrd ConDel:xxxxx 19.4 xxxxx xxxxx 13.2 xxxxx xxxxx xxxx xxxxx xxxxx xxxx xxxxx
Shared LOS:     *    C    *     *    B    *     *    *    *     *    *    *
ApproachDel:       19.4            13.2            xxxxxx           xxxxxx
ApproachLOS:          C               B                *                *
*******************************************************************************
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 #7 Twin Oaks Valley Road/Buena Creek Road

Cycle (sec): 100 Critical Vol./Cap.(X): 0.660
Loss Time (sec): 6 (Y+R=4.0 sec) Average Delay (sec/veh): 12.6
Optimal Cycle: 46 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				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:	95	202		1	0	858		274	146		0	170	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:	95	202		1	0	858		274	146		0	170	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:	103	220		1	0	933		298	159		0	185	1		1	1
Reduct Vol:	0	0		0	0	0		0	0	0		0	0	0		0
Reduced Vol:	103	220		1	0	933		298	159		0	185	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:	103	220		1	0	933		298	159		0	185	1		1	1
Saturation Flow Module:																
Sat/Lane:	1900	1900		1900	1900	1900		1900	1900	1900		1900	1900	1900		1900
Adjustment:	0.22	0.98		0.83	0.98	0.98		0.83	0.70	0.98		0.83	0.89	0.89		0.89
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.:	415	1862		1583	1862	1862		1583	1326		0	1583	561	561		561
Capacity Analysis Module:																
Vol/Sat:	0.25	0.12		0.00	0.00	0.50		0.19	0.12	0.00		0.12	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:	0.33	0.16		0.00	0.00	0.66		0.25	0.66	0.00		0.64	0.01	0.01		0.01
Uniform Del:	3.9	3.3		2.9	0.0	5.8		3.6	38.1	0.0		37.9	33.6	33.6		33.6
IncremntDel:	0.6	0.1		0.0	0.0	1.2		0.1	6.6	0.0		5.0	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:	4.5	3.4		2.9	0.0	7.0		3.7	44.7	0.0		42.9	33.6	33.6		33.6
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:	4.5	3.4		2.9	0.0	7.0		3.7	44.7	0.0		42.9	33.6	33.6		33.6
LOS by Move:	A	A		A	A	A		A	D	A		D	C	C		C
HCM2kAvgQ:	1	2		0	0	14		3	6	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): 0.872
Loss Time (sec): 9 (Y+R=4.0 sec) Average Delay (sec/veh): 19.3
Optimal Cycle: 90 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:	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:	64	254		0	0	1125		59	38		0	71	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:	64	254		0	0	1125		59	38		0	71	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:	70	276		0	0	1223		64	41		0	77	0		0	0
Reduct Vol:	0	0		0	0	0		0	0	0		0	0	0		0
Reduced Vol:	70	276		0	0	1223		64	41		0	77	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:	70	276		0	0	1223		64	41		0	77	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	0.16		0.00	0.00	0.70		0.04	0.02	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:	0.60	0.19		0.00	0.00	0.91		0.06	0.36	0.00		0.74	0.00	0.00		0.00
Uniform Del:	45.1	1.5		0.0	0.0	8.8		2.8	44.3	0.0		45.6	0.0	0.0		0.0
IncremntDel:	8.3	0.1		0.0	0.0	9.3		0.0	1.9	0.0		24.6	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:	53.5	1.6		0.0	0.0	18.1		2.8	46.2	0.0		70.2	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:	53.5	1.6		0.0	0.0	18.1		2.8	46.2	0.0		70.2	0.0	0.0		0.0
LOS by Move:	D	A		A	A	B		A	D	A		E	A	A		A
HCM2kAvgQ:	3	2		0	0	33		0	2	0		4	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 #9 I-15 SB Ramps/Deer Springs Rd.

Cycle (sec): 100 Critical Vol./Cap.(X): 0.919
Loss Time (sec): 9 (Y+R=4.0 sec) Average Delay (sec/veh): 46.5
Optimal Cycle: 114 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:	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	42	5	876	0	270	86	133	481	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	42	5	876	0	270	86	133	481	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	46	5	857	0	293	84	145	523	0
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	0	0	0	46	5	857	0	293	84	145	523	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	46	5	857	0	293	84	145	523	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	0.97	0.97	0.95	1.00	1.00
Lanes:	0.00	0.00	0.00	0.05	0.01	0.94	0.00	0.78	0.22	1.00	1.00	0.00
Final Sat.:	0	0	0	83	10	1554	0	1432	411	1805	1900	0
Capacity Analysis Module:												
Vol/Sat:	0.00	0.00	0.00	0.55	0.55	0.55	0.00	0.20	0.20	0.08	0.28	0.00
Crit Moves:					****			****		****		
Green/Cycle:	0.00	0.00	0.00	0.60	0.60	0.60	0.00	0.22	0.22	0.09	0.31	0.00
Volume/Cap:	0.00	0.00	0.00	0.92	0.92	0.92	0.00	0.92	0.92	0.92	0.89	0.00
Uniform Del:	0.0	0.0	0.0	17.8	17.8	17.8	0.0	38.0	38.0	45.3	32.8	0.0
IncremntDel:	0.0	0.0	0.0	13.2	13.2	13.2	0.0	25.5	25.5	48.5	15.2	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	31.0	31.0	31.0	0.0	63.4	63.4	93.8	48.0	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:	0.0	0.0	0.0	31.0	31.0	31.0	0.0	63.4	63.4	93.8	48.0	0.0
LOS by Move:	A	A	A	C	C	C	A	E	E	F	D	A
HCM2kAvgQ:	0	0	0	29	29	29	0	15	15	8	19	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 #10 I-15 NB Ramps/Deer Springs Rd.

Cycle (sec): 110 Critical Vol./Cap.(X): 0.533
Loss Time (sec): 9 (Y+R=4.0 sec) Average Delay (sec/veh): 27.8
Optimal Cycle: 43 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:	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:	166	6	111	0	0	0	229	94	0	0	425	59
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:	166	6	111	0	0	0	229	94	0	0	425	59
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:	180	7	103	0	0	0	249	102	0	0	462	55
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	180	7	103	0	0	0	249	102	0	0	462	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
FinalVolume:	180	7	103	0	0	0	249	102	0	0	462	55
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.91	0.91	0.85	1.00	1.00	1.00	0.95	1.00	1.00	1.00	1.00	0.85
Lanes:	0.97	0.03	1.00	0.00	0.00	0.00	1.00	1.00	0.00	0.00	1.00	1.00
Final Sat.:	1663	60	1615	0	0	0	1805	1900	0	0	1900	1615
Capacity Analysis Module:												
Vol/Sat:	0.11	0.11	0.06	0.00	0.00	0.00	0.14	0.05	0.00	0.00	0.24	0.03
Crit Moves:		****					****				****	
Green/Cycle:	0.20	0.20	0.20	0.00	0.00	0.00	0.26	0.71	0.00	0.00	0.46	0.46
Volume/Cap:	0.53	0.53	0.31	0.00	0.00	0.00	0.53	0.08	0.00	0.00	0.53	0.07
Uniform Del:	39.1	39.1	37.3	0.0	0.0	0.0	35.1	4.7	0.0	0.0	21.5	16.8
IncremntDel:	1.6	1.6	0.5	0.0	0.0	0.0	1.2	0.0	0.0	0.0	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	1.00	1.00	0.00	0.00	0.00	1.00	1.00	0.00	0.00	1.00	1.00
Delay/Veh:	40.7	40.7	37.8	0.0	0.0	0.0	36.3	4.8	0.0	0.0	22.1	16.9
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:	40.7	40.7	37.8	0.0	0.0	0.0	36.3	4.8	0.0	0.0	22.1	16.9
LOS by Move:	D	D	D	A	A	A	D	A	A	A	C	B
HCM2kAvgQ:	6	6	3	0	0	0	8	1	0	0	11	1

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

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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	D	52.6	1.156	D	52.6	1.156	+ 0.000 D/V
# 2 SR 78/Sycamore WB Ramps	C	29.3	0.866	C	29.3	0.866	+ 0.000 D/V
# 3 S. Santa Fe/Robelini Dr	C	30.1	0.843	C	30.1	0.843	+ 0.000 D/V
# 4 S. Santa Fe/Buena Creek	F	185.6	1.339	F	185.6	1.339	+ 0.000 D/V
# 5 Buena Creek/Monte Vista Dr	E	39.7	1.022	E	39.7	1.022	+ 0.000 V/C
# 6 Buena Creek/Sugarbush Dr	D	27.8	0.000	D	27.8	0.000	+ 0.000 D/V
# 7 Twin Oaks Valley Road/Buena Cr	B	19.0	0.714	B	19.0	0.714	+ 0.000 D/V
# 8 Deer Springs Rd/N. Twin Oaks V	B	19.0	0.922	B	19.0	0.922	+ 0.000 D/V
# 9 I-15 SB Ramps/Deer Springs Rd.	F	91.9	1.132	F	91.9	1.132	+ 0.000 D/V
# 10 I-15 NB Ramps/Deer Springs Rd.	D	39.7	0.875	D	39.7	0.875	+ 0.000 D/V
# 11 Buena Creek/S. Santa Fe (4-Leg		0.0	0.000		0.0	0.000	+ 0.000 D/V

SUGARBUSH SUBDIVISION
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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):          1.156
Loss Time (sec):        9 (Y+R=4.0 sec)   Average Delay (sec/veh):        52.6
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:        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  0  3  0  1    2  0  3  0  0    1  1  0  0  1    0  0  0  0  0
------------|---------------||---------------||---------------||---------------|
Volume Module:pm peak
Base Vol:       0 1669  946  328 1030    0  484    0  466    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:    0 1669  946  328 1030    0  484    0  466    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:     0 1814 1028  357 1120    0  526    0  507    0    0    0
Reduct Vol:     0    0    0    0    0    0    0    0    0    0    0    0
Reduced Vol:    0 1814 1028  357 1120    0  526    0  507    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:    0 1814 1028  357 1120    0  526    0  507    0    0    0
------------|---------------||---------------||---------------||---------------|
Saturation Flow Module:
Sat/Lane:    1900 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900
Adjustment:  1.00 0.91 0.85 0.92 0.91 1.00 0.95 1.00 0.85 1.00 1.00 1.00
Lanes:       0.00 3.00 1.00 2.00 3.00 0.00 2.00 0.00 1.00 0.00 0.00 0.00
Final Sat.:     0 5187 1615 3502 5187    0 3618    0 1615    0    0    0
------------|---------------||---------------||---------------||---------------|
Capacity Analysis Module:
Vol/Sat:     0.00 0.35 0.64 0.10 0.22 0.00 0.15 0.00 0.31 0.00 0.00 0.00
Crit Moves:                ****  ****                ****
Green/Cycle: 0.00 0.55 0.55 0.09 0.64 0.00 0.27 0.00 0.27 0.00 0.00 0.00
Volume/Cap:  0.00 0.64 1.16 1.16 0.34 0.00 0.54 0.00 1.16 0.00 0.00 0.00
Uniform Del:  0.0 15.5 22.5 45.6  8.3  0.0 31.1  0.0 36.4  0.0  0.0  0.0
IncremntDel:  0.0  0.5 83.0 100.5  0.1  0.0  0.6  0.0 93.2  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:   0.00 1.00 1.00 1.00 1.00 0.00 1.00 0.00 1.00 0.00 0.00 0.00
Delay/Veh:    0.0 16.0 105.4 146.1  8.4  0.0 31.7  0.0 129.7  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:   0.0 16.0 105.4 146.1  8.4  0.0 31.7  0.0 129.7  0.0  0.0  0.0
LOS by Move:    A    B    F    F    A    A    C    A    F    A    A    A
HCM2kAvgQ:      0   14   52   12    6    0    7    0   27    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):          0.866
Loss Time (sec):        9 (Y+R=4.0 sec)   Average Delay (sec/veh):        29.3
Optimal Cycle:         88                 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:     809 1366    0    0  677  471    0    0    0  695    4  516
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:  809 1366    0    0  677  471    0    0    0  695    4  516
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:   879 1485    0    0  736  512    0    0    0  755    4  561
Reduct Vol:     0    0    0    0    0    0    0    0    0    0    0    0
Reduced Vol:  879 1485    0    0  736  512    0    0    0  755    4  561
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:  879 1485    0    0  736  512    0    0    0  755    4  561
------------|---------------||---------------||---------------||---------------|
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 3446   20 2837
------------|---------------||---------------||---------------||---------------|
Capacity Analysis Module:
Vol/Sat:     0.25 0.29 0.00 0.00 0.14 0.32 0.00 0.00 0.00 0.22 0.22 0.20
Crit Moves:  ****                     ****                     ****
Green/Cycle: 0.29 0.66 0.00 0.00 0.37 0.37 0.00 0.00 0.00 0.25 0.25 0.25
Volume/Cap:  0.87 0.44 0.00 0.00 0.39 0.87 0.00 0.00 0.00 0.87 0.87 0.78
Uniform Del: 33.6  8.2  0.0  0.0 23.4 29.4  0.0  0.0  0.0 35.7 35.7 34.8
IncremntDel:  8.0  0.1  0.0  0.0  0.1 12.8  0.0  0.0  0.0  9.1  9.1  5.6
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:   41.6  8.3  0.0  0.0 23.5 42.2  0.0  0.0  0.0 44.8 44.8 40.3
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:  41.6  8.3  0.0  0.0 23.5 42.2  0.0  0.0  0.0 44.8 44.8 40.3
LOS by Move:    D    A    A    A    C    D    A    A    A    D    D    D
HCM2kAvgQ:     16    8    0    0    6   18    0    0    0   14   14   11
******************************************************************************
Note: Queue reported is the number of cars per lane.
******************************************************************************
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SUGARBUSH SUBDIVISION
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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): 0.843
Loss Time (sec): 9 (Y+R=4.0 sec) Average Delay (sec/veh): 30.1
Optimal Cycle: 80 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:	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:	377	0	636		0	0		0	0	554	283		371	598		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:	377	0	636		0	0		0	0	554	283		371	598		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:	410	0	691		0	0		0	0	602	308		403	650		0
Reduct Vol:	0	0	0		0	0		0	0	0	0		0	0		0
Reduced Vol:	410	0	691		0	0		0	0	602	308		403	650		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:	410	0	691		0	0		0	0	602	308		403	650		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	0.00	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:	0.23	0.00	0.43		0.00	0.00		0.00	0.00	0.32	0.19		0.22	0.34		0.00
Crit Moves:	****									****			****			
Green/Cycle:	0.27	0.00	0.53		0.00	0.00		0.00	0.00	0.38	0.38		0.26	0.64		0.00
Volume/Cap:	0.84	0.00	0.80		0.00	0.00		0.00	0.00	0.84	0.51		0.84	0.53		0.00
Uniform Del:	34.5	0.0	19.0		0.0	0.0		0.0	0.0	28.5	24.1		34.8	9.8		0.0
IncremntDel:	12.7	0.0	5.4		0.0	0.0		0.0	0.0	9.0	0.7		12.8	0.5		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:	47.2	0.0	24.4		0.0	0.0		0.0	0.0	37.5	24.8		47.6	10.3		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:	47.2	0.0	24.4		0.0	0.0		0.0	0.0	37.5	24.8		47.6	10.3		0.0
LOS by Move:	D	A	C		A	A		A	A	D	C		D	B		A
HCM2kAvgQ:	15	0	19		0	0		0	0	19	8		14	11		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 #4 S. Santa Fe/Buena Creek

Cycle (sec): 100 Critical Vol./Cap.(X): 1.339
Loss Time (sec): 9 (Y+R=4.0 sec) Average Delay (sec/veh): 185.6
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	147	0		253	540	514		0	0	540		217
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	147	0		253	540	514		0	0	540		217
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	160	0		275	587	559		0	0	587		236
Reduct Vol:	0	0		0	0	0		0	0	0		0	0	0		0
Reduced Vol:	0	0		0	160	0		275	587	559		0	0	587		236
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	160	0		275	587	559		0	0	587		236
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	0.51	0.49		0.00	1.00	1.43		0.57
Final Sat.:	1615	3069		0	1534	1534		1304	807	768		0	1615	2095		842
Capacity Analysis Module:																
Vol/Sat:	0.00	0.00		0.00	0.10	0.00		0.21	0.73	0.73		0.00	0.00	0.28		0.28
Crit Moves:								****	****							****
Green/Cycle:	0.00	0.00		0.00	0.16	0.00		0.16	0.54	0.54		0.00	0.00	0.21		0.21
Volume/Cap:	0.00	0.00		0.00	0.66	0.00		1.34	1.34	1.34		0.00	0.00	1.34		1.34
Uniform Del:	0.0	0.0		0.0	39.6	0.0		42.1	22.8	22.8		0.0	0.0	39.5		39.5
IncremntDel:	0.0	0.0		0.0	6.7	0.0		181.7	160.5	161		0.0	0.0	163		163.4
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	46.3	0.0		223.8	183.4	183		0.0	0.0	203		203.0
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	46.3	0.0		223.8	183.4	183		0.0	0.0	203		203.0
LOS by Move:	A	A		A	D	A		F	F	F		A	A	F		F
HCM2kAvgQ:	0	0		0	6	0		20	72	72		0	0	29		29

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

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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):          1.022
Loss Time (sec):        0 (Y+R=4.0 sec)  Average Delay (sec/veh):        39.7
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   277    0  137   149  394    0     0  187  256
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   277    0  137   149  394    0     0  187  256
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   301    0  149   162  428    0     0  203  278
Reduct Vol:     0    0    0     0    0    0     0    0    0     0    0    0
Reduced Vol:    0    0    0   301    0  149   162  428    0     0  203  278
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   301    0  149   162  428    0     0  203  278
------------|---------------||---------------||---------------||---------------|
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  0.67 0.00 0.33  0.27 0.73 0.00  0.00 1.00 1.00
Final Sat.:     0    0    0   376    0  186   158  461    0     0  562  568
------------|---------------||---------------||---------------||---------------|
Capacity Analysis Module:
Vol/Sat:     xxxx xxxx xxxx  0.80 xxxx  0.80  1.02 0.93 xxxx  xxxx 0.36 0.49
Crit Moves:                  ****              ****                      ****
Delay/Veh:    0.0  0.0  0.0  29.6  0.0  29.6  68.0 68.0  0.0   0.0 14.0 14.6
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  29.6  0.0  29.6  68.0 68.0  0.0   0.0 14.0 14.6
LOS by Move:    *    *    *     D    *     D     F    F    *     *    B    B
ApproachDel:    xxxxxx             29.6             68.0             14.4
Delay Adj:       xxxxx             1.00             1.00             1.00
ApprAdjDel:     xxxxxx             29.6             68.0             14.4
LOS by Appr:         *               D                F                B
AllWayAvgQ:   0.0  0.0  0.0   3.2  3.2   3.2   9.4  9.4  9.4   0.0  0.6  0.9
******************************************************************************
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):       0.5       Worst Case Level Of Service: D[ 27.8]
******************************************************************************
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  1! 0  0    0  0  1! 0  0    0  0  1! 0  0
------------|---------------||---------------||---------------||---------------|
Volume Module:
Base Vol:       9    0    1     1    0    9    12  619    5     2  453    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:    9    0    1     1    0    9    12  619    5     2  453    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:    10    0    1     1    0   10    13  673    5     2  492    3
Reduct Vol:     0    0    0     0    0    0     0    0    0     0    0    0
FinalVolume:   10    0    1     1    0   10    13  673    5     2  492    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: 1205 1202  676  1201 1203  494   496 xxxx xxxxx   678 xxxx xxxxx
Potent Cap.:  162  186  457   163  186  579  1079 xxxx xxxxx   923 xxxx xxxxx
Move Cap.:    158  184  457   161  183  579  1079 xxxx xxxxx   923 xxxx xxxxx
Volume/Cap:  0.06 0.00 0.00  0.01 0.00 0.02  0.01 xxxx  xxxx  0.00 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   8.4 xxxx xxxxx   8.9 xxxx xxxxx
LOS by Move:    *    *    *     *    *    *     A    *    *     A    *    *
Movement:    LT - LTR - RT   LT - LTR - RT   LT - LTR - RT   LT - LTR - RT
Shared Cap.: xxxx  169 xxxxx  xxxx  460 xxxxx  xxxx xxxx xxxxx  xxxx xxxx xxxxx
SharedQueue:xxxxx  0.2 xxxxx xxxxx  0.1 xxxxx xxxxx xxxx xxxxx xxxxx xxxx xxxxx
Shrd ConDel:xxxxx 27.8 xxxxx xxxxx 13.0 xxxxx xxxxx xxxx xxxxx xxxxx xxxx xxxxx
Shared LOS:     *    D    *     *    B    *     *    *    *     *    *    *
ApproachDel:       27.8             13.0            xxxxxx           xxxxxx
ApproachLOS:         D                B                *                *
******************************************************************************
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 #7 Twin Oaks Valley Road/Buena Creek Road

Cycle (sec): 100 Critical Vol./Cap.(X): 0.714
Loss Time (sec): 6 (Y+R=4.0 sec) Average Delay (sec/veh): 19.0
Optimal Cycle: 44 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				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:pm peak																
Base Vol:	150	675		1	1	462		212	337		0	205	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:	150	675		1	1	462		212	337		0	205	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:	163	734		1	1	502		230	366		0	223	2		0	2
Reduct Vol:	0	0		0	0	0		0	0	0		0	0	0		0
Reduced Vol:	163	734		1	1	502		230	366		0	223	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:	163	734		1	1	502		230	366		0	223	2		0	2
Saturation Flow Module:																
Sat/Lane:	1900	1900		1900	1900	1900		1900	1900	1900		1900	1900	1900		1900
Adjustment:	0.34	0.98		0.83	0.18	0.98		0.83	0.70	0.98		0.83	0.84	0.98		0.84
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.:	655	1862		1583	350	1862		1583	1324		0	1583	798		0	798
Capacity Analysis Module:																
Vol/Sat:	0.25	0.39		0.00	0.00	0.27		0.15	0.28	0.00		0.14	0.00	0.00		0.00
Crit Moves:		****							****							
Green/Cycle:	0.55	0.55		0.55	0.55	0.55		0.55	0.39	0.00		0.39	0.39	0.00		0.39
Volume/Cap:	0.45	0.71		0.00	0.01	0.49		0.26	0.71	0.00		0.36	0.01	0.00		0.01
Uniform Del:	13.3	16.5		10.0	10.1	13.7		11.7	25.9	0.0		21.8	18.8	0.0		18.8
IncremntDel:	0.9	2.4		0.0	0.0	0.4		0.2	4.7	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:	14.2	18.9		10.0	10.1	14.1		11.9	30.6	0.0		22.2	18.8	0.0		18.8
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:	14.2	18.9		10.0	10.1	14.1		11.9	30.6	0.0		22.2	18.8	0.0		18.8
LOS by Move:	B	B		B	B	B		B	C	A		C	B	A		B
HCM2kAvgQ:	3	17		0	0	9		4	11	0		5	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): 0.922
Loss Time (sec): 9 (Y+R=4.0 sec) Average Delay (sec/veh): 19.0
Optimal Cycle: 115 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:	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:	58	1268		0	0	294		56	37		0	69	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:	58	1268		0	0	294		56	37		0	69	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:	63	1378		0	0	320		61	40		0	75	0		0	0
Reduct Vol:	0	0		0	0	0		0	0	0		0	0	0		0
Reduced Vol:	63	1378		0	0	320		61	40		0	75	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:	63	1378		0	0	320		61	40		0	75	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	0.79		0.00	0.00	0.18		0.04	0.02	0.00		0.05	0.00	0.00		0.00
Crit Moves:		****			****							****				
Green/Cycle:	0.22	0.84		0.00	0.00	0.62		0.62	0.07	0.00		0.07	0.00	0.00		0.00
Volume/Cap:	0.17	0.94		0.00	0.00	0.29		0.07	0.35	0.00		0.72	0.00	0.00		0.00
Uniform Del:	31.8	6.1		0.0	0.0	8.7		7.4	44.3	0.0		45.5	0.0	0.0		0.0
IncremntDel:	0.2	11.8		0.0	0.0	0.2		0.0	1.8	0.0		21.7	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		0.00	0.00	1.00		1.00	1.00	0.00		1.00	0.00	0.00		0.00
Delay/Veh:	32.0	17.9		0.0	0.0	8.9		7.5	46.1	0.0		67.3	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:	32.0	17.9		0.0	0.0	8.9		7.5	46.1	0.0		67.3	0.0	0.0		0.0
LOS by Move:	C	B		A	A	A		A	D	A		E	A	A		A
HCM2kAvgQ:	2	38		0	0	5		1	2	0		4	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 #9 I-15 SB Ramps/Deer Springs Rd.

Cycle (sec): 100 Critical Vol./Cap.(X): 1.132
Loss Time (sec): 9 (Y+R=4.0 sec) Average Delay (sec/veh): 91.9
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	56	2	421	0	949	135	200	326	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	56	2	421	0	949	135	200	326	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	61	2	412	0	1032	132	217	354	0
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	0	0	0	61	2	412	0	1032	132	217	354	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	61	2	412	0	1032	132	217	354	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	0.99	0.99	0.95	1.00	1.00
Lanes:	0.00	0.00	0.00	0.13	0.01	0.86	0.00	0.89	0.11	1.00	1.00	0.00
Final Sat.:	0	0	0	211	8	1430	0	1659	212	1805	1900	0
Capacity Analysis Module:												
Vol/Sat:	0.00	0.00	0.00	0.29	0.29	0.29	0.00	0.62	0.62	0.12	0.19	0.00
Crit Moves:						****		****		****		
Green/Cycle:	0.00	0.00	0.00	0.25	0.25	0.25	0.00	0.55	0.55	0.11	0.66	0.00
Volume/Cap:	0.00	0.00	0.00	1.13	1.13	1.13	0.00	1.13	1.13	1.13	0.28	0.00
Uniform Del:	0.0	0.0	0.0	37.3	37.3	37.3	0.0	22.5	22.5	44.7	7.3	0.0
IncremntDel:	0.0	0.0	0.0	85.1	85.1	85.1	0.0	71.8	71.8	104.9	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:	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	122.4	122	122.4	0.0	94.4	94.4	149.6	7.4	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:	0.0	0.0	0.0	122.4	122	122.4	0.0	94.4	94.4	149.6	7.4	0.0
LOS by Move:	A	A	A	F	F	F	A	F	F	F	A	A
HCM2kAvgQ:	0	0	0	25	25	25	0	56	56	13	5	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 #10 I-15 NB Ramps/Deer Springs Rd.

Cycle (sec): 110 Critical Vol./Cap.(X): 0.875
Loss Time (sec): 9 (Y+R=4.0 sec) Average Delay (sec/veh): 39.7
Optimal Cycle: 94 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:	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:	175	5	317	0	0	0	714	278	0	0	335	40
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:	175	5	317	0	0	0	714	278	0	0	335	40
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:	190	5	293	0	0	0	776	302	0	0	364	37
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	190	5	293	0	0	0	776	302	0	0	364	37
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:	190	5	293	0	0	0	776	302	0	0	364	37
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.94	0.94	0.85	1.00	1.00	1.00	0.95	1.00	1.00	1.00	1.00	0.85
Lanes:	0.97	0.03	1.00	0.00	0.00	0.00	1.00	1.00	0.00	0.00	1.00	1.00
Final Sat.:	1740	50	1615	0	0	0	1805	1900	0	0	1900	1615
Capacity Analysis Module:												
Vol/Sat:	0.11	0.11	0.18	0.00	0.00	0.00	0.43	0.16	0.00	0.00	0.19	0.02
Crit Moves:			****				****				****	
Green/Cycle:	0.21	0.21	0.21	0.00	0.00	0.00	0.49	0.71	0.00	0.00	0.22	0.22
Volume/Cap:	0.53	0.53	0.87	0.00	0.00	0.00	0.87	0.22	0.00	0.00	0.87	0.10
Uniform Del:	38.8	38.8	42.2	0.0	0.0	0.0	24.9	5.5	0.0	0.0	41.5	34.3
IncremntDel:	1.4	1.4	21.6	0.0	0.0	0.0	9.6	0.1	0.0	0.0	18.2	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:	40.2	40.2	63.9	0.0	0.0	0.0	34.6	5.6	0.0	0.0	59.7	34.5
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:	40.2	40.2	63.9	0.0	0.0	0.0	34.6	5.6	0.0	0.0	59.7	34.5
LOS by Move:	D	D	E	A	A	A	C	A	A	A	E	C
HCM2kAvgQ:	6	6	13	0	0	0	26	3	0	0	15	1

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

Existing - AM

INTERSECTION

Signalized Intersection
CAPACITY ANALYSIS

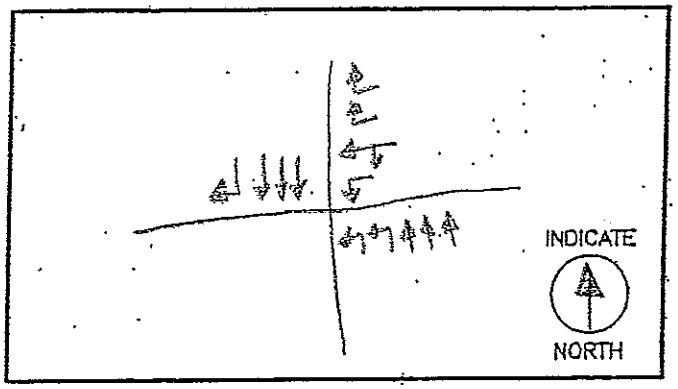
INTERSECTION SR 78/Sycamore Ave WB Ramps

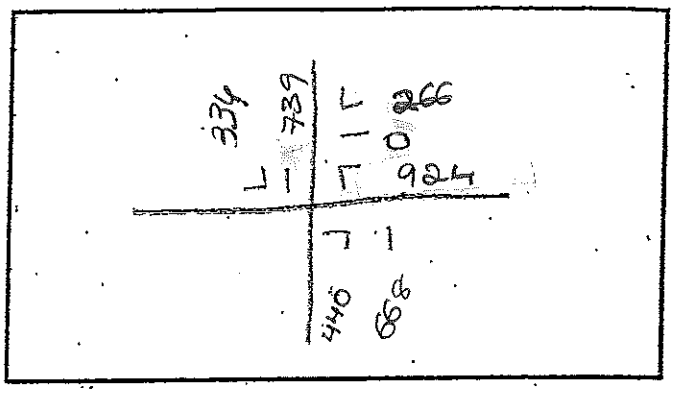
DIST. CO. RTE. P.M.

BY LK DATE 12/5/06

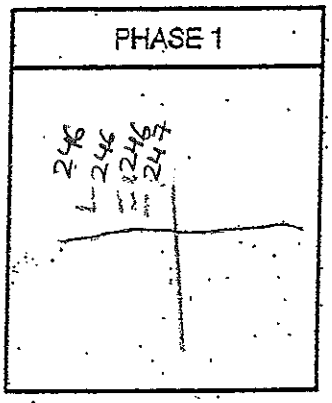
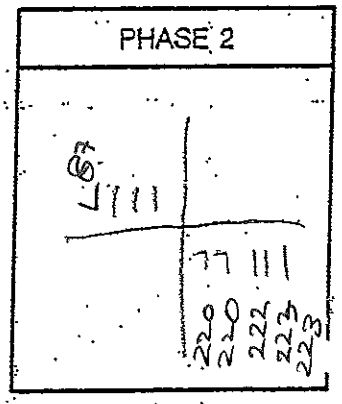
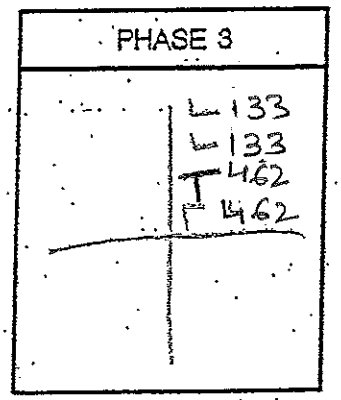
TIME AM AM PM

DIAGRAM AND TRAFFIC FLOWS:





LANE VOLUMES (ILV/HR)

PHASE 1	PHASE 2	PHASE 3	PHASE 4
			

CRITICAL LANE VOLUMES (ILV/HR)

PHASE 1	PHASE 2	PHASE 3	PHASE 4
247	228	462	

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

Σ
932

☑ < 1200 ILV/HR.

☐ > 1200 BUT < 1500 ILV/HR.

☐ > 1500 ILV/HR (CAPACITY)

REMARKS:

Under Capacity

Existing - PM

INTERSECTION

Signalized Intersection
CAPACITY ANALYSIS

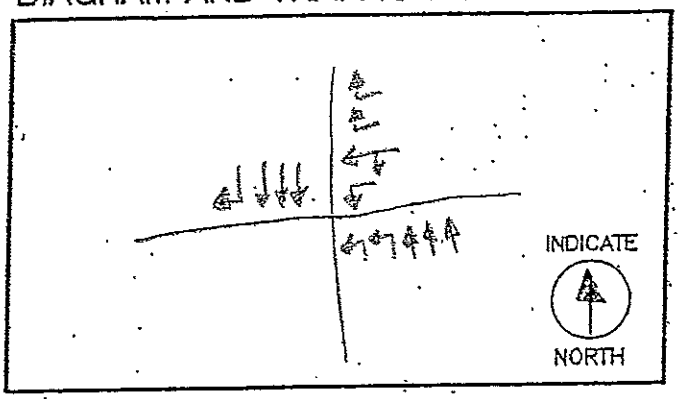
INTERSECTION SR 78/Sycamore Ave WB Ramps

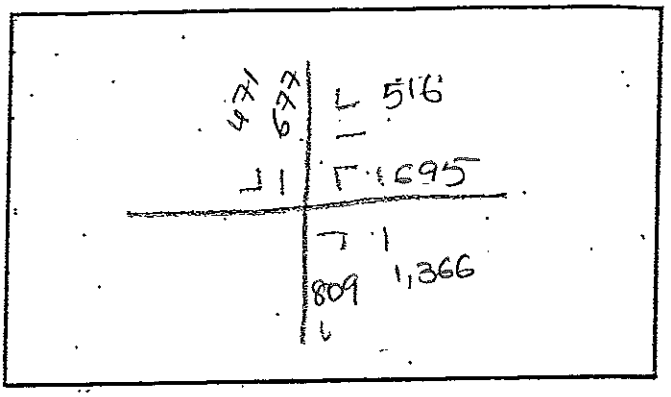
DIST. CO. RTE. P.M.

BY TK DATE 12/5/06

TIME PM AM PM

DIAGRAM AND TRAFFIC FLOWS:





LANE VOLUMES (ILV/HR)

PHASE 1	PHASE 2	PHASE 3	PHASE 4
226 226 226	245	258 258 348 347	

CRITICAL LANE VOLUMES (ILV/HR)

PHASE 1	PHASE 2	PHASE 3	PHASE 4
226	456	348	

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

Σ
1,030

☒ < 1200 ILV/HR.

☒ > 1200 BUT < 1500 ILV/HR.

☐ > 1500 ILV/HR (CAPACITY)

REMARKS: Under Capacity

Existing – AM

INTERSECTION

Signalized Intersection
CAPACITY ANALYSIS

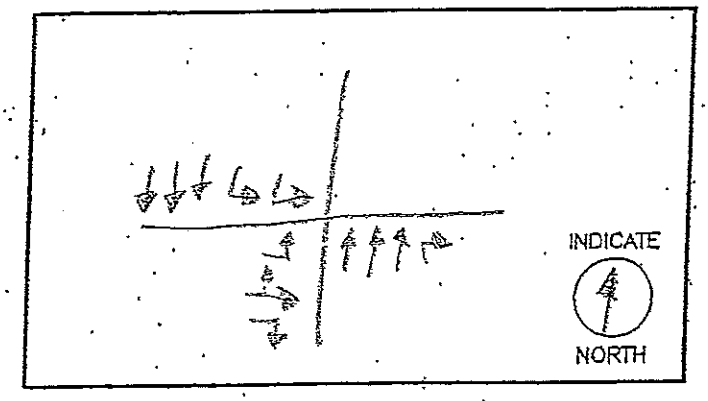
INTERSECTION SR78/Sycamore Ave
EB Ramps

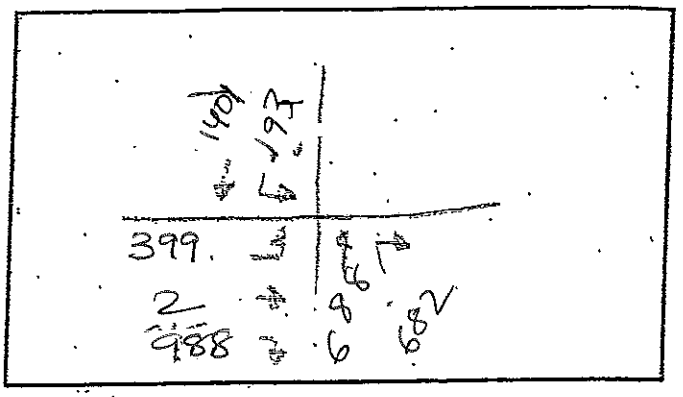
DIST. CO. RTE. P.M. _____

BY LK DATE 12/5/06

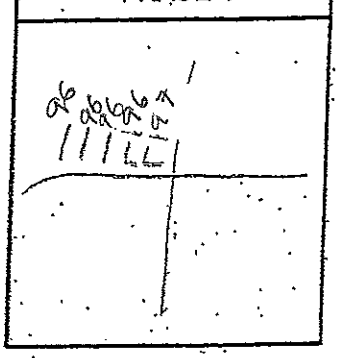
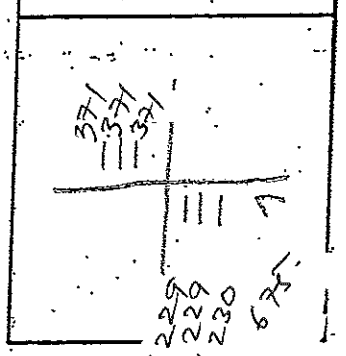
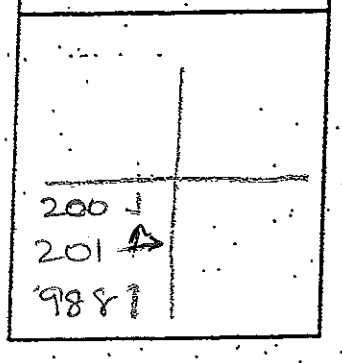
TIME AM AM PM

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
97	675	988	

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

Σ
1,760

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

REMARKS:

Over Capacity

Existing - PM

INTERSECTION

Signalized Intersection
CAPACITY ANALYSIS

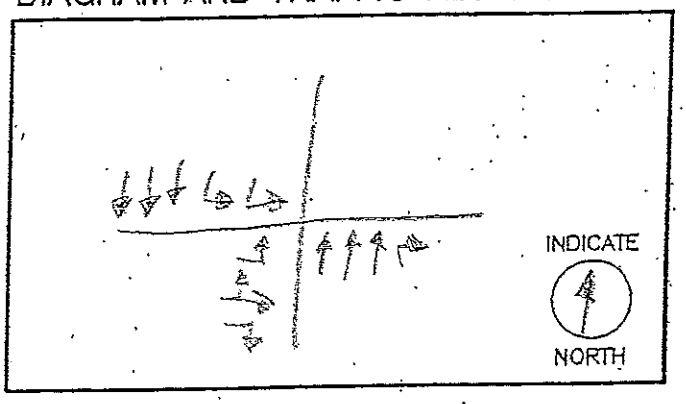
INTERSECTION SR 78/Sycamore Ave EB Ramps

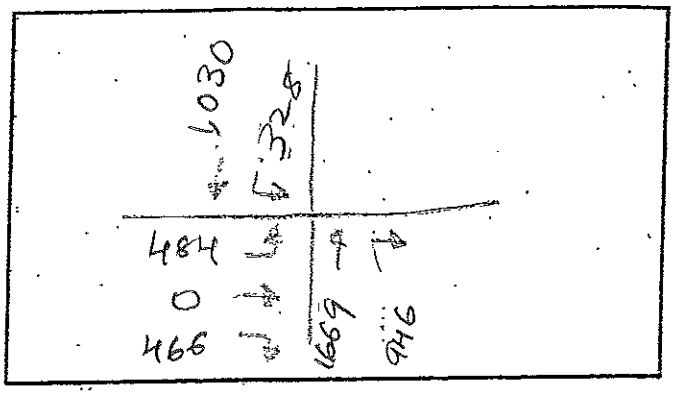
DIST. CO. RTE. P.M. _____

BY _____ DATE 5-6-03

TIME PM AM PM

DIAGRAM AND TRAFFIC FLOWS:





LANE VOLUMES (ILV/HR)

PHASE 1	PHASE 2	PHASE 3	PHASE 4
164 164 164 164 164	179 180 179 946 946 946	242 242 466	

CRITICAL LANE VOLUMES (ILV/HR)

PHASE 1	PHASE 2	PHASE 3	PHASE 4
164	946	466	

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

Σ
1576

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

REMARKS: Over Capacity

ex

INTERSECTION

Signalized Intersection
CAPACITY ANALYSIS

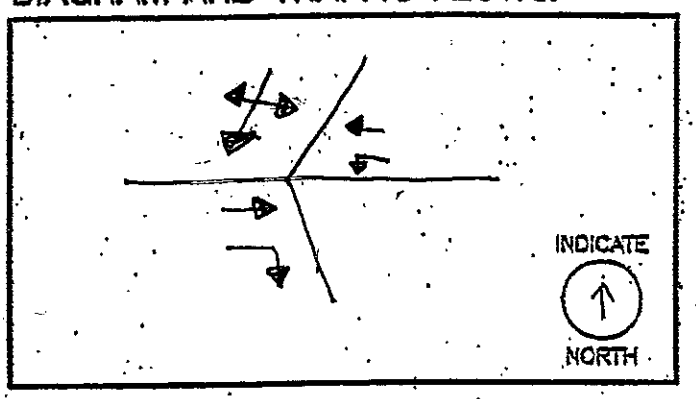
INTERSECTION Deer Springs / I-15 SB Ramps

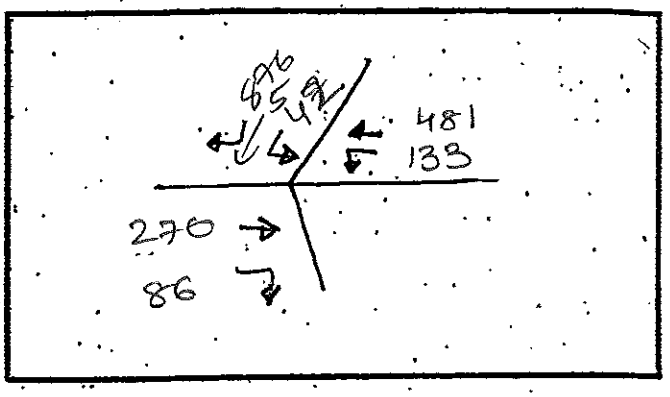
DIST. CO. RTE. P.M. _____

BY _____ DATE _____

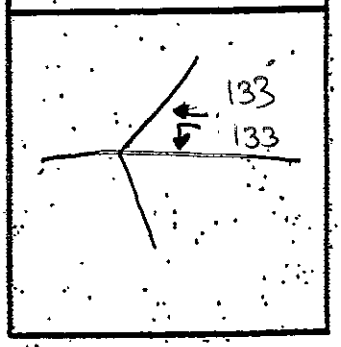
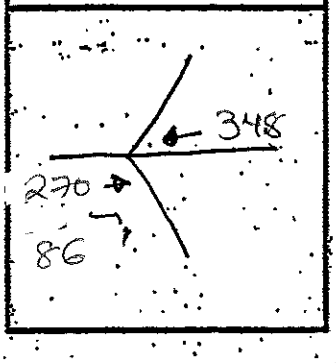
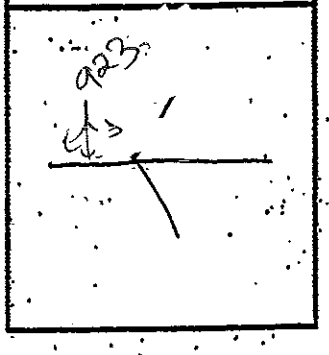
TIME AM AM (PM)

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
133	348	423	

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

Σ
1,404

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

REMARKS: near capacity

ex

INTERSECTION

Signalized Intersection
CAPACITY ANALYSIS

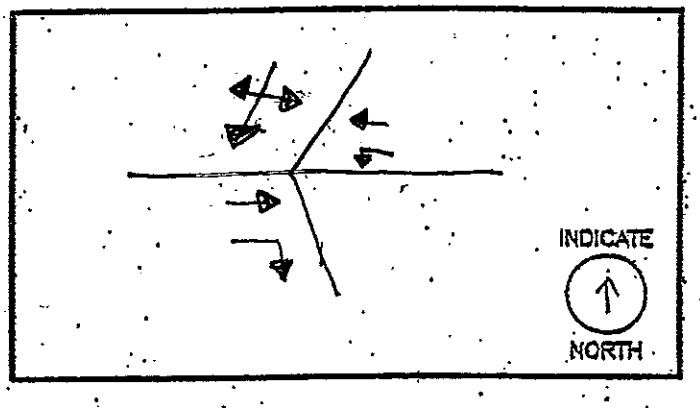
INTERSECTION Deer Springs / I-15 SB Rampo

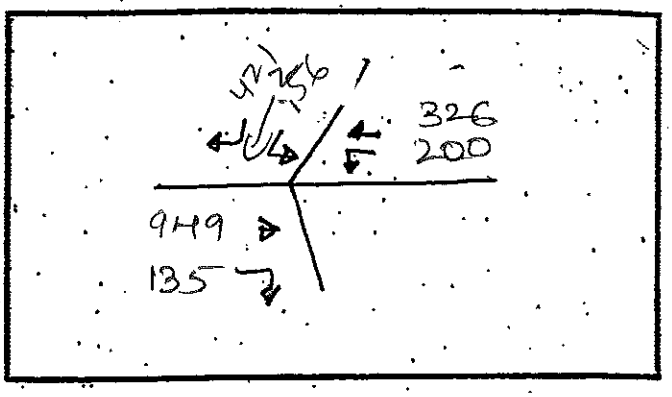
DIST. CO. RTE. P.M. _____

BY _____ DATE _____

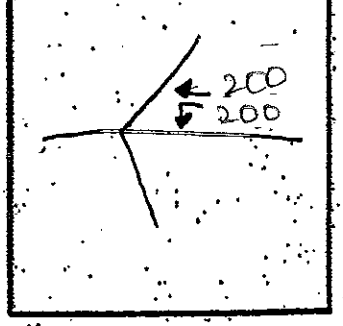
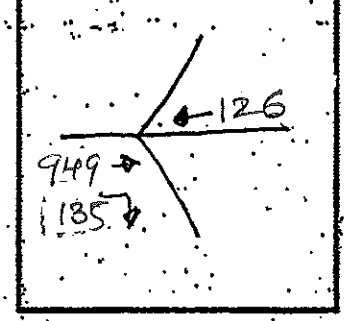
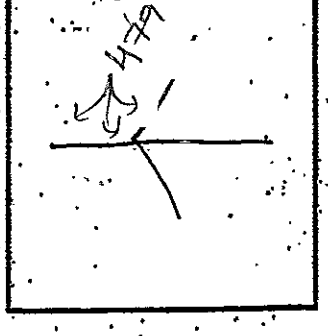
TIME PM AM (PM)

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
200	949	479	

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

Σ
1,628

☐ < 1200 ILV/HR.

☐ > 1200 BUT < 1500 ILV/HR.

☒ > 1500 ILV/HR (CAPACITY)

REMARKS: Over Capacity

ex

INTERSECTION

Signalized Intersection
CAPACITY ANALYSIS

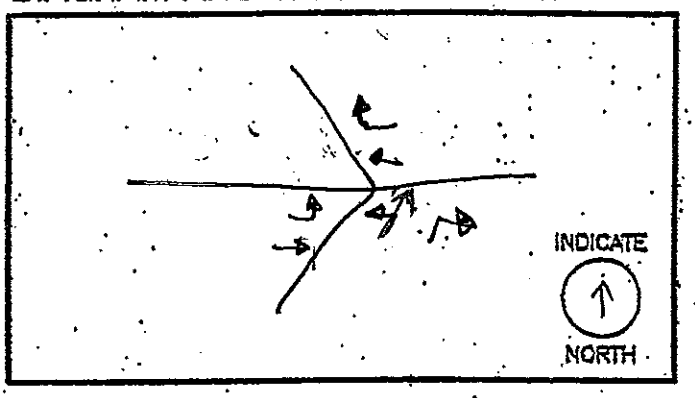
INTERSECTION Deer Springs / I-15 NB Ramps

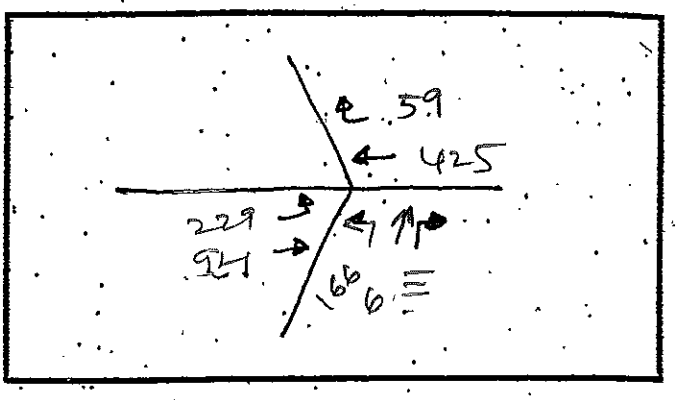
DIST. CO. RTE. P.M. _____

BY _____ DATE _____

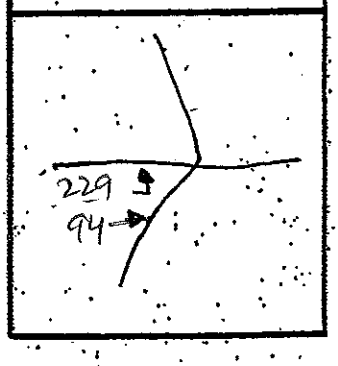
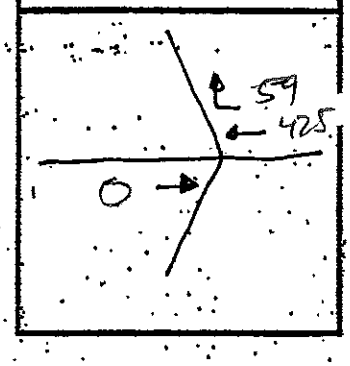
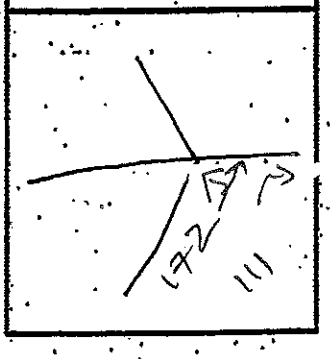
TIME AM AM PM

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
229	425	172	

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

Σ
826

☒ < 1200 ILV/HR.

☐ > 1200 BUT < 1500 ILV/HR.

☐ > 1500 ILV/HR (CAPACITY)

REMARKS: Under capacity

C-19

ex

INTERSECTION

Signalized Intersection
CAPACITY ANALYSIS

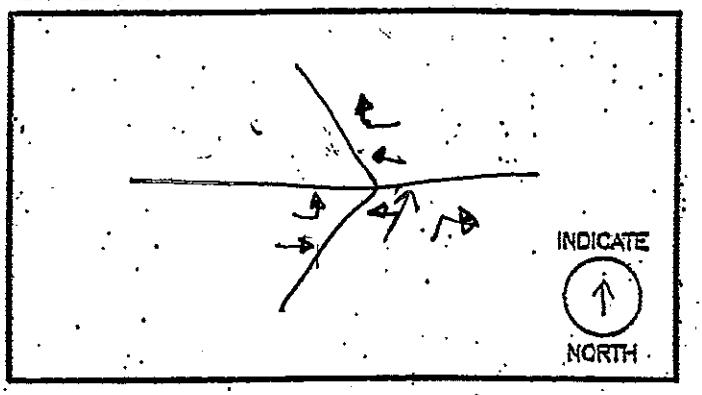
INTERSECTION Deer Springs / I-15 NB Ramps

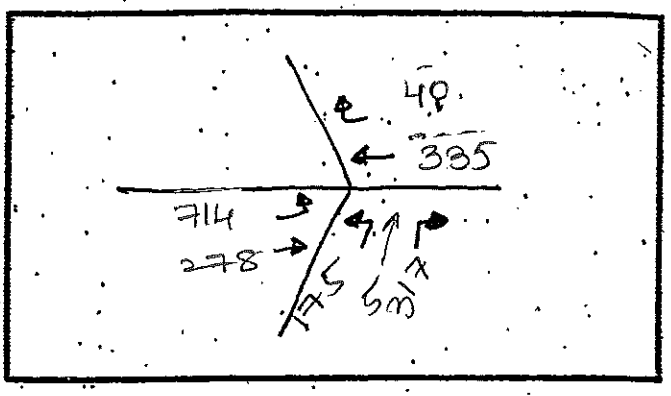
DIST. CO. RTE. P.M. _____

BY LK DATE 12/15/06

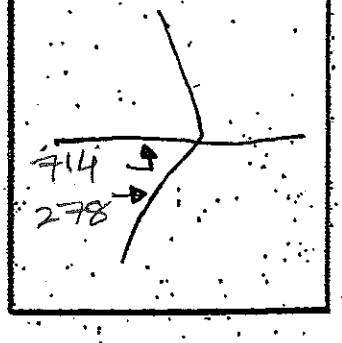
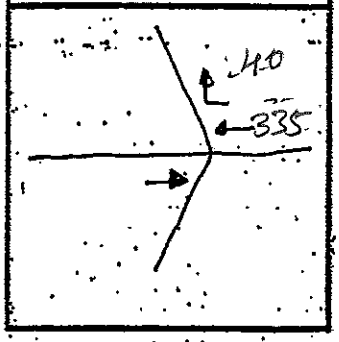
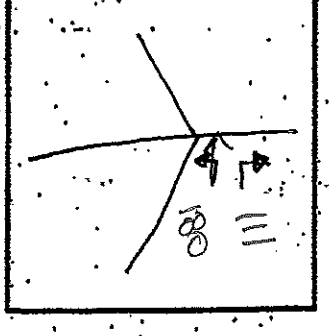
TIME PM AM (PM)

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
714	335	180	

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

Σ
1,229

☐ < 1200 ILV/HR.

☒ > 1200 BUT < 1500 ILV/HR.

1500 ILV/HR (CAPACITY)

REMARKS: Near capacity

C-20