Appendix D

Traffic Data

D1. Existing No Project

Patterson Sand and Gravel
Existing Conditions No Project (No Haul Road)
Peak Season Average Day - AM Peak Hour

Scenario Report

Scenario:	Existing AM
Command:	Existing AM
Volume:	Existing AM
Geometry:	Existing AM
Impact Fee:	Default Impact Fee
Trip Generation:	Default Trip Generation
Trip Distribution:	Default Trip Distribution
Paths:	Default Paths
Routes:	Default Routes
Configuration:	Default Configuration

Patterson Sand and Gravel
Existing Conditions No Project (No Haul Road)
Peak Season Average Day - AM Peak Hour

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 65 and Riosa Road (Sheridan	E	4.3	0.000	E	4.3	0.000	+ 0.000 V/C
# 2 SR 65 and SR 193 (Lincoln)	C	21.3	0.720	C	21.3	0.722	+ 0.032 D/V
# 4 Riosa Rd and 11th St	A	8.4	0.184	A	8.4	0.184	+ 0.000 V/C
# 5 Riosa Rd and Karchner Rd	A	5.4	0.000	A	5.4	0.000	+ 0.000 V/C

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Patterson Sand and Gravel
Existing Conditions No Project (No Haul Road)
Peak Season Average Day - AM Peak Hour

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

****
Intersection #1 SR 65 and Riosa Road (Sheridan)
****
Average Delay (sec/veh): 4.3 Worst Case 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:	Uncontrolled			Uncontrolled			Stop Sign			Stop Sign		
Rights:	Include			Include			Include			Include		
Lanes:	0 0 1	0	1	1 0 1	0	0	0 0 0	0	0	0 0 1!	0	0
Volume Module: >> Count Date: 28 Jun 2001 <<												
Base Vol:	0	445	30	22	725	0	0	0	0	76	0	76
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	445	30	22	725	0	0	0	0	76	0	76
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	0	445	30	22	725	0	0	0	0	76	0	76
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Final Vol.:	0	445	30	22	725	0	0	0	0	76	0	76
Critical Gap Module:												
Critical Gp:	xxxxx	xxxx	xxxxx	4.2	xxxx	xxxxx	xxxxx	xxxx	xxxxx	6.8	xxxx	6.6
FollowUpTim:	xxxxx	xxxx	xxxxx	2.3	xxxx	xxxxx	xxxxx	xxxx	xxxxx	3.8	xxxx	3.6
Capacity Module:												
Cnflict Vol:	xxxx	xxxx	xxxxx	475	xxxx	xxxxx	xxxx	xxxx	xxxxx	1214	xxxx	445
Potent Cap.:	xxxx	xxxx	xxxxx	1042	xxxx	xxxxx	xxxx	xxxx	xxxxx	171	xxxx	548
Move Cap.:	xxxx	xxxx	xxxxx	1042	xxxx	xxxxx	xxxx	xxxx	xxxxx	169	xxxx	548
Level Of Service Module:												
Stopped Del:	xxxxx	xxxx	xxxxx	8.5	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx
LOS by Move:	*	*	*	A	*	*	*	*	*	*	*	*
Movement:	LT -	LTR -	RT	LT -	LTR -	RT	LT -	LTR -	RT	LT -	LTR -	RT
Shared Cap.:	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	258	xxxxx
Shrd StpDel:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	37.2	xxxxx
Shared LOS:	*	*	*	*	*	*	*	*	*	*	E	*
ApproachDel:	xxxxxx			xxxxxx			xxxxxx			37.2		
ApproachLOS:	*			*			*			E		

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Patterson Sand and Gravel
Existing Conditions No Project (No Haul Road)
Peak Season Average Day - AM Peak Hour

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

****
Intersection #1 SR 65 and Riosa Road (Sheridan)
****

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
HevVeh:		17%			11%			0%			36%	
Grade:		0%			0%			0%			0%	
Peds/Hour:		0			0			0			0	
Pedestrian Walk Speed: 4.00 feet/sec												
LaneWidth:		12 feet			12 feet			12 feet			12 feet	
Time Period: 0.25 hour												

Existing AM Mon Jan 12, 2004 11:50:20 Page 5-1

Patterson Sand and Gravel
Existing Conditions No Project (No Haul Road)
Peak Season Average Day - AM Peak Hour

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

****

Intersection #2 SR 65 and SR 193 (Lincoln)

****

Cycle (sec): 100 Critical Vol./Cap. (X): 0.720
Loss Time (sec): 0 (Y+R = 4 sec) Average Delay (sec/veh): 21.3
Optimal Cycle: 66 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				Permitted				Permitted			
Rights:	Include				Include				Include				Ovl			
Min. Green:	0	0	0		0	0	0		0	0	0		0	0	0	
Lanes:	1	0	0	1 0	1	0	0	1 0	0	0	1!	0 0	0	1	0	0 1
Volume Module: >> Count Date: 27 Jun 2001 << AM Peak Hour																
Base Vol:	0	484	83		139	612	0		0	0	0		249	0	104	
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	484	83		139	612	0		0	0	0		249	0	104	
User Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
PHF Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
PHF Volume:	0	484	83		139	612	0		0	0	0		249	0	104	
Reduct Vol:	0	0	0		0	0	0		0	0	0		0	0	0	
Reduced Vol:	0	484	83		139	612	0		0	0	0		249	0	104	
PCE Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
MLF Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
Final Vol.:	0	484	83		139	612	0		0	0	0		249	0	104	
Saturation Flow Module:																
Sat/Lane:	1900	1900	1900		1900	1900	1900		1900	1900	1900		1900	1900	1900	
Adjustment:	1.00	0.75	0.75		0.74	0.78	1.00		1.00	1.00	1.00		0.59	1.00	0.69	
Lanes:	1.00	0.85	0.15		1.00	1.00	0.00		0.00	1.00	0.00		1.00	0.00	1.00	
Final Sat.:	1900	1221	209		1400	1474	0		0	1900	0		1112	0	1310	
Capacity Analysis Module:																
Vol/Sat:	0.00	0.40	0.40		0.10	0.42	0.00		0.00	0.00	0.00		0.22	0.00	0.08	
Crit Moves:		****			****								****			
Green/Cycle:	0.00	0.55	0.55		0.14	0.69	0.00		0.00	0.00	0.00		0.31	0.00	0.45	
Volume/Cap:	0.00	0.72	0.72		0.72	0.60	0.00		0.00	0.00	0.00		0.72	0.00	0.18	
Delay/Veh:	0.0	19.9	19.9		53.6	9.3	0.0		0.0	0.0	0.0		37.7	0.0	16.6	
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:	0.0	19.9	19.9		53.6	9.3	0.0		0.0	0.0	0.0		37.7	0.0	16.6	
DesignQueue:	0	13	2		7	12	0		0	0	0		10	0	3	

****

Existing AM Mon Jan 12, 2004 11:50:20 Page 6-1

Patterson Sand and Gravel
Existing Conditions No Project (No Haul Road)
Peak Season Average Day - AM Peak Hour

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

****

Intersection #2 SR 65 and SR 193 (Lincoln)

****

Approach:	North Bound				South Bound				East Bound				West Bound			
Movement:	L	-	T	- R	L	-	T	- R	L	-	T	- R	L	-	T	- R
HCM Ops Adjusted Lane Utilization Module:																
Lanes:	1	0	0	1 0	1	0	0	1 0	0	0	1!	0 0	0	1	0	0 1
Lane Group:	L		RT	RT	L		RT	RT	LTR	LTR		LTR	LT		LT	R
#LnsInGrps:	1		1	1	1		1	1	1	1		1	1		1	1
HCM Ops Input Saturation Adj Module:																
Lane Width:	12		12	12	12		12	12	12	12		12	12		12	12
CrosswalkWid			8				8			8					8	
% Hev Veh:			17				16			0					11	
Grade:			0%				0%			0%					0%	
Parking/Hr:			No				No			No					No	
Bus Stp/Hr:			0				0			0					0	
Area Type:	< < < < < < < < < < < < < < < < CBD > > > > > > > > > > > > > > > >															
Cnft Ped/Hr:			0				0			0					0	
ExclusiveRT:			Include				Include			Include					Include	
% RT Prtct:			0				0			0					0	
HCM Ops f(lt) Adj Case Module:																
f(lt) Case:	xxxx	xxxx	xxxx		1	xxxx	xxxx		xxxx	xxxx	xxxx		5	xxxx	xxxx	
HCM Ops Saturation Adj Module:																
Ln Wid Adj:	xxxx	1.00	1.00		1.00	1.00	xxxxx		xxxx	xxxx	xxxxx		1.00	xxxx	1.00	
Hev Veh Adj:	xxxx	0.86	0.86		0.86	0.86	xxxxx		xxxx	xxxx	xxxxx		0.90	xxxx	0.90	
Grade Adj:	xxxx	1.00	1.00		1.00	1.00	xxxxx		xxxx	xxxx	xxxxx		1.00	xxxx	1.00	
Parking Adj:	xxxx	1.00	1.00		xxxx	1.00	xxxxx		xxxx	xxxx	xxxxx		xxxx	xxxx	1.00	
Bus Stp Adj:	xxxx	1.00	1.00		xxxx	1.00	xxxxx		xxxx	xxxx	xxxxx		xxxx	xxxx	1.00	
Area Adj:	xxxx	0.90	0.90		0.90	0.90	xxxxx		xxxx	xxxx	xxxxx		0.90	xxxx	0.90	
RT Adj:	xxxx	0.98	0.98		xxxx	xxxx	xxxxx		xxxx	xxxx	xxxxx		xxxx	xxxx	0.85	
LT Adj:	xxxx	xxxx	xxxxx		0.95	xxxx	xxxxx		xxxx	xxxx	xxxxx		0.72	xxxx	xxxxx	
PedBike Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
HCM Sat Adj:	1.00	0.75	0.75		0.74	0.78	1.00		1.00	1.00	1.00		0.59	1.00	0.69	
Usr Sat Adj:	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 Sat Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
Fnl Sat Adj:	1.00	0.75	0.75		0.74	0.78	1.00		1.00	1.00	1.00		0.59	1.00	0.69	
Delay Adjustment Factor Module:																
Coordinated:	< < < < < < < < < < < < < < < < No > > > > > > > > > > > > > > > >															
Signal Type:	< < < < < < < < < < < < < Actuated > > > > > > > > > > > > > > >															
DelAdjFctr:	0.00	1.00	1.00		1.00	1.00	0.00		0.00	0.00	0.00		1.00	0.00	1.00	

****

Patterson Sand and Gravel
Existing Conditions No Project (No Haul Road)
Peak Season Average Day - AM Peak Hour

Level Of Service Detailed Computation Report (Permitted Left Turn Sat Adj)
2000 HCM Operations Method
Base Volume Alternative

****
Intersection #2 SR 65 and SR 193 (Lincoln)
****

Approach:	North	South	East	West
Cycle Length, C:	xxxxxx	xxxxxx	xxxxxx	100
Actual Green Time Per Lane Group, G:	xxxxxx	xxxxxx	xxxxxx	27.12
Effective Green Time Per Lane Group, g:	xxxxxx	xxxxxx	xxxxxx	31.12
Opposing Effective Green Time, go:	xxxxxx	xxxxxx	xxxxxx	31.12
Number Of Opposing Lanes, No:	xxxxxx	xxxxxx	xxxxxx	1
Number Of Lanes In Lane Group, N:	xxxxxx	xxxxxx	xxxxxx	1
Adjusted Left-Turn Flow Rate, Vlt:	xxxxxx	xxxxxx	xxxxxx	249
Proportion of Left Turns in Lane Group, Plt:	xxxxxx	xxxxxx	xxxxxx	1.00
Proportion of Left Turns in Opp Flow, Plto:	xxxxxx	xxxxxx	xxxxxx	1.00
Left Turns Per Cycle, LTC:	xxxxxx	xxxxxx	xxxxxx	6.92
Adjusted Opposing Flow Rate, Vo:	xxxxxx	xxxxxx	xxxxxx	0
Opposing Flow Per Lane Per Cycle, Volc:	xxxxxx	xxxxxx	xxxxxx	0.00
Opposing Platoon Ratio, Rpo:	xxxxxx	xxxxxx	xxxxxx	1.00
Lost Time Per Phase, tl:	xxxxxx	xxxxxx	xxxxxx	0.00
Eff grn until arrival of left-turn car, gf:	xxxxxx	xxxxxx	xxxxxx	0.80
Opposing Queue Ratio, qro:	xxxxxx	xxxxxx	xxxxxx	0.69
Eff grn blocked by opposing queue, gq:	xxxxxx	xxxxxx	xxxxxx	0.00
Eff grn while left turns filter thru, gu:	xxxxxx	xxxxxx	xxxxxx	30.32
Max opposing cars arriving during gq-gf, n:	xxxxxx	xxxxxx	xxxxxx	0.00
Proportion of Opposing Thru & RT cars, ptho:	xxxxxx	xxxxxx	xxxxxx	0.00
Left-turn Saturation Factor, fs:	xxxxxx	xxxxxx	xxxxxx	xxxxxx
Proportion of Left Turns in Shared Lane, pl:	xxxxxx	xxxxxx	xxxxxx	1.00
Through-car Equivalents, el1:	xxxxxx	xxxxxx	xxxxxx	1.40
Single Lane Through-car Equivalents, el2:	xxxxxx	xxxxxx	xxxxxx	1.00
Minimum Left Turn Adjustment Factor, fmin:	xxxxxx	xxxxxx	xxxxxx	0.13
Single Lane Left Turn Adjustment Factor, fm:	xxxxxx	xxxxxx	xxxxxx	0.72
Left Turn Adjustment Factor, flt:	xxxxxx	xxxxxx	xxxxxx	0.72

****

Patterson Sand and Gravel
Existing Conditions No Project (No Haul Road)
Peak Season Average Day - AM Peak Hour

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

****
Intersection #4 Riosa Rd and 11th St
****

Cycle (sec): 100 Critical Vol./Cap. (X): 0.184
Loss Time (sec): 0 (Y+R = 4 sec) Average Delay (sec/veh): 8.4
Optimal Cycle: 0 Level Of Service: A

****

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Stop Sign			Stop Sign			Stop Sign			Stop Sign		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Lanes:	0 0	1! 0	0	0 0	1! 0	0	0 1	0 0	0	0 1	0 0	0
Volume Module:												
Base Vol:	3	2	2	6	4	11	6	57	0	1	139	0
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	3	2	2	6	4	11	6	57	0	1	139	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:	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 Volume:	3	2	2	6	4	11	6	57	0	1	139	0
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	3	2	2	6	4	11	6	57	0	1	139	0
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Final Vol.:	3	2	2	6	4	11	6	57	0	1	139	0
Saturation Flow Module:												
Adjustment:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Lanes:	0.43	0.28	0.29	0.29	0.19	0.52	0.10	0.90	0.00	0.01	0.99	0.00
Final Sat.:	342	228	228	238	159	436	71	675	0	5	757	0
Capacity Analysis Module:												
Vol/Sat:	0.01	0.01	0.01	0.03	0.03	0.03	0.08	0.08	xxxx	0.18	0.18	xxxx
Crit Moves:	****				****			****		****		
Delay/Veh:	7.4	7.4	7.4	7.2	7.2	7.2	8.2	8.2	0.0	8.7	8.7	0.0
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:	7.4	7.4	7.4	7.2	7.2	7.2	8.2	8.2	0.0	8.7	8.7	0.0
LOS by Move:	A	A	A	A	A	A	A	A	*	A	A	*
ApproachDel:	7.4			7.2			8.2			8.7		
Delay Adj:	1.00			1.00			1.00			1.00		
ApprAdjDel:	7.4			7.2			8.2			8.7		
LOS by Appr:	A			A			A			A		

****

Existing AM Mon Jan 12, 2004 11:50:20 Page 8-1

Patterson Sand and Gravel
Existing Conditions No Project (No Haul Road)
Peak Season Average Day - AM Peak Hour

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

****
Intersection #4 Riosa Rd and 11th St
****

Approach:	North Bound	South Bound	East Bound	West Bound
Movement:	L - T - R	L - T - R	L - T - R	L - T - R
Time Period: 0.25 hour				
HevVeh:	0%	0%	38%	39%
Alpha Value: 0.01				
GroupType:	1	1	1	1
P[C1]:	0.7314	0.7432	0.7913	0.8870
P[C2]:	0.0180	0.0063	0.1764	0.0807
P[C3]:	0.2297	0.2334	0.0262	0.0294
P[C4]:	0.0205	0.0171	0.0060	0.0029
P[C5]:	0.0004	0.0001	0.0000	0.0000
Padj[C1]:	0.00540	0.00525	0.00247	0.00148
Padj[C2]:	0.00254	0.00262	-0.00138	-0.00046
Padj[C3]:	-0.00668	-0.00683	-0.00073	-0.00085
Padj[C4]:	-0.00123	-0.00102	-0.00036	-0.00017
Padj[C5]:	-0.00004	-0.00001	-0.00000	-0.00000
Lane:	L1	L1	L1	L1
LaneType:	LEFTTHRURITE	LEFTTHRURITE	LEFTTHRURITE	LEFTTHRURITE
HeadwayAdj:	-0.086	-0.257	0.665	0.664
Volume:	7	21	63	140
Capacity:	799	833	746	762
DegOfUtil:	0.01	0.02	0.08	0.18
DepHeadway:	4.32	4.13	4.77	4.69
ServiceTime:	2.3	2.1	2.8	2.7
Delay:	7.4	7.2	8.2	8.7
Approach:	North Bound	South Bound	East Bound	West Bound
ApproachDel:	7.4	7.2	8.2	8.7
Delay Adj:	1.00	1.00	1.00	1.00
ApprAdjDel:	7.4	7.2	8.2	8.7
LOS by Appr:	A	A	A	A
OverallDel:		8.4		
OverallLOS:		A		

Existing AM Mon Jan 12, 2004 11:50:20 Page 9-1

Patterson Sand and Gravel
Existing Conditions No Project (No Haul Road)
Peak Season Average Day - AM Peak Hour

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

****
Intersection #5 Riosa Rd and Karchner Rd
****
Average Delay (sec/veh): 5.4 Worst Case Level Of Service: A
****

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	- T	- R	L	- T	- R	L	- T	- R	L	- T	- R
Control:	Stop Sign			Stop Sign			Uncontrolled			Uncontrolled		
Rights:	Include			Include			Include			Include		
Lanes:	0 0	0 0	0	0 0	1! 0	0	0 1	0 0	0	0 0	0 1	0
Volume Module:												
Base Vol:	0	0	0	15	0	53	25	16	0	0	28	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:	0	0	0	15	0	53	25	16	0	0	28	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:	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 Volume:	0	0	0	15	0	53	25	16	0	0	28	1
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Final Vol.:	0	0	0	15	0	53	25	16	0	0	28	1
Critical Gap Module:												
Critical Gp:	xxxxx	xxxx	xxxxx	7.2	xxxx	7.0	4.7	xxxx	xxxxx	xxxxx	xxxx	xxxxx
FollowUpTim:	xxxxx	xxxx	xxxxx	4.2	xxxx	4.0	2.7	xxxx	xxxxx	xxxxx	xxxx	xxxxx
Capacity Module:												
Cnflict Vol:	xxxx	xxxx	xxxxx	94	xxxx	29	29	xxxx	xxxxx	xxxx	xxxx	xxxxx
Potent Cap.:	xxxx	xxxx	xxxxx	755	xxxx	871	1283	xxxx	xxxxx	xxxx	xxxx	xxxxx
Move Cap.:	xxxx	xxxx	xxxxx	743	xxxx	871	1283	xxxx	xxxxx	xxxx	xxxx	xxxxx
Level Of Service Module:												
Stopped Del:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	7.9	xxxx	xxxxx	xxxxx	xxxx	xxxxx
LOS by Move:	*	*	*	*	*	*	A	*	*	*	*	*
Movement:	LT -	LTR -	RT	LT -	LTR -	RT	LT -	LTR -	RT	LT -	LTR -	RT
Shared Cap.:	xxxx	xxxx	xxxxx	xxxx	839	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx
Shrd StpDel:	xxxxx	xxxx	xxxxx	xxxxx	9.7	xxxxx	7.9	xxxx	xxxxx	xxxxx	xxxx	xxxxx
Shared LOS:	*	*	*	*	A	*	A	*	*	*	*	*
ApproachDel:	xxxxxx			9.7			xxxxxx			xxxxxx		
ApproachLOS:	*			A			*			*		

Existing AM Mon Jan 12, 2004 11:50:20 Page 10-1

Patterson Sand and Gravel
Existing Conditions No Project (No Haul Road)
Peak Season Average Day - AM Peak Hour

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

****
Intersection #5 Riosa Rd and Karchner Rd
****

Approach:	North Bound	South Bound	East Bound	West Bound
Movement:	L - T - R	L - T - R	L - T - R	L - T - R
HevVeh:	0%	75%	59%	10%
Grade:	0%	0%	0%	0%
Peds/Hour:	0	0	0	0
LaneWidth:	12 feet	12 feet	12 feet	12 feet

Pedestrian Walk Speed: 4.00 feet/sec
Time Period: 0.25 hour

Traffix 7.5.0715 (c) 2002 Dowling Assoc. Licensed to DKS ASSOC., SACRAMENTO

Patterson Sand and Gravel
Existing Conditions No Project (No Haul Road)
"30th Highest" - AM Peak Hour

Scenario Report

Scenario:	Existing AM
Command:	Existing AM
Volume:	Existing AM
Geometry:	Existing AM
Impact Fee:	Default Impact Fee
Trip Generation:	Default Trip Generation
Trip Distribution:	Default Trip Distribution
Paths:	Default Paths
Routes:	Default Routes
Configuration:	Default Configuration

Patterson Sand and Gravel
Existing Conditions No Project (No Haul Road)
"30th Highest" - AM Peak Hour

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 65 and Riosa Road (Sheridan	F	7.3	0.000	F	7.3	0.000	+ 0.000 V/C
# 2 SR 65 and SR 193 (Lincoln)	C	21.9	0.739	C	21.9	0.739	+ 0.000 D/V
# 4 Riosa Rd and 11th St	A	8.9	0.227	A	8.9	0.227	+ 0.000 V/C
# 5 Riosa Rd and Karchner Rd	A	6.2	0.000	A	6.2	0.000	+ 0.000 V/C

Existing AM Mon Jan 12, 2004 14:56:48 Page 3-1

Patterson Sand and Gravel
Existing Conditions No Project (No Haul Road)
"30th Highest" - AM Peak Hour

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

****
Intersection #1 SR 65 and Riosa Road (Sheridan)
****
Average Delay (sec/veh): 7.3 Worst Case 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:	Uncontrolled			Uncontrolled			Stop Sign			Stop Sign		
Rights:	Include			Include			Include			Include		
Lanes:	0 0	1 0	1	1 0	1 0	0	0 0	0 0	0	0 0	1! 0	0
Volume Module: >> Count Date: 28 Jun 2001 <<												
Base Vol:	0	445	40	24	725	0	0	0	0	98	0	81
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	445	40	24	725	0	0	0	0	98	0	81
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	0	445	40	24	725	0	0	0	0	98	0	81
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Final Vol.:	0	445	40	24	725	0	0	0	0	98	0	81
Critical Gap Module:												
Critical Gp:	xxxxx	xxxx	xxxxx	4.2	xxxx	xxxxx	xxxxx	xxxx	xxxxx	6.9	xxxx	6.7
FollowUpTim:	xxxxx	xxxx	xxxxx	2.3	xxxx	xxxxx	xxxxx	xxxx	xxxxx	3.9	xxxx	3.7
Capacity Module:												
Cnflict Vol:	xxxx	xxxx	xxxxx	485	xxxx	xxxxx	xxxx	xxxx	xxxxx	1218	xxxx	445
Potent Cap.:	xxxx	xxxx	xxxxx	1033	xxxx	xxxxx	xxxx	xxxx	xxxxx	164	xxxx	532
Move Cap.:	xxxx	xxxx	xxxxx	1033	xxxx	xxxxx	xxxx	xxxx	xxxxx	161	xxxx	532
Level Of Service Module:												
Stopped Del:	xxxxx	xxxx	xxxxx	8.6	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx
LOS by Move:	*	*	*	A	*	*	*	*	*	*	*	*
Movement:	LT -	LTR -	RT	LT -	LTR -	RT	LT -	LTR -	RT	LT -	LTR -	RT
Shared Cap.:	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	235	xxxxx
Shrd StpDel:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	56.9	xxxxx
Shared LOS:	*	*	*	*	*	*	*	*	*	*	F	*
ApproachDel:	xxxxxx			xxxxxx			xxxxxx			56.9		
ApproachLOS:	*			*			*			F		

Existing AM Mon Jan 12, 2004 14:56:48 Page 4-1

Patterson Sand and Gravel
Existing Conditions No Project (No Haul Road)
"30th Highest" - AM Peak Hour

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

****
Intersection #1 SR 65 and Riosa Road (Sheridan)
****

Approach:	North Bound	South Bound	East Bound	West Bound
Movement:	L - T - R	L - T - R	L - T - R	L - T - R
HevVeh:	19%	11%	0%	45%
Grade:	0%	0%	0%	0%
Peds/Hour:	0	0	0	0
Pedestrian Walk Speed: 4.00 feet/sec				
LaneWidth:	12 feet	12 feet	12 feet	12 feet
Time Period: 0.25 hour				

Existing AM Mon Jan 12, 2004 14:56:48 Page 5-1

Patterson Sand and Gravel
Existing Conditions No Project (No Haul Road)
"30th Highest" - AM Peak Hour

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

```
*******************************************************************************
Intersection #2 SR 65 and SR 193 (Lincoln)
*******************************************************************************
Cycle (sec):        100                  Critical Vol./Cap. (X):        0.739
Loss Time (sec):      0 (Y+R =  4 sec) Average Delay (sec/veh):        21.9
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:        Protected        Protected        Permitted        Permitted
Rights:           Include          Include          Include           Ovl
Min. Green:     0    0    0    0    0    0    0    0    0    0    0    0
Lanes:        1  0  0  1  0    1  0  0  1  0    0  0  1! 0  0    0  1  0  0  1
------------|---------------||---------------||---------------||---------------|
Volume Module: >> Count Date: 27 Jun 2001 << AM Peak Hour
Base Vol:       0  493   83  143  630    0    0    0    0  249    0  105
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  493   83  143  630    0    0    0    0  249    0  105
User Adj:    1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
PHF Adj:     1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
PHF Volume:     0  493   83  143  630    0    0    0    0  249    0  105
Reduct Vol:     0    0    0    0    0    0    0    0    0    0    0    0
Reduced Vol:    0  493   83  143  630    0    0    0    0  249    0  105
PCE Adj:     1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
MLF Adj:     1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
Final Vol.:     0  493   83  143  630    0    0    0    0  249    0  105
------------|---------------||---------------||---------------||---------------|
Saturation Flow Module:
Sat/Lane:    1900 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900
Adjustment:  1.00 0.74 0.74 0.72 0.76 1.00 1.00 1.00 1.00 0.59 1.00 0.69
Lanes:       1.00 0.86 0.14 1.00 1.00 0.00 0.00 1.00 0.00 1.00 0.00 1.00
Final Sat.:  1900 1202  202 1365 1436    0    0 1900    0 1112    0 1310
------------|---------------||---------------||---------------||---------------|
Capacity Analysis Module:
Vol/Sat:     0.00 0.41 0.41 0.10 0.44 0.00 0.00 0.00 0.00 0.22 0.00 0.08
Crit Moves:       ****      ****                          ****
Green/Cycle: 0.00 0.56 0.56 0.14 0.70 0.00 0.00 0.00 0.00 0.30 0.00 0.44
Volume/Cap:  0.00 0.74 0.74 0.74 0.63 0.00 0.00 0.00 0.00 0.74 0.00 0.18
Delay/Veh:    0.0 20.5 20.5 55.1  9.5  0.0  0.0  0.0  0.0 39.7  0.0 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:   0.0 20.5 20.5 55.1  9.5  0.0  0.0  0.0  0.0 39.7  0.0 16.9
DesignQueue:    0   13    2    7   12    0    0    0    0   10    0    3
*******************************************************************************
```


Existing AM Mon Jan 12, 2004 14:56:48 Page 6-1

Patterson Sand and Gravel
Existing Conditions No Project (No Haul Road)
"30th Highest" - AM Peak Hour

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

```
*******************************************************************************
Intersection #2 SR 65 and SR 193 (Lincoln)
*******************************************************************************
Approach:      North Bound      South Bound      East Bound       West Bound
Movement:     L  -  T  -  R    L  -  T  -  R    L  -  T  -  R    L  -  T  -  R
------------|---------------||---------------||---------------||---------------|
HCM Ops Adjusted Lane Utilization Module:
Lanes:        1  0  0  1  0    1  0  0  1  0    0  0  1! 0  0    0  1  0  0  1
Lane Group:     L   RT    RT     L   RT    RT   LTR  LTR   LTR   LT   LT    R
#LnsInGrps:     1    1     1     1    1     1     1    1     1    1    1    1
------------|---------------||---------------||---------------||---------------|
HCM Ops Input Saturation Adj Module:
Lane Width:    12   12    12    12   12    12    12   12    12    12   12   12
CrosswalkWid          8                8                8                8
% Hev Veh:           19               19                0               11
Grade:               0%               0%               0%               0%
Parking/Hr:          No               No               No               No
Bus Stp/Hr:           0                0                0                0
Area Type:    < < < < < < < < < < < < < < < < CBD  > > > > > > > > > > > > > > >
Cnft Ped/Hr:          0                0                0                0
ExclusiveRT:     Include          Include          Include          Include
% RT Prtct:           0                0                0                0
------------|---------------||---------------||---------------||---------------|
HCM Ops f(lt) Adj Case Module:
f(lt) Case:  xxxx xxxx  xxxx     1 xxxx  xxxx  xxxx xxxx  xxxx     5 xxxx  xxxx
------------|---------------||---------------||---------------||---------------|
HCM Ops Saturation Adj Module:
Ln Wid Adj:  xxxx 1.00  1.00  1.00 1.00 xxxxx  xxxx xxxx xxxxx  1.00 xxxx  1.00
Hev Veh Adj: xxxx 0.84  0.84  0.84 0.84 xxxxx  xxxx xxxx xxxxx  0.90 xxxx  0.90
Grade Adj:   xxxx 1.00  1.00  1.00 1.00 xxxxx  xxxx xxxx xxxxx  1.00 xxxx  1.00
Parking Adj: xxxx 1.00  1.00  xxxx 1.00 xxxxx  xxxx xxxx xxxxx  xxxx xxxx  1.00
Bus Stp Adj: xxxx 1.00  1.00  xxxx 1.00 xxxxx  xxxx xxxx xxxxx  xxxx xxxx  1.00
Area Adj:    xxxx 0.90  0.90  0.90 0.90 xxxxx  xxxx xxxx xxxxx  0.90 xxxx  0.90
RT Adj:      xxxx 0.98  0.98  xxxx xxxx xxxxx  xxxx xxxx xxxxx  xxxx xxxx  0.85
LT Adj:      xxxx xxxx xxxxx  0.95 xxxx xxxxx  xxxx xxxx xxxxx  0.72 xxxx xxxxx
PedBike Adj: 1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
HCM Sat Adj: 1.00 0.74  0.74  0.72 0.76  1.00  1.00 1.00  1.00  0.59 1.00  0.69
Usr Sat Adj: 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 Sat Adj: 1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
Fnl Sat Adj: 1.00 0.74  0.74  0.72 0.76  1.00  1.00 1.00  1.00  0.59 1.00  0.69
------------|---------------||---------------||---------------||---------------|
Delay Adjustment Factor Module:
Coordinated:  < < < < < < < < < < < < < < < No   > > > > > > > > > > > > > > >
Signal Type:  < < < < < < < < < < < <    Actuated    > > > > > > > > > > > >
DelAdjFctr:  0.00 1.00  1.00  1.00 1.00  0.00  0.00 0.00  0.00  1.00 0.00  1.00
*******************************************************************************
```

Patterson Sand and Gravel
Existing Conditions No Project (No Haul Road)
"30th Highest" - AM Peak Hour

Level Of Service Detailed Computation Report (Permitted Left Turn Sat Adj)
2000 HCM Operations Method
Base Volume Alternative

Intersection #2 SR 65 and SR 193 (Lincoln)

Approach:	North	South	East	West
Cycle Length, C:	xxxxxx	xxxxxx	xxxxxx	100
Actual Green Time Per Lane Group, G:	xxxxxx	xxxxxx	xxxxxx	26.32
Effective Green Time Per Lane Group, g:	xxxxxx	xxxxxx	xxxxxx	30.32
Opposing Effective Green Time, go:	xxxxxx	xxxxxx	xxxxxx	30.32
Number Of Opposing Lanes, No:	xxxxxx	xxxxxx	xxxxxx	1
Number Of Lanes In Lane Group, N:	xxxxxx	xxxxxx	xxxxxx	1
Adjusted Left-Turn Flow Rate, Vlt:	xxxxxx	xxxxxx	xxxxxx	249
Proportion of Left Turns in Lane Group, Plt:	xxxxxx	xxxxxx	xxxxxx	1.00
Proportion of Left Turns in Opp Flow, Plto:	xxxxxx	xxxxxx	xxxxxx	1.00
Left Turns Per Cycle, LTC:	xxxxxx	xxxxxx	xxxxxx	6.92
Adjusted Opposing Flow Rate, Vo:	xxxxxx	xxxxxx	xxxxxx	0
Opposing Flow Per Lane Per Cycle, Volc:	xxxxxx	xxxxxx	xxxxxx	0.00
Opposing Platoon Ratio, Rpo:	xxxxxx	xxxxxx	xxxxxx	1.00
Lost Time Per Phase, tl:	xxxxxx	xxxxxx	xxxxxx	0.00
Eff grn until arrival of left-turn car, gf:	xxxxxx	xxxxxx	xxxxxx	0.77
Opposing Queue Ratio, qro:	xxxxxx	xxxxxx	xxxxxx	0.70
Eff grn blocked by opposing queue, gq:	xxxxxx	xxxxxx	xxxxxx	0.00
Eff grn while left turns filter thru, gu:	xxxxxx	xxxxxx	xxxxxx	29.55
Max opposing cars arriving during gq-gf, n:	xxxxxx	xxxxxx	xxxxxx	0.00
Proportion of Opposing Thru & RT cars, ptho:	xxxxxx	xxxxxx	xxxxxx	0.00
Left-turn Saturation Factor, fs:	xxxxxx	xxxxxx	xxxxxx	xxxxxx
Proportion of Left Turns in Shared Lane, pl:	xxxxxx	xxxxxx	xxxxxx	1.00
Through-car Equivalents, el1:	xxxxxx	xxxxxx	xxxxxx	1.40
Single Lane Through-car Equivalents, el2:	xxxxxx	xxxxxx	xxxxxx	1.00
Minimum Left Turn Adjustment Factor, fmin:	xxxxxx	xxxxxx	xxxxxx	0.13
Single Lane Left Turn Adjustment Factor, fm:	xxxxxx	xxxxxx	xxxxxx	0.72
Left Turn Adjustment Factor, flt:	xxxxxx	xxxxxx	xxxxxx	0.72

Patterson Sand and Gravel
Existing Conditions No Project (No Haul Road)
"30th Highest" - AM Peak Hour

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

Intersection #4 Riosa Rd and 11th St

Cycle (sec): 100 Critical Vol./Cap. (X): 0.227
Loss Time (sec): 0 (Y+R = 4 sec) Average Delay (sec/veh): 8.9
Optimal Cycle: 0 Level Of Service: A

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Stop Sign			Stop Sign			Stop Sign			Stop Sign		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Lanes:	0 0	1! 0	0	0 0	1! 0	0	0 1	0 0	0	0 1	0 0	0
Volume Module:												
Base Vol:	3	2	2	6	4	11	6	68	0	1	166	0
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	3	2	2	6	4	11	6	68	0	1	166	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:	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 Volume:	3	2	2	6	4	11	6	68	0	1	166	0
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	3	2	2	6	4	11	6	68	0	1	166	0
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Final Vol.:	3	2	2	6	4	11	6	68	0	1	166	0
Saturation Flow Module:												
Adjustment:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Lanes:	0.43	0.28	0.29	0.29	0.19	0.52	0.08	0.92	0.00	0.01	0.99	0.00
Final Sat.:	331	221	221	231	154	423	58	658	0	4	732	0
Capacity Analysis Module:												
Vol/Sat:	0.01	0.01	0.01	0.03	0.03	0.03	0.10	0.10	xxxx	0.23	0.23	xxxx
Crit Moves:	****				****			****			****	
Delay/Veh:	7.5	7.5	7.5	7.3	7.3	7.3	8.5	8.5	0.0	9.3	9.3	0.0
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:	7.5	7.5	7.5	7.3	7.3	7.3	8.5	8.5	0.0	9.3	9.3	0.0
LOS by Move:	A	A	A	A	A	A	A	A	*	A	A	*
ApproachDel:	7.5			7.3			8.5			9.3		
Delay Adj:	1.00			1.00			1.00			1.00		
ApprAdjDel:	7.5			7.3			8.5			9.3		
LOS by Appr:	A			A			A			A		

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Patterson Sand and Gravel
Existing Conditions No Project (No Haul Road)
"30th Highest" - AM Peak Hour

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

****
Intersection #4 Riosa Rd and 11th St
****

Approach:	North Bound	South Bound	East Bound	West Bound
Movement:	L - T - R	L - T - R	L - T - R	L - T - R
Time Period: 0.25 hour				
HevVeh:	0%	0%	48%	48%
Alpha Value: 0.01				
GroupType:	1	1	1	1
P[C1]:	0.6784	0.6896	0.7491	0.8681
P[C2]:	0.0172	0.0060	0.2178	0.0988
P[C3]:	0.2745	0.2790	0.0255	0.0295
P[C4]:	0.0294	0.0252	0.0076	0.0035
P[C5]:	0.0006	0.0002	0.0000	0.0000
Padj[C1]:	0.00657	0.00640	0.00292	0.00169
Padj[C2]:	0.00318	0.00324	-0.00177	-0.00062
Padj[C3]:	-0.00793	-0.00811	-0.00069	-0.00085
Padj[C4]:	-0.00176	-0.00151	-0.00045	-0.00021
Padj[C5]:	-0.00006	-0.00002	-0.00000	-0.00000
Lane:	L1	L1	L1	L1
LaneType:	LEFTTHRURITE	LEFTTHRURITE	LEFTTHRURITE	LEFTTHRURITE
HeadwayAdj:	-0.086	-0.257	0.832	0.817
Volume:	7	21	74	167
Capacity:	772	807	716	736
DegOfUtil:	0.01	0.02	0.10	0.23
DepHeadway:	4.43	4.24	4.97	4.86
ServiceTime:	2.4	2.2	3.0	2.9
Delay:	7.5	7.3	8.5	9.3
Approach:	North Bound	South Bound	East Bound	West Bound
ApproachDel:	7.5	7.3	8.5	9.3
Delay Adj:	1.00	1.00	1.00	1.00
ApprAdjDel:	7.5	7.3	8.5	9.3
LOS by Appr:	A	A	A	A
OverallDel:		8.9		
OverallLOS:		A		

Existing AM Mon Jan 12, 2004 14:56:48 Page 9-1

Patterson Sand and Gravel
Existing Conditions No Project (No Haul Road)
"30th Highest" - AM Peak Hour

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

****
Intersection #5 Riosa Rd and Karchner Rd
****
Average Delay (sec/veh): 6.2 Worst Case Level Of Service: A
****

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	- T	- R	L	- T	- R	L	- T	- R	L	- T	- R
Control:	Stop Sign			Stop Sign			Uncontrolled			Uncontrolled		
Rights:	Include			Include			Include			Include		
Lanes:	0 0	0 0	0	0 0	1! 0	0	0 1	0 0	0	0 0	0 1	0
Volume Module:												
Base Vol:	0	0	0	15	0	80	36	16	0	0	28	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:	0	0	0	15	0	80	36	16	0	0	28	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:	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 Volume:	0	0	0	15	0	80	36	16	0	0	28	1
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Final Vol.:	0	0	0	15	0	80	36	16	0	0	28	1
Critical Gap Module:												
Critical Gp:	xxxxx	xxxx	xxxxx	7.2	xxxx	7.0	4.8	xxxx	xxxxx	xxxxx	xxxx	xxxxx
FollowUpTim:	xxxxx	xxxx	xxxxx	4.2	xxxx	4.0	2.8	xxxx	xxxxx	xxxxx	xxxx	xxxxx
Capacity Module:												
Cnflict Vol:	xxxx	xxxx	xxxxx	117	xxxx	29	29	xxxx	xxxxx	xxxx	xxxx	xxxxx
Potent Cap.:	xxxx	xxxx	xxxxx	720	xxxx	857	1246	xxxx	xxxxx	xxxx	xxxx	xxxxx
Move Cap.:	xxxx	xxxx	xxxxx	703	xxxx	857	1246	xxxx	xxxxx	xxxx	xxxx	xxxxx
Level Of Service Module:												
Stopped Del:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	8.0	xxxx	xxxxx	xxxxx	xxxx	xxxxx
LOS by Move:	*	*	*	*	*	*	A	*	*	*	*	*
Movement:	LT - LTR - RT			LT - LTR - RT			LT - LTR - RT			LT - LTR - RT		
Shared Cap.:	xxxx	xxxx	xxxxx	xxxx	828	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx
Shrd StpDel:	xxxxx	xxxx	xxxxx	xxxxx	9.9	xxxxx	8.0	xxxx	xxxxx	xxxxx	xxxx	xxxxx
Shared LOS:	*	*	*	*	A	*	A	*	*	*	*	*
ApproachDel:	xxxxxx			9.9			xxxxxx			xxxxxx		
ApproachLOS:	*			A			*			*		

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Patterson Sand and Gravel
Existing Conditions No Project (No Haul Road)
"30th Highest" - AM Peak Hour

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

****
Intersection #5 Riosa Rd and Karchner Rd
****

Approach:	North Bound	South Bound	East Bound	West Bound
Movement:	L - T - R	L - T - R	L - T - R	L - T - R
HevVeh:	0%	82%	68%	10%
Grade:	0%	0%	0%	0%
Peds/Hour:	0	0	0	0
Pedestrian Walk Speed: 4.00 feet/sec				
LaneWidth:	12 feet	12 feet	12 feet	12 feet

Time Period: 0.25 hour

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Patterson Sand and Gravel
Existing Conditions No Project (No Haul Road)
"Highest" - AM Peak Hour

Scenario Report

Scenario:	Existing AM
Command:	Existing AM
Volume:	Existing AM
Geometry:	Existing AM
Impact Fee:	Default Impact Fee
Trip Generation:	Default Trip Generation
Trip Distribution:	Default Trip Distribution
Paths:	Default Paths
Routes:	Default Routes
Configuration:	Default Configuration

Existing AM Mon Jan 12, 2004 16:49:31 Page 2-1

Patterson Sand and Gravel
Existing Conditions No Project (No Haul Road)
"Highest" - AM Peak Hour

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 65 and Riosa Road (Sheridan	F	13.1	0.000	F	13.1	0.000	+ 0.000 V/C
# 2 SR 65 and SR 193 (Lincoln)	C	22.5	0.753	C	22.5	0.753	+ 0.000 D/V
# 4 Riosa Rd and 11th St	A	9.4	0.272	A	9.4	0.272	+ 0.000 V/C
# 5 Riosa Rd and Karchner Rd	B	6.8	0.000	B	6.8	0.000	+ 0.000 V/C

Patterson Sand and Gravel
Existing Conditions No Project (No Haul Road)
"Highest" - AM Peak Hour

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

Intersection #1 SR 65 and Riosa Road (Sheridan)

Average Delay (sec/veh): 13.1 Worst Case 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:	Uncontrolled			Uncontrolled			Stop Sign			Stop Sign		
Rights:	Include			Include			Include			Include		
Lanes:	0 0 1	0	1	1 0 1	0	0	0 0 0	0	0	0 0 1!	0	0
Volume Module: >> Count Date: 28 Jun 2001 <<												
Base Vol:	0	445	50	24	725	0	0	0	0	120	0	86
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	445	50	24	725	0	0	0	0	120	0	86
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	0	445	50	24	725	0	0	0	0	120	0	86
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Final Vol.:	0	445	50	24	725	0	0	0	0	120	0	86
Critical Gap Module:												
Critical Gp:	xxxxx	xxxx	xxxxx	4.2	xxxx	xxxxx	xxxxx	xxxx	xxxxx	6.9	xxxx	6.7
FollowUpTim:	xxxxx	xxxx	xxxxx	2.3	xxxx	xxxxx	xxxxx	xxxx	xxxxx	4.0	xxxx	3.8
Capacity Module:												
Cnflict Vol:	xxxx	xxxx	xxxxx	495	xxxx	xxxxx	xxxx	xxxx	xxxxx	1218	xxxx	445
Potent Cap.:	xxxx	xxxx	xxxxx	1024	xxxx	xxxxx	xxxx	xxxx	xxxxx	159	xxxx	521
Move Cap.:	xxxx	xxxx	xxxxx	1024	xxxx	xxxxx	xxxx	xxxx	xxxxx	156	xxxx	521
Level Of Service Module:												
Stopped Del:	xxxxx	xxxx	xxxxx	8.6	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx
LOS by Move:	*	*	*	A	*	*	*	*	*	*	*	*
Movement:	LT -	LTR -	RT	LT -	LTR -	RT	LT -	LTR -	RT	LT -	LTR -	RT
Shared Cap.:	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	220	xxxxx
Shrd StpDel:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	91.1	xxxxx
Shared LOS:	*	*	*	*	*	*	*	*	*	*	F	*
ApproachDel:	xxxxxx			xxxxxx			xxxxxx			91.1		
ApproachLOS:	*			*			*			F		

Patterson Sand and Gravel
Existing Conditions No Project (No Haul Road)
"Highest" - AM Peak Hour

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

Intersection #1 SR 65 and Riosa Road (Sheridan)

Approach:	North Bound	South Bound	East Bound	West Bound
Movement:	L - T - R	L - T - R	L - T - R	L - T - R
HevVeh:	21%	11%	0%	52%
Grade:	0%	0%	0%	0%
Peds/Hour:	0	0	0	0
Pedestrian Walk Speed: 4.00 feet/sec				
LaneWidth:	12 feet	12 feet	12 feet	12 feet

Time Period: 0.25 hour

Existing AM Mon Jan 12, 2004 16:49:31 Page 5-1

Patterson Sand and Gravel
Existing Conditions No Project (No Haul Road)
"Highest" - AM Peak Hour

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

Intersection #2 SR 65 and SR 193 (Lincoln)

Cycle (sec): 100 Critical Vol./Cap. (X): 0.753
Loss Time (sec): 0 (Y+R = 4 sec) Average Delay (sec/veh): 22.5
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				Permitted				Permitted			
Rights:	Include				Include				Include				Ovl			
Min. Green:	0	0	0		0	0	0		0	0	0		0	0	0	
Lanes:	1	0	0	1	0	1	0	0	1	0	0	0	1!	0	0	0	1	0	0	1
Volume Module: >> Count Date: 27 Jun 2001 << AM Peak Hour																
Base Vol:	0	502	83	147	649	0	0	0	0	249	0	106				
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	502	83	147	649	0	0	0	0	249	0	106				
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00				
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00				
PHF Volume:	0	502	83	147	649	0	0	0	0	249	0	106				
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0				
Reduced Vol:	0	502	83	147	649	0	0	0	0	249	0	106				
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00				
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00				
Final Vol.:	0	502	83	147	649	0	0	0	0	249	0	106				
Saturation Flow Module:																
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900				
Adjustment:	1.00	0.73	0.73	0.71	0.74	1.00	1.00	1.00	1.00	0.59	1.00	0.69				
Lanes:	1.00	0.86	0.14	1.00	1.00	0.00	0.00	1.00	0.00	1.00	0.00	1.00				
Final Sat.:	1900	1197	198	1342	1412	0	0	1900	0	1112	0	1310				
Capacity Analysis Module:																
Vol/Sat:	0.00	0.42	0.42	0.11	0.46	0.00	0.00	0.00	0.00	0.22	0.00	0.08				
Crit Moves:		****		****						****						
Green/Cycle:	0.00	0.56	0.56	0.15	0.70	0.00	0.00	0.00	0.00	0.30	0.00	0.44				
Volume/Cap:	0.00	0.75	0.75	0.75	0.65	0.00	0.00	0.00	0.00	0.75	0.00	0.18				
Delay/Veh:	0.0	21.1	21.1	56.2	9.8	0.0	0.0	0.0	0.0	41.2	0.0	17.0				
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	21.1	21.1	56.2	9.8	0.0	0.0	0.0	0.0	41.2	0.0	17.0				
DesignQueue:	0	13	2	7	12	0	0	0	0	10	0	3				

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Patterson Sand and Gravel
Existing Conditions No Project (No Haul Road)
"Highest" - AM Peak Hour

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

Intersection #2 SR 65 and SR 193 (Lincoln)

Approach:	North Bound				South Bound				East Bound				West Bound			
Movement:	L	- T	-	R	L	- T	-	R	L	- T	-	R	L	- T	-	R
HCM Ops Adjusted Lane Utilization Module:																
Lanes:	1	0	0	1	0	1	0	0	1	0	0	0	1!	0	0	0	1	0	0	1
Lane Group:	L	RT		RT		L	RT		RT	LTR	LTR		LTR	LT	LT		R
#LnsInGrps:	1	1		1		1	1		1	1	1		1	1	1		1
HCM Ops Input Saturation Adj Module:																
Lane Width:	12	12		12		12	12		12	12	12		12	12	12		12
CrosswalkWid		8					8				8				8		
% Hev Veh:		20					21				0				11		
Grade:		0%					0%				0%				0%		
Parking/Hr:		No					No				No				No		
Bus Stp/Hr:		0					0				0				0		
Area Type:	< < < < < < < < < < < < < < < < CBD > > > > > > > > > > > > > > > >															
Cnft Ped/Hr:		0					0				0				0		
ExclusiveRT:		Include					Include				Include				Include		
% RT Prtct:		0					0				0				0		
HCM Ops f(lt) Adj Case Module:																
f(lt) Case:	xxxx	xxxx		xxxx		1	xxxx		xxxx	xxxx		xxxx		5	xxxx		xxxx
HCM Ops Saturation Adj Module:																
Ln Wid Adj:	xxxx	1.00		1.00		1.00	1.00	xxxxx		xxxx	xxxx	xxxxx		1.00	xxxx		1.00
Hev Veh Adj:	xxxx	0.83		0.83		0.83	0.83	xxxxx		xxxx	xxxx	xxxxx		0.90	xxxx		0.90
Grade Adj:	xxxx	1.00		1.00		1.00	1.00	xxxxx		xxxx	xxxx	xxxxx		1.00	xxxx		1.00
Parking Adj:	xxxx	1.00		1.00		xxxx	1.00	xxxxx		xxxx	xxxx	xxxxx		xxxx	xxxx		1.00
Bus Stp Adj:	xxxx	1.00		1.00		xxxx	1.00	xxxxx		xxxx	xxxx	xxxxx		xxxx	xxxx		1.00
Area Adj:	xxxx	0.90		0.90		0.90	0.90	xxxxx		xxxx	xxxx	xxxxx		0.90	xxxx		0.90
RT Adj:	xxxx	0.98		0.98		xxxx	xxxx	xxxxx		xxxx	xxxx	xxxxx		xxxx	xxxx		0.85
LT Adj:	xxxx	xxxx		xxxxx		0.95	xxxx	xxxxx		xxxx	xxxx	xxxxx		0.72	xxxx		xxxxx
PedBike Adj:	1.00	1.00		1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00		1.00
HCM Sat Adj:	1.00	0.73		0.73		0.71	0.74	1.00		1.00	1.00	1.00		0.59	1.00		0.69
Usr Sat Adj:	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 Sat Adj:	1.00	1.00		1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00		1.00
Fnl Sat Adj:	1.00	0.73		0.73		0.71	0.74	1.00		1.00	1.00	1.00		0.59	1.00		0.69
Delay Adjustment Factor Module:																
Coordinated:	< < < < < < < < < < < < < < < < No > > > > > > > > > > > > > > > >															
Signal Type:	< < < < < < < < < < < < < Actuated > > > > > > > > > > > > >															
DelAdjFctr:	0.00	1.00		1.00		1.00	1.00	0.00		0.00	0.00	0.00		1.00	0.00		1.00

Patterson Sand and Gravel
Existing Conditions No Project (No Haul Road)
"Highest" - AM Peak Hour

Level Of Service Detailed Computation Report (Permitted Left Turn Sat Adj)
2000 HCM Operations Method
Base Volume Alternative

Intersection #2 SR 65 and SR 193 (Lincoln)

Approach:	North	South	East	West
Cycle Length, C:	xxxxxx	xxxxxx	xxxxxx	100
Actual Green Time Per Lane Group, G:	xxxxxx	xxxxxx	xxxxxx	25.74
Effective Green Time Per Lane Group, g:	xxxxxx	xxxxxx	xxxxxx	29.74
Opposing Effective Green Time, go:	xxxxxx	xxxxxx	xxxxxx	29.74
Number Of Opposing Lanes, No:	xxxxxx	xxxxxx	xxxxxx	1
Number Of Lanes In Lane Group, N:	xxxxxx	xxxxxx	xxxxxx	1
Adjusted Left-Turn Flow Rate, Vlt:	xxxxxx	xxxxxx	xxxxxx	249
Proportion of Left Turns in Lane Group, Plt:	xxxxxx	xxxxxx	xxxxxx	1.00
Proportion of Left Turns in Opp Flow, Plto:	xxxxxx	xxxxxx	xxxxxx	1.00
Left Turns Per Cycle, LTC:	xxxxxx	xxxxxx	xxxxxx	6.92
Adjusted Opposing Flow Rate, Vo:	xxxxxx	xxxxxx	xxxxxx	0
Opposing Flow Per Lane Per Cycle, Volc:	xxxxxx	xxxxxx	xxxxxx	0.00
Opposing Platoon Ratio, Rpo:	xxxxxx	xxxxxx	xxxxxx	1.00
Lost Time Per Phase, tl:	xxxxxx	xxxxxx	xxxxxx	0.00
Eff grn until arrival of left-turn car, gf:	xxxxxx	xxxxxx	xxxxxx	0.76
Opposing Queue Ratio, qro:	xxxxxx	xxxxxx	xxxxxx	0.70
Eff grn blocked by opposing queue, gq:	xxxxxx	xxxxxx	xxxxxx	0.00
Eff grn while left turns filter thru, gu:	xxxxxx	xxxxxx	xxxxxx	28.98
Max opposing cars arriving during gq-gf, n:	xxxxxx	xxxxxx	xxxxxx	0.00
Proportion of Opposing Thru & RT cars, ptho:	xxxxxx	xxxxxx	xxxxxx	0.00
Left-turn Saturation Factor, fs:	xxxxxx	xxxxxx	xxxxxx	xxxxxx
Proportion of Left Turns in Shared Lane, pl:	xxxxxx	xxxxxx	xxxxxx	1.00
Through-car Equivalents, el1:	xxxxxx	xxxxxx	xxxxxx	1.40
Single Lane Through-car Equivalents, el2:	xxxxxx	xxxxxx	xxxxxx	1.00
Minimum Left Turn Adjustment Factor, fmin:	xxxxxx	xxxxxx	xxxxxx	0.13
Single Lane Left Turn Adjustment Factor, fm:	xxxxxx	xxxxxx	xxxxxx	0.72
Left Turn Adjustment Factor, flt:	xxxxxx	xxxxxx	xxxxxx	0.72

Patterson Sand and Gravel
Existing Conditions No Project (No Haul Road)
"Highest" - AM Peak Hour

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

Intersection #4 Riosa Rd and 11th St

Cycle (sec): 100 Critical Vol./Cap. (X): 0.272
Loss Time (sec): 0 (Y+R = 4 sec) Average Delay (sec/veh): 9.4
Optimal Cycle: 0 Level Of Service: A

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Stop Sign			Stop Sign			Stop Sign			Stop Sign		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Lanes:	0 0	1!	0 0	0 0	1!	0 0	0 1	0	0 0	0 1	0	0 0
Volume Module:												
Base Vol:	3	2	2	6	4	11	6	79	0	1	193	0
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	3	2	2	6	4	11	6	79	0	1	193	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:	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 Volume:	3	2	2	6	4	11	6	79	0	1	193	0
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	3	2	2	6	4	11	6	79	0	1	193	0
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Final Vol.:	3	2	2	6	4	11	6	79	0	1	193	0
Saturation Flow Module:												
Adjustment:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Lanes:	0.43	0.28	0.29	0.29	0.19	0.52	0.07	0.93	0.00	0.01	0.99	0.00
Final Sat.:	321	214	214	223	149	410	49	648	0	4	710	0
Capacity Analysis Module:												
Vol/Sat:	0.01	0.01	0.01	0.03	0.03	0.03	0.12	0.12	xxxx	0.27	0.27	xxxx
Crit Moves:	****				****			****			****	
Delay/Veh:	7.6	7.6	7.6	7.5	7.5	7.5	8.8	8.8	0.0	9.9	9.9	0.0
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:	7.6	7.6	7.6	7.5	7.5	7.5	8.8	8.8	0.0	9.9	9.9	0.0
LOS by Move:	A	A	A	A	A	A	A	A	*	A	A	*
ApproachDel:	7.6			7.5			8.8			9.9		
Delay Adj:	1.00			1.00			1.00			1.00		
ApprAdjDel:	7.6			7.5			8.8			9.9		
LOS by Appr:	A			A			A			A		

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Patterson Sand and Gravel
Existing Conditions No Project (No Haul Road)
"Highest" - AM Peak Hour

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

****
Intersection #4 Riosa Rd and 11th St
****

Approach:	North Bound	South Bound	East Bound	West Bound
Movement:	L - T - R	L - T - R	L - T - R	L - T - R
Time Period: 0.25 hour				
HevVeh:	0%	0%	54%	56%
Alpha Value: 0.01				
GroupType:	1	1	1	1
P[C1]:	0.6259	0.6365	0.7054	0.8496
P[C2]:	0.0163	0.0057	0.2607	0.1165
P[C3]:	0.3171	0.3225	0.0246	0.0296
P[C4]:	0.0399	0.0351	0.0093	0.0043
P[C5]:	0.0008	0.0003	0.0001	0.0000
Padj[C1]:	0.00774	0.00757	0.00338	0.00189
Padj[C2]:	0.00383	0.00388	-0.00217	-0.00078
Padj[C3]:	-0.00910	-0.00932	-0.00064	-0.00085
Padj[C4]:	-0.00239	-0.00210	-0.00055	-0.00026
Padj[C5]:	-0.00008	-0.00003	-0.00001	-0.00000
Lane:	L1	L1	L1	L1
LaneType:	LEFTTHRURITE	LEFTTHRURITE	LEFTTHRURITE	LEFTTHRURITE
HeadwayAdj:	-0.086	-0.257	0.932	0.953
Volume:	7	21	85	194
Capacity:	749	782	697	714
DegOfUtil:	0.01	0.03	0.12	0.27
DepHeadway:	4.54	4.35	5.11	5.01
ServiceTime:	2.5	2.3	3.1	3.0
Delay:	7.6	7.5	8.8	9.9
Approach:	North Bound	South Bound	East Bound	West Bound
ApproachDel:	7.6	7.5	8.8	9.9
Delay Adj:	1.00	1.00	1.00	1.00
ApprAdjDel:	7.6	7.5	8.8	9.9
LOS by Appr:	A	A	A	A
OverallDel:		9.4		
OverallLOS:		A		

Existing AM Mon Jan 12, 2004 16:49:31 Page 9-1

Patterson Sand and Gravel
Existing Conditions No Project (No Haul Road)
"Highest" - AM Peak Hour

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

****
Intersection #5 Riosa Rd and Karchner Rd
****
Average Delay (sec/veh): 6.8 Worst Case 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			Uncontrolled			Uncontrolled		
Rights:	Include			Include			Include			Include		
Lanes:	0 0	0 0	0	0 0	1! 0	0	0 1	0 0	0	0 0	0 1	0
Volume Module:												
Base Vol:	0	0	0	15	0	107	47	16	0	0	28	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:	0	0	0	15	0	107	47	16	0	0	28	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:	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 Volume:	0	0	0	15	0	107	47	16	0	0	28	1
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Final Vol.:	0	0	0	15	0	107	47	16	0	0	28	1
Critical Gap Module:												
Critical Gp:	xxxxx	xxxx	xxxxx	7.3	xxxx	7.1	4.8	xxxx	xxxxx	xxxxx	xxxx	xxxxx
FollowUpTim:	xxxxx	xxxx	xxxxx	4.3	xxxx	4.1	2.9	xxxx	xxxxx	xxxxx	xxxx	xxxxx
Capacity Module:												
Cnflict Vol:	xxxx	xxxx	xxxxx	139	xxxx	29	29	xxxx	xxxxx	xxxx	xxxx	xxxxx
Potent Cap.:	xxxx	xxxx	xxxxx	691	xxxx	849	1226	xxxx	xxxxx	xxxx	xxxx	xxxxx
Move Cap.:	xxxx	xxxx	xxxxx	670	xxxx	849	1226	xxxx	xxxxx	xxxx	xxxx	xxxxx
Level Of Service Module:												
Stopped Del:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	8.1	xxxx	xxxxx	xxxxx	xxxx	xxxxx
LOS by Move:	*	*	*	*	*	*	A	*	*	*	*	*
Movement:	LT - LTR - RT			LT - LTR - RT			LT - LTR - RT			LT - LTR - RT		
Shared Cap.:	xxxx	xxxx	xxxxx	xxxx	822	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx
Shrd StpDel:	xxxxx	xxxx	xxxxx	xxxxx	10.1	xxxxx	8.1	xxxx	xxxxx	xxxxx	xxxx	xxxxx
Shared LOS:	*	*	*	*	B	*	A	*	*	*	*	*
ApproachDel:	xxxxxx			10.1			xxxxxx			xxxxxx		
ApproachLOS:	*			B			*			*		

Existing AM Mon Jan 12, 2004 16:49:31 Page 10-1

Patterson Sand and Gravel
Existing Conditions No Project (No Haul Road)
"Highest" - AM Peak Hour

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

****
Intersection #5 Riosa Rd and Karchner Rd
****

Approach:	North Bound	South Bound	East Bound	West Bound
Movement:	L - T - R	L - T - R	L - T - R	L - T - R
HevVeh:	0%	86%	73%	10%
Grade:	0%	0%	0%	0%
Peds/Hour:	0	0	0	0
LaneWidth:	12 feet	12 feet	12 feet	12 feet

Pedestrian Walk Speed: 4.00 feet/sec
Time Period: 0.25 hour

Existing PM Mon Jan 12, 2004 12:13:27 Page 1-1

Patterson Sand and Gravel
Existing Conditions No Project (No Haul Road)
Peak Season Average Day - PM Peak Hour

Scenario Report

Scenario:	Existing PM
Command:	Existing PM
Volume:	Existing PM
Geometry:	Existing PM
Impact Fee:	Default Impact Fee
Trip Generation:	Default Trip Generation
Trip Distribution:	Default Trip Distribution
Paths:	Default Paths
Routes:	Default Routes
Configuration:	Default Configuration

Existing PM Mon Jan 12, 2004 12:13:27 Page 2-1

Patterson Sand and Gravel
Existing Conditions No Project (No Haul Road)
Peak Season Average Day - PM Peak Hour

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 65 and Riosa Road (Sheridan	D	2.5	0.000	D	2.5	0.000	+ 0.000 V/C
# 2 SR 65 and SR 193 (Lincoln)	C	31.2	0.911	C	31.2	0.911	-0.020 D/V
# 4 Riosa Rd and 11th St	A	7.6	0.115	A	7.6	0.115	+ 0.000 V/C
# 5 Riosa Rd and Karchner Rd	A	3.8	0.000	A	3.8	0.000	+ 0.000 V/C

Existing PM Mon Jan 12, 2004 12:13:27 Page 3-1

Patterson Sand and Gravel
Existing Conditions No Project (No Haul Road)
Peak Season Average Day - PM Peak Hour

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

****
Intersection #1 SR 65 and Riosa Road (Sheridan)
****
Average Delay (sec/veh): 2.5 Worst Case 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:	Uncontrolled			Uncontrolled			Stop Sign			Stop Sign		
Rights:	Include			Include			Include			Include		
Lanes:	0 0 1	0 1		1 0 1	0 0		0 0 0	0 0		0 0 1!	0 0	
Volume Module: >> Count Date: 28 Jun 2001 << PM												
Base Vol:	0	745	101	85	563	0	0	0	0	36	0	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:	0	745	101	85	563	0	0	0	0	36	0	59
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	0	745	101	85	563	0	0	0	0	36	0	59
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Final Vol.:	0	745	101	85	563	0	0	0	0	36	0	59
Critical Gap Module:												
Critical Gp:	xxxxx	xxxx	xxxxx	4.1	xxxx	xxxxx	xxxxx	xxxx	xxxxx	6.4	xxxx	6.3
FollowUpTim:	xxxxx	xxxx	xxxxx	2.2	xxxx	xxxxx	xxxxx	xxxx	xxxxx	3.5	xxxx	3.3
Capacity Module:												
Cnflict Vol:	xxxx	xxxx	xxxxx	846	xxxx	xxxxx	xxxx	xxxx	xxxxx	1478	xxxx	745
Potent Cap.:	xxxx	xxxx	xxxxx	782	xxxx	xxxxx	xxxx	xxxx	xxxxx	136	xxxx	409
Move Cap.:	xxxx	xxxx	xxxxx	782	xxxx	xxxxx	xxxx	xxxx	xxxxx	125	xxxx	409
Level Of Service Module:												
Stopped Del:	xxxxx	xxxx	xxxxx	10.2	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx
LOS by Move:	*	*	*	B	*	*	*	*	*	*	*	*
Movement:	LT - LTR - RT			LT - LTR - RT			LT - LTR - RT			LT - LTR - RT		
Shared Cap.:	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	220	xxxxx
Shrd StpDel:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	33.3	xxxxx
Shared LOS:	*	*	*	*	*	*	*	*	*	*	D	*
ApproachDel:	xxxxxx			xxxxxx			xxxxxx			33.3		
ApproachLOS:	*			*			*			D		

Existing PM Mon Jan 12, 2004 12:13:27 Page 4-1

Patterson Sand and Gravel
Existing Conditions No Project (No Haul Road)
Peak Season Average Day - PM Peak Hour

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

****
Intersection #1 SR 65 and Riosa Road (Sheridan)
****

Approach:	North Bound	South Bound	East Bound	West Bound
Movement:	L - T - R	L - T - R	L - T - R	L - T - R
HevVeh:	4%	4%	0%	5%
Grade:	0%	0%	0%	0%
Peds/Hour:	0	0	0	0
Pedestrian Walk Speed: 4.00 feet/sec				
LaneWidth:	12 feet	12 feet	12 feet	12 feet
Time Period: 0.25 hour				

Existing PM Mon Jan 12, 2004 12:13:27 Page 5-1

Patterson Sand and Gravel
Existing Conditions No Project (No Haul Road)
Peak Season Average Day - PM Peak Hour

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

****

Intersection #2 SR 65 and SR 193 (Lincoln)

****

Cycle (sec): 100 Critical Vol./Cap. (X): 0.911
Loss Time (sec): 0 (Y+R = 4 sec) Average Delay (sec/veh): 31.2
Optimal Cycle: 180 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				Permitted				Permitted			
Rights:	Include				Include				Include				Ovl			
Min. Green:	0	0	0		0	0	0		0	0	0		0	0	0	
Lanes:	1	0	0	1 0	1	0	0	1 0	0	0	1!	0 0	0	1	0	0 1
Volume Module: >> Count Date: 28 Jun 2001 << PM																
Base Vol:	0	839	89		177	579	0		0	0	0		281	0	265	
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	839	89		177	579	0		0	0	0		281	0	265	
User Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
PHF Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
PHF Volume:	0	839	89		177	579	0		0	0	0		281	0	265	
Reduct Vol:	0	0	0		0	0	0		0	0	0		0	0	0	
Reduced Vol:	0	839	89		177	579	0		0	0	0		281	0	265	
PCE Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
MLF Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
Final Vol.:	0	839	89		177	579	0		0	0	0		281	0	265	
Saturation Flow Module:																
Sat/Lane:	1900	1900	1900		1900	1900	1900		1900	1900	1900		1900	1900	1900	
Adjustment:	1.00	0.87	0.87		0.81	0.86	1.00		1.00	1.00	1.00		0.63	1.00	0.74	
Lanes:	1.00	0.90	0.10		1.00	1.00	0.00		0.00	1.00	0.00		1.00	0.00	1.00	
Final Sat.:	1900	1494	158		1547	1628	0		0	1900	0		1194	0	1411	
Capacity Analysis Module:																
Vol/Sat:	0.00	0.56	0.56		0.11	0.36	0.00		0.00	0.00	0.00		0.24	0.00	0.19	
Crit Moves:		****			****								****			
Green/Cycle:	0.00	0.62	0.62		0.13	0.74	0.00		0.00	0.00	0.00		0.26	0.00	0.38	
Volume/Cap:	0.00	0.91	0.91		0.91	0.48	0.00		0.00	0.00	0.00		0.91	0.00	0.49	
Delay/Veh:	0.0	28.8	28.8		83.7	5.5	0.0		0.0	0.0	0.0		65.6	0.0	24.1	
User DelAdj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
AdjDel/Veh:	0.0	28.8	28.8		83.7	5.5	0.0		0.0	0.0	0.0		65.6	0.0	24.1	
DesignQueue:	0	21	2		9	9	0		0	0	0		12	0	9	

****

Existing PM Mon Jan 12, 2004 12:13:27 Page 6-1

Patterson Sand and Gravel
Existing Conditions No Project (No Haul Road)
Peak Season Average Day - PM Peak Hour

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

****

Intersection #2 SR 65 and SR 193 (Lincoln)

****

Approach:	North Bound				South Bound				East Bound				West Bound			
Movement:	L	-	T	- R	L	-	T	- R	L	-	T	- R	L	-	T	- R
HCM Ops Adjusted Lane Utilization Module:																
Lanes:	1	0	0	1 0	1	0	0	1 0	0	0	1!	0 0	0	1	0	0 1
Lane Group:	L		RT		RT	L		RT	RT	LTR	LTR	LTR	LT		LT	R
#LnsInGrps:	1		1		1	1		1	1	1	1	1	1		1	1
HCM Ops Input Saturation Adj Module:																
Lane Width:	12		12		12	12		12	12	12	12	12	12		12	12
CrosswalkWid			8					8			8				8	
% Hev Veh:			2					5			0				3	
Grade:			0%					0%			0%				0%	
Parking/Hr:			No					No			No				No	
Bus Stp/Hr:			0					0			0				0	
Area Type:	< < < < < < < < < < < < < < < < CBD > > > > > > > > > > > > > > > >															
Cnft Ped/Hr:			0					0			0				0	
ExclusiveRT:			Include					Include			Include				Include	
% RT Prtct:			0					0			0				0	
HCM Ops f(lt) Adj Case Module:																
f(lt) Case:	xxxx	xxxx	xxxx		1	xxxx	xxxx		xxxx	xxxx	xxxx		5	xxxx	xxxx	
HCM Ops Saturation Adj Module:																
Ln Wid Adj:	xxxx	1.00	1.00		1.00	1.00	xxxxx		xxxx	xxxx	xxxxx		1.00	xxxx	1.00	
Hev Veh Adj:	xxxx	0.98	0.98		0.95	0.95	xxxxx		xxxx	xxxx	xxxxx		0.97	xxxx	0.97	
Grade Adj:	xxxx	1.00	1.00		1.00	1.00	xxxxx		xxxx	xxxx	xxxxx		1.00	xxxx	1.00	
Parking Adj:	xxxx	1.00	1.00		xxxx	1.00	xxxxx		xxxx	xxxx	xxxxx		xxxx	xxxx	1.00	
Bus Stp Adj:	xxxx	1.00	1.00		xxxx	1.00	xxxxx		xxxx	xxxx	xxxxx		xxxx	xxxx	1.00	
Area Adj:	xxxx	0.90	0.90		0.90	0.90	xxxxx		xxxx	xxxx	xxxxx		0.90	xxxx	0.90	
RT Adj:	xxxx	0.99	0.99		xxxx	xxxx	xxxxx		xxxx	xxxx	xxxxx		xxxx	xxxx	0.85	
LT Adj:	xxxx	xxxx	xxxxx		0.95	xxxx	xxxxx		xxxx	xxxx	xxxxx		0.72	xxxx	xxxxx	
PedBike Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
HCM Sat Adj:	1.00	0.87	0.87		0.81	0.86	1.00		1.00	1.00	1.00		0.63	1.00	0.74	
Usr Sat Adj:	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 Sat Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
Fnl Sat Adj:	1.00	0.87	0.87		0.81	0.86	1.00		1.00	1.00	1.00		0.63	1.00	0.74	
Delay Adjustment Factor Module:																
Coordinated:	< < < < < < < < < < < < < < < < No > > > > > > > > > > > > > > > >															
Signal Type:	< < < < < < < < < < < < < < Actuated > > > > > > > > > > > > > >															
DelAdjFctr:	0.00	1.00	1.00		1.00	1.00	0.00		0.00	0.00	0.00		1.00	0.00	1.00	

****

Existing PM Mon Jan 12, 2004 12:13:27 Page 6-2

Patterson Sand and Gravel
Existing Conditions No Project (No Haul Road)
Peak Season Average Day - PM Peak Hour

Level Of Service Detailed Computation Report (Permitted Left Turn Sat Adj)
2000 HCM Operations Method
Base Volume Alternative

Intersection #2 SR 65 and SR 193 (Lincoln)

Approach:	North	South	East	West
Cycle Length, C:	xxxxxx	xxxxxx	xxxxxx	100
Actual Green Time Per Lane Group, G:	xxxxxx	xxxxxx	xxxxxx	21.81
Effective Green Time Per Lane Group, g:	xxxxxx	xxxxxx	xxxxxx	25.81
Opposing Effective Green Time, go:	xxxxxx	xxxxxx	xxxxxx	25.81
Number Of Opposing Lanes, No:	xxxxxx	xxxxxx	xxxxxx	1
Number Of Lanes In Lane Group, N:	xxxxxx	xxxxxx	xxxxxx	1
Adjusted Left-Turn Flow Rate, Vlt:	xxxxxx	xxxxxx	xxxxxx	281
Proportion of Left Turns in Lane Group, Plt:	xxxxxx	xxxxxx	xxxxxx	1.00
Proportion of Left Turns in Opp Flow, Plto:	xxxxxx	xxxxxx	xxxxxx	1.00
Left Turns Per Cycle, LTC:	xxxxxx	xxxxxx	xxxxxx	7.81
Adjusted Opposing Flow Rate, Vo:	xxxxxx	xxxxxx	xxxxxx	0
Opposing Flow Per Lane Per Cycle, Volc:	xxxxxx	xxxxxx	xxxxxx	0.00
Opposing Platoon Ratio, Rpo:	xxxxxx	xxxxxx	xxxxxx	1.00
Lost Time Per Phase, tl:	xxxxxx	xxxxxx	xxxxxx	0.00
Eff grn until arrival of left-turn car, gf:	xxxxxx	xxxxxx	xxxxxx	0.46
Opposing Queue Ratio, qro:	xxxxxx	xxxxxx	xxxxxx	0.74
Eff grn blocked by opposing queue, gq:	xxxxxx	xxxxxx	xxxxxx	0.00
Eff grn while left turns filter thru, gu:	xxxxxx	xxxxxx	xxxxxx	25.35
Max opposing cars arriving during gq-gf, n:	xxxxxx	xxxxxx	xxxxxx	0.00
Proportion of Opposing Thru & RT cars, ptho:	xxxxxx	xxxxxx	xxxxxx	0.00
Left-turn Saturation Factor, fs:	xxxxxx	xxxxxx	xxxxxx	xxxxxx
Proportion of Left Turns in Shared Lane, pl:	xxxxxx	xxxxxx	xxxxxx	1.00
Through-car Equivalents, el1:	xxxxxx	xxxxxx	xxxxxx	1.40
Single Lane Through-car Equivalents, el2:	xxxxxx	xxxxxx	xxxxxx	1.00
Minimum Left Turn Adjustment Factor, fmin:	xxxxxx	xxxxxx	xxxxxx	0.15
Single Lane Left Turn Adjustment Factor, fm:	xxxxxx	xxxxxx	xxxxxx	0.72
Left Turn Adjustment Factor, flt:	xxxxxx	xxxxxx	xxxxxx	0.72

Existing PM Mon Jan 12, 2004 12:13:27 Page 7-1

Patterson Sand and Gravel
Existing Conditions No Project (No Haul Road)
Peak Season Average Day - PM Peak Hour

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

Intersection #4 Riosa Rd and 11th St

Cycle (sec): 100 Critical Vol./Cap. (X): 0.115
Loss Time (sec): 0 (Y+R = 4 sec) Average Delay (sec/veh): 7.6
Optimal Cycle: 0 Level Of Service: A

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Stop Sign			Stop Sign			Stop Sign			Stop Sign		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Lanes:	0 0	1! 0	0	0 0	0 1	0	0 1	0 0	0	0 1	0 0	0
Volume Module:												
Base Vol:	2	3	1	0	1	2	6	93	0	1	75	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:	2	3	1	0	1	2	6	93	0	1	75	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:	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 Volume:	2	3	1	0	1	2	6	93	0	1	75	0
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	2	3	1	0	1	2	6	93	0	1	75	0
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Final Vol.:	2	3	1	0	1	2	6	93	0	1	75	0
Saturation Flow Module:												
Adjustment:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Lanes:	0.33	0.50	0.17	0.00	0.33	0.67	0.06	0.94	0.00	0.01	0.99	0.00
Final Sat.:	273	409	136	0	297	595	52	810	0	11	855	0
Capacity Analysis Module:												
Vol/Sat:	0.01	0.01	0.01	xxxx	0.00	0.00	0.11	0.11	xxxx	0.09	0.09	xxxx
Crit Moves:		****				****	****				****	
Delay/Veh:	7.3	7.3	7.3	0.0	6.9	6.9	7.7	7.7	0.0	7.5	7.5	0.0
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:	7.3	7.3	7.3	0.0	6.9	6.9	7.7	7.7	0.0	7.5	7.5	0.0
LOS by Move:	A	A	A	*	A	A	A	A	*	A	A	*
ApproachDel:		7.3			6.9			7.7			7.5	
Delay Adj:		1.00			1.00			1.00			1.00	
ApprAdjDel:		7.3			6.9			7.7			7.5	
LOS by Appr:		A			A			A			A	

Existing PM Mon Jan 12, 2004 12:13:27 Page 8-1

Patterson Sand and Gravel
Existing Conditions No Project (No Haul Road)
Peak Season Average Day - PM Peak Hour

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

****
Intersection #4 Riosa Rd and 11th St
****

Approach:	North Bound	South Bound	East Bound	West Bound
Movement:	L - T - R	L - T - R	L - T - R	L - T - R
Time Period: 0.25 hour				
HevVeh:	0%	0%	9%	7%
Alpha Value: 0.01				
GroupType:	1	1	1	1
P[C1]:	0.8059	0.8029	0.9034	0.8767
P[C2]:	0.0026	0.0057	0.0863	0.1130
P[C3]:	0.1809	0.1802	0.0093	0.0091
P[C4]:	0.0105	0.0112	0.0009	0.0012
P[C5]:	0.0000	0.0001	0.0000	0.0000
Padj[C1]:	0.00396	0.00400	0.00108	0.00135
Padj[C2]:	0.00199	0.00197	-0.00075	-0.00102
Padj[C3]:	-0.00532	-0.00529	-0.00027	-0.00026
Padj[C4]:	-0.00063	-0.00067	-0.00005	-0.00007
Padj[C5]:	-0.00000	-0.00001	-0.00000	-0.00000
Lane:	L1	L1	L1	L1
LaneType:	LEFTTHRURITE	LEFTTHRURITE	LEFTTHRURITE	LEFTTHRURITE
HeadwayAdj:	-0.033	-0.400	0.165	0.122
Volume:	6	3	99	76
Capacity:	819	892	862	867
DegOfUtil:	0.01	0.00	0.11	0.09
DepHeadway:	4.23	3.87	4.15	4.13
ServiceTime:	2.2	1.9	2.2	2.1
Delay:	7.3	6.9	7.7	7.5
Approach:	North Bound	South Bound	East Bound	West Bound
ApproachDel:	7.3	6.9	7.7	7.5
Delay Adj:	1.00	1.00	1.00	1.00
ApprAdjDel:	7.3	6.9	7.7	7.5
LOS by Appr:	A	A	A	A
OverallDel:		7.6		
OverallLOS:		A		

Existing PM Mon Jan 12, 2004 12:13:27 Page 9-1

Patterson Sand and Gravel
Existing Conditions No Project (No Haul Road)
Peak Season Average Day - PM Peak Hour

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

****
Intersection #5 Riosa Rd and Karchner Rd
****
Average Delay (sec/veh): 3.8 Worst Case Level Of Service: A
****

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Stop Sign			Stop Sign			Uncontrolled			Uncontrolled		
Rights:	Include			Include			Include			Include		
Lanes:	0 0	0 0	0	0 0	1! 0	0	0 1	0 0	0	0 0	0 1	0
Volume Module:												
Base Vol:	0	0	0	7	0	12	19	23	0	0	19	5
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	7	0	12	19	23	0	0	19	5
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	0	0	0	7	0	12	19	23	0	0	19	5
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Final Vol.:	0	0	0	7	0	12	19	23	0	0	19	5
Critical Gap Module:												
Critical Gp:	xxxxx	xxxx	xxxxx	6.7	xxxx	6.5	4.3	xxxx	xxxxx	xxxxx	xxxx	xxxxx
FollowUpTim:	xxxxx	xxxx	xxxxx	3.7	xxxx	3.5	2.4	xxxx	xxxxx	xxxxx	xxxx	xxxxx
Capacity Module:												
Cnflict Vol:	xxxx	xxxx	xxxxx	83	xxxx	22	24	xxxx	xxxxx	xxxx	xxxx	xxxxx
Potent Cap.:	xxxx	xxxx	xxxxx	864	xxxx	991	1476	xxxx	xxxxx	xxxx	xxxx	xxxxx
Move Cap.:	xxxx	xxxx	xxxxx	855	xxxx	991	1476	xxxx	xxxxx	xxxx	xxxx	xxxxx
Level Of Service Module:												
Stopped Del:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	7.5	xxxx	xxxxx	xxxxx	xxxx	xxxxx
LOS by Move:	*	*	*	*	*	*	A	*	*	*	*	*
Movement:	LT - LTR - RT			LT - LTR - RT			LT - LTR - RT			LT - LTR - RT		
Shared Cap.:	xxxx	xxxx	xxxxx	xxxx	936	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx
Shrd StpDel:	xxxxx	xxxx	xxxxx	xxxxx	8.9	xxxxx	7.5	xxxx	xxxxx	xxxxx	xxxx	xxxxx
Shared LOS:	*	*	*	*	A	*	A	*	*	*	*	*
ApproachDel:	xxxxxx			8.9			xxxxxx			xxxxxx		
ApproachLOS:	*			A			*			*		

Existing PM Mon Jan 12, 2004 12:13:27 Page 10-1

Patterson Sand and Gravel
Existing Conditions No Project (No Haul Road)
Peak Season Average Day - PM Peak Hour

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

****
Intersection #5 Riosa Rd and Karchner Rd
****

Approach:	North Bound	South Bound	East Bound	West Bound
Movement:	L - T - R	L - T - R	L - T - R	L - T - R
HevVeh:	0%	26%	21%	0%
Grade:	0%	0%	0%	0%
Peds/Hour:	0	0	0	0
Pedestrian Walk Speed: 4.00 feet/sec				
LaneWidth:	12 feet	12 feet	12 feet	12 feet

Time Period: 0.25 hour

Traffix 7.5.0715 (c) 2002 Dowling Assoc. Licensed to DKS ASSOC., SACRAMENTO

Patterson Sand and Gravel
Existing Conditions No Project (No Haul Road)
"30th Highest" - PM Peak Hour

Scenario Report

Scenario:	Existing PM
Command:	Existing PM
Volume:	Existing PM
Geometry:	Existing PM
Impact Fee:	Default Impact Fee
Trip Generation:	Default Trip Generation
Trip Distribution:	Default Trip Distribution
Paths:	Default Paths
Routes:	Default Routes
Configuration:	Default Configuration

Patterson Sand and Gravel
Existing Conditions No Project (No Haul Road)
"30th Highest" - PM Peak Hour

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 65 and Riosa Road (Sheridan	E	2.7	0.000	E	2.7	0.000	+ 0.000 V/C
# 2 SR 65 and SR 193 (Lincoln)	C	31.8	0.917	C	31.8	0.917	-0.021 D/V
# 4 Riosa Rd and 11th St	A	7.7	0.121	A	7.7	0.121	+ 0.000 V/C
# 5 Riosa Rd and Karchner Rd	A	4.1	0.000	A	4.1	0.000	+ 0.000 V/C

Patterson Sand and Gravel
Existing Conditions No Project (No Haul Road)
"30th Highest" - PM Peak Hour

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

```
*******************************************************************************
Intersection #1 SR 65 and Riosa Road (Sheridan)
*******************************************************************************
Average Delay (sec/veh):      2.7           Worst Case 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:       Uncontrolled     Uncontrolled      Stop Sign        Stop Sign
Rights:           Include          Include          Include          Include
Lanes:        0  0  1  0  1    1  0  1  0  0    0  0  0  0  0    0  0  1! 0  0
------------|---------------||---------------||---------------||---------------|
Volume Module: >> Count Date: 28 Jun 2001 << PM
Base Vol:       0  745   103    87  563     0     0    0     0    38    0    60
Growth Adj:  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
Initial Bse:    0  745   103    87  563     0     0    0     0    38    0    60
User Adj:    1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
PHF Adj:     1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
PHF Volume:     0  745   103    87  563     0     0    0     0    38    0    60
Reduct Vol:     0    0     0     0    0     0     0    0     0     0    0     0
Final Vol.:     0  745   103    87  563     0     0    0     0    38    0    60
------------|---------------||---------------||---------------||---------------|
Critical Gap Module:
Critical Gp:xxxxx xxxx xxxxx   4.1 xxxx xxxxx xxxxx xxxx xxxxx   6.5 xxxx   6.3
FollowUpTim:xxxxx xxxx xxxxx   2.2 xxxx xxxxx xxxxx xxxx xxxxx   3.6 xxxx   3.4
------------|---------------||---------------||---------------||---------------|
Capacity Module:
Cnflict Vol: xxxx xxxx xxxxx   848 xxxx xxxxx  xxxx xxxx xxxxx  1482 xxxx   745
Potent Cap.: xxxx xxxx xxxxx   781 xxxx xxxxx  xxxx xxxx xxxxx   134 xxxx   404
Move Cap.:   xxxx xxxx xxxxx   781 xxxx xxxxx  xxxx xxxx xxxxx   122 xxxx   404
------------|---------------||---------------||---------------||---------------|
Level Of Service Module:
Stopped Del:xxxxx xxxx xxxxx  10.2 xxxx xxxxx xxxxx xxxx xxxxx xxxxx xxxx xxxxx
LOS by Move:   *    *    *     B    *     *     *    *     *     *    *     *
Movement:     LT - LTR - RT    LT - LTR - RT    LT - LTR - RT    LT - LTR - RT
Shared Cap.: xxxx xxxx xxxxx  xxxx xxxx xxxxx  xxxx xxxx xxxxx  xxxx  213 xxxxx
Shrd StpDel:xxxxx xxxx xxxxx xxxxx xxxx xxxxx xxxxx xxxx xxxxx xxxxx 35.5 xxxxx
Shared LOS:    *    *    *     *    *     *     *    *     *     *    E     *
ApproachDel:    xxxxxx          xxxxxx          xxxxxx            35.5
ApproachLOS:       *               *               *               E
```


Patterson Sand and Gravel
Existing Conditions No Project (No Haul Road)
"30th Highest" - PM Peak Hour

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

```
*******************************************************************************
Intersection #1 SR 65 and Riosa Road (Sheridan)
*******************************************************************************
Approach:      North Bound      South Bound      East Bound      West Bound
Movement:     L  -  T  -  R    L  -  T  -  R    L  -  T  -  R    L  -  T  -  R
------------|---------------||---------------||---------------||---------------|
HevVeh:            4%               4%               0%               8%
Grade:             0%               0%               0%               0%
Peds/Hour:         0                0                0                0
Pedestrian Walk Speed: 4.00 feet/sec
LaneWidth:      12 feet          12 feet          12 feet          12 feet
Time Period: 0.25 hour
```

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Patterson Sand and Gravel
Existing Conditions No Project (No Haul Road)
"30th Highest" - PM Peak Hour

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

****

Intersection #2 SR 65 and SR 193 (Lincoln)

****

Cycle (sec): 100 Critical Vol./Cap. (X): 0.917
Loss Time (sec): 0 (Y+R = 4 sec) Average Delay (sec/veh): 31.8
Optimal Cycle: 180 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				Permitted				Permitted			
Rights:	Include				Include				Include				Ovl			
Min. Green:	0	0	0		0	0	0		0	0	0		0	0	0	
Lanes:	1	0	0	1 0	1	0	0	1 0	0	0	1!	0 0	0	1	0	0 1
Volume Module: >> Count Date: 28 Jun 2001 << PM																
Base Vol:	0	840	89		177	581	0		0	0	0		281	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:	0	840	89		177	581	0		0	0	0		281	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:	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 Volume:	0	840	89		177	581	0		0	0	0		281	0	266	
Reduct Vol:	0	0	0		0	0	0		0	0	0		0	0	0	
Reduced Vol:	0	840	89		177	581	0		0	0	0		281	0	266	
PCE Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
MLF Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
Final Vol.:	0	840	89		177	581	0		0	0	0		281	0	266	
Saturation Flow Module:																
Sat/Lane:	1900	1900	1900		1900	1900	1900		1900	1900	1900		1900	1900	1900	
Adjustment:	1.00	0.86	0.86		0.81	0.86	1.00		1.00	1.00	1.00		0.63	1.00	0.74	
Lanes:	1.00	0.90	0.10		1.00	1.00	0.00		0.00	1.00	0.00		1.00	0.00	1.00	
Final Sat.:	1900	1480	157		1547	1628	0		0	1900	0		1194	0	1411	
Capacity Analysis Module:																
Vol/Sat:	0.00	0.57	0.57		0.11	0.36	0.00		0.00	0.00	0.00		0.24	0.00	0.19	
Crit Moves:		****			****								****			
Green/Cycle:	0.00	0.62	0.62		0.12	0.74	0.00		0.00	0.00	0.00		0.26	0.00	0.38	
Volume/Cap:	0.00	0.92	0.92		0.92	0.48	0.00		0.00	0.00	0.00		0.92	0.00	0.49	
Delay/Veh:	0.0	29.6	29.6		85.4	5.4	0.0		0.0	0.0	0.0		67.0	0.0	24.3	
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:	0.0	29.6	29.6		85.4	5.4	0.0		0.0	0.0	0.0		67.0	0.0	24.3	
DesignQueue:	0	20	2		9	9	0		0	0	0		12	0	9	

****

Existing PM Mon Jan 12, 2004 15:26:16 Page 6-1

Patterson Sand and Gravel
Existing Conditions No Project (No Haul Road)
"30th Highest" - PM Peak Hour

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

****

Intersection #2 SR 65 and SR 193 (Lincoln)

****

Approach:	North Bound				South Bound				East Bound				West Bound			
Movement:	L	-	T	- R	L	-	T	- R	L	-	T	- R	L	-	T	- R
HCM Ops Adjusted Lane Utilization Module:																
Lanes:	1	0	0	1 0	1	0	0	1 0	0	0	1!	0 0	0	1	0	0 1
Lane Group:	L		RT		RT	L	RT	RT	LTR	LTR		LTR	LT	LT		R
#LnsInGrps:	1		1		1	1	1	1	1	1		1	1	1		1
HCM Ops Input Saturation Adj Module:																
Lane Width:	12		12		12	12	12	12	12	12		12	12	12		12
CrosswalkWid			8				8			8				8		
% Hev Veh:			3				5			0				3		
Grade:			0%				0%			0%				0%		
Parking/Hr:			No				No			No				No		
Bus Stp/Hr:			0				0			0				0		
Area Type:	< < < < < < < < < < < < < < < < CBD > > > > > > > > > > > > > > > >															
Cnft Ped/Hr:			0				0			0				0		
ExclusiveRT:			Include				Include			Include				Include		
% RT Prtct:			0				0			0				0		
HCM Ops f(lt) Adj Case Module:																
f(lt) Case:	xxxx	xxxx	xxxx		1	xxxx	xxxx		xxxx	xxxx	xxxx		5	xxxx	xxxx	
HCM Ops Saturation Adj Module:																
Ln Wid Adj:	xxxx	1.00	1.00		1.00	1.00	xxxxx		xxxx	xxxx	xxxxx		1.00	xxxx	1.00	
Hev Veh Adj:	xxxx	0.97	0.97		0.95	0.95	xxxxx		xxxx	xxxx	xxxxx		0.97	xxxx	0.97	
Grade Adj:	xxxx	1.00	1.00		1.00	1.00	xxxxx		xxxx	xxxx	xxxxx		1.00	xxxx	1.00	
Parking Adj:	xxxx	1.00	1.00		xxxx	1.00	xxxxx		xxxx	xxxx	xxxxx		xxxx	xxxx	1.00	
Bus Stp Adj:	xxxx	1.00	1.00		xxxx	1.00	xxxxx		xxxx	xxxx	xxxxx		xxxx	xxxx	1.00	
Area Adj:	xxxx	0.90	0.90		0.90	0.90	xxxxx		xxxx	xxxx	xxxxx		0.90	xxxx	0.90	
RT Adj:	xxxx	0.99	0.99		xxxx	xxxx	xxxxx		xxxx	xxxx	xxxxx		xxxx	xxxx	0.85	
LT Adj:	xxxx	xxxx	xxxxx		0.95	xxxx	xxxxx		xxxx	xxxx	xxxxx		0.72	xxxx	xxxxx	
PedBike Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
HCM Sat Adj:	1.00	0.86	0.86		0.81	0.86	1.00		1.00	1.00	1.00		0.63	1.00	0.74	
Usr Sat Adj:	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 Sat Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
Fnl Sat Adj:	1.00	0.86	0.86		0.81	0.86	1.00		1.00	1.00	1.00		0.63	1.00	0.74	
Delay Adjustment Factor Module:																
Coordinated:	< < < < < < < < < < < < < < < < No > > > > > > > > > > > > > > > >															
Signal Type:	< < < < < < < < < < < < < Actuated > > > > > > > > > > > > > >															
DelAdjFctr:	0.00	1.00	1.00		1.00	1.00	0.00		0.00	0.00	0.00		1.00	0.00	1.00	

****

Patterson Sand and Gravel
Existing Conditions No Project (No Haul Road)
"30th Highest" - PM Peak Hour

Level Of Service Detailed Computation Report (Permitted Left Turn Sat Adj)
2000 HCM Operations Method
Base Volume Alternative

****
Intersection #2 SR 65 and SR 193 (Lincoln)
****

Approach:	North	South	East	West
Cycle Length, C:	xxxxxx	xxxxxx	xxxxxx	100
Actual Green Time Per Lane Group, G:	xxxxxx	xxxxxx	xxxxxx	21.65
Effective Green Time Per Lane Group, g:	xxxxxx	xxxxxx	xxxxxx	25.65
Opposing Effective Green Time, go:	xxxxxx	xxxxxx	xxxxxx	25.65
Number Of Opposing Lanes, No:	xxxxxx	xxxxxx	xxxxxx	1
Number Of Lanes In Lane Group, N:	xxxxxx	xxxxxx	xxxxxx	1
Adjusted Left-Turn Flow Rate, Vlt:	xxxxxx	xxxxxx	xxxxxx	281
Proportion of Left Turns in Lane Group, Plt:	xxxxxx	xxxxxx	xxxxxx	1.00
Proportion of Left Turns in Opp Flow, Plto:	xxxxxx	xxxxxx	xxxxxx	1.00
Left Turns Per Cycle, LTC:	xxxxxx	xxxxxx	xxxxxx	7.81
Adjusted Opposing Flow Rate, Vo:	xxxxxx	xxxxxx	xxxxxx	0
Opposing Flow Per Lane Per Cycle, Volc:	xxxxxx	xxxxxx	xxxxxx	0.00
Opposing Platoon Ratio, Rpo:	xxxxxx	xxxxxx	xxxxxx	1.00
Lost Time Per Phase, tl:	xxxxxx	xxxxxx	xxxxxx	0.00
Eff grn until arrival of left-turn car, gf:	xxxxxx	xxxxxx	xxxxxx	0.46
Opposing Queue Ratio, qro:	xxxxxx	xxxxxx	xxxxxx	0.74
Eff grn blocked by opposing queue, gq:	xxxxxx	xxxxxx	xxxxxx	0.00
Eff grn while left turns filter thru, gu:	xxxxxx	xxxxxx	xxxxxx	25.19
Max opposing cars arriving during gq-gf, n:	xxxxxx	xxxxxx	xxxxxx	0.00
Proportion of Opposing Thru & RT cars, ptho:	xxxxxx	xxxxxx	xxxxxx	0.00
Left-turn Saturation Factor, fs:	xxxxxx	xxxxxx	xxxxxx	xxxxxx
Proportion of Left Turns in Shared Lane, pl:	xxxxxx	xxxxxx	xxxxxx	1.00
Through-car Equivalents, el1:	xxxxxx	xxxxxx	xxxxxx	1.40
Single Lane Through-car Equivalents, el2:	xxxxxx	xxxxxx	xxxxxx	1.00
Minimum Left Turn Adjustment Factor, fmin:	xxxxxx	xxxxxx	xxxxxx	0.16
Single Lane Left Turn Adjustment Factor, fm:	xxxxxx	xxxxxx	xxxxxx	0.72
Left Turn Adjustment Factor, flt:	xxxxxx	xxxxxx	xxxxxx	0.72

****

Patterson Sand and Gravel
Existing Conditions No Project (No Haul Road)
"30th Highest" - PM Peak Hour

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

****
Intersection #4 Riosa Rd and 11th St
****

Cycle (sec): 100 Critical Vol./Cap. (X): 0.121
Loss Time (sec): 0 (Y+R = 4 sec) Average Delay (sec/veh): 7.7
Optimal Cycle: 0 Level Of Service: A

****

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Stop Sign			Stop Sign			Stop Sign			Stop Sign		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Lanes:	0 0	1! 0	0	0 0	0 1	0	0 1	0 0	0	0 1	0 0	0
Volume Module:												
Base Vol:	2	3	1	0	1	2	6	97	0	1	78	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:	2	3	1	0	1	2	6	97	0	1	78	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:	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 Volume:	2	3	1	0	1	2	6	97	0	1	78	0
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	2	3	1	0	1	2	6	97	0	1	78	0
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Final Vol.:	2	3	1	0	1	2	6	97	0	1	78	0
Saturation Flow Module:												
Adjustment:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Lanes:	0.33	0.50	0.17	0.00	0.33	0.67	0.06	0.94	0.00	0.01	0.99	0.00
Final Sat.:	271	407	136	0	295	590	50	802	0	11	844	0
Capacity Analysis Module:												
Vol/Sat:	0.01	0.01	0.01	xxxx	0.00	0.00	0.12	0.12	xxxx	0.09	0.09	xxxx
Crit Moves:	****					****		****			****	
Delay/Veh:	7.3	7.3	7.3	0.0	6.9	6.9	7.8	7.8	0.0	7.6	7.6	0.0
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:	7.3	7.3	7.3	0.0	6.9	6.9	7.8	7.8	0.0	7.6	7.6	0.0
LOS by Move:	A	A	A	*	A	A	A	A	*	A	A	*
ApproachDel:	7.3			6.9			7.8			7.6		
Delay Adj:	1.00			1.00			1.00			1.00		
ApprAdjDel:	7.3			6.9			7.8			7.6		
LOS by Appr:	A			A			A			A		

****

Existing PM Mon Jan 12, 2004 15:26:16 Page 8-1

Patterson Sand and Gravel
Existing Conditions No Project (No Haul Road)
"30th Highest" - PM Peak Hour

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

****
Intersection #4 Riosa Rd and 11th St
****

Approach:	North Bound	South Bound	East Bound	West Bound
Movement:	L - T - R	L - T - R	L - T - R	L - T - R
Time Period: 0.25 hour				
HevVeh:	0%	0%	12%	10%
Alpha Value: 0.01				
GroupType:	1	1	1	1
P[C1]:	0.7962	0.7932	0.8988	0.8706
P[C2]:	0.0026	0.0057	0.0909	0.1191
P[C3]:	0.1895	0.1888	0.0093	0.0090
P[C4]:	0.0116	0.0123	0.0010	0.0013
P[C5]:	0.0000	0.0001	0.0000	0.0000
Padj[C1]:	0.00417	0.00420	0.00113	0.00141
Padj[C2]:	0.00210	0.00208	-0.00080	-0.00108
Padj[C3]:	-0.00557	-0.00554	-0.00027	-0.00026
Padj[C4]:	-0.00070	-0.00074	-0.00006	-0.00008
Padj[C5]:	-0.00000	-0.00001	-0.00000	-0.00000
Lane:	L1	L1	L1	L1
LaneType:	LEFTTHRURITE	LEFTTHRURITE	LEFTTHRURITE	LEFTTHRURITE
HeadwayAdj:	-0.033	-0.400	0.216	0.173
Volume:	6	3	103	79
Capacity:	813	886	851	855
DegOfUtil:	0.01	0.00	0.12	0.09
DepHeadway:	4.25	3.89	4.21	4.19
ServiceTime:	2.3	1.9	2.2	2.2
Delay:	7.3	6.9	7.8	7.6
Approach:	North Bound	South Bound	East Bound	West Bound
ApproachDel:	7.3	6.9	7.8	7.6
Delay Adj:	1.00	1.00	1.00	1.00
ApprAdjDel:	7.3	6.9	7.8	7.6
LOS by Appr:	A	A	A	A
OverallDel:		7.7		
OverallLOS:		A		

Existing PM Mon Jan 12, 2004 15:26:16 Page 9-1

Patterson Sand and Gravel
Existing Conditions No Project (No Haul Road)
"30th Highest" - PM Peak Hour

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

****
Intersection #5 Riosa Rd and Karchner Rd
****
Average Delay (sec/veh): 4.1 Worst Case Level Of Service: A
****

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Stop Sign			Stop Sign			Uncontrolled			Uncontrolled		
Rights:	Include			Include			Include			Include		
Lanes:	0 0	0 0	0	0 0	1! 0	0	0 1	0 0	0	0 0	0 1	0
Volume Module:												
Base Vol:	0	0	0	7	0	15	23	23	0	0	19	5
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	7	0	15	23	23	0	0	19	5
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	0	0	0	7	0	15	23	23	0	0	19	5
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Final Vol.:	0	0	0	7	0	15	23	23	0	0	19	5
Critical Gap Module:												
Critical Gp:	xxxxx	xxxx	xxxxx	6.7	xxxx	6.6	4.4	xxxx	xxxxx	xxxxx	xxxx	xxxxx
FollowUpTim:	xxxxx	xxxx	xxxxx	3.8	xxxx	3.6	2.4	xxxx	xxxxx	xxxxx	xxxx	xxxxx
Capacity Module:												
Cnflict Vol:	xxxx	xxxx	xxxxx	91	xxxx	22	24	xxxx	xxxxx	xxxx	xxxx	xxxxx
Potent Cap.:	xxxx	xxxx	xxxxx	835	xxxx	968	1443	xxxx	xxxxx	xxxx	xxxx	xxxxx
Move Cap.:	xxxx	xxxx	xxxxx	825	xxxx	968	1443	xxxx	xxxxx	xxxx	xxxx	xxxxx
Level Of Service Module:												
Stopped Del:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	7.5	xxxx	xxxxx	xxxxx	xxxx	xxxxx
LOS by Move:	*	*	*	*	*	*	A	*	*	*	*	*
Movement:	LT - LTR - RT			LT - LTR - RT			LT - LTR - RT			LT - LTR - RT		
Shared Cap.:	xxxx	xxxx	xxxxx	xxxx	917	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx
Shrd StpDel:	xxxxx	xxxx	xxxxx	xxxxx	9.0	xxxxx	7.5	xxxx	xxxxx	xxxxx	xxxx	xxxxx
Shared LOS:	*	*	*	*	A	*	A	*	*	*	*	*
ApproachDel:	xxxxxx			9.0			xxxxxx			xxxxxx		
ApproachLOS:	*			A			*			*		

Existing PM Mon Jan 12, 2004 15:26:16 Page 10-1

Patterson Sand and Gravel
Existing Conditions No Project (No Haul Road)
"30th Highest" - PM Peak Hour

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

****
Intersection #5 Riosa Rd and Karchner Rd
****

Approach:	North Bound	South Bound	East Bound	West Bound
Movement:	L - T - R	L - T - R	L - T - R	L - T - R
HevVeh:	0%	35%	27%	0%
Grade:	0%	0%	0%	0%
Peds/Hour:	0	0	0	0
Pedestrian Walk Speed: 4.00 feet/sec				
LaneWidth:	12 feet	12 feet	12 feet	12 feet

Time Period: 0.25 hour

Traffix 7.5.0715 (c) 2002 Dowling Assoc. Licensed to DKS ASSOC., SACRAMENTO

Patterson Sand and Gravel
Existing Conditions No Project (No Haul Road)
"Highest" - PM Peak Hour

Scenario Report

Scenario:	Existing PM
Command:	Existing PM
Volume:	Existing PM
Geometry:	Existing PM
Impact Fee:	Default Impact Fee
Trip Generation:	Default Trip Generation
Trip Distribution:	Default Trip Distribution
Paths:	Default Paths
Routes:	Default Routes
Configuration:	Default Configuration

Patterson Sand and Gravel
Existing Conditions No Project (No Haul Road)
"Highest" - PM Peak Hour

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 65 and Riosa Road (Sheridan	E	2.9	0.000	E	2.9	0.000	+ 0.000 V/C
# 2 SR 65 and SR 193 (Lincoln)	C	32.0	0.919	C	32.0	0.919	-0.021 D/V
# 4 Riosa Rd and 11th St	A	7.8	0.124	A	7.8	0.124	+ 0.000 V/C
# 5 Riosa Rd and Karchner Rd	A	4.3	0.000	A	4.3	0.000	+ 0.000 V/C

Patterson Sand and Gravel
Existing Conditions No Project (No Haul Road)
"Highest" - PM Peak Hour

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

****

Intersection #1 SR 65 and Riosa Road (Sheridan)

****

Average Delay (sec/veh): 2.9 Worst Case 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:	Uncontrolled			Uncontrolled			Stop Sign			Stop Sign		
Rights:	Include			Include			Include			Include		
Lanes:	0 0 1	0	1	1 0 1	0	0	0 0 0	0	0	0 0 1!	0	0
Volume Module: >> Count Date: 28 Jun 2001 << PM												
Base Vol:	0	745	105	87	563	0	0	0	0	40	0	60
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	0	745	105	87	563	0	0	0	0	40	0	60
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	0	745	105	87	563	0	0	0	0	40	0	60
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Final Vol.:	0	745	105	87	563	0	0	0	0	40	0	60
Critical Gap Module:												
Critical Gp:	xxxxx	xxxx	xxxxx	4.1	xxxx	xxxxx	xxxxx	xxxx	xxxxx	6.5	xxxx	6.3
FollowUpTim:	xxxxx	xxxx	xxxxx	2.2	xxxx	xxxxx	xxxxx	xxxx	xxxxx	3.6	xxxx	3.4
Capacity Module:												
Cnflict Vol:	xxxx	xxxx	xxxxx	850	xxxx	xxxxx	xxxx	xxxx	xxxxx	1482	xxxx	745
Potent Cap.:	xxxx	xxxx	xxxxx	780	xxxx	xxxxx	xxxx	xxxx	xxxxx	132	xxxx	401
Move Cap.:	xxxx	xxxx	xxxxx	780	xxxx	xxxxx	xxxx	xxxx	xxxxx	121	xxxx	401
Level Of Service Module:												
Stopped Del:	xxxxx	xxxx	xxxxx	10.2	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx
LOS by Move:	*	*	*	B	*	*	*	*	*	*	*	*
Movement:	LT -	LTR -	RT	LT -	LTR -	RT	LT -	LTR -	RT	LT -	LTR -	RT
Shared Cap.:	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	208	xxxxx
Shrd StpDel:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	37.3	xxxxx
Shared LOS:	*	*	*	*	*	*	*	*	*	*	E	*
ApproachDel:	xxxxxx			xxxxxx			xxxxxx			37.3		
ApproachLOS:	*			*			*			E		

Patterson Sand and Gravel
Existing Conditions No Project (No Haul Road)
"Highest" - PM Peak Hour

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

****

Intersection #1 SR 65 and Riosa Road (Sheridan)

****

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
HevVeh:	4%			4%			0%			10%		
Grade:	0%			0%			0%			0%		
Peds/Hour:	0			0			0			0		
Pedestrian Walk Speed: 4.00 feet/sec												
LaneWidth:	12 feet			12 feet			12 feet			12 feet		
Time Period: 0.25 hour												

Existing PM Mon Jan 12, 2004 17:14:12 Page 5-1

Patterson Sand and Gravel
Existing Conditions No Project (No Haul Road)
"Highest" - PM Peak Hour

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

Intersection #2 SR 65 and SR 193 (Lincoln)

Cycle (sec): 100 Critical Vol./Cap. (X): 0.919
Loss Time (sec): 0 (Y+R = 4 sec) Average Delay (sec/veh): 32.0
Optimal Cycle: 180 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				Permitted				Permitted			
Rights:	Include				Include				Include				Ovl			
Min. Green:	0	0	0		0	0	0		0	0	0		0	0	0	
Lanes:	1	0	0	1 0	1	0	0	1 0	0	0	1!	0 0	0	1	0	0 1
Volume Module: >> Count Date: 28 Jun 2001 << PM																
Base Vol:	0	842	89		178	583	0		0	0	0		281	0	267	
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	842	89		178	583	0		0	0	0		281	0	267	
User Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
PHF Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
PHF Volume:	0	842	89		178	583	0		0	0	0		281	0	267	
Reduct Vol:	0	0	0		0	0	0		0	0	0		0	0	0	
Reduced Vol:	0	842	89		178	583	0		0	0	0		281	0	267	
PCE Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
MLF Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
Final Vol.:	0	842	89		178	583	0		0	0	0		281	0	267	
Saturation Flow Module:																
Sat/Lane:	1900	1900	1900		1900	1900	1900		1900	1900	1900		1900	1900	1900	
Adjustment:	1.00	0.86	0.86		0.81	0.86	1.00		1.00	1.00	1.00		0.63	1.00	0.74	
Lanes:	1.00	0.90	0.10		1.00	1.00	0.00		0.00	1.00	0.00		1.00	0.00	1.00	
Final Sat.:	1900	1481	157		1547	1628	0		0	1900	0		1194	0	1411	
Capacity Analysis Module:																
Vol/Sat:	0.00	0.57	0.57		0.12	0.36	0.00		0.00	0.00	0.00		0.24	0.00	0.19	
Crit Moves:		****			****								****			
Green/Cycle:	0.00	0.62	0.62		0.13	0.74	0.00		0.00	0.00	0.00		0.26	0.00	0.38	
Volume/Cap:	0.00	0.92	0.92		0.92	0.48	0.00		0.00	0.00	0.00		0.92	0.00	0.50	
Delay/Veh:	0.0	29.8	29.8		85.7	5.4	0.0		0.0	0.0	0.0		67.5	0.0	24.3	
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:	0.0	29.8	29.8		85.7	5.4	0.0		0.0	0.0	0.0		67.5	0.0	24.3	
DesignQueue:	0	21	2		9	9	0		0	0	0		12	0	10	

Existing PM Mon Jan 12, 2004 17:14:12 Page 6-1

Patterson Sand and Gravel
Existing Conditions No Project (No Haul Road)
"Highest" - PM Peak Hour

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

Intersection #2 SR 65 and SR 193 (Lincoln)

Approach:	North Bound				South Bound				East Bound				West Bound			
Movement:	L	-	T	- R	L	-	T	- R	L	-	T	- R	L	-	T	- R
HCM Ops Adjusted Lane Utilization Module:																
Lanes:	1	0	0	1 0	1	0	0	1 0	0	0	1!	0 0	0	1	0	0 1
Lane Group:	L		RT	RT	L		RT	RT	LTR	LTR		LTR	LT		LT	R
#LnsInGrps:	1		1	1	1		1	1	1	1		1	1		1	1
HCM Ops Input Saturation Adj Module:																
Lane Width:	12		12	12	12		12	12	12	12		12	12		12	12
CrosswalkWid			8				8			8					8	
% Hev Veh:			3				5			0					3	
Grade:			0%				0%			0%					0%	
Parking/Hr:			No				No			No					No	
Bus Stp/Hr:			0				0			0					0	
Area Type:	< < < < < < < < < < < < < < < CBD > > > > > > > > > > > > > > >															
Cnft Ped/Hr:			0				0			0					0	
ExclusiveRT:			Include				Include			Include					Include	
% RT Prtct:			0				0			0					0	
HCM Ops f(lt) Adj Case Module:																
f(lt) Case:	xxxx	xxxx	xxxx		1	xxxx	xxxx		xxxx	xxxx	xxxx		5	xxxx	xxxx	
HCM Ops Saturation Adj Module:																
Ln Wid Adj:	xxxx	1.00	1.00		1.00	1.00	xxxxx		xxxx	xxxx	xxxxx		1.00	xxxx	1.00	
Hev Veh Adj:	xxxx	0.97	0.97		0.95	0.95	xxxxx		xxxx	xxxx	xxxxx		0.97	xxxx	0.97	
Grade Adj:	xxxx	1.00	1.00		1.00	1.00	xxxxx		xxxx	xxxx	xxxxx		1.00	xxxx	1.00	
Parking Adj:	xxxx	1.00	1.00		xxxx	1.00	xxxxx		xxxx	xxxx	xxxxx		xxxx	xxxx	1.00	
Bus Stp Adj:	xxxx	1.00	1.00		xxxx	1.00	xxxxx		xxxx	xxxx	xxxxx		xxxx	xxxx	1.00	
Area Adj:	xxxx	0.90	0.90		0.90	0.90	xxxxx		xxxx	xxxx	xxxxx		0.90	xxxx	0.90	
RT Adj:	xxxx	0.99	0.99		xxxx	xxxx	xxxxx		xxxx	xxxx	xxxxx		xxxx	xxxx	0.85	
LT Adj:	xxxx	xxxx	xxxxx		0.95	xxxx	xxxxx		xxxx	xxxx	xxxxx		0.72	xxxx	xxxxx	
PedBike Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
HCM Sat Adj:	1.00	0.86	0.86		0.81	0.86	1.00		1.00	1.00	1.00		0.63	1.00	0.74	
Usr Sat Adj:	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 Sat Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
Fnl Sat Adj:	1.00	0.86	0.86		0.81	0.86	1.00		1.00	1.00	1.00		0.63	1.00	0.74	
Delay Adjustment Factor Module:																
Coordinated:	< < < < < < < < < < < < < < < No > > > > > > > > > > > > > > >															
Signal Type:	< < < < < < < < < < < < < Actuated > > > > > > > > > > > > > > >															
DelAdjFctr:	0.00	1.00	1.00		1.00	1.00	0.00		0.00	0.00	0.00		1.00	0.00	1.00	

Patterson Sand and Gravel
Existing Conditions No Project (No Haul Road)
"Highest" - PM Peak Hour

Level Of Service Detailed Computation Report (Permitted Left Turn Sat Adj)
2000 HCM Operations Method
Base Volume Alternative

****
Intersection #2 SR 65 and SR 193 (Lincoln)
****

Approach:	North	South	East	West
Cycle Length, C:	xxxxxx	xxxxxx	xxxxxx	100
Actual Green Time Per Lane Group, G:	xxxxxx	xxxxxx	xxxxxx	21.60
Effective Green Time Per Lane Group, g:	xxxxxx	xxxxxx	xxxxxx	25.60
Opposing Effective Green Time, go:	xxxxxx	xxxxxx	xxxxxx	25.60
Number Of Opposing Lanes, No:	xxxxxx	xxxxxx	xxxxxx	1
Number Of Lanes In Lane Group, N:	xxxxxx	xxxxxx	xxxxxx	1
Adjusted Left-Turn Flow Rate, Vlt:	xxxxxx	xxxxxx	xxxxxx	281
Proportion of Left Turns in Lane Group, Plt:	xxxxxx	xxxxxx	xxxxxx	1.00
Proportion of Left Turns in Opp Flow, Plto:	xxxxxx	xxxxxx	xxxxxx	1.00
Left Turns Per Cycle, LTC:	xxxxxx	xxxxxx	xxxxxx	7.81
Adjusted Opposing Flow Rate, Vo:	xxxxxx	xxxxxx	xxxxxx	0
Opposing Flow Per Lane Per Cycle, Volc:	xxxxxx	xxxxxx	xxxxxx	0.00
Opposing Platoon Ratio, Rpo:	xxxxxx	xxxxxx	xxxxxx	1.00
Lost Time Per Phase, tl:	xxxxxx	xxxxxx	xxxxxx	0.00
Eff grn until arrival of left-turn car, gf:	xxxxxx	xxxxxx	xxxxxx	0.46
Opposing Queue Ratio, qro:	xxxxxx	xxxxxx	xxxxxx	0.74
Eff grn blocked by opposing queue, gq:	xxxxxx	xxxxxx	xxxxxx	0.00
Eff grn while left turns filter thru, gu:	xxxxxx	xxxxxx	xxxxxx	25.14
Max opposing cars arriving during gq-gf, n:	xxxxxx	xxxxxx	xxxxxx	0.00
Proportion of Opposing Thru & RT cars, ptho:	xxxxxx	xxxxxx	xxxxxx	0.00
Left-turn Saturation Factor, fs:	xxxxxx	xxxxxx	xxxxxx	xxxxxx
Proportion of Left Turns in Shared Lane, pl:	xxxxxx	xxxxxx	xxxxxx	1.00
Through-car Equivalents, el1:	xxxxxx	xxxxxx	xxxxxx	1.40
Single Lane Through-car Equivalents, el2:	xxxxxx	xxxxxx	xxxxxx	1.00
Minimum Left Turn Adjustment Factor, fmin:	xxxxxx	xxxxxx	xxxxxx	0.16
Single Lane Left Turn Adjustment Factor, fm:	xxxxxx	xxxxxx	xxxxxx	0.72
Left Turn Adjustment Factor, flt:	xxxxxx	xxxxxx	xxxxxx	0.72

****

Patterson Sand and Gravel
Existing Conditions No Project (No Haul Road)
"Highest" - PM Peak Hour

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

****
Intersection #4 Riosa Rd and 11th St
****

Cycle (sec): 100 Critical Vol./Cap. (X): 0.124
Loss Time (sec): 0 (Y+R = 4 sec) Average Delay (sec/veh): 7.8
Optimal Cycle: 0 Level Of Service: A

****

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Stop Sign			Stop Sign			Stop Sign			Stop Sign		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Lanes:	0 0	1! 0	0	0 0	0 1	0	0 1	0 0	0	0 1	0 0	0
Volume Module:												
Base Vol:	2	3	1	0	1	2	6	99	0	1	81	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:	2	3	1	0	1	2	6	99	0	1	81	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:	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 Volume:	2	3	1	0	1	2	6	99	0	1	81	0
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	2	3	1	0	1	2	6	99	0	1	81	0
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Final Vol.:	2	3	1	0	1	2	6	99	0	1	81	0
Saturation Flow Module:												
Adjustment:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Lanes:	0.33	0.50	0.17	0.00	0.33	0.67	0.06	0.94	0.00	0.01	0.99	0.00
Final Sat.:	270	405	135	0	294	588	48	795	0	10	834	0
Capacity Analysis Module:												
Vol/Sat:	0.01	0.01	0.01	xxxx	0.00	0.00	0.12	0.12	xxxx	0.10	0.10	xxxx
Crit Moves:		****				****		****			****	
Delay/Veh:	7.3	7.3	7.3	0.0	6.9	6.9	7.8	7.8	0.0	7.7	7.7	0.0
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:	7.3	7.3	7.3	0.0	6.9	6.9	7.8	7.8	0.0	7.7	7.7	0.0
LOS by Move:	A	A	A	*	A	A	A	A	*	A	A	*
ApproachDel:		7.3			6.9			7.8			7.7	
Delay Adj:		1.00			1.00			1.00			1.00	
ApprAdjDel:		7.3			6.9			7.8			7.7	
LOS by Appr:		A			A			A			A	

****

Existing PM Mon Jan 12, 2004 17:14:12 Page 8-1

Patterson Sand and Gravel
Existing Conditions No Project (No Haul Road)
"Highest" - PM Peak Hour

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

****
Intersection #4 Riosa Rd and 11th St
****

Approach:	North Bound	South Bound	East Bound	West Bound
Movement:	L - T - R	L - T - R	L - T - R	L - T - R
Time Period: 0.25 hour				
HevVeh:	0%	0%	14%	13%
Alpha Value: 0.01				
GroupType:	1	1	1	1
P[C1]:	0.7890	0.7860	0.8941	0.8671
P[C2]:	0.0026	0.0056	0.0956	0.1225
P[C3]:	0.1958	0.1951	0.0093	0.0090
P[C4]:	0.0126	0.0133	0.0010	0.0013
P[C5]:	0.0000	0.0001	0.0000	0.0000
Padj[C1]:	0.00432	0.00436	0.00117	0.00144
Padj[C2]:	0.00218	0.00216	-0.00084	-0.00111
Padj[C3]:	-0.00575	-0.00572	-0.00027	-0.00026
Padj[C4]:	-0.00075	-0.00080	-0.00006	-0.00008
Padj[C5]:	-0.00000	-0.00001	-0.00000	-0.00000
Lane:	L1	L1	L1	L1
LaneType:	LEFTTHRURITE	LEFTTHRURITE	LEFTTHRURITE	LEFTTHRURITE
HeadwayAdj:	-0.033	-0.400	0.249	0.223
Volume:	6	3	105	82
Capacity:	811	882	844	844
DegOfUtil:	0.01	0.00	0.12	0.10
DepHeadway:	4.27	3.91	4.25	4.24
ServiceTime:	2.3	1.9	2.2	2.2
Delay:	7.3	6.9	7.8	7.7
Approach:	North Bound	South Bound	East Bound	West Bound
ApproachDel:	7.3	6.9	7.8	7.7
Delay Adj:	1.00	1.00	1.00	1.00
ApprAdjDel:	7.3	6.9	7.8	7.7
LOS by Appr:	A	A	A	A
OverallDel:		7.8		
OverallLOS:		A		

Existing PM Mon Jan 12, 2004 17:14:12 Page 9-1

Patterson Sand and Gravel
Existing Conditions No Project (No Haul Road)
"Highest" - PM Peak Hour

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

****
Intersection #5 Riosa Rd and Karchner Rd
****

Average Delay (sec/veh): 4.3 Worst Case Level Of Service: A

****

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	- T	- R	L	- T	- R	L	- T	- R	L	- T	- R
Control:	Stop Sign			Stop Sign			Uncontrolled			Uncontrolled		
Rights:	Include			Include			Include			Include		
Lanes:	0 0	0 0	0	0 0	1! 0	0	0 1	0 0	0	0 0	0 1	0
Volume Module:												
Base Vol:	0	0	0	7	0	18	25	23	0	0	19	5
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	7	0	18	25	23	0	0	19	5
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	0	0	0	7	0	18	25	23	0	0	19	5
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Final Vol.:	0	0	0	7	0	18	25	23	0	0	19	5
Critical Gap Module:												
Critical Gp:	xxxxx	xxxx	xxxxx	6.8	xxxx	6.6	4.4	xxxx	xxxxx	xxxxx	xxxx	xxxxx
FollowUpTim:	xxxxx	xxxx	xxxxx	3.9	xxxx	3.7	2.5	xxxx	xxxxx	xxxxx	xxxx	xxxxx
Capacity Module:												
Cnflict Vol:	xxxx	xxxx	xxxxx	94	xxxx	22	24	xxxx	xxxxx	xxxx	xxxx	xxxxx
Potent Cap.:	xxxx	xxxx	xxxxx	814	xxxx	949	1422	xxxx	xxxxx	xxxx	xxxx	xxxxx
Move Cap.:	xxxx	xxxx	xxxxx	803	xxxx	949	1422	xxxx	xxxxx	xxxx	xxxx	xxxxx
Level Of Service Module:												
Stopped Del:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	7.6	xxxx	xxxxx	xxxxx	xxxx	xxxxx
LOS by Move:	*	*	*	*	*	*	A	*	*	*	*	*
Movement:	LT - LTR - RT			LT - LTR - RT			LT - LTR - RT			LT - LTR - RT		
Shared Cap.:	xxxx	xxxx	xxxxx	xxxx	903	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx
Shrd StpDel:	xxxxx	xxxx	xxxxx	xxxxx	9.1	xxxxx	7.6	xxxx	xxxxx	xxxxx	xxxx	xxxxx
Shared LOS:	*	*	*	*	A	*	A	*	*	*	*	*
ApproachDel:	xxxxxx			9.1			xxxxxx			xxxxxx		
ApproachLOS:	*			A			*			*		

Existing PM Mon Jan 12, 2004 17:14:12 Page 10-1

Patterson Sand and Gravel
Existing Conditions No Project (No Haul Road)
"Highest" - PM Peak Hour

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

****
Intersection #5 Riosa Rd and Karchner Rd
****

Approach:	North Bound	South Bound	East Bound	West Bound
Movement:	L - T - R	L - T - R	L - T - R	L - T - R
HevVeh:	0%	43%	31%	0%
Grade:	0%	0%	0%	0%
Peds/Hour:	0	0	0	0
Pedestrian Walk Speed: 4.00 feet/sec				
LaneWidth:	12 feet	12 feet	12 feet	12 feet
Time Period: 0.25 hour				

Traffix 7.5.0715 (c) 2002 Dowling Assoc. Licensed to DKS ASSOC., SACRAMENTO

D2. Existing Plus Project (No Haul Road)

Existing AM Plus Project Mon Jan 12, 2004 13:31:37 Page 1-1

Patterson Sand and Gravel
Existing Plus Project (No Haul Road)
Peak Season Average Day - AM Peak Hour

Scenario Report

Scenario:	Existing AM Plus Project
Command:	Existing AM Plus Project
Volume:	Existing AM Plus Project
Geometry:	Existing AM Plus Project
Impact Fee:	Default Impact Fee
Trip Generation:	Default Trip Generation
Trip Distribution:	Default Trip Distribution
Paths:	Default Paths
Routes:	Default Routes
Configuration:	Default Configuration

Existing AM Plus Project Mon Jan 12, 2004 13:31:37 Page 2-1

Patterson Sand and Gravel
Existing Plus Project (No Haul Road)
Peak Season Average Day - AM Peak Hour

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 65 and Riosa Road (Sheridan	D	3.5	0.000	D	3.5	0.000	+ 0.000 V/C
# 2 SR 65 and SR 193 (Lincoln)	C	21.2	0.717	C	21.2	0.717	+ 0.000 D/V
# 4 Riosa Rd and 11th St	A	8.2	0.167	A	8.2	0.167	+ 0.000 V/C
# 5 Riosa Rd and Karchner Rd	A	5.1	0.000	A	5.1	0.000	+ 0.000 V/C

Existing AM Plus Project Mon Jan 12, 2004 13:31:37 Page 3-1

Patterson Sand and Gravel
Existing Plus Project (No Haul Road)
Peak Season Average Day - AM Peak Hour

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

****
Intersection #1 SR 65 and Riosa Road (Sheridan)
****
Average Delay (sec/veh): 3.5 Worst Case 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:	Uncontrolled			Uncontrolled			Stop Sign			Stop Sign		
Rights:	Include			Include			Include			Include		
Lanes:	0 0 1	0 1		1 0 1	0 0		0 0 0	0 0		0 0 1!	0 0	
Volume Module:												
Base Vol:	0	445	28	23	725	0	0	0	0	68	0	74
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	445	28	23	725	0	0	0	0	68	0	74
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	0	445	28	23	725	0	0	0	0	68	0	74
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Final Vol.:	0	445	28	23	725	0	0	0	0	68	0	74
Critical Gap Module:												
Critical Gp:	xxxxx	xxxx	xxxxx	4.2	xxxx	xxxxx	xxxxx	xxxx	xxxxx	6.7	xxxx	6.5
FollowUpTim:	xxxxx	xxxx	xxxxx	2.3	xxxx	xxxxx	xxxxx	xxxx	xxxxx	3.8	xxxx	3.6
Capacity Module:												
Cnflict Vol:	xxxx	xxxx	xxxxx	473	xxxx	xxxxx	xxxx	xxxx	xxxxx	1216	xxxx	445
Potent Cap.:	xxxx	xxxx	xxxxx	1043	xxxx	xxxxx	xxxx	xxxx	xxxxx	175	xxxx	557
Move Cap.:	xxxx	xxxx	xxxxx	1043	xxxx	xxxxx	xxxx	xxxx	xxxxx	172	xxxx	557
Level Of Service Module:												
Stopped Del:	xxxxx	xxxx	xxxxx	8.5	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx
LOS by Move:	*	*	*	A	*	*	*	*	*	*	*	*
Movement:	LT -	LTR -	RT	LT -	LTR -	RT	LT -	LTR -	RT	LT -	LTR -	RT
Shared Cap.:	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	269	xxxxx
Shrd StpDel:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	32.5	xxxxx
Shared LOS:	*	*	*	*	*	*	*	*	*	*	D	*
ApproachDel:	xxxxxx			xxxxxx			xxxxxx			32.5		
ApproachLOS:	*			*			*			D		

Existing AM Plus Project Mon Jan 12, 2004 13:31:37 Page 4-1

Patterson Sand and Gravel
Existing Plus Project (No Haul Road)
Peak Season Average Day - AM Peak Hour

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

****
Intersection #1 SR 65 and Riosa Road (Sheridan)
****

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
HevVeh:	17%			11%			0%			31%		
Grade:	0%			0%			0%			0%		
Peds/Hour:	0			0			0			0		
Pedestrian Walk Speed: 4.00 feet/sec												
LaneWidth:	12 feet			12 feet			12 feet			12 feet		
Time Period: 0.25 hour												
Upstream Signals:												
Link Index:	#2											
Dist(miles):	0.000											
Speed (mph):	0.00											
SignalIndex:	#2											
Cycle Time:	0 secs											
InitVolume:	0	0										
Saturation:	0	0										
ArrivalType:	0	0										
G/C:	0.00	0.00										
*** Computation 1: Time for Queue to Clear at Each Upstream Intersection												
P:	0.000	0.000										
gq1:	0.00	0.00										
gq2:	0.00	0.00										
gq:	0.00	0.00										
*** Computation 2: Time Intersection Blocked Because of Upstream Platoons												
alpha:	0.000											
beta:	0.000											
ta (secs):	0.000											
F:	0.000											
f:	0.000	0.000										
vcmax:	0	0										
vcmin:	0	0										
tp:	0.0	0.0										
p:	0.000											
*** Computation 3: Platoon Event Periods												
pdom/psubo:	0.000/0.000/Unconstrained											
*** Computation 4: Conflicting Flows During Each Unblocked Period												
InitCnflVol:	0	xxxxx	xxxxx	473	xxxxx	xxxxx	0	0	0	1216	0	445
UpstreamSat:	0	xxxxx	xxxxx	0	xxxxx	xxxxx	0	0	0	0	0	0
UpstreamAdj:	1.00	x.xxx	x.xxx	1.00	x.xxx	x.xxx	1.00	1.000	1.000	1.00	1.000	1.000
ConflictVol:	0	xxxxx	xxxxx	473	xxxxx	xxxxx	0	0	0	1216	0	445
*** Computation 5: Capactiy for Subject Movement During Unblocked Period												
InitPotCap:	0	xxxxx	xxxxx	1043	xxxxx	xxxxx	0	0	0	175	0	557
UpstreamAdj:	1.00	x.xxx	x.xxx	1.00	x.xxx	x.xxx	1.00	1.000	1.000	1.00	1.000	1.000
PotentCap:	0	xxxxx	xxxxx	1043	xxxxx	xxxxx	0	0	0	175	0	557

Existing AM Plus Project Mon Jan 12, 2004 13:31:37 Page 5-1

Patterson Sand and Gravel
Existing Plus Project (No Haul Road)
Peak Season Average Day - AM Peak Hour

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

****

Intersection #2 SR 65 and SR 193 (Lincoln)

****

Cycle (sec): 100 Critical Vol./Cap. (X): 0.717
Loss Time (sec): 0 (Y+R = 4 sec) Average Delay (sec/veh): 21.2
Optimal Cycle: 66 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				Permitted				Permitted			
Rights:	Include				Include				Include				Ovl			
Min. Green:	0	0	0		0	0	0		0	0	0		0	0	0	
Lanes:	1	0	0	1 0	1	0	0	1 0	0	0	1!	0 0	0	1	0	0 1
Volume Module:																
Base Vol:	0	483	83		138	605	0		0	0	0		249	0	104	
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	483	83		138	605	0		0	0	0		249	0	104	
User Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
PHF Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
PHF Volume:	0	483	83		138	605	0		0	0	0		249	0	104	
Reduct Vol:	0	0	0		0	0	0		0	0	0		0	0	0	
Reduced Vol:	0	483	83		138	605	0		0	0	0		249	0	104	
PCE Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
MLF Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
Final Vol.:	0	483	83		138	605	0		0	0	0		249	0	104	
Saturation Flow Module:																
Sat/Lane:	1900	1900	1900		1900	1900	1900		1900	1900	1900		1900	1900	1900	
Adjustment:	1.00	0.75	0.75		0.74	0.78	1.00		1.00	1.00	1.00		0.59	1.00	0.69	
Lanes:	1.00	0.85	0.15		1.00	1.00	0.00		0.00	1.00	0.00		1.00	0.00	1.00	
Final Sat.:	1900	1220	210		1413	1488	0		0	1900	0		1112	0	1310	
Capacity Analysis Module:																
Vol/Sat:	0.00	0.40	0.40		0.10	0.41	0.00		0.00	0.00	0.00		0.22	0.00	0.08	
Crit Moves:		****			****								****			
Green/Cycle:	0.00	0.55	0.55		0.14	0.69	0.00		0.00	0.00	0.00		0.31	0.00	0.45	
Volume/Cap:	0.00	0.72	0.72		0.72	0.59	0.00		0.00	0.00	0.00		0.72	0.00	0.18	
Delay/Veh:	0.0	19.8	19.8		53.6	9.1	0.0		0.0	0.0	0.0		37.5	0.0	16.7	
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:	0.0	19.8	19.8		53.6	9.1	0.0		0.0	0.0	0.0		37.5	0.0	16.7	
DesignQueue:	0	13	2		7	11	0		0	0	0		10	0	3	

****

Existing AM Plus Project Mon Jan 12, 2004 13:31:37 Page 6-1

Patterson Sand and Gravel
Existing Plus Project (No Haul Road)
Peak Season Average Day - AM Peak Hour

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

****

Intersection #2 SR 65 and SR 193 (Lincoln)

****

Approach:	North Bound				South Bound				East Bound				West Bound			
Movement:	L	-	T	- R	L	-	T	- R	L	-	T	- R	L	-	T	- R
HCM Ops Adjusted Lane Utilization Module:																
Lanes:	1	0	0	1 0	1	0	0	1 0	0	0	1!	0 0	0	1	0	0 1
Lane Group:	L		RT		RT	L		RT	RT	LTR	LTR	LTR	LT		LT	R
#LnsInGrps:	1		1		1	1		1	1	1	1	1	1		1	1
HCM Ops Input Saturation Adj Module:																
Lane Width:	12		12	12	12		12	12	12	12	12	12	12		12	12
CrosswalkWid			8				8				8				8	
% Hev Veh:			17				15				0				11	
Grade:			0%				0%				0%				0%	
Parking/Hr:			No				No				No				No	
Bus Stp/Hr:			0				0				0				0	
Area Type:	< < < < < < < < < < < < < < < < CBD > > > > > > > > > > > > > > > >															
Cnft Ped/Hr:			0				0				0				0	
ExclusiveRT:			Include				Include				Include				Include	
% RT Prtct:			0				0				0				0	
HCM Ops f(lt) Adj Case Module:																
f(lt) Case:	xxxx	xxxx	xxxx		1	xxxx	xxxx		xxxx	xxxx	xxxx		5	xxxx	xxxx	
HCM Ops Saturation Adj Module:																
Ln Wid Adj:	xxxx	1.00	1.00		1.00	1.00	xxxxx		xxxx	xxxx	xxxxx		1.00	xxxx	1.00	
Hev Veh Adj:	xxxx	0.86	0.86		0.87	0.87	xxxxx		xxxx	xxxx	xxxxx		0.90	xxxx	0.90	
Grade Adj:	xxxx	1.00	1.00		1.00	1.00	xxxxx		xxxx	xxxx	xxxxx		1.00	xxxx	1.00	
Parking Adj:	xxxx	1.00	1.00		xxxx	1.00	xxxxx		xxxx	xxxx	xxxxx		xxxx	xxxx	1.00	
Bus Stp Adj:	xxxx	1.00	1.00		xxxx	1.00	xxxxx		xxxx	xxxx	xxxxx		xxxx	xxxx	1.00	
Area Adj:	xxxx	0.90	0.90		0.90	0.90	xxxxx		xxxx	xxxx	xxxxx		0.90	xxxx	0.90	
RT Adj:	xxxx	0.98	0.98		xxxx	xxxx	xxxxx		xxxx	xxxx	xxxxx		xxxx	xxxx	0.85	
LT Adj:	xxxx	xxxx	xxxxx		0.95	xxxx	xxxxx		xxxx	xxxx	xxxxx		0.72	xxxx	xxxxx	
PedBike Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
HCM Sat Adj:	1.00	0.75	0.75		0.74	0.78	1.00		1.00	1.00	1.00		0.59	1.00	0.69	
Usr Sat Adj:	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 Sat Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
Fnl Sat Adj:	1.00	0.75	0.75		0.74	0.78	1.00		1.00	1.00	1.00		0.59	1.00	0.69	
Delay Adjustment Factor Module:																
Coordinated:	< < < < < < < < < < < < < < < < No > > > > > > > > > > > > > > > >															
Signal Type:	< < < < < < < < < < < < < Actuated > > > > > > > > > > > > > > >															
DelAdjFctr:	0.00	1.00	1.00		1.00	1.00	0.00		0.00	0.00	0.00		1.00	0.00	1.00	

****

Patterson Sand and Gravel
Existing Plus Project (No Haul Road)
Peak Season Average Day - AM Peak Hour

Level Of Service Detailed Computation Report (Permitted Left Turn Sat Adj)
2000 HCM Operations Method
Base Volume Alternative

Intersection #2 SR 65 and SR 193 (Lincoln)

Approach:	North	South	East	West
Cycle Length, C:	xxxxxx	xxxxxx	xxxxxx	100
Actual Green Time Per Lane Group, G:	xxxxxx	xxxxxx	xxxxxx	27.22
Effective Green Time Per Lane Group, g:	xxxxxx	xxxxxx	xxxxxx	31.22
Opposing Effective Green Time, go:	xxxxxx	xxxxxx	xxxxxx	31.22
Number Of Opposing Lanes, No:	xxxxxx	xxxxxx	xxxxxx	1
Number Of Lanes In Lane Group, N:	xxxxxx	xxxxxx	xxxxxx	1
Adjusted Left-Turn Flow Rate, Vlt:	xxxxxx	xxxxxx	xxxxxx	249
Proportion of Left Turns in Lane Group, Plt:	xxxxxx	xxxxxx	xxxxxx	1.00
Proportion of Left Turns in Opp Flow, Plto:	xxxxxx	xxxxxx	xxxxxx	1.00
Left Turns Per Cycle, LTC:	xxxxxx	xxxxxx	xxxxxx	6.92
Adjusted Opposing Flow Rate, Vo:	xxxxxx	xxxxxx	xxxxxx	0
Opposing Flow Per Lane Per Cycle, Volc:	xxxxxx	xxxxxx	xxxxxx	0.00
Opposing Platoon Ratio, Rpo:	xxxxxx	xxxxxx	xxxxxx	1.00
Lost Time Per Phase, tl:	xxxxxx	xxxxxx	xxxxxx	0.00
Eff grn until arrival of left-turn car, gf:	xxxxxx	xxxxxx	xxxxxx	0.80
Opposing Queue Ratio, qro:	xxxxxx	xxxxxx	xxxxxx	0.69
Eff grn blocked by opposing queue, gq:	xxxxxx	xxxxxx	xxxxxx	0.00
Eff grn while left turns filter thru, gu:	xxxxxx	xxxxxx	xxxxxx	30.42
Max opposing cars arriving during gq-gf, n:	xxxxxx	xxxxxx	xxxxxx	0.00
Proportion of Opposing Thru & RT cars, ptho:	xxxxxx	xxxxxx	xxxxxx	0.00
Left-turn Saturation Factor, fs:	xxxxxx	xxxxxx	xxxxxx	xxxxxx
Proportion of Left Turns in Shared Lane, pl:	xxxxxx	xxxxxx	xxxxxx	1.00
Through-car Equivalents, el1:	xxxxxx	xxxxxx	xxxxxx	1.40
Single Lane Through-car Equivalents, el2:	xxxxxx	xxxxxx	xxxxxx	1.00
Minimum Left Turn Adjustment Factor, fmin:	xxxxxx	xxxxxx	xxxxxx	0.13
Single Lane Left Turn Adjustment Factor, fm:	xxxxxx	xxxxxx	xxxxxx	0.72
Left Turn Adjustment Factor, flt:	xxxxxx	xxxxxx	xxxxxx	0.72

Patterson Sand and Gravel
Existing Plus Project (No Haul Road)
Peak Season Average Day - AM Peak Hour

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

Intersection #4 Riosa Rd and 11th St

Cycle (sec): 100 Critical Vol./Cap. (X): 0.167
Loss Time (sec): 0 (Y+R = 4 sec) Average Delay (sec/veh): 8.2
Optimal Cycle: 0 Level Of Service: A

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Stop Sign			Stop Sign			Stop Sign			Stop Sign		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Lanes:	0 0	1!	0 0	0 0	1!	0 0	0 1	0	0 0	0 1	0	0 0
Volume Module:												
Base Vol:	3	2	2	6	4	11	6	56	0	1	129	0
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	3	2	2	6	4	11	6	56	0	1	129	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:	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 Volume:	3	2	2	6	4	11	6	56	0	1	129	0
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	3	2	2	6	4	11	6	56	0	1	129	0
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Final Vol.:	3	2	2	6	4	11	6	56	0	1	129	0
Saturation Flow Module:												
Adjustment:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Lanes:	0.43	0.28	0.29	0.29	0.19	0.52	0.10	0.90	0.00	0.01	0.99	0.00
Final Sat.:	346	230	230	241	160	441	74	690	0	6	771	0
Capacity Analysis Module:												
Vol/Sat:	0.01	0.01	0.01	0.02	0.02	0.02	0.08	0.08	xxxx	0.17	0.17	xxxx
Crit Moves:	****				****			****			****	
Delay/Veh:	7.3	7.3	7.3	7.2	7.2	7.2	8.1	8.1	0.0	8.5	8.5	0.0
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:	7.3	7.3	7.3	7.2	7.2	7.2	8.1	8.1	0.0	8.5	8.5	0.0
LOS by Move:	A	A	A	A	A	A	A	A	*	A	A	*
ApproachDel:	7.3			7.2			8.1			8.5		
Delay Adj:	1.00			1.00			1.00			1.00		
ApprAdjDel:	7.3			7.2			8.1			8.5		
LOS by Appr:	A			A			A			A		

Existing AM Plus Project Mon Jan 12, 2004 13:31:37 Page 8-1

Patterson Sand and Gravel
Existing Plus Project (No Haul Road)
Peak Season Average Day - AM Peak Hour

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

****
Intersection #4 Riosa Rd and 11th St
****

Approach:	North Bound	South Bound	East Bound	West Bound
Movement:	L - T - R	L - T - R	L - T - R	L - T - R
Time Period: 0.25 hour				
HevVeh:	0%	0%	33%	34%
Alpha Value: 0.01				
GroupType:	1	1	1	1
P[C1]:	0.7485	0.7604	0.8072	0.8901
P[C2]:	0.0183	0.0064	0.1608	0.0779
P[C3]:	0.2146	0.2180	0.0265	0.0292
P[C4]:	0.0183	0.0151	0.0054	0.0027
P[C5]:	0.0003	0.0001	0.0000	0.0000
Padj[C1]:	0.00504	0.00488	0.00230	0.00145
Padj[C2]:	0.00234	0.00242	-0.00123	-0.00043
Padj[C3]:	-0.00625	-0.00639	-0.00074	-0.00085
Padj[C4]:	-0.00109	-0.00090	-0.00033	-0.00016
Padj[C5]:	-0.00003	-0.00001	-0.00000	-0.00000
Lane:	L1	L1	L1	L1
LaneType:	LEFTTHRURITE	LEFTTHRURITE	LEFTTHRURITE	LEFTTHRURITE
HeadwayAdj:	-0.086	-0.257	0.580	0.580
Volume:	7	21	62	130
Capacity:	807	842	763	777
DegOfUtil:	0.01	0.02	0.08	0.17
DepHeadway:	4.28	4.10	4.67	4.60
ServiceTime:	2.3	2.1	2.7	2.6
Delay:	7.3	7.2	8.1	8.5
Approach:	North Bound	South Bound	East Bound	West Bound
ApproachDel:	7.3	7.2	8.1	8.5
Delay Adj:	1.00	1.00	1.00	1.00
ApprAdjDel:	7.3	7.2	8.1	8.5
LOS by Appr:	A	A	A	A
OverallDel:		8.2		
OverallLOS:		A		

Existing AM Plus Project Mon Jan 12, 2004 13:31:37 Page 9-1

Patterson Sand and Gravel
Existing Plus Project (No Haul Road)
Peak Season Average Day - AM Peak Hour

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

****
Intersection #5 Riosa Rd and Karchner Rd
****
Average Delay (sec/veh): 5.1 Worst Case Level Of Service: A
****

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Stop Sign			Stop Sign			Uncontrolled			Uncontrolled		
Rights:	Include			Include			Include			Include		
Lanes:	0 0	0	0 0	0 0	1!	0 0	0 1	0	0 0	0 0	0	1 0
Volume Module:												
Base Vol:	0	0	0	15	0	43	24	16	0	0	28	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:	0	0	0	15	0	43	24	16	0	0	28	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:	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 Volume:	0	0	0	15	0	43	24	16	0	0	28	1
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Final Vol.:	0	0	0	15	0	43	24	16	0	0	28	1
Critical Gap Module:												
Critical Gp:	xxxxx	xxxx	xxxxx	7.1	xxxx	6.9	4.6	xxxx	xxxxx	xxxxx	xxxx	xxxxx
FollowUpTim:	xxxxx	xxxx	xxxxx	4.1	xxxx	3.9	2.7	xxxx	xxxxx	xxxxx	xxxx	xxxxx
Capacity Module:												
Cnflict Vol:	xxxx	xxxx	xxxxx	93	xxxx	29	29	xxxx	xxxxx	xxxx	xxxx	xxxxx
Potent Cap.:	xxxx	xxxx	xxxxx	764	xxxx	879	1323	xxxx	xxxxx	xxxx	xxxx	xxxxx
Move Cap.:	xxxx	xxxx	xxxxx	753	xxxx	879	1323	xxxx	xxxxx	xxxx	xxxx	xxxxx
Level Of Service Module:												
Stopped Del:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	7.8	xxxx	xxxxx	xxxxx	xxxx	xxxxx
LOS by Move:	*	*	*	*	*	*	A	*	*	*	*	*
Movement:	LT - LTR - RT			LT - LTR - RT			LT - LTR - RT			LT - LTR - RT		
Shared Cap.:	xxxx	xxxx	xxxxx	xxxx	842	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx
Shrd StpDel:	xxxxx	xxxx	xxxxx	xxxxx	9.6	xxxxx	7.8	xxxx	xxxxx	xxxxx	xxxx	xxxxx
Shared LOS:	*	*	*	*	A	*	A	*	*	*	*	*
ApproachDel:	xxxxxx			9.6			xxxxxx			xxxxxx		
ApproachLOS:	*			A			*			*		

Existing AM Plus Project Mon Jan 12, 2004 13:31:37 Page 10-1

Patterson Sand and Gravel
Existing Plus Project (No Haul Road)
Peak Season Average Day - AM Peak Hour

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

****
Intersection #5 Riosa Rd and Karchner Rd
****

Approach:	North Bound	South Bound	East Bound	West Bound
Movement:	L - T - R	L - T - R	L - T - R	L - T - R
HevVeh:	0%	71%	50%	10%
Grade:	0%	0%	0%	0%
Peds/Hour:	0	0	0	0
Pedestrian Walk Speed: 4.00 feet/sec				
LaneWidth:	12 feet	12 feet	12 feet	12 feet

Time Period: 0.25 hour

Existing AM Plus Project Tue Jan 13, 2004 13:15:12 Page 1-1

Patterson Sand and Gravel
Existing Plus Project (No Haul Road)
"30th Highest" - AM Peak Hour

Scenario Report

Scenario:	Existing AM Plus Project
Command:	Existing AM Plus Project
Volume:	Existing AM Plus Project
Geometry:	Existing AM Plus Project
Impact Fee:	Default Impact Fee
Trip Generation:	Default Trip Generation
Trip Distribution:	Default Trip Distribution
Paths:	Default Paths
Routes:	Default Routes
Configuration:	Default Configuration

Existing AM Plus Project Tue Jan 13, 2004 13:15:13 Page 2-1

Patterson Sand and Gravel
Existing Plus Project (No Haul Road)
"30th Highest" - AM Peak Hour

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 65 and Riosa Road (Sheridan	E	5.4	0.000	E	5.4	0.000	+ 0.000 V/C
# 2 SR 65 and SR 193 (Lincoln)	C	21.7	0.731	C	21.7	0.731	+ 0.000 D/V
# 4 Riosa Rd and 11th St	A	8.6	0.203	A	8.6	0.203	+ 0.000 V/C
# 5 Riosa Rd and Karchner Rd	A	5.8	0.000	A	5.8	0.000	+ 0.000 V/C

Patterson Sand and Gravel
Existing Plus Project (No Haul Road)
"30th Highest" - AM Peak Hour

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

****
Intersection #1 SR 65 and Riosa Road (Sheridan)
****
Average Delay (sec/veh): 5.4 Worst Case 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:	Uncontrolled				Uncontrolled				Stop Sign				Stop Sign			
Rights:	Include				Include				Include				Include			
Lanes:	0	0	1	0 1	1	0	1	0 0	0	0	0	0 0	0	0	1!	0 0
Volume Module:																
Base Vol:	0	445	37		24	725	0		0	0	0		86	0	78	
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	445	37		24	725	0		0	0	0		86	0	78	
User Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
PHF Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
PHF Volume:	0	445	37		24	725	0		0	0	0		86	0	78	
Reduct Vol:	0	0	0		0	0	0		0	0	0		0	0	0	
Final Vol.:	0	445	37		24	725	0		0	0	0		86	0	78	
Critical Gap Module:																
Critical Gp:	xxxxx	xxxx	xxxxx		4.2	xxxx	xxxxx		xxxxx	xxxx	xxxxx		6.8	xxxx	6.6	
FollowUpTim:	xxxxx	xxxx	xxxxx		2.3	xxxx	xxxxx		xxxxx	xxxx	xxxxx		3.9	xxxx	3.7	
Capacity Module:																
Cnflict Vol:	xxxx	xxxx	xxxxx		482	xxxx	xxxxx		xxxx	xxxx	xxxxx		1218	xxxx	445	
Potent Cap.:	xxxx	xxxx	xxxxx		1035	xxxx	xxxxx		xxxx	xxxx	xxxxx		167	xxxx	541	
Move Cap.:	xxxx	xxxx	xxxxx		1035	xxxx	xxxxx		xxxx	xxxx	xxxxx		164	xxxx	541	
Level Of Service Module:																
Stopped Del:	xxxxx	xxxx	xxxxx		8.6	xxxx	xxxxx		xxxxx	xxxx	xxxxx		xxxxx	xxxx	xxxxx	
LOS by Move:	*	*	*		A	*	*		*	*	*		*	*	*	
Movement:	LT -	LTR -	RT		LT -	LTR -	RT		LT -	LTR -	RT		LT -	LTR -	RT	
Shared Cap.:	xxxx	xxxx	xxxxx		xxxx	xxxx	xxxxx		xxxx	xxxx	xxxxx		xxxx	246	xxxxx	
Shrd StpDel:	xxxxx	xxxx	xxxxx		xxxxx	xxxx	xxxxx		xxxxx	xxxx	xxxxx		xxxxx	44.8	xxxxx	
Shared LOS:	*	*	*		*	*	*		*	*	*		*	E	*	
ApproachDel:	xxxxxx				xxxxxx				xxxxxx				44.8			
ApproachLOS:	*				*				*				E			

Patterson Sand and Gravel
Existing Plus Project (No Haul Road)
"30th Highest" - AM Peak Hour

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

****
Intersection #1 SR 65 and Riosa Road (Sheridan)
****

Approach:	North Bound				South Bound				East Bound				West Bound			
Movement:	L	-	T	- R	L	-	T	- R	L	-	T	- R	L	-	T	- R
HevVeh:	18%				11%				0%				40%			
Grade:	0%				0%				0%				0%			
Peds/Hour:	0				0				0				0			
Pedestrian Walk Speed: 4.00 feet/sec																
LaneWidth:	12 feet				12 feet				12 feet				12 feet			
Time Period: 0.25 hour																
Upstream Signals:																
Link Index:	#2															
Dist(miles):	0.000															
Speed (mph):	0.00															
SignalIndex:	#2															
Cycle Time:	0 secs															
InitVolume:	0	0														
Saturation:	0	0														
ArrivalType:	0	0														
G/C:	0.00	0.00														
*** Computation 1: Time for Queue to Clear at Each Upstream Intersection																
P:	0.000	0.000														
gq1:	0.00	0.00														
gq2:	0.00	0.00														
gq:	0.00	0.00														
*** Computation 2: Time Intersection Blocked Because of Upstream Platoons																
alpha:	0.000															
beta:	0.000															
ta (secs):	0.000															
F:	0.000															
f:	0.000	0.000														
vcmax:	0	0														
vcmin:	0	0														
tp:	0.0	0.0														
p:	0.000															
*** Computation 3: Platoon Event Periods																
pdom/psubo:	0.000/0.000/Unconstrained															
*** Computation 4: Conflicting Flows During Each Unblocked Period																
InitCnflVol:	0	xxxxx	xxxxx	482	xxxxx	xxxxx	0	0	0	1218	0	445				
UpstreamSat:	0	xxxxx	xxxxx	0	xxxxx	xxxxx	0	0	0	0	0	0				
UpstreamAdj:	1.00	x.xxx	x.xxx	1.00	x.xxx	x.xxx	1.00	1.000	1.000	1.00	1.000	1.000				
ConflictVol:	0	xxxxx	xxxxx	482	xxxxx	xxxxx	0	0	0	1218	0	445				
*** Computation 5: Capactiy for Subject Movement During Unblocked Period																
InitPotCap:	0	xxxxx	xxxxx	1035	xxxxx	xxxxx	0	0	0	167	0	541				
UpstreamAdj:	1.00	x.xxx	x.xxx	1.00	x.xxx	x.xxx	1.00	1.000	1.000	1.00	1.000	1.000				
PotentCap:	0	xxxxx	xxxxx	1035	xxxxx	xxxxx	0	0	0	167	0	541				

Existing AM Plus Project Tue Jan 13, 2004 13:15:13 Page 5-1

Patterson Sand and Gravel
Existing Plus Project (No Haul Road)
"30th Highest" - AM Peak Hour

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

****

Intersection #2 SR 65 and SR 193 (Lincoln)

****

Cycle (sec): 100 Critical Vol./Cap. (X): 0.731
Loss Time (sec): 0 (Y+R = 4 sec) Average Delay (sec/veh): 21.7
Optimal Cycle: 69 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				Permitted				Permitted			
Rights:	Include				Include				Include				Ovl			
Min. Green:	0	0	0		0	0	0		0	0	0		0	0	0	
Lanes:	1	0	0	1 0	1	0	0	1 0	0	0	1!	0 0	0	1	0	0 1
Volume Module:																
Base Vol:	0	490	83		141	620	0		0	0	0		249	0	104	
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	490	83		141	620	0		0	0	0		249	0	104	
User Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
PHF Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
PHF Volume:	0	490	83		141	620	0		0	0	0		249	0	104	
Reduct Vol:	0	0	0		0	0	0		0	0	0		0	0	0	
Reduced Vol:	0	490	83		141	620	0		0	0	0		249	0	104	
PCE Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
MLF Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
Final Vol.:	0	490	83		141	620	0		0	0	0		249	0	104	
Saturation Flow Module:																
Sat/Lane:	1900	1900	1900		1900	1900	1900		1900	1900	1900		1900	1900	1900	
Adjustment:	1.00	0.75	0.75		0.72	0.76	1.00		1.00	1.00	1.00		0.59	1.00	0.69	
Lanes:	1.00	0.86	0.14		1.00	1.00	0.00		0.00	1.00	0.00		1.00	0.00	1.00	
Final Sat.:	1900	1211	205		1376	1448	0		0	1900	0		1112	0	1310	
Capacity Analysis Module:																
Vol/Sat:	0.00	0.40	0.40		0.10	0.43	0.00		0.00	0.00	0.00		0.22	0.00	0.08	
Crit Moves:		****			****								****			
Green/Cycle:	0.00	0.55	0.55		0.14	0.69	0.00		0.00	0.00	0.00		0.31	0.00	0.45	
Volume/Cap:	0.00	0.73	0.73		0.73	0.62	0.00		0.00	0.00	0.00		0.73	0.00	0.18	
Delay/Veh:	0.0	20.3	20.3		54.5	9.4	0.0		0.0	0.0	0.0		38.9	0.0	16.8	
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	20.3	20.3		54.5	9.4	0.0		0.0	0.0	0.0		38.9	0.0	16.8	
DesignQueue:	0	13	2		7	12	0		0	0	0		10	0	3	

****

Existing AM Plus Project Tue Jan 13, 2004 13:15:13 Page 6-1

Patterson Sand and Gravel
Existing Plus Project (No Haul Road)
"30th Highest" - AM Peak Hour

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

****

Intersection #2 SR 65 and SR 193 (Lincoln)

****

Approach:	North Bound				South Bound				East Bound				West Bound			
Movement:	L	-	T	- R	L	-	T	- R	L	-	T	- R	L	-	T	- R
HCM Ops Adjusted Lane Utilization Module:																
Lanes:	1	0	0	1 0	1	0	0	1 0	0	0	1!	0 0	0	1	0	0 1
Lane Group:	L		RT		RT	L		RT	RT	LTR	LTR	LTR	LT	LT		R
#LnsInGrps:	1		1		1	1		1	1	1	1	1	1	1		1
HCM Ops Input Saturation Adj Module:																
Lane Width:	12		12		12	12		12	12	12	12	12	12	12		12
CrosswalkWid			8					8			8			8		
% Hev Veh:			18					18			0			11		
Grade:			0%					0%			0%			0%		
Parking/Hr:			No					No			No			No		
Bus Stp/Hr:			0					0			0			0		
Area Type:	< < < < < < < < < < < < < < < < CBD > > > > > > > > > > > > > > > >															
Cnft Ped/Hr:			0					0			0			0		
ExclusiveRT:			Include					Include			Include			Include		
% RT Prtct:			0					0			0			0		
HCM Ops f(lt) Adj Case Module:																
f(lt) Case:	xxxx	xxxx	xxxx		1	xxxx	xxxx		xxxx	xxxx	xxxx		5	xxxx	xxxx	
HCM Ops Saturation Adj Module:																
Ln Wid Adj:	xxxx	1.00	1.00		1.00	1.00	xxxxx		xxxx	xxxx	xxxxx		1.00	xxxx	1.00	
Hev Veh Adj:	xxxx	0.85	0.85		0.85	0.85	xxxxx		xxxx	xxxx	xxxxx		0.90	xxxx	0.90	
Grade Adj:	xxxx	1.00	1.00		1.00	1.00	xxxxx		xxxx	xxxx	xxxxx		1.00	xxxx	1.00	
Parking Adj:	xxxx	1.00	1.00		xxxx	1.00	xxxxx		xxxx	xxxx	xxxxx		xxxx	xxxx	1.00	
Bus Stp Adj:	xxxx	1.00	1.00		xxxx	1.00	xxxxx		xxxx	xxxx	xxxxx		xxxx	xxxx	1.00	
Area Adj:	xxxx	0.90	0.90		0.90	0.90	xxxxx		xxxx	xxxx	xxxxx		0.90	xxxx	0.90	
RT Adj:	xxxx	0.98	0.98		xxxx	xxxx	xxxxx		xxxx	xxxx	xxxxx		xxxx	xxxx	0.85	
LT Adj:	xxxx	xxxx	xxxxx		0.95	xxxx	xxxxx		xxxx	xxxx	xxxxx		0.72	xxxx	xxxxx	
PedBike Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
HCM Sat Adj:	1.00	0.75	0.75		0.72	0.76	1.00		1.00	1.00	1.00		0.59	1.00	0.69	
Usr Sat Adj:	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 Sat Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
Fnl Sat Adj:	1.00	0.75	0.75		0.72	0.76	1.00		1.00	1.00	1.00		0.59	1.00	0.69	
Delay Adjustment Factor Module:																
Coordinated:	< < < < < < < < < < < < < < < < No > > > > > > > > > > > > > > > >															
Signal Type:	< < < < < < < < < < < < < Actuated > > > > > > > > > > > > >															
DelAdjFctr:	0.00	1.00	1.00		1.00	1.00	0.00		0.00	0.00	0.00		1.00	0.00	1.00	

****

Patterson Sand and Gravel
Existing Plus Project (No Haul Road)
"30th Highest" - AM Peak Hour

Level Of Service Detailed Computation Report (Permitted Left Turn Sat Adj)
2000 HCM Operations Method
Base Volume Alternative

Intersection #2 SR 65 and SR 193 (Lincoln)

Approach:	North	South	East	West
Cycle Length, C:	xxxxxx	xxxxxx	xxxxxx	100
Actual Green Time Per Lane Group, G:	xxxxxx	xxxxxx	xxxxxx	26.64
Effective Green Time Per Lane Group, g:	xxxxxx	xxxxxx	xxxxxx	30.64
Opposing Effective Green Time, go:	xxxxxx	xxxxxx	xxxxxx	30.64
Number Of Opposing Lanes, No:	xxxxxx	xxxxxx	xxxxxx	1
Number Of Lanes In Lane Group, N:	xxxxxx	xxxxxx	xxxxxx	1
Adjusted Left-Turn Flow Rate, Vlt:	xxxxxx	xxxxxx	xxxxxx	249
Proportion of Left Turns in Lane Group, Plt:	xxxxxx	xxxxxx	xxxxxx	1.00
Proportion of Left Turns in Opp Flow, Plto:	xxxxxx	xxxxxx	xxxxxx	1.00
Left Turns Per Cycle, LTC:	xxxxxx	xxxxxx	xxxxxx	6.92
Adjusted Opposing Flow Rate, Vo:	xxxxxx	xxxxxx	xxxxxx	0
Opposing Flow Per Lane Per Cycle, Volc:	xxxxxx	xxxxxx	xxxxxx	0.00
Opposing Platoon Ratio, Rpo:	xxxxxx	xxxxxx	xxxxxx	1.00
Lost Time Per Phase, tl:	xxxxxx	xxxxxx	xxxxxx	0.00
Eff grn until arrival of left-turn car, gf:	xxxxxx	xxxxxx	xxxxxx	0.78
Opposing Queue Ratio, qro:	xxxxxx	xxxxxx	xxxxxx	0.69
Eff grn blocked by opposing queue, gq:	xxxxxx	xxxxxx	xxxxxx	0.00
Eff grn while left turns filter thru, gu:	xxxxxx	xxxxxx	xxxxxx	29.86
Max opposing cars arriving during gq-gf, n:	xxxxxx	xxxxxx	xxxxxx	0.00
Proportion of Opposing Thru & RT cars, ptho:	xxxxxx	xxxxxx	xxxxxx	0.00
Left-turn Saturation Factor, fs:	xxxxxx	xxxxxx	xxxxxx	xxxxxx
Proportion of Left Turns in Shared Lane, pl:	xxxxxx	xxxxxx	xxxxxx	1.00
Through-car Equivalents, el1:	xxxxxx	xxxxxx	xxxxxx	1.40
Single Lane Through-car Equivalents, el2:	xxxxxx	xxxxxx	xxxxxx	1.00
Minimum Left Turn Adjustment Factor, fmin:	xxxxxx	xxxxxx	xxxxxx	0.13
Single Lane Left Turn Adjustment Factor, fm:	xxxxxx	xxxxxx	xxxxxx	0.72
Left Turn Adjustment Factor, flt:	xxxxxx	xxxxxx	xxxxxx	0.72

Patterson Sand and Gravel
Existing Plus Project (No Haul Road)
"30th Highest" - AM Peak Hour

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

Intersection #4 Riosa Rd and 11th St

Cycle (sec): 100 Critical Vol./Cap. (X): 0.203
Loss Time (sec): 0 (Y+R = 4 sec) Average Delay (sec/veh): 8.6
Optimal Cycle: 0 Level Of Service: A

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Stop Sign			Stop Sign			Stop Sign			Stop Sign		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Lanes:	0 0	1!	0 0	0 0	1!	0 0	0 1	0	0 0	0 1	0	0 0
Volume Module:												
Base Vol:	3	2	2	6	4	11	6	66	0	1	151	0
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	3	2	2	6	4	11	6	66	0	1	151	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:	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 Volume:	3	2	2	6	4	11	6	66	0	1	151	0
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	3	2	2	6	4	11	6	66	0	1	151	0
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Final Vol.:	3	2	2	6	4	11	6	66	0	1	151	0
Saturation Flow Module:												
Adjustment:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Lanes:	0.43	0.28	0.29	0.29	0.19	0.52	0.08	0.92	0.00	0.01	0.99	0.00
Final Sat.:	336	224	224	234	156	429	61	673	0	5	742	0
Capacity Analysis Module:												
Vol/Sat:	0.01	0.01	0.01	0.03	0.03	0.03	0.10	0.10	xxxx	0.20	0.20	xxxx
Crit Moves:			****		****		****			****		
Delay/Veh:	7.4	7.4	7.4	7.3	7.3	7.3	8.4	8.4	0.0	9.0	9.0	0.0
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:	7.4	7.4	7.4	7.3	7.3	7.3	8.4	8.4	0.0	9.0	9.0	0.0
LOS by Move:	A	A	A	A	A	A	A	A	*	A	A	*
ApproachDel:	7.4			7.3			8.4			9.0		
Delay Adj:	1.00			1.00			1.00			1.00		
ApprAdjDel:	7.4			7.3			8.4			9.0		
LOS by Appr:	A			A			A			A		

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Patterson Sand and Gravel
Existing Plus Project (No Haul Road)
"30th Highest" - AM Peak Hour

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

****
Intersection #4 Riosa Rd and 11th St
****

Approach:	North Bound	South Bound	East Bound	West Bound
Movement:	L - T - R	L - T - R	L - T - R	L - T - R
Time Period: 0.25 hour				
HevVeh:	0%	0%	42%	44%
Alpha Value: 0.01				
GroupType:	1	1	1	1
P[C1]:	0.7030	0.7145	0.7719	0.8735
P[C2]:	0.0176	0.0061	0.1954	0.0938
P[C3]:	0.2535	0.2576	0.0259	0.0293
P[C4]:	0.0255	0.0216	0.0067	0.0033
P[C5]:	0.0005	0.0002	0.0000	0.0000
Padj[C1]:	0.00603	0.00587	0.00268	0.00163
Padj[C2]:	0.00288	0.00295	-0.00156	-0.00058
Padj[C3]:	-0.00734	-0.00751	-0.00071	-0.00085
Padj[C4]:	-0.00152	-0.00130	-0.00040	-0.00020
Padj[C5]:	-0.00005	-0.00002	-0.00000	-0.00000
Lane:	L1	L1	L1	L1
LaneType:	LEFTTHRURITE	LEFTTHRURITE	LEFTTHRURITE	LEFTTHRURITE
HeadwayAdj:	-0.086	-0.257	0.731	0.749
Volume:	7	21	72	152
Capacity:	785	818	734	747
DegOfUtil:	0.01	0.02	0.10	0.20
DepHeadway:	4.37	4.19	4.85	4.79
ServiceTime:	2.4	2.2	2.9	2.8
Delay:	7.4	7.3	8.4	9.0
Approach:	North Bound	South Bound	East Bound	West Bound
ApproachDel:	7.4	7.3	8.4	9.0
Delay Adj:	1.00	1.00	1.00	1.00
ApprAdjDel:	7.4	7.3	8.4	9.0
LOS by Appr:	A	A	A	A
OverallDel:		8.6		
OverallLOS:		A		

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Patterson Sand and Gravel
Existing Plus Project (No Haul Road)
"30th Highest" - AM Peak Hour

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

****
Intersection #5 Riosa Rd and Karchner Rd
****
Average Delay (sec/veh): 5.8 Worst Case Level Of Service: A
****

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Stop Sign			Stop Sign			Uncontrolled			Uncontrolled		
Rights:	Include			Include			Include			Include		
Lanes:	0 0	0	0 0	0 0	1!	0 0	0 1	0	0 0	0 0	0	1 0
Volume Module:												
Base Vol:	0	0	0	15	0	65	34	16	0	0	28	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:	0	0	0	15	0	65	34	16	0	0	28	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:	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 Volume:	0	0	0	15	0	65	34	16	0	0	28	1
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Final Vol.:	0	0	0	15	0	65	34	16	0	0	28	1
Critical Gap Module:												
Critical Gp:	xxxxx	xxxx	xxxxx	7.2	xxxx	7.0	4.7	xxxx	xxxxx	xxxxx	xxxx	xxxxx
FollowUpTim:	xxxxx	xxxx	xxxxx	4.2	xxxx	4.0	2.7	xxxx	xxxxx	xxxxx	xxxx	xxxxx
Capacity Module:												
Cnflict Vol:	xxxx	xxxx	xxxxx	113	xxxx	29	29	xxxx	xxxxx	xxxx	xxxx	xxxxx
Potent Cap.:	xxxx	xxxx	xxxxx	729	xxxx	863	1279	xxxx	xxxxx	xxxx	xxxx	xxxxx
Move Cap.:	xxxx	xxxx	xxxxx	714	xxxx	863	1279	xxxx	xxxxx	xxxx	xxxx	xxxxx
Level Of Service Module:												
Stopped Del:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	7.9	xxxx	xxxxx	xxxxx	xxxx	xxxxx
LOS by Move:	*	*	*	*	*	*	A	*	*	*	*	*
Movement:	LT - LTR - RT			LT - LTR - RT			LT - LTR - RT			LT - LTR - RT		
Shared Cap.:	xxxx	xxxx	xxxxx	xxxx	830	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx
Shrd StpDel:	xxxxx	xxxx	xxxxx	xxxxx	9.8	xxxxx	7.9	xxxx	xxxxx	xxxxx	xxxx	xxxxx
Shared LOS:	*	*	*	*	A	*	A	*	*	*	*	*
ApproachDel:	xxxxxx			9.8			xxxxxx			xxxxxx		
ApproachLOS:	*			A			*			*		

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Patterson Sand and Gravel
Existing Plus Project (No Haul Road)
"30th Highest" - AM Peak Hour

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

****
Intersection #5 Riosa Rd and Karchner Rd
****

Approach:	North Bound	South Bound	East Bound	West Bound
Movement:	L - T - R	L - T - R	L - T - R	L - T - R
HevVeh:	0%	79%	60%	10%
Grade:	0%	0%	0%	0%
Peds/Hour:	0	0	0	0
Pedestrian Walk Speed: 4.00 feet/sec				
LaneWidth:	12 feet	12 feet	12 feet	12 feet
Time Period: 0.25 hour				

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Patterson Sand and Gravel
Existing Plus Project (No Haul Road)
"Highest" - AM Peak Hour

Scenario Report

Scenario:	Existing AM Plus Project
Command:	Existing AM Plus Project
Volume:	Existing AM Plus Project
Geometry:	Existing AM Plus Project
Impact Fee:	Default Impact Fee
Trip Generation:	Default Trip Generation
Trip Distribution:	Default Trip Distribution
Paths:	Default Paths
Routes:	Default Routes
Configuration:	Default Configuration

Existing AM Plus Project Wed Jan 14, 2004 09:46:44 Page 2-1

Patterson Sand and Gravel
Existing Plus Project (No Haul Road)
"Highest" - AM Peak Hour

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 65 and Riosa Road (Sheridan	F	8.9	0.000	F	8.9	0.000	+ 0.000 V/C
# 2 SR 65 and SR 193 (Lincoln)	C	22.0	0.743	C	22.0	0.743	+ 0.000 D/V
# 4 Riosa Rd and 11th St	A	9.0	0.241	A	9.0	0.241	+ 0.000 V/C
# 5 Riosa Rd and Karchner Rd	A	6.4	0.000	A	6.4	0.000	+ 0.000 V/C

Patterson Sand and Gravel
Existing Plus Project (No Haul Road)
"Highest" - AM Peak Hour

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

```
*******************************************************************************
Intersection #1 SR 65 and Riosa Road (Sheridan)
*******************************************************************************
Average Delay (sec/veh):      8.9           Worst Case 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:       Uncontrolled     Uncontrolled      Stop Sign        Stop Sign
Rights:           Include          Include          Include          Include
Lanes:       0  0  1  0  1    1  0  1  0  0    0  0  0  0  0    0  0  1! 0  0
------------|---------------||---------------||---------------||---------------|
Volume Module:
Base Vol:       0  445    45   25  725     0    0    0     0  105    0   82
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  445    45   25  725     0    0    0     0  105    0   82
User Adj:    1.00 1.00  1.00 1.00 1.00  1.00 1.00 1.00  1.00 1.00 1.00 1.00
PHF Adj:     1.00 1.00  1.00 1.00 1.00  1.00 1.00 1.00  1.00 1.00 1.00 1.00
PHF Volume:     0  445    45   25  725     0    0    0     0  105    0   82
Reduct Vol:     0    0     0    0    0     0    0    0     0    0    0    0
Final Vol.:     0  445    45   25  725     0    0    0     0  105    0   82
------------|---------------||---------------||---------------||---------------|
Critical Gap Module:
Critical Gp:xxxxx xxxx xxxxx   4.2 xxxx xxxxx xxxxx xxxx xxxxx   6.9 xxxx   6.7
FollowUpTim:xxxxx xxxx xxxxx   2.3 xxxx xxxxx xxxxx xxxx xxxxx   3.9 xxxx   3.7
------------|---------------||---------------||---------------||---------------|
Capacity Module:
Cnflict Vol: xxxx xxxx xxxxx   490 xxxx xxxxx  xxxx xxxx xxxxx  1220 xxxx   445
Potent Cap.: xxxx xxxx xxxxx  1028 xxxx xxxxx  xxxx xxxx xxxxx   161 xxxx   527
Move Cap.:   xxxx xxxx xxxxx  1028 xxxx xxxxx  xxxx xxxx xxxxx   158 xxxx   527
------------|---------------||---------------||---------------||---------------|
Level Of Service Module:
Stopped Del:xxxxx xxxx xxxxx   8.6 xxxx xxxxx xxxxx xxxx xxxxx xxxxx xxxx xxxxx
LOS by Move:   *    *    *     A    *    *     *    *    *     *    *    *
Movement:     LT - LTR - RT    LT - LTR - RT    LT - LTR - RT    LT - LTR - RT
Shared Cap.: xxxx xxxx xxxxx  xxxx xxxx xxxxx  xxxx xxxx xxxxx  xxxx  228 xxxxx
Shrd StpDel:xxxxx xxxx xxxxx xxxxx xxxx xxxxx xxxxx xxxx xxxxx xxxxx 66.7 xxxxx
Shared LOS:    *    *    *     *    *    *     *    *    *     *    F    *
ApproachDel:    xxxxxx           xxxxxx           xxxxxx           66.7
ApproachLOS:       *                *                *               F
```


Patterson Sand and Gravel
Existing Plus Project (No Haul Road)
"Highest" - AM Peak Hour

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

```
*******************************************************************************
Intersection #1 SR 65 and Riosa Road (Sheridan)
*******************************************************************************
Approach:      North Bound      South Bound      East Bound       West Bound
Movement:    L  -  T  -  R    L  -  T  -  R    L  -  T  -  R    L  -  T  -  R
------------|---------------||---------------||---------------||---------------|
HevVeh:            20%              11%              0%               48%
Grade:              0%               0%              0%                0%
Peds/Hour:          0                0               0                 0
Pedestrian Walk Speed: 4.00 feet/sec
LaneWidth:       12 feet          12 feet         12 feet          12 feet
Time Period: 0.25 hour
------------|---------------||---------------||---------------||---------------|
Upstream Signals:
Link Index:        #2
Dist(miles):       0.000
Speed (mph):        0.00
SignalIndex:       #2
Cycle Time:           0 secs
InitVolume:      0     0
Saturation:      0     0
ArrivalType:     0     0
G/C:          0.00  0.00
*** Computation 1: Time for Queue to Clear at Each Upstream Intersection
P:           0.000 0.000
gq1:          0.00  0.00
gq2:          0.00  0.00
gq:           0.00  0.00
*** Computation 2: Time Intersection Blocked Because of Upstream Platoons
alpha:            0.000
beta:             0.000
ta (secs):        0.000
F:                0.000
f:           0.000 0.000
vcmax:           0     0
vcmin:           0     0
tp:            0.0   0.0
p:                0.000
*** Computation 3: Platoon Event Periods
pdom/psubo:      0.000/0.000/Unconstrained
*** Computation 4: Conflicting Flows During Each Unblocked Period
InitCnflVol:   0 xxxxx xxxxx  490 xxxxx xxxxx    0     0     0 1220     0   445
UpstreamSat:   0 xxxxx xxxxx    0 xxxxx xxxxx    0     0     0    0     0     0
UpstreamAdj:1.00 x.xxx x.xxx 1.00 x.xxx x.xxx 1.00 1.000 1.000 1.00 1.000 1.000
ConflictVol:   0 xxxxx xxxxx  490 xxxxx xxxxx    0     0     0 1220     0   445
*** Computation 5: Capactiy for Subject Movement During Unblocked Period
InitPotCap:    0 xxxxx xxxxx 1028 xxxxx xxxxx    0     0     0  161     0   527
UpstreamAdj:1.00 x.xxx x.xxx 1.00 x.xxx x.xxx 1.00 1.000 1.000 1.00 1.000 1.000
PotentCap:     0 xxxxx xxxxx 1028 xxxxx xxxxx    0     0     0  161     0   527
```

Existing AM Plus Project Wed Jan 14, 2004 09:46:44 Page 5-1

Patterson Sand and Gravel
Existing Plus Project (No Haul Road)
"Highest" - AM Peak Hour

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

Intersection #2 SR 65 and SR 193 (Lincoln)

Cycle (sec): 100 Critical Vol./Cap. (X): 0.743
Loss Time (sec): 0 (Y+R = 4 sec) Average Delay (sec/veh): 22.0
Optimal Cycle: 72 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				Permitted				Permitted			
Rights:	Include				Include				Include				Ovl			
Min. Green:	0	0	0		0	0	0		0	0	0		0	0	0	
Lanes:	1	0	0	1 0	1	0	0	1 0	0	0	1!	0 0	0	1	0	0 1
Volume Module:																
Base Vol:	0	498	83		144	636	0		0	0	0		249	0	105	
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	498	83		144	636	0		0	0	0		249	0	105	
User Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
PHF Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
PHF Volume:	0	498	83		144	636	0		0	0	0		249	0	105	
Reduct Vol:	0	0	0		0	0	0		0	0	0		0	0	0	
Reduced Vol:	0	498	83		144	636	0		0	0	0		249	0	105	
PCE Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
MLF Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
Final Vol.:	0	498	83		144	636	0		0	0	0		249	0	105	
Saturation Flow Module:																
Sat/Lane:	1900	1900	1900		1900	1900	1900		1900	1900	1900		1900	1900	1900	
Adjustment:	1.00	0.74	0.74		0.72	0.76	1.00		1.00	1.00	1.00		0.59	1.00	0.69	
Lanes:	1.00	0.86	0.14		1.00	1.00	0.00		0.00	1.00	0.00		1.00	0.00	1.00	
Final Sat.:	1900	1205	201		1365	1436	0		0	1900	0		1112	0	1310	
Capacity Analysis Module:																
Vol/Sat:	0.00	0.41	0.41		0.11	0.44	0.00		0.00	0.00	0.00		0.22	0.00	0.08	
Crit Moves:		****			****								****			
Green/Cycle:	0.00	0.56	0.56		0.14	0.70	0.00		0.00	0.00	0.00		0.30	0.00	0.44	
Volume/Cap:	0.00	0.74	0.74		0.74	0.63	0.00		0.00	0.00	0.00		0.74	0.00	0.18	
Delay/Veh:	0.0	20.6	20.6		55.4	9.5	0.0		0.0	0.0	0.0		40.1	0.0	17.0	
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	20.6	20.6		55.4	9.5	0.0		0.0	0.0	0.0		40.1	0.0	17.0	
DesignQueue:	0	13	2		7	12	0		0	0	0		10	0	3	

Existing AM Plus Project Wed Jan 14, 2004 09:46:44 Page 6-1

Patterson Sand and Gravel
Existing Plus Project (No Haul Road)
"Highest" - AM Peak Hour

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

Intersection #2 SR 65 and SR 193 (Lincoln)

Approach:	North Bound				South Bound				East Bound				West Bound			
Movement:	L	-	T	- R	L	-	T	- R	L	-	T	- R	L	-	T	- R
HCM Ops Adjusted Lane Utilization Module:																
Lanes:	1	0	0	1 0	1	0	0	1 0	0	0	1!	0 0	0	1	0	0 1
Lane Group:	L		RT	RT	L		RT	RT	LTR	LTR		LTR	LT		LT	R
#LnsInGrps:	1		1	1	1		1	1	1	1		1	1		1	1
HCM Ops Input Saturation Adj Module:																
Lane Width:	12		12	12	12		12	12	12	12		12	12		12	12
CrosswalkWid			8				8			8					8	
% Hev Veh:			19				19			0					11	
Grade:			0%				0%			0%					0%	
Parking/Hr:			No				No			No					No	
Bus Stp/Hr:			0				0			0					0	
Area Type:	< < < < < < < < < < < < < < < < CBD > > > > > > > > > > > > > > > >															
Cnft Ped/Hr:			0				0			0					0	
ExclusiveRT:			Include				Include			Include					Include	
% RT Prtct:			0				0			0					0	
HCM Ops f(lt) Adj Case Module:																
f(lt) Case:	xxxx	xxxx	xxxx		1	xxxx	xxxx		xxxx	xxxx	xxxx		5	xxxx	xxxx	
HCM Ops Saturation Adj Module:																
Ln Wid Adj:	xxxx	1.00	1.00	1.00	1.00	xxxxx	xxxx		xxxx	xxxx	xxxxx		1.00	xxxx	1.00	
Hev Veh Adj:	xxxx	0.84	0.84	0.84	0.84	xxxxx	xxxx		xxxx	xxxx	xxxxx		0.90	xxxx	0.90	
Grade Adj:	xxxx	1.00	1.00	1.00	1.00	xxxxx	xxxx		xxxx	xxxx	xxxxx		1.00	xxxx	1.00	
Parking Adj:	xxxx	1.00	1.00	xxxx	1.00	xxxxx	xxxx		xxxx	xxxx	xxxxx		xxxx	xxxx	1.00	
Bus Stp Adj:	xxxx	1.00	1.00	xxxx	1.00	xxxxx	xxxx		xxxx	xxxx	xxxxx		xxxx	xxxx	1.00	
Area Adj:	xxxx	0.90	0.90	0.90	0.90	xxxxx	xxxx		xxxx	xxxx	xxxxx		0.90	xxxx	0.90	
RT Adj:	xxxx	0.98	0.98	xxxx	xxxx	xxxxx	xxxx		xxxx	xxxx	xxxxx		xxxx	xxxx	0.85	
LT Adj:	xxxx	xxxx	xxxxx	0.95	xxxx	xxxxx	xxxx		xxxx	xxxx	xxxxx		0.72	xxxx	xxxxx	
PedBike Adj:	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	
HCM Sat Adj:	1.00	0.74	0.74	0.72	0.76	1.00	1.00		1.00	1.00	1.00		0.59	1.00	0.69	
Usr Sat Adj:	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 Sat Adj:	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	
Fnl Sat Adj:	1.00	0.74	0.74	0.72	0.76	1.00	1.00		1.00	1.00	1.00		0.59	1.00	0.69	
Delay Adjustment Factor Module:																
Coordinated:	< < < < < < < < < < < < < < < < No > > > > > > > > > > > > > > > >															
Signal Type:	< < < < < < < < < < < < < < Actuated > > > > > > > > > > > > > >															
DelAdjFctr:	0.00	1.00	1.00	1.00	1.00	0.00	0.00		0.00	0.00	0.00		1.00	0.00	1.00	

Existing AM Plus Project Wed Jan 14, 2004 09:46:44 Page 6-2

Patterson Sand and Gravel
Existing Plus Project (No Haul Road)
"Highest" - AM Peak Hour

Level Of Service Detailed Computation Report (Permitted Left Turn Sat Adj)
2000 HCM Operations Method
Base Volume Alternative

Intersection #2 SR 65 and SR 193 (Lincoln)

Approach:	North	South	East	West
Cycle Length, C:	xxxxxx	xxxxxx	xxxxxx	100
Actual Green Time Per Lane Group, G:	xxxxxx	xxxxxx	xxxxxx	26.16
Effective Green Time Per Lane Group, g:	xxxxxx	xxxxxx	xxxxxx	30.16
Opposing Effective Green Time, go:	xxxxxx	xxxxxx	xxxxxx	30.16
Number Of Opposing Lanes, No:	xxxxxx	xxxxxx	xxxxxx	1
Number Of Lanes In Lane Group, N:	xxxxxx	xxxxxx	xxxxxx	1
Adjusted Left-Turn Flow Rate, Vlt:	xxxxxx	xxxxxx	xxxxxx	249
Proportion of Left Turns in Lane Group, Plt:	xxxxxx	xxxxxx	xxxxxx	1.00
Proportion of Left Turns in Opp Flow, Plto:	xxxxxx	xxxxxx	xxxxxx	1.00
Left Turns Per Cycle, LTC:	xxxxxx	xxxxxx	xxxxxx	6.92
Adjusted Opposing Flow Rate, Vo:	xxxxxx	xxxxxx	xxxxxx	0
Opposing Flow Per Lane Per Cycle, Volc:	xxxxxx	xxxxxx	xxxxxx	0.00
Opposing Platoon Ratio, Rpo:	xxxxxx	xxxxxx	xxxxxx	1.00
Lost Time Per Phase, tl:	xxxxxx	xxxxxx	xxxxxx	0.00
Eff grn until arrival of left-turn car, gf:	xxxxxx	xxxxxx	xxxxxx	0.77
Opposing Queue Ratio, qro:	xxxxxx	xxxxxx	xxxxxx	0.70
Eff grn blocked by opposing queue, gq:	xxxxxx	xxxxxx	xxxxxx	0.00
Eff grn while left turns filter thru, gu:	xxxxxx	xxxxxx	xxxxxx	29.39
Max opposing cars arriving during gq-gf, n:	xxxxxx	xxxxxx	xxxxxx	0.00
Proportion of Opposing Thru & RT cars, ptho:	xxxxxx	xxxxxx	xxxxxx	0.00
Left-turn Saturation Factor, fs:	xxxxxx	xxxxxx	xxxxxx	xxxxxx
Proportion of Left Turns in Shared Lane, pl:	xxxxxx	xxxxxx	xxxxxx	1.00
Through-car Equivalents, el1:	xxxxxx	xxxxxx	xxxxxx	1.40
Single Lane Through-car Equivalents, el2:	xxxxxx	xxxxxx	xxxxxx	1.00
Minimum Left Turn Adjustment Factor, fmin:	xxxxxx	xxxxxx	xxxxxx	0.13
Single Lane Left Turn Adjustment Factor, fm:	xxxxxx	xxxxxx	xxxxxx	0.72
Left Turn Adjustment Factor, flt:	xxxxxx	xxxxxx	xxxxxx	0.72

Existing AM Plus Project Wed Jan 14, 2004 09:46:44 Page 7-1

Patterson Sand and Gravel
Existing Plus Project (No Haul Road)
"Highest" - AM Peak Hour

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

Intersection #4 Riosa Rd and 11th St

Cycle (sec): 100 Critical Vol./Cap. (X): 0.241
Loss Time (sec): 0 (Y+R = 4 sec) Average Delay (sec/veh): 9.0
Optimal Cycle: 0 Level Of Service: A

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Stop Sign			Stop Sign			Stop Sign			Stop Sign		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Lanes:	0 0	1!	0 0	0 0	1!	0 0	0 1	0	0 0	0 1	0	0 0
Volume Module:												
Base Vol:	3	2	2	6	4	11	6	75	0	1	174	0
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	3	2	2	6	4	11	6	75	0	1	174	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:	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 Volume:	3	2	2	6	4	11	6	75	0	1	174	0
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	3	2	2	6	4	11	6	75	0	1	174	0
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Final Vol.:	3	2	2	6	4	11	6	75	0	1	174	0
Saturation Flow Module:												
Adjustment:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Lanes:	0.43	0.28	0.29	0.29	0.19	0.52	0.07	0.93	0.00	0.01	0.99	0.00
Final Sat.:	327	218	218	228	152	418	53	662	0	4	723	0
Capacity Analysis Module:												
Vol/Sat:	0.01	0.01	0.01	0.03	0.03	0.03	0.11	0.11	xxxx	0.24	0.24	xxxx
Crit Moves:	****				****			****		****		
Delay/Veh:	7.5	7.5	7.5	7.4	7.4	7.4	8.6	8.6	0.0	9.5	9.5	0.0
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:	7.5	7.5	7.5	7.4	7.4	7.4	8.6	8.6	0.0	9.5	9.5	0.0
LOS by Move:	A	A	A	A	A	A	A	A	*	A	A	*
ApproachDel:	7.5			7.4			8.6			9.5		
Delay Adj:	1.00			1.00			1.00			1.00		
ApprAdjDel:	7.5			7.4			8.6			9.5		
LOS by Appr:	A			A			A			A		

Existing AM Plus Project Wed Jan 14, 2004 09:46:44 Page 8-1

Patterson Sand and Gravel
Existing Plus Project (No Haul Road)
"Highest" - AM Peak Hour

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

****
Intersection #4 Riosa Rd and 11th St
****

Approach:	North Bound	South Bound	East Bound	West Bound
Movement:	L - T - R	L - T - R	L - T - R	L - T - R
Time Period: 0.25 hour				
HevVeh:	0%	0%	48%	51%
Alpha Value: 0.01				
GroupType:	1	1	1	1
P[C1]:	0.6589	0.6699	0.7356	0.8583
P[C2]:	0.0168	0.0059	0.2310	0.1083
P[C3]:	0.2900	0.2949	0.0252	0.0294
P[C4]:	0.0335	0.0291	0.0081	0.0039
P[C5]:	0.0007	0.0002	0.0001	0.0000
Padj[C1]:	0.00700	0.00684	0.00306	0.00179
Padj[C2]:	0.00342	0.00348	-0.00189	-0.00071
Padj[C3]:	-0.00835	-0.00855	-0.00068	-0.00084
Padj[C4]:	-0.00200	-0.00174	-0.00048	-0.00023
Padj[C5]:	-0.00007	-0.00002	-0.00001	-0.00000
Lane:	L1	L1	L1	L1
LaneType:	LEFTTHRURITE	LEFTTHRURITE	LEFTTHRURITE	LEFTTHRURITE
HeadwayAdj:	-0.086	-0.257	0.831	0.868
Volume:	7	21	81	175
Capacity:	764	798	715	727
DegOfUtil:	0.01	0.02	0.11	0.24
DepHeadway:	4.47	4.28	4.98	4.92
ServiceTime:	2.5	2.3	3.0	2.9
Delay:	7.5	7.4	8.6	9.5

Approach:	North Bound	South Bound	East Bound	West Bound
ApproachDel:	7.5	7.4	8.6	9.5
Delay Adj:	1.00	1.00	1.00	1.00
ApprAdjDel:	7.5	7.4	8.6	9.5
LOS by Appr:	A	A	A	A
OverallDel:			9.0	
OverallLOS:			A	

Existing AM Plus Project Wed Jan 14, 2004 09:46:44 Page 9-1

Patterson Sand and Gravel
Existing Plus Project (No Haul Road)
"Highest" - AM Peak Hour

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

****
Intersection #5 Riosa Rd and Karchner Rd
****
Average Delay (sec/veh): 6.4 Worst Case Level Of Service: A
****

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	- T	- R	L	- T	- R	L	- T	- R	L	- T	- R
Control:	Stop Sign			Stop Sign			Uncontrolled			Uncontrolled		
Rights:	Include			Include			Include			Include		
Lanes:	0 0	0 0	0	0 0	1! 0	0	0 1	0 0	0	0 0	0 1	0
Volume Module:												
Base Vol:	0	0	0	15	0	88	43	16	0	0	28	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:	0	0	0	15	0	88	43	16	0	0	28	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:	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 Volume:	0	0	0	15	0	88	43	16	0	0	28	1
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Final Vol.:	0	0	0	15	0	88	43	16	0	0	28	1
Critical Gap Module:												
Critical Gp:	xxxxx	xxxx	xxxxx	7.2	xxxx	7.0	4.8	xxxx	xxxxx	xxxxx	xxxx	xxxxx
FollowUpTim:	xxxxx	xxxx	xxxxx	4.2	xxxx	4.0	2.8	xxxx	xxxxx	xxxxx	xxxx	xxxxx
Capacity Module:												
Cnflict Vol:	xxxx	xxxx	xxxxx	131	xxxx	29	29	xxxx	xxxxx	xxxx	xxxx	xxxxx
Potent Cap.:	xxxx	xxxx	xxxxx	704	xxxx	855	1254	xxxx	xxxxx	xxxx	xxxx	xxxxx
Move Cap.:	xxxx	xxxx	xxxxx	685	xxxx	855	1254	xxxx	xxxxx	xxxx	xxxx	xxxxx
Level Of Service Module:												
Stopped Del:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	8.0	xxxx	xxxxx	xxxxx	xxxx	xxxxx
LOS by Move:	*	*	*	*	*	*	A	*	*	*	*	*
Movement:	LT -	LTR -	RT	LT -	LTR -	RT	LT -	LTR -	RT	LT -	LTR -	RT
Shared Cap.:	xxxx	xxxx	xxxxx	xxxx	825	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx
Shrd StpDel:	xxxxx	xxxx	xxxxx	xxxxx	10.0	xxxxx	8.0	xxxx	xxxxx	xxxxx	xxxx	xxxxx
Shared LOS:	*	*	*	*	A	*	A	*	*	*	*	*
ApproachDel:	xxxxxx			10.0			xxxxxx			xxxxxx		
ApproachLOS:	*			A			*			*		

Existing AM Plus Project Wed Jan 14, 2004 09:46:44 Page 10-1

Patterson Sand and Gravel
Existing Plus Project (No Haul Road)
"Highest" - AM Peak Hour

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

****
Intersection #5 Riosa Rd and Karchner Rd
****

Approach:	North Bound	South Bound	East Bound	West Bound
Movement:	L - T - R	L - T - R	L - T - R	L - T - R
HevVeh:	0%	83%	66%	10%
Grade:	0%	0%	0%	0%
Peds/Hour:	0	0	0	0
Pedestrian Walk Speed: 4.00 feet/sec				
LaneWidth:	12 feet	12 feet	12 feet	12 feet
Time Period: 0.25 hour				

Traffix 7.5.0715 (c) 2002 Dowling Assoc. Licensed to DKS ASSOC., SACRAMENTO

Patterson Sand and Gravel
Existing Plus Project (No Haul Road)
Peak Season Average Day - PM Peak Hour

Scenario Report

Scenario:	Existing PM Plus Project
Command:	Existing PM Plus Project
Volume:	Existing PM Plus Project
Geometry:	Existing PM Plus Project
Impact Fee:	Default Impact Fee
Trip Generation:	Default Trip Generation
Trip Distribution:	Default Trip Distribution
Paths:	Default Paths
Routes:	Default Routes
Configuration:	Default Configuration

Patterson Sand and Gravel
Existing Plus Project (No Haul Road)
Peak Season Average Day - PM Peak Hour

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 65 and Riosa Road (Sheridan	D	2.6	0.000	D	2.6	0.000	+ 0.000 V/C
# 2 SR 65 and SR 193 (Lincoln)	C	31.2	0.911	C	31.2	0.911	+ 0.000 D/V
# 4 Riosa Rd and 11th St	A	7.6	0.113	A	7.6	0.113	+ 0.000 V/C
# 5 Riosa Rd and Karchner Rd	A	3.8	0.000	A	3.8	0.000	+ 0.000 V/C

Existing PM Plus Project Mon Jan 12, 2004 13:42:12 Page 3-1

Patterson Sand and Gravel
Existing Plus Project (No Haul Road)
Peak Season Average Day - PM Peak Hour

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

```
*******************************************************************************
Intersection #1 SR 65 and Riosa Road (Sheridan)
*******************************************************************************
Average Delay (sec/veh):      2.6           Worst Case 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:      Uncontrolled     Uncontrolled     Stop Sign        Stop Sign
Rights:          Include          Include          Include          Include
Lanes:       0  0  1  0  1    1  0  1  0  0    0  0  0  0  0    0  0  1! 0  0
------------|---------------||---------------||---------------||---------------|
Volume Module:
Base Vol:       0  745   100   85  563    0    0    0    0   37    0   60
Growth Adj:  1.00 1.00  1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
Initial Bse:    0  745   100   85  563    0    0    0    0   37    0   60
User Adj:    1.00 1.00  1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
PHF Adj:     1.00 1.00  1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
PHF Volume:     0  745   100   85  563    0    0    0    0   37    0   60
Reduct Vol:     0    0     0    0    0    0    0    0    0    0    0    0
Final Vol.:     0  745   100   85  563    0    0    0    0   37    0   60
------------|---------------||---------------||---------------||---------------|
Critical Gap Module:
Critical Gp:xxxxx xxxx xxxxx  4.1 xxxx xxxxx xxxxx xxxx xxxxx  6.4 xxxx  6.2
FollowUpTim:xxxxx xxxx xxxxx  2.2 xxxx xxxxx xxxxx xxxx xxxxx  3.5 xxxx  3.3
------------|---------------||---------------||---------------||---------------|
Capacity Module:
Cnflict Vol: xxxx xxxx xxxxx  845 xxxx xxxxx  xxxx xxxx xxxxx 1478 xxxx  745
Potent Cap.: xxxx xxxx xxxxx  783 xxxx xxxxx  xxxx xxxx xxxxx  137 xxxx  411
Move Cap.:   xxxx xxxx xxxxx  783 xxxx xxxxx  xxxx xxxx xxxxx  126 xxxx  411
------------|---------------||---------------||---------------||---------------|
Level Of Service Module:
Stopped Del:xxxxx xxxx xxxxx 10.2 xxxx xxxxx xxxxx xxxx xxxxx xxxxx xxxx xxxxx
LOS by Move:   *    *    *    B    *    *    *    *    *    *    *    *
Movement:     LT - LTR - RT   LT - LTR - RT   LT - LTR - RT   LT - LTR - RT
Shared Cap.: xxxx xxxx xxxxx xxxx xxxx xxxxx xxxx xxxx xxxxx xxxx  220 xxxxx
Shrd StpDel:xxxxx xxxx xxxxx xxxxx xxxx xxxxx xxxxx xxxx xxxxx xxxxx 33.6 xxxxx
Shared LOS:    *    *    *    *    *    *    *    *    *    *    D    *
ApproachDel:    xxxxxx          xxxxxx          xxxxxx            33.6
ApproachLOS:       *               *               *               D
```


Existing PM Plus Project Mon Jan 12, 2004 13:42:12 Page 4-1

Patterson Sand and Gravel
Existing Plus Project (No Haul Road)
Peak Season Average Day - PM Peak Hour

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

```
*******************************************************************************
Intersection #1 SR 65 and Riosa Road (Sheridan)
*******************************************************************************
Approach:       North Bound      South Bound      East Bound       West Bound
Movement:     L  -  T  -  R    L  -  T  -  R    L  -  T  -  R    L  -  T  -  R
------------|---------------||---------------||---------------||---------------|
HevVeh:            4%               4%               0%               4%
Grade:             0%               0%               0%               0%
Peds/Hour:         0                0                0                0
Pedestrian Walk Speed: 4.00 feet/sec
LaneWidth:      12 feet          12 feet          12 feet          12 feet
Time Period: 0.25 hour
------------|---------------||---------------||---------------||---------------|
Upstream Signals:
Link Index:       #2
Dist(miles):      0.000
Speed (mph):       0.00
SignalIndex:      #2
Cycle Time:          0 secs
InitVolume:     0     0
Saturation:     0     0
ArrivalType:    0     0
G/C:         0.00  0.00
*** Computation 1: Time for Queue to Clear at Each Upstream Intersection
P:          0.000 0.000
gq1:         0.00  0.00
gq2:         0.00  0.00
gq:          0.00  0.00
*** Computation 2: Time Intersection Blocked Because of Upstream Platoons
alpha:            0.000
beta:             0.000
ta (secs):        0.000
F:                0.000
f:          0.000 0.000
vcmax:          0     0
vcmin:          0     0
tp:           0.0   0.0
p:              0.000
*** Computation 3: Platoon Event Periods
pdom/psubo:     0.000/0.000/Unconstrained
*** Computation 4: Conflicting Flows During Each Unblocked Period
InitCnflVol:   0 xxxxx xxxxx  845 xxxxx xxxxx    0     0     0 1478     0   745
UpstreamSat:   0 xxxxx xxxxx    0 xxxxx xxxxx    0     0     0    0     0     0
UpstreamAdj:1.00 x.xxx x.xxx 1.00 x.xxx x.xxx 1.00 1.000 1.000 1.00 1.000 1.000
ConflictVol:   0 xxxxx xxxxx  845 xxxxx xxxxx    0     0     0 1478     0   745
*** Computation 5: Capactiy for Subject Movement During Unblocked Period
InitPotCap:    0 xxxxx xxxxx  783 xxxxx xxxxx    0     0     0  137     0   411
UpstreamAdj:1.00 x.xxx x.xxx 1.00 x.xxx x.xxx 1.00 1.000 1.000 1.00 1.000 1.000
PotentCap:     0 xxxxx xxxxx  783 xxxxx xxxxx    0     0     0  137     0   411
```

Existing PM Plus Project Mon Jan 12, 2004 13:42:12 Page 5-1

Patterson Sand and Gravel
Existing Plus Project (No Haul Road)
Peak Season Average Day - PM Peak Hour

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

Intersection #2 SR 65 and SR 193 (Lincoln)

Cycle (sec): 100 Critical Vol./Cap. (X): 0.911
Loss Time (sec): 0 (Y+R = 4 sec) Average Delay (sec/veh): 31.2
Optimal Cycle: 180 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				Permitted				Permitted			
Rights:	Include				Include				Include				Ovl			
Min. Green:	0	0	0		0	0	0		0	0	0		0	0	0	
Lanes:	1 0	0 1	0		1 0	0 1	0		0 0	1! 0	0		0 1	0 0	1	
Volume Module:																
Base Vol:	0	839	89		177	580	0		0	0	0		281	0	265	
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	839	89		177	580	0		0	0	0		281	0	265	
User Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
PHF Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
PHF Volume:	0	839	89		177	580	0		0	0	0		281	0	265	
Reduct Vol:	0	0	0		0	0	0		0	0	0		0	0	0	
Reduced Vol:	0	839	89		177	580	0		0	0	0		281	0	265	
PCE Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
MLF Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
Final Vol.:	0	839	89		177	580	0		0	0	0		281	0	265	
Saturation Flow Module:																
Sat/Lane:	1900	1900	1900		1900	1900	1900		1900	1900	1900		1900	1900	1900	
Adjustment:	1.00	0.87	0.87		0.81	0.86	1.00		1.00	1.00	1.00		0.63	1.00	0.74	
Lanes:	1.00	0.90	0.10		1.00	1.00	0.00		0.00	1.00	0.00		1.00	0.00	1.00	
Final Sat.:	1900	1494	158		1547	1628	0		0	1900	0		1194	0	1411	
Capacity Analysis Module:																
Vol/Sat:	0.00	0.56	0.56		0.11	0.36	0.00		0.00	0.00	0.00		0.24	0.00	0.19	
Crit Moves:		****			****								****			
Green/Cycle:	0.00	0.62	0.62		0.13	0.74	0.00		0.00	0.00	0.00		0.26	0.00	0.38	
Volume/Cap:	0.00	0.91	0.91		0.91	0.48	0.00		0.00	0.00	0.00		0.91	0.00	0.49	
Delay/Veh:	0.0	28.8	28.8		83.7	5.5	0.0		0.0	0.0	0.0		65.6	0.0	24.1	
User DelAdj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
AdjDel/Veh:	0.0	28.8	28.8		83.7	5.5	0.0		0.0	0.0	0.0		65.6	0.0	24.1	
DesignQueue:	0	21	2		9	9	0		0	0	0		12	0	9	

Existing PM Plus Project Mon Jan 12, 2004 13:42:12 Page 6-1

Patterson Sand and Gravel
Existing Plus Project (No Haul Road)
Peak Season Average Day - PM Peak Hour

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

Intersection #2 SR 65 and SR 193 (Lincoln)

Approach:	North Bound				South Bound				East Bound				West Bound			
Movement:	L	- T	-	R	L	- T	-	R	L	- T	-	R	L	- T	-	R
HCM Ops Adjusted Lane Utilization Module:																
Lanes:	1 0	0 1	0		1 0	0 1	0		0 0	1! 0	0		0 1	0 0	1	
Lane Group:	L	RT			L	RT			LTR	LTR	LTR		LT	LT	R	
#LnsInGrps:	1	1	1		1	1	1		1	1	1		1	1	1	
HCM Ops Input Saturation Adj Module:																
Lane Width:	12	12	12		12	12	12		12	12	12		12	12	12	
CrosswalkWid		8				8				8				8		
% Hev Veh:		2				5				0				3		
Grade:		0%				0%				0%				0%		
Parking/Hr:		No				No				No				No		
Bus Stp/Hr:		0				0				0				0		
Area Type:	< < < < < < < < < < < < < < < < CBD > > > > > > > > > > > > > > > >															
Cnft Ped/Hr:		0				0				0				0		
ExclusiveRT:		Include				Include				Include				Include		
% RT Prtct:		0				0				0				0		
HCM Ops f(lt) Adj Case Module:																
f(lt) Case:	xxxx	xxxx	xxxx		1	xxxx	xxxx		xxxx	xxxx	xxxx		5	xxxx	xxxx	
HCM Ops Saturation Adj Module:																
Ln Wid Adj:	xxxx	1.00	1.00		1.00	1.00	xxxxx		xxxx	xxxx	xxxxx		1.00	xxxx	1.00	
Hev Veh Adj:	xxxx	0.98	0.98		0.95	0.95	xxxxx		xxxx	xxxx	xxxxx		0.97	xxxx	0.97	
Grade Adj:	xxxx	1.00	1.00		1.00	1.00	xxxxx		xxxx	xxxx	xxxxx		1.00	xxxx	1.00	
Parking Adj:	xxxx	1.00	1.00		xxxx	1.00	xxxxx		xxxx	xxxx	xxxxx		xxxx	xxxx	1.00	
Bus Stp Adj:	xxxx	1.00	1.00		xxxx	1.00	xxxxx		xxxx	xxxx	xxxxx		xxxx	xxxx	1.00	
Area Adj:	xxxx	0.90	0.90		0.90	0.90	xxxxx		xxxx	xxxx	xxxxx		0.90	xxxx	0.90	
RT Adj:	xxxx	0.99	0.99		xxxx	xxxx	xxxxx		xxxx	xxxx	xxxxx		xxxx	xxxx	0.85	
LT Adj:	xxxx	xxxx	xxxxx		0.95	xxxx	xxxxx		xxxx	xxxx	xxxxx		0.72	xxxx	xxxxx	
PedBike Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
HCM Sat Adj:	1.00	0.87	0.87		0.81	0.86	1.00		1.00	1.00	1.00		0.63	1.00	0.74	
Usr Sat Adj:	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 Sat Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
Fnl Sat Adj:	1.00	0.87	0.87		0.81	0.86	1.00		1.00	1.00	1.00		0.63	1.00	0.74	
Delay Adjustment Factor Module:																
Coordinated:	< < < < < < < < < < < < < < < < No > > > > > > > > > > > > > > > >															
Signal Type:	< < < < < < < < < < < < < Actuated > > > > > > > > > > > > > >															
DelAdjFctr:	0.00	1.00	1.00		1.00	1.00	0.00		0.00	0.00	0.00		1.00	0.00	1.00	

Existing PM Plus Project Mon Jan 12, 2004 13:42:12 Page 6-2

Patterson Sand and Gravel
Existing Plus Project (No Haul Road)
Peak Season Average Day - PM Peak Hour

Level Of Service Detailed Computation Report (Permitted Left Turn Sat Adj)
2000 HCM Operations Method
Base Volume Alternative

Intersection #2 SR 65 and SR 193 (Lincoln)

Approach:	North	South	East	West
Cycle Length, C:	xxxxxx	xxxxxx	xxxxxx	100
Actual Green Time Per Lane Group, G:	xxxxxx	xxxxxx	xxxxxx	21.81
Effective Green Time Per Lane Group, g:	xxxxxx	xxxxxx	xxxxxx	25.81
Opposing Effective Green Time, go:	xxxxxx	xxxxxx	xxxxxx	25.81
Number Of Opposing Lanes, No:	xxxxxx	xxxxxx	xxxxxx	1
Number Of Lanes In Lane Group, N:	xxxxxx	xxxxxx	xxxxxx	1
Adjusted Left-Turn Flow Rate, Vlt:	xxxxxx	xxxxxx	xxxxxx	281
Proportion of Left Turns in Lane Group, Plt:	xxxxxx	xxxxxx	xxxxxx	1.00
Proportion of Left Turns in Opp Flow, Plto:	xxxxxx	xxxxxx	xxxxxx	1.00
Left Turns Per Cycle, LTC:	xxxxxx	xxxxxx	xxxxxx	7.81
Adjusted Opposing Flow Rate, Vo:	xxxxxx	xxxxxx	xxxxxx	0
Opposing Flow Per Lane Per Cycle, Volc:	xxxxxx	xxxxxx	xxxxxx	0.00
Opposing Platoon Ratio, Rpo:	xxxxxx	xxxxxx	xxxxxx	1.00
Lost Time Per Phase, tl:	xxxxxx	xxxxxx	xxxxxx	0.00
Eff grn until arrival of left-turn car, gf:	xxxxxx	xxxxxx	xxxxxx	0.46
Opposing Queue Ratio, qro:	xxxxxx	xxxxxx	xxxxxx	0.74
Eff grn blocked by opposing queue, gq:	xxxxxx	xxxxxx	xxxxxx	0.00
Eff grn while left turns filter thru, gu:	xxxxxx	xxxxxx	xxxxxx	25.35
Max opposing cars arriving during gq-gf, n:	xxxxxx	xxxxxx	xxxxxx	0.00
Proportion of Opposing Thru & RT cars, ptho:	xxxxxx	xxxxxx	xxxxxx	0.00
Left-turn Saturation Factor, fs:	xxxxxx	xxxxxx	xxxxxx	xxxxxx
Proportion of Left Turns in Shared Lane, pl:	xxxxxx	xxxxxx	xxxxxx	1.00
Through-car Equivalents, el1:	xxxxxx	xxxxxx	xxxxxx	1.40
Single Lane Through-car Equivalents, el2:	xxxxxx	xxxxxx	xxxxxx	1.00
Minimum Left Turn Adjustment Factor, fmin:	xxxxxx	xxxxxx	xxxxxx	0.15
Single Lane Left Turn Adjustment Factor, fm:	xxxxxx	xxxxxx	xxxxxx	0.72
Left Turn Adjustment Factor, flt:	xxxxxx	xxxxxx	xxxxxx	0.72

Existing PM Plus Project Mon Jan 12, 2004 13:42:12 Page 7-1

Patterson Sand and Gravel
Existing Plus Project (No Haul Road)
Peak Season Average Day - PM Peak Hour

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

Intersection #4 Riosa Rd and 11th St

Cycle (sec): 100 Critical Vol./Cap. (X): 0.113
Loss Time (sec): 0 (Y+R = 4 sec) Average Delay (sec/veh): 7.6
Optimal Cycle: 0 Level Of Service: A

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Stop Sign			Stop Sign			Stop Sign			Stop Sign		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Lanes:	0 0	1! 0	0	0 0	0 1	0	0 1	0 0	0	0 1	0 0	0
Volume Module:												
Base Vol:	2	3	1	0	1	2	6	92	0	1	75	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:	2	3	1	0	1	2	6	92	0	1	75	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:	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 Volume:	2	3	1	0	1	2	6	92	0	1	75	0
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	2	3	1	0	1	2	6	92	0	1	75	0
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Final Vol.:	2	3	1	0	1	2	6	92	0	1	75	0
Saturation Flow Module:												
Adjustment:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Lanes:	0.33	0.50	0.17	0.00	0.33	0.67	0.06	0.94	0.00	0.01	0.99	0.00
Final Sat.:	273	410	137	0	298	595	53	813	0	12	863	0
Capacity Analysis Module:												
Vol/Sat:	0.01	0.01	0.01	xxxx	0.00	0.00	0.11	0.11	xxxx	0.09	0.09	xxxx
Crit Moves:	****					****		****			****	
Delay/Veh:	7.3	7.3	7.3	0.0	6.9	6.9	7.7	7.7	0.0	7.5	7.5	0.0
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:	7.3	7.3	7.3	0.0	6.9	6.9	7.7	7.7	0.0	7.5	7.5	0.0
LOS by Move:	A	A	A	*	A	A	A	A	*	A	A	*
ApproachDel:	7.3			6.9			7.7			7.5		
Delay Adj:	1.00			1.00			1.00			1.00		
ApprAdjDel:	7.3			6.9			7.7			7.5		
LOS by Appr:	A			A			A			A		

Existing PM Plus Project Mon Jan 12, 2004 13:42:12 Page 8-1

Patterson Sand and Gravel
Existing Plus Project (No Haul Road)
Peak Season Average Day - PM Peak Hour

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

****
Intersection #4 Riosa Rd and 11th St
****

Approach:	North Bound	South Bound	East Bound	West Bound
Movement:	L - T - R	L - T - R	L - T - R	L - T - R
Time Period: 0.25 hour				
HevVeh:	0%	0%	8%	5%
Alpha Value: 0.01				
GroupType:	1	1	1	1
P[C1]:	0.8081	0.8050	0.9042	0.8783
P[C2]:	0.0026	0.0057	0.0856	0.1114
P[C3]:	0.1790	0.1783	0.0093	0.0091
P[C4]:	0.0103	0.0109	0.0009	0.0012
P[C5]:	0.0000	0.0001	0.0000	0.0000
Padj[C1]:	0.00392	0.00395	0.00107	0.00133
Padj[C2]:	0.00197	0.00195	-0.00074	-0.00100
Padj[C3]:	-0.00527	-0.00524	-0.00027	-0.00026
Padj[C4]:	-0.00062	-0.00066	-0.00005	-0.00007
Padj[C5]:	-0.00000	-0.00001	-0.00000	-0.00000
Lane:	L1	L1	L1	L1
LaneType:	LEFTTHRURITE	LEFTTHRURITE	LEFTTHRURITE	LEFTTHRURITE
HeadwayAdj:	-0.033	-0.400	0.148	0.088
Volume:	6	3	98	76
Capacity:	820	893	866	874
DegOfUtil:	0.01	0.00	0.11	0.09
DepHeadway:	4.23	3.87	4.14	4.10
ServiceTime:	2.2	1.9	2.1	2.1
Delay:	7.3	6.9	7.7	7.5
Approach:	North Bound	South Bound	East Bound	West Bound
ApproachDel:	7.3	6.9	7.7	7.5
Delay Adj:	1.00	1.00	1.00	1.00
ApprAdjDel:	7.3	6.9	7.7	7.5
LOS by Appr:	A	A	A	A
OverallDel:		7.6		
OverallLOS:		A		

Existing PM Plus Project Mon Jan 12, 2004 13:42:12 Page 9-1

Patterson Sand and Gravel
Existing Plus Project (No Haul Road)
Peak Season Average Day - PM Peak Hour

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

****
Intersection #5 Riosa Rd and Karchner Rd
****
Average Delay (sec/veh): 3.8 Worst Case Level Of Service: A
****

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	- T	- R	L	- T	- R	L	- T	- R	L	- T	- R
Control:	Stop Sign			Stop Sign			Uncontrolled			Uncontrolled		
Rights:	Include			Include			Include			Include		
Lanes:	0 0	0 0	0	0 0	1! 0	0	0 1	0 0	0	0 0	0 1	0
Volume Module:												
Base Vol:	0	0	0	7	0	14	18	23	0	0	19	5
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	7	0	14	18	23	0	0	19	5
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	0	0	0	7	0	14	18	23	0	0	19	5
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Final Vol.:	0	0	0	7	0	14	18	23	0	0	19	5
Critical Gap Module:												
Critical Gp:	xxxxx	xxxx	xxxxx	6.6	xxxx	6.4	4.3	xxxx	xxxxx	xxxxx	xxxx	xxxxx
FollowUpTim:	xxxxx	xxxx	xxxxx	3.7	xxxx	3.5	2.4	xxxx	xxxxx	xxxxx	xxxx	xxxxx
Capacity Module:												
Cnflict Vol:	xxxx	xxxx	xxxxx	81	xxxx	22	24	xxxx	xxxxx	xxxx	xxxx	xxxxx
Potent Cap.:	xxxx	xxxx	xxxxx	882	xxxx	1009	1487	xxxx	xxxxx	xxxx	xxxx	xxxxx
Move Cap.:	xxxx	xxxx	xxxxx	873	xxxx	1009	1487	xxxx	xxxxx	xxxx	xxxx	xxxxx
Level Of Service Module:												
Stopped Del:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	7.5	xxxx	xxxxx	xxxxx	xxxx	xxxxx
LOS by Move:	*	*	*	*	*	*	A	*	*	*	*	*
Movement:	LT -	LTR -	RT	LT -	LTR -	RT	LT -	LTR -	RT	LT -	LTR -	RT
Shared Cap.:	xxxx	xxxx	xxxxx	xxxx	959	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx
Shrd StpDel:	xxxxx	xxxx	xxxxx	xxxxx	8.8	xxxxx	7.5	xxxx	xxxxx	xxxxx	xxxx	xxxxx
Shared LOS:	*	*	*	*	A	*	A	*	*	*	*	*
ApproachDel:	xxxxxx			8.8			xxxxxx			xxxxxx		
ApproachLOS:	*			A			*			*		

Existing PM Plus Project Mon Jan 12, 2004 13:42:12 Page 10-1

Patterson Sand and Gravel
Existing Plus Project (No Haul Road)
Peak Season Average Day - PM Peak Hour

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

****
Intersection #5 Riosa Rd and Karchner Rd
****

Approach:	North Bound	South Bound	East Bound	West Bound
Movement:	L - T - R	L - T - R	L - T - R	L - T - R
HevVeh:	0%	19%	19%	0%
Grade:	0%	0%	0%	0%
Peds/Hour:	0	0	0	0
LaneWidth:	12 feet	12 feet	12 feet	12 feet

Pedestrian Walk Speed: 4.00 feet/sec
Time Period: 0.25 hour

Traffix 7.5.0715 (c) 2002 Dowling Assoc. Licensed to DKS ASSOC., SACRAMENTO

Patterson Sand and Gravel
Existing Plus Project (No Haul Road)
"30th Highest" - PM Peak Hour

Scenario Report

Scenario:	Existing PM Plus Project
Command:	Existing PM Plus Project
Volume:	Existing PM Plus Project
Geometry:	Existing PM Plus Project
Impact Fee:	Default Impact Fee
Trip Generation:	Default Trip Generation
Trip Distribution:	Default Trip Distribution
Paths:	Default Paths
Routes:	Default Routes
Configuration:	Default Configuration

Patterson Sand and Gravel
Existing Plus Project (No Haul Road)
"30th Highest" - PM Peak Hour

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 65 and Riosa Road (Sheridan	E	2.7	0.000	E	2.7	0.000	+ 0.000 V/C
# 2 SR 65 and SR 193 (Lincoln)	C	31.9	0.918	C	31.9	0.918	+ 0.000 D/V
# 4 Riosa Rd and 11th St	A	7.7	0.120	A	7.7	0.120	+ 0.000 V/C
# 5 Riosa Rd and Karchner Rd	A	4.0	0.000	A	4.0	0.000	+ 0.000 V/C

Patterson Sand and Gravel
Existing Plus Project (No Haul Road)
"30th Highest" - PM Peak Hour

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

```
*******************************************************************************
Intersection #1 SR 65 and Riosa Road (Sheridan)
*******************************************************************************
Average Delay (sec/veh):      2.7          Worst Case 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:       Uncontrolled     Uncontrolled      Stop Sign        Stop Sign
Rights:           Include          Include          Include          Include
Lanes:        0  0  1  0  1    1  0  1  0  0    0  0  0  0  0    0  0  1! 0  0
------------|---------------||---------------||---------------||---------------|
Volume Module:
Base Vol:        0  745   102   86  563    0    0    0    0   39    0   60
Growth Adj:   1.00 1.00  1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
Initial Bse:     0  745   102   86  563    0    0    0    0   39    0   60
User Adj:     1.00 1.00  1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
PHF Adj:      1.00 1.00  1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
PHF Volume:      0  745   102   86  563    0    0    0    0   39    0   60
Reduct Vol:      0    0     0    0    0    0    0    0    0    0    0    0
Final Vol.:      0  745   102   86  563    0    0    0    0   39    0   60
------------|---------------||---------------||---------------||---------------|
Critical Gap Module:
Critical Gp:xxxxx xxxx xxxxx  4.1 xxxx xxxxx xxxxx xxxx xxxxx  6.5 xxxx  6.3
FollowUpTim:xxxxx xxxx xxxxx  2.2 xxxx xxxxx xxxxx xxxx xxxxx  3.6 xxxx  3.4
------------|---------------||---------------||---------------||---------------|
Capacity Module:
Cnflict Vol: xxxx xxxx xxxxx  847 xxxx xxxxx  xxxx xxxx xxxxx 1480 xxxx  745
Potent Cap.: xxxx xxxx xxxxx  782 xxxx xxxxx  xxxx xxxx xxxxx  135 xxxx  408
Move Cap.:   xxxx xxxx xxxxx  782 xxxx xxxxx  xxxx xxxx xxxxx  124 xxxx  408
------------|---------------||---------------||---------------||---------------|
Level Of Service Module:
Stopped Del:xxxxx xxxx xxxxx 10.2 xxxx xxxxx xxxxx xxxx xxxxx xxxxx xxxx xxxxx
LOS by Move:   *    *    *    B    *    *    *    *    *    *    *    *
Movement:     LT - LTR - RT   LT - LTR - RT   LT - LTR - RT   LT - LTR - RT
Shared Cap.: xxxx xxxx xxxxx xxxx xxxx xxxxx xxxx xxxx xxxxx xxxx  214 xxxxx
Shrd StpDel:xxxxx xxxx xxxxx xxxxx xxxx xxxxx xxxxx xxxx xxxxx xxxxx 35.4 xxxxx
Shared LOS:    *    *    *    *    *    *    *    *    *    *    E    *
ApproachDel:    xxxxxx          xxxxxx          xxxxxx          35.4
ApproachLOS:       *               *               *               E
```


Patterson Sand and Gravel
Existing Plus Project (No Haul Road)
"30th Highest" - PM Peak Hour

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

```
*******************************************************************************
Intersection #1 SR 65 and Riosa Road (Sheridan)
*******************************************************************************
Approach:       North Bound      South Bound      East Bound       West Bound
Movement:     L  -  T  -  R    L  -  T  -  R    L  -  T  -  R    L  -  T  -  R
------------|---------------||---------------||---------------||---------------|
HevVeh:            4%               4%               0%               6%
Grade:             0%               0%               0%               0%
Peds/Hour:         0                0                0                0
Pedestrian Walk Speed: 4.00 feet/sec
LaneWidth:      12 feet          12 feet          12 feet          12 feet
Time Period: 0.25 hour
------------|---------------||---------------||---------------||---------------|
Upstream Signals:
Link Index:       #2
Dist(miles):      0.000
Speed (mph):       0.00
SignalIndex:      #2
Cycle Time:          0 secs
InitVolume:     0     0
Saturation:     0     0
ArrivalType:    0     0
G/C:         0.00  0.00
*** Computation 1: Time for Queue to Clear at Each Upstream Intersection
P:          0.000 0.000
gq1:         0.00  0.00
gq2:         0.00  0.00
gq:          0.00  0.00
*** Computation 2: Time Intersection Blocked Because of Upstream Platoons
alpha:            0.000
beta:             0.000
ta (secs):        0.000
F:                0.000
f:          0.000 0.000
vcmax:          0     0
vcmin:          0     0
tp:           0.0   0.0
p:                0.000
*** Computation 3: Platoon Event Periods
pdom/psubo:      0.000/0.000/Unconstrained
*** Computation 4: Conflicting Flows During Each Unblocked Period
InitCnflVol:   0 xxxxx xxxxx  847 xxxxx xxxxx    0     0     0 1480     0   745
UpstreamSat:   0 xxxxx xxxxx    0 xxxxx xxxxx    0     0     0    0     0     0
UpstreamAdj:1.00 x.xxx x.xxx 1.00 x.xxx x.xxx 1.00 1.000 1.000 1.00 1.000 1.000
ConflictVol:   0 xxxxx xxxxx  847 xxxxx xxxxx    0     0     0 1480     0   745
*** Computation 5: Capactiy for Subject Movement During Unblocked Period
InitPotCap:    0 xxxxx xxxxx  782 xxxxx xxxxx    0     0     0  135     0   408
UpstreamAdj:1.00 x.xxx x.xxx 1.00 x.xxx x.xxx 1.00 1.000 1.000 1.00 1.000 1.000
PotentCap:     0 xxxxx xxxxx  782 xxxxx xxxxx    0     0     0  135     0   408
```

Existing PM Plus Project Tue Jan 13, 2004 13:54:25 Page 5-1

Patterson Sand and Gravel
Existing Plus Project (No Haul Road)
"30th Highest" - PM Peak Hour

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

Intersection #2 SR 65 and SR 193 (Lincoln)

Cycle (sec): 100 Critical Vol./Cap. (X): 0.918
Loss Time (sec): 0 (Y+R = 4 sec) Average Delay (sec/veh): 31.9
Optimal Cycle: 180 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				Permitted				Permitted			
Rights:	Include				Include				Include				Ovl			
Min. Green:	0	0	0		0	0	0		0	0	0		0	0	0	
Lanes:	1	0	0	1	0	1	0	0	1	0	0	0	1!	0	0	0
Volume Module:																
Base Vol:	0	842	89		177	580	0		0	0	0		281	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:	0	842	89		177	580	0		0	0	0		281	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:	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 Volume:	0	842	89		177	580	0		0	0	0		281	0	266	
Reduct Vol:	0	0	0		0	0	0		0	0	0		0	0	0	
Reduced Vol:	0	842	89		177	580	0		0	0	0		281	0	266	
PCE Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
MLF Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
Final Vol.:	0	842	89		177	580	0		0	0	0		281	0	266	
Saturation Flow Module:																
Sat/Lane:	1900	1900	1900		1900	1900	1900		1900	1900	1900		1900	1900	1900	
Adjustment:	1.00	0.86	0.86		0.81	0.86	1.00		1.00	1.00	1.00		0.63	1.00	0.74	
Lanes:	1.00	0.90	0.10		1.00	1.00	0.00		0.00	1.00	0.00		1.00	0.00	1.00	
Final Sat.:	1900	1481	157		1547	1628	0		0	1900	0		1194	0	1411	
Capacity Analysis Module:																
Vol/Sat:	0.00	0.57	0.57		0.11	0.36	0.00		0.00	0.00	0.00		0.24	0.00	0.19	
Crit Moves:		****			****								****			
Green/Cycle:	0.00	0.62	0.62		0.12	0.74	0.00		0.00	0.00	0.00		0.26	0.00	0.38	
Volume/Cap:	0.00	0.92	0.92		0.92	0.48	0.00		0.00	0.00	0.00		0.92	0.00	0.49	
Delay/Veh:	0.0	29.7	29.7		85.7	5.4	0.0		0.0	0.0	0.0		67.3	0.0	24.3	
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:	0.0	29.7	29.7		85.7	5.4	0.0		0.0	0.0	0.0		67.3	0.0	24.3	
DesignQueue:	0	20	2		9	9	0		0	0	0		12	0	10	

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Patterson Sand and Gravel
Existing Plus Project (No Haul Road)
"30th Highest" - PM Peak Hour

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

Intersection #2 SR 65 and SR 193 (Lincoln)

Approach:	North Bound					South Bound					East Bound					West Bound				
Movement:	L	-	T	-	R	L	-	T	-	R	L	-	T	-	R	L	-	T	-	R
HCM Ops Adjusted Lane Utilization Module:																				
Lanes:	1	0	0	1	0	1	0	0	1	0	0	0	1!	0	0	0	1	0	0	1
Lane Group:	L		RT			RT	L		RT		RT	LTR	LTR		LTR	LT		LT		R
#LnsInGrps:	1		1			1	1		1		1	1	1		1	1		1		1
HCM Ops Input Saturation Adj Module:																				
Lane Width:	12		12			12	12		12		12	12	12		12	12		12		12
CrosswalkWid			8						8				8					8		
% Hev Veh:			3						5				0					3		
Grade:			0%						0%				0%					0%		
Parking/Hr:			No						No				No					No		
Bus Stp/Hr:			0						0				0					0		
Area Type:	< < < < < < < < < < < < < < < < CBD > > > > > > > > > > > > > > > >																			
Cnft Ped/Hr:			0						0				0					0		
ExclusiveRT:			Include						Include				Include					Include		
% RT Prtct:			0						0				0					0		
HCM Ops f(lt) Adj Case Module:																				
f(lt) Case:	xxxx	xxxx		xxxx			1	xxxx		xxxx	xxxx	xxxx		xxxx			5	xxxx		xxxx
HCM Ops Saturation Adj Module:																				
Ln Wid Adj:	xxxx	1.00		1.00		1.00	1.00		xxxxx		xxxx	xxxx	xxxxx			1.00		xxxx		1.00
Hev Veh Adj:	xxxx	0.97		0.97		0.95	0.95		xxxxx		xxxx	xxxx	xxxxx			0.97		xxxx		0.97
Grade Adj:	xxxx	1.00		1.00		1.00	1.00		xxxxx		xxxx	xxxx	xxxxx			1.00		xxxx		1.00
Parking Adj:	xxxx	1.00		1.00		xxxx	1.00		xxxxx		xxxx	xxxx	xxxxx			xxxx		xxxx		1.00
Bus Stp Adj:	xxxx	1.00		1.00		xxxx	1.00		xxxxx		xxxx	xxxx	xxxxx			xxxx		xxxx		1.00
Area Adj:	xxxx	0.90		0.90		0.90	0.90		xxxxx		xxxx	xxxx	xxxxx			0.90		xxxx		0.90
RT Adj:	xxxx	0.99		0.99		xxxx	xxxx		xxxxx		xxxx	xxxx	xxxxx			xxxx		xxxx		0.85
LT Adj:	xxxx	xxxx		xxxxx		0.95	xxxx		xxxxx		xxxx	xxxx	xxxxx			0.72		xxxx		xxxxx
PedBike Adj:	1.00	1.00		1.00		1.00	1.00		1.00		1.00	1.00	1.00			1.00		1.00		1.00
HCM Sat Adj:	1.00	0.86		0.86		0.81	0.86		1.00		1.00	1.00	1.00			0.63		1.00		0.74
Usr Sat Adj:	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 Sat Adj:	1.00	1.00		1.00		1.00	1.00		1.00		1.00	1.00	1.00			1.00		1.00		1.00
Fnl Sat Adj:	1.00	0.86		0.86		0.81	0.86		1.00		1.00	1.00	1.00			0.63		1.00		0.74
Delay Adjustment Factor Module:																				
Coordinated:	< < < < < < < < < < < < < < < < No > > > > > > > > > > > > > > > >																			
Signal Type:	< < < < < < < < < < < < Actuated > > > > > > > > > > > > > >																			
DelAdjFctr:	0.00	1.00		1.00		1.00	1.00		0.00		0.00	0.00	0.00			1.00		0.00		1.00

Patterson Sand and Gravel
Existing Plus Project (No Haul Road)
"30th Highest" - PM Peak Hour

Level Of Service Detailed Computation Report (Permitted Left Turn Sat Adj)
2000 HCM Operations Method
Base Volume Alternative

Intersection #2 SR 65 and SR 193 (Lincoln)

Approach:	North	South	East	West
Cycle Length, C:	xxxxxx	xxxxxx	xxxxxx	100
Actual Green Time Per Lane Group, G:	xxxxxx	xxxxxx	xxxxxx	21.62
Effective Green Time Per Lane Group, g:	xxxxxx	xxxxxx	xxxxxx	25.62
Opposing Effective Green Time, go:	xxxxxx	xxxxxx	xxxxxx	25.62
Number Of Opposing Lanes, No:	xxxxxx	xxxxxx	xxxxxx	1
Number Of Lanes In Lane Group, N:	xxxxxx	xxxxxx	xxxxxx	1
Adjusted Left-Turn Flow Rate, Vlt:	xxxxxx	xxxxxx	xxxxxx	281
Proportion of Left Turns in Lane Group, Plt:	xxxxxx	xxxxxx	xxxxxx	1.00
Proportion of Left Turns in Opp Flow, Plto:	xxxxxx	xxxxxx	xxxxxx	1.00
Left Turns Per Cycle, LTC:	xxxxxx	xxxxxx	xxxxxx	7.81
Adjusted Opposing Flow Rate, Vo:	xxxxxx	xxxxxx	xxxxxx	0
Opposing Flow Per Lane Per Cycle, Volc:	xxxxxx	xxxxxx	xxxxxx	0.00
Opposing Platoon Ratio, Rpo:	xxxxxx	xxxxxx	xxxxxx	1.00
Lost Time Per Phase, tl:	xxxxxx	xxxxxx	xxxxxx	0.00
Eff grn until arrival of left-turn car, gf:	xxxxxx	xxxxxx	xxxxxx	0.46
Opposing Queue Ratio, qro:	xxxxxx	xxxxxx	xxxxxx	0.74
Eff grn blocked by opposing queue, gq:	xxxxxx	xxxxxx	xxxxxx	0.00
Eff grn while left turns filter thru, gu:	xxxxxx	xxxxxx	xxxxxx	25.16
Max opposing cars arriving during gq-gf, n:	xxxxxx	xxxxxx	xxxxxx	0.00
Proportion of Opposing Thru & RT cars, ptho:	xxxxxx	xxxxxx	xxxxxx	0.00
Left-turn Saturation Factor, fs:	xxxxxx	xxxxxx	xxxxxx	xxxxxx
Proportion of Left Turns in Shared Lane, pl:	xxxxxx	xxxxxx	xxxxxx	1.00
Through-car Equivalents, el1:	xxxxxx	xxxxxx	xxxxxx	1.40
Single Lane Through-car Equivalents, el2:	xxxxxx	xxxxxx	xxxxxx	1.00
Minimum Left Turn Adjustment Factor, fmin:	xxxxxx	xxxxxx	xxxxxx	0.16
Single Lane Left Turn Adjustment Factor, fm:	xxxxxx	xxxxxx	xxxxxx	0.72
Left Turn Adjustment Factor, flt:	xxxxxx	xxxxxx	xxxxxx	0.72

Patterson Sand and Gravel
Existing Plus Project (No Haul Road)
"30th Highest" - PM Peak Hour

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

Intersection #4 Riosa Rd and 11th St

Cycle (sec): 100 Critical Vol./Cap. (X): 0.120
Loss Time (sec): 0 (Y+R = 4 sec) Average Delay (sec/veh): 7.7
Optimal Cycle: 0 Level Of Service: A

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Stop Sign			Stop Sign			Stop Sign			Stop Sign		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Lanes:	0 0	1! 0	0	0 0	0 1	0	0 1	0 0	0	0 1	0 0	0
Volume Module:												
Base Vol:	2	3	1	0	1	2	6	96	0	1	77	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:	2	3	1	0	1	2	6	96	0	1	77	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:	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 Volume:	2	3	1	0	1	2	6	96	0	1	77	0
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	2	3	1	0	1	2	6	96	0	1	77	0
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Final Vol.:	2	3	1	0	1	2	6	96	0	1	77	0
Saturation Flow Module:												
Adjustment:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Lanes:	0.33	0.50	0.17	0.00	0.33	0.67	0.06	0.94	0.00	0.01	0.99	0.00
Final Sat.:	272	407	136	0	296	591	50	801	0	11	851	0
Capacity Analysis Module:												
Vol/Sat:	0.01	0.01	0.01	xxxx	0.00	0.00	0.12	0.12	xxxx	0.09	0.09	xxxx
Crit Moves:	****					****		****		****		
Delay/Veh:	7.3	7.3	7.3	0.0	6.9	6.9	7.8	7.8	0.0	7.6	7.6	0.0
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:	7.3	7.3	7.3	0.0	6.9	6.9	7.8	7.8	0.0	7.6	7.6	0.0
LOS by Move:	A	A	A	*	A	A	A	A	*	A	A	*
ApproachDel:	7.3				6.9			7.8			7.6	
Delay Adj:	1.00				1.00			1.00			1.00	
ApprAdjDel:	7.3				6.9			7.8			7.6	
LOS by Appr:	A				A			A			A	

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Patterson Sand and Gravel
Existing Plus Project (No Haul Road)
"30th Highest" - PM Peak Hour

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

****

Intersection #4 Riosa Rd and 11th St

****

Approach:	North Bound	South Bound	East Bound	West Bound
Movement:	L - T - R	L - T - R	L - T - R	L - T - R
Time Period: 0.25 hour				
HevVeh:	0%	0%	12%	8%
Alpha Value: 0.01				
GroupType:	1	1	1	1
P[C1]:	0.7990	0.7959	0.9007	0.8718
P[C2]:	0.0026	0.0057	0.0890	0.1179
P[C3]:	0.1871	0.1863	0.0093	0.0090
P[C4]:	0.0113	0.0120	0.0009	0.0012
P[C5]:	0.0000	0.0001	0.0000	0.0000
Padj[C1]:	0.00411	0.00415	0.00111	0.00140
Padj[C2]:	0.00207	0.00205	-0.00078	-0.00106
Padj[C3]:	-0.00550	-0.00547	-0.00027	-0.00026
Padj[C4]:	-0.00068	-0.00072	-0.00006	-0.00007
Padj[C5]:	-0.00000	-0.00001	-0.00000	-0.00000
Lane:	L1	L1	L1	L1
LaneType:	LEFTTHRURITE	LEFTTHRURITE	LEFTTHRURITE	LEFTTHRURITE
HeadwayAdj:	-0.033	-0.400	0.216	0.139
Volume:	6	3	102	78
Capacity:	815	887	851	862
DegOfUtil:	0.01	0.00	0.12	0.09
DepHeadway:	4.25	3.89	4.21	4.15
ServiceTime:	2.2	1.9	2.2	2.2
Delay:	7.3	6.9	7.8	7.6
Approach:	North Bound	South Bound	East Bound	West Bound
ApproachDel:	7.3	6.9	7.8	7.6
Delay Adj:	1.00	1.00	1.00	1.00
ApprAdjDel:	7.3	6.9	7.8	7.6
LOS by Appr:	A	A	A	A
OverallDel:		7.7		
OverallLOS:		A		

Existing PM Plus Project Tue Jan 13, 2004 13:54:25 Page 9-1

Patterson Sand and Gravel
Existing Plus Project (No Haul Road)
"30th Highest" - PM Peak Hour

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

****

Intersection #5 Riosa Rd and Karchner Rd

****

Average Delay (sec/veh): 4.0 Worst Case Level Of Service: A

****

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Stop Sign			Stop Sign			Uncontrolled			Uncontrolled		
Rights:	Include			Include			Include			Include		
Lanes:	0 0	0	0 0	0 0	1!	0 0	0 1	0	0 0	0 0	0	1 0
Volume Module:												
Base Vol:	0	0	0	7	0	16	21	23	0	0	19	5
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	7	0	16	21	23	0	0	19	5
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	0	0	0	7	0	16	21	23	0	0	19	5
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Final Vol.:	0	0	0	7	0	16	21	23	0	0	19	5
Critical Gap Module:												
Critical Gp:	xxxxx	xxxx	xxxxx	6.7	xxxx	6.5	4.4	xxxx	xxxxx	xxxxx	xxxx	xxxxx
FollowUpTim:	xxxxx	xxxx	xxxxx	3.7	xxxx	3.5	2.4	xxxx	xxxxx	xxxxx	xxxx	xxxxx
Capacity Module:												
Cnflict Vol:	xxxx	xxxx	xxxxx	87	xxxx	22	24	xxxx	xxxxx	xxxx	xxxx	xxxxx
Potent Cap.:	xxxx	xxxx	xxxxx	857	xxxx	988	1448	xxxx	xxxxx	xxxx	xxxx	xxxxx
Move Cap.:	xxxx	xxxx	xxxxx	847	xxxx	988	1448	xxxx	xxxxx	xxxx	xxxx	xxxxx
Level Of Service Module:												
Stopped Del:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	7.5	xxxx	xxxxx	xxxxx	xxxx	xxxxx
LOS by Move:	*	*	*	*	*	*	A	*	*	*	*	*
Movement:	LT -	LTR -	RT	LT -	LTR -	RT	LT -	LTR -	RT	LT -	LTR -	RT
Shared Cap.:	xxxx	xxxx	xxxxx	xxxx	940	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx
Shrd StpDel:	xxxxx	xxxx	xxxxx	xxxxx	8.9	xxxxx	7.5	xxxx	xxxxx	xxxxx	xxxx	xxxxx
Shared LOS:	*	*	*	*	A	*	A	*	*	*	*	*
ApproachDel:	xxxxxx				8.9		xxxxxx			xxxxxx		
ApproachLOS:	*				A		*			*		

Existing PM Plus Project Tue Jan 13, 2004 13:54:25 Page 10-1

Patterson Sand and Gravel
Existing Plus Project (No Haul Road)
"30th Highest" - PM Peak Hour

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

****
Intersection #5 Riosa Rd and Karchner Rd
****

Approach:	North Bound	South Bound	East Bound	West Bound
Movement:	L - T - R	L - T - R	L - T - R	L - T - R
HevVeh:	0%	27%	26%	0%
Grade:	0%	0%	0%	0%
Peds/Hour:	0	0	0	0
Pedestrian Walk Speed: 4.00 feet/sec				
LaneWidth:	12 feet	12 feet	12 feet	12 feet
Time Period: 0.25 hour				

Existing PM Plus Project Wed Jan 14, 2004 10:04:30 Page 1-1

Patterson Sand and Gravel
Existing Plus Project (No Haul Road)
"Highest" - PM Peak Hour

Scenario Report

Scenario:	Existing PM Plus Project
Command:	Existing PM Plus Project
Volume:	Existing PM Plus Project
Geometry:	Existing PM Plus Project
Impact Fee:	Default Impact Fee
Trip Generation:	Default Trip Generation
Trip Distribution:	Default Trip Distribution
Paths:	Default Paths
Routes:	Default Routes
Configuration:	Default Configuration

Existing PM Plus Project Wed Jan 14, 2004 10:04:31 Page 2-1

Patterson Sand and Gravel
Existing Plus Project (No Haul Road)
"Highest" - PM Peak Hour

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 65 and Riosa Road (Sheridan	E	3.0	0.000	E	3.0	0.000	+ 0.000 V/C
# 2 SR 65 and SR 193 (Lincoln)	C	32.1	0.920	C	32.1	0.920	+ 0.000 D/V
# 4 Riosa Rd and 11th St	A	7.7	0.122	A	7.7	0.122	+ 0.000 V/C
# 5 Riosa Rd and Karchner Rd	A	4.2	0.000	A	4.2	0.000	+ 0.000 V/C

Patterson Sand and Gravel
Existing Plus Project (No Haul Road)
"Highest" - PM Peak Hour

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

```
*******************************************************************************
Intersection #1 SR 65 and Riosa Road (Sheridan)
*******************************************************************************
Average Delay (sec/veh):      3.0          Worst Case 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:       Uncontrolled     Uncontrolled      Stop Sign        Stop Sign
Rights:           Include          Include          Include          Include
Lanes:        0  0  1  0  1    1  0  1  0  0    0  0  0  0  0    0  0  1! 0  0
------------|---------------||---------------||---------------||---------------|
Volume Module:
Base Vol:        0  745   104   87  563    0    0    0    0   41    0   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
Initial Bse:     0  745   104   87  563    0    0    0    0   41    0   61
User Adj:     1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
PHF Adj:      1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
PHF Volume:      0  745   104   87  563    0    0    0    0   41    0   61
Reduct Vol:      0    0     0    0    0    0    0    0    0    0    0    0
Final Vol.:      0  745   104   87  563    0    0    0    0   41    0   61
------------|---------------||---------------||---------------||---------------|
Critical Gap Module:
Critical Gp:xxxxx xxxx xxxxx  4.1 xxxx xxxxx xxxxx xxxx xxxxx  6.5 xxxx  6.3
FollowUpTim:xxxxx xxxx xxxxx  2.2 xxxx xxxxx xxxxx xxxx xxxxx  3.6 xxxx  3.4
------------|---------------||---------------||---------------||---------------|
Capacity Module:
Cnflict Vol: xxxx xxxx xxxxx  849 xxxx xxxxx  xxxx xxxx xxxxx 1482 xxxx  745
Potent Cap.: xxxx xxxx xxxxx  780 xxxx xxxxx  xxxx xxxx xxxxx  133 xxxx  403
Move Cap.:   xxxx xxxx xxxxx  780 xxxx xxxxx  xxxx xxxx xxxxx  122 xxxx  403
------------|---------------||---------------||---------------||---------------|
Level Of Service Module:
Stopped Del:xxxxx xxxx xxxxx 10.2 xxxx xxxxx xxxxx xxxx xxxxx xxxxx xxxx xxxxx
LOS by Move:   *    *    *    B    *    *    *    *    *    *    *    *
Movement:     LT - LTR - RT   LT - LTR - RT   LT - LTR - RT   LT - LTR - RT
Shared Cap.: xxxx xxxx xxxxx xxxx xxxx xxxxx xxxx xxxx xxxxx xxxx  209 xxxxx
Shrd StpDel:xxxxx xxxx xxxxx xxxxx xxxx xxxxx xxxxx xxxx xxxxx xxxxx 37.7 xxxxx
Shared LOS:    *    *    *    *    *    *    *    *    *    *    E    *
ApproachDel:    xxxxxx          xxxxxx          xxxxxx          37.7
ApproachLOS:       *               *               *               E
```


Patterson Sand and Gravel
Existing Plus Project (No Haul Road)
"Highest" - PM Peak Hour

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

```
*******************************************************************************
Intersection #1 SR 65 and Riosa Road (Sheridan)
*******************************************************************************
Approach:       North Bound      South Bound      East Bound       West Bound
Movement:     L  -  T  -  R    L  -  T  -  R    L  -  T  -  R    L  -  T  -  R
------------|---------------||---------------||---------------||---------------|
HevVeh:            4%               4%               0%               9%
Grade:             0%               0%               0%               0%
Peds/Hour:         0                0                0                0
Pedestrian Walk Speed: 4.00 feet/sec
LaneWidth:       12 feet          12 feet          12 feet          12 feet
Time Period: 0.25 hour
------------|---------------||---------------||---------------||---------------|
Upstream Signals:
Link Index:       #2
Dist(miles):      0.000
Speed (mph):       0.00
SignalIndex:      #2
Cycle Time:          0 secs
InitVolume:     0     0
Saturation:     0     0
ArrivalType:    0     0
G/C:         0.00  0.00
*** Computation 1: Time for Queue to Clear at Each Upstream Intersection
P:          0.000 0.000
gq1:         0.00  0.00
gq2:         0.00  0.00
gq:          0.00  0.00
*** Computation 2: Time Intersection Blocked Because of Upstream Platoons
alpha:            0.000
beta:             0.000
ta (secs):        0.000
F:                0.000
f:          0.000 0.000
vcmax:          0     0
vcmin:          0     0
tp:           0.0   0.0
p:                0.000
*** Computation 3: Platoon Event Periods
pdom/psubo:      0.000/0.000/Unconstrained
*** Computation 4: Conflicting Flows During Each Unblocked Period
InitCnflVol:   0 xxxxx xxxxx  849 xxxxx xxxxx    0     0     0 1482     0   745
UpstreamSat:   0 xxxxx xxxxx    0 xxxxx xxxxx    0     0     0    0     0     0
UpstreamAdj:1.00 x.xxx x.xxx 1.00 x.xxx x.xxx 1.00 1.000 1.000 1.00 1.000 1.000
ConflictVol:   0 xxxxx xxxxx  849 xxxxx xxxxx    0     0     0 1482     0   745
*** Computation 5: Capactiy for Subject Movement During Unblocked Period
InitPotCap:    0 xxxxx xxxxx  780 xxxxx xxxxx    0     0     0  133     0   403
UpstreamAdj:1.00 x.xxx x.xxx 1.00 x.xxx x.xxx 1.00 1.000 1.000 1.00 1.000 1.000
PotentCap:     0 xxxxx xxxxx  780 xxxxx xxxxx    0     0     0  133     0   403
```

Existing PM Plus Project Wed Jan 14, 2004 10:04:31 Page 5-1

Patterson Sand and Gravel
Existing Plus Project (No Haul Road)
"Highest" - PM Peak Hour

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

****

Intersection #2 SR 65 and SR 193 (Lincoln)

****

Cycle (sec): 100 Critical Vol./Cap. (X): 0.920
Loss Time (sec): 0 (Y+R = 4 sec) Average Delay (sec/veh): 32.1
Optimal Cycle: 180 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			Permitted			Permitted		
Rights:	Include			Include			Include			Ovl		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Lanes:	1 0	0 1	0	1 0	0 1	0	0 0	1! 0	0	0 1	0 0	1
Volume Module:												
Base Vol:	0	843	89	178	581	0	0	0	0	281	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:	0	843	89	178	581	0	0	0	0	281	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:	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 Volume:	0	843	89	178	581	0	0	0	0	281	0	266
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	0	843	89	178	581	0	0	0	0	281	0	266
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Final Vol.:	0	843	89	178	581	0	0	0	0	281	0	266
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	1.00	0.86	0.86	0.81	0.86	1.00	1.00	1.00	1.00	0.63	1.00	0.74
Lanes:	1.00	0.90	0.10	1.00	1.00	0.00	0.00	1.00	0.00	1.00	0.00	1.00
Final Sat.:	1900	1481	156	1547	1628	0	0	1900	0	1194	0	1411
Capacity Analysis Module:												
Vol/Sat:	0.00	0.57	0.57	0.12	0.36	0.00	0.00	0.00	0.00	0.24	0.00	0.19
Crit Moves:		****		****						****		
Green/Cycle:	0.00	0.62	0.62	0.13	0.74	0.00	0.00	0.00	0.00	0.26	0.00	0.38
Volume/Cap:	0.00	0.92	0.92	0.92	0.48	0.00	0.00	0.00	0.00	0.92	0.00	0.49
Delay/Veh:	0.0	29.9	29.9	85.9	5.4	0.0	0.0	0.0	0.0	67.7	0.0	24.3
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:	0.0	29.9	29.9	85.9	5.4	0.0	0.0	0.0	0.0	67.7	0.0	24.3
DesignQueue:	0	21	2	9	9	0	0	0	0	12	0	9

****

Existing PM Plus Project Wed Jan 14, 2004 10:04:31 Page 6-1

Patterson Sand and Gravel
Existing Plus Project (No Haul Road)
"Highest" - PM Peak Hour

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

****

Intersection #2 SR 65 and SR 193 (Lincoln)

****

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
HCM Ops Adjusted Lane Utilization Module:												
Lanes:	1 0	0 1	0	1 0	0 1	0	0 0	1! 0	0	0 1	0 0	1
Lane Group:	L	RT		L	RT		LTR	LTR	LTR	LT	LT	R
#LnsInGrps:	1	1	1	1	1	1	1	1	1	1	1	1
HCM Ops Input Saturation Adj Module:												
Lane Width:	12	12	12	12	12	12	12	12	12	12	12	12
CrosswalkWid		8			8			8			8	
% Hev Veh:		3			5			0			3	
Grade:		0%			0%			0%			0%	
Parking/Hr:		No			No			No			No	
Bus Stp/Hr:		0			0			0			0	
Area Type:	< < < < < < < < < < < < < < < CBD > > > > > > > > > > > > > > >											
Cnft Ped/Hr:		0			0			0			0	
ExclusiveRT:		Include			Include			Include			Include	
% RT Prtct:		0			0			0			0	
HCM Ops f(lt) Adj Case Module:												
f(lt) Case:	xxxx	xxxx	xxxx	1	xxxx	xxxx	xxxx	xxxx	xxxx	5	xxxx	xxxx
HCM Ops Saturation Adj Module:												
Ln Wid Adj:	xxxx	1.00	1.00	1.00	1.00	xxxxx	xxxx	xxxx	xxxxx	1.00	xxxx	1.00
Hev Veh Adj:	xxxx	0.97	0.97	0.95	0.95	xxxxx	xxxx	xxxx	xxxxx	0.97	xxxx	0.97
Grade Adj:	xxxx	1.00	1.00	1.00	1.00	xxxxx	xxxx	xxxx	xxxxx	1.00	xxxx	1.00
Parking Adj:	xxxx	1.00	1.00	xxxx	1.00	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	1.00
Bus Stp Adj:	xxxx	1.00	1.00	xxxx	1.00	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	1.00
Area Adj:	xxxx	0.90	0.90	0.90	0.90	xxxxx	xxxx	xxxx	xxxxx	0.90	xxxx	0.90
RT Adj:	xxxx	0.99	0.99	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	0.85
LT Adj:	xxxx	xxxx	xxxxx	0.95	xxxx	xxxxx	xxxx	xxxx	xxxxx	0.72	xxxx	xxxxx
PedBike Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
HCM Sat Adj:	1.00	0.86	0.86	0.81	0.86	1.00	1.00	1.00	1.00	0.63	1.00	0.74
Usr Sat Adj:	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 Sat Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Fnl Sat Adj:	1.00	0.86	0.86	0.81	0.86	1.00	1.00	1.00	1.00	0.63	1.00	0.74
Delay Adjustment Factor Module:												
Coordinated:	< < < < < < < < < < < < < < < No > > > > > > > > > > > > > > >											
Signal Type:	< < < < < < < < < < < < Actuated > > > > > > > > > > > >											
DelAdjFctr:	0.00	1.00	1.00	1.00	1.00	0.00	0.00	0.00	0.00	1.00	0.00	1.00

****

Patterson Sand and Gravel
Existing Plus Project (No Haul Road)
"Highest" - PM Peak Hour

Level Of Service Detailed Computation Report (Permitted Left Turn Sat Adj)
2000 HCM Operations Method
Base Volume Alternative

Intersection #2 SR 65 and SR 193 (Lincoln)

Approach:	North	South	East	West
Cycle Length, C:	xxxxxx	xxxxxx	xxxxxx	100
Actual Green Time Per Lane Group, G:	xxxxxx	xxxxxx	xxxxxx	21.58
Effective Green Time Per Lane Group, g:	xxxxxx	xxxxxx	xxxxxx	25.58
Opposing Effective Green Time, go:	xxxxxx	xxxxxx	xxxxxx	25.58
Number Of Opposing Lanes, No:	xxxxxx	xxxxxx	xxxxxx	1
Number Of Lanes In Lane Group, N:	xxxxxx	xxxxxx	xxxxxx	1
Adjusted Left-Turn Flow Rate, Vlt:	xxxxxx	xxxxxx	xxxxxx	281
Proportion of Left Turns in Lane Group, Plt:	xxxxxx	xxxxxx	xxxxxx	1.00
Proportion of Left Turns in Opp Flow, Plto:	xxxxxx	xxxxxx	xxxxxx	1.00
Left Turns Per Cycle, LTC:	xxxxxx	xxxxxx	xxxxxx	7.81
Adjusted Opposing Flow Rate, Vo:	xxxxxx	xxxxxx	xxxxxx	0
Opposing Flow Per Lane Per Cycle, Volc:	xxxxxx	xxxxxx	xxxxxx	0.00
Opposing Platoon Ratio, Rpo:	xxxxxx	xxxxxx	xxxxxx	1.00
Lost Time Per Phase, tl:	xxxxxx	xxxxxx	xxxxxx	0.00
Eff grn until arrival of left-turn car, gf:	xxxxxx	xxxxxx	xxxxxx	0.46
Opposing Queue Ratio, qro:	xxxxxx	xxxxxx	xxxxxx	0.74
Eff grn blocked by opposing queue, gq:	xxxxxx	xxxxxx	xxxxxx	0.00
Eff grn while left turns filter thru, gu:	xxxxxx	xxxxxx	xxxxxx	25.12
Max opposing cars arriving during gq-gf, n:	xxxxxx	xxxxxx	xxxxxx	0.00
Proportion of Opposing Thru & RT cars, ptho:	xxxxxx	xxxxxx	xxxxxx	0.00
Left-turn Saturation Factor, fs:	xxxxxx	xxxxxx	xxxxxx	xxxxxx
Proportion of Left Turns in Shared Lane, pl:	xxxxxx	xxxxxx	xxxxxx	1.00
Through-car Equivalents, el1:	xxxxxx	xxxxxx	xxxxxx	1.40
Single Lane Through-car Equivalents, el2:	xxxxxx	xxxxxx	xxxxxx	1.00
Minimum Left Turn Adjustment Factor, fmin:	xxxxxx	xxxxxx	xxxxxx	0.16
Single Lane Left Turn Adjustment Factor, fm:	xxxxxx	xxxxxx	xxxxxx	0.72
Left Turn Adjustment Factor, flt:	xxxxxx	xxxxxx	xxxxxx	0.72

Patterson Sand and Gravel
Existing Plus Project (No Haul Road)
"Highest" - PM Peak Hour

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

Intersection #4 Riosa Rd and 11th St

Cycle (sec): 100 Critical Vol./Cap. (X): 0.122
Loss Time (sec): 0 (Y+R = 4 sec) Average Delay (sec/veh): 7.7
Optimal Cycle: 0 Level Of Service: A

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Stop Sign			Stop Sign			Stop Sign			Stop Sign		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Lanes:	0 0	1! 0	0	0 0	0 1	0	0 1	0 0	0	0 1	0 0	0
Volume Module:												
Base Vol:	2	3	1	0	1	2	6	97	0	1	80	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:	2	3	1	0	1	2	6	97	0	1	80	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:	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 Volume:	2	3	1	0	1	2	6	97	0	1	80	0
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	2	3	1	0	1	2	6	97	0	1	80	0
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Final Vol.:	2	3	1	0	1	2	6	97	0	1	80	0
Saturation Flow Module:												
Adjustment:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Lanes:	0.33	0.50	0.17	0.00	0.33	0.67	0.06	0.94	0.00	0.01	0.99	0.00
Final Sat.:	271	406	135	0	295	590	49	798	0	11	841	0
Capacity Analysis Module:												
Vol/Sat:	0.01	0.01	0.01	xxxx	0.00	0.00	0.12	0.12	xxxx	0.10	0.10	xxxx
Crit Moves:	****					****		****		****		
Delay/Veh:	7.3	7.3	7.3	0.0	6.9	6.9	7.8	7.8	0.0	7.6	7.6	0.0
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:	7.3	7.3	7.3	0.0	6.9	6.9	7.8	7.8	0.0	7.6	7.6	0.0
LOS by Move:	A	A	A	*	A	A	A	A	*	A	A	*
ApproachDel:	7.3			6.9			7.8			7.6		
Delay Adj:	1.00			1.00			1.00			1.00		
ApprAdjDel:	7.3			6.9			7.8			7.6		
LOS by Appr:	A			A			A			A		

Patterson Sand and Gravel
Existing Plus Project (No Haul Road)
"Highest" - PM Peak Hour

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

****
Intersection #4 Riosa Rd and 11th St
****

Approach:	North Bound				South Bound				East Bound				West Bound			
Movement:	L	-	T	- R	L	-	T	- R	L	-	T	- R	L	-	T	- R
Time Period: 0.25 hour																
HevVeh:	0%				0%				13%				11%			
Alpha Value: 0.01																
GroupType:	1				1				1				1			
P[C1]:	0.7934				0.7903				0.8961				0.8700			
P[C2]:	0.0026				0.0056				0.0936				0.1197			
P[C3]:	0.1920				0.1913				0.0093				0.0091			
P[C4]:	0.0120				0.0127				0.0010				0.0013			
P[C5]:	0.0000				0.0001				0.0000				0.0000			
Padj[C1]:	0.00423				0.00427				0.00115				0.00142			
Padj[C2]:	0.00214				0.00211				-0.00082				-0.00108			
Padj[C3]:	-0.00564				-0.00561				-0.00027				-0.00026			
Padj[C4]:	-0.00072				-0.00076				-0.00006				-0.00008			
Padj[C5]:	-0.00000				-0.00001				-0.00000				-0.00000			
Lane:	L1				L1				L1				L1			
LaneType:	LEFTTHRURITE				LEFTTHRURITE				LEFTTHRURITE				LEFTTHRURITE			
HeadwayAdj:	-0.033				-0.400				0.233				0.189			
Volume:	6				3				103				81			
Capacity:	812				884				847				852			
DegOfUtil:	0.01				0.00				0.12				0.09			
DepHeadway:	4.26				3.90				4.23				4.20			
ServiceTime:	2.3				1.9				2.2				2.2			
Delay:	7.3				6.9				7.8				7.6			

Approach:	North Bound	South Bound	East Bound	West Bound
ApproachDel:	7.3	6.9	7.8	7.6
Delay Adj:	1.00	1.00	1.00	1.00
ApprAdjDel:	7.3	6.9	7.8	7.6
LOS by Appr:	A	A	A	A

OverallDel: 7.7
OverallLOS: A

Patterson Sand and Gravel
Existing Plus Project (No Haul Road)
"Highest" - PM Peak Hour

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

****
Intersection #5 Riosa Rd and Karchner Rd
****
Average Delay (sec/veh): 4.2 Worst Case Level Of Service: A
****

Approach:	North Bound				South Bound				East Bound				West Bound			
Movement:	L	-	T	- R	L	-	T	- R	L	-	T	- R	L	-	T	- R
Control:	Stop Sign				Stop Sign				Uncontrolled				Uncontrolled			
Rights:	Include				Include				Include				Include			
Lanes:	0	0	0	0 0	0	0	1!	0 0	0	1	0	0 0	0	0	0	1 0
Volume Module:																
Base Vol:	0	0	0		7	0	19		23	23	0		0	19	5	
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		7	0	19		23	23	0		0	19	5	
User Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
PHF Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
PHF Volume:	0	0	0		7	0	19		23	23	0		0	19	5	
Reduct Vol:	0	0	0		0	0	0		0	0	0		0	0	0	
Final Vol.:	0	0	0		7	0	19		23	23	0		0	19	5	
Critical Gap Module:																
Critical Gp:	xxxxx	xxxx	xxxxx		6.7	xxxx	6.5		4.4	xxxx	xxxxx		xxxxx	xxxx	xxxxx	
FollowUpTim:	xxxxx	xxxx	xxxxx		3.8	xxxx	3.6		2.5	xxxx	xxxxx		xxxxx	xxxx	xxxxx	
Capacity Module:																
Cnflict Vol:	xxxx	xxxx	xxxxx		91	xxxx	22		24	xxxx	xxxxx		xxxx	xxxx	xxxxx	
Potent Cap.:	xxxx	xxxx	xxxxx		837	xxxx	970		1438	xxxx	xxxxx		xxxx	xxxx	xxxxx	
Move Cap.:	xxxx	xxxx	xxxxx		827	xxxx	970		1438	xxxx	xxxxx		xxxx	xxxx	xxxxx	
Level Of Service Module:																
Stopped Del:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx			7.5	xxxx	xxxxx	xxxxx	xxxx	xxxxx		
LOS by Move:	*	*	*	*	*	*			A	*	*	*	*	*		
Movement:	LT -	LTR -	RT	LT -	LTR -	RT			LT -	LTR -	RT	LT -	LTR -	RT		
Shared Cap.:	xxxx	xxxx	xxxxx	xxxx	927	xxxxx			xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx		
Shrd StpDel:	xxxxx	xxxx	xxxxx	xxxxx	9.0	xxxxx			7.5	xxxx	xxxxx	xxxxx	xxxx	xxxxx		
Shared LOS:	*	*	*	*	A	*			A	*	*	*	*	*		
ApproachDel:	xxxxxx				9.0				xxxxxx				xxxxxx			
ApproachLOS:	*				A				*				*			

Existing PM Plus Project Wed Jan 14, 2004 10:04:31 Page 10-1

Patterson Sand and Gravel
Existing Plus Project (No Haul Road)
"Highest" - PM Peak Hour

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

****
Intersection #5 Riosa Rd and Karchner Rd
****

Approach:	North Bound	South Bound	East Bound	West Bound
Movement:	L - T - R	L - T - R	L - T - R	L - T - R
HevVeh:	0%	34%	28%	0%
Grade:	0%	0%	0%	0%
Peds/Hour:	0	0	0	0
Pedestrian Walk Speed: 4.00 feet/sec				
LaneWidth:	12 feet	12 feet	12 feet	12 feet
Time Period: 0.25 hour				

Traffix 7.5.0715 (c) 2002 Dowling Assoc. Licensed to DKS ASSOC., SACRAMENTO

Existing AM Plus Project Wed Jan 14, 2004 12:42:56 Page 1-1

Patterson Sand and Gravel
Existing Plus "Maximum Practical Mining Rate" (No Haul Road)
"Highest" - AM Peak Hour

Scenario Report

Scenario:	Existing AM Plus Project
Command:	Existing AM Plus Project
Volume:	Existing AM Plus Project
Geometry:	Existing AM Plus Project
Impact Fee:	Default Impact Fee
Trip Generation:	Default Trip Generation
Trip Distribution:	Default Trip Distribution
Paths:	Default Paths
Routes:	Default Routes
Configuration:	Default Configuration

Existing AM Plus Project Wed Jan 14, 2004 12:42:56 Page 2-1

Patterson Sand and Gravel
Existing Plus "Maximum Practical Mining Rate" (No Haul Road)
"Highest" - AM Peak Hour

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 65 and Riosa Road (Sheridan	F	20.5	0.000	F	20.5	0.000	+ 0.000 V/C
# 2 SR 65 and SR 193 (Lincoln)	C	23.0	0.767	C	23.0	0.767	+ 0.000 D/V
# 4 Riosa Rd and 11th St	A	9.7	0.305	A	9.7	0.305	+ 0.000 V/C
# 5 Riosa Rd and Karchner Rd	B	7.1	0.000	B	7.1	0.000	+ 0.000 V/C

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Existing AM Plus Project   Wed Jan 14, 2004 12:42:56                Page 3-1
-------------------------------------------------------------------------------
                          Patterson Sand and Gravel
          Existing Plus "Maximum Practical Mining Rate" (No Haul Road)
                              "Highest" - AM Peak Hour
-------------------------------------------------------------------------------
                     Level Of Service Computation Report
              2000 HCM Unsignalized Method (Base Volume Alternative)
*******************************************************************************
Intersection #1 SR 65 and Riosa Road (Sheridan)
*******************************************************************************
Average Delay (sec/veh):      20.5           Worst Case 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:       Uncontrolled     Uncontrolled      Stop Sign        Stop Sign
Rights:           Include          Include          Include          Include
Lanes:       0  0  1  0  1    1  0  1  0  0    0  0  0  0  0    0  0  1! 0  0
------------|---------------||---------------||---------------||---------------|
Volume Module:
Base Vol:       0  445    59    26  725     0     0    0     0  137    0    89
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  445    59    26  725     0     0    0     0  137    0    89
User Adj:    1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00 1.00 1.00  1.00
PHF Adj:     1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00 1.00 1.00  1.00
PHF Volume:     0  445    59    26  725     0     0    0     0  137    0    89
Reduct Vol:     0    0     0     0    0     0     0    0     0    0    0     0
Final Vol.:     0  445    59    26  725     0     0    0     0  137    0    89
------------|---------------||---------------||---------------||---------------|
Critical Gap Module:
Critical Gp:xxxxx xxxx xxxxx   4.2 xxxx xxxxx xxxxx xxxx xxxxx   7.0 xxxx   6.8
FollowUpTim:xxxxx xxxx xxxxx   2.3 xxxx xxxxx xxxxx xxxx xxxxx   4.0 xxxx   3.8
------------|---------------||---------------||---------------||---------------|
Capacity Module:
Cnflict Vol: xxxx xxxx xxxxx   504 xxxx xxxxx  xxxx xxxx xxxxx  1222 xxxx   445
Potent Cap.: xxxx xxxx xxxxx  1016 xxxx xxxxx  xxxx xxxx xxxxx   154 xxxx   513
Move Cap.:   xxxx xxxx xxxxx  1016 xxxx xxxxx  xxxx xxxx xxxxx   151 xxxx   513
------------|---------------||---------------||---------------||---------------|
Level Of Service Module:
Stopped Del:xxxxx xxxx xxxxx   8.6 xxxx xxxxx xxxxx xxxx xxxxx xxxxx xxxx xxxxx
LOS by Move:   *    *     *     A    *     *     *    *     *     *    *     *
Movement:     LT - LTR - RT    LT - LTR - RT    LT - LTR - RT    LT - LTR - RT
Shared Cap.: xxxx xxxx xxxxx  xxxx xxxx xxxxx  xxxx xxxx xxxxx  xxxx  209 xxxxx
Shrd StpDel:xxxxx xxxx xxxxx xxxxx xxxx xxxxx xxxxx xxxx xxxxx xxxxx  133 xxxxx
Shared LOS:    *    *     *     *    *     *     *    *     *     *    F     *
ApproachDel:    xxxxxx           xxxxxx           xxxxxx           133.3
ApproachLOS:       *                *                *                F
```



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Existing AM Plus Project   Wed Jan 14, 2004 12:42:56                Page 4-1
-------------------------------------------------------------------------------
                          Patterson Sand and Gravel
          Existing Plus "Maximum Practical Mining Rate" (No Haul Road)
                              "Highest" - AM Peak Hour
-------------------------------------------------------------------------------
                  Level Of Service Detailed Computation Report
                        2000 HCM Unsignalized Method
                           Base Volume Alternative
*******************************************************************************
Intersection #1 SR 65 and Riosa Road (Sheridan)
*******************************************************************************
Approach:      North Bound      South Bound      East Bound       West Bound
Movement:    L  -  T  -  R    L  -  T  -  R    L  -  T  -  R    L  -  T  -  R
------------|---------------||---------------||---------------||---------------|
HevVeh:            22%              11%              0%               57%
Grade:              0%               0%              0%                0%
Peds/Hour:          0                0               0                 0
Pedestrian Walk Speed: 4.00 feet/sec
LaneWidth:       12 feet          12 feet          12 feet          12 feet
Time Period: 0.25 hour
------------|---------------||---------------||---------------||---------------|
Upstream Signals:
Link Index:        #2
Dist(miles):       0.000
Speed (mph):        0.00
SignalIndex:       #2
Cycle Time:           0 secs
InitVolume:      0     0
Saturation:      0     0
ArrivalType:     0     0
G/C:          0.00  0.00
*** Computation 1: Time for Queue to Clear at Each Upstream Intersection
P:           0.000 0.000
gq1:          0.00  0.00
gq2:          0.00  0.00
gq:           0.00  0.00
*** Computation 2: Time Intersection Blocked Because of Upstream Platoons
alpha:            0.000
beta:             0.000
ta (secs):        0.000
F:                0.000
f:           0.000 0.000
vcmax:           0     0
vcmin:           0     0
tp:            0.0   0.0
p:                0.000
*** Computation 3: Platoon Event Periods
pdom/psubo:       0.000/0.000/Unconstrained
*** Computation 4: Conflicting Flows During Each Unblocked Period
InitCnflVol:   0 xxxxx xxxxx  504 xxxxx xxxxx    0     0     0 1222     0   445
UpstreamSat:   0 xxxxx xxxxx    0 xxxxx xxxxx    0     0     0    0     0     0
UpstreamAdj:1.00 x.xxx x.xxx 1.00 x.xxx x.xxx 1.00 1.000 1.000 1.00 1.000 1.000
ConflictVol:   0 xxxxx xxxxx  504 xxxxx xxxxx    0     0     0 1222     0   445
*** Computation 5: Capactiy for Subject Movement During Unblocked Period
InitPotCap:    0 xxxxx xxxxx 1016 xxxxx xxxxx    0     0     0  154     0   513
UpstreamAdj:1.00 x.xxx x.xxx 1.00 x.xxx x.xxx 1.00 1.000 1.000 1.00 1.000 1.000
PotentCap:     0 xxxxx xxxxx 1016 xxxxx xxxxx    0     0     0  154     0   513
```

Existing AM Plus Project Wed Jan 14, 2004 12:42:56 Page 5-1

Patterson Sand and Gravel
Existing Plus "Maximum Practical Mining Rate" (No Haul Road)
"Highest" - AM Peak Hour

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

Intersection #2 SR 65 and SR 193 (Lincoln)

Cycle (sec): 100 Critical Vol./Cap. (X): 0.767
Loss Time (sec): 0 (Y+R = 4 sec) Average Delay (sec/veh): 23.0
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:	Protected				Protected				Permitted				Permitted			
Rights:	Include				Include				Include				Ovl			
Min. Green:	0	0	0		0	0	0		0	0	0		0	0	0	
Lanes:	1	0	0	1 0	1	0	0	1 0	0	0	1!	0 0	0	1	0	0 1
Volume Module:																
Base Vol:	0	511	83		150	662	0		0	0	0		249	0	106	
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	511	83		150	662	0		0	0	0		249	0	106	
User Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
PHF Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
PHF Volume:	0	511	83		150	662	0		0	0	0		249	0	106	
Reduct Vol:	0	0	0		0	0	0		0	0	0		0	0	0	
Reduced Vol:	0	511	83		150	662	0		0	0	0		249	0	106	
PCE Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
MLF Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
Final Vol.:	0	511	83		150	662	0		0	0	0		249	0	106	
Saturation Flow Module:																
Sat/Lane:	1900	1900	1900		1900	1900	1900		1900	1900	1900		1900	1900	1900	
Adjustment:	1.00	0.73	0.73		0.70	0.73	1.00		1.00	1.00	1.00		0.59	1.00	0.69	
Lanes:	1.00	0.86	0.14		1.00	1.00	0.00		0.00	1.00	0.00		1.00	0.00	1.00	
Final Sat.:	1900	1190	193		1321	1390	0		0	1900	0		1112	0	1310	
Capacity Analysis Module:																
Vol/Sat:	0.00	0.43	0.43		0.11	0.48	0.00		0.00	0.00	0.00		0.22	0.00	0.08	
Crit Moves:		****			****								****			
Green/Cycle:	0.00	0.56	0.56		0.15	0.71	0.00		0.00	0.00	0.00		0.29	0.00	0.44	
Volume/Cap:	0.00	0.77	0.77		0.77	0.67	0.00		0.00	0.00	0.00		0.77	0.00	0.18	
Delay/Veh:	0.0	21.6	21.6		57.5	10.0	0.0		0.0	0.0	0.0		42.8	0.0	17.2	
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	21.6	21.6		57.5	10.0	0.0		0.0	0.0	0.0		42.8	0.0	17.2	
DesignQueue:	0	14	2		7	12	0		0	0	0		10	0	3	

Existing AM Plus Project Wed Jan 14, 2004 12:42:56 Page 6-1

Patterson Sand and Gravel
Existing Plus "Maximum Practical Mining Rate" (No Haul Road)
"Highest" - AM Peak Hour

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

Intersection #2 SR 65 and SR 193 (Lincoln)

Approach:	North Bound				South Bound				East Bound				West Bound			
Movement:	L	-	T	- R	L	-	T	- R	L	-	T	- R	L	-	T	- R
HCM Ops Adjusted Lane Utilization Module:																
Lanes:	1	0	0	1 0	1	0	0	1 0	0	0	1!	0 0	0	1	0	0 1
Lane Group:	L		RT		RT	L	RT	RT	LTR	LTR	LTR		LT	LT	R	
#LnsInGrps:	1	1	1		1	1	1	1	1	1	1		1	1	1	
HCM Ops Input Saturation Adj Module:																
Lane Width:	12	12	12		12	12	12		12	12	12		12	12	12	
CrosswalkWid		8				8				8				8		
% Hev Veh:		21				23				0				11		
Grade:		0%				0%				0%				0%		
Parking/Hr:		No				No				No				No		
Bus Stp/Hr:		0				0				0				0		
Area Type:	< < < < < < < < < < < < < < < < CBD > > > > > > > > > > > > > > > >															
Cnft Ped/Hr:		0				0				0				0		
ExclusiveRT:		Include				Include				Include				Include		
% RT Prtct:		0				0				0				0		
HCM Ops f(lt) Adj Case Module:																
f(lt) Case:	xxxx	xxxx	xxxx		1	xxxx	xxxx		xxxx	xxxx	xxxx		5	xxxx	xxxx	
HCM Ops Saturation Adj Module:																
Ln Wid Adj:	xxxx	1.00	1.00		1.00	1.00	xxxxx		xxxx	xxxx	xxxxx		1.00	xxxx	1.00	
Hev Veh Adj:	xxxx	0.83	0.83		0.81	0.81	xxxxx		xxxx	xxxx	xxxxx		0.90	xxxx	0.90	
Grade Adj:	xxxx	1.00	1.00		1.00	1.00	xxxxx		xxxx	xxxx	xxxxx		1.00	xxxx	1.00	
Parking Adj:	xxxx	1.00	1.00		xxxx	1.00	xxxxx		xxxx	xxxx	xxxxx		xxxx	xxxx	1.00	
Bus Stp Adj:	xxxx	1.00	1.00		xxxx	1.00	xxxxx		xxxx	xxxx	xxxxx		xxxx	xxxx	1.00	
Area Adj:	xxxx	0.90	0.90		0.90	0.90	xxxxx		xxxx	xxxx	xxxxx		0.90	xxxx	0.90	
RT Adj:	xxxx	0.98	0.98		xxxx	xxxx	xxxxx		xxxx	xxxx	xxxxx		xxxx	xxxx	0.85	
LT Adj:	xxxx	xxxx	xxxxx		0.95	xxxx	xxxxx		xxxx	xxxx	xxxxx		0.72	xxxx	xxxxx	
PedBike Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
HCM Sat Adj:	1.00	0.73	0.73		0.70	0.73	1.00		1.00	1.00	1.00		0.59	1.00	0.69	
Usr Sat Adj:	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 Sat Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
Fnl Sat Adj:	1.00	0.73	0.73		0.70	0.73	1.00		1.00	1.00	1.00		0.59	1.00	0.69	
Delay Adjustment Factor Module:																
Coordinated:	< < < < < < < < < < < < < < < < No > > > > > > > > > > > > > > > >															
Signal Type:	< < < < < < < < < < < < < Actuated > > > > > > > > > > > > > >															
DelAdjFctr:	0.00	1.00	1.00		1.00	1.00	0.00		0.00	0.00	0.00		1.00	0.00	1.00	

Patterson Sand and Gravel
Existing Plus "Maximum Practical Mining Rate" (No Haul Road)
"Highest" - AM Peak Hour

Level Of Service Detailed Computation Report (Permitted Left Turn Sat Adj)
2000 HCM Operations Method
Base Volume Alternative

Intersection #2 SR 65 and SR 193 (Lincoln)

Approach:	North	South	East	West
Cycle Length, C:	xxxxxx	xxxxxx	xxxxxx	100
Actual Green Time Per Lane Group, G:	xxxxxx	xxxxxx	xxxxxx	25.20
Effective Green Time Per Lane Group, g:	xxxxxx	xxxxxx	xxxxxx	29.20
Opposing Effective Green Time, go:	xxxxxx	xxxxxx	xxxxxx	29.20
Number Of Opposing Lanes, No:	xxxxxx	xxxxxx	xxxxxx	1
Number Of Lanes In Lane Group, N:	xxxxxx	xxxxxx	xxxxxx	1
Adjusted Left-Turn Flow Rate, Vlt:	xxxxxx	xxxxxx	xxxxxx	249
Proportion of Left Turns in Lane Group, Plt:	xxxxxx	xxxxxx	xxxxxx	1.00
Proportion of Left Turns in Opp Flow, Plto:	xxxxxx	xxxxxx	xxxxxx	1.00
Left Turns Per Cycle, LTC:	xxxxxx	xxxxxx	xxxxxx	6.92
Adjusted Opposing Flow Rate, Vo:	xxxxxx	xxxxxx	xxxxxx	0
Opposing Flow Per Lane Per Cycle, Volc:	xxxxxx	xxxxxx	xxxxxx	0.00
Opposing Platoon Ratio, Rpo:	xxxxxx	xxxxxx	xxxxxx	1.00
Lost Time Per Phase, tl:	xxxxxx	xxxxxx	xxxxxx	0.00
Eff grn until arrival of left-turn car, gf:	xxxxxx	xxxxxx	xxxxxx	0.74
Opposing Queue Ratio, qro:	xxxxxx	xxxxxx	xxxxxx	0.71
Eff grn blocked by opposing queue, gq:	xxxxxx	xxxxxx	xxxxxx	0.00
Eff grn while left turns filter thru, gu:	xxxxxx	xxxxxx	xxxxxx	28.46
Max opposing cars arriving during gq-gf, n:	xxxxxx	xxxxxx	xxxxxx	0.00
Proportion of Opposing Thru & RT cars, ptho:	xxxxxx	xxxxxx	xxxxxx	0.00
Left-turn Saturation Factor, fs:	xxxxxx	xxxxxx	xxxxxx	xxxxxx
Proportion of Left Turns in Shared Lane, pl:	xxxxxx	xxxxxx	xxxxxx	1.00
Through-car Equivalents, el1:	xxxxxx	xxxxxx	xxxxxx	1.40
Single Lane Through-car Equivalents, el2:	xxxxxx	xxxxxx	xxxxxx	1.00
Minimum Left Turn Adjustment Factor, fmin:	xxxxxx	xxxxxx	xxxxxx	0.14
Single Lane Left Turn Adjustment Factor, fm:	xxxxxx	xxxxxx	xxxxxx	0.72
Left Turn Adjustment Factor, flt:	xxxxxx	xxxxxx	xxxxxx	0.72

Patterson Sand and Gravel
Existing Plus "Maximum Practical Mining Rate" (No Haul Road)
"Highest" - AM Peak Hour

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

Intersection #4 Riosa Rd and 11th St

Cycle (sec): 100 Critical Vol./Cap. (X): 0.305
Loss Time (sec): 0 (Y+R = 4 sec) Average Delay (sec/veh): 9.7
Optimal Cycle: 0 Level Of Service: A

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Stop Sign			Stop Sign			Stop Sign			Stop Sign		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Lanes:	0 0	1! 0	0	0 0	1! 0	0	0 1	0 0	0	0 1	0 0	0
Volume Module:												
Base Vol:	3	2	2	6	4	11	6	89	0	1	213	0
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	3	2	2	6	4	11	6	89	0	1	213	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:	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 Volume:	3	2	2	6	4	11	6	89	0	1	213	0
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	3	2	2	6	4	11	6	89	0	1	213	0
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Final Vol.:	3	2	2	6	4	11	6	89	0	1	213	0
Saturation Flow Module:												
Adjustment:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Lanes:	0.43	0.28	0.29	0.29	0.19	0.52	0.06	0.94	0.00	0.01	0.99	0.00
Final Sat.:	314	209	209	218	145	400	44	645	0	3	699	0
Capacity Analysis Module:												
Vol/Sat:	0.01	0.01	0.01	0.03	0.03	0.03	0.14	0.14	xxxx	0.30	0.30	xxxx
Crit Moves:	****			****				****		****		
Delay/Veh:	7.7	7.7	7.7	7.6	7.6	7.6	9.0	9.0	0.0	10.3	10.3	0.0
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:	7.7	7.7	7.7	7.6	7.6	7.6	9.0	9.0	0.0	10.3	10.3	0.0
LOS by Move:	A	A	A	A	A	A	A	A	*	B	B	*
ApproachDel:	7.7			7.6			9.0			10.3		
Delay Adj:	1.00			1.00			1.00			1.00		
ApprAdjDel:	7.7			7.6			9.0			10.3		
LOS by Appr:	A			A			A			B		

Existing AM Plus Project Wed Jan 14, 2004 12:42:56 Page 8-1

Patterson Sand and Gravel
Existing Plus "Maximum Practical Mining Rate" (No Haul Road)
"Highest" - AM Peak Hour

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

****
Intersection #4 Riosa Rd and 11th St
****

Approach:	North Bound	South Bound	East Bound	West Bound
Movement:	L - T - R	L - T - R	L - T - R	L - T - R
Time Period: 0.25 hour				
HevVeh:	0%	0%	56%	60%
Alpha Value: 0.01				
GroupType:	1	1	1	1
P[C1]:	0.5864	0.5966	0.6730	0.8336
P[C2]:	0.0156	0.0054	0.2924	0.1318
P[C3]:	0.3474	0.3535	0.0240	0.0297
P[C4]:	0.0495	0.0442	0.0106	0.0049
P[C5]:	0.0011	0.0004	0.0001	0.0000
Padj[C1]:	0.00863	0.00846	0.00372	0.00206
Padj[C2]:	0.00434	0.00437	-0.00247	-0.00092
Padj[C3]:	-0.00991	-0.01015	-0.00061	-0.00084
Padj[C4]:	-0.00296	-0.00265	-0.00063	-0.00029
Padj[C5]:	-0.00011	-0.00004	-0.00001	-0.00000
Lane:	L1	L1	L1	L1
LaneType:	LEFTTHRURITE	LEFTTHRURITE	LEFTTHRURITE	LEFTTHRURITE
HeadwayAdj:	-0.086	-0.257	0.965	1.021
Volume:	7	21	95	214
Capacity:	732	763	689	703
DegOfUtil:	0.01	0.03	0.14	0.30
DepHeadway:	4.62	4.43	5.17	5.09
ServiceTime:	2.6	2.4	3.2	3.1
Delay:	7.7	7.6	9.0	10.3
Approach:	North Bound	South Bound	East Bound	West Bound
ApproachDel:	7.7	7.6	9.0	10.3
Delay Adj:	1.00	1.00	1.00	1.00
ApprAdjDel:	7.7	7.6	9.0	10.3
LOS by Appr:	A	A	A	B
OverallDel:		9.7		
OverallLOS:		A		

Existing AM Plus Project Wed Jan 14, 2004 12:42:56 Page 9-1

Patterson Sand and Gravel
Existing Plus "Maximum Practical Mining Rate" (No Haul Road)
"Highest" - AM Peak Hour

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

****
Intersection #5 Riosa Rd and Karchner Rd
****

Average Delay (sec/veh): 7.1 Worst Case 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			Uncontrolled			Uncontrolled		
Rights:	Include			Include			Include			Include		
Lanes:	0 0	0 0	0	0 0	1! 0	0	0 1	0 0	0	0 0	0 1	0
Volume Module:												
Base Vol:	0	0	0	15	0	127	58	16	0	0	28	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:	0	0	0	15	0	127	58	16	0	0	28	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:	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 Volume:	0	0	0	15	0	127	58	16	0	0	28	1
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Final Vol.:	0	0	0	15	0	127	58	16	0	0	28	1
Critical Gap Module:												
Critical Gp:	xxxxx	xxxx	xxxxx	7.3	xxxx	7.1	4.8	xxxx	xxxxx	xxxxx	xxxx	xxxxx
FollowUpTim:	xxxxx	xxxx	xxxxx	4.3	xxxx	4.1	2.9	xxxx	xxxxx	xxxxx	xxxx	xxxxx
Capacity Module:												
Cnflict Vol:	xxxx	xxxx	xxxxx	161	xxxx	29	29	xxxx	xxxxx	xxxx	xxxx	xxxxx
Potent Cap.:	xxxx	xxxx	xxxxx	666	xxxx	845	1226	xxxx	xxxxx	xxxx	xxxx	xxxxx
Move Cap.:	xxxx	xxxx	xxxxx	641	xxxx	845	1226	xxxx	xxxxx	xxxx	xxxx	xxxxx
Level Of Service Module:												
Stopped Del:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	8.1	xxxx	xxxxx	xxxxx	xxxx	xxxxx
LOS by Move:	*	*	*	*	*	*	A	*	*	*	*	*
Movement:	LT - LTR - RT			LT - LTR - RT			LT - LTR - RT			LT - LTR - RT		
Shared Cap.:	xxxx	xxxx	xxxxx	xxxx	818	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx
Shrd StpDel:	xxxxx	xxxx	xxxxx	xxxxx	10.3	xxxxx	8.1	xxxx	xxxxx	xxxxx	xxxx	xxxxx
Shared LOS:	*	*	*	*	B	*	A	*	*	*	*	*
ApproachDel:	xxxxxx			10.3			xxxxxx			xxxxxx		
ApproachLOS:	*			B			*			*		

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Patterson Sand and Gravel
Existing Plus "Maximum Practical Mining Rate" (No Haul Road)
"Highest" - AM Peak Hour

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

****
Intersection #5 Riosa Rd and Karchner Rd
****

Approach:	North Bound	South Bound	East Bound	West Bound
Movement:	L - T - R	L - T - R	L - T - R	L - T - R
HevVeh:	0%	88%	73%	10%
Grade:	0%	0%	0%	0%
Peds/Hour:	0	0	0	0
Pedestrian Walk Speed: 4.00 feet/sec				
LaneWidth:	12 feet	12 feet	12 feet	12 feet

Time Period: 0.25 hour

Existing PM Plus Project Wed Jan 14, 2004 13:13:29 Page 1-1

Patterson Sand and Gravel
Existing Plus "Maximum Practical Mining Rate" (No Haul Road)
"Highest" - PM Peak Hour

Scenario Report

Scenario:	Existing PM Plus Project
Command:	Existing PM Plus Project
Volume:	Existing PM Plus Project
Geometry:	Existing PM Plus Project
Impact Fee:	Default Impact Fee
Trip Generation:	Default Trip Generation
Trip Distribution:	Default Trip Distribution
Paths:	Default Paths
Routes:	Default Routes
Configuration:	Default Configuration

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Patterson Sand and Gravel
Existing Plus "Maximum Practical Mining Rate" (No Haul Road)
"Highest" - PM Peak Hour

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 65 and Riosa Road (Sheridan	E	3.3	0.000	E	3.3	0.000	+ 0.000 V/C
# 2 SR 65 and SR 193 (Lincoln)	C	32.1	0.920	C	32.1	0.920	+ 0.000 D/V
# 4 Riosa Rd and 11th St	A	7.8	0.128	A	7.8	0.128	+ 0.000 V/C
# 5 Riosa Rd and Karchner Rd	A	4.5	0.000	A	4.5	0.000	+ 0.000 V/C

Patterson Sand and Gravel
Existing Plus "Maximum Practical Mining Rate" (No Haul Road)
"Highest" - PM Peak Hour

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

****
Intersection #1 SR 65 and Riosa Road (Sheridan)
****
Average Delay (sec/veh): 3.3 Worst Case 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:	Uncontrolled			Uncontrolled			Stop Sign			Stop Sign		
Rights:	Include			Include			Include			Include		
Lanes:	0 0	1	0 1	1 0	1	0 0	0 0	0	0 0	0 0	1!	0 0
Volume Module:												
Base Vol:	0	745	107	88	563	0	0	0	0	44	0	62
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	745	107	88	563	0	0	0	0	44	0	62
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	0	745	107	88	563	0	0	0	0	44	0	62
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Final Vol.:	0	745	107	88	563	0	0	0	0	44	0	62
Critical Gap Module:												
Critical Gp:	xxxxx	xxxx	xxxxx	4.1	xxxx	xxxxx	xxxxx	xxxx	xxxxx	6.5	xxxx	6.3
FollowUpTim:	xxxxx	xxxx	xxxxx	2.2	xxxx	xxxxx	xxxxx	xxxx	xxxxx	3.6	xxxx	3.4
Capacity Module:												
Cnflict Vol:	xxxx	xxxx	xxxxx	852	xxxx	xxxxx	xxxx	xxxx	xxxxx	1484	xxxx	745
Potent Cap.:	xxxx	xxxx	xxxxx	774	xxxx	xxxxx	xxxx	xxxx	xxxxx	130	xxxx	398
Move Cap.:	xxxx	xxxx	xxxxx	774	xxxx	xxxxx	xxxx	xxxx	xxxxx	119	xxxx	398
Level Of Service Module:												
Stopped Del:	xxxxx	xxxx	xxxxx	10.2	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx
LOS by Move:	*	*	*	B	*	*	*	*	*	*	*	*
Movement:	LT -	LTR -	RT	LT -	LTR -	RT	LT -	LTR -	RT	LT -	LTR -	RT
Shared Cap.:	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	202	xxxxx
Shrd StpDel:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	41.0	xxxxx
Shared LOS:	*	*	*	*	*	*	*	*	*	*	E	*
ApproachDel:	xxxxxx			xxxxxx			xxxxxx			41.0		
ApproachLOS:	*			*			*			E		

Patterson Sand and Gravel
Existing Plus "Maximum Practical Mining Rate" (No Haul Road)
"Highest" - PM Peak Hour

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

****
Intersection #1 SR 65 and Riosa Road (Sheridan)
****

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
HevVeh:	4%			5%			0%			12%		
Grade:	0%			0%			0%			0%		
Peds/Hour:	0			0			0			0		
Pedestrian Walk Speed: 4.00 feet/sec												
LaneWidth:	12 feet			12 feet			12 feet			12 feet		
Time Period: 0.25 hour												

Upstream Signals:
Link Index: #2
Dist(miles): 0.000
Speed (mph): 0.00
SignalIndex: #2
Cycle Time: 0 secs
InitVolume: 0 0
Saturation: 0 0
ArrivalType: 0 0
G/C: 0.00 0.00
*** Computation 1: Time for Queue to Clear at Each Upstream Intersection
P: 0.000 0.000
gq1: 0.00 0.00
gq2: 0.00 0.00
gq: 0.00 0.00
*** Computation 2: Time Intersection Blocked Because of Upstream Platoons
alpha: 0.000
beta: 0.000
ta (secs): 0.000
F: 0.000
f: 0.000 0.000
vcmax: 0 0
vcmin: 0 0
tp: 0.0 0.0
p: 0.000
*** Computation 3: Platoon Event Periods
pdom/psubo: 0.000/0.000/Unconstrained
*** Computation 4: Conflicting Flows During Each Unblocked Period

InitCnflVol:	0	xxxxx	xxxxx	852	xxxxx	xxxxx	0	0	0	1484	0	745
UpstreamSat:	0	xxxxx	xxxxx	0	xxxxx	xxxxx	0	0	0	0	0	0
UpstreamAdj:	1.00	x.xxx	x.xxx	1.00	x.xxx	x.xxx	1.00	1.000	1.000	1.00	1.000	1.000
ConflictVol:	0	xxxxx	xxxxx	852	xxxxx	xxxxx	0	0	0	1484	0	745

*** Computation 5: Capactiy for Subject Movement During Unblocked Period

InitPotCap:	0	xxxxx	xxxxx	774	xxxxx	xxxxx	0	0	0	130	0	398
UpstreamAdj:	1.00	x.xxx	x.xxx	1.00	x.xxx	x.xxx	1.00	1.000	1.000	1.00	1.000	1.000
PotentCap:	0	xxxxx	xxxxx	774	xxxxx	xxxxx	0	0	0	130	0	398

Existing PM Plus Project Wed Jan 14, 2004 13:13:29 Page 5-1

Patterson Sand and Gravel
Existing Plus "Maximum Practical Mining Rate" (No Haul Road)
"Highest" - PM Peak Hour

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

Intersection #2 SR 65 and SR 193 (Lincoln)

Cycle (sec): 100 Critical Vol./Cap. (X): 0.920
Loss Time (sec): 0 (Y+R = 4 sec) Average Delay (sec/veh): 32.1
Optimal Cycle: 180 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				Permitted				Permitted			
Rights:	Include				Include				Include				Ovl			
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Lanes:	1	0	0	1 0	1	0	0	1 0	0	0	1!	0 0	0	1	0	0 1
Volume Module:																
Base Vol:	0	844	89		178	584	0		0	0	0		281	0	267	
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	844	89		178	584	0		0	0	0		281	0	267	
User Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
PHF Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
PHF Volume:	0	844	89		178	584	0		0	0	0		281	0	267	
Reduct Vol:	0	0	0		0	0	0		0	0	0		0	0	0	
Reduced Vol:	0	844	89		178	584	0		0	0	0		281	0	267	
PCE Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
MLF Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
Final Vol.:	0	844	89		178	584	0		0	0	0		281	0	267	
Saturation Flow Module:																
Sat/Lane:	1900	1900	1900		1900	1900	1900		1900	1900	1900		1900	1900	1900	
Adjustment:	1.00	0.86	0.86		0.81	0.86	1.00		1.00	1.00	1.00		0.63	1.00	0.74	
Lanes:	1.00	0.90	0.10		1.00	1.00	0.00		0.00	1.00	0.00		1.00	0.00	1.00	
Final Sat.:	1900	1481	156		1547	1628	0		0	1900	0		1194	0	1411	
Capacity Analysis Module:																
Vol/Sat:	0.00	0.57	0.57		0.12	0.36	0.00		0.00	0.00	0.00		0.24	0.00	0.19	
Crit Moves:		****			****								****			
Green/Cycle:	0.00	0.62	0.62		0.13	0.74	0.00		0.00	0.00	0.00		0.26	0.00	0.38	
Volume/Cap:	0.00	0.92	0.92		0.92	0.48	0.00		0.00	0.00	0.00		0.92	0.00	0.50	
Delay/Veh:	0.0	30.0	30.0		86.0	5.4	0.0		0.0	0.0	0.0		67.8	0.0	24.4	
User DelAdj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
AdjDel/Veh:	0.0	30.0	30.0		86.0	5.4	0.0		0.0	0.0	0.0		67.8	0.0	24.4	
DesignQueue:	0	21	2		9	9	0		0	0	0		12	0	10	

Existing PM Plus Project Wed Jan 14, 2004 13:13:29 Page 6-1

Patterson Sand and Gravel
Existing Plus "Maximum Practical Mining Rate" (No Haul Road)
"Highest" - PM Peak Hour

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

Intersection #2 SR 65 and SR 193 (Lincoln)

Approach:	North Bound				South Bound				East Bound				West Bound			
Movement:	L	-	T	- R	L	-	T	- R	L	-	T	- R	L	-	T	- R
HCM Ops Adjusted Lane Utilization Module:																
Lanes:	1	0	0	1 0	1	0	0	1 0	0	0	1!	0 0	0	1	0	0 1
Lane Group:	L		RT	RT	L		RT	RT	LTR		LTR	LTR	LT		LT	R
#LnsInGrps:	1		1	1	1		1	1	1		1	1	1		1	1
HCM Ops Input Saturation Adj Module:																
Lane Width:	12		12	12	12		12	12	12		12	12	12		12	12
CrosswalkWid			8				8				8				8	
% Hev Veh:			3				5				0				3	
Grade:			0%				0%				0%				0%	
Parking/Hr:			No				No				No				No	
Bus Stp/Hr:			0				0				0				0	
Area Type:	< < < < < < < < < < < < < < < < CBD > > > > > > > > > > > > > > > >															
Cnft Ped/Hr:			0				0				0				0	
ExclusiveRT:			Include				Include				Include				Include	
% RT Prtct:			0				0				0				0	
HCM Ops f(lt) Adj Case Module:																
f(lt) Case:	xxxx	xxxx	xxxx		1	xxxx	xxxx		xxxx	xxxx	xxxx		5	xxxx	xxxx	
HCM Ops Saturation Adj Module:																
Ln Wid Adj:	xxxx	1.00	1.00		1.00	1.00	xxxxx		xxxx	xxxx	xxxxx		1.00	xxxx	1.00	
Hev Veh Adj:	xxxx	0.97	0.97		0.95	0.95	xxxxx		xxxx	xxxx	xxxxx		0.97	xxxx	0.97	
Grade Adj:	xxxx	1.00	1.00		1.00	1.00	xxxxx		xxxx	xxxx	xxxxx		1.00	xxxx	1.00	
Parking Adj:	xxxx	1.00	1.00		xxxx	1.00	xxxxx		xxxx	xxxx	xxxxx		xxxx	xxxx	1.00	
Bus Stp Adj:	xxxx	1.00	1.00		xxxx	1.00	xxxxx		xxxx	xxxx	xxxxx		xxxx	xxxx	1.00	
Area Adj:	xxxx	0.90	0.90		0.90	0.90	xxxxx		xxxx	xxxx	xxxxx		0.90	xxxx	0.90	
RT Adj:	xxxx	0.99	0.99		xxxx	xxxx	xxxxx		xxxx	xxxx	xxxxx		xxxx	xxxx	0.85	
LT Adj:	xxxx	xxxx	xxxxx		0.95	xxxx	xxxxx		xxxx	xxxx	xxxxx		0.72	xxxx	xxxxx	
PedBike Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
HCM Sat Adj:	1.00	0.86	0.86		0.81	0.86	1.00		1.00	1.00	1.00		0.63	1.00	0.74	
Usr Sat Adj:	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 Sat Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
Fnl Sat Adj:	1.00	0.86	0.86		0.81	0.86	1.00		1.00	1.00	1.00		0.63	1.00	0.74	
Delay Adjustment Factor Module:																
Coordinated:	< < < < < < < < < < < < < < < < No > > > > > > > > > > > > > > > >															
Signal Type:	< < < < < < < < < < < < < Actuated > > > > > > > > > > > > > > >															
DelAdjFctr:	0.00	1.00	1.00		1.00	1.00	0.00		0.00	0.00	0.00		1.00	0.00	1.00	

Existing PM Plus Project Wed Jan 14, 2004 13:13:29 Page 6-2

Patterson Sand and Gravel
Existing Plus "Maximum Practical Mining Rate" (No Haul Road)
"Highest" - PM Peak Hour

Level Of Service Detailed Computation Report (Permitted Left Turn Sat Adj)
2000 HCM Operations Method
Base Volume Alternative

****
Intersection #2 SR 65 and SR 193 (Lincoln)
****

Approach:	North	South	East	West
Cycle Length, C:	xxxxxx	xxxxxx	xxxxxx	100
Actual Green Time Per Lane Group, G:	xxxxxx	xxxxxx	xxxxxx	21.56
Effective Green Time Per Lane Group, g:	xxxxxx	xxxxxx	xxxxxx	25.56
Opposing Effective Green Time, go:	xxxxxx	xxxxxx	xxxxxx	25.56
Number Of Opposing Lanes, No:	xxxxxx	xxxxxx	xxxxxx	1
Number Of Lanes In Lane Group, N:	xxxxxx	xxxxxx	xxxxxx	1
Adjusted Left-Turn Flow Rate, Vlt:	xxxxxx	xxxxxx	xxxxxx	281
Proportion of Left Turns in Lane Group, Plt:	xxxxxx	xxxxxx	xxxxxx	1.00
Proportion of Left Turns in Opp Flow, Plto:	xxxxxx	xxxxxx	xxxxxx	1.00
Left Turns Per Cycle, LTC:	xxxxxx	xxxxxx	xxxxxx	7.81
Adjusted Opposing Flow Rate, Vo:	xxxxxx	xxxxxx	xxxxxx	0
Opposing Flow Per Lane Per Cycle, Volc:	xxxxxx	xxxxxx	xxxxxx	0.00
Opposing Platoon Ratio, Rpo:	xxxxxx	xxxxxx	xxxxxx	1.00
Lost Time Per Phase, tl:	xxxxxx	xxxxxx	xxxxxx	0.00
Eff grn until arrival of left-turn car, gf:	xxxxxx	xxxxxx	xxxxxx	0.46
Opposing Queue Ratio, qro:	xxxxxx	xxxxxx	xxxxxx	0.74
Eff grn blocked by opposing queue, gq:	xxxxxx	xxxxxx	xxxxxx	0.00
Eff grn while left turns filter thru, gu:	xxxxxx	xxxxxx	xxxxxx	25.10
Max opposing cars arriving during gq-gf, n:	xxxxxx	xxxxxx	xxxxxx	0.00
Proportion of Opposing Thru & RT cars, ptho:	xxxxxx	xxxxxx	xxxxxx	0.00
Left-turn Saturation Factor, fs:	xxxxxx	xxxxxx	xxxxxx	xxxxxx
Proportion of Left Turns in Shared Lane, pl:	xxxxxx	xxxxxx	xxxxxx	1.00
Through-car Equivalents, el1:	xxxxxx	xxxxxx	xxxxxx	1.40
Single Lane Through-car Equivalents, el2:	xxxxxx	xxxxxx	xxxxxx	1.00
Minimum Left Turn Adjustment Factor, fmin:	xxxxxx	xxxxxx	xxxxxx	0.16
Single Lane Left Turn Adjustment Factor, fm:	xxxxxx	xxxxxx	xxxxxx	0.72
Left Turn Adjustment Factor, flt:	xxxxxx	xxxxxx	xxxxxx	0.72

****

Existing PM Plus Project Wed Jan 14, 2004 13:13:29 Page 7-1

Patterson Sand and Gravel
Existing Plus "Maximum Practical Mining Rate" (No Haul Road)
"Highest" - PM Peak Hour

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

****
Intersection #4 Riosa Rd and 11th St
****

Cycle (sec): 100 Critical Vol./Cap. (X): 0.128
Loss Time (sec): 0 (Y+R = 4 sec) Average Delay (sec/veh): 7.8
Optimal Cycle: 0 Level Of Service: A

****

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Stop Sign			Stop Sign			Stop Sign			Stop Sign		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Lanes:	0 0	1! 0	0	0 0	0 1	0	0 1	0 0	0	0 1	0 0	0
Volume Module:												
Base Vol:	2	3	1	0	1	2	6	101	0	1	84	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:	2	3	1	0	1	2	6	101	0	1	84	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:	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 Volume:	2	3	1	0	1	2	6	101	0	1	84	0
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	2	3	1	0	1	2	6	101	0	1	84	0
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Final Vol.:	2	3	1	0	1	2	6	101	0	1	84	0
Saturation Flow Module:												
Adjustment:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Lanes:	0.33	0.50	0.17	0.00	0.33	0.67	0.06	0.94	0.00	0.01	0.99	0.00
Final Sat.:	269	403	134	0	292	585	47	789	0	10	827	0
Capacity Analysis Module:												
Vol/Sat:	0.01	0.01	0.01	xxxx	0.00	0.00	0.13	0.13	xxxx	0.10	0.10	xxxx
Crit Moves:		****				****	****			****		
Delay/Veh:	7.3	7.3	7.3	0.0	6.9	6.9	7.9	7.9	0.0	7.8	7.8	0.0
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:	7.3	7.3	7.3	0.0	6.9	6.9	7.9	7.9	0.0	7.8	7.8	0.0
LOS by Move:	A	A	A	*	A	A	A	A	*	A	A	*
ApproachDel:		7.3			6.9			7.9			7.8	
Delay Adj:		1.00			1.00			1.00			1.00	
ApprAdjDel:		7.3			6.9			7.9			7.8	
LOS by Appr:		A			A			A			A	

****

Existing PM Plus Project Wed Jan 14, 2004 13:13:29 Page 8-1

Patterson Sand and Gravel
Existing Plus "Maximum Practical Mining Rate" (No Haul Road)
"Highest" - PM Peak Hour

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

****

Intersection #4 Riosa Rd and 11th St

****

Approach:	North Bound	South Bound	East Bound	West Bound
Movement:	L - T - R	L - T - R	L - T - R	L - T - R
Time Period: 0.25 hour				
HevVeh:	0%	0%	16%	15%
Alpha Value: 0.01				
GroupType:	1	1	1	1
P[C1]:	0.7820	0.7790	0.8897	0.8637
P[C2]:	0.0026	0.0056	0.0999	0.1259
P[C3]:	0.2019	0.2011	0.0093	0.0090
P[C4]:	0.0135	0.0142	0.0011	0.0013
P[C5]:	0.0000	0.0001	0.0000	0.0000
Padj[C1]:	0.00447	0.00451	0.00122	0.00148
Padj[C2]:	0.00226	0.00224	-0.00088	-0.00114
Padj[C3]:	-0.00592	-0.00589	-0.00027	-0.00026
Padj[C4]:	-0.00081	-0.00085	-0.00006	-0.00008
Padj[C5]:	-0.00000	-0.00001	-0.00000	-0.00000
Lane:	L1	L1	L1	L1
LaneType:	LEFTTHRURITE	LEFTTHRURITE	LEFTTHRURITE	LEFTTHRURITE
HeadwayAdj:	-0.033	-0.400	0.283	0.257
Volume:	6	3	107	85
Capacity:	806	877	836	837
DegOfUtil:	0.01	0.00	0.13	0.10
DepHeadway:	4.28	3.92	4.28	4.28
ServiceTime:	2.3	1.9	2.3	2.3
Delay:	7.3	6.9	7.9	7.8
Approach:	North Bound	South Bound	East Bound	West Bound
ApproachDel:	7.3	6.9	7.9	7.8
Delay Adj:	1.00	1.00	1.00	1.00
ApprAdjDel:	7.3	6.9	7.9	7.8
LOS by Appr:	A	A	A	A
OverallDel:		7.8		
OverallLOS:		A		

Existing PM Plus Project Wed Jan 14, 2004 13:13:29 Page 9-1

Patterson Sand and Gravel
Existing Plus "Maximum Practical Mining Rate" (No Haul Road)
"Highest" - PM Peak Hour

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

****

Intersection #5 Riosa Rd and Karchner Rd

****

Average Delay (sec/veh): 4.5 Worst Case Level Of Service: A

****

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Stop Sign			Stop Sign			Uncontrolled			Uncontrolled		
Rights:	Include			Include			Include			Include		
Lanes:	0 0	0 0	0	0 0	1! 0	0	0 1	0 0	0	0 0	0 1	0
Volume Module:												
Base Vol:	0	0	0	7	0	23	28	23	0	0	19	5
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	7	0	23	28	23	0	0	19	5
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	0	0	0	7	0	23	28	23	0	0	19	5
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Final Vol.:	0	0	0	7	0	23	28	23	0	0	19	5
Critical Gap Module:												
Critical Gp:	xxxxx	xxxx	xxxxx	6.8	xxxx	6.6	4.4	xxxx	xxxxx	xxxxx	xxxx	xxxxx
FollowUpTim:	xxxxx	xxxx	xxxxx	3.9	xxxx	3.7	2.5	xxxx	xxxxx	xxxxx	xxxx	xxxxx
Capacity Module:												
Cnflict Vol:	xxxx	xxxx	xxxxx	101	xxxx	22	24	xxxx	xxxxx	xxxx	xxxx	xxxxx
Potent Cap.:	xxxx	xxxx	xxxxx	808	xxxx	949	1401	xxxx	xxxxx	xxxx	xxxx	xxxxx
Move Cap.:	xxxx	xxxx	xxxxx	795	xxxx	949	1401	xxxx	xxxxx	xxxx	xxxx	xxxxx
Level Of Service Module:												
Stopped Del:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	7.6	xxxx	xxxxx	xxxxx	xxxx	xxxxx
LOS by Move:	*	*	*	*	*	*	A	*	*	*	*	*
Movement:	LT - LTR - RT			LT - LTR - RT			LT - LTR - RT			LT - LTR - RT		
Shared Cap.:	xxxx	xxxx	xxxxx	xxxx	908	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx
Shrd StpDel:	xxxxx	xxxx	xxxxx	xxxxx	9.1	xxxxx	7.6	xxxx	xxxxx	xxxxx	xxxx	xxxxx
Shared LOS:	*	*	*	*	A	*	A	*	*	*	*	*
ApproachDel:	xxxxxx			9.1			xxxxxx			xxxxxx		
ApproachLOS:	*			A			*			*		

Existing PM Plus Project Wed Jan 14, 2004 13:13:29 Page 10-1

Patterson Sand and Gravel
Existing Plus "Maximum Practical Mining Rate" (No Haul Road)
"Highest" - PM Peak Hour

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

****
Intersection #5 Riosa Rd and Karchner Rd
****

Approach:	North Bound	South Bound	East Bound	West Bound
Movement:	L - T - R	L - T - R	L - T - R	L - T - R
HevVeh:	0%	43%	35%	0%
Grade:	0%	0%	0%	0%
Peds/Hour:	0	0	0	0
Pedestrian Walk Speed: 4.00 feet/sec				
LaneWidth:	12 feet	12 feet	12 feet	12 feet

Time Period: 0.25 hour

D3. Cumulative No Project

Cumulative AM Wed Jan 14, 2004 15:22:47 Page 1-1

Patterson Sand and Gravel
Cumulative Conditions -No Project
"Average Day" - AM Peak Hour

Scenario Report

Scenario:	Cumulative AM
Command:	Cumulative AM
Volume:	Cumulative AM
Geometry:	Cumulative AM
Impact Fee:	Default Impact Fee
Trip Generation:	Default Trip Generation
Trip Distribution:	Default Trip Distribution
Paths:	Default Paths
Routes:	Default Routes
Configuration:	Default Configuration

Cumulative AM Wed Jan 14, 2004 15:22:48 Page 2-1

Patterson Sand and Gravel
Cumulative Conditions -No Project
"Average Day" - AM Peak Hour

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 65 and Riosa Road (Sheridan	D	6.7	0.000	D	6.7	0.000	+ 0.000 V/C
# 2 SR 65 and SR 193 (Lincoln)	B	15.7	0.577	B	15.7	0.577	+ 0.000 D/V
# 4 Riosa Rd and 11th St	A	8.9	0.283	A	8.9	0.283	+ 0.000 V/C
# 5 Riosa Rd and Karchner Rd	A	4.5	0.000	A	4.5	0.000	+ 0.000 V/C

Cumulative AM Wed Jan 14, 2004 15:22:48 Page 3-1

Patterson Sand and Gravel
Cumulative Conditions -No Project
"Average Day" - AM Peak Hour

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

****

Intersection #1 SR 65 and Riosa Road (Sheridan)

****

Average Delay (sec/veh): 6.7 Worst Case 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:	Uncontrolled			Uncontrolled			Stop Sign			Stop Sign		
Rights:	Include			Include			Include			Include		
Lanes:	0 0 1	0	1	1 0 1	0	0	0 0 0	0	0	0 0 1!	0	0
Volume Module:												
Base Vol:	0	319	34	60	581	0	0	0	0	87	0	195
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	319	34	60	581	0	0	0	0	87	0	195
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	0	319	34	60	581	0	0	0	0	87	0	195
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Final Vol.:	0	319	34	60	581	0	0	0	0	87	0	195
Critical Gap Module:												
Critical Gp:	xxxxx	xxxx	xxxxx	4.2	xxxx	xxxxx	xxxxx	xxxx	xxxxx	6.6	xxxx	6.4
FollowUpTim:	xxxxx	xxxx	xxxxx	2.3	xxxx	xxxxx	xxxxx	xxxx	xxxxx	3.7	xxxx	3.5
Capacity Module:												
Cnflict Vol:	xxxx	xxxx	xxxxx	353	xxxx	xxxxx	xxxx	xxxx	xxxxx	1020	xxxx	319
Potent Cap.:	xxxx	xxxx	xxxxx	1157	xxxx	xxxxx	xxxx	xxxx	xxxxx	242	xxxx	680
Move Cap.:	xxxx	xxxx	xxxxx	1157	xxxx	xxxxx	xxxx	xxxx	xxxxx	232	xxxx	680
Level Of Service Module:												
Stopped Del:	xxxxx	xxxx	xxxxx	8.3	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx
LOS by Move:	*	*	*	A	*	*	*	*	*	*	*	*
Movement:	LT -	LTR -	RT	LT -	LTR -	RT	LT -	LTR -	RT	LT -	LTR -	RT
Shared Cap.:	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	426	xxxxx
Shrd StpDel:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	28.5	xxxxx
Shared LOS:	*	*	*	*	*	*	*	*	*	*	D	*
ApproachDel:	xxxxxx			xxxxxx			xxxxxx			28.5		
ApproachLOS:	*			*			*			D		

Cumulative AM Wed Jan 14, 2004 15:22:48 Page 4-1

Patterson Sand and Gravel
Cumulative Conditions -No Project
"Average Day" - AM Peak Hour

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

****

Intersection #1 SR 65 and Riosa Road (Sheridan)

****

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
HevVeh:	19%			11%			0%			21%		
Grade:	0%			0%			0%			0%		
Peds/Hour:	0			0			0			0		
Pedestrian Walk Speed: 4.00 feet/sec												
LaneWidth:	12 feet			12 feet			12 feet			12 feet		

Time Period: 0.25 hour

Cumulative AM Wed Jan 14, 2004 15:22:48 Page 5-1

Patterson Sand and Gravel
Cumulative Conditions -No Project
"Average Day" - AM Peak Hour

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

Intersection #2 SR 65 and SR 193 (Lincoln)

Cycle (sec): 100 Critical Vol./Cap. (X): 0.577
Loss Time (sec): 0 (Y+R = 4 sec) Average Delay (sec/veh): 15.7
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:	Protected				Protected				Permitted				Permitted			
Rights:	Include				Include				Include				Ovl			
Min. Green:	0	0	0		0	0	0		0	0	0		0	0	0	
Lanes:	1	0	0	1 0	1	0	0	1 0	0	0	1!	0 0	0	1	0	0 1
Volume Module:																
Base Vol:	0	433	29		182	619	0		0	0	0		62	0	302	
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	433	29		182	619	0		0	0	0		62	0	302	
User Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
PHF Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
PHF Volume:	0	433	29		182	619	0		0	0	0		62	0	302	
Reduct Vol:	0	0	0		0	0	0		0	0	0		0	0	0	
Reduced Vol:	0	433	29		182	619	0		0	0	0		62	0	302	
PCE Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
MLF Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
Final Vol.:	0	433	29		182	619	0		0	0	0		62	0	302	
Saturation Flow Module:																
Sat/Lane:	1900	1900	1900		1900	1900	1900		1900	1900	1900		1900	1900	1900	
Adjustment:	1.00	0.76	0.76		0.73	0.77	1.00		1.00	1.00	1.00		0.57	1.00	0.62	
Lanes:	1.00	0.94	0.06		1.00	1.00	0.00		0.00	1.00	0.00		1.00	0.00	1.00	
Final Sat.:	1900	1345	90		1389	1462	0		0	1900	0		1091	0	1182	
Capacity Analysis Module:																
Vol/Sat:	0.00	0.32	0.32		0.13	0.42	0.00		0.00	0.00	0.00		0.06	0.00	0.26	
Crit Moves:		****			****										****	
Green/Cycle:	0.00	0.56	0.56		0.23	0.78	0.00		0.00	0.00	0.00		0.22	0.00	0.44	
Volume/Cap:	0.00	0.58	0.58		0.58	0.54	0.00		0.00	0.00	0.00		0.26	0.00	0.58	
Delay/Veh:	0.0	15.5	15.5		37.0	4.6	0.0		0.0	0.0	0.0		33.2	0.0	22.5	
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	15.5	15.5		37.0	4.6	0.0		0.0	0.0	0.0		33.2	0.0	22.5	
DesignQueue:	0	11	1		8	8	0		0	0	0		3	0	10	

Cumulative AM Wed Jan 14, 2004 15:22:48 Page 6-1

Patterson Sand and Gravel
Cumulative Conditions -No Project
"Average Day" - AM Peak Hour

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

Intersection #2 SR 65 and SR 193 (Lincoln)

Approach:	North Bound				South Bound				East Bound				West Bound			
Movement:	L	-	T	- R	L	-	T	- R	L	-	T	- R	L	-	T	- R
HCM Ops Adjusted Lane Utilization Module:																
Lanes:	1	0	0	1 0	1	0	0	1 0	0	0	1!	0 0	0	1	0	0 1
Lane Group:	L		RT		RT	L		RT	RT	LTR	LTR	LTR	LT		LT	R
#LnsInGrps:	1		1		1	1		1	1	1	1	1	1		1	1
HCM Ops Input Saturation Adj Module:																
Lane Width:	12		12		12	12		12	12	12	12	12	12		12	12
CrosswalkWid			8					8			8				8	
% Hev Veh:			18					17			0				23	
Grade:			0%					0%			0%				0%	
Parking/Hr:			No					No			No				No	
Bus Stp/Hr:			0					0			0				0	
Area Type:	< < < < < < < < < < < < < < < < CBD > > > > > > > > > > > > > > > >															
Cnft Ped/Hr:			0					0			0				0	
ExclusiveRT:			Include					Include			Include				Include	
% RT Prtct:			0					0			0				0	
HCM Ops f(lt) Adj Case Module:																
f(lt) Case:	xxxx	xxxx	xxxx		1	xxxx	xxxx		xxxx	xxxx	xxxx		5	xxxx	xxxx	
HCM Ops Saturation Adj Module:																
Ln Wid Adj:	xxxx	1.00	1.00		1.00	1.00	xxxxx		xxxx	xxxx	xxxxx		1.00	xxxx	1.00	
Hev Veh Adj:	xxxx	0.85	0.85		0.86	0.86	xxxxx		xxxx	xxxx	xxxxx		0.81	xxxx	0.81	
Grade Adj:	xxxx	1.00	1.00		1.00	1.00	xxxxx		xxxx	xxxx	xxxxx		1.00	xxxx	1.00	
Parking Adj:	xxxx	1.00	1.00		xxxx	1.00	xxxxx		xxxx	xxxx	xxxxx		xxxx	xxxx	1.00	
Bus Stp Adj:	xxxx	1.00	1.00		xxxx	1.00	xxxxx		xxxx	xxxx	xxxxx		xxxx	xxxx	1.00	
Area Adj:	xxxx	0.90	0.90		0.90	0.90	xxxxx		xxxx	xxxx	xxxxx		0.90	xxxx	0.90	
RT Adj:	xxxx	0.99	0.99		xxxx	xxxx	xxxxx		xxxx	xxxx	xxxxx		xxxx	xxxx	0.85	
LT Adj:	xxxx	xxxx	xxxxx		0.95	xxxx	xxxxx		xxxx	xxxx	xxxxx		0.79	xxxx	xxxxx	
PedBike Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
HCM Sat Adj:	1.00	0.76	0.76		0.73	0.77	1.00		1.00	1.00	1.00		0.57	1.00	0.62	
Usr Sat Adj:	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 Sat Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
Fnl Sat Adj:	1.00	0.76	0.76		0.73	0.77	1.00		1.00	1.00	1.00		0.57	1.00	0.62	
Delay Adjustment Factor Module:																
Coordinated:	< < < < < < < < < < < < < < < < No > > > > > > > > > > > > > > > >															
Signal Type:	< < < < < < < < < < < < < Actuated > > > > > > > > > > > > > >															
DelAdjFctr:	0.00	1.00	1.00		1.00	1.00	0.00		0.00	0.00	0.00		1.00	0.00	1.00	

Cumulative AM Wed Jan 14, 2004 15:22:48 Page 6-2

Patterson Sand and Gravel
Cumulative Conditions -No Project
"Average Day" - AM Peak Hour

Level Of Service Detailed Computation Report (Permitted Left Turn Sat Adj)
2000 HCM Operations Method
Base Volume Alternative

****
Intersection #2 SR 65 and SR 193 (Lincoln)
****

Approach:	North	South	East	West
Cycle Length, C:	xxxxxx	xxxxxx	xxxxxx	100
Actual Green Time Per Lane Group, G:	xxxxxx	xxxxxx	xxxxxx	40.26
Effective Green Time Per Lane Group, g:	xxxxxx	xxxxxx	xxxxxx	44.26
Opposing Effective Green Time, go:	xxxxxx	xxxxxx	xxxxxx	44.26
Number Of Opposing Lanes, No:	xxxxxx	xxxxxx	xxxxxx	1
Number Of Lanes In Lane Group, N:	xxxxxx	xxxxxx	xxxxxx	1
Adjusted Left-Turn Flow Rate, Vlt:	xxxxxx	xxxxxx	xxxxxx	62
Proportion of Left Turns in Lane Group, Plt:	xxxxxx	xxxxxx	xxxxxx	1.00
Proportion of Left Turns in Opp Flow, Plto:	xxxxxx	xxxxxx	xxxxxx	1.00
Left Turns Per Cycle, LTC:	xxxxxx	xxxxxx	xxxxxx	1.72
Adjusted Opposing Flow Rate, Vo:	xxxxxx	xxxxxx	xxxxxx	0
Opposing Flow Per Lane Per Cycle, Volc:	xxxxxx	xxxxxx	xxxxxx	0.00
Opposing Platoon Ratio, Rpo:	xxxxxx	xxxxxx	xxxxxx	1.00
Lost Time Per Phase, tl:	xxxxxx	xxxxxx	xxxxxx	0.00
Eff grn until arrival of left-turn car, gf:	xxxxxx	xxxxxx	xxxxxx	10.95
Opposing Queue Ratio, qro:	xxxxxx	xxxxxx	xxxxxx	0.56
Eff grn blocked by opposing queue, gq:	xxxxxx	xxxxxx	xxxxxx	0.00
Eff grn while left turns filter thru, gu:	xxxxxx	xxxxxx	xxxxxx	33.31
Max opposing cars arriving during gq-gf, n:	xxxxxx	xxxxxx	xxxxxx	0.00
Proportion of Opposing Thru & RT cars, ptho:	xxxxxx	xxxxxx	xxxxxx	0.00
Left-turn Saturation Factor, fs:	xxxxxx	xxxxxx	xxxxxx	xxxxxx
Proportion of Left Turns in Shared Lane, pl:	xxxxxx	xxxxxx	xxxxxx	1.00
Through-car Equivalents, el1:	xxxxxx	xxxxxx	xxxxxx	1.40
Single Lane Through-car Equivalents, el2:	xxxxxx	xxxxxx	xxxxxx	1.00
Minimum Left Turn Adjustment Factor, fmin:	xxxxxx	xxxxxx	xxxxxx	0.09
Single Lane Left Turn Adjustment Factor, fm:	xxxxxx	xxxxxx	xxxxxx	0.78
Left Turn Adjustment Factor, flt:	xxxxxx	xxxxxx	xxxxxx	0.78

****

Cumulative AM Wed Jan 14, 2004 15:22:48 Page 7-1

Patterson Sand and Gravel
Cumulative Conditions -No Project
"Average Day" - AM Peak Hour

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

****
Intersection #4 Riosa Rd and 11th St
****

Cycle (sec): 100 Critical Vol./Cap. (X): 0.283
Loss Time (sec): 0 (Y+R = 4 sec) Average Delay (sec/veh): 8.9
Optimal Cycle: 0 Level Of Service: A

****

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Stop Sign			Stop Sign			Stop Sign			Stop Sign		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Lanes:	0 0	1! 0	0	0 0	1! 0	0	0 1	0 0	0	0 1	0 0	0
Volume Module:												
Base Vol:	6	4	4	11	7	20	13	105	0	2	217	0
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	6	4	4	11	7	20	13	105	0	2	217	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:	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 Volume:	6	4	4	11	7	20	13	105	0	2	217	0
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	6	4	4	11	7	20	13	105	0	2	217	0
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Final Vol.:	6	4	4	11	7	20	13	105	0	2	217	0
Saturation Flow Module:												
Adjustment:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Lanes:	0.43	0.28	0.29	0.29	0.18	0.53	0.11	0.89	0.00	0.01	0.99	0.00
Final Sat.:	311	208	208	220	140	400	83	666	0	7	766	0
Capacity Analysis Module:												
Vol/Sat:	0.02	0.02	0.02	0.05	0.05	0.05	0.16	0.16	xxxx	0.28	0.28	xxxx
Crit Moves:			****		****			****			****	
Delay/Veh:	7.7	7.7	7.7	7.6	7.6	7.6	8.6	8.6	0.0	9.4	9.4	0.0
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:	7.7	7.7	7.7	7.6	7.6	7.6	8.6	8.6	0.0	9.4	9.4	0.0
LOS by Move:	A	A	A	A	A	A	A	A	*	A	A	*
ApproachDel:	7.7			7.6			8.6			9.4		
Delay Adj:	1.00			1.00			1.00			1.00		
ApprAdjDel:	7.7			7.6			8.6			9.4		
LOS by Appr:	A			A			A			A		

****

Cumulative AM Wed Jan 14, 2004 15:22:48 Page 8-1

Patterson Sand and Gravel
Cumulative Conditions -No Project
"Average Day" - AM Peak Hour

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

****
Intersection #4 Riosa Rd and 11th St
****

Approach:	North Bound	South Bound	East Bound	West Bound
Movement:	L - T - R	L - T - R	L - T - R	L - T - R
Time Period:	0.25 hour			
HevVeh:	0%	0%	27%	27%
Alpha Value:	0.01			
GroupType:	1	1	1	1
P[C1]:	0.58	0.60	0.67	0.79
P[C2]:	0.03	0.01	0.26	0.15
P[C3]:	0.33	0.34	0.05	0.05
P[C4]:	0.06	0.05	0.02	0.01
P[C5]:	0.00	0.00	0.00	0.00
Padj[C1]:	0.009	0.008	0.004	0.003
Padj[C2]:	0.004	0.004	-0.002	-0.001
Padj[C3]:	-0.009	-0.010	-0.001	-0.001
Padj[C4]:	-0.003	-0.003	-0.001	-0.001
Padj[C5]:	-0.000	-0.000	-0.000	-0.000
Lane:	L1	L1	L1	L1
LaneType:	LEFTTHRURITE	LEFTTHRURITE	LEFTTHRURITE	LEFTTHRURITE
HeadwayAdj:	-0.086	-0.258	0.481	0.461
Volume:	14	38	118	219
Capacity:	727	759	749	773
DegOfUtil:	0.02	0.05	0.15	0.28
DepHeadway:	4.63	4.43	4.73	4.61
ServiceTime:	2.6	2.4	2.7	2.6
Delay:	7.7	7.6	8.6	9.4
Approach:	North Bound	South Bound	East Bound	West Bound
ApproachDel:	7.7	7.6	8.6	9.4
Delay Adj:	1.00	1.00	1.00	1.00
ApprAdjDel:	7.7	7.6	8.6	9.4
LOS by Appr:	A	A	A	A
OverallDel:		8.9		
OverallLOS:		A		

Cumulative AM Wed Jan 14, 2004 15:22:48 Page 9-1

Patterson Sand and Gravel
Cumulative Conditions -No Project
"Average Day" - AM Peak Hour

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

****
Intersection #5 Riosa Rd and Karchner Rd
****
Average Delay (sec/veh): 4.5 Worst Case Level Of Service: A
****

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	- T	- R	L	- T	- R	L	- T	- R	L	- T	- R
Control:	Stop Sign			Stop Sign			Uncontrolled			Uncontrolled		
Rights:	Include			Include			Include			Include		
Lanes:	0 0	0 0	0	0 0	1! 0	0	0 1	0 0	0	0 0	0 1	0
Volume Module:												
Base Vol:	0	0	0	23	0	54	31	38	0	0	52	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:	0	0	0	23	0	54	31	38	0	0	52	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:	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 Volume:	0	0	0	23	0	54	31	38	0	0	52	2
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Final Vol.:	0	0	0	23	0	54	31	38	0	0	52	2
Critical Gap Module:												
Critical Gp:	xxxxx	xxxx	xxxxx	7.1	xxxx	6.9	4.6	xxxx	xxxxx	xxxxx	xxxx	xxxxx
FollowUpTim:	xxxxx	xxxx	xxxxx	4.1	xxxx	3.9	2.6	xxxx	xxxxx	xxxxx	xxxx	xxxxx
Capacity Module:												
Cnflict Vol:	xxxx	xxxx	xxxxx	153	xxxx	53	54	xxxx	xxxxx	xxxx	xxxx	xxxxx
Potent Cap.:	xxxx	xxxx	xxxxx	710	xxxx	860	1307	xxxx	xxxxx	xxxx	xxxx	xxxxx
Move Cap.:	xxxx	xxxx	xxxxx	697	xxxx	860	1307	xxxx	xxxxx	xxxx	xxxx	xxxxx
Level Of Service Module:												
Stopped Del:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	7.8	xxxx	xxxxx	xxxxx	xxxx	xxxxx
LOS by Move:	*	*	*	*	*	*	A	*	*	*	*	*
Movement:	LT -	LTR -	RT	LT -	LTR -	RT	LT -	LTR -	RT	LT -	LTR -	RT
Shared Cap.:	xxxx	xxxx	xxxxx	xxxx	804	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx
Shrd StpDel:	xxxxx	xxxx	xxxxx	xxxxx	10.0	xxxxx	7.8	xxxx	xxxxx	xxxxx	xxxx	xxxxx
Shared LOS:	*	*	*	*	A	*	A	*	*	*	*	*
ApproachDel:	xxxxxx			10.0			xxxxxx			xxxxxx		
ApproachLOS:	*			A			*			*		

Cumulative AM Wed Jan 14, 2004 15:22:48 Page 10-1

Patterson Sand and Gravel
Cumulative Conditions -No Project
"Average Day" - AM Peak Hour

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

****
Intersection #5 Riosa Rd and Karchner Rd
****

Approach:	North Bound	South Bound	East Bound	West Bound
Movement:	L - T - R	L - T - R	L - T - R	L - T - R
HevVeh:	0%	66%	47%	15%
Grade:	0%	0%	0%	0%
Peds/Hour:	0	0	0	0
LaneWidth:	12 feet	12 feet	12 feet	12 feet

Pedestrian Walk Speed: 4.00 feet/sec
Time Period: 0.25 hour

Cumulative AM Thu Jan 15, 2004 10:06:32 Page 1-1

Patterson Sand and Gravel
Cumulative Conditions -No Project
"30th Highest" - AM Peak Hour

Scenario Report

Scenario:	Cumulative AM
Command:	Cumulative AM
Volume:	Cumulative AM
Geometry:	Cumulative AM
Impact Fee:	Default Impact Fee
Trip Generation:	Default Trip Generation
Trip Distribution:	Default Trip Distribution
Paths:	Default Paths
Routes:	Default Routes
Configuration:	Default Configuration

Cumulative AM Thu Jan 15, 2004 10:06:32 Page 2-1

Patterson Sand and Gravel
Cumulative Conditions -No Project
"30th Highest" - AM Peak Hour

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 65 and Riosa Road (Sheridan	E	9.9	0.000	E	9.9	0.000	+ 0.000 V/C
# 2 SR 65 and SR 193 (Lincoln)	B	15.7	0.587	B	15.7	0.587	+ 0.000 D/V
# 4 Riosa Rd and 11th St	A	9.4	0.327	A	9.4	0.327	+ 0.000 V/C
# 5 Riosa Rd and Karchner Rd	B	5.2	0.000	B	5.2	0.000	+ 0.000 V/C

Patterson Sand and Gravel
Cumulative Conditions -No Project
"30th Highest" - AM Peak Hour

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

****
Intersection #1 SR 65 and Riosa Road (Sheridan)
****
Average Delay (sec/veh): 9.9 Worst Case 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:	Uncontrolled			Uncontrolled			Stop Sign			Stop Sign		
Rights:	Include			Include			Include			Include		
Lanes:	0 0 1	0	1	1 0 1	0	0	0 0 0	0	0	0 0 1!	0	0
Volume Module:												
Base Vol:	0	319	44	61	581	0	0	0	0	109	0	200
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	319	44	61	581	0	0	0	0	109	0	200
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	0	319	44	61	581	0	0	0	0	109	0	200
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Final Vol.:	0	319	44	61	581	0	0	0	0	109	0	200
Critical Gap Module:												
Critical Gp:	xxxxx	xxxx	xxxxx	4.2	xxxx	xxxxx	xxxxx	xxxx	xxxxx	6.7	xxxx	6.5
FollowUpTim:	xxxxx	xxxx	xxxxx	2.3	xxxx	xxxxx	xxxxx	xxxx	xxxxx	3.8	xxxx	3.6
Capacity Module:												
Cnflict Vol:	xxxx	xxxx	xxxxx	363	xxxx	xxxxx	xxxx	xxxx	xxxxx	1022	xxxx	319
Potent Cap.:	xxxx	xxxx	xxxxx	1148	xxxx	xxxxx	xxxx	xxxx	xxxxx	234	xxxx	665
Move Cap.:	xxxx	xxxx	xxxxx	1148	xxxx	xxxxx	xxxx	xxxx	xxxxx	225	xxxx	665
Level Of Service Module:												
Stopped Del:	xxxxx	xxxx	xxxxx	8.3	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx
LOS by Move:	*	*	*	A	*	*	*	*	*	*	*	*
Movement:	LT -	LTR -	RT	LT -	LTR -	RT	LT -	LTR -	RT	LT -	LTR -	RT
Shared Cap.:	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	393	xxxxx
Shrd StpDel:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	40.5	xxxxx
Shared LOS:	*	*	*	*	*	*	*	*	*	*	E	*
ApproachDel:	xxxxxx			xxxxxx			xxxxxx			40.5		
ApproachLOS:	*			*			*			E		

Patterson Sand and Gravel
Cumulative Conditions -No Project
"30th Highest" - AM Peak Hour

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

****
Intersection #1 SR 65 and Riosa Road (Sheridan)
****

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
HevVeh:		21%			11%			0%			28%	
Grade:		0%			0%			0%			0%	
Peds/Hour:		0			0			0			0	
Pedestrian Walk Speed: 4.00 feet/sec												
LaneWidth:		12 feet			12 feet			12 feet			12 feet	

Time Period: 0.25 hour

Cumulative AM Thu Jan 15, 2004 10:06:32 Page 5-1

Patterson Sand and Gravel
Cumulative Conditions -No Project
"30th Highest" - AM Peak Hour

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

****
Intersection #2 SR 65 and SR 193 (Lincoln)
****

```
Cycle (sec):        100                Critical Vol./Cap. (X):        0.587
Loss Time (sec):      0 (Y+R =  4 sec) Average Delay (sec/veh):       15.7
Optimal Cycle:       45                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				Permitted				Permitted			
Rights:	Include				Include				Include				Ovl			
Min. Green:	0		0	0	0		0	0	0		0	0	0		0	0
Lanes:	1	0	0	1 0	1	0	0	1 0	0	0	1!	0 0	0	1	0	0 1
Volume Module:																
Base Vol:	0	441		29	187	636		0	0	0		0	62		0	304
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	441		29	187	636		0	0	0		0	62		0	304
User Adj:	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00		1.00	1.00
PHF Adj:	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00		1.00	1.00
PHF Volume:	0	441		29	187	636		0	0	0		0	62		0	304
Reduct Vol:	0	0		0	0	0		0	0	0		0	0		0	0
Reduced Vol:	0	441		29	187	636		0	0	0		0	62		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
Final Vol.:	0	441		29	187	636		0	0	0		0	62		0	304
Saturation Flow Module:																
Sat/Lane:	1900	1900		1900	1900	1900		1900	1900	1900		1900	1900		1900	1900
Adjustment:	1.00	0.75		0.75	0.72	0.76		1.00	1.00	1.00		0.57	1.00		0.62	1.00
Lanes:	1.00	0.94		0.06	1.00	1.00		0.00	0.00	1.00		0.00	1.00		0.00	1.00
Final Sat.:	1900	1336		88	1365	1436		0	0	1900		0	1091		0	1182
Capacity Analysis Module:																
Vol/Sat:	0.00	0.33		0.33	0.14	0.44		0.00	0.00	0.00		0.00	0.06		0.00	0.26
Crit Moves:		****			****											****
Green/Cycle:	0.00	0.56		0.56	0.23	0.80		0.00	0.00	0.00		0.00	0.20		0.00	0.44
Volume/Cap:	0.00	0.59		0.59	0.59	0.56		0.00	0.00	0.00		0.00	0.28		0.00	0.59
Delay/Veh:	0.0	15.5		15.5	36.9	4.4		0.0	0.0	0.0		0.0	34.2		0.0	23.0
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	15.5		15.5	36.9	4.4		0.0	0.0	0.0		0.0	34.2		0.0	23.0
DesignQueue:	0	11		1	8	8		0	0	0		0	3		0	10

****

Cumulative AM Thu Jan 15, 2004 10:06:32 Page 6-1

Patterson Sand and Gravel
Cumulative Conditions -No Project
"30th Highest" - AM Peak Hour

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

****
Intersection #2 SR 65 and SR 193 (Lincoln)
****

Approach:	North Bound				South Bound				East Bound				West Bound			
Movement:	L	-	T	- R	L	-	T	- R	L	-	T	- R	L	-	T	- R
HCM Ops Adjusted Lane Utilization Module:																
Lanes:	1	0	0	1 0	1	0	0	1 0	0	0	1!	0 0	0	1	0	0 1
Lane Group:	L		RT	RT	L		RT	RT	LTR		LTR	LTR	LT		LT	R
#LnsInGrps:	1		1	1	1		1	1	1		1	1	1		1	1
HCM Ops Input Saturation Adj Module:																
Lane Width:	12		12	12	12		12	12	12		12	12	12		12	12
CrosswalkWid			8				8				8				8	
% Hev Veh:			19				19				0				23	
Grade:			0%				0%				0%				0%	
Parking/Hr:			No				No				No				No	
Bus Stp/Hr:			0				0				0				0	
Area Type:	< < < < < < < < < < < < < < < < CBD > > > > > > > > > > > > > > > >															
Cnft Ped/Hr:			0				0				0				0	
ExclusiveRT:			Include				Include				Include				Include	
% RT Prtct:			0				0				0				0	
HCM Ops f(lt) Adj Case Module:																
f(lt) Case:	xxxx	xxxx		xxxx		1	xxxx	xxxx	xxxx	xxxx		xxxx		5	xxxx	xxxx
HCM Ops Saturation Adj Module:																
Ln Wid Adj:	xxxx	1.00		1.00	1.00	1.00	xxxxx		xxxx	xxxx	xxxxx		1.00		xxxx	1.00
Hev Veh Adj:	xxxx	0.84		0.84	0.84	0.84	xxxxx		xxxx	xxxx	xxxxx		0.81		xxxx	0.81
Grade Adj:	xxxx	1.00		1.00	1.00	1.00	xxxxx		xxxx	xxxx	xxxxx		1.00		xxxx	1.00
Parking Adj:	xxxx	1.00		1.00	xxxx	1.00	xxxxx		xxxx	xxxx	xxxxx		xxxx		xxxx	1.00
Bus Stp Adj:	xxxx	1.00		1.00	xxxx	1.00	xxxxx		xxxx	xxxx	xxxxx		xxxx		xxxx	1.00
Area Adj:	xxxx	0.90		0.90	0.90	0.90	xxxxx		xxxx	xxxx	xxxxx		0.90		xxxx	0.90
RT Adj:	xxxx	0.99		0.99	xxxx	xxxx	xxxxx		xxxx	xxxx	xxxxx		xxxx		xxxx	0.85
LT Adj:	xxxx	xxxx		xxxxx	0.95	xxxx	xxxxx		xxxx	xxxx	xxxxx		0.79		xxxx	xxxxx
PedBike Adj:	1.00	1.00		1.00	1.00	1.00	1.00		1.00	1.00	1.00		1.00		1.00	1.00
HCM Sat Adj:	1.00	0.75		0.75	0.72	0.76	1.00		1.00	1.00	1.00		0.57		1.00	0.62
Usr Sat Adj:	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 Sat Adj:	1.00	1.00		1.00	1.00	1.00	1.00		1.00	1.00	1.00		1.00		1.00	1.00
Fnl Sat Adj:	1.00	0.75		0.75	0.72	0.76	1.00		1.00	1.00	1.00		0.57		1.00	0.62

Delay Adjustment Factor Module:
Coordinated: < < < < < < < < < < < < < < < < No > > > > > > > > > > > > > > > >
Signal Type: < < < < < < < < < < < < < Actuated > > > > > > > > > > > > >
DelAdjFctr: 0.00 1.00 1.00 1.00 1.00 0.00 0.00 0.00 0.00 1.00 0.00 1.00

****

Cumulative AM Thu Jan 15, 2004 10:06:32 Page 6-2

Patterson Sand and Gravel
Cumulative Conditions -No Project
"30th Highest" - AM Peak Hour

Level Of Service Detailed Computation Report (Permitted Left Turn Sat Adj)
2000 HCM Operations Method
Base Volume Alternative

****

Intersection #2 SR 65 and SR 193 (Lincoln)

****

Approach:	North	South	East	West
Cycle Length, C:	xxxxxx	xxxxxx	xxxxxx	100
Actual Green Time Per Lane Group, G:	xxxxxx	xxxxxx	xxxxxx	39.79
Effective Green Time Per Lane Group, g:	xxxxxx	xxxxxx	xxxxxx	43.79
Opposing Effective Green Time, go:	xxxxxx	xxxxxx	xxxxxx	43.79
Number Of Opposing Lanes, No:	xxxxxx	xxxxxx	xxxxxx	1
Number Of Lanes In Lane Group, N:	xxxxxx	xxxxxx	xxxxxx	1
Adjusted Left-Turn Flow Rate, Vlt:	xxxxxx	xxxxxx	xxxxxx	62
Proportion of Left Turns in Lane Group, Plt:	xxxxxx	xxxxxx	xxxxxx	1.00
Proportion of Left Turns in Opp Flow, Plto:	xxxxxx	xxxxxx	xxxxxx	1.00
Left Turns Per Cycle, LTC:	xxxxxx	xxxxxx	xxxxxx	1.72
Adjusted Opposing Flow Rate, Vo:	xxxxxx	xxxxxx	xxxxxx	0
Opposing Flow Per Lane Per Cycle, Volc:	xxxxxx	xxxxxx	xxxxxx	0.00
Opposing Platoon Ratio, Rpo:	xxxxxx	xxxxxx	xxxxxx	1.00
Lost Time Per Phase, tl:	xxxxxx	xxxxxx	xxxxxx	0.00
Eff grn until arrival of left-turn car, gf:	xxxxxx	xxxxxx	xxxxxx	10.82
Opposing Queue Ratio, qro:	xxxxxx	xxxxxx	xxxxxx	0.56
Eff grn blocked by opposing queue, gq:	xxxxxx	xxxxxx	xxxxxx	0.00
Eff grn while left turns filter thru, gu:	xxxxxx	xxxxxx	xxxxxx	32.97
Max opposing cars arriving during gq-gf, n:	xxxxxx	xxxxxx	xxxxxx	0.00
Proportion of Opposing Thru & RT cars, ptho:	xxxxxx	xxxxxx	xxxxxx	0.00
Left-turn Saturation Factor, fs:	xxxxxx	xxxxxx	xxxxxx	xxxxxx
Proportion of Left Turns in Shared Lane, pl:	xxxxxx	xxxxxx	xxxxxx	1.00
Through-car Equivalents, el1:	xxxxxx	xxxxxx	xxxxxx	1.40
Single Lane Through-car Equivalents, el2:	xxxxxx	xxxxxx	xxxxxx	1.00
Minimum Left Turn Adjustment Factor, fmin:	xxxxxx	xxxxxx	xxxxxx	0.09
Single Lane Left Turn Adjustment Factor, fm:	xxxxxx	xxxxxx	xxxxxx	0.78
Left Turn Adjustment Factor, flt:	xxxxxx	xxxxxx	xxxxxx	0.78

****

Cumulative AM Thu Jan 15, 2004 10:06:32 Page 7-1

Patterson Sand and Gravel
Cumulative Conditions -No Project
"30th Highest" - AM Peak Hour

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

****

Intersection #4 Riosa Rd and 11th St

****

Cycle (sec): 100 Critical Vol./Cap. (X): 0.327
Loss Time (sec): 0 (Y+R = 4 sec) Average Delay (sec/veh): 9.4
Optimal Cycle: 0 Level Of Service: A

****

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Stop Sign			Stop Sign			Stop Sign			Stop Sign		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Lanes:	0 0	1! 0	0	0 0	1! 0	0	0 1	0 0	0	0 1	0 0	0
Volume Module:												
Base Vol:	6	4	4	11	7	20	13	115	0	2	243	0
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	6	4	4	11	7	20	13	115	0	2	243	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:	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 Volume:	6	4	4	11	7	20	13	115	0	2	243	0
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	6	4	4	11	7	20	13	115	0	2	243	0
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Final Vol.:	6	4	4	11	7	20	13	115	0	2	243	0
Saturation Flow Module:												
Adjustment:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Lanes:	0.43	0.28	0.29	0.29	0.18	0.53	0.10	0.90	0.00	0.01	0.99	0.00
Final Sat.:	302	202	202	214	136	389	74	654	0	6	742	0
Capacity Analysis Module:												
Vol/Sat:	0.02	0.02	0.02	0.05	0.05	0.05	0.18	0.18	xxxx	0.33	0.33	xxxx
Crit Moves:			****		****			****			****	
Delay/Veh:	7.8	7.8	7.8	7.8	7.8	7.8	8.9	8.9	0.0	10.0	10.0	0.0
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:	7.8	7.8	7.8	7.8	7.8	7.8	8.9	8.9	0.0	10.0	10.0	0.0
LOS by Move:	A	A	A	A	A	A	A	A	*	B	B	*
ApproachDel:		7.8			7.8			8.9			10.0	
Delay Adj:		1.00			1.00			1.00			1.00	
ApprAdjDel:		7.8			7.8			8.9			10.0	
LOS by Appr:		A			A			A			B	

****

Cumulative AM Thu Jan 15, 2004 10:06:32 Page 8-1

Patterson Sand and Gravel
Cumulative Conditions -No Project
"30th Highest" - AM Peak Hour

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

****
Intersection #4 Riosa Rd and 11th St
****

Approach:	North Bound	South Bound	East Bound	West Bound
Movement:	L - T - R	L - T - R	L - T - R	L - T - R
Time Period: 0.25 hour				
HevVeh:	0%	0%	33%	35%
Alpha Value: 0.01				
GroupType:	1	1	1	1
P[C1]:	0.53	0.55	0.63	0.77
P[C2]:	0.03	0.01	0.30	0.16
P[C3]:	0.37	0.38	0.04	0.05
P[C4]:	0.07	0.06	0.02	0.01
P[C5]:	0.00	0.00	0.00	0.00
Padj[C1]:	0.010	0.010	0.005	0.003
Padj[C2]:	0.005	0.005	-0.002	-0.001
Padj[C3]:	-0.010	-0.011	-0.001	-0.001
Padj[C4]:	-0.004	-0.004	-0.001	-0.001
Padj[C5]:	-0.000	-0.000	-0.000	-0.000
Lane:	L1	L1	L1	L1
LaneType:	LEFTTHRURITE	LEFTTHRURITE	LEFTTHRURITE	LEFTTHRURITE
HeadwayAdj:	-0.086	-0.258	0.581	0.597
Volume:	14	38	128	245
Capacity:	706	739	728	748
DegOfUtil:	0.02	0.05	0.17	0.32
DepHeadway:	4.74	4.54	4.87	4.76
ServiceTime:	2.7	2.5	2.9	2.8
Delay:	7.8	7.8	8.9	10.0
Approach:	North Bound	South Bound	East Bound	West Bound
ApproachDel:	7.8	7.8	8.9	10.0
Delay Adj:	1.00	1.00	1.00	1.00
ApprAdjDel:	7.8	7.8	8.9	10.0
LOS by Appr:	A	A	A	B
OverallDel:			9.4	
OverallLOS:			A	

Cumulative AM Thu Jan 15, 2004 10:06:32 Page 9-1

Patterson Sand and Gravel
Cumulative Conditions -No Project
"30th Highest" - AM Peak Hour

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

****
Intersection #5 Riosa Rd and Karchner Rd
****
Average Delay (sec/veh): 5.2 Worst Case 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			Uncontrolled			Uncontrolled		
Rights:	Include			Include			Include			Include		
Lanes:	0 0	0 0	0	0 0	1! 0	0	0 1	0 0	0	0 0	0 1	0
Volume Module:												
Base Vol:	0	0	0	23	0	81	41	38	0	0	52	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:	0	0	0	23	0	81	41	38	0	0	52	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:	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 Volume:	0	0	0	23	0	81	41	38	0	0	52	2
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Final Vol.:	0	0	0	23	0	81	41	38	0	0	52	2
Critical Gap Module:												
Critical Gp:	xxxxx	xxxx	xxxxx	7.2	xxxx	7.0	4.6	xxxx	xxxxx	xxxxx	xxxx	xxxxx
FollowUpTim:	xxxxx	xxxx	xxxxx	4.2	xxxx	4.0	2.7	xxxx	xxxxx	xxxxx	xxxx	xxxxx
Capacity Module:												
Cnflict Vol:	xxxx	xxxx	xxxxx	173	xxxx	53	54	xxxx	xxxxx	xxxx	xxxx	xxxxx
Potent Cap.:	xxxx	xxxx	xxxxx	675	xxxx	842	1276	xxxx	xxxxx	xxxx	xxxx	xxxxx
Move Cap.:	xxxx	xxxx	xxxxx	658	xxxx	842	1276	xxxx	xxxxx	xxxx	xxxx	xxxxx
Level Of Service Module:												
Stopped Del:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	7.9	xxxx	xxxxx	xxxxx	xxxx	xxxxx
LOS by Move:	*	*	*	*	*	*	A	*	*	*	*	*
Movement:	LT -	LTR -	RT	LT -	LTR -	RT	LT -	LTR -	RT	LT -	LTR -	RT
Shared Cap.:	xxxx	xxxx	xxxxx	xxxx	793	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx
Shrd StpDel:	xxxxx	xxxx	xxxxx	xxxxx	10.2	xxxxx	7.9	xxxx	xxxxx	xxxxx	xxxx	xxxxx
Shared LOS:	*	*	*	*	B	*	A	*	*	*	*	*
ApproachDel:	xxxxxx			10.2			xxxxxx			xxxxxx		
ApproachLOS:	*			B			*			*		

Cumulative AM Thu Jan 15, 2004 10:06:32 Page 10-1

Patterson Sand and Gravel
Cumulative Conditions -No Project
"30th Highest" - AM Peak Hour

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

****
Intersection #5 Riosa Rd and Karchner Rd
****

Approach:	North Bound	South Bound	East Bound	West Bound
Movement:	L - T - R	L - T - R	L - T - R	L - T - R
HevVeh:	0%	75%	54%	15%
Grade:	0%	0%	0%	0%
Peds/Hour:	0	0	0	0
Pedestrian Walk Speed: 4.00 feet/sec				
LaneWidth:	12 feet	12 feet	12 feet	12 feet

Time Period: 0.25 hour

Traffix 7.5.0715 (c) 2002 Dowling Assoc. Licensed to DKS ASSOC., SACRAMENTO

Cumulative AM Thu Jan 15, 2004 11:45:38 Page 1-1

Patterson Sand and Gravel
Cumulative Conditions -No Project
"Highest" - AM Peak Hour

Scenario Report

Scenario:	Cumulative AM
Command:	Cumulative AM
Volume:	Cumulative AM
Geometry:	Cumulative AM
Impact Fee:	Default Impact Fee
Trip Generation:	Default Trip Generation
Trip Distribution:	Default Trip Distribution
Paths:	Default Paths
Routes:	Default Routes
Configuration:	Default Configuration

Cumulative AM Thu Jan 15, 2004 11:45:38 Page 2-1

Patterson Sand and Gravel
Cumulative Conditions -No Project
"Highest" - AM Peak Hour

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 65 and Riosa Road (Sheridan	F	15.8	0.000	F	15.8	0.000	+ 0.000 V/C
# 2 SR 65 and SR 193 (Lincoln)	B	15.9	0.603	B	15.9	0.603	+ 0.000 D/V
# 4 Riosa Rd and 11th St	A	10.0	0.374	A	10.0	0.374	+ 0.000 V/C
# 5 Riosa Rd and Karchner Rd	B	5.7	0.000	B	5.7	0.000	+ 0.000 V/C

Cumulative AM Thu Jan 15, 2004 11:45:38 Page 3-1

Patterson Sand and Gravel
Cumulative Conditions -No Project
"Highest" - AM Peak Hour

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

****
Intersection #1 SR 65 and Riosa Road (Sheridan)
****
Average Delay (sec/veh): 15.8 Worst Case 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:	Uncontrolled			Uncontrolled			Stop Sign			Stop Sign		
Rights:	Include			Include			Include			Include		
Lanes:	0 0 1	0 1		1 0 1	0 0		0 0 0	0 0		0 0 1!	0 0	
Volume Module:												
Base Vol:	0	319	54	62	581	0	0	0	0	131	0	205
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	319	54	62	581	0	0	0	0	131	0	205
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	0	319	54	62	581	0	0	0	0	131	0	205
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Final Vol.:	0	319	54	62	581	0	0	0	0	131	0	205
Critical Gap Module:												
Critical Gp:	xxxxx	xxxx	xxxxx	4.2	xxxx	xxxxx	xxxxx	xxxx	xxxxx	6.7	xxxx	6.5
FollowUpTim:	xxxxx	xxxx	xxxxx	2.3	xxxx	xxxxx	xxxxx	xxxx	xxxxx	3.8	xxxx	3.6
Capacity Module:												
Cnflict Vol:	xxxx	xxxx	xxxxx	373	xxxx	xxxxx	xxxx	xxxx	xxxxx	1024	xxxx	319
Potent Cap.:	xxxx	xxxx	xxxxx	1133	xxxx	xxxxx	xxxx	xxxx	xxxxx	228	xxxx	653
Move Cap.:	xxxx	xxxx	xxxxx	1133	xxxx	xxxxx	xxxx	xxxx	xxxxx	218	xxxx	653
Level Of Service Module:												
Stopped Del:	xxxxx	xxxx	xxxxx	8.4	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx
LOS by Move:	*	*	*	A	*	*	*	*	*	*	*	*
Movement:	LT -	LTR -	RT	LT -	LTR -	RT	LT -	LTR -	RT	LT -	LTR -	RT
Shared Cap.:	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	367	xxxxx
Shrd StpDel:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	61.9	xxxxx
Shared LOS:	*	*	*	*	*	*	*	*	*	*	F	*
ApproachDel:	xxxxxx			xxxxxx			xxxxxx			61.9		
ApproachLOS:	*			*			*			F		

Cumulative AM Thu Jan 15, 2004 11:45:38 Page 4-1

Patterson Sand and Gravel
Cumulative Conditions -No Project
"Highest" - AM Peak Hour

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

****
Intersection #1 SR 65 and Riosa Road (Sheridan)
****

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
HevVeh:	23%			12%			0%			34%		
Grade:	0%			0%			0%			0%		
Peds/Hour:	0			0			0			0		
Pedestrian Walk Speed: 4.00 feet/sec												
LaneWidth:	12 feet			12 feet			12 feet			12 feet		

Time Period: 0.25 hour

Cumulative AM Thu Jan 15, 2004 11:45:38 Page 5-1

Patterson Sand and Gravel
Cumulative Conditions -No Project
"Highest" - AM Peak Hour

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

Intersection #2 SR 65 and SR 193 (Lincoln)

Cycle (sec): 100 Critical Vol./Cap. (X): 0.603
Loss Time (sec): 0 (Y+R = 4 sec) Average Delay (sec/veh): 15.9
Optimal Cycle: 47 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				Permitted				Permitted			
Rights:	Include				Include				Include				Ovl			
Min. Green:	0	0		0	0	0		0	0	0		0	0	0		0
Lanes:	1	0	0	1	0	1	0	0	1	0	0	0	1!	0	0	0
Volume Module:																
Base Vol:	0	448		29	192	653		0	0	0	0	62	0	307		
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	448		29	192	653		0	0	0	0	62	0	307		
User Adj:	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	1.00	1.00	1.00	1.00		
PHF Adj:	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	1.00	1.00	1.00	1.00		
PHF Volume:	0	448		29	192	653		0	0	0	0	62	0	307		
Reduct Vol:	0	0		0	0	0		0	0	0	0	0	0	0		
Reduced Vol:	0	448		29	192	653		0	0	0	0	62	0	307		
PCE Adj:	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	1.00	1.00	1.00	1.00		
MLF Adj:	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	1.00	1.00	1.00	1.00		
Final Vol.:	0	448		29	192	653		0	0	0	0	62	0	307		
Saturation Flow Module:																
Sat/Lane:	1900	1900		1900	1900	1900		1900	1900	1900	1900	1900	1900	1900		
Adjustment:	1.00	0.74		0.74	0.71	0.74		1.00	1.00	1.00	0.57	1.00	0.62			
Lanes:	1.00	0.94		0.06	1.00	1.00		0.00	0.00	1.00	0.00	1.00	0.00	1.00		
Final Sat.:	1900	1315		85	1342	1412		0	0	1900	0	1082	0	1172		
Capacity Analysis Module:																
Vol/Sat:	0.00	0.34		0.34	0.14	0.46		0.00	0.00	0.00	0.00	0.06	0.00	0.26		
Crit Moves:		****			****									****		
Green/Cycle:	0.00	0.57		0.57	0.24	0.80		0.00	0.00	0.00	0.00	0.20	0.00	0.43		
Volume/Cap:	0.00	0.60		0.60	0.60	0.58		0.00	0.00	0.00	0.00	0.29	0.00	0.60		
Delay/Veh:	0.0	15.7		15.7	37.2	4.4		0.0	0.0	0.0	0.0	34.9	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:	0.0	15.7		15.7	37.2	4.4		0.0	0.0	0.0	0.0	34.9	0.0	23.7		
DesignQueue:	0	12		1	8	8		0	0	0	0	3	0	10		

Cumulative AM Thu Jan 15, 2004 11:45:38 Page 6-1

Patterson Sand and Gravel
Cumulative Conditions -No Project
"Highest" - AM Peak Hour

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

Intersection #2 SR 65 and SR 193 (Lincoln)

Approach:	North Bound				South Bound				East Bound				West Bound			
Movement:	L	- T	-	R	L	- T	-	R	L	- T	-	R	L	- T	-	R
HCM Ops Adjusted Lane Utilization Module:																
Lanes:	1	0	0	1	0	1	0	0	1	0	0	0	1!	0	0	0
Lane Group:	L		RT		RT	L		RT		RT	LTR	LTR	LTR	LT	LT	R
#LnsInGrps:	1		1		1	1		1		1	1	1	1	1	1	1
HCM Ops Input Saturation Adj Module:																
Lane Width:	12		12		12	12		12		12	12	12	12	12	12	12
CrosswalkWid			8					8				8			8	
% Hev Veh:			21					21				0			24	
Grade:			0%					0%				0%			0%	
Parking/Hr:			No					No				No			No	
Bus Stp/Hr:			0					0				0			0	
Area Type:	< < < < < < < < < < < < < < < < CBD > > > > > > > > > > > > > > > >															
Cnft Ped/Hr:			0					0				0			0	
ExclusiveRT:			Include					Include				Include			Include	
% RT Prtct:			0					0				0			0	
HCM Ops f(lt) Adj Case Module:																
f(lt) Case:	xxxx	xxxx		xxxx		1	xxxx		xxxx	xxxx		xxxx		5	xxxx	xxxx
HCM Ops Saturation Adj Module:																
Ln Wid Adj:	xxxx	1.00		1.00	1.00	1.00	xxxxx		xxxx	xxxx	xxxxx		1.00	xxxx		1.00
Hev Veh Adj:	xxxx	0.83		0.83	0.83	0.83	xxxxx		xxxx	xxxx	xxxxx		0.81	xxxx		0.81
Grade Adj:	xxxx	1.00		1.00	1.00	1.00	xxxxx		xxxx	xxxx	xxxxx		1.00	xxxx		1.00
Parking Adj:	xxxx	1.00		1.00	xxxx	1.00	xxxxx		xxxx	xxxx	xxxxx		xxxx	xxxx		1.00
Bus Stp Adj:	xxxx	1.00		1.00	xxxx	1.00	xxxxx		xxxx	xxxx	xxxxx		xxxx	xxxx		1.00
Area Adj:	xxxx	0.90		0.90	0.90	0.90	xxxxx		xxxx	xxxx	xxxxx		0.90	xxxx		0.90
RT Adj:	xxxx	0.99		0.99	xxxx	xxxx	xxxxx		xxxx	xxxx	xxxxx		xxxx	xxxx		0.85
LT Adj:	xxxx	xxxx		xxxxx	0.95	xxxx	xxxxx		xxxx	xxxx	xxxxx		0.79	xxxx		xxxxx
PedBike Adj:	1.00	1.00		1.00	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00		1.00
HCM Sat Adj:	1.00	0.74		0.74	0.71	0.74	1.00		1.00	1.00	1.00		0.57	1.00		0.62
Usr Sat Adj:	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 Sat Adj:	1.00	1.00		1.00	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00		1.00
Fnl Sat Adj:	1.00	0.74		0.74	0.71	0.74	1.00		1.00	1.00	1.00		0.57	1.00		0.62
Delay Adjustment Factor Module:																
Coordinated:	< < < < < < < < < < < < < < < < No > > > > > > > > > > > > > > > >															
Signal Type:	< < < < < < < < < < < < < Actuated > > > > > > > > > > > > > >															
DelAdjFctr:	0.00	1.00		1.00	1.00	1.00	0.00		0.00	0.00	0.00		1.00	0.00		1.00

Cumulative AM Thu Jan 15, 2004 11:45:38 Page 6-2

Patterson Sand and Gravel
Cumulative Conditions -No Project
"Highest" - AM Peak Hour

Level Of Service Detailed Computation Report (Permitted Left Turn Sat Adj)
2000 HCM Operations Method
Base Volume Alternative

****

Intersection #2 SR 65 and SR 193 (Lincoln)

****

Approach:	North	South	East	West
Cycle Length, C:	xxxxxx	xxxxxx	xxxxxx	100
Actual Green Time Per Lane Group, G:	xxxxxx	xxxxxx	xxxxxx	39.47
Effective Green Time Per Lane Group, g:	xxxxxx	xxxxxx	xxxxxx	43.47
Opposing Effective Green Time, go:	xxxxxx	xxxxxx	xxxxxx	43.47
Number Of Opposing Lanes, No:	xxxxxx	xxxxxx	xxxxxx	1
Number Of Lanes In Lane Group, N:	xxxxxx	xxxxxx	xxxxxx	1
Adjusted Left-Turn Flow Rate, Vlt:	xxxxxx	xxxxxx	xxxxxx	62
Proportion of Left Turns in Lane Group, Plt:	xxxxxx	xxxxxx	xxxxxx	1.00
Proportion of Left Turns in Opp Flow, Plto:	xxxxxx	xxxxxx	xxxxxx	1.00
Left Turns Per Cycle, LTC:	xxxxxx	xxxxxx	xxxxxx	1.72
Adjusted Opposing Flow Rate, Vo:	xxxxxx	xxxxxx	xxxxxx	0
Opposing Flow Per Lane Per Cycle, Volc:	xxxxxx	xxxxxx	xxxxxx	0.00
Opposing Platoon Ratio, Rpo:	xxxxxx	xxxxxx	xxxxxx	1.00
Lost Time Per Phase, tl:	xxxxxx	xxxxxx	xxxxxx	0.00
Eff grn until arrival of left-turn car, gf:	xxxxxx	xxxxxx	xxxxxx	10.73
Opposing Queue Ratio, qro:	xxxxxx	xxxxxx	xxxxxx	0.57
Eff grn blocked by opposing queue, gq:	xxxxxx	xxxxxx	xxxxxx	0.00
Eff grn while left turns filter thru, gu:	xxxxxx	xxxxxx	xxxxxx	32.74
Max opposing cars arriving during gq-gf, n:	xxxxxx	xxxxxx	xxxxxx	0.00
Proportion of Opposing Thru & RT cars, ptho:	xxxxxx	xxxxxx	xxxxxx	0.00
Left-turn Saturation Factor, fs:	xxxxxx	xxxxxx	xxxxxx	xxxxxx
Proportion of Left Turns in Shared Lane, pl:	xxxxxx	xxxxxx	xxxxxx	1.00
Through-car Equivalents, el1:	xxxxxx	xxxxxx	xxxxxx	1.40
Single Lane Through-car Equivalents, el2:	xxxxxx	xxxxxx	xxxxxx	1.00
Minimum Left Turn Adjustment Factor, fmin:	xxxxxx	xxxxxx	xxxxxx	0.09
Single Lane Left Turn Adjustment Factor, fm:	xxxxxx	xxxxxx	xxxxxx	0.78
Left Turn Adjustment Factor, flt:	xxxxxx	xxxxxx	xxxxxx	0.78

****

Cumulative AM Thu Jan 15, 2004 11:45:38 Page 7-1

Patterson Sand and Gravel
Cumulative Conditions -No Project
"Highest" - AM Peak Hour

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

****

Intersection #4 Riosa Rd and 11th St

****

Cycle (sec): 100 Critical Vol./Cap. (X): 0.374
Loss Time (sec): 0 (Y+R = 4 sec) Average Delay (sec/veh): 10.0
Optimal Cycle: 0 Level Of Service: A

****

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Stop Sign			Stop Sign			Stop Sign			Stop Sign		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Lanes:	0 0	1! 0	0	0 0	1! 0	0	0 1	0 0	0	0 1	0 0	0
Volume Module:												
Base Vol:	6	4	4	11	7	20	13	127	0	2	271	0
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	6	4	4	11	7	20	13	127	0	2	271	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:	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 Volume:	6	4	4	11	7	20	13	127	0	2	271	0
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	6	4	4	11	7	20	13	127	0	2	271	0
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Final Vol.:	6	4	4	11	7	20	13	127	0	2	271	0
Saturation Flow Module:												
Adjustment:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Lanes:	0.43	0.28	0.29	0.29	0.18	0.53	0.09	0.91	0.00	0.01	0.99	0.00
Final Sat.:	294	196	196	207	132	377	66	642	0	5	725	0
Capacity Analysis Module:												
Vol/Sat:	0.02	0.02	0.02	0.05	0.05	0.05	0.20	0.20	xxxx	0.37	0.37	xxxx
Crit Moves:	****				****			****		****		
Delay/Veh:	7.9	7.9	7.9	7.9	7.9	7.9	9.2	9.2	0.0	10.7	10.7	0.0
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:	7.9	7.9	7.9	7.9	7.9	7.9	9.2	9.2	0.0	10.7	10.7	0.0
LOS by Move:	A	A	A	A	A	A	A	A	*	B	B	*
ApproachDel:	7.9			7.9			9.2			10.7		
Delay Adj:	1.00			1.00			1.00			1.00		
ApprAdjDel:	7.9			7.9			9.2			10.7		
LOS by Appr:	A			A			A			B		

****

Cumulative AM Thu Jan 15, 2004 11:45:38 Page 8-1

Patterson Sand and Gravel
Cumulative Conditions -No Project
"Highest" - AM Peak Hour

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

****
Intersection #4 Riosa Rd and 11th St
****

Approach:	North Bound	South Bound	East Bound	West Bound
Movement:	L - T - R	L - T - R	L - T - R	L - T - R
Time Period: 0.25 hour				
HevVeh:	0%	0%	39%	41%
Alpha Value: 0.01				
GroupType:	1	1	1	1
P[C1]:	0.48	0.50	0.59	0.75
P[C2]:	0.02	0.01	0.35	0.18
P[C3]:	0.40	0.41	0.04	0.05
P[C4]:	0.09	0.08	0.03	0.01
P[C5]:	0.00	0.00	0.00	0.00
Padj[C1]:	0.011	0.011	0.005	0.003
Padj[C2]:	0.006	0.006	-0.003	-0.001
Padj[C3]:	-0.011	-0.012	-0.001	-0.001
Padj[C4]:	-0.005	-0.005	-0.001	-0.001
Padj[C5]:	-0.000	-0.000	-0.000	-0.000
Lane:	L1	L1	L1	L1
LaneType:	LEFTTHRURITE	LEFTTHRURITE	LEFTTHRURITE	LEFTTHRURITE
HeadwayAdj:	-0.086	-0.258	0.682	0.698
Volume:	14	38	140	273
Capacity:	686	716	708	730
DegOfUtil:	0.02	0.05	0.19	0.37
DepHeadway:	4.86	4.65	5.01	4.88
ServiceTime:	2.9	2.7	3.0	2.9
Delay:	7.9	7.9	9.2	10.7
Approach:	North Bound	South Bound	East Bound	West Bound
ApproachDel:	7.9	7.9	9.2	10.7
Delay Adj:	1.00	1.00	1.00	1.00
ApprAdjDel:	7.9	7.9	9.2	10.7
LOS by Appr:	A	A	A	B
OverallDel:		10.0		
OverallLOS:		A		

Cumulative AM Thu Jan 15, 2004 11:45:38 Page 9-1

Patterson Sand and Gravel
Cumulative Conditions -No Project
"Highest" - AM Peak Hour

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

****
Intersection #5 Riosa Rd and Karchner Rd
****

Average Delay (sec/veh): 5.7 Worst Case 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			Uncontrolled			Uncontrolled		
Rights:	Include			Include			Include			Include		
Lanes:	0 0	1! 0	0	0 0	1! 0	0	0 1	0 0	0	0 0	0 1	0
Volume Module:												
Base Vol:	0	0	0	23	0	108	53	38	0	0	52	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:	0	0	0	23	0	108	53	38	0	0	52	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:	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 Volume:	0	0	0	23	0	108	53	38	0	0	52	2
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Final Vol.:	0	0	0	23	0	108	53	38	0	0	52	2
Critical Gap Module:												
Critical Gp:	xxxxx	xxxx	xxxxx	7.2	xxxx	7.0	4.7	xxxx	xxxxx	xxxxx	xxxx	xxxxx
FollowUpTim:	xxxxx	xxxx	xxxxx	4.2	xxxx	4.0	2.7	xxxx	xxxxx	xxxxx	xxxx	xxxxx
Capacity Module:												
Cnflict Vol:	xxxx	xxxx	xxxxx	197	xxxx	53	54	xxxx	xxxxx	xxxx	xxxx	xxxxx
Potent Cap.:	xxxx	xxxx	xxxxx	644	xxxx	832	1250	xxxx	xxxxx	xxxx	xxxx	xxxxx
Move Cap.:	xxxx	xxxx	xxxxx	623	xxxx	832	1250	xxxx	xxxxx	xxxx	xxxx	xxxxx
Level Of Service Module:												
Stopped Del:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	8.0	xxxx	xxxxx	xxxxx	xxxx	xxxxx
LOS by Move:	*	*	*	*	*	*	A	*	*	*	*	*
Movement:	LT -	LTR -	RT	LT -	LTR -	RT	LT -	LTR -	RT	LT -	LTR -	RT
Shared Cap.:	xxxx	0	xxxxx	xxxx	786	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx
Shrd StpDel:	xxxxx	xxxx	xxxxx	xxxxx	10.5	xxxxx	8.0	xxxx	xxxxx	xxxxx	xxxx	xxxxx
Shared LOS:	*	*	*	*	B	*	A	*	*	*	*	*
ApproachDel:	xxxxxx			10.5			xxxxxx			xxxxxx		
ApproachLOS:	*			B			*			*		

Cumulative AM Thu Jan 15, 2004 11:45:38 Page 10-1

Patterson Sand and Gravel
Cumulative Conditions -No Project
"Highest" - AM Peak Hour

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

****
Intersection #5 Riosa Rd and Karchner Rd
****

Approach:	North Bound	South Bound	East Bound	West Bound
Movement:	L - T - R	L - T - R	L - T - R	L - T - R
HevVeh:	0%	80%	60%	15%
Grade:	0%	0%	0%	0%
Peds/Hour:	0	0	0	0
LaneWidth:	12 feet	12 feet	12 feet	12 feet

Pedestrian Walk Speed: 4.00 feet/sec
Time Period: 0.25 hour

Patterson Sand and Gravel
Cumulative Conditions - No Project
"Average Day" - PM Peak Hour

Scenario Report

Scenario:	Cumulative PM
Command:	Cumulative PM
Volume:	Cumulative PM
Geometry:	Cumulative PM
Impact Fee:	Default Impact Fee
Trip Generation:	Default Trip Generation
Trip Distribution:	Default Trip Distribution
Paths:	Default Paths
Routes:	Default Routes
Configuration:	Default Configuration

Patterson Sand and Gravel
Cumulative Conditions - No Project
"Average Day" - PM Peak Hour

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 65 and Riosa Road (Sheridan	E	4.7	0.000	E	4.7	0.000	+ 0.000 V/C
# 2 SR 65 and SR 193 (Lincoln)	C	27.9	0.879	C	27.9	0.879	+ 0.000 D/V
# 4 Riosa Rd and 11th St	A	8.0	0.192	A	8.0	0.192	+ 0.000 V/C
# 5 Riosa Rd and Karchner Rd	A	3.8	0.000	A	3.8	0.000	+ 0.000 V/C

Cumulative PM Wed Jan 14, 2004 15:29:24 Page 3-1

Patterson Sand and Gravel
Cumulative Conditions - No Project
"Average Day" - PM Peak Hour

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

```
*******************************************************************************
Intersection #1 SR 65 and Riosa Road (Sheridan)
*******************************************************************************
Average Delay (sec/veh):       4.7           Worst Case 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:       Uncontrolled     Uncontrolled      Stop Sign        Stop Sign
Rights:           Include          Include          Include          Include
Lanes:        0  0  1  0  1    1  0  1  0  0    0  0  0  0  0    0  0  1! 0  0
------------|---------------||---------------||---------------||---------------|
Volume Module:
Base Vol:       0  601   112   203  437     0     0    0     0   42    0    97
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  601   112   203  437     0     0    0     0   42    0    97
User Adj:    1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
PHF Adj:     1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
PHF Volume:     0  601   112   203  437     0     0    0     0   42    0    97
Reduct Vol:     0    0     0     0    0     0     0    0     0    0    0     0
Final Vol.:     0  601   112   203  437     0     0    0     0   42    0    97
------------|---------------||---------------||---------------||---------------|
Critical Gap Module:
Critical Gp:xxxxx xxxx xxxxx   4.1 xxxx xxxxx xxxxx xxxx xxxxx   6.4 xxxx   6.2
FollowUpTim:xxxxx xxxx xxxxx   2.2 xxxx xxxxx xxxxx xxxx xxxxx   3.5 xxxx   3.3
------------|---------------||---------------||---------------||---------------|
Capacity Module:
Cnflict Vol: xxxx xxxx xxxxx   713 xxxx xxxxx  xxxx xxxx xxxxx  1444 xxxx   601
Potent Cap.: xxxx xxxx xxxxx   882 xxxx xxxxx  xxxx xxxx xxxxx   144 xxxx   497
Move Cap.:   xxxx xxxx xxxxx   882 xxxx xxxxx  xxxx xxxx xxxxx   118 xxxx   497
------------|---------------||---------------||---------------||---------------|
Level Of Service Module:
Stopped Del:xxxxx xxxx xxxxx  10.3 xxxx xxxxx xxxxx xxxx xxxxx xxxxx xxxx xxxxx
LOS by Move:   *    *    *     B    *    *     *    *    *     *    *    *
Movement:     LT - LTR - RT   LT - LTR - RT   LT - LTR - RT   LT - LTR - RT
Shared Cap.: xxxx xxxx xxxxx  xxxx xxxx xxxxx  xxxx xxxx xxxxx  xxxx  253 xxxxx
Shrd StpDel:xxxxx xxxx xxxxx xxxxx xxxx xxxxx xxxxx xxxx xxxxx xxxxx 35.4 xxxxx
Shared LOS:    *    *    *     *    *    *     *    *    *     *    E    *
ApproachDel:    xxxxxx          xxxxxx          xxxxxx          35.4
ApproachLOS:       *               *               *              E
```

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Cumulative PM Wed Jan 14, 2004 15:29:24 Page 4-1

Patterson Sand and Gravel
Cumulative Conditions - No Project
"Average Day" - PM Peak Hour

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

```
*******************************************************************************
Intersection #1 SR 65 and Riosa Road (Sheridan)
*******************************************************************************
Approach:       North Bound      South Bound      East Bound       West Bound
Movement:     L  -  T  -  R    L  -  T  -  R    L  -  T  -  R    L  -  T  -  R
------------|---------------||---------------||---------------||---------------|
HevVeh:            4%               3%               0%               4%
Grade:             0%               0%               0%               0%
Peds/Hour:         0                0                0                0
Pedestrian Walk Speed: 4.00 feet/sec
LaneWidth:      12 feet          12 feet          12 feet          12 feet
Time Period: 0.25 hour
------------|---------------||---------------||---------------||---------------|
Upstream Signals:
Link Index:       #2
Dist(miles):      0.000
Speed (mph):       0.00
SignalIndex:      #2
Cycle Time:          0 secs
InitVolume:     0     0
Saturation:     0     0
ArrivalType:    0     0
G/C:         0.00  0.00
*** Computation 1: Time for Queue to Clear at Each Upstream Intersection
P:          0.000 0.000
gq1:         0.00  0.00
gq2:         0.00  0.00
gq:          0.00  0.00
*** Computation 2: Time Intersection Blocked Because of Upstream Platoons
alpha:            0.000
beta:             0.000
ta (secs):        0.000
F:                0.000
f:          0.000 0.000
vcmax:          0     0
vcmin:          0     0
tp:           0.0   0.0
p:                0.000
*** Computation 3: Platoon Event Periods
pdom/psubo:      0.000/0.000/Unconstrained
*** Computation 4: Conflicting Flows During Each Unblocked Period
InitCnflVol:   0 xxxxx xxxxx  713 xxxxx xxxxx    0     0     0 1444     0   601
UpstreamSat:   0 xxxxx xxxxx    0 xxxxx xxxxx    0     0     0    0     0     0
UpstreamAdj:1.00 x.xxx x.xxx 1.00 x.xxx x.xxx 1.00 1.000 1.000 1.00 1.000 1.000
ConflictVol:   0 xxxxx xxxxx  713 xxxxx xxxxx    0     0     0 1444     0   601
*** Computation 5: Capactiy for Subject Movement During Unblocked Period
InitPotCap:    0 xxxxx xxxxx  882 xxxxx xxxxx    0     0     0  144     0   497
UpstreamAdj:1.00 x.xxx x.xxx 1.00 x.xxx x.xxx 1.00 1.000 1.000 1.00 1.000 1.000
PotentCap:     0 xxxxx xxxxx  882 xxxxx xxxxx    0     0     0  144     0   497
```

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Cumulative PM Wed Jan 14, 2004 15:29:24 Page 5-1

Patterson Sand and Gravel
Cumulative Conditions - No Project
"Average Day" - PM Peak Hour

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

****

Intersection #2 SR 65 and SR 193 (Lincoln)

****

Cycle (sec): 100 Critical Vol./Cap. (X): 0.879
Loss Time (sec): 0 (Y+R = 4 sec) Average Delay (sec/veh): 27.9
Optimal Cycle: 154 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				Permitted				Permitted			
Rights:	Include				Include				Include				Ovl			
Min. Green:	0	0	0		0	0	0		0	0	0		0	0	0	
Lanes:	1	0	0	1 0	1	0	0	1 0	0	0	1!	0 0	0	1	0	0 1
Volume Module:																
Base Vol:	0	848	22		375	529	0		0	0	0		131	0	308	
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	848	22		375	529	0		0	0	0		131	0	308	
User Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
PHF Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
PHF Volume:	0	848	22		375	529	0		0	0	0		131	0	308	
Reduct Vol:	0	0	0		0	0	0		0	0	0		0	0	0	
Reduced Vol:	0	848	22		375	529	0		0	0	0		131	0	308	
PCE Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
MLF Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
Final Vol.:	0	848	22		375	529	0		0	0	0		131	0	308	
Saturation Flow Module:																
Sat/Lane:	1900	1900	1900		1900	1900	1900		1900	1900	1900		1900	1900	1900	
Adjustment:	1.00	0.87	0.87		0.81	0.85	1.00		1.00	1.00	1.00		0.64	1.00	0.74	
Lanes:	1.00	0.97	0.03		1.00	1.00	0.00		0.00	1.00	0.00		1.00	0.00	1.00	
Final Sat.:	1900	1612	42		1532	1613	0		0	1900	0		1209	0	1398	
Capacity Analysis Module:																
Vol/Sat:	0.00	0.53	0.53		0.24	0.33	0.00		0.00	0.00	0.00		0.11	0.00	0.22	
Crit Moves:		****			****								****			
Green/Cycle:	0.00	0.60	0.60		0.28	0.88	0.00		0.00	0.00	0.00		0.12	0.00	0.40	
Volume/Cap:	0.00	0.88	0.88		0.88	0.37	0.00		0.00	0.00	0.00		0.88	0.00	0.55	
Delay/Veh:	0.0	26.2	26.2		53.0	1.3	0.0		0.0	0.0	0.0		83.7	0.0	24.1	
User DelAdj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
AdjDel/Veh:	0.0	26.2	26.2		53.0	1.3	0.0		0.0	0.0	0.0		83.7	0.0	24.1	
DesignQueue:	0	22	1		16	4	0		0	0	0		6	0	11	

****

Cumulative PM Wed Jan 14, 2004 15:29:24 Page 6-1

Patterson Sand and Gravel
Cumulative Conditions - No Project
"Average Day" - PM Peak Hour

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

****

Intersection #2 SR 65 and SR 193 (Lincoln)

****

Approach:	North Bound				South Bound				East Bound				West Bound			
Movement:	L	-	T	- R	L	-	T	- R	L	-	T	- R	L	-	T	- R
HCM Ops Adjusted Lane Utilization Module:																
Lanes:	1	0	0	1 0	1	0	0	1 0	0	0	1!	0 0	0	1	0	0 1
Lane Group:	L		RT		RT	L		RT	RT	LTR	LTR	LTR	LT		LT	R
#LnsInGrps:	1		1		1	1		1	1	1	1	1	1		1	1
HCM Ops Input Saturation Adj Module:																
Lane Width:	12		12	12	12		12	12	12	12	12	12	12		12	12
CrosswalkWid			8				8				8				8	
% Hev Veh:			3				6				0				4	
Grade:			0%				0%				0%				0%	
Parking/Hr:			No				No				No				No	
Bus Stp/Hr:			0				0				0				0	
Area Type:	< < < < < < < < < < < < < < < < CBD > > > > > > > > > > > > > > > >															
Cnft Ped/Hr:			0				0				0				0	
ExclusiveRT:			Include				Include				Include				Include	
% RT Prtct:			0				0				0				0	
HCM Ops f(lt) Adj Case Module:																
f(lt) Case:	xxxx	xxxx	xxxx		1	xxxx	xxxx		xxxx	xxxx	xxxx		5	xxxx	xxxx	
HCM Ops Saturation Adj Module:																
Ln Wid Adj:	xxxx	1.00	1.00		1.00	1.00	xxxxx		xxxx	xxxx	xxxxx		1.00	xxxx	1.00	
Hev Veh Adj:	xxxx	0.97	0.97		0.94	0.94	xxxxx		xxxx	xxxx	xxxxx		0.96	xxxx	0.96	
Grade Adj:	xxxx	1.00	1.00		1.00	1.00	xxxxx		xxxx	xxxx	xxxxx		1.00	xxxx	1.00	
Parking Adj:	xxxx	1.00	1.00		xxxx	1.00	xxxxx		xxxx	xxxx	xxxxx		xxxx	xxxx	1.00	
Bus Stp Adj:	xxxx	1.00	1.00		xxxx	1.00	xxxxx		xxxx	xxxx	xxxxx		xxxx	xxxx	1.00	
Area Adj:	xxxx	0.90	0.90		0.90	0.90	xxxxx		xxxx	xxxx	xxxxx		0.90	xxxx	0.90	
RT Adj:	xxxx	1.00	1.00		xxxx	xxxx	xxxxx		xxxx	xxxx	xxxxx		xxxx	xxxx	0.85	
LT Adj:	xxxx	xxxx	xxxxx		0.95	xxxx	xxxxx		xxxx	xxxx	xxxxx		0.74	xxxx	xxxxx	
PedBike Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
HCM Sat Adj:	1.00	0.87	0.87		0.81	0.85	1.00		1.00	1.00	1.00		0.64	1.00	0.74	
Usr Sat Adj:	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 Sat Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
Fnl Sat Adj:	1.00	0.87	0.87		0.81	0.85	1.00		1.00	1.00	1.00		0.64	1.00	0.74	
Delay Adjustment Factor Module:																
Coordinated:	< < < < < < < < < < < < < < < < No > > > > > > > > > > > > > > > >															
Signal Type:	< < < < < < < < < < < < < Actuated > > > > > > > > > > > > > > >															
DelAdjFctr:	0.00	1.00	1.00		1.00	1.00	0.00		0.00	0.00	0.00		1.00	0.00	1.00	

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Patterson Sand and Gravel
Cumulative Conditions - No Project
"Average Day" - PM Peak Hour

Level Of Service Detailed Computation Report (Permitted Left Turn Sat Adj)
2000 HCM Operations Method
Base Volume Alternative

Intersection #2 SR 65 and SR 193 (Lincoln)

Approach:	North	South	East	West
Cycle Length, C:	xxxxxx	xxxxxx	xxxxxx	100
Actual Green Time Per Lane Group, G:	xxxxxx	xxxxxx	xxxxxx	8.32
Effective Green Time Per Lane Group, g:	xxxxxx	xxxxxx	xxxxxx	12.32
Opposing Effective Green Time, go:	xxxxxx	xxxxxx	xxxxxx	12.32
Number Of Opposing Lanes, No:	xxxxxx	xxxxxx	xxxxxx	1
Number Of Lanes In Lane Group, N:	xxxxxx	xxxxxx	xxxxxx	1
Adjusted Left-Turn Flow Rate, Vlt:	xxxxxx	xxxxxx	xxxxxx	131
Proportion of Left Turns in Lane Group, Plt:	xxxxxx	xxxxxx	xxxxxx	1.00
Proportion of Left Turns in Opp Flow, Plto:	xxxxxx	xxxxxx	xxxxxx	1.00
Left Turns Per Cycle, LTC:	xxxxxx	xxxxxx	xxxxxx	3.64
Adjusted Opposing Flow Rate, Vo:	xxxxxx	xxxxxx	xxxxxx	0
Opposing Flow Per Lane Per Cycle, Volc:	xxxxxx	xxxxxx	xxxxxx	0.00
Opposing Platoon Ratio, Rpo:	xxxxxx	xxxxxx	xxxxxx	1.00
Lost Time Per Phase, tl:	xxxxxx	xxxxxx	xxxxxx	0.00
Eff grn until arrival of left-turn car, gf:	xxxxxx	xxxxxx	xxxxxx	0.90
Opposing Queue Ratio, qro:	xxxxxx	xxxxxx	xxxxxx	0.88
Eff grn blocked by opposing queue, gq:	xxxxxx	xxxxxx	xxxxxx	0.00
Eff grn while left turns filter thru, gu:	xxxxxx	xxxxxx	xxxxxx	11.42
Max opposing cars arriving during gq-gf, n:	xxxxxx	xxxxxx	xxxxxx	0.00
Proportion of Opposing Thru & RT cars, ptho:	xxxxxx	xxxxxx	xxxxxx	0.00
Left-turn Saturation Factor, fs:	xxxxxx	xxxxxx	xxxxxx	xxxxxx
Proportion of Left Turns in Shared Lane, pl:	xxxxxx	xxxxxx	xxxxxx	1.00
Through-car Equivalents, el1:	xxxxxx	xxxxxx	xxxxxx	1.40
Single Lane Through-car Equivalents, el2:	xxxxxx	xxxxxx	xxxxxx	1.00
Minimum Left Turn Adjustment Factor, fmin:	xxxxxx	xxxxxx	xxxxxx	0.32
Single Lane Left Turn Adjustment Factor, fm:	xxxxxx	xxxxxx	xxxxxx	0.74
Left Turn Adjustment Factor, flt:	xxxxxx	xxxxxx	xxxxxx	0.74

Patterson Sand and Gravel
Cumulative Conditions - No Project
"Average Day" - PM Peak Hour

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

Intersection #4 Riosa Rd and 11th St

Cycle (sec): 100 Critical Vol./Cap. (X): 0.192
Loss Time (sec): 0 (Y+R = 4 sec) Average Delay (sec/veh): 8.0
Optimal Cycle: 0 Level Of Service: A

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Stop Sign			Stop Sign			Stop Sign			Stop Sign		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Lanes:	0 0	1! 0	0	0 0	0 1	0	0 1	0 0	0	0 1	0 0	0
Volume Module:												
Base Vol:	3	4	1	0	1	3	10	155	0	1	107	0
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	3	4	1	0	1	3	10	155	0	1	107	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:	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 Volume:	3	4	1	0	1	3	10	155	0	1	107	0
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	3	4	1	0	1	3	10	155	0	1	107	0
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Final Vol.:	3	4	1	0	1	3	10	155	0	1	107	0
Saturation Flow Module:												
Adjustment:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Lanes:	0.37	0.50	0.13	0.00	0.25	0.75	0.06	0.94	0.00	0.01	0.99	0.00
Final Sat.:	286	381	95	0	210	630	52	808	0	8	849	0
Capacity Analysis Module:												
Vol/Sat:	0.01	0.01	0.01	xxxx	0.00	0.00	0.19	0.19	xxxx	0.13	0.13	xxxx
Crit Moves:		****			****			****			****	
Delay/Veh:	7.5	7.5	7.5	0.0	7.0	7.0	8.1	8.1	0.0	7.8	7.8	0.0
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:	7.5	7.5	7.5	0.0	7.0	7.0	8.1	8.1	0.0	7.8	7.8	0.0
LOS by Move:	A	A	A	*	A	A	A	A	*	A	A	*
ApproachDel:		7.5			7.0			8.1			7.8	
Delay Adj:		1.00			1.00			1.00			1.00	
ApprAdjDel:		7.5			7.0			8.1			7.8	
LOS by Appr:		A			A			A			A	

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Patterson Sand and Gravel
Cumulative Conditions - No Project
"Average Day" - PM Peak Hour

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

****

Intersection #4 Riosa Rd and 11th St

****

Approach:	North Bound	South Bound	East Bound	West Bound
Movement:	L - T - R	L - T - R	L - T - R	L - T - R
Time Period:	0.25 hour			
HevVeh:	0%	0%	7%	5%
Alpha Value:	0.01			
GroupType:	1	1	1	1
P[C1]:	0.7053	0.7014	0.8625	0.7979
P[C2]:	0.0032	0.0070	0.1231	0.1877
P[C3]:	0.2666	0.2651	0.0125	0.0116
P[C4]:	0.0249	0.0262	0.0018	0.0028
P[C5]:	0.0001	0.0002	0.0000	0.0000
Padj[C1]:	0.00611	0.00617	0.00154	0.00219
Padj[C2]:	0.00313	0.00311	-0.00107	-0.00171
Padj[C3]:	-0.00775	-0.00769	-0.00036	-0.00032
Padj[C4]:	-0.00149	-0.00157	-0.00011	-0.00017
Padj[C5]:	-0.00001	-0.00002	-0.00000	-0.00000
Lane:	L1	L1	L1	L1
LaneType:	LEFTTHRURITE	LEFTTHRURITE	LEFTTHRURITE	LEFTTHRURITE
HeadwayAdj:	0.000	-0.450	0.131	0.087
Volume:	8	4	165	108
Capacity:	762	841	860	857
DegOfUtil:	0.01	0.00	0.19	0.12
DepHeadway:	4.47	4.02	4.16	4.17
ServiceTime:	2.5	2.0	2.2	2.2
Delay:	7.5	7.0	8.1	7.8
Approach:	North Bound	South Bound	East Bound	West Bound
ApproachDel:	7.5	7.0	8.1	7.8
Delay Adj:	1.00	1.00	1.00	1.00
ApprAdjDel:	7.5	7.0	8.1	7.8
LOS by Appr:	A	A	A	A
OverallDel:		8.0		
OverallLOS:		A		

Cumulative PM Wed Jan 14, 2004 15:29:24 Page 9-1

Patterson Sand and Gravel
Cumulative Conditions - No Project
"Average Day" - PM Peak Hour

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

****

Intersection #5 Riosa Rd and Karchner Rd

****

Average Delay (sec/veh): 3.8 Worst Case Level Of Service: A

****

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	- T	- R	L	- T	- R	L	- T	- R	L	- T	- R
Control:	Stop Sign			Stop Sign			Uncontrolled			Uncontrolled		
Rights:	Include			Include			Include			Include		
Lanes:	0 0	0 0	0	0 0	1! 0	0	0 1	0 0	0	0 0	0 1	0
Volume Module:												
Base Vol:	0	0	0	10	0	15	29	39	0	0	27	7
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	10	0	15	29	39	0	0	27	7
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	0	0	0	10	0	15	29	39	0	0	27	7
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Final Vol.:	0	0	0	10	0	15	29	39	0	0	27	7
Critical Gap Module:												
Critical Gp:	xxxxx	xxxx	xxxxx	6.6	xxxx	6.4	4.3	xxxx	xxxxx	xxxxx	xxxx	xxxxx
FollowUpTim:	xxxxx	xxxx	xxxxx	3.7	xxxx	3.5	2.3	xxxx	xxxxx	xxxxx	xxxx	xxxxx
Capacity Module:												
Cnflict Vol:	xxxx	xxxx	xxxxx	128	xxxx	31	34	xxxx	xxxxx	xxxx	xxxx	xxxxx
Potent Cap.:	xxxx	xxxx	xxxxx	826	xxxx	994	1492	xxxx	xxxxx	xxxx	xxxx	xxxxx
Move Cap.:	xxxx	xxxx	xxxxx	813	xxxx	994	1492	xxxx	xxxxx	xxxx	xxxx	xxxxx
Level Of Service Module:												
Stopped Del:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	7.5	xxxx	xxxxx	xxxxx	xxxx	xxxxx
LOS by Move:	*	*	*	*	*	*	A	*	*	*	*	*
Movement:	LT -	LTR -	RT	LT -	LTR -	RT	LT -	LTR -	RT	LT -	LTR -	RT
Shared Cap.:	xxxx	xxxx	xxxxx	xxxx	913	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx
Shrd StpDel:	xxxxx	xxxx	xxxxx	xxxxx	9.1	xxxxx	7.5	xxxx	xxxxx	xxxxx	xxxx	xxxxx
Shared LOS:	*	*	*	*	A	*	A	*	*	*	*	*
ApproachDel:	xxxxxx				9.1		xxxxxx			xxxxxx		
ApproachLOS:	*				A		*			*		

Cumulative PM Wed Jan 14, 2004 15:29:24 Page 10-1

Patterson Sand and Gravel
Cumulative Conditions - No Project
"Average Day" - PM Peak Hour

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

****
Intersection #5 Riosa Rd and Karchner Rd
****

Approach:	North Bound	South Bound	East Bound	West Bound
Movement:	L - T - R	L - T - R	L - T - R	L - T - R
HevVeh:	0%	20%	16%	0%
Grade:	0%	0%	0%	0%
Peds/Hour:	0	0	0	0
Pedestrian Walk Speed: 4.00 feet/sec				
LaneWidth:	12 feet	12 feet	12 feet	12 feet

Time Period: 0.25 hour

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Patterson Sand and Gravel
Cumulative Conditions - No Project
"30th Highest" - PM Peak Hour

Scenario Report

Scenario:	Cumulative PM
Command:	Cumulative PM
Volume:	Cumulative PM
Geometry:	Cumulative PM
Impact Fee:	Default Impact Fee
Trip Generation:	Default Trip Generation
Trip Distribution:	Default Trip Distribution
Paths:	Default Paths
Routes:	Default Routes
Configuration:	Default Configuration

Cumulative PM Thu Jan 15, 2004 10:28:41 Page 2-1

Patterson Sand and Gravel
Cumulative Conditions - No Project
"30th Highest" - PM Peak Hour

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 65 and Riosa Road (Sheridan	E	5.0	0.000	E	5.0	0.000	+ 0.000 V/C
# 2 SR 65 and SR 193 (Lincoln)	C	28.0	0.880	C	28.0	0.880	+ 0.000 D/V
# 4 Riosa Rd and 11th St	A	8.0	0.196	A	8.0	0.196	+ 0.000 V/C
# 5 Riosa Rd and Karchner Rd	A	4.0	0.000	A	4.0	0.000	+ 0.000 V/C

Cumulative PM Thu Jan 15, 2004 10:28:41 Page 3-1

Patterson Sand and Gravel
Cumulative Conditions - No Project
"30th Highest" - PM Peak Hour

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

****

Intersection #1 SR 65 and Riosa Road (Sheridan)

****

Average Delay (sec/veh): 5.0 Worst Case 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:	Uncontrolled				Uncontrolled				Stop Sign				Stop Sign			
Rights:	Include				Include				Include				Include			
Lanes:	0	0	1	0 1	1	0	1	0 0	0	0	0	0 0	0	0	1!	0 0
Volume Module:																
Base Vol:	0	601	114		204	437	0		0	0	0		44	0	98	
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	601	114		204	437	0		0	0	0		44	0	98	
User Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
PHF Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
PHF Volume:	0	601	114		204	437	0		0	0	0		44	0	98	
Reduct Vol:	0	0	0		0	0	0		0	0	0		0	0	0	
Final Vol.:	0	601	114		204	437	0		0	0	0		44	0	98	
Critical Gap Module:																
Critical Gp:	xxxxx	xxxx	xxxxx		4.1	xxxx	xxxxx		xxxxx	xxxx	xxxxx		6.4	xxxx	6.3	
FollowUpTim:	xxxxx	xxxx	xxxxx		2.2	xxxx	xxxxx		xxxxx	xxxx	xxxxx		3.5	xxxx	3.3	
Capacity Module:																
Cnflict Vol:	xxxx	xxxx	xxxxx		715	xxxx	xxxxx		xxxx	xxxx	xxxxx		1446	xxxx	601	
Potent Cap.:	xxxx	xxxx	xxxxx		876	xxxx	xxxxx		xxxx	xxxx	xxxxx		143	xxxx	495	
Move Cap.:	xxxx	xxxx	xxxxx		876	xxxx	xxxxx		xxxx	xxxx	xxxxx		117	xxxx	495	
Level Of Service Module:																
Stopped Del:	xxxxx	xxxx	xxxxx		10.4	xxxx	xxxxx		xxxxx	xxxx	xxxxx		xxxxx	xxxx	xxxxx	
LOS by Move:	*	*	*		B	*	*		*	*	*		*	*	*	
Movement:	LT -	LTR -	RT		LT -	LTR -	RT		LT -	LTR -	RT		LT -	LTR -	RT	
Shared Cap.:	xxxx	xxxx	xxxxx		xxxx	xxxx	xxxxx		xxxx	xxxx	xxxxx		xxxx	248	xxxxx	
Shrd StpDel:	xxxxx	xxxx	xxxxx		xxxxx	xxxx	xxxxx		xxxxx	xxxx	xxxxx		xxxxx	37.4	xxxxx	
Shared LOS:	*	*	*		*	*	*		*	*	*		*	E	*	
ApproachDel:	xxxxxx				xxxxxx				xxxxxx				37.4			
ApproachLOS:	*				*				*				E			

Cumulative PM Thu Jan 15, 2004 10:28:41 Page 4-1

Patterson Sand and Gravel
Cumulative Conditions - No Project
"30th Highest" - PM Peak Hour

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

****

Intersection #1 SR 65 and Riosa Road (Sheridan)

****

Approach:	North Bound				South Bound				East Bound				West Bound			
Movement:	L	-	T	- R	L	-	T	- R	L	-	T	- R	L	-	T	- R
HevVeh:			4%				4%				0%				5%	
Grade:			0%				0%				0%				0%	
Peds/Hour:			0				0				0				0	
Pedestrian Walk Speed: 4.00 feet/sec																
LaneWidth:			12 feet				12 feet				12 feet				12 feet	
Time Period: 0.25 hour																
Upstream Signals:																
Link Index:			#2													
Dist(miles):			0.000													
Speed (mph):			0.00													
SignalIndex:			#2													
Cycle Time:				0 secs												
InitVolume:			0	0												
Saturation:			0	0												
ArrivalType:			0	0												
G/C:			0.00	0.00												
*** Computation 1: Time for Queue to Clear at Each Upstream Intersection																
P:			0.000	0.000												
gq1:			0.00	0.00												
gq2:			0.00	0.00												
gq:			0.00	0.00												
*** Computation 2: Time Intersection Blocked Because of Upstream Platoons																
alpha:			0.000													
beta:			0.000													
ta (secs):			0.000													
F:			0.000													
f:			0.000	0.000												
vcmax:			0	0												
vcmin:			0	0												
tp:			0.0	0.0												
p:			0.000													
*** Computation 3: Platoon Event Periods																
pdom/psubo:			0.000/0.000/Unconstrained													
*** Computation 4: Conflicting Flows During Each Unblocked Period																
InitCnflVol:	0	xxxxx	xxxxx		715	xxxxx	xxxxx		0	0	0		1446	0	601	
UpstreamSat:	0	xxxxx	xxxxx		0	xxxxx	xxxxx		0	0	0		0	0	0	
UpstreamAdj:	1.00	x.xxx	x.xxx		1.00	x.xxx	x.xxx		1.00	1.000	1.000		1.00	1.000	1.000	
ConflictVol:	0	xxxxx	xxxxx		715	xxxxx	xxxxx		0	0	0		1446	0	601	
*** Computation 5: Capactiy for Subject Movement During Unblocked Period																
InitPotCap:	0	xxxxx	xxxxx		876	xxxxx	xxxxx		0	0	0		143	0	495	
UpstreamAdj:	1.00	x.xxx	x.xxx		1.00	x.xxx	x.xxx		1.00	1.000	1.000		1.00	1.000	1.000	
PotentCap:	0	xxxxx	xxxxx		876	xxxxx	xxxxx		0	0	0		143	0	495	

Patterson Sand and Gravel
Cumulative Conditions - No Project
"30th Highest" - PM Peak Hour

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

Intersection #2 SR 65 and SR 193 (Lincoln)

Cycle (sec): 100 Critical Vol./Cap. (X): 0.880
Loss Time (sec): 0 (Y+R = 4 sec) Average Delay (sec/veh): 28.0
Optimal Cycle: 156 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			Permitted			Permitted		
Rights:	Include			Include			Include			Ovl		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Lanes:	1 0	0 1	0	1 0	0 1	0	0 0	1! 0	0	0 1	0 0	1
Volume Module:												
Base Vol:	0	849	22	376	530	0	0	0	0	131	0	309
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	849	22	376	530	0	0	0	0	131	0	309
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	0	849	22	376	530	0	0	0	0	131	0	309
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	0	849	22	376	530	0	0	0	0	131	0	309
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Final Vol.:	0	849	22	376	530	0	0	0	0	131	0	309
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	1.00	0.87	0.87	0.81	0.85	1.00	1.00	1.00	1.00	0.64	1.00	0.74
Lanes:	1.00	0.97	0.03	1.00	1.00	0.00	0.00	1.00	0.00	1.00	0.00	1.00
Final Sat.:	1900	1612	42	1532	1613	0	0	1900	0	1209	0	1398
Capacity Analysis Module:												
Vol/Sat:	0.00	0.53	0.53	0.25	0.33	0.00	0.00	0.00	0.00	0.11	0.00	0.22
Crit Moves:		****		****						****		
Green/Cycle:	0.00	0.60	0.60	0.28	0.88	0.00	0.00	0.00	0.00	0.12	0.00	0.40
Volume/Cap:	0.00	0.88	0.88	0.88	0.37	0.00	0.00	0.00	0.00	0.88	0.00	0.55
Delay/Veh:	0.0	26.3	26.3	53.1	1.3	0.0	0.0	0.0	0.0	84.1	0.0	24.1
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	0.0	26.3	26.3	53.1	1.3	0.0	0.0	0.0	0.0	84.1	0.0	24.1
DesignQueue:	0	22	1	16	4	0	0	0	0	7	0	11

Patterson Sand and Gravel
Cumulative Conditions - No Project
"30th Highest" - PM Peak Hour

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

Intersection #2 SR 65 and SR 193 (Lincoln)

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
HCM Ops Adjusted Lane Utilization Module:												
Lanes:	1 0	0 1	0	1 0	0 1	0	0 0	1! 0	0	0 1	0 0	1
Lane Group:	L	RT	RT	L	RT	RT	LTR	LTR	LTR	LT	LT	R
#LnsInGrps:	1	1	1	1	1	1	1	1	1	1	1	1
HCM Ops Input Saturation Adj Module:												
Lane Width:	12	12	12	12	12	12	12	12	12	12	12	12
CrosswalkWid		8			8			8			8	
% Hev Veh:		3			6			0			4	
Grade:		0%			0%			0%			0%	
Parking/Hr:		No			No			No			No	
Bus Stp/Hr:		0			0			0			0	
Area Type:	< < < < < < < < < < < < < < < < CBD > > > > > > > > > > > > > > > >											
Cnft Ped/Hr:		0			0			0			0	
ExclusiveRT:		Include			Include			Include			Include	
% RT Prtct:		0			0			0			0	
HCM Ops f(lt) Adj Case Module:												
f(lt) Case:	xxxx	xxxx	xxxx	1	xxxx	xxxx	xxxx	xxxx	xxxx	5	xxxx	xxxx
HCM Ops Saturation Adj Module:												
Ln Wid Adj:	xxxx	1.00	1.00	1.00	1.00	xxxxx	xxxx	xxxx	xxxxx	1.00	xxxx	1.00
Hev Veh Adj:	xxxx	0.97	0.97	0.94	0.94	xxxxx	xxxx	xxxx	xxxxx	0.96	xxxx	0.96
Grade Adj:	xxxx	1.00	1.00	1.00	1.00	xxxxx	xxxx	xxxx	xxxxx	1.00	xxxx	1.00
Parking Adj:	xxxx	1.00	1.00	xxxx	1.00	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	1.00
Bus Stp Adj:	xxxx	1.00	1.00	xxxx	1.00	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	1.00
Area Adj:	xxxx	0.90	0.90	0.90	0.90	xxxxx	xxxx	xxxx	xxxxx	0.90	xxxx	0.90
RT Adj:	xxxx	1.00	1.00	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	0.85
LT Adj:	xxxx	xxxx	xxxxx	0.95	xxxx	xxxxx	xxxx	xxxx	xxxxx	0.74	xxxx	xxxxx
PedBike Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
HCM Sat Adj:	1.00	0.87	0.87	0.81	0.85	1.00	1.00	1.00	1.00	0.64	1.00	0.74
Usr Sat Adj:	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 Sat Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Fnl Sat Adj:	1.00	0.87	0.87	0.81	0.85	1.00	1.00	1.00	1.00	0.64	1.00	0.74
Delay Adjustment Factor Module:												
Coordinated:	< < < < < < < < < < < < < < < < No > > > > > > > > > > > > > > > >											
Signal Type:	< < < < < < < < < < < < < Actuated > > > > > > > > > > > > > > >											
DelAdjFctr:	0.00	1.00	1.00	1.00	1.00	0.00	0.00	0.00	0.00	1.00	0.00	1.00

Patterson Sand and Gravel
Cumulative Conditions - No Project
"30th Highest" - PM Peak Hour

Level Of Service Detailed Computation Report (Permitted Left Turn Sat Adj)
2000 HCM Operations Method
Base Volume Alternative

****
Intersection #2 SR 65 and SR 193 (Lincoln)
****

Approach:	North	South	East	West
Cycle Length, C:	xxxxxx	xxxxxx	xxxxxx	100
Actual Green Time Per Lane Group, G:	xxxxxx	xxxxxx	xxxxxx	8.30
Effective Green Time Per Lane Group, g:	xxxxxx	xxxxxx	xxxxxx	12.30
Opposing Effective Green Time, go:	xxxxxx	xxxxxx	xxxxxx	12.30
Number Of Opposing Lanes, No:	xxxxxx	xxxxxx	xxxxxx	1
Number Of Lanes In Lane Group, N:	xxxxxx	xxxxxx	xxxxxx	1
Adjusted Left-Turn Flow Rate, Vlt:	xxxxxx	xxxxxx	xxxxxx	131
Proportion of Left Turns in Lane Group, Plt:	xxxxxx	xxxxxx	xxxxxx	1.00
Proportion of Left Turns in Opp Flow, Plto:	xxxxxx	xxxxxx	xxxxxx	1.00
Left Turns Per Cycle, LTC:	xxxxxx	xxxxxx	xxxxxx	3.64
Adjusted Opposing Flow Rate, Vo:	xxxxxx	xxxxxx	xxxxxx	0
Opposing Flow Per Lane Per Cycle, Volc:	xxxxxx	xxxxxx	xxxxxx	0.00
Opposing Platoon Ratio, Rpo:	xxxxxx	xxxxxx	xxxxxx	1.00
Lost Time Per Phase, tl:	xxxxxx	xxxxxx	xxxxxx	0.00
Eff grn until arrival of left-turn car, gf:	xxxxxx	xxxxxx	xxxxxx	0.90
Opposing Queue Ratio, qro:	xxxxxx	xxxxxx	xxxxxx	0.88
Eff grn blocked by opposing queue, gq:	xxxxxx	xxxxxx	xxxxxx	0.00
Eff grn while left turns filter thru, gu:	xxxxxx	xxxxxx	xxxxxx	11.40
Max opposing cars arriving during gq-gf, n:	xxxxxx	xxxxxx	xxxxxx	0.00
Proportion of Opposing Thru & RT cars, ptho:	xxxxxx	xxxxxx	xxxxxx	0.00
Left-turn Saturation Factor, fs:	xxxxxx	xxxxxx	xxxxxx	xxxxxx
Proportion of Left Turns in Shared Lane, pl:	xxxxxx	xxxxxx	xxxxxx	1.00
Through-car Equivalents, el1:	xxxxxx	xxxxxx	xxxxxx	1.40
Single Lane Through-car Equivalents, el2:	xxxxxx	xxxxxx	xxxxxx	1.00
Minimum Left Turn Adjustment Factor, fmin:	xxxxxx	xxxxxx	xxxxxx	0.33
Single Lane Left Turn Adjustment Factor, fm:	xxxxxx	xxxxxx	xxxxxx	0.74
Left Turn Adjustment Factor, flt:	xxxxxx	xxxxxx	xxxxxx	0.74

****

Patterson Sand and Gravel
Cumulative Conditions - No Project
"30th Highest" - PM Peak Hour

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

****
Intersection #4 Riosa Rd and 11th St
****

Cycle (sec): 100 Critical Vol./Cap. (X): 0.196
Loss Time (sec): 0 (Y+R = 4 sec) Average Delay (sec/veh): 8.0
Optimal Cycle: 0 Level Of Service: A

****

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Stop Sign			Stop Sign			Stop Sign			Stop Sign		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Lanes:	0 0	1!	0 0	0 0	0 1	0	0 1	0 0	0	0 1	0 0	0
Volume Module:												
Base Vol:	3	4	1	0	1	3	10	158	0	1	110	0
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	3	4	1	0	1	3	10	158	0	1	110	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:	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 Volume:	3	4	1	0	1	3	10	158	0	1	110	0
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	3	4	1	0	1	3	10	158	0	1	110	0
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Final Vol.:	3	4	1	0	1	3	10	158	0	1	110	0
Saturation Flow Module:												
Adjustment:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Lanes:	0.37	0.50	0.13	0.00	0.25	0.75	0.06	0.94	0.00	0.01	0.99	0.00
Final Sat.:	285	380	95	0	209	627	51	805	0	8	842	0
Capacity Analysis Module:												
Vol/Sat:	0.01	0.01	0.01	xxxx	0.00	0.00	0.20	0.20	xxxx	0.13	0.13	xxxx
Crit Moves:		****			****			****			****	
Delay/Veh:	7.5	7.5	7.5	0.0	7.1	7.1	8.2	8.2	0.0	7.8	7.8	0.0
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:	7.5	7.5	7.5	0.0	7.1	7.1	8.2	8.2	0.0	7.8	7.8	0.0
LOS by Move:	A	A	A	*	A	A	A	A	*	A	A	*
ApproachDel:		7.5			7.1			8.2			7.8	
Delay Adj:		1.00			1.00			1.00			1.00	
ApprAdjDel:		7.5			7.1			8.2			7.8	
LOS by Appr:		A			A			A			A	

****

Cumulative PM Thu Jan 15, 2004 10:28:41 Page 8-1

Patterson Sand and Gravel
Cumulative Conditions - No Project
"30th Highest" - PM Peak Hour

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

****
Intersection #4 Riosa Rd and 11th St
****

Approach:	North Bound	South Bound	East Bound	West Bound
Movement:	L - T - R	L - T - R	L - T - R	L - T - R
Time Period:	0.25 hour			
HevVeh:	0%	0%	8%	7%
Alpha Value:	0.01			
GroupType:	1	1	1	1
P[C1]:	0.6977	0.6939	0.8579	0.7935
P[C2]:	0.0031	0.0070	0.1277	0.1921
P[C3]:	0.2727	0.2712	0.0125	0.0116
P[C4]:	0.0264	0.0277	0.0019	0.0028
P[C5]:	0.0001	0.0003	0.0000	0.0000
Padj[C1]:	0.00628	0.00634	0.00158	0.00224
Padj[C2]:	0.00323	0.00320	-0.00111	-0.00175
Padj[C3]:	-0.00791	-0.00785	-0.00036	-0.00032
Padj[C4]:	-0.00158	-0.00166	-0.00011	-0.00017
Padj[C5]:	-0.00001	-0.00003	-0.00000	-0.00000
Lane:	L1	L1	L1	L1
LaneType:	LEFTTHRURITE	LEFTTHRURITE	LEFTTHRURITE	LEFTTHRURITE
HeadwayAdj:	0.000	-0.450	0.148	0.121
Volume:	8	4	168	111
Capacity:	759	836	856	849
DegOfUtil:	0.01	0.00	0.19	0.13
DepHeadway:	4.49	4.04	4.18	4.20
ServiceTime:	2.5	2.0	2.2	2.2
Delay:	7.5	7.1	8.2	7.8
Approach:	North Bound	South Bound	East Bound	West Bound
ApproachDel:	7.5	7.1	8.2	7.8
Delay Adj:	1.00	1.00	1.00	1.00
ApprAdjDel:	7.5	7.1	8.2	7.8
LOS by Appr:	A	A	A	A
OverallDel:		8.0		
OverallLOS:		A		

Cumulative PM Thu Jan 15, 2004 10:28:41 Page 9-1

Patterson Sand and Gravel
Cumulative Conditions - No Project
"30th Highest" - PM Peak Hour

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

****
Intersection #5 Riosa Rd and Karchner Rd
****
Average Delay (sec/veh): 4.0 Worst Case Level Of Service: A
****

Approach:	North Bound	South Bound	East Bound	West Bound
Movement:	L - T - R	L - T - R	L - T - R	L - T - R
Control:	Stop Sign	Stop Sign	Uncontrolled	Uncontrolled
Rights:	Include	Include	Include	Include
Lanes:	0 0 0 0 0	0 0 1! 0 0	0 1 0 0 0	0 0 0 1 0
Volume Module:				
Base Vol:	0 0 0	10 0 18	32 39 0	0 27 7
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	10 0 18	32 39 0	0 27 7
User Adj:	1.00 1.00 1.00	1.00 1.00 1.00	1.00 1.00 1.00	1.00 1.00 1.00
PHF Adj:	1.00 1.00 1.00	1.00 1.00 1.00	1.00 1.00 1.00	1.00 1.00 1.00
PHF Volume:	0 0 0	10 0 18	32 39 0	0 27 7
Reduct Vol:	0 0 0	0 0 0	0 0 0	0 0 0
Final Vol.:	0 0 0	10 0 18	32 39 0	0 27 7
Critical Gap Module:				
Critical Gp:	xxxxx xxxx xxxxx	6.7 xxxx 6.5	4.3 xxxx xxxxx	xxxxx xxxx xxxxx
FollowUpTim:	xxxxx xxxx xxxxx	3.7 xxxx 3.5	2.4 xxxx xxxxx	xxxxx xxxx xxxxx
Capacity Module:				
Cnflict Vol:	xxxx xxxx xxxxx	134 xxxx 31	34 xxxx xxxxx	xxxx xxxx xxxxx
Potent Cap.:	xxxx xxxx xxxxx	804 xxxx 976	1474 xxxx xxxxx	xxxx xxxx xxxxx
Move Cap.:	xxxx xxxx xxxxx	791 xxxx 976	1474 xxxx xxxxx	xxxx xxxx xxxxx
Level Of Service Module:				
Stopped Del:	xxxxx xxxx xxxxx	xxxxx xxxx xxxxx	7.5 xxxx xxxxx	xxxxx xxxx xxxxx
LOS by Move:	* * *	* * *	A * *	* * *
Movement:	LT - LTR - RT	LT - LTR - RT	LT - LTR - RT	LT - LTR - RT
Shared Cap.:	xxxx xxxx xxxxx	xxxx 901 xxxxx	xxxx xxxx xxxxx	xxxx xxxx xxxxx
Shrd StpDel:	xxxxx xxxx xxxxx	xxxxx 9.1 xxxxx	7.5 xxxx xxxxx	xxxxx xxxx xxxxx
Shared LOS:	* * *	* A *	A * *	* * *
ApproachDel:	xxxxxx	9.1	xxxxxx	xxxxxx
ApproachLOS:	*	A	*	*

Patterson Sand and Gravel
Cumulative Conditions - No Project
"30th Highest" - PM Peak Hour

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

****
Intersection #5 Riosa Rd and Karchner Rd
****

Approach:	North Bound	South Bound	East Bound	West Bound
Movement:	L - T - R	L - T - R	L - T - R	L - T - R
HevVeh:	0%	27%	19%	0%
Grade:	0%	0%	0%	0%
Peds/Hour:	0	0	0	0
Pedestrian Walk Speed: 4.00 feet/sec				
LaneWidth:	12 feet	12 feet	12 feet	12 feet
Time Period: 0.25 hour				

Cumulative PM Thu Jan 15, 2004 11:48:53 Page 1-1

Patterson Sand and Gravel
Cumulative Conditions - No Project
"Highest" - PM Peak Hour

Scenario Report

Scenario:	Cumulative PM
Command:	Cumulative PM
Volume:	Cumulative PM
Geometry:	Cumulative PM
Impact Fee:	Default Impact Fee
Trip Generation:	Default Trip Generation
Trip Distribution:	Default Trip Distribution
Paths:	Default Paths
Routes:	Default Routes
Configuration:	Default Configuration

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Patterson Sand and Gravel
Cumulative Conditions - No Project
"Highest" - PM Peak Hour

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 65 and Riosa Road (Sheridan	E	5.2	0.000	E	5.2	0.000	+ 0.000 V/C
# 2 SR 65 and SR 193 (Lincoln)	C	28.1	0.882	C	28.1	0.882	+ 0.000 D/V
# 4 Riosa Rd and 11th St	A	8.1	0.201	A	8.1	0.201	+ 0.000 V/C
# 5 Riosa Rd and Karchner Rd	A	4.1	0.000	A	4.1	0.000	+ 0.000 V/C

Cumulative PM Thu Jan 15, 2004 11:48:53 Page 3-1

Patterson Sand and Gravel
Cumulative Conditions - No Project
"Highest" - PM Peak Hour

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

```
*******************************************************************************
Intersection #1 SR 65 and Riosa Road (Sheridan)
*******************************************************************************
Average Delay (sec/veh):       5.2           Worst Case 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:       Uncontrolled     Uncontrolled      Stop Sign        Stop Sign
Rights:           Include          Include          Include          Include
Lanes:       0  0  1  0  1    1  0  1  0  0    0  0  0  0  0    0  0  1! 0  0
------------|---------------||---------------||---------------||---------------|
Volume Module:
Base Vol:        0  601   116   204  437    0    0    0    0   46    0   98
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  601   116   204  437    0    0    0    0   46    0   98
User Adj:     1.00 1.00  1.00  1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
PHF Adj:      1.00 1.00  1.00  1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
PHF Volume:      0  601   116   204  437    0    0    0    0   46    0   98
Reduct Vol:      0    0     0     0    0    0    0    0    0    0    0    0
Final Vol.:      0  601   116   204  437    0    0    0    0   46    0   98
------------|---------------||---------------||---------------||---------------|
Critical Gap Module:
Critical Gp:xxxxx xxxx xxxxx   4.1 xxxx xxxxx xxxxx xxxx xxxxx   6.5 xxxx   6.3
FollowUpTim:xxxxx xxxx xxxxx   2.2 xxxx xxxxx xxxxx xxxx xxxxx   3.6 xxxx   3.4
------------|---------------||---------------||---------------||---------------|
Capacity Module:
Cnflict Vol: xxxx xxxx xxxxx   717 xxxx xxxxx  xxxx xxxx xxxxx  1446 xxxx   601
Potent Cap.: xxxx xxxx xxxxx   875 xxxx xxxxx  xxxx xxxx xxxxx   141 xxxx   491
Move Cap.:   xxxx xxxx xxxxx   875 xxxx xxxxx  xxxx xxxx xxxxx   116 xxxx   491
------------|---------------||---------------||---------------||---------------|
Level Of Service Module:
Stopped Del:xxxxx xxxx xxxxx  10.4 xxxx xxxxx xxxxx xxxx xxxxx xxxxx xxxx xxxxx
LOS by Move:   *    *    *     B    *    *    *    *    *    *    *    *
Movement:     LT - LTR - RT   LT - LTR - RT   LT - LTR - RT   LT - LTR - RT
Shared Cap.: xxxx xxxx xxxxx  xxxx xxxx xxxxx  xxxx xxxx xxxxx  xxxx  241 xxxxx
Shrd StpDel:xxxxx xxxx xxxxx xxxxx xxxx xxxxx xxxxx xxxx xxxxx xxxxx 39.8 xxxxx
Shared LOS:    *    *    *     *    *    *    *    *    *    *    E    *
ApproachDel:    xxxxxx          xxxxxx          xxxxxx            39.8
ApproachLOS:       *               *               *                E
```


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Patterson Sand and Gravel
Cumulative Conditions - No Project
"Highest" - PM Peak Hour

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

```
*******************************************************************************
Intersection #1 SR 65 and Riosa Road (Sheridan)
*******************************************************************************
Approach:       North Bound      South Bound       East Bound       West Bound
Movement:     L  -  T  -  R    L  -  T  -  R    L  -  T  -  R    L  -  T  -  R
------------|---------------||---------------||---------------||---------------|
HevVeh:            5%               4%               0%               7%
Grade:             0%               0%               0%               0%
Peds/Hour:         0                0                0                0
Pedestrian Walk Speed: 4.00 feet/sec
LaneWidth:       12 feet          12 feet          12 feet          12 feet
Time Period: 0.25 hour
------------|---------------||---------------||---------------||---------------|
Upstream Signals:
Link Index:        #2
Dist(miles):       0.000
Speed (mph):        0.00
SignalIndex:       #2
Cycle Time:            0 secs
InitVolume:      0     0
Saturation:      0     0
ArrivalType:     0     0
G/C:          0.00  0.00
*** Computation 1: Time for Queue to Clear at Each Upstream Intersection
P:           0.000 0.000
gq1:          0.00  0.00
gq2:          0.00  0.00
gq:           0.00  0.00
*** Computation 2: Time Intersection Blocked Because of Upstream Platoons
alpha:            0.000
beta:             0.000
ta (secs):        0.000
F:                0.000
f:           0.000 0.000
vcmax:           0     0
vcmin:           0     0
tp:            0.0   0.0
p:                0.000
*** Computation 3: Platoon Event Periods
pdom/psubo:      0.000/0.000/Unconstrained
*** Computation 4: Conflicting Flows During Each Unblocked Period
InitCnflVol:   0 xxxxx xxxxx  717 xxxxx xxxxx    0     0     0 1446     0   601
UpstreamSat:   0 xxxxx xxxxx    0 xxxxx xxxxx    0     0     0    0     0     0
UpstreamAdj:1.00 x.xxx x.xxx 1.00 x.xxx x.xxx 1.00 1.000 1.000 1.00 1.000 1.000
ConflictVol:   0 xxxxx xxxxx  717 xxxxx xxxxx    0     0     0 1446     0   601
*** Computation 5: Capactiy for Subject Movement During Unblocked Period
InitPotCap:    0 xxxxx xxxxx  875 xxxxx xxxxx    0     0     0  141     0   491
UpstreamAdj:1.00 x.xxx x.xxx 1.00 x.xxx x.xxx 1.00 1.000 1.000 1.00 1.000 1.000
PotentCap:     0 xxxxx xxxxx  875 xxxxx xxxxx    0     0     0  141     0   491
```

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Patterson Sand and Gravel
Cumulative Conditions - No Project
"Highest" - PM Peak Hour

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

```
*******************************************************************************
Intersection #2 SR 65 and SR 193 (Lincoln)
*******************************************************************************
Cycle (sec):          100                  Critical Vol./Cap. (X):        0.882
Loss Time (sec):        0 (Y+R =  4 sec) Average Delay (sec/veh):        28.1
Optimal Cycle:        157                  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        Permitted        Permitted
Rights:           Include          Include          Include          Ovl
Min. Green:     0    0    0    0    0    0    0    0    0    0    0    0
Lanes:        1  0  0  1  0    1  0  0  1  0    0  0  1! 0  0    0  1  0  0  1
------------|---------------||---------------||---------------||---------------|
Volume Module:
Base Vol:       0  850   22  377  532    0    0    0    0  131    0  310
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  850   22  377  532    0    0    0    0  131    0  310
User Adj:    1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
PHF Adj:     1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
PHF Volume:     0  850   22  377  532    0    0    0    0  131    0  310
Reduct Vol:     0    0    0    0    0    0    0    0    0    0    0    0
Reduced Vol:    0  850   22  377  532    0    0    0    0  131    0  310
PCE Adj:     1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
MLF Adj:     1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
Final Vol.:     0  850   22  377  532    0    0    0    0  131    0  310
------------|---------------||---------------||---------------||---------------|
Saturation Flow Module:
Sat/Lane:    1900 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900
Adjustment:  1.00 0.87 0.87 0.81 0.85 1.00 1.00 1.00 1.00 0.64 1.00 0.74
Lanes:       1.00 0.97 0.03 1.00 1.00 0.00 0.00 1.00 0.00 1.00 0.00 1.00
Final Sat.:  1900 1612   42 1532 1613    0    0 1900    0 1209    0 1398
------------|---------------||---------------||---------------||---------------|
Capacity Analysis Module:
Vol/Sat:     0.00 0.53 0.53 0.25 0.33 0.00 0.00 0.00 0.00 0.11 0.00 0.22
Crit Moves:          ****      ****                          ****
Green/Cycle: 0.00 0.60 0.60 0.28 0.88 0.00 0.00 0.00 0.00 0.12 0.00 0.40
Volume/Cap:  0.00 0.88 0.88 0.88 0.38 0.00 0.00 0.00 0.00 0.88 0.00 0.55
Delay/Veh:    0.0 26.4 26.4 53.3  1.3  0.0  0.0  0.0  0.0 84.4  0.0 24.2
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 26.4 26.4 53.3  1.3  0.0  0.0  0.0  0.0 84.4  0.0 24.2
DesignQueue:    0   22    1   16    4    0    0    0    0    7    0   11
*******************************************************************************
```


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Patterson Sand and Gravel
Cumulative Conditions - No Project
"Highest" - PM Peak Hour

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

```
*******************************************************************************
Intersection #2 SR 65 and SR 193 (Lincoln)
*******************************************************************************
Approach:       North Bound      South Bound      East Bound       West Bound
Movement:     L  -  T  -  R    L  -  T  -  R    L  -  T  -  R    L  -  T  -  R
------------|---------------||---------------||---------------||---------------|
HCM Ops Adjusted Lane Utilization Module:
Lanes:        1  0  0  1  0    1  0  0  1  0    0  0  1! 0  0    0  1  0  0  1
Lane Group:     L   RT   RT     L   RT   RT    LTR  LTR  LTR    LT   LT    R
#LnsInGrps:     1    1    1     1    1    1     1    1    1     1    1    1
------------|---------------||---------------||---------------||---------------|
HCM Ops Input Saturation Adj Module:
Lane Width:    12   12   12    12   12   12    12   12   12    12   12   12
CrosswalkWid         8                 8                 8                 8
% Hev Veh:           3                 6                 0                 4
Grade:              0%                0%                0%                0%
Parking/Hr:         No                No                No                No
Bus Stp/Hr:          0                 0                 0                 0
Area Type:    < < < < < < < < < < < < < < < CBD > > > > > > > > > > > > > > >
Cnft Ped/Hr:         0                 0                 0                 0
ExclusiveRT:     Include           Include           Include           Include
% RT Prtct:          0                 0                 0                 0
------------|---------------||---------------||---------------||---------------|
HCM Ops f(lt) Adj Case Module:
f(lt) Case:   xxxx xxxx  xxxx     1 xxxx  xxxx  xxxx xxxx  xxxx     5 xxxx  xxxx
------------|---------------||---------------||---------------||---------------|
HCM Ops Saturation Adj Module:
Ln Wid Adj:   xxxx 1.00  1.00  1.00 1.00 xxxxx  xxxx xxxx xxxxx  1.00 xxxx  1.00
Hev Veh Adj:  xxxx 0.97  0.97  0.94 0.94 xxxxx  xxxx xxxx xxxxx  0.96 xxxx  0.96
Grade Adj:    xxxx 1.00  1.00  1.00 1.00 xxxxx  xxxx xxxx xxxxx  1.00 xxxx  1.00
Parking Adj:  xxxx 1.00  1.00  xxxx 1.00 xxxxx  xxxx xxxx xxxxx  xxxx xxxx  1.00
Bus Stp Adj:  xxxx 1.00  1.00  xxxx 1.00 xxxxx  xxxx xxxx xxxxx  xxxx xxxx  1.00
Area Adj:     xxxx 0.90  0.90  0.90 0.90 xxxxx  xxxx xxxx xxxxx  0.90 xxxx  0.90
RT Adj:       xxxx 1.00  1.00  xxxx xxxx xxxxx  xxxx xxxx xxxxx  xxxx xxxx  0.85
LT Adj:       xxxx xxxx xxxxx  0.95 xxxx xxxxx  xxxx xxxx xxxxx  0.74 xxxx xxxxx
PedBike Adj:  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
HCM Sat Adj:  1.00 0.87  0.87  0.81 0.85  1.00  1.00 1.00  1.00  0.64 1.00  0.74
Usr Sat Adj:  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 Sat Adj:  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
Fnl Sat Adj:  1.00 0.87  0.87  0.81 0.85  1.00  1.00 1.00  1.00  0.64 1.00  0.74
------------|---------------||---------------||---------------||---------------|
Delay Adjustment Factor Module:
Coordinated:  < < < < < < < < < < < < < < < No  > > > > > > > > > > > > > > >
Signal Type:  < < < < < < < < < < < < <    Actuated    > > > > > > > > > > > >
DelAdjFctr:  0.00 1.00  1.00  1.00 1.00  0.00  0.00 0.00  0.00  1.00 0.00  1.00
*******************************************************************************
```

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Patterson Sand and Gravel
Cumulative Conditions - No Project
"Highest" - PM Peak Hour

Level Of Service Detailed Computation Report (Permitted Left Turn Sat Adj)
2000 HCM Operations Method
Base Volume Alternative

Intersection #2 SR 65 and SR 193 (Lincoln)

Approach:	North	South	East	West
Cycle Length, C:	xxxxxx	xxxxxx	xxxxxx	100
Actual Green Time Per Lane Group, G:	xxxxxx	xxxxxx	xxxxxx	8.29
Effective Green Time Per Lane Group, g:	xxxxxx	xxxxxx	xxxxxx	12.29
Opposing Effective Green Time, go:	xxxxxx	xxxxxx	xxxxxx	12.29
Number Of Opposing Lanes, No:	xxxxxx	xxxxxx	xxxxxx	1
Number Of Lanes In Lane Group, N:	xxxxxx	xxxxxx	xxxxxx	1
Adjusted Left-Turn Flow Rate, Vlt:	xxxxxx	xxxxxx	xxxxxx	131
Proportion of Left Turns in Lane Group, Plt:	xxxxxx	xxxxxx	xxxxxx	1.00
Proportion of Left Turns in Opp Flow, Plto:	xxxxxx	xxxxxx	xxxxxx	1.00
Left Turns Per Cycle, LTC:	xxxxxx	xxxxxx	xxxxxx	3.64
Adjusted Opposing Flow Rate, Vo:	xxxxxx	xxxxxx	xxxxxx	0
Opposing Flow Per Lane Per Cycle, Volc:	xxxxxx	xxxxxx	xxxxxx	0.00
Opposing Platoon Ratio, Rpo:	xxxxxx	xxxxxx	xxxxxx	1.00
Lost Time Per Phase, tl:	xxxxxx	xxxxxx	xxxxxx	0.00
Eff grn until arrival of left-turn car, gf:	xxxxxx	xxxxxx	xxxxxx	0.89
Opposing Queue Ratio, qro:	xxxxxx	xxxxxx	xxxxxx	0.88
Eff grn blocked by opposing queue, gq:	xxxxxx	xxxxxx	xxxxxx	0.00
Eff grn while left turns filter thru, gu:	xxxxxx	xxxxxx	xxxxxx	11.40
Max opposing cars arriving during gq-gf, n:	xxxxxx	xxxxxx	xxxxxx	0.00
Proportion of Opposing Thru & RT cars, ptho:	xxxxxx	xxxxxx	xxxxxx	0.00
Left-turn Saturation Factor, fs:	xxxxxx	xxxxxx	xxxxxx	xxxxxx
Proportion of Left Turns in Shared Lane, pl:	xxxxxx	xxxxxx	xxxxxx	1.00
Through-car Equivalents, el1:	xxxxxx	xxxxxx	xxxxxx	1.40
Single Lane Through-car Equivalents, el2:	xxxxxx	xxxxxx	xxxxxx	1.00
Minimum Left Turn Adjustment Factor, fmin:	xxxxxx	xxxxxx	xxxxxx	0.33
Single Lane Left Turn Adjustment Factor, fm:	xxxxxx	xxxxxx	xxxxxx	0.73
Left Turn Adjustment Factor, flt:	xxxxxx	xxxxxx	xxxxxx	0.73

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Patterson Sand and Gravel
Cumulative Conditions - No Project
"Highest" - PM Peak Hour

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

Intersection #4 Riosa Rd and 11th St

Cycle (sec): 100 Critical Vol./Cap. (X): 0.201
Loss Time (sec): 0 (Y+R = 4 sec) Average Delay (sec/veh): 8.1
Optimal Cycle: 0 Level Of Service: A

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Stop Sign			Stop Sign			Stop Sign			Stop Sign		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Lanes:	0 0	1! 0	0	0 0	0 1	0	0 1	0 0	0	0 1	0 0	0
Volume Module:												
Base Vol:	3	4	1	0	1	3	10	161	0	1	113	0
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	3	4	1	0	1	3	10	161	0	1	113	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:	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 Volume:	3	4	1	0	1	3	10	161	0	1	113	0
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	3	4	1	0	1	3	10	161	0	1	113	0
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Final Vol.:	3	4	1	0	1	3	10	161	0	1	113	0
Saturation Flow Module:												
Adjustment:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Lanes:	0.37	0.50	0.13	0.00	0.25	0.75	0.06	0.94	0.00	0.01	0.99	0.00
Final Sat.:	283	377	94	0	208	624	50	799	0	7	834	0
Capacity Analysis Module:												
Vol/Sat:	0.01	0.01	0.01	xxxx	0.00	0.00	0.20	0.20	xxxx	0.14	0.14	xxxx
Crit Moves:		****			****		****				****	
Delay/Veh:	7.5	7.5	7.5	0.0	7.1	7.1	8.3	8.3	0.0	7.9	7.9	0.0
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:	7.5	7.5	7.5	0.0	7.1	7.1	8.3	8.3	0.0	7.9	7.9	0.0
LOS by Move:	A	A	A	*	A	A	A	A	*	A	A	*
ApproachDel:		7.5			7.1			8.3			7.9	
Delay Adj:		1.00			1.00			1.00			1.00	
ApprAdjDel:		7.5			7.1			8.3			7.9	
LOS by Appr:		A			A			A			A	

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Patterson Sand and Gravel
Cumulative Conditions - No Project
"Highest" - PM Peak Hour

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

****
Intersection #4 Riosa Rd and 11th St
****

Approach:	North Bound	South Bound	East Bound	West Bound
Movement:	L - T - R	L - T - R	L - T - R	L - T - R
Time Period: 0.25 hour				
HevVeh:	0%	0%	10%	9%
Alpha Value: 0.01				
GroupType:	1	1	1	1
P[C1]:	0.6894	0.6856	0.8533	0.7883
P[C2]:	0.0031	0.0069	0.1323	0.1972
P[C3]:	0.2794	0.2778	0.0125	0.0115
P[C4]:	0.0280	0.0294	0.0020	0.0029
P[C5]:	0.0001	0.0003	0.0000	0.0000
Padj[C1]:	0.00646	0.00652	0.00163	0.00229
Padj[C2]:	0.00333	0.00331	-0.00116	-0.00180
Padj[C3]:	-0.00810	-0.00804	-0.00035	-0.00032
Padj[C4]:	-0.00168	-0.00176	-0.00012	-0.00018
Padj[C5]:	-0.00001	-0.00003	-0.00000	-0.00000
Lane:	L1	L1	L1	L1
LaneType:	LEFTTHRURITE	LEFTTHRURITE	LEFTTHRURITE	LEFTTHRURITE
HeadwayAdj:	0.000	-0.450	0.182	0.155
Volume:	8	4	171	114
Capacity:	755	832	849	842
DegOfUtil:	0.01	0.00	0.20	0.13
DepHeadway:	4.50	4.06	4.22	4.24
ServiceTime:	2.5	2.1	2.2	2.2
Delay:	7.5	7.1	8.3	7.9
Approach:	North Bound	South Bound	East Bound	West Bound
ApproachDel:	7.5	7.1	8.3	7.9
Delay Adj:	1.00	1.00	1.00	1.00
ApprAdjDel:	7.5	7.1	8.3	7.9
LOS by Appr:	A	A	A	A
OverallDel:			8.1	
OverallLOS:			A	

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Patterson Sand and Gravel
Cumulative Conditions - No Project
"Highest" - PM Peak Hour

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

****
Intersection #5 Riosa Rd and Karchner Rd
****
Average Delay (sec/veh): 4.1 Worst Case Level Of Service: A
****

Approach:	North Bound						South Bound						East Bound						West Bound					
Movement:	L	-	T	-	R		L	-	T	-	R		L	-	T	-	R		L	-	T	-	R	
Control:	Stop Sign						Stop Sign						Uncontrolled						Uncontrolled					
Rights:	Include						Include						Include						Include					
Lanes:	0	0	0	0	0		0	0	1!	0	0		0	1	0	0	0		0	0	0	1	0	
Volume Module:																								
Base Vol:	0	0	0				10	0	21				35	39	0				0	27	7			
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				10	0	21				35	39	0				0	27	7			
User Adj:	1.00	1.00	1.00				1.00	1.00	1.00				1.00	1.00	1.00				1.00	1.00	1.00			
PHF Adj:	1.00	1.00	1.00				1.00	1.00	1.00				1.00	1.00	1.00				1.00	1.00	1.00			
PHF Volume:	0	0	0				10	0	21				35	39	0				0	27	7			
Reduct Vol:	0	0	0				0	0	0				0	0	0				0	0	0			
Final Vol.:	0	0	0				10	0	21				35	39	0				0	27	7			
Critical Gap Module:																								
Critical Gp:	xxxxx	xxxx	xxxxx				6.7	xxxx	6.5				4.3	xxxx	xxxxx				xxxxx	xxxx	xxxxx			
FollowUpTim:	xxxxx	xxxx	xxxxx				3.8	xxxx	3.6				2.4	xxxx	xxxxx				xxxxx	xxxx	xxxxx			
Capacity Module:																								
Cnflict Vol:	xxxx	xxxx	xxxxx				140	xxxx	31				34	xxxx	xxxxx				xxxx	xxxx	xxxxx			
Potent Cap.:	xxxx	xxxx	xxxxx				783	xxxx	959				1452	xxxx	xxxxx				xxxx	xxxx	xxxxx			
Move Cap.:	xxxx	xxxx	xxxxx				769	xxxx	959				1452	xxxx	xxxxx				xxxx	xxxx	xxxxx			
Level Of Service Module:																								
Stopped Del:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx							7.5	xxxx	xxxxx	xxxxx	xxxx	xxxxx						
LOS by Move:	*	*	*	*	*	*							A	*	*	*	*	*						
Movement:	LT	-	LTR	-	RT		LT	-	LTR	-	RT		LT	-	LTR	-	RT		LT	-	LTR	-	RT	
Shared Cap.:	xxxx	xxxx	xxxxx	xxxx	888	xxxxx							xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx						
Shrd StpDel:	xxxxx	xxxx	xxxxx	xxxxx	9.2	xxxxx							7.5	xxxx	xxxxx	xxxxx	xxxx	xxxxx						
Shared LOS:	*	*	*	*	A	*							A	*	*	*	*	*						
ApproachDel:	xxxxxx				9.2								xxxxxx				xxxxxx							
ApproachLOS:	*				A								*				*							

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Patterson Sand and Gravel
Cumulative Conditions - No Project
"Highest" - PM Peak Hour

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

****
Intersection #5 Riosa Rd and Karchner Rd
****

Approach:	North Bound	South Bound	East Bound	West Bound
Movement:	L - T - R	L - T - R	L - T - R	L - T - R
HevVeh:	0%	34%	23%	0%
Grade:	0%	0%	0%	0%
Peds/Hour:	0	0	0	0
Pedestrian Walk Speed: 4.00 feet/sec				
LaneWidth:	12 feet	12 feet	12 feet	12 feet

Time Period: 0.25 hour

D4. Cumulative Plus Project (No Haul Road)

Cumulative AM Plus Project Thu Jan 15, 2004 14:31:58 Page 1-1

Patterson Sand and Gravel
Cumulative Conditions -Plus Proposed Project (No Haul Road)
"Average Day" - AM Peak Hour

Scenario Report

Scenario:	Cumulative AM Plus Project
Command:	Cumulative AM Plus Project
Volume:	Cumulative AM Plus Project
Geometry:	Cumulative AM Plus Project
Impact Fee:	Default Impact Fee
Trip Generation:	Default Trip Generation
Trip Distribution:	Default Trip Distribution
Paths:	Default Paths
Routes:	Default Routes
Configuration:	Default Configuration

Cumulative AM Plus Project Thu Jan 15, 2004 14:31:58 Page 2-1

Patterson Sand and Gravel
Cumulative Conditions -Plus Proposed Project (No Haul Road)
"Average Day" - AM Peak Hour

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 65 and Riosa Road (Sheridan	D	5.9	0.000	D	5.9	0.000	+ 0.000 V/C
# 2 SR 65 and SR 193 (Lincoln)	B	15.6	0.571	B	15.6	0.571	+ 0.000 D/V
# 4 Riosa Rd and 11th St	A	8.7	0.266	A	8.7	0.266	+ 0.000 V/C
# 5 Riosa Rd and Karchner Rd	A	4.3	0.000	A	4.3	0.000	+ 0.000 V/C

Cumulative AM Plus Project Thu Jan 15, 2004 14:31:58 Page 3-1

Patterson Sand and Gravel
Cumulative Conditions -Plus Proposed Project (No Haul Road)
"Average Day" - AM Peak Hour

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

```
*******************************************************************************
Intersection #1 SR 65 and Riosa Road (Sheridan)
*******************************************************************************
Average Delay (sec/veh):      5.9          Worst Case 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:       Uncontrolled     Uncontrolled      Stop Sign        Stop Sign
Rights:           Include          Include          Include          Include
Lanes:        0  0  1  0  1    1  0  1  0  0    0  0  0  0  0    0  0  1! 0  0
------------|---------------||---------------||---------------||---------------|
Volume Module:
Base Vol:       0  319   32   61  581    0    0    0    0   79    0  193
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  319   32   61  581    0    0    0    0   79    0  193
User Adj:    1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
PHF Adj:     1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
PHF Volume:     0  319   32   61  581    0    0    0    0   79    0  193
Reduct Vol:     0    0    0    0    0    0    0    0    0    0    0    0
Final Vol.:     0  319   32   61  581    0    0    0    0   79    0  193
------------|---------------||---------------||---------------||---------------|
Critical Gap Module:
Critical Gp:xxxxx xxxx xxxxx  4.2 xxxx xxxxx xxxxx xxxx xxxxx  6.6 xxxx  6.4
FollowUpTim:xxxxx xxxx xxxxx  2.3 xxxx xxxxx xxxxx xxxx xxxxx  3.7 xxxx  3.5
------------|---------------||---------------||---------------||---------------|
Capacity Module:
Cnflict Vol: xxxx xxxx xxxxx  351 xxxx xxxxx  xxxx xxxx xxxxx 1022 xxxx  319
Potent Cap.: xxxx xxxx xxxxx 1159 xxxx xxxxx  xxxx xxxx xxxxx  244 xxxx  686
Move Cap.:   xxxx xxxx xxxxx 1159 xxxx xxxxx  xxxx xxxx xxxxx  234 xxxx  686
------------|---------------||---------------||---------------||---------------|
Level Of Service Module:
Stopped Del:xxxxx xxxx xxxxx  8.3 xxxx xxxxx xxxxx xxxx xxxxx xxxxx xxxx xxxxx
LOS by Move:   *    *    *    A    *    *    *    *    *    *    *    *
Movement:     LT - LTR - RT   LT - LTR - RT   LT - LTR - RT   LT - LTR - RT
Shared Cap.: xxxx xxxx xxxxx xxxx xxxx xxxxx xxxx xxxx xxxxx xxxx  440 xxxxx
Shrd StpDel:xxxxx xxxx xxxxx xxxxx xxxx xxxxx xxxxx xxxx xxxxx xxxxx 25.6 xxxxx
Shared LOS:    *    *    *    *    *    *    *    *    *    *    D    *
ApproachDel:    xxxxxx          xxxxxx          xxxxxx          25.6
ApproachLOS:       *               *               *               D
```

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Cumulative AM Plus Project Thu Jan 15, 2004 14:31:58 Page 4-1

Patterson Sand and Gravel
Cumulative Conditions -Plus Proposed Project (No Haul Road)
"Average Day" - AM Peak Hour

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

```
*******************************************************************************
Intersection #1 SR 65 and Riosa Road (Sheridan)
*******************************************************************************
Approach:      North Bound      South Bound      East Bound       West Bound
Movement:     L  -  T  -  R    L  -  T  -  R    L  -  T  -  R    L  -  T  -  R
------------|---------------||---------------||---------------||---------------|
HevVeh:            18%              11%              0%              18%
Grade:              0%               0%              0%               0%
Peds/Hour:          0                0               0                0
Pedestrian Walk Speed: 4.00 feet/sec
LaneWidth:       12 feet          12 feet         12 feet          12 feet
Time Period: 0.25 hour
------------|---------------||---------------||---------------||---------------|
Upstream Signals:
Link Index:       #2
Dist(miles):      0.000
Speed (mph):       0.00
SignalIndex:      #2
Cycle Time:          0 secs
InitVolume:     0     0
Saturation:     0     0
ArrivalType:    0     0
G/C:         0.00  0.00
*** Computation 1: Time for Queue to Clear at Each Upstream Intersection
P:          0.000 0.000
gq1:         0.00  0.00
gq2:         0.00  0.00
gq:          0.00  0.00
*** Computation 2: Time Intersection Blocked Because of Upstream Platoons
alpha:           0.000
beta:            0.000
ta (secs):       0.000
F:               0.000
f:          0.000 0.000
vcmax:          0     0
vcmin:          0     0
tp:           0.0   0.0
p:               0.000
*** Computation 3: Platoon Event Periods
pdom/psubo:      0.000/0.000/Unconstrained
*** Computation 4: Conflicting Flows During Each Unblocked Period
InitCnflVol:   0 xxxxx xxxxx  351 xxxxx xxxxx    0     0     0 1022     0   319
UpstreamSat:   0 xxxxx xxxxx    0 xxxxx xxxxx    0     0     0    0     0     0
UpstreamAdj:1.00 x.xxx x.xxx 1.00 x.xxx x.xxx 1.00 1.000 1.000 1.00 1.000 1.000
ConflictVol:   0 xxxxx xxxxx  351 xxxxx xxxxx    0     0     0 1022     0   319
*** Computation 5: Capactiy for Subject Movement During Unblocked Period
InitPotCap:    0 xxxxx xxxxx 1159 xxxxx xxxxx    0     0     0  244     0   686
UpstreamAdj:1.00 x.xxx x.xxx 1.00 x.xxx x.xxx 1.00 1.000 1.000 1.00 1.000 1.000
PotentCap:     0 xxxxx xxxxx 1159 xxxxx xxxxx    0     0     0  244     0   686
```

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Cumulative AM Plus Project Thu Jan 15, 2004 14:31:58 Page 5-1

Patterson Sand and Gravel
Cumulative Conditions -Plus Proposed Project (No Haul Road)
"Average Day" - AM Peak Hour

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

****

Intersection #2 SR 65 and SR 193 (Lincoln)

****

Cycle (sec): 100 Critical Vol./Cap. (X): 0.571
Loss Time (sec): 0 (Y+R = 4 sec) Average Delay (sec/veh): 15.6
Optimal Cycle: 43 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				Permitted				Permitted			
Rights:	Include				Include				Include				Ovl			
Min. Green:	0	0	0		0	0	0		0	0	0		0	0	0	
Lanes:	1	0	0	1 0	1	0	0	1 0	0	0	1!	0 0	0	1	0	0 1
Volume Module:																
Base Vol:	0	432	29		180	613	0		0	0	0		62	0	301	
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	432	29		180	613	0		0	0	0		62	0	301	
User Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
PHF Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
PHF Volume:	0	432	29		180	613	0		0	0	0		62	0	301	
Reduct Vol:	0	0	0		0	0	0		0	0	0		0	0	0	
Reduced Vol:	0	432	29		180	613	0		0	0	0		62	0	301	
PCE Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
MLF Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
Final Vol.:	0	432	29		180	613	0		0	0	0		62	0	301	
Saturation Flow Module:																
Sat/Lane:	1900	1900	1900		1900	1900	1900		1900	1900	1900		1900	1900	1900	
Adjustment:	1.00	0.76	0.76		0.74	0.78	1.00		1.00	1.00	1.00		0.58	1.00	0.63	
Lanes:	1.00	0.94	0.06		1.00	1.00	0.00		0.00	1.00	0.00		1.00	0.00	1.00	
Final Sat.:	1900	1358	91		1400	1474	0		0	1900	0		1101	0	1192	
Capacity Analysis Module:																
Vol/Sat:	0.00	0.32	0.32		0.13	0.42	0.00		0.00	0.00	0.00		0.06	0.00	0.25	
Crit Moves:		****			****										****	
Green/Cycle:	0.00	0.56	0.56		0.23	0.78	0.00		0.00	0.00	0.00		0.22	0.00	0.44	
Volume/Cap:	0.00	0.57	0.57		0.57	0.53	0.00		0.00	0.00	0.00		0.26	0.00	0.57	
Delay/Veh:	0.0	15.3	15.3		36.9	4.5	0.0		0.0	0.0	0.0		33.0	0.0	22.3	
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:	0.0	15.3	15.3		36.9	4.5	0.0		0.0	0.0	0.0		33.0	0.0	22.3	
DesignQueue:	0	11	1		8	8	0		0	0	0		3	0	10	

****

Cumulative AM Plus Project Thu Jan 15, 2004 14:31:58 Page 6-1

Patterson Sand and Gravel
Cumulative Conditions -Plus Proposed Project (No Haul Road)
"Average Day" - AM Peak Hour

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

****

Intersection #2 SR 65 and SR 193 (Lincoln)

****

Approach:	North Bound				South Bound				East Bound				West Bound			
Movement:	L	-	T	- R	L	-	T	- R	L	-	T	- R	L	-	T	- R
HCM Ops Adjusted Lane Utilization Module:																
Lanes:	1	0	0	1 0	1	0	0	1 0	0	0	1!	0 0	0	1	0	0 1
Lane Group:	L		RT	RT	L		RT	RT	LTR	LTR		LTR	LT		LT	R
#LnsInGrps:	1		1	1	1		1	1	1	1		1	1		1	1
HCM Ops Input Saturation Adj Module:																
Lane Width:	12		12	12	12		12	12	12	12		12	12		12	12
CrosswalkWid			8				8			8					8	
% Hev Veh:			17				16			0					22	
Grade:			0%				0%			0%					0%	
Parking/Hr:			No				No			No					No	
Bus Stp/Hr:			0				0			0					0	
Area Type:	< < < < < < < < < < < < < < < < CBD > > > > > > > > > > > > > > > >															
Cnft Ped/Hr:			0				0			0					0	
ExclusiveRT:			Include				Include			Include					Include	
% RT Prtct:			0				0			0					0	
HCM Ops f(lt) Adj Case Module:																
f(lt) Case:	xxxx	xxxx	xxxx		1	xxxx	xxxx		xxxx	xxxx	xxxx		5	xxxx	xxxx	
HCM Ops Saturation Adj Module:																
Ln Wid Adj:	xxxx	1.00	1.00		1.00	1.00	xxxxx		xxxx	xxxx	xxxxx		1.00	xxxx	1.00	
Hev Veh Adj:	xxxx	0.86	0.86		0.86	0.86	xxxxx		xxxx	xxxx	xxxxx		0.82	xxxx	0.82	
Grade Adj:	xxxx	1.00	1.00		1.00	1.00	xxxxx		xxxx	xxxx	xxxxx		1.00	xxxx	1.00	
Parking Adj:	xxxx	1.00	1.00		xxxx	1.00	xxxxx		xxxx	xxxx	xxxxx		xxxx	xxxx	1.00	
Bus Stp Adj:	xxxx	1.00	1.00		xxxx	1.00	xxxxx		xxxx	xxxx	xxxxx		xxxx	xxxx	1.00	
Area Adj:	xxxx	0.90	0.90		0.90	0.90	xxxxx		xxxx	xxxx	xxxxx		0.90	xxxx	0.90	
RT Adj:	xxxx	0.99	0.99		xxxx	xxxx	xxxxx		xxxx	xxxx	xxxxx		xxxx	xxxx	0.85	
LT Adj:	xxxx	xxxx	xxxxx		0.95	xxxx	xxxxx		xxxx	xxxx	xxxxx		0.79	xxxx	xxxxx	
PedBike Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
HCM Sat Adj:	1.00	0.76	0.76		0.74	0.78	1.00		1.00	1.00	1.00		0.58	1.00	0.63	
Usr Sat Adj:	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 Sat Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
Fnl Sat Adj:	1.00	0.76	0.76		0.74	0.78	1.00		1.00	1.00	1.00		0.58	1.00	0.63	
Delay Adjustment Factor Module:																
Coordinated:	< < < < < < < < < < < < < < < < No > > > > > > > > > > > > > > > >															
Signal Type:	< < < < < < < < < < < < < Actuated > > > > > > > > > > > > >															
DelAdjFctr:	0.00	1.00	1.00		1.00	1.00	0.00		0.00	0.00	0.00		1.00	0.00	1.00	

****

Cumulative AM Plus Project Thu Jan 15, 2004 14:31:58 Page 6-2

Patterson Sand and Gravel
Cumulative Conditions -Plus Proposed Project (No Haul Road)
"Average Day" - AM Peak Hour

Level Of Service Detailed Computation Report (Permitted Left Turn Sat Adj)
2000 HCM Operations Method
Base Volume Alternative

****

Intersection #2 SR 65 and SR 193 (Lincoln)

****

Approach:	North	South	East	West
Cycle Length, C:	xxxxxx	xxxxxx	xxxxxx	100
Actual Green Time Per Lane Group, G:	xxxxxx	xxxxxx	xxxxxx	40.25
Effective Green Time Per Lane Group, g:	xxxxxx	xxxxxx	xxxxxx	44.25
Opposing Effective Green Time, go:	xxxxxx	xxxxxx	xxxxxx	44.25
Number Of Opposing Lanes, No:	xxxxxx	xxxxxx	xxxxxx	1
Number Of Lanes In Lane Group, N:	xxxxxx	xxxxxx	xxxxxx	1
Adjusted Left-Turn Flow Rate, Vlt:	xxxxxx	xxxxxx	xxxxxx	62
Proportion of Left Turns in Lane Group, Plt:	xxxxxx	xxxxxx	xxxxxx	1.00
Proportion of Left Turns in Opp Flow, Plto:	xxxxxx	xxxxxx	xxxxxx	1.00
Left Turns Per Cycle, LTC:	xxxxxx	xxxxxx	xxxxxx	1.72
Adjusted Opposing Flow Rate, Vo:	xxxxxx	xxxxxx	xxxxxx	0
Opposing Flow Per Lane Per Cycle, Volc:	xxxxxx	xxxxxx	xxxxxx	0.00
Opposing Platoon Ratio, Rpo:	xxxxxx	xxxxxx	xxxxxx	1.00
Lost Time Per Phase, tl:	xxxxxx	xxxxxx	xxxxxx	0.00
Eff grn until arrival of left-turn car, gf:	xxxxxx	xxxxxx	xxxxxx	10.94
Opposing Queue Ratio, qro:	xxxxxx	xxxxxx	xxxxxx	0.56
Eff grn blocked by opposing queue, gq:	xxxxxx	xxxxxx	xxxxxx	0.00
Eff grn while left turns filter thru, gu:	xxxxxx	xxxxxx	xxxxxx	33.31
Max opposing cars arriving during gq-gf, n:	xxxxxx	xxxxxx	xxxxxx	0.00
Proportion of Opposing Thru & RT cars, ptho:	xxxxxx	xxxxxx	xxxxxx	0.00
Left-turn Saturation Factor, fs:	xxxxxx	xxxxxx	xxxxxx	xxxxxx
Proportion of Left Turns in Shared Lane, pl:	xxxxxx	xxxxxx	xxxxxx	1.00
Through-car Equivalents, el1:	xxxxxx	xxxxxx	xxxxxx	1.40
Single Lane Through-car Equivalents, el2:	xxxxxx	xxxxxx	xxxxxx	1.00
Minimum Left Turn Adjustment Factor, fmin:	xxxxxx	xxxxxx	xxxxxx	0.09
Single Lane Left Turn Adjustment Factor, fm:	xxxxxx	xxxxxx	xxxxxx	0.78
Left Turn Adjustment Factor, flt:	xxxxxx	xxxxxx	xxxxxx	0.78

****

Cumulative AM Plus Project Thu Jan 15, 2004 14:31:58 Page 7-1

Patterson Sand and Gravel
Cumulative Conditions -Plus Proposed Project (No Haul Road)
"Average Day" - AM Peak Hour

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

****

Intersection #4 Riosa Rd and 11th St

****

Cycle (sec): 100 Critical Vol./Cap. (X): 0.266
Loss Time (sec): 0 (Y+R = 4 sec) Average Delay (sec/veh): 8.7
Optimal Cycle: 0 Level Of Service: A

****

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Stop Sign			Stop Sign			Stop Sign			Stop Sign		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Lanes:	0 0	1! 0	0	0 0	1! 0	0	0 1	0 0	0	0 1	0 0	0
Volume Module:												
Base Vol:	6	4	4	11	7	20	13	104	0	2	207	0
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	6	4	4	11	7	20	13	104	0	2	207	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:	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 Volume:	6	4	4	11	7	20	13	104	0	2	207	0
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	6	4	4	11	7	20	13	104	0	2	207	0
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Final Vol.:	6	4	4	11	7	20	13	104	0	2	207	0
Saturation Flow Module:												
Adjustment:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Lanes:	0.43	0.28	0.29	0.29	0.18	0.53	0.11	0.89	0.00	0.01	0.99	0.00
Final Sat.:	314	209	209	222	141	404	84	675	0	8	777	0
Capacity Analysis Module:												
Vol/Sat:	0.02	0.02	0.02	0.05	0.05	0.05	0.15	0.15	xxxx	0.27	0.27	xxxx
Crit Moves:	****				****			****			****	
Delay/Veh:	7.7	7.7	7.7	7.6	7.6	7.6	8.5	8.5	0.0	9.1	9.1	0.0
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:	7.7	7.7	7.7	7.6	7.6	7.6	8.5	8.5	0.0	9.1	9.1	0.0
LOS by Move:	A	A	A	A	A	A	A	A	*	A	A	*
ApproachDel:	7.7			7.6			8.5			9.1		
Delay Adj:	1.00			1.00			1.00			1.00		
ApprAdjDel:	7.7			7.6			8.5			9.1		
LOS by Appr:	A			A			A			A		

****

Cumulative AM Plus Project Thu Jan 15, 2004 14:31:58 Page 8-1

Patterson Sand and Gravel
Cumulative Conditions -Plus Proposed Project (No Haul Road)
"Average Day" - AM Peak Hour

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

****
Intersection #4 Riosa Rd and 11th St
****

Approach:	North Bound	South Bound	East Bound	West Bound
Movement:	L - T - R	L - T - R	L - T - R	L - T - R
Time Period: 0.25 hour				
HevVeh:	0%	0%	24%	23%
Alpha Value: 0.01				
GroupType:	1	1	1	1
P[C1]:	0.60	0.61	0.69	0.79
P[C2]:	0.03	0.01	0.25	0.14
P[C3]:	0.32	0.33	0.05	0.05
P[C4]:	0.05	0.05	0.02	0.01
P[C5]:	0.00	0.00	0.00	0.00
Padj[C1]:	0.008	0.008	0.004	0.003
Padj[C2]:	0.004	0.004	-0.002	-0.001
Padj[C3]:	-0.009	-0.009	-0.001	-0.001
Padj[C4]:	-0.003	-0.003	-0.001	-0.001
Padj[C5]:	-0.000	-0.000	-0.000	-0.000
Lane:	L1	L1	L1	L1
LaneType:	LEFTTHRURITE	LEFTTHRURITE	LEFTTHRURITE	LEFTTHRURITE
HeadwayAdj:	-0.086	-0.258	0.430	0.393
Volume:	14	38	117	209
Capacity:	733	767	759	785
DegOfUtil:	0.02	0.05	0.15	0.26
DepHeadway:	4.60	4.40	4.66	4.53
ServiceTime:	2.6	2.4	2.7	2.5
Delay:	7.7	7.6	8.5	9.1
Approach:	North Bound	South Bound	East Bound	West Bound
ApproachDel:	7.7	7.6	8.5	9.1
Delay Adj:	1.00	1.00	1.00	1.00
ApprAdjDel:	7.7	7.6	8.5	9.1
LOS by Appr:	A	A	A	A
OverallDel:		8.7		
OverallLOS:		A		

Cumulative AM Plus Project Thu Jan 15, 2004 14:31:58 Page 9-1

Patterson Sand and Gravel
Cumulative Conditions -Plus Proposed Project (No Haul Road)
"Average Day" - AM Peak Hour

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

****
Intersection #5 Riosa Rd and Karchner Rd
****

Average Delay (sec/veh): 4.3 Worst Case Level Of Service: A

****

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Stop Sign			Stop Sign			Uncontrolled			Uncontrolled		
Rights:	Include			Include			Include			Include		
Lanes:	0 0	0	0 0	0 0	1!	0 0	0 1	0	0 0	0 0	0	1 0
Volume Module:												
Base Vol:	0	0	0	23	0	44	30	38	0	0	52	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:	0	0	0	23	0	44	30	38	0	0	52	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:	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 Volume:	0	0	0	23	0	44	30	38	0	0	52	2
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Final Vol.:	0	0	0	23	0	44	30	38	0	0	52	2
Critical Gap Module:												
Critical Gp:	xxxxx	xxxx	xxxxx	7.0	xxxx	6.8	4.5	xxxx	xxxxx	xxxxx	xxxx	xxxxx
FollowUpTim:	xxxxx	xxxx	xxxxx	4.0	xxxx	3.8	2.6	xxxx	xxxxx	xxxxx	xxxx	xxxxx
Capacity Module:												
Cnflict Vol:	xxxx	xxxx	xxxxx	151	xxxx	53	54	xxxx	xxxxx	xxxx	xxxx	xxxxx
Potent Cap.:	xxxx	xxxx	xxxxx	720	xxxx	870	1330	xxxx	xxxxx	xxxx	xxxx	xxxxx
Move Cap.:	xxxx	xxxx	xxxxx	708	xxxx	870	1330	xxxx	xxxxx	xxxx	xxxx	xxxxx
Level Of Service Module:												
Stopped Del:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	7.8	xxxx	xxxxx	xxxxx	xxxx	xxxxx
LOS by Move:	*	*	*	*	*	*	A	*	*	*	*	*
Movement:	LT - LTR - RT			LT - LTR - RT			LT - LTR - RT			LT - LTR - RT		
Shared Cap.:	xxxx	xxxx	xxxxx	xxxx	807	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx
Shrd StpDel:	xxxxx	xxxx	xxxxx	xxxxx	9.9	xxxxx	7.8	xxxx	xxxxx	xxxxx	xxxx	xxxxx
Shared LOS:	*	*	*	*	A	*	A	*	*	*	*	*
ApproachDel:	xxxxxx				9.9		xxxxxx			xxxxxx		
ApproachLOS:	*				A		*			*		

Cumulative AM Plus Project Thu Jan 15, 2004 14:31:58 Page 10-1

Patterson Sand and Gravel
Cumulative Conditions -Plus Proposed Project (No Haul Road)
"Average Day" - AM Peak Hour

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

****
Intersection #5 Riosa Rd and Karchner Rd
****

Approach:	North Bound	South Bound	East Bound	West Bound
Movement:	L - T - R	L - T - R	L - T - R	L - T - R
HevVeh:	0%	61%	42%	15%
Grade:	0%	0%	0%	0%
Peds/Hour:	0	0	0	0
LaneWidth:	12 feet	12 feet	12 feet	12 feet

Pedestrian Walk Speed: 4.00 feet/sec
Time Period: 0.25 hour

Cumulative AM Plus Project Thu Jan 15, 2004 16:13:04 Page 1-1

Patterson Sand and Gravel
Cumulative Conditions -Plus Proposed Project (No Haul Road)
"30th Highest" - AM Peak Hour

Scenario Report

Scenario:	Cumulative AM Plus Project
Command:	Cumulative AM Plus Project
Volume:	Cumulative AM Plus Project
Geometry:	Cumulative AM Plus Project
Impact Fee:	Default Impact Fee
Trip Generation:	Default Trip Generation
Trip Distribution:	Default Trip Distribution
Paths:	Default Paths
Routes:	Default Routes
Configuration:	Default Configuration

Cumulative AM Plus Project Thu Jan 15, 2004 16:13:04 Page 2-1

Patterson Sand and Gravel
Cumulative Conditions -Plus Proposed Project (No Haul Road)
"30th Highest" - AM Peak Hour

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 65 and Riosa Road (Sheridan	D	7.9	0.000	D	7.9	0.000	+ 0.000 V/C
# 2 SR 65 and SR 193 (Lincoln)	B	15.8	0.585	B	15.8	0.585	+ 0.000 D/V
# 4 Riosa Rd and 11th St	A	9.1	0.304	A	9.1	0.304	+ 0.000 V/C
# 5 Riosa Rd and Karchner Rd	B	4.9	0.000	B	4.9	0.000	+ 0.000 V/C

Cumulative AM Plus Project Thu Jan 15, 2004 16:13:04 Page 3-1

Patterson Sand and Gravel
Cumulative Conditions -Plus Proposed Project (No Haul Road)
"30th Highest" - AM Peak Hour

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

```
*******************************************************************************
Intersection #1 SR 65 and Riosa Road (Sheridan)
*******************************************************************************
Average Delay (sec/veh):      7.9           Worst Case 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:       Uncontrolled     Uncontrolled      Stop Sign        Stop Sign
Rights:           Include          Include          Include          Include
Lanes:       0  0  1  0  1    1  0  1  0  0    0  0  0  0  0    0  0  1! 0  0
------------|----------------||----------------||----------------||----------------|
Volume Module:
Base Vol:       0  319    41    61  581     0     0    0     0    97    0   197
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  319    41    61  581     0     0    0     0    97    0   197
User Adj:    1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
PHF Adj:     1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
PHF Volume:     0  319    41    61  581     0     0    0     0    97    0   197
Reduct Vol:     0    0     0     0    0     0     0    0     0     0    0     0
Final Vol.:     0  319    41    61  581     0     0    0     0    97    0   197
------------|----------------||----------------||----------------||----------------|
Critical Gap Module:
Critical Gp:xxxxx xxxx xxxxx   4.2 xxxx xxxxx xxxxx xxxx xxxxx   6.6 xxxx   6.4
FollowUpTim:xxxxx xxxx xxxxx   2.3 xxxx xxxxx xxxxx xxxx xxxxx   3.7 xxxx   3.5
------------|----------------||----------------||----------------||----------------|
Capacity Module:
Cnflict Vol: xxxx xxxx xxxxx   360 xxxx xxxxx  xxxx xxxx xxxxx  1022 xxxx   319
Potent Cap.: xxxx xxxx xxxxx  1151 xxxx xxxxx  xxxx xxxx xxxxx   238 xxxx   673
Move Cap.:   xxxx xxxx xxxxx  1151 xxxx xxxxx  xxxx xxxx xxxxx   228 xxxx   673
------------|----------------||----------------||----------------||----------------|
Level Of Service Module:
Stopped Del:xxxxx xxxx xxxxx   8.3 xxxx xxxxx xxxxx xxxx xxxxx xxxxx xxxx xxxxx
LOS by Move:   *    *    *     A    *    *     *    *    *     *    *    *
Movement:     LT - LTR - RT    LT - LTR - RT    LT - LTR - RT    LT - LTR - RT
Shared Cap.: xxxx xxxx xxxxx  xxxx xxxx xxxxx  xxxx xxxx xxxxx  xxxx  410 xxxxx
Shrd StpDel:xxxxx xxxx xxxxx xxxxx xxxx xxxxx xxxxx xxxx xxxxx xxxxx 33.1 xxxxx
Shared LOS:    *    *    *     *    *    *     *    *    *     *    D     *
ApproachDel:    xxxxxx           xxxxxx           xxxxxx           33.1
ApproachLOS:       *                *                *               D
```

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Cumulative AM Plus Project Thu Jan 15, 2004 16:13:04 Page 4-1

Patterson Sand and Gravel
Cumulative Conditions -Plus Proposed Project (No Haul Road)
"30th Highest" - AM Peak Hour

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

```
*******************************************************************************
Intersection #1 SR 65 and Riosa Road (Sheridan)
*******************************************************************************
Approach:      North Bound      South Bound      East Bound       West Bound
Movement:    L  -  T  -  R    L  -  T  -  R    L  -  T  -  R    L  -  T  -  R
------------|----------------||----------------||----------------||----------------|
HevVeh:            20%              11%              0%               24%
Grade:              0%               0%              0%                0%
Peds/Hour:          0                0               0                 0
Pedestrian Walk Speed: 4.00 feet/sec
LaneWidth:       12 feet          12 feet          12 feet          12 feet
Time Period: 0.25 hour
------------|----------------||----------------||----------------||----------------|
Upstream Signals:
Link Index:       #2
Dist(miles):      0.000
Speed (mph):       0.00
SignalIndex:      #2
Cycle Time:          0 secs
InitVolume:     0     0
Saturation:     0     0
ArrivalType:    0     0
G/C:         0.00  0.00
*** Computation 1: Time for Queue to Clear at Each Upstream Intersection
P:          0.000 0.000
gq1:         0.00  0.00
gq2:         0.00  0.00
gq:          0.00  0.00
*** Computation 2: Time Intersection Blocked Because of Upstream Platoons
alpha:            0.000
beta:             0.000
ta (secs):        0.000
F:                0.000
f:          0.000 0.000
vcmax:          0     0
vcmin:          0     0
tp:           0.0   0.0
p:                0.000
*** Computation 3: Platoon Event Periods
pdom/psubo:      0.000/0.000/Unconstrained
*** Computation 4: Conflicting Flows During Each Unblocked Period
InitCnflVol:   0 xxxxx xxxxx  360 xxxxx xxxxx    0     0     0 1022     0   319
UpstreamSat:   0 xxxxx xxxxx    0 xxxxx xxxxx    0     0     0    0     0     0
UpstreamAdj:1.00 x.xxx x.xxx 1.00 x.xxx x.xxx 1.00 1.000 1.000 1.00 1.000 1.000
ConflictVol:   0 xxxxx xxxxx  360 xxxxx xxxxx    0     0     0 1022     0   319
*** Computation 5: Capactiy for Subject Movement During Unblocked Period
InitPotCap:    0 xxxxx xxxxx 1151 xxxxx xxxxx    0     0     0  238     0   673
UpstreamAdj:1.00 x.xxx x.xxx 1.00 x.xxx x.xxx 1.00 1.000 1.000 1.00 1.000 1.000
PotentCap:     0 xxxxx xxxxx 1151 xxxxx xxxxx    0     0     0  238     0   673
```

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Cumulative AM Plus Project Thu Jan 15, 2004 16:13:04 Page 5-1

Patterson Sand and Gravel
Cumulative Conditions -Plus Proposed Project (No Haul Road)
"30th Highest" - AM Peak Hour

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

****
Intersection #2 SR 65 and SR 193 (Lincoln)
****
Cycle (sec): 100 Critical Vol./Cap. (X): 0.585
Loss Time (sec): 0 (Y+R = 4 sec) Average Delay (sec/veh): 15.8
Optimal Cycle: 45 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				Permitted				Permitted			
Rights:	Include				Include				Include				Ovl			
Min. Green:	0	0	0		0	0	0		0	0	0		0	0	0	
Lanes:	1	0	0	1 0	1	0	0	1 0	0	0	1!	0 0	0	1	0	0 1
Volume Module:																
Base Vol:	0	439	29		184	627	0		0	0	0		62	0	303	
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	439	29		184	627	0		0	0	0		62	0	303	
User Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
PHF Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
PHF Volume:	0	439	29		184	627	0		0	0	0		62	0	303	
Reduct Vol:	0	0	0		0	0	0		0	0	0		0	0	0	
Reduced Vol:	0	439	29		184	627	0		0	0	0		62	0	303	
PCE Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
MLF Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
Final Vol.:	0	439	29		184	627	0		0	0	0		62	0	303	
Saturation Flow Module:																
Sat/Lane:	1900	1900	1900		1900	1900	1900		1900	1900	1900		1900	1900	1900	
Adjustment:	1.00	0.75	0.75		0.72	0.76	1.00		1.00	1.00	1.00		0.57	1.00	0.62	
Lanes:	1.00	0.94	0.06		1.00	1.00	0.00		0.00	1.00	0.00		1.00	0.00	1.00	
Final Sat.:	1900	1335	88		1376	1448	0		0	1900	0		1091	0	1182	
Capacity Analysis Module:																
Vol/Sat:	0.00	0.33	0.33		0.13	0.43	0.00		0.00	0.00	0.00		0.06	0.00	0.26	
Crit Moves:		****			****										****	
Green/Cycle:	0.00	0.56	0.56		0.23	0.79	0.00		0.00	0.00	0.00		0.21	0.00	0.44	
Volume/Cap:	0.00	0.59	0.59		0.59	0.55	0.00		0.00	0.00	0.00		0.27	0.00	0.59	
Delay/Veh:	0.0	15.4	15.4		37.2	4.4	0.0		0.0	0.0	0.0		33.8	0.0	23.0	
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	15.4	15.4		37.2	4.4	0.0		0.0	0.0	0.0		33.8	0.0	23.0	
DesignQueue:	0	11	1		8	8	0		0	0	0		3	0	10	

****

Cumulative AM Plus Project Thu Jan 15, 2004 16:13:04 Page 6-1

Patterson Sand and Gravel
Cumulative Conditions -Plus Proposed Project (No Haul Road)
"30th Highest" - AM Peak Hour

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

****
Intersection #2 SR 65 and SR 193 (Lincoln)
****

Approach:	North Bound				South Bound				East Bound				West Bound			
Movement:	L	-	T	- R	L	-	T	- R	L	-	T	- R	L	-	T	- R
HCM Ops Adjusted Lane Utilization Module:																
Lanes:	1	0	0	1 0	1	0	0	1 0	0	0	1!	0 0	0	1	0	0 1
Lane Group:	L		RT	RT	L		RT	RT	LTR		LTR	LTR	LT		LT	R
#LnsInGrps:	1		1	1	1		1	1	1		1	1	1		1	1
HCM Ops Input Saturation Adj Module:																
Lane Width:	12		12	12	12		12	12	12		12	12	12		12	12
CrosswalkWid			8				8				8				8	
% Hev Veh:			19				18				0				23	
Grade:			0%				0%				0%				0%	
Parking/Hr:			No				No				No				No	
Bus Stp/Hr:			0				0				0				0	
Area Type:	< < < < < < < < < < < < < < < < CBD > > > > > > > > > > > > > > > >															
Cnft Ped/Hr:			0				0				0				0	
ExclusiveRT:			Include				Include				Include				Include	
% RT Prtct:			0				0				0				0	
HCM Ops f(lt) Adj Case Module:																
f(lt) Case:	xxxx	xxxx	xxxx		1	xxxx	xxxx		xxxx	xxxx	xxxx		5	xxxx	xxxx	
HCM Ops Saturation Adj Module:																
Ln Wid Adj:	xxxx	1.00	1.00		1.00	1.00	xxxxx		xxxx	xxxx	xxxxx		1.00	xxxx	1.00	
Hev Veh Adj:	xxxx	0.84	0.84		0.85	0.85	xxxxx		xxxx	xxxx	xxxxx		0.81	xxxx	0.81	
Grade Adj:	xxxx	1.00	1.00		1.00	1.00	xxxxx		xxxx	xxxx	xxxxx		1.00	xxxx	1.00	
Parking Adj:	xxxx	1.00	1.00		xxxx	1.00	xxxxx		xxxx	xxxx	xxxxx		xxxx	xxxx	1.00	
Bus Stp Adj:	xxxx	1.00	1.00		xxxx	1.00	xxxxx		xxxx	xxxx	xxxxx		xxxx	xxxx	1.00	
Area Adj:	xxxx	0.90	0.90		0.90	0.90	xxxxx		xxxx	xxxx	xxxxx		0.90	xxxx	0.90	
RT Adj:	xxxx	0.99	0.99		xxxx	xxxx	xxxxx		xxxx	xxxx	xxxxx		xxxx	xxxx	0.85	
LT Adj:	xxxx	xxxx	xxxxx		0.95	xxxx	xxxxx		xxxx	xxxx	xxxxx		0.79	xxxx	xxxxx	
PedBike Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
HCM Sat Adj:	1.00	0.75	0.75		0.72	0.76	1.00		1.00	1.00	1.00		0.57	1.00	0.62	
Usr Sat Adj:	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 Sat Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
Fnl Sat Adj:	1.00	0.75	0.75		0.72	0.76	1.00		1.00	1.00	1.00		0.57	1.00	0.62	
Delay Adjustment Factor Module:																
Coordinated:	< < < < < < < < < < < < < < < < No > > > > > > > > > > > > > > > >															
Signal Type:	< < < < < < < < < < < < < Actuated > > > > > > > > > > > > >															
DelAdjFctr:	0.00	1.00	1.00		1.00	1.00	0.00		0.00	0.00	0.00		1.00	0.00	1.00	

****

Cumulative AM Plus Project Thu Jan 15, 2004 16:13:04 Page 6-2

Patterson Sand and Gravel
Cumulative Conditions -Plus Proposed Project (No Haul Road)
"30th Highest" - AM Peak Hour

Level Of Service Detailed Computation Report (Permitted Left Turn Sat Adj)
2000 HCM Operations Method
Base Volume Alternative

****
Intersection #2 SR 65 and SR 193 (Lincoln)
****

Approach:	North	South	East	West
Cycle Length, C:	xxxxxx	xxxxxx	xxxxxx	100
Actual Green Time Per Lane Group, G:	xxxxxx	xxxxxx	xxxxxx	39.82
Effective Green Time Per Lane Group, g:	xxxxxx	xxxxxx	xxxxxx	43.82
Opposing Effective Green Time, go:	xxxxxx	xxxxxx	xxxxxx	43.82
Number Of Opposing Lanes, No:	xxxxxx	xxxxxx	xxxxxx	1
Number Of Lanes In Lane Group, N:	xxxxxx	xxxxxx	xxxxxx	1
Adjusted Left-Turn Flow Rate, Vlt:	xxxxxx	xxxxxx	xxxxxx	62
Proportion of Left Turns in Lane Group, Plt:	xxxxxx	xxxxxx	xxxxxx	1.00
Proportion of Left Turns in Opp Flow, Plto:	xxxxxx	xxxxxx	xxxxxx	1.00
Left Turns Per Cycle, LTC:	xxxxxx	xxxxxx	xxxxxx	1.72
Adjusted Opposing Flow Rate, Vo:	xxxxxx	xxxxxx	xxxxxx	0
Opposing Flow Per Lane Per Cycle, Volc:	xxxxxx	xxxxxx	xxxxxx	0.00
Opposing Platoon Ratio, Rpo:	xxxxxx	xxxxxx	xxxxxx	1.00
Lost Time Per Phase, tl:	xxxxxx	xxxxxx	xxxxxx	0.00
Eff grn until arrival of left-turn car, gf:	xxxxxx	xxxxxx	xxxxxx	10.83
Opposing Queue Ratio, qro:	xxxxxx	xxxxxx	xxxxxx	0.56
Eff grn blocked by opposing queue, gq:	xxxxxx	xxxxxx	xxxxxx	0.00
Eff grn while left turns filter thru, gu:	xxxxxx	xxxxxx	xxxxxx	32.99
Max opposing cars arriving during gq-gf, n:	xxxxxx	xxxxxx	xxxxxx	0.00
Proportion of Opposing Thru & RT cars, ptho:	xxxxxx	xxxxxx	xxxxxx	0.00
Left-turn Saturation Factor, fs:	xxxxxx	xxxxxx	xxxxxx	xxxxxx
Proportion of Left Turns in Shared Lane, pl:	xxxxxx	xxxxxx	xxxxxx	1.00
Through-car Equivalents, el1:	xxxxxx	xxxxxx	xxxxxx	1.40
Single Lane Through-car Equivalents, el2:	xxxxxx	xxxxxx	xxxxxx	1.00
Minimum Left Turn Adjustment Factor, fmin:	xxxxxx	xxxxxx	xxxxxx	0.09
Single Lane Left Turn Adjustment Factor, fm:	xxxxxx	xxxxxx	xxxxxx	0.78
Left Turn Adjustment Factor, flt:	xxxxxx	xxxxxx	xxxxxx	0.78

****

Cumulative AM Plus Project Thu Jan 15, 2004 16:13:04 Page 7-1

Patterson Sand and Gravel
Cumulative Conditions -Plus Proposed Project (No Haul Road)
"30th Highest" - AM Peak Hour

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

****
Intersection #4 Riosa Rd and 11th St
****

Cycle (sec): 100 Critical Vol./Cap. (X): 0.304
Loss Time (sec): 0 (Y+R = 4 sec) Average Delay (sec/veh): 9.1
Optimal Cycle: 0 Level Of Service: A

****

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Stop Sign			Stop Sign			Stop Sign			Stop Sign		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Lanes:	0 0	1! 0	0	0 0	1! 0	0	0 1	0 0	0	0 1	0 0	0
Volume Module:												
Base Vol:	6	4	4	11	7	20	13	113	0	2	229	0
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	6	4	4	11	7	20	13	113	0	2	229	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:	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 Volume:	6	4	4	11	7	20	13	113	0	2	229	0
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	6	4	4	11	7	20	13	113	0	2	229	0
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Final Vol.:	6	4	4	11	7	20	13	113	0	2	229	0
Saturation Flow Module:												
Adjustment:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Lanes:	0.43	0.28	0.29	0.29	0.18	0.53	0.10	0.90	0.00	0.01	0.99	0.00
Final Sat.:	306	204	204	217	138	394	76	665	0	7	753	0
Capacity Analysis Module:												
Vol/Sat:	0.02	0.02	0.02	0.05	0.05	0.05	0.17	0.17	xxxx	0.30	0.30	xxxx
Crit Moves:	****				****			****		****		
Delay/Veh:	7.8	7.8	7.8	7.7	7.7	7.7	8.7	8.7	0.0	9.7	9.7	0.0
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:	7.8	7.8	7.8	7.7	7.7	7.7	8.7	8.7	0.0	9.7	9.7	0.0
LOS by Move:	A	A	A	A	A	A	A	A	*	A	A	*
ApproachDel:	7.8			7.7			8.7			9.7		
Delay Adj:	1.00			1.00			1.00			1.00		
ApprAdjDel:	7.8			7.7			8.7			9.7		
LOS by Appr:	A			A			A			A		

****

Cumulative AM Plus Project Thu Jan 15, 2004 16:13:04 Page 8-1

Patterson Sand and Gravel
Cumulative Conditions -Plus Proposed Project (No Haul Road)
"30th Highest" - AM Peak Hour

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

Intersection #4 Riosa Rd and 11th St

Approach:	North Bound	South Bound	East Bound	West Bound
Movement:	L - T - R	L - T - R	L - T - R	L - T - R
Time Period:	0.25 hour			
HevVeh:	0%	0%	29%	31%
Alpha Value:	0.01			
GroupType:	1	1	1	1
P[C1]:	0.55	0.57	0.65	0.78
P[C2]:	0.03	0.01	0.28	0.16
P[C3]:	0.35	0.36	0.04	0.05
P[C4]:	0.07	0.06	0.02	0.01
P[C5]:	0.00	0.00	0.00	0.00
Padj[C1]:	0.009	0.009	0.004	0.003
Padj[C2]:	0.005	0.005	-0.002	-0.001
Padj[C3]:	-0.010	-0.010	-0.001	-0.001
Padj[C4]:	-0.004	-0.003	-0.001	-0.001
Padj[C5]:	-0.000	-0.000	-0.000	-0.000
Lane:	L1	L1	L1	L1
LaneType:	LEFTTHRURITE	LEFTTHRURITE	LEFTTHRURITE	LEFTTHRURITE
HeadwayAdj:	-0.086	-0.258	0.514	0.529
Volume:	14	38	126	231
Capacity:	715	748	741	760
DegOfUtil:	0.02	0.05	0.17	0.30
DepHeadway:	4.69	4.49	4.78	4.69
ServiceTime:	2.7	2.5	2.8	2.7
Delay:	7.8	7.7	8.7	9.7
Approach:	North Bound	South Bound	East Bound	West Bound
ApproachDel:	7.8	7.7	8.7	9.7
Delay Adj:	1.00	1.00	1.00	1.00
ApprAdjDel:	7.8	7.7	8.7	9.7
LOS by Appr:	A	A	A	A
OverallDel:		9.1		
OverallLOS:		A		

Cumulative AM Plus Project Thu Jan 15, 2004 16:13:04 Page 9-1

Patterson Sand and Gravel
Cumulative Conditions -Plus Proposed Project (No Haul Road)
"30th Highest" - AM Peak Hour

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

Intersection #5 Riosa Rd and Karchner Rd

Average Delay (sec/veh): 4.9 Worst Case 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			Uncontrolled			Uncontrolled		
Rights:	Include			Include			Include			Include		
Lanes:	0 0	0 0	0	0 0	1! 0	0	0 1	0 0	0	0 0	0 1	0
Volume Module:												
Base Vol:	0	0	0	23	0	67	39	38	0	0	52	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:	0	0	0	23	0	67	39	38	0	0	52	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:	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 Volume:	0	0	0	23	0	67	39	38	0	0	52	2
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Final Vol.:	0	0	0	23	0	67	39	38	0	0	52	2
Critical Gap Module:												
Critical Gp:	xxxxx	xxxx	xxxxx	7.1	xxxx	6.9	4.6	xxxx	xxxxx	xxxxx	xxxx	xxxxx
FollowUpTim:	xxxxx	xxxx	xxxxx	4.1	xxxx	3.9	2.6	xxxx	xxxxx	xxxxx	xxxx	xxxxx
Capacity Module:												
Cnflict Vol:	xxxx	xxxx	xxxxx	169	xxxx	53	54	xxxx	xxxxx	xxxx	xxxx	xxxxx
Potent Cap.:	xxxx	xxxx	xxxxx	685	xxxx	850	1302	xxxx	xxxxx	xxxx	xxxx	xxxxx
Move Cap.:	xxxx	xxxx	xxxxx	669	xxxx	850	1302	xxxx	xxxxx	xxxx	xxxx	xxxxx
Level Of Service Module:												
Stopped Del:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	7.8	xxxx	xxxxx	xxxxx	xxxx	xxxxx
LOS by Move:	*	*	*	*	*	*	A	*	*	*	*	*
Movement:	LT - LTR - RT			LT - LTR - RT			LT - LTR - RT			LT - LTR - RT		
Shared Cap.:	xxxx	xxxx	xxxxx	xxxx	795	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx
Shrd StpDel:	xxxxx	xxxx	xxxxx	xxxxx	10.1	xxxxx	7.8	xxxx	xxxxx	xxxxx	xxxx	xxxxx
Shared LOS:	*	*	*	*	B	*	A	*	*	*	*	*
ApproachDel:	xxxxxx			10.1			xxxxxx			xxxxxx		
ApproachLOS:	*			B			*			*		

Cumulative AM Plus Project Thu Jan 15, 2004 16:13:04 Page 10-1

Patterson Sand and Gravel
Cumulative Conditions -Plus Proposed Project (No Haul Road)
"30th Highest" - AM Peak Hour

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

****
Intersection #5 Riosa Rd and Karchner Rd
****

Approach:	North Bound	South Bound	East Bound	West Bound
Movement:	L - T - R	L - T - R	L - T - R	L - T - R
HevVeh:	0%	71%	48%	15%
Grade:	0%	0%	0%	0%
Peds/Hour:	0	0	0	0
LaneWidth:	12 feet	12 feet	12 feet	12 feet

Pedestrian Walk Speed: 4.00 feet/sec
Time Period: 0.25 hour

Traffix 7.5.0715 (c) 2002 Dowling Assoc. Licensed to DKS ASSOC., SACRAMENTO

Cumulative AM Plus Project Thu Jan 15, 2004 16:43:04 Page 1-1

Patterson Sand and Gravel
Cumulative Conditions -Plus Proposed Project (No Haul Road)
"Highest" - AM Peak Hour

Scenario Report

Scenario:	Cumulative AM Plus Project
Command:	Cumulative AM Plus Project
Volume:	Cumulative AM Plus Project
Geometry:	Cumulative AM Plus Project
Impact Fee:	Default Impact Fee
Trip Generation:	Default Trip Generation
Trip Distribution:	Default Trip Distribution
Paths:	Default Paths
Routes:	Default Routes
Configuration:	Default Configuration

Cumulative AM Plus Project Thu Jan 15, 2004 16:43:04 Page 2-1

Patterson Sand and Gravel
Cumulative Conditions -Plus Proposed Project (No Haul Road)
"Highest" - AM Peak Hour

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 65 and Riosa Road (Sheridan	E	11.5	0.000	E	11.5	0.000	+ 0.000 V/C
# 2 SR 65 and SR 193 (Lincoln)	B	15.8	0.594	B	15.8	0.594	+ 0.000 D/V
# 4 Riosa Rd and 11th St	A	9.6	0.341	A	9.6	0.341	+ 0.000 V/C
# 5 Riosa Rd and Karchner Rd	B	5.4	0.000	B	5.4	0.000	+ 0.000 V/C

Cumulative AM Plus Project Thu Jan 15, 2004 16:43:04 Page 3-1

Patterson Sand and Gravel
Cumulative Conditions -Plus Proposed Project (No Haul Road)
"Highest" - AM Peak Hour

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

Intersection #1 SR 65 and Riosa Road (Sheridan)

Average Delay (sec/veh): 11.5 Worst Case 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:	Uncontrolled			Uncontrolled			Stop Sign			Stop Sign		
Rights:	Include			Include			Include			Include		
Lanes:	0 0	1	0 1	1 0	1	0 0	0 0	0	0 0	0 0	1! 0	0
Volume Module:												
Base Vol:	0	319	49	63	581	0	0	0	0	116	0	201
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	319	49	63	581	0	0	0	0	116	0	201
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	0	319	49	63	581	0	0	0	0	116	0	201
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Final Vol.:	0	319	49	63	581	0	0	0	0	116	0	201
Critical Gap Module:												
Critical Gp:	xxxxx	xxxx	xxxxx	4.2	xxxx	xxxxx	xxxxx	xxxx	xxxxx	6.7	xxxx	6.5
FollowUpTim:	xxxxx	xxxx	xxxxx	2.3	xxxx	xxxxx	xxxxx	xxxx	xxxxx	3.8	xxxx	3.6
Capacity Module:												
Cnflict Vol:	xxxx	xxxx	xxxxx	368	xxxx	xxxxx	xxxx	xxxx	xxxxx	1026	xxxx	319
Potent Cap.:	xxxx	xxxx	xxxxx	1137	xxxx	xxxxx	xxxx	xxxx	xxxxx	231	xxxx	661
Move Cap.:	xxxx	xxxx	xxxxx	1137	xxxx	xxxxx	xxxx	xxxx	xxxxx	221	xxxx	661
Level Of Service Module:												
Stopped Del:	xxxxx	xxxx	xxxxx	8.4	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx
LOS by Move:	*	*	*	A	*	*	*	*	*	*	*	*
Movement:	LT -	LTR -	RT	LT -	LTR -	RT	LT -	LTR -	RT	LT -	LTR -	RT
Shared Cap.:	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	383	xxxxx
Shrd StpDel:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	46.5	xxxxx
Shared LOS:	*	*	*	*	*	*	*	*	*	*	E	*
ApproachDel:	xxxxxx			xxxxxx			xxxxxx			46.5		
ApproachLOS:	*			*			*			E		

Cumulative AM Plus Project Thu Jan 15, 2004 16:43:04 Page 4-1

Patterson Sand and Gravel
Cumulative Conditions -Plus Proposed Project (No Haul Road)
"Highest" - AM Peak Hour

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

Intersection #1 SR 65 and Riosa Road (Sheridan)

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
HevVeh:	21%			12%			0%			30%		
Grade:	0%			0%			0%			0%		
Peds/Hour:	0			0			0			0		
Pedestrian Walk Speed: 4.00 feet/sec												
LaneWidth:	12 feet			12 feet			12 feet			12 feet		
Time Period: 0.25 hour												
Upstream Signals:												
Link Index:	#2											
Dist(miles):	0.000											
Speed (mph):	0.00											
SignalIndex:	#2											
Cycle Time:	0 secs											
InitVolume:	0	0										
Saturation:	0	0										
ArrivalType:	0	0										
G/C:	0.00	0.00										
*** Computation 1: Time for Queue to Clear at Each Upstream Intersection												
P:	0.000	0.000										
gq1:	0.00	0.00										
gq2:	0.00	0.00										
gq:	0.00	0.00										
*** Computation 2: Time Intersection Blocked Because of Upstream Platoons												
alpha:	0.000											
beta:	0.000											
ta (secs):	0.000											
F:	0.000											
f:	0.000	0.000										
vcmax:	0	0										
vcmin:	0	0										
tp:	0.0	0.0										
p:	0.000											
*** Computation 3: Platoon Event Periods												
pdom/psubo:	0.000/0.000/Unconstrained											
*** Computation 4: Conflicting Flows During Each Unblocked Period												
InitCnflVol:	0	xxxxx	xxxxx	368	xxxxx	xxxxx	0	0	0	1026	0	319
UpstreamSat:	0	xxxxx	xxxxx	0	xxxxx	xxxxx	0	0	0	0	0	0
UpstreamAdj:	1.00	x.xxx	x.xxx	1.00	x.xxx	x.xxx	1.00	1.000	1.000	1.00	1.000	1.000
ConflictVol:	0	xxxxx	xxxxx	368	xxxxx	xxxxx	0	0	0	1026	0	319
*** Computation 5: Capactiy for Subject Movement During Unblocked Period												
InitPotCap:	0	xxxxx	xxxxx	1137	xxxxx	xxxxx	0	0	0	231	0	661
UpstreamAdj:	1.00	x.xxx	x.xxx	1.00	x.xxx	x.xxx	1.00	1.000	1.000	1.00	1.000	1.000
PotentCap:	0	xxxxx	xxxxx	1137	xxxxx	xxxxx	0	0	0	231	0	661

Cumulative AM Plus Project Thu Jan 15, 2004 16:43:04 Page 5-1

Patterson Sand and Gravel
Cumulative Conditions -Plus Proposed Project (No Haul Road)
"Highest" - AM Peak Hour

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

Intersection #2 SR 65 and SR 193 (Lincoln)

Cycle (sec): 100 Critical Vol./Cap. (X): 0.594
Loss Time (sec): 0 (Y+R = 4 sec) Average Delay (sec/veh): 15.8
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:	Protected			Protected			Permitted			Permitted		
Rights:	Include			Include			Include			Ovl		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Lanes:	1 0	0 1	0	1 0	0 1	0	0 0	1! 0	0	0 1	0 0	1
Volume Module:												
Base Vol:	0	445	29	188	641	0	0	0	0	62	0	305
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	445	29	188	641	0	0	0	0	62	0	305
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	0	445	29	188	641	0	0	0	0	62	0	305
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	0	445	29	188	641	0	0	0	0	62	0	305
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Final Vol.:	0	445	29	188	641	0	0	0	0	62	0	305
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	1.00	0.74	0.74	0.72	0.76	1.00	1.00	1.00	1.00	0.57	1.00	0.62
Lanes:	1.00	0.94	0.06	1.00	1.00	0.00	0.00	1.00	0.00	1.00	0.00	1.00
Final Sat.:	1900	1325	86	1365	1436	0	0	1900	0	1091	0	1182
Capacity Analysis Module:												
Vol/Sat:	0.00	0.34	0.34	0.14	0.45	0.00	0.00	0.00	0.00	0.06	0.00	0.26
Crit Moves:		****		****								****
Green/Cycle:	0.00	0.57	0.57	0.23	0.80	0.00	0.00	0.00	0.00	0.20	0.00	0.43
Volume/Cap:	0.00	0.59	0.59	0.59	0.56	0.00	0.00	0.00	0.00	0.28	0.00	0.59
Delay/Veh:	0.0	15.4	15.4	37.2	4.3	0.0	0.0	0.0	0.0	34.4	0.0	23.4
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	0.0	15.4	15.4	37.2	4.3	0.0	0.0	0.0	0.0	34.4	0.0	23.4
DesignQueue:	0	12	1	8	8	0	0	0	0	3	0	10

Cumulative AM Plus Project Thu Jan 15, 2004 16:43:04 Page 6-1

Patterson Sand and Gravel
Cumulative Conditions -Plus Proposed Project (No Haul Road)
"Highest" - AM Peak Hour

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

Intersection #2 SR 65 and SR 193 (Lincoln)

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
HCM Ops Adjusted Lane Utilization Module:												
Lanes:	1 0	0 1	0	1 0	0 1	0	0 0	1! 0	0	0 1	0 0	1
Lane Group:	L	RT	RT	L	RT	RT	LTR	LTR	LTR	LT	LT	R
#LnsInGrps:	1	1	1	1	1	1	1	1	1	1	1	1
HCM Ops Input Saturation Adj Module:												
Lane Width:	12	12	12	12	12	12	12	12	12	12	12	12
CrosswalkWid		8			8			8			8	
% Hev Veh:		20			19			0			23	
Grade:		0%			0%			0%			0%	
Parking/Hr:		No			No			No			No	
Bus Stp/Hr:		0			0			0			0	
Area Type:	< < < < < < < < < < < < < < < CBD > > > > > > > > > > > > > > >											
Cnft Ped/Hr:		0			0			0			0	
ExclusiveRT:		Include			Include			Include			Include	
% RT Prtct:		0			0			0			0	
HCM Ops f(lt) Adj Case Module:												
f(lt) Case:	xxxx	xxxx	xxxx	1	xxxx	xxxx	xxxx	xxxx	xxxx	5	xxxx	xxxx
HCM Ops Saturation Adj Module:												
Ln Wid Adj:	xxxx	1.00	1.00	1.00	1.00	xxxxx	xxxx	xxxx	xxxxx	1.00	xxxx	1.00
Hev Veh Adj:	xxxx	0.83	0.83	0.84	0.84	xxxxx	xxxx	xxxx	xxxxx	0.81	xxxx	0.81
Grade Adj:	xxxx	1.00	1.00	1.00	1.00	xxxxx	xxxx	xxxx	xxxxx	1.00	xxxx	1.00
Parking Adj:	xxxx	1.00	1.00	xxxx	1.00	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	1.00
Bus Stp Adj:	xxxx	1.00	1.00	xxxx	1.00	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	1.00
Area Adj:	xxxx	0.90	0.90	0.90	0.90	xxxxx	xxxx	xxxx	xxxxx	0.90	xxxx	0.90
RT Adj:	xxxx	0.99	0.99	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	0.85
LT Adj:	xxxx	xxxx	xxxxx	0.95	xxxx	xxxxx	xxxx	xxxx	xxxxx	0.79	xxxx	xxxxx
PedBike Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
HCM Sat Adj:	1.00	0.74	0.74	0.72	0.76	1.00	1.00	1.00	1.00	0.57	1.00	0.62
Usr Sat Adj:	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 Sat Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Fnl Sat Adj:	1.00	0.74	0.74	0.72	0.76	1.00	1.00	1.00	1.00	0.57	1.00	0.62
Delay Adjustment Factor Module:												
Coordinated:	< < < < < < < < < < < < < < < No > > > > > > > > > > > > > > >											
Signal Type:	< < < < < < < < < < < < < Actuated > > > > > > > > > > > > >											
DelAdjFctr:	0.00	1.00	1.00	1.00	1.00	0.00	0.00	0.00	0.00	1.00	0.00	1.00

Cumulative AM Plus Project Thu Jan 15, 2004 16:43:04 Page 6-2

Patterson Sand and Gravel
Cumulative Conditions -Plus Proposed Project (No Haul Road)
"Highest" - AM Peak Hour

Level Of Service Detailed Computation Report (Permitted Left Turn Sat Adj)
2000 HCM Operations Method
Base Volume Alternative

****
Intersection #2 SR 65 and SR 193 (Lincoln)
****

Approach:	North	South	East	West
Cycle Length, C:	xxxxxx	xxxxxx	xxxxxx	100
Actual Green Time Per Lane Group, G:	xxxxxx	xxxxxx	xxxxxx	39.46
Effective Green Time Per Lane Group, g:	xxxxxx	xxxxxx	xxxxxx	43.46
Opposing Effective Green Time, go:	xxxxxx	xxxxxx	xxxxxx	43.46
Number Of Opposing Lanes, No:	xxxxxx	xxxxxx	xxxxxx	1
Number Of Lanes In Lane Group, N:	xxxxxx	xxxxxx	xxxxxx	1
Adjusted Left-Turn Flow Rate, Vlt:	xxxxxx	xxxxxx	xxxxxx	62
Proportion of Left Turns in Lane Group, Plt:	xxxxxx	xxxxxx	xxxxxx	1.00
Proportion of Left Turns in Opp Flow, Plto:	xxxxxx	xxxxxx	xxxxxx	1.00
Left Turns Per Cycle, LTC:	xxxxxx	xxxxxx	xxxxxx	1.72
Adjusted Opposing Flow Rate, Vo:	xxxxxx	xxxxxx	xxxxxx	0
Opposing Flow Per Lane Per Cycle, Volc:	xxxxxx	xxxxxx	xxxxxx	0.00
Opposing Platoon Ratio, Rpo:	xxxxxx	xxxxxx	xxxxxx	1.00
Lost Time Per Phase, tl:	xxxxxx	xxxxxx	xxxxxx	0.00
Eff grn until arrival of left-turn car, gf:	xxxxxx	xxxxxx	xxxxxx	10.73
Opposing Queue Ratio, qro:	xxxxxx	xxxxxx	xxxxxx	0.57
Eff grn blocked by opposing queue, gq:	xxxxxx	xxxxxx	xxxxxx	0.00
Eff grn while left turns filter thru, gu:	xxxxxx	xxxxxx	xxxxxx	32.73
Max opposing cars arriving during gq-gf, n:	xxxxxx	xxxxxx	xxxxxx	0.00
Proportion of Opposing Thru & RT cars, ptho:	xxxxxx	xxxxxx	xxxxxx	0.00
Left-turn Saturation Factor, fs:	xxxxxx	xxxxxx	xxxxxx	xxxxxx
Proportion of Left Turns in Shared Lane, pl:	xxxxxx	xxxxxx	xxxxxx	1.00
Through-car Equivalents, el1:	xxxxxx	xxxxxx	xxxxxx	1.40
Single Lane Through-car Equivalents, el2:	xxxxxx	xxxxxx	xxxxxx	1.00
Minimum Left Turn Adjustment Factor, fmin:	xxxxxx	xxxxxx	xxxxxx	0.09
Single Lane Left Turn Adjustment Factor, fm:	xxxxxx	xxxxxx	xxxxxx	0.78
Left Turn Adjustment Factor, flt:	xxxxxx	xxxxxx	xxxxxx	0.78

****

Cumulative AM Plus Project Thu Jan 15, 2004 16:43:04 Page 7-1

Patterson Sand and Gravel
Cumulative Conditions -Plus Proposed Project (No Haul Road)
"Highest" - AM Peak Hour

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

****
Intersection #4 Riosa Rd and 11th St
****

Cycle (sec): 100 Critical Vol./Cap. (X): 0.341
Loss Time (sec): 0 (Y+R = 4 sec) Average Delay (sec/veh): 9.6
Optimal Cycle: 0 Level Of Service: A

****

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Stop Sign			Stop Sign			Stop Sign			Stop Sign		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Lanes:	0 0	1! 0	0	0 0	1! 0	0	0 1	0 0	0	0 1	0 0	0
Volume Module:												
Base Vol:	6	4	4	11	7	20	13	123	0	2	251	0
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	6	4	4	11	7	20	13	123	0	2	251	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:	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 Volume:	6	4	4	11	7	20	13	123	0	2	251	0
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	6	4	4	11	7	20	13	123	0	2	251	0
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Final Vol.:	6	4	4	11	7	20	13	123	0	2	251	0
Saturation Flow Module:												
Adjustment:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Lanes:	0.43	0.28	0.29	0.29	0.18	0.53	0.10	0.90	0.00	0.01	0.99	0.00
Final Sat.:	299	199	199	211	135	384	69	652	0	6	736	0
Capacity Analysis Module:												
Vol/Sat:	0.02	0.02	0.02	0.05	0.05	0.05	0.19	0.19	xxxx	0.34	0.34	xxxx
Crit Moves:			****			****		****		****		
Delay/Veh:	7.9	7.9	7.9	7.8	7.8	7.8	9.0	9.0	0.0	10.2	10.2	0.0
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:	7.9	7.9	7.9	7.8	7.8	7.8	9.0	9.0	0.0	10.2	10.2	0.0
LOS by Move:	A	A	A	A	A	A	A	A	*	B	B	*
ApproachDel:		7.9			7.8			9.0			10.2	
Delay Adj:		1.00			1.00			1.00			1.00	
ApprAdjDel:		7.9			7.8			9.0			10.2	
LOS by Appr:		A			A			A			B	

****

Cumulative AM Plus Project Thu Jan 15, 2004 16:43:04 Page 8-1

Patterson Sand and Gravel
Cumulative Conditions -Plus Proposed Project (No Haul Road)
"Highest" - AM Peak Hour

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

****
Intersection #4 Riosa Rd and 11th St
****

Approach:	North Bound	South Bound	East Bound	West Bound
Movement:	L - T - R	L - T - R	L - T - R	L - T - R
Time Period: 0.25 hour				
HevVeh:	0%	0%	35%	37%
Alpha Value: 0.01				
GroupType:	1	1	1	1
P[C1]:	0.51	0.53	0.62	0.76
P[C2]:	0.03	0.01	0.32	0.17
P[C3]:	0.38	0.39	0.04	0.05
P[C4]:	0.08	0.07	0.02	0.01
P[C5]:	0.00	0.00	0.00	0.00
Padj[C1]:	0.010	0.010	0.005	0.003
Padj[C2]:	0.005	0.005	-0.002	-0.001
Padj[C3]:	-0.011	-0.011	-0.001	-0.001
Padj[C4]:	-0.005	-0.004	-0.001	-0.001
Padj[C5]:	-0.000	-0.000	-0.000	-0.000
Lane:	L1	L1	L1	L1
LaneType:	LEFTTHRURITE	LEFTTHRURITE	LEFTTHRURITE	LEFTTHRURITE
HeadwayAdj:	-0.086	-0.258	0.614	0.631
Volume:	14	38	136	253
Capacity:	698	730	721	742
DegOfUtil:	0.02	0.05	0.19	0.34
DepHeadway:	4.78	4.58	4.91	4.80
ServiceTime:	2.8	2.6	2.9	2.8
Delay:	7.9	7.8	9.0	10.2
Approach:	North Bound	South Bound	East Bound	West Bound
ApproachDel:	7.9	7.8	9.0	10.2
Delay Adj:	1.00	1.00	1.00	1.00
ApprAdjDel:	7.9	7.8	9.0	10.2
LOS by Appr:	A	A	A	B
OverallDel:		9.6		
OverallLOS:		A		

Cumulative AM Plus Project Thu Jan 15, 2004 16:43:04 Page 9-1

Patterson Sand and Gravel
Cumulative Conditions -Plus Proposed Project (No Haul Road)
"Highest" - AM Peak Hour

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

****
Intersection #5 Riosa Rd and Karchner Rd
****
Average Delay (sec/veh): 5.4 Worst Case 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			Uncontrolled			Uncontrolled		
Rights:	Include			Include			Include			Include		
Lanes:	0 0	0 0	0	0 0	1! 0	0	0 1	0 0	0	0 0	0 1	0
Volume Module:												
Base Vol:	0	0	0	23	0	89	48	38	0	0	52	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:	0	0	0	23	0	89	48	38	0	0	52	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:	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 Volume:	0	0	0	23	0	89	48	38	0	0	52	2
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Final Vol.:	0	0	0	23	0	89	48	38	0	0	52	2
Critical Gap Module:												
Critical Gp:	xxxxx	xxxx	xxxxx	7.2	xxxx	7.0	4.6	xxxx	xxxxx	xxxxx	xxxx	xxxxx
FollowUpTim:	xxxxx	xxxx	xxxxx	4.2	xxxx	4.0	2.7	xxxx	xxxxx	xxxxx	xxxx	xxxxx
Capacity Module:												
Cnflict Vol:	xxxx	xxxx	xxxxx	187	xxxx	53	54	xxxx	xxxxx	xxxx	xxxx	xxxxx
Potent Cap.:	xxxx	xxxx	xxxxx	660	xxxx	840	1276	xxxx	xxxxx	xxxx	xxxx	xxxxx
Move Cap.:	xxxx	xxxx	xxxxx	640	xxxx	840	1276	xxxx	xxxxx	xxxx	xxxx	xxxxx
Level Of Service Module:												
Stopped Del:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	7.9	xxxx	xxxxx	xxxxx	xxxx	xxxxx
LOS by Move:	*	*	*	*	*	*	A	*	*	*	*	*
Movement:	LT -	LTR -	RT	LT -	LTR -	RT	LT -	LTR -	RT	LT -	LTR -	RT
Shared Cap.:	xxxx	xxxx	xxxxx	xxxx	789	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx
Shrd StpDel:	xxxxx	xxxx	xxxxx	xxxxx	10.3	xxxxx	7.9	xxxx	xxxxx	xxxxx	xxxx	xxxxx
Shared LOS:	*	*	*	*	B	*	A	*	*	*	*	*
ApproachDel:	xxxxxx				10.3		xxxxxx			xxxxxx		
ApproachLOS:	*				B		*			*		

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Patterson Sand and Gravel
Cumulative Conditions -Plus Proposed Project (No Haul Road)
"Highest" - AM Peak Hour

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

****
Intersection #5 Riosa Rd and Karchner Rd
****

Approach:	North Bound	South Bound	East Bound	West Bound
Movement:	L - T - R	L - T - R	L - T - R	L - T - R
HevVeh:	0%	76%	54%	15%
Grade:	0%	0%	0%	0%
Peds/Hour:	0	0	0	0
LaneWidth:	12 feet	12 feet	12 feet	12 feet

Pedestrian Walk Speed: 4.00 feet/sec
Time Period: 0.25 hour

Cumulative PM Plus Project Thu Jan 15, 2004 15:25:08 Page 1-1

Patterson Sand and Gravel
Cumulative Conditions - Plus Proposed Project (No Haul Road)
"Average Day" - PM Peak Hour

Scenario Report

Scenario:	Cumulative PM Plus Project
Command:	Cumulative PM Plus Project
Volume:	Cumulative PM Plus Project
Geometry:	Cumulative PM Plus Project
Impact Fee:	Default Impact Fee
Trip Generation:	Default Trip Generation
Trip Distribution:	Default Trip Distribution
Paths:	Default Paths
Routes:	Default Routes
Configuration:	Default Configuration

Cumulative PM Plus Project Thu Jan 15, 2004 15:25:08 Page 2-1

Patterson Sand and Gravel
Cumulative Conditions - Plus Proposed Project (No Haul Road)
"Average Day" - PM Peak Hour

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 65 and Riosa Road (Sheridan	E	4.8	0.000	E	4.8	0.000	+ 0.000 V/C
# 2 SR 65 and SR 193 (Lincoln)	C	27.7	0.877	C	27.7	0.877	+ 0.000 D/V
# 4 Riosa Rd and 11th St	A	7.9	0.178	A	7.9	0.178	+ 0.000 V/C
# 5 Riosa Rd and Karchner Rd	A	3.8	0.000	A	3.8	0.000	+ 0.000 V/C

Cumulative PM Plus Project Thu Jan 15, 2004 15:25:08 Page 3-1

Patterson Sand and Gravel
Cumulative Conditions - Plus Proposed Project (No Haul Road)
"Average Day" - PM Peak Hour

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

Intersection #1 SR 65 and Riosa Road (Sheridan)

Average Delay (sec/veh): 4.8 Worst Case 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:	Uncontrolled				Uncontrolled				Stop Sign				Stop Sign			
Rights:	Include				Include				Include				Include			
Lanes:	0	0	1	0 1	1	0	1	0 0	0	0	0	0 0	0	0	1!	0 0
Volume Module:																
Base Vol:	0	601		111	203	437		0	0	0		0	43	0		98
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	601		111	203	437		0	0	0		0	43	0		98
User Adj:	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00
PHF Adj:	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00
PHF Volume:	0	601		111	203	437		0	0	0		0	43	0		98
Reduct Vol:	0	0		0	0	0		0	0	0		0	0	0		0
Final Vol.:	0	601		111	203	437		0	0	0		0	43	0		98
Critical Gap Module:																
Critical Gp:	xxxxx	xxxx		xxxxx	4.1	xxxx		xxxxx	xxxxx	xxxx		xxxxx	6.4	xxxx		6.2
FollowUpTim:	xxxxx	xxxx		xxxxx	2.2	xxxx		xxxxx	xxxxx	xxxx		xxxxx	3.5	xxxx		3.3
Capacity Module:																
Cnflict Vol:	xxxx	xxxx		xxxxx	712	xxxx		xxxxx	xxxx	xxxx		xxxxx	1444	xxxx		601
Potent Cap.:	xxxx	xxxx		xxxxx	883	xxxx		xxxxx	xxxx	xxxx		xxxxx	145	xxxx		498
Move Cap.:	xxxx	xxxx		xxxxx	883	xxxx		xxxxx	xxxx	xxxx		xxxxx	119	xxxx		498
Level Of Service Module:																
Stopped Del:	xxxxx	xxxx		xxxxx	10.3	xxxx		xxxxx	xxxxx	xxxx		xxxxx	xxxxx	xxxx		xxxxx
LOS by Move:	*	*		*	B	*		*	*	*		*	*	*		*
Movement:	LT -	LTR -		RT	LT -	LTR -		RT	LT -	LTR -		RT	LT -	LTR -		RT
Shared Cap.:	xxxx	xxxx		xxxxx	xxxx	xxxx		xxxxx	xxxx	xxxx		xxxxx	xxxx	253		xxxxx
Shrd StpDel:	xxxxx	xxxx		xxxxx	xxxxx	xxxx		xxxxx	xxxxx	xxxx		xxxxx	xxxxx	35.8		xxxxx
Shared LOS:	*	*		*	*	*		*	*	*		*	*	E		*
ApproachDel:	xxxxxx				xxxxxx				xxxxxx				35.8			
ApproachLOS:	*				*				*				E			

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Patterson Sand and Gravel
Cumulative Conditions - Plus Proposed Project (No Haul Road)
"Average Day" - PM Peak Hour

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

Intersection #1 SR 65 and Riosa Road (Sheridan)

Approach:	North Bound				South Bound				East Bound				West Bound			
Movement:	L	-	T	- R	L	-	T	- R	L	-	T	- R	L	-	T	- R
HevVeh:			4%				3%				0%				3%	
Grade:			0%				0%				0%				0%	
Peds/Hour:			0				0				0				0	
Pedestrian Walk Speed: 4.00 feet/sec																
LaneWidth:			12 feet				12 feet				12 feet				12 feet	
Time Period: 0.25 hour																
Upstream Signals:																
Link Index:			#2													
Dist(miles):			0.000													
Speed (mph):			0.00													
SignalIndex:			#2													
Cycle Time:			0 secs													
InitVolume:		0		0												
Saturation:		0		0												
ArrivalType:		0		0												
G/C:		0.00		0.00												
*** Computation 1: Time for Queue to Clear at Each Upstream Intersection																
P:		0.000		0.000												
gq1:		0.00		0.00												
gq2:		0.00		0.00												
gq:		0.00		0.00												
*** Computation 2: Time Intersection Blocked Because of Upstream Platoons																
alpha:			0.000													
beta:			0.000													
ta (secs):			0.000													
F:			0.000													
f:		0.000		0.000												
vcmax:		0		0												
vcmin:		0		0												
tp:		0.0		0.0												
p:			0.000													
*** Computation 3: Platoon Event Periods																
pdom/psubo:			0.000/0.000/Unconstrained													
*** Computation 4: Conflicting Flows During Each Unblocked Period																
InitCnflVol:	0	xxxxx	xxxxx	712	xxxxx	xxxxx	0	0	0	1444	0	601				
UpstreamSat:	0	xxxxx	xxxxx	0	xxxxx	xxxxx	0	0	0	0	0	0				
UpstreamAdj:	1.00	x.xxx	x.xxx	1.00	x.xxx	x.xxx	1.00	1.000	1.000	1.00	1.000	1.000				
ConflictVol:	0	xxxxx	xxxxx	712	xxxxx	xxxxx	0	0	0	1444	0	601				
*** Computation 5: Capactiy for Subject Movement During Unblocked Period																
InitPotCap:	0	xxxxx	xxxxx	883	xxxxx	xxxxx	0	0	0	145	0	498				
UpstreamAdj:	1.00	x.xxx	x.xxx	1.00	x.xxx	x.xxx	1.00	1.000	1.000	1.00	1.000	1.000				
PotentCap:	0	xxxxx	xxxxx	883	xxxxx	xxxxx	0	0	0	145	0	498				

Cumulative PM Plus Project Thu Jan 15, 2004 15:25:08 Page 5-1

Patterson Sand and Gravel
Cumulative Conditions - Plus Proposed Project (No Haul Road)
"Average Day" - PM Peak Hour

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

Intersection #2 SR 65 and SR 193 (Lincoln)

Cycle (sec): 100 Critical Vol./Cap. (X): 0.877
Loss Time (sec): 0 (Y+R = 4 sec) Average Delay (sec/veh): 27.7
Optimal Cycle: 151 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				Permitted				Permitted			
Rights:	Include				Include				Include				Ovl			
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Lanes:	1	0	0	1 0	1	0	0	1 0	0	0	1!	0 0	0	1	0	0 1
Volume Module:																
Base Vol:	0	848	22		375	530		0	0	0		0	131		0	308
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	848	22		375	530		0	0	0		0	131		0	308
User Adj:	1.00	1.00	1.00		1.00	1.00		1.00	1.00	1.00		1.00	1.00		1.00	1.00
PHF Adj:	1.00	1.00	1.00		1.00	1.00		1.00	1.00	1.00		1.00	1.00		1.00	1.00
PHF Volume:	0	848	22		375	530		0	0	0		0	131		0	308
Reduct Vol:	0	0	0		0	0		0	0	0		0	0		0	0
Reduced Vol:	0	848	22		375	530		0	0	0		0	131		0	308
PCE Adj:	1.00	1.00	1.00		1.00	1.00		1.00	1.00	1.00		1.00	1.00		1.00	1.00
MLF Adj:	1.00	1.00	1.00		1.00	1.00		1.00	1.00	1.00		1.00	1.00		1.00	1.00
Final Vol.:	0	848	22		375	530		0	0	0		0	131		0	308
Saturation Flow Module:																
Sat/Lane:	1900	1900	1900		1900	1900		1900	1900	1900		1900	1900		1900	1900
Adjustment:	1.00	0.87	0.87		0.81	0.86		1.00	1.00	1.00		1.00	0.64		1.00	0.74
Lanes:	1.00	0.97	0.03		1.00	1.00		0.00	0.00	1.00		0.00	1.00		0.00	1.00
Final Sat.:	1900	1612	42		1547	1628		0	0	1900		0	1209		0	1398
Capacity Analysis Module:																
Vol/Sat:	0.00	0.53	0.53		0.24	0.33		0.00	0.00	0.00		0.00	0.11		0.00	0.22
Crit Moves:		****			****								****			
Green/Cycle:	0.00	0.60	0.60		0.28	0.88		0.00	0.00	0.00		0.00	0.12		0.00	0.40
Volume/Cap:	0.00	0.88	0.88		0.88	0.37		0.00	0.00	0.00		0.00	0.88		0.00	0.55
Delay/Veh:	0.0	25.8	25.8		52.7	1.3		0.0	0.0	0.0		0.0	83.1		0.0	24.3
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:	0.0	25.8	25.8		52.7	1.3		0.0	0.0	0.0		0.0	83.1		0.0	24.3
DesignQueue:	0	21	1		16	4		0	0	0		0	6		0	11

Cumulative PM Plus Project Thu Jan 15, 2004 15:25:08 Page 6-1

Patterson Sand and Gravel
Cumulative Conditions - Plus Proposed Project (No Haul Road)
"Average Day" - PM Peak Hour

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

Intersection #2 SR 65 and SR 193 (Lincoln)

Approach:	North Bound				South Bound				East Bound				West Bound			
Movement:	L	-	T	- R	L	-	T	- R	L	-	T	- R	L	-	T	- R
HCM Ops Adjusted Lane Utilization Module:																
Lanes:	1	0	0	1 0	1	0	0	1 0	0	0	1!	0 0	0	1	0	0 1
Lane Group:	L		RT		RT	L	RT	RT	LTR	LTR		LTR	LT		LT	R
#LnsInGrps:	1		1		1	1	1	1	1	1		1	1		1	1
HCM Ops Input Saturation Adj Module:																
Lane Width:	12		12	12	12	12	12	12	12	12		12	12		12	12
CrosswalkWid			8				8			8					8	
% Hev Veh:			3				5			0					4	
Grade:			0%				0%			0%					0%	
Parking/Hr:			No				No			No					No	
Bus Stp/Hr:			0				0			0					0	
Area Type:	< < < < < < < < < < < < < < < CBD > > > > > > > > > > > > > > >															
Cnft Ped/Hr:			0				0			0					0	
ExclusiveRT:			Include				Include			Include					Include	
% RT Prtct:			0				0			0					0	
HCM Ops f(lt) Adj Case Module:																
f(lt) Case:	xxxx	xxxx	xxxx		1	xxxx	xxxx		xxxx	xxxx	xxxx		5	xxxx	xxxx	
HCM Ops Saturation Adj Module:																
Ln Wid Adj:	xxxx	1.00	1.00		1.00	1.00	xxxxx		xxxx	xxxx	xxxxx		1.00	xxxx	1.00	
Hev Veh Adj:	xxxx	0.97	0.97		0.95	0.95	xxxxx		xxxx	xxxx	xxxxx		0.96	xxxx	0.96	
Grade Adj:	xxxx	1.00	1.00		1.00	1.00	xxxxx		xxxx	xxxx	xxxxx		1.00	xxxx	1.00	
Parking Adj:	xxxx	1.00	1.00		xxxx	1.00	xxxxx		xxxx	xxxx	xxxxx		xxxx	xxxx	1.00	
Bus Stp Adj:	xxxx	1.00	1.00		xxxx	1.00	xxxxx		xxxx	xxxx	xxxxx		xxxx	xxxx	1.00	
Area Adj:	xxxx	0.90	0.90		0.90	0.90	xxxxx		xxxx	xxxx	xxxxx		0.90	xxxx	0.90	
RT Adj:	xxxx	1.00	1.00		xxxx	xxxx	xxxxx		xxxx	xxxx	xxxxx		xxxx	xxxx	0.85	
LT Adj:	xxxx	xxxx	xxxxx		0.95	xxxx	xxxxx		xxxx	xxxx	xxxxx		0.74	xxxx	xxxxx	
PedBike Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
HCM Sat Adj:	1.00	0.87	0.87		0.81	0.86	1.00		1.00	1.00	1.00		0.64	1.00	0.74	
Usr Sat Adj:	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 Sat Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
Fnl Sat Adj:	1.00	0.87	0.87		0.81	0.86	1.00		1.00	1.00	1.00		0.64	1.00	0.74	
Delay Adjustment Factor Module:																
Coordinated:	< < < < < < < < < < < < < < < No > > > > > > > > > > > > > > >															
Signal Type:	< < < < < < < < < < < < < Actuated > > > > > > > > > > > > >															
DelAdjFctr:	0.00	1.00	1.00		1.00	1.00	0.00		0.00	0.00	0.00		1.00	0.00	1.00	

Patterson Sand and Gravel
Cumulative Conditions - Plus Proposed Project (No Haul Road)
"Average Day" - PM Peak Hour

Level Of Service Detailed Computation Report (Permitted Left Turn Sat Adj)
2000 HCM Operations Method
Base Volume Alternative

****
Intersection #2 SR 65 and SR 193 (Lincoln)
****

Approach:	North	South	East	West
Cycle Length, C:	xxxxxx	xxxxxx	xxxxxx	100
Actual Green Time Per Lane Group, G:	xxxxxx	xxxxxx	xxxxxx	8.35
Effective Green Time Per Lane Group, g:	xxxxxx	xxxxxx	xxxxxx	12.35
Opposing Effective Green Time, go:	xxxxxx	xxxxxx	xxxxxx	12.35
Number Of Opposing Lanes, No:	xxxxxx	xxxxxx	xxxxxx	1
Number Of Lanes In Lane Group, N:	xxxxxx	xxxxxx	xxxxxx	1
Adjusted Left-Turn Flow Rate, Vlt:	xxxxxx	xxxxxx	xxxxxx	131
Proportion of Left Turns in Lane Group, Plt:	xxxxxx	xxxxxx	xxxxxx	1.00
Proportion of Left Turns in Opp Flow, Plto:	xxxxxx	xxxxxx	xxxxxx	1.00
Left Turns Per Cycle, LTC:	xxxxxx	xxxxxx	xxxxxx	3.64
Adjusted Opposing Flow Rate, Vo:	xxxxxx	xxxxxx	xxxxxx	0
Opposing Flow Per Lane Per Cycle, Volc:	xxxxxx	xxxxxx	xxxxxx	0.00
Opposing Platoon Ratio, Rpo:	xxxxxx	xxxxxx	xxxxxx	1.00
Lost Time Per Phase, tl:	xxxxxx	xxxxxx	xxxxxx	0.00
Eff grn until arrival of left-turn car, gf:	xxxxxx	xxxxxx	xxxxxx	0.90
Opposing Queue Ratio, qro:	xxxxxx	xxxxxx	xxxxxx	0.88
Eff grn blocked by opposing queue, gq:	xxxxxx	xxxxxx	xxxxxx	0.00
Eff grn while left turns filter thru, gu:	xxxxxx	xxxxxx	xxxxxx	11.45
Max opposing cars arriving during gq-gf, n:	xxxxxx	xxxxxx	xxxxxx	0.00
Proportion of Opposing Thru & RT cars, ptho:	xxxxxx	xxxxxx	xxxxxx	0.00
Left-turn Saturation Factor, fs:	xxxxxx	xxxxxx	xxxxxx	xxxxxx
Proportion of Left Turns in Shared Lane, pl:	xxxxxx	xxxxxx	xxxxxx	1.00
Through-car Equivalents, el1:	xxxxxx	xxxxxx	xxxxxx	1.40
Single Lane Through-car Equivalents, el2:	xxxxxx	xxxxxx	xxxxxx	1.00
Minimum Left Turn Adjustment Factor, fmin:	xxxxxx	xxxxxx	xxxxxx	0.32
Single Lane Left Turn Adjustment Factor, fm:	xxxxxx	xxxxxx	xxxxxx	0.74
Left Turn Adjustment Factor, flt:	xxxxxx	xxxxxx	xxxxxx	0.74

****

Patterson Sand and Gravel
Cumulative Conditions - Plus Proposed Project (No Haul Road)
"Average Day" - PM Peak Hour

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

****
Intersection #4 Riosa Rd and 11th St
****

Cycle (sec): 100 Critical Vol./Cap. (X): 0.178
Loss Time (sec): 0 (Y+R = 4 sec) Average Delay (sec/veh): 7.9
Optimal Cycle: 0 Level Of Service: A

****

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Stop Sign			Stop Sign			Stop Sign			Stop Sign		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Lanes:	0 0	1! 0	0	0 0	0 1	0	0 1	0 0	0	0 1	0 0	0
Volume Module:												
Base Vol:	3	4	1	0	1	3	10	144	0	1	107	0
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	3	4	1	0	1	3	10	144	0	1	107	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:	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 Volume:	3	4	1	0	1	3	10	144	0	1	107	0
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	3	4	1	0	1	3	10	144	0	1	107	0
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Final Vol.:	3	4	1	0	1	3	10	144	0	1	107	0
Saturation Flow Module:												
Adjustment:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Lanes:	0.37	0.50	0.13	0.00	0.25	0.75	0.06	0.94	0.00	0.01	0.99	0.00
Final Sat.:	288	384	96	0	212	636	56	808	0	8	855	0
Capacity Analysis Module:												
Vol/Sat:	0.01	0.01	0.01	xxxx	0.00	0.00	0.18	0.18	xxxx	0.13	0.13	xxxx
Crit Moves:		****			****			****			****	
Delay/Veh:	7.5	7.5	7.5	0.0	7.0	7.0	8.0	8.0	0.0	7.7	7.7	0.0
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:	7.5	7.5	7.5	0.0	7.0	7.0	8.0	8.0	0.0	7.7	7.7	0.0
LOS by Move:	A	A	A	*	A	A	A	A	*	A	A	*
ApproachDel:		7.5			7.0			8.0			7.7	
Delay Adj:		1.00			1.00			1.00			1.00	
ApprAdjDel:		7.5			7.0			8.0			7.7	
LOS by Appr:		A			A			A			A	

****

Cumulative PM Plus Project Thu Jan 15, 2004 15:25:08 Page 8-1

Patterson Sand and Gravel
Cumulative Conditions - Plus Proposed Project (No Haul Road)
"Average Day" - PM Peak Hour

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

****
Intersection #4 Riosa Rd and 11th St
****

Approach:	North Bound	South Bound	East Bound	West Bound
Movement:	L - T - R	L - T - R	L - T - R	L - T - R
Time Period: 0.25 hour				
HevVeh:	0%	0%	6%	4%
Alpha Value: 0.01				
GroupType:	1	1	1	1
P[C1]:	0.7177	0.7137	0.8634	0.8112
P[C2]:	0.0032	0.0071	0.1223	0.1745
P[C3]:	0.2560	0.2546	0.0125	0.0117
P[C4]:	0.0230	0.0243	0.0018	0.0026
P[C5]:	0.0001	0.0002	0.0000	0.0000
Padj[C1]:	0.00585	0.00590	0.00153	0.00206
Padj[C2]:	0.00299	0.00297	-0.00106	-0.00158
Padj[C3]:	-0.00745	-0.00739	-0.00036	-0.00033
Padj[C4]:	-0.00138	-0.00146	-0.00011	-0.00015
Padj[C5]:	-0.00001	-0.00002	-0.00000	-0.00000
Lane:	L1	L1	L1	L1
LaneType:	LEFTTHRURITE	LEFTTHRURITE	LEFTTHRURITE	LEFTTHRURITE
HeadwayAdj:	0.000	-0.450	0.115	0.070
Volume:	8	4	154	108
Capacity:	768	848	864	863
DegOfUtil:	0.01	0.00	0.18	0.12
DepHeadway:	4.44	4.00	4.14	4.14
ServiceTime:	2.4	2.0	2.1	2.1
Delay:	7.5	7.0	8.0	7.7
Approach:	North Bound	South Bound	East Bound	West Bound
ApproachDel:	7.5	7.0	8.0	7.7
Delay Adj:	1.00	1.00	1.00	1.00
ApprAdjDel:	7.5	7.0	8.0	7.7
LOS by Appr:	A	A	A	A
OverallDel:		7.9		
OverallLOS:		A		

Cumulative PM Plus Project Thu Jan 15, 2004 15:25:08 Page 9-1

Patterson Sand and Gravel
Cumulative Conditions - Plus Proposed Project (No Haul Road)
"Average Day" - PM Peak Hour

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

****
Intersection #5 Riosa Rd and Karchner Rd
****
Average Delay (sec/veh): 3.8 Worst Case Level Of Service: A
****

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	- T	- R	L	- T	- R	L	- T	- R	L	- T	- R
Control:	Stop Sign			Stop Sign			Uncontrolled			Uncontrolled		
Rights:	Include			Include			Include			Include		
Lanes:	0 0	0 0	0	0 0	1! 0	0	0 1	0 0	0	0 0	0 1	0
Volume Module:												
Base Vol:	0	0	0	10	0	17	28	39	0	0	27	7
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	10	0	17	28	39	0	0	27	7
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	0	0	0	10	0	17	28	39	0	0	27	7
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Final Vol.:	0	0	0	10	0	17	28	39	0	0	27	7
Critical Gap Module:												
Critical Gp:	xxxxx	xxxx	xxxxx	6.6	xxxx	6.4	4.3	xxxx	xxxxx	xxxxx	xxxx	xxxxx
FollowUpTim:	xxxxx	xxxx	xxxxx	3.6	xxxx	3.4	2.3	xxxx	xxxxx	xxxxx	xxxx	xxxxx
Capacity Module:												
Cnflict Vol:	xxxx	xxxx	xxxxx	126	xxxx	31	34	xxxx	xxxxx	xxxx	xxxx	xxxxx
Potent Cap.:	xxxx	xxxx	xxxxx	839	xxxx	1008	1497	xxxx	xxxxx	xxxx	xxxx	xxxxx
Move Cap.:	xxxx	xxxx	xxxxx	827	xxxx	1008	1497	xxxx	xxxxx	xxxx	xxxx	xxxxx
Level Of Service Module:												
Stopped Del:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	7.4	xxxx	xxxxx	xxxxx	xxxx	xxxxx
LOS by Move:	*	*	*	*	*	*	A	*	*	*	*	*
Movement:	LT -	LTR -	RT	LT -	LTR -	RT	LT -	LTR -	RT	LT -	LTR -	RT
Shared Cap.:	xxxx	xxxx	xxxxx	xxxx	932	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx
Shrd StpDel:	xxxxx	xxxx	xxxxx	xxxxx	9.0	xxxxx	7.4	xxxx	xxxxx	xxxxx	xxxx	xxxxx
Shared LOS:	*	*	*	*	A	*	A	*	*	*	*	*
ApproachDel:	xxxxxx				9.0		xxxxxx			xxxxxx		
ApproachLOS:	*				A		*			*		

Cumulative PM Plus Project Thu Jan 15, 2004 15:25:08 Page 10-1

Patterson Sand and Gravel
Cumulative Conditions - Plus Proposed Project (No Haul Road)
"Average Day" - PM Peak Hour

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

****
Intersection #5 Riosa Rd and Karchner Rd
****

Approach:	North Bound	South Bound	East Bound	West Bound
Movement:	L - T - R	L - T - R	L - T - R	L - T - R
HevVeh:	0%	15%	15%	0%
Grade:	0%	0%	0%	0%
Peds/Hour:	0	0	0	0
Pedestrian Walk Speed: 4.00 feet/sec				
LaneWidth:	12 feet	12 feet	12 feet	12 feet
Time Period: 0.25 hour				

Traffix 7.5.0715 (c) 2002 Dowling Assoc. Licensed to DKS ASSOC., SACRAMENTO

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Patterson Sand and Gravel
Cumulative Conditions - Plus Proposed Project (No Haul Road)
"30th Highest" - PM Peak Hour

Scenario Report

Scenario:	Cumulative PM Plus Project
Command:	Cumulative PM Plus Project
Volume:	Cumulative PM Plus Project
Geometry:	Cumulative PM Plus Project
Impact Fee:	Default Impact Fee
Trip Generation:	Default Trip Generation
Trip Distribution:	Default Trip Distribution
Paths:	Default Paths
Routes:	Default Routes
Configuration:	Default Configuration

Cumulative PM Plus Project Thu Jan 15, 2004 16:20:07 Page 2-1

Patterson Sand and Gravel
Cumulative Conditions - Plus Proposed Project (No Haul Road)
"30th Highest" - PM Peak Hour

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 65 and Riosa Road (Sheridan	E	5.0	0.000	E	5.0	0.000	+ 0.000 V/C
# 2 SR 65 and SR 193 (Lincoln)	C	28.0	0.881	C	28.0	0.881	+ 0.000 D/V
# 4 Riosa Rd and 11th St	A	7.9	0.180	A	7.9	0.180	+ 0.000 V/C
# 5 Riosa Rd and Karchner Rd	A	3.9	0.000	A	3.9	0.000	+ 0.000 V/C

Cumulative PM Plus Project Thu Jan 15, 2004 16:20:07 Page 3-1

Patterson Sand and Gravel
Cumulative Conditions - Plus Proposed Project (No Haul Road)
"30th Highest" - PM Peak Hour

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

```
*******************************************************************************
Intersection #1 SR 65 and Riosa Road (Sheridan)
*******************************************************************************
Average Delay (sec/veh):       5.0           Worst Case 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:       Uncontrolled     Uncontrolled      Stop Sign        Stop Sign
Rights:           Include          Include          Include          Include
Lanes:        0  0  1  0  1    1  0  1  0  0    0  0  0  0  0    0  0  1! 0  0
------------|---------------||---------------||---------------||---------------|
Volume Module:
Base Vol:        0  601   113   203  437    0    0    0    0   45    0   98
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  601   113   203  437    0    0    0    0   45    0   98
User Adj:     1.00 1.00  1.00  1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
PHF Adj:      1.00 1.00  1.00  1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
PHF Volume:      0  601   113   203  437    0    0    0    0   45    0   98
Reduct Vol:      0    0     0     0    0    0    0    0    0    0    0    0
Final Vol.:      0  601   113   203  437    0    0    0    0   45    0   98
------------|---------------||---------------||---------------||---------------|
Critical Gap Module:
Critical Gp:xxxxx xxxx xxxxx   4.1 xxxx xxxxx xxxxx xxxx xxxxx   6.4 xxxx   6.2
FollowUpTim:xxxxx xxxx xxxxx   2.2 xxxx xxxxx xxxxx xxxx xxxxx   3.5 xxxx   3.3
------------|---------------||---------------||---------------||---------------|
Capacity Module:
Cnflict Vol: xxxx xxxx xxxxx   714 xxxx xxxxx  xxxx xxxx xxxxx  1444 xxxx   601
Potent Cap.: xxxx xxxx xxxxx   882 xxxx xxxxx  xxxx xxxx xxxxx   144 xxxx   497
Move Cap.:   xxxx xxxx xxxxx   882 xxxx xxxxx  xxxx xxxx xxxxx   118 xxxx   497
------------|---------------||---------------||---------------||---------------|
Level Of Service Module:
Stopped Del:xxxxx xxxx xxxxx  10.3 xxxx xxxxx xxxxx xxxx xxxxx xxxxx xxxx xxxxx
LOS by Move:   *    *    *     B    *    *    *    *    *    *    *    *
Movement:     LT - LTR - RT   LT - LTR - RT   LT - LTR - RT   LT - LTR - RT
Shared Cap.: xxxx xxxx xxxxx  xxxx xxxx xxxxx  xxxx xxxx xxxxx  xxxx  248 xxxxx
Shrd StpDel:xxxxx xxxx xxxxx xxxxx xxxx xxxxx xxxxx xxxx xxxxx xxxxx 37.7 xxxxx
Shared LOS:    *    *    *     *    *    *    *    *    *    *    E    *
ApproachDel:    xxxxxx          xxxxxx          xxxxxx            37.7
ApproachLOS:       *               *               *                E
```


Cumulative PM Plus Project Thu Jan 15, 2004 16:20:07 Page 4-1

Patterson Sand and Gravel
Cumulative Conditions - Plus Proposed Project (No Haul Road)
"30th Highest" - PM Peak Hour

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

```
*******************************************************************************
Intersection #1 SR 65 and Riosa Road (Sheridan)
*******************************************************************************
Approach:       North Bound      South Bound      East Bound       West Bound
Movement:     L  -  T  -  R    L  -  T  -  R    L  -  T  -  R    L  -  T  -  R
------------|---------------||---------------||---------------||---------------|
HevVeh:            4%               3%               0%               4%
Grade:             0%               0%               0%               0%
Peds/Hour:         0                0                0                0
Pedestrian Walk Speed: 4.00 feet/sec
LaneWidth:      12 feet          12 feet          12 feet          12 feet
Time Period: 0.25 hour
------------|---------------||---------------||---------------||---------------|
Upstream Signals:
Link Index:       #2
Dist(miles):      0.000
Speed (mph):       0.00
SignalIndex:      #2
Cycle Time:          0 secs
InitVolume:     0     0
Saturation:     0     0
ArrivalType:    0     0
G/C:         0.00  0.00
*** Computation 1: Time for Queue to Clear at Each Upstream Intersection
P:          0.000 0.000
gq1:         0.00  0.00
gq2:         0.00  0.00
gq:          0.00  0.00
*** Computation 2: Time Intersection Blocked Because of Upstream Platoons
alpha:           0.000
beta:            0.000
ta (secs):       0.000
F:               0.000
f:          0.000 0.000
vcmax:          0     0
vcmin:          0     0
tp:           0.0   0.0
p:               0.000
*** Computation 3: Platoon Event Periods
pdom/psubo:      0.000/0.000/Unconstrained
*** Computation 4: Conflicting Flows During Each Unblocked Period
InitCnflVol:   0 xxxxx xxxxx  714 xxxxx xxxxx    0     0     0 1444     0   601
UpstreamSat:   0 xxxxx xxxxx    0 xxxxx xxxxx    0     0     0    0     0     0
UpstreamAdj:1.00 x.xxx x.xxx 1.00 x.xxx x.xxx 1.00 1.000 1.000 1.00 1.000 1.000
ConflictVol:   0 xxxxx xxxxx  714 xxxxx xxxxx    0     0     0 1444     0   601
*** Computation 5: Capactiy for Subject Movement During Unblocked Period
InitPotCap:    0 xxxxx xxxxx  882 xxxxx xxxxx    0     0     0  144     0   497
UpstreamAdj:1.00 x.xxx x.xxx 1.00 x.xxx x.xxx 1.00 1.000 1.000 1.00 1.000 1.000
PotentCap:     0 xxxxx xxxxx  882 xxxxx xxxxx    0     0     0  144     0   497
```

Cumulative PM Plus Project Thu Jan 15, 2004 16:20:07 Page 5-1

Patterson Sand and Gravel
Cumulative Conditions - Plus Proposed Project (No Haul Road)
"30th Highest" - PM Peak Hour

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

Intersection #2 SR 65 and SR 193 (Lincoln)

Cycle (sec): 100 Critical Vol./Cap. (X): 0.881
Loss Time (sec): 0 (Y+R = 4 sec) Average Delay (sec/veh): 28.0
Optimal Cycle: 156 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				Permitted				Permitted			
Rights:	Include				Include				Include				Ovl			
Min. Green:	0	0	0		0	0	0		0	0	0		0	0	0	
Lanes:	1	0	0	1 0	1	0	0	1 0	0	0	1!	0 0	0	1	0	0 1
Volume Module:																
Base Vol:	0	851	22		375	530	0		0	0	0		131	0	309	
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	851	22		375	530	0		0	0	0		131	0	309	
User Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
PHF Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
PHF Volume:	0	851	22		375	530	0		0	0	0		131	0	309	
Reduct Vol:	0	0	0		0	0	0		0	0	0		0	0	0	
Reduced Vol:	0	851	22		375	530	0		0	0	0		131	0	309	
PCE Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
MLF Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
Final Vol.:	0	851	22		375	530	0		0	0	0		131	0	309	
Saturation Flow Module:																
Sat/Lane:	1900	1900	1900		1900	1900	1900		1900	1900	1900		1900	1900	1900	
Adjustment:	1.00	0.87	0.87		0.81	0.85	1.00		1.00	1.00	1.00		0.64	1.00	0.74	
Lanes:	1.00	0.97	0.03		1.00	1.00	0.00		0.00	1.00	0.00		1.00	0.00	1.00	
Final Sat.:	1900	1612	42		1532	1613	0		0	1900	0		1209	0	1398	
Capacity Analysis Module:																
Vol/Sat:	0.00	0.53	0.53		0.24	0.33	0.00		0.00	0.00	0.00		0.11	0.00	0.22	
Crit Moves:		****			****								****			
Green/Cycle:	0.00	0.60	0.60		0.28	0.88	0.00		0.00	0.00	0.00		0.12	0.00	0.40	
Volume/Cap:	0.00	0.88	0.88		0.88	0.37	0.00		0.00	0.00	0.00		0.88	0.00	0.55	
Delay/Veh:	0.0	26.3	26.3		53.3	1.3	0.0		0.0	0.0	0.0		84.2	0.0	24.2	
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	26.3	26.3		53.3	1.3	0.0		0.0	0.0	0.0		84.2	0.0	24.2	
DesignQueue:	0	22	1		16	4	0		0	0	0		7	0	11	

Cumulative PM Plus Project Thu Jan 15, 2004 16:20:07 Page 6-1

Patterson Sand and Gravel
Cumulative Conditions - Plus Proposed Project (No Haul Road)
"30th Highest" - PM Peak Hour

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

Intersection #2 SR 65 and SR 193 (Lincoln)

Approach:	North Bound				South Bound				East Bound				West Bound			
Movement:	L	-	T	- R	L	-	T	- R	L	-	T	- R	L	-	T	- R
HCM Ops Adjusted Lane Utilization Module:																
Lanes:	1	0	0	1 0	1	0	0	1 0	0	0	1!	0 0	0	1	0	0 1
Lane Group:	L	RT		RT	L	RT		RT	LTR	LTR		LTR	LT	LT		R
#LnsInGrps:	1	1		1	1	1		1	1	1		1	1	1		1
HCM Ops Input Saturation Adj Module:																
Lane Width:	12	12		12	12	12		12	12	12		12	12	12		12
CrosswalkWid		8				8				8				8		
% Hev Veh:		3				6				0				4		
Grade:		0%				0%				0%				0%		
Parking/Hr:		No				No				No				No		
Bus Stp/Hr:		0				0				0				0		
Area Type:	< < < < < < < < < < < < < < < < CBD > > > > > > > > > > > > > > > >															
Cnft Ped/Hr:		0				0				0				0		
ExclusiveRT:		Include				Include				Include				Include		
% RT Prtct:		0				0				0				0		
HCM Ops f(lt) Adj Case Module:																
f(lt) Case:	xxxx	xxxx	xxxx		1	xxxx	xxxx		xxxx	xxxx	xxxx		5	xxxx	xxxx	
HCM Ops Saturation Adj Module:																
Ln Wid Adj:	xxxx	1.00	1.00		1.00	1.00	xxxxx		xxxx	xxxx	xxxxx		1.00	xxxx	1.00	
Hev Veh Adj:	xxxx	0.97	0.97		0.94	0.94	xxxxx		xxxx	xxxx	xxxxx		0.96	xxxx	0.96	
Grade Adj:	xxxx	1.00	1.00		1.00	1.00	xxxxx		xxxx	xxxx	xxxxx		1.00	xxxx	1.00	
Parking Adj:	xxxx	1.00	1.00		xxxx	1.00	xxxxx		xxxx	xxxx	xxxxx		xxxx	xxxx	1.00	
Bus Stp Adj:	xxxx	1.00	1.00		xxxx	1.00	xxxxx		xxxx	xxxx	xxxxx		xxxx	xxxx	1.00	
Area Adj:	xxxx	0.90	0.90		0.90	0.90	xxxxx		xxxx	xxxx	xxxxx		0.90	xxxx	0.90	
RT Adj:	xxxx	1.00	1.00		xxxx	xxxx	xxxxx		xxxx	xxxx	xxxxx		xxxx	xxxx	0.85	
LT Adj:	xxxx	xxxx	xxxxx		0.95	xxxx	xxxxx		xxxx	xxxx	xxxxx		0.74	xxxx	xxxxx	
PedBike Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
HCM Sat Adj:	1.00	0.87	0.87		0.81	0.85	1.00		1.00	1.00	1.00		0.64	1.00	0.74	
Usr Sat Adj:	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 Sat Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
Fnl Sat Adj:	1.00	0.87	0.87		0.81	0.85	1.00		1.00	1.00	1.00		0.64	1.00	0.74	
Delay Adjustment Factor Module:																
Coordinated:	< < < < < < < < < < < < < < < < No > > > > > > > > > > > > > > > >															
Signal Type:	< < < < < < < < < < < < < Actuated > > > > > > > > > > > > > >															
DelAdjFctr:	0.00	1.00	1.00		1.00	1.00	0.00		0.00	0.00	0.00		1.00	0.00	1.00	

Cumulative PM Plus Project Thu Jan 15, 2004 16:20:07 Page 6-2

Patterson Sand and Gravel
Cumulative Conditions - Plus Proposed Project (No Haul Road)
"30th Highest" - PM Peak Hour

Level Of Service Detailed Computation Report (Permitted Left Turn Sat Adj)
2000 HCM Operations Method
Base Volume Alternative

****
Intersection #2 SR 65 and SR 193 (Lincoln)
****

Approach:	North	South	East	West
Cycle Length, C:	xxxxxx	xxxxxx	xxxxxx	100
Actual Green Time Per Lane Group, G:	xxxxxx	xxxxxx	xxxxxx	8.30
Effective Green Time Per Lane Group, g:	xxxxxx	xxxxxx	xxxxxx	12.30
Opposing Effective Green Time, go:	xxxxxx	xxxxxx	xxxxxx	12.30
Number Of Opposing Lanes, No:	xxxxxx	xxxxxx	xxxxxx	1
Number Of Lanes In Lane Group, N:	xxxxxx	xxxxxx	xxxxxx	1
Adjusted Left-Turn Flow Rate, Vlt:	xxxxxx	xxxxxx	xxxxxx	131
Proportion of Left Turns in Lane Group, Plt:	xxxxxx	xxxxxx	xxxxxx	1.00
Proportion of Left Turns in Opp Flow, Plto:	xxxxxx	xxxxxx	xxxxxx	1.00
Left Turns Per Cycle, LTC:	xxxxxx	xxxxxx	xxxxxx	3.64
Adjusted Opposing Flow Rate, Vo:	xxxxxx	xxxxxx	xxxxxx	0
Opposing Flow Per Lane Per Cycle, Volc:	xxxxxx	xxxxxx	xxxxxx	0.00
Opposing Platoon Ratio, Rpo:	xxxxxx	xxxxxx	xxxxxx	1.00
Lost Time Per Phase, tl:	xxxxxx	xxxxxx	xxxxxx	0.00
Eff grn until arrival of left-turn car, gf:	xxxxxx	xxxxxx	xxxxxx	0.90
Opposing Queue Ratio, qro:	xxxxxx	xxxxxx	xxxxxx	0.88
Eff grn blocked by opposing queue, gq:	xxxxxx	xxxxxx	xxxxxx	0.00
Eff grn while left turns filter thru, gu:	xxxxxx	xxxxxx	xxxxxx	11.40
Max opposing cars arriving during gq-gf, n:	xxxxxx	xxxxxx	xxxxxx	0.00
Proportion of Opposing Thru & RT cars, ptho:	xxxxxx	xxxxxx	xxxxxx	0.00
Left-turn Saturation Factor, fs:	xxxxxx	xxxxxx	xxxxxx	xxxxxx
Proportion of Left Turns in Shared Lane, pl:	xxxxxx	xxxxxx	xxxxxx	1.00
Through-car Equivalents, el1:	xxxxxx	xxxxxx	xxxxxx	1.40
Single Lane Through-car Equivalents, el2:	xxxxxx	xxxxxx	xxxxxx	1.00
Minimum Left Turn Adjustment Factor, fmin:	xxxxxx	xxxxxx	xxxxxx	0.33
Single Lane Left Turn Adjustment Factor, fm:	xxxxxx	xxxxxx	xxxxxx	0.74
Left Turn Adjustment Factor, flt:	xxxxxx	xxxxxx	xxxxxx	0.74

****

Cumulative PM Plus Project Thu Jan 15, 2004 16:20:07 Page 7-1

Patterson Sand and Gravel
Cumulative Conditions - Plus Proposed Project (No Haul Road)
"30th Highest" - PM Peak Hour

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

****
Intersection #4 Riosa Rd and 11th St
****

Cycle (sec): 100 Critical Vol./Cap. (X): 0.180
Loss Time (sec): 0 (Y+R = 4 sec) Average Delay (sec/veh): 7.9
Optimal Cycle: 0 Level Of Service: A

****

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Stop Sign			Stop Sign			Stop Sign			Stop Sign		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Lanes:	0 0	1! 0	0	0 0	0 1	0	0 1	0 0	0	0 1	0 0	0
Volume Module:												
Base Vol:	3	4	1	0	1	3	10	144	0	1	110	0
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	3	4	1	0	1	3	10	144	0	1	110	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:	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 Volume:	3	4	1	0	1	3	10	144	0	1	110	0
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	3	4	1	0	1	3	10	144	0	1	110	0
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Final Vol.:	3	4	1	0	1	3	10	144	0	1	110	0
Saturation Flow Module:												
Adjustment:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Lanes:	0.37	0.50	0.13	0.00	0.25	0.75	0.06	0.94	0.00	0.01	0.99	0.00
Final Sat.:	287	383	96	0	211	634	56	801	0	8	848	0
Capacity Analysis Module:												
Vol/Sat:	0.01	0.01	0.01	xxxx	0.00	0.00	0.18	0.18	xxxx	0.13	0.13	xxxx
Crit Moves:		****			****			****			****	
Delay/Veh:	7.5	7.5	7.5	0.0	7.0	7.0	8.1	8.1	0.0	7.8	7.8	0.0
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:	7.5	7.5	7.5	0.0	7.0	7.0	8.1	8.1	0.0	7.8	7.8	0.0
LOS by Move:	A	A	A	*	A	A	A	A	*	A	A	*
ApproachDel:		7.5			7.0			8.1			7.8	
Delay Adj:		1.00			1.00			1.00			1.00	
ApprAdjDel:		7.5			7.0			8.1			7.8	
LOS by Appr:		A			A			A			A	

****

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Patterson Sand and Gravel
Cumulative Conditions - Plus Proposed Project (No Haul Road)
"30th Highest" - PM Peak Hour

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

Intersection #4 Riosa Rd and 11th St

Approach:	North Bound	South Bound	East Bound	West Bound
Movement:	L - T - R	L - T - R	L - T - R	L - T - R
Time Period:	0.25 hour			
HevVeh:	0%	0%	8%	6%
Alpha Value:	0.01			
GroupType:	1	1	1	1
P[C1]:	0.7125	0.7086	0.8589	0.8096
P[C2]:	0.0032	0.0071	0.1268	0.1761
P[C3]:	0.2601	0.2587	0.0124	0.0117
P[C4]:	0.0240	0.0253	0.0019	0.0026
P[C5]:	0.0001	0.0002	0.0000	0.0000
Padj[C1]:	0.00596	0.00601	0.00157	0.00207
Padj[C2]:	0.00305	0.00303	-0.00111	-0.00159
Padj[C3]:	-0.00756	-0.00750	-0.00035	-0.00033
Padj[C4]:	-0.00144	-0.00152	-0.00011	-0.00015
Padj[C5]:	-0.00001	-0.00002	-0.00000	-0.00000
Lane:	L1	L1	L1	L1
LaneType:	LEFTTHRURITE	LEFTTHRURITE	LEFTTHRURITE	LEFTTHRURITE
HeadwayAdj:	0.000	-0.450	0.149	0.104
Volume:	8	4	154	111
Capacity:	766	845	856	855
DegOfUtil:	0.01	0.00	0.18	0.13
DepHeadway:	4.46	4.01	4.18	4.17
ServiceTime:	2.5	2.0	2.2	2.2
Delay:	7.5	7.0	8.1	7.8
Approach:	North Bound	South Bound	East Bound	West Bound
ApproachDel:	7.5	7.0	8.1	7.8
Delay Adj:	1.00	1.00	1.00	1.00
ApprAdjDel:	7.5	7.0	8.1	7.8
LOS by Appr:	A	A	A	A
OverallDel:		7.9		
OverallLOS:		A		

Cumulative PM Plus Project Thu Jan 15, 2004 16:20:07 Page 9-1

Patterson Sand and Gravel
Cumulative Conditions - Plus Proposed Project (No Haul Road)
"30th Highest" - PM Peak Hour

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

Intersection #5 Riosa Rd and Karchner Rd

Average Delay (sec/veh): 3.9 Worst Case Level Of Service: A

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	- T	- R	L	- T	- R	L	- T	- R	L	- T	- R
Control:	Stop Sign			Stop Sign			Uncontrolled			Uncontrolled		
Rights:	Include			Include			Include			Include		
Lanes:	0 0	0 0	0	0 0	1! 0	0	0 1	0 0	0	0 0	0 1	0
Volume Module:												
Base Vol:	0	0	0	10	0	19	30	39	0	0	27	7
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	10	0	19	30	39	0	0	27	7
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	0	0	0	10	0	19	30	39	0	0	27	7
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Final Vol.:	0	0	0	10	0	19	30	39	0	0	27	7
Critical Gap Module:												
Critical Gp:	xxxxx	xxxx	xxxxx	6.6	xxxx	6.4	4.3	xxxx	xxxxx	xxxxx	xxxx	xxxxx
FollowUpTim:	xxxxx	xxxx	xxxxx	3.7	xxxx	3.5	2.4	xxxx	xxxxx	xxxxx	xxxx	xxxxx
Capacity Module:												
Cnflict Vol:	xxxx	xxxx	xxxxx	130	xxxx	31	34	xxxx	xxxxx	xxxx	xxxx	xxxxx
Potent Cap.:	xxxx	xxxx	xxxxx	819	xxxx	989	1480	xxxx	xxxxx	xxxx	xxxx	xxxxx
Move Cap.:	xxxx	xxxx	xxxxx	806	xxxx	989	1480	xxxx	xxxxx	xxxx	xxxx	xxxxx
Level Of Service Module:												
Stopped Del:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	7.5	xxxx	xxxxx	xxxxx	xxxx	xxxxx
LOS by Move:	*	*	*	*	*	*	A	*	*	*	*	*
Movement:	LT -	LTR -	RT	LT -	LTR -	RT	LT -	LTR -	RT	LT -	LTR -	RT
Shared Cap.:	xxxx	xxxx	xxxxx	xxxx	918	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx
Shrd StpDel:	xxxxx	xxxx	xxxxx	xxxxx	9.1	xxxxx	7.5	xxxx	xxxxx	xxxxx	xxxx	xxxxx
Shared LOS:	*	*	*	*	A	*	A	*	*	*	*	*
ApproachDel:	xxxxxx				9.1		xxxxxx			xxxxxx		
ApproachLOS:	*				A		*			*		

Cumulative PM Plus Project Thu Jan 15, 2004 16:20:07 Page 10-1

Patterson Sand and Gravel
Cumulative Conditions - Plus Proposed Project (No Haul Road)
"30th Highest" - PM Peak Hour

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

****
Intersection #5 Riosa Rd and Karchner Rd
****

Approach:	North Bound	South Bound	East Bound	West Bound
Movement:	L - T - R	L - T - R	L - T - R	L - T - R
HevVeh:	0%	22%	18%	0%
Grade:	0%	0%	0%	0%
Peds/Hour:	0	0	0	0
Pedestrian Walk Speed: 4.00 feet/sec				
LaneWidth:	12 feet	12 feet	12 feet	12 feet
Time Period: 0.25 hour				

Cumulative PM Plus Project Thu Jan 15, 2004 16:46:14 Page 1-1

Patterson Sand and Gravel
Cumulative Conditions - Plus Proposed Project (No Haul Road)
"Highest" - PM Peak Hour

Scenario Report

Scenario:	Cumulative PM Plus Project
Command:	Cumulative PM Plus Project
Volume:	Cumulative PM Plus Project
Geometry:	Cumulative PM Plus Project
Impact Fee:	Default Impact Fee
Trip Generation:	Default Trip Generation
Trip Distribution:	Default Trip Distribution
Paths:	Default Paths
Routes:	Default Routes
Configuration:	Default Configuration

Cumulative PM Plus Project Thu Jan 15, 2004 16:46:15 Page 2-1

Patterson Sand and Gravel
Cumulative Conditions - Plus Proposed Project (No Haul Road)
"Highest" - PM Peak Hour

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 65 and Riosa Road (Sheridan	E	5.3	0.000	E	5.3	0.000	+ 0.000 V/C
# 2 SR 65 and SR 193 (Lincoln)	C	28.1	0.882	C	28.1	0.882	+ 0.000 D/V
# 4 Riosa Rd and 11th St	A	8.1	0.198	A	8.1	0.198	+ 0.000 V/C
# 5 Riosa Rd and Karchner Rd	A	4.1	0.000	A	4.1	0.000	+ 0.000 V/C

Cumulative PM Plus Project Thu Jan 15, 2004 16:46:15 Page 3-1

Patterson Sand and Gravel
Cumulative Conditions - Plus Proposed Project (No Haul Road)
"Highest" - PM Peak Hour

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

Intersection #1 SR 65 and Riosa Road (Sheridan)

Average Delay (sec/veh): 5.3 Worst Case 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:	Uncontrolled			Uncontrolled			Stop Sign			Stop Sign		
Rights:	Include			Include			Include			Include		
Lanes:	0 0	1	0 1	1 0	1	0 0	0 0	0	0 0	0 0	1!	0 0
Volume Module:												
Base Vol:	0	601	115	204	437	0	0	0	0	47	0	99
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	601	115	204	437	0	0	0	0	47	0	99
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	0	601	115	204	437	0	0	0	0	47	0	99
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Final Vol.:	0	601	115	204	437	0	0	0	0	47	0	99
Critical Gap Module:												
Critical Gp:	xxxxx	xxxx	xxxxx	4.1	xxxx	xxxxx	xxxxx	xxxx	xxxxx	6.5	xxxx	6.3
FollowUpTim:	xxxxx	xxxx	xxxxx	2.2	xxxx	xxxxx	xxxxx	xxxx	xxxxx	3.6	xxxx	3.4
Capacity Module:												
Cnflict Vol:	xxxx	xxxx	xxxxx	716	xxxx	xxxxx	xxxx	xxxx	xxxxx	1446	xxxx	601
Potent Cap.:	xxxx	xxxx	xxxxx	875	xxxx	xxxxx	xxxx	xxxx	xxxxx	142	xxxx	493
Move Cap.:	xxxx	xxxx	xxxxx	875	xxxx	xxxxx	xxxx	xxxx	xxxxx	117	xxxx	493
Level Of Service Module:												
Stopped Del:	xxxxx	xxxx	xxxxx	10.4	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx
LOS by Move:	*	*	*	B	*	*	*	*	*	*	*	*
Movement:	LT -	LTR -	RT	LT -	LTR -	RT	LT -	LTR -	RT	LT -	LTR -	RT
Shared Cap.:	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	242	xxxxx
Shrd StpDel:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	40.3	xxxxx
Shared LOS:	*	*	*	*	*	*	*	*	*	*	E	*
ApproachDel:	xxxxxx			xxxxxx			xxxxxx			40.3		
ApproachLOS:	*			*			*			E		

Cumulative PM Plus Project Thu Jan 15, 2004 16:46:15 Page 4-1

Patterson Sand and Gravel
Cumulative Conditions - Plus Proposed Project (No Haul Road)
"Highest" - PM Peak Hour

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

Intersection #1 SR 65 and Riosa Road (Sheridan)

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
HevVeh:	4%			4%			0%			6%		
Grade:	0%			0%			0%			0%		
Peds/Hour:	0			0			0			0		
Pedestrian Walk Speed: 4.00 feet/sec												
LaneWidth:	12 feet			12 feet			12 feet			12 feet		
Time Period: 0.25 hour												
Upstream Signals:												
Link Index:	#2											
Dist(miles):	0.000											
Speed (mph):	0.00											
SignalIndex:	#2											
Cycle Time:	0 secs											
InitVolume:	0	0										
Saturation:	0	0										
ArrivalType:	0	0										
G/C:	0.00	0.00										
*** Computation 1: Time for Queue to Clear at Each Upstream Intersection												
P:	0.000	0.000										
gq1:	0.00	0.00										
gq2:	0.00	0.00										
gq:	0.00	0.00										
*** Computation 2: Time Intersection Blocked Because of Upstream Platoons												
alpha:	0.000											
beta:	0.000											
ta (secs):	0.000											
F:	0.000											
f:	0.000	0.000										
vcmax:	0	0										
vcmin:	0	0										
tp:	0.0	0.0										
p:	0.000											
*** Computation 3: Platoon Event Periods												
pdom/psubo:	0.000/0.000/Unconstrained											
*** Computation 4: Conflicting Flows During Each Unblocked Period												
InitCnflVol:	0	xxxxx	xxxxx	716	xxxxx	xxxxx	0	0	0	1446	0	601
UpstreamSat:	0	xxxxx	xxxxx	0	xxxxx	xxxxx	0	0	0	0	0	0
UpstreamAdj:	1.00	x.xxx	x.xxx	1.00	x.xxx	x.xxx	1.00	1.000	1.000	1.00	1.000	1.000
ConflictVol:	0	xxxxx	xxxxx	716	xxxxx	xxxxx	0	0	0	1446	0	601
*** Computation 5: Capactiy for Subject Movement During Unblocked Period												
InitPotCap:	0	xxxxx	xxxxx	875	xxxxx	xxxxx	0	0	0	142	0	493
UpstreamAdj:	1.00	x.xxx	x.xxx	1.00	x.xxx	x.xxx	1.00	1.000	1.000	1.00	1.000	1.000
PotentCap:	0	xxxxx	xxxxx	875	xxxxx	xxxxx	0	0	0	142	0	493

Cumulative PM Plus Project Thu Jan 15, 2004 16:46:15 Page 5-1

Patterson Sand and Gravel
Cumulative Conditions - Plus Proposed Project (No Haul Road)
"Highest" - PM Peak Hour

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

Intersection #2 SR 65 and SR 193 (Lincoln)

Cycle (sec): 100 Critical Vol./Cap. (X): 0.882
Loss Time (sec): 0 (Y+R = 4 sec) Average Delay (sec/veh): 28.1
Optimal Cycle: 158 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			Permitted			Permitted		
Rights:	Include			Include			Include			Ovl		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Lanes:	1 0	0 1	0	1 0	0 1	0	0 0	1! 0	0	0 1	0 0	1
Volume Module:												
Base Vol:	0	852	22	376	531	0	0	0	0	131	0	309
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	852	22	376	531	0	0	0	0	131	0	309
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	0	852	22	376	531	0	0	0	0	131	0	309
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	0	852	22	376	531	0	0	0	0	131	0	309
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Final Vol.:	0	852	22	376	531	0	0	0	0	131	0	309
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	1.00	0.87	0.87	0.81	0.85	1.00	1.00	1.00	1.00	0.64	1.00	0.74
Lanes:	1.00	0.97	0.03	1.00	1.00	0.00	0.00	1.00	0.00	1.00	0.00	1.00
Final Sat.:	1900	1612	42	1532	1613	0	0	1900	0	1209	0	1398
Capacity Analysis Module:												
Vol/Sat:	0.00	0.53	0.53	0.25	0.33	0.00	0.00	0.00	0.00	0.11	0.00	0.22
Crit Moves:		****		****						****		
Green/Cycle:	0.00	0.60	0.60	0.28	0.88	0.00	0.00	0.00	0.00	0.12	0.00	0.40
Volume/Cap:	0.00	0.88	0.88	0.88	0.38	0.00	0.00	0.00	0.00	0.88	0.00	0.55
Delay/Veh:	0.0	26.4	26.4	53.5	1.3	0.0	0.0	0.0	0.0	84.5	0.0	24.2
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	26.4	26.4	53.5	1.3	0.0	0.0	0.0	0.0	84.5	0.0	24.2
DesignQueue:	0	22	1	16	4	0	0	0	0	7	0	11

Cumulative PM Plus Project Thu Jan 15, 2004 16:46:15 Page 6-1

Patterson Sand and Gravel
Cumulative Conditions - Plus Proposed Project (No Haul Road)
"Highest" - PM Peak Hour

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

Intersection #2 SR 65 and SR 193 (Lincoln)

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
HCM Ops Adjusted Lane Utilization Module:												
Lanes:	1 0	0 1	0	1 0	0 1	0	0 0	1! 0	0	0 1	0 0	1
Lane Group:	L	RT	RT	L	RT	RT	LTR	LTR	LTR	LT	LT	R
#LnsInGrps:	1	1	1	1	1	1	1	1	1	1	1	1
HCM Ops Input Saturation Adj Module:												
Lane Width:	12	12	12	12	12	12	12	12	12	12	12	12
CrosswalkWid		8			8			8			8	
% Hev Veh:		3			6			0			4	
Grade:		0%			0%			0%			0%	
Parking/Hr:		No			No			No			No	
Bus Stp/Hr:		0			0			0			0	
Area Type:	< < < < < < < < < < < < < < < < CBD > > > > > > > > > > > > > > > >											
Cnft Ped/Hr:		0			0			0			0	
ExclusiveRT:		Include			Include			Include			Include	
% RT Prtct:		0			0			0			0	
HCM Ops f(lt) Adj Case Module:												
f(lt) Case:	xxxx	xxxx	xxxx		1 xxxx	xxxx	xxxx	xxxx	xxxx		5 xxxx	xxxx
HCM Ops Saturation Adj Module:												
Ln Wid Adj:	xxxx	1.00	1.00	1.00	1.00	xxxxx	xxxx	xxxx	xxxxx	1.00	xxxx	1.00
Hev Veh Adj:	xxxx	0.97	0.97	0.94	0.94	xxxxx	xxxx	xxxx	xxxxx	0.96	xxxx	0.96
Grade Adj:	xxxx	1.00	1.00	1.00	1.00	xxxxx	xxxx	xxxx	xxxxx	1.00	xxxx	1.00
Parking Adj:	xxxx	1.00	1.00	xxxx	1.00	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	1.00
Bus Stp Adj:	xxxx	1.00	1.00	xxxx	1.00	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	1.00
Area Adj:	xxxx	0.90	0.90	0.90	0.90	xxxxx	xxxx	xxxx	xxxxx	0.90	xxxx	0.90
RT Adj:	xxxx	1.00	1.00	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	0.85
LT Adj:	xxxx	xxxx	xxxxx	0.95	xxxx	xxxxx	xxxx	xxxx	xxxxx	0.74	xxxx	xxxxx
PedBike Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
HCM Sat Adj:	1.00	0.87	0.87	0.81	0.85	1.00	1.00	1.00	1.00	0.64	1.00	0.74
Usr Sat Adj:	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 Sat Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Fnl Sat Adj:	1.00	0.87	0.87	0.81	0.85	1.00	1.00	1.00	1.00	0.64	1.00	0.74
Delay Adjustment Factor Module:												
Coordinated:	< < < < < < < < < < < < < < < < No > > > > > > > > > > > > > > > >											
Signal Type:	< < < < < < < < < < < < Actuated > > > > > > > > > > > >											
DelAdjFctr:	0.00	1.00	1.00	1.00	1.00	0.00	0.00	0.00	0.00	1.00	0.00	1.00

Cumulative PM Plus Project Thu Jan 15, 2004 16:46:15 Page 6-2

Patterson Sand and Gravel
Cumulative Conditions - Plus Proposed Project (No Haul Road)
"Highest" - PM Peak Hour

Level Of Service Detailed Computation Report (Permitted Left Turn Sat Adj)
2000 HCM Operations Method
Base Volume Alternative

Intersection #2 SR 65 and SR 193 (Lincoln)

Approach:	North	South	East	West
Cycle Length, C:	xxxxxx	xxxxxx	xxxxxx	100
Actual Green Time Per Lane Group, G:	xxxxxx	xxxxxx	xxxxxx	8.28
Effective Green Time Per Lane Group, g:	xxxxxx	xxxxxx	xxxxxx	12.28
Opposing Effective Green Time, go:	xxxxxx	xxxxxx	xxxxxx	12.28
Number Of Opposing Lanes, No:	xxxxxx	xxxxxx	xxxxxx	1
Number Of Lanes In Lane Group, N:	xxxxxx	xxxxxx	xxxxxx	1
Adjusted Left-Turn Flow Rate, Vlt:	xxxxxx	xxxxxx	xxxxxx	131
Proportion of Left Turns in Lane Group, Plt:	xxxxxx	xxxxxx	xxxxxx	1.00
Proportion of Left Turns in Opp Flow, Plto:	xxxxxx	xxxxxx	xxxxxx	1.00
Left Turns Per Cycle, LTC:	xxxxxx	xxxxxx	xxxxxx	3.64
Adjusted Opposing Flow Rate, Vo:	xxxxxx	xxxxxx	xxxxxx	0
Opposing Flow Per Lane Per Cycle, Volc:	xxxxxx	xxxxxx	xxxxxx	0.00
Opposing Platoon Ratio, Rpo:	xxxxxx	xxxxxx	xxxxxx	1.00
Lost Time Per Phase, tl:	xxxxxx	xxxxxx	xxxxxx	0.00
Eff grn until arrival of left-turn car, gf:	xxxxxx	xxxxxx	xxxxxx	0.89
Opposing Queue Ratio, qro:	xxxxxx	xxxxxx	xxxxxx	0.88
Eff grn blocked by opposing queue, gq:	xxxxxx	xxxxxx	xxxxxx	0.00
Eff grn while left turns filter thru, gu:	xxxxxx	xxxxxx	xxxxxx	11.39
Max opposing cars arriving during gq-gf, n:	xxxxxx	xxxxxx	xxxxxx	0.00
Proportion of Opposing Thru & RT cars, ptho:	xxxxxx	xxxxxx	xxxxxx	0.00
Left-turn Saturation Factor, fs:	xxxxxx	xxxxxx	xxxxxx	xxxxxx
Proportion of Left Turns in Shared Lane, pl:	xxxxxx	xxxxxx	xxxxxx	1.00
Through-car Equivalents, el1:	xxxxxx	xxxxxx	xxxxxx	1.40
Single Lane Through-car Equivalents, el2:	xxxxxx	xxxxxx	xxxxxx	1.00
Minimum Left Turn Adjustment Factor, fmin:	xxxxxx	xxxxxx	xxxxxx	0.33
Single Lane Left Turn Adjustment Factor, fm:	xxxxxx	xxxxxx	xxxxxx	0.73
Left Turn Adjustment Factor, flt:	xxxxxx	xxxxxx	xxxxxx	0.73

Cumulative PM Plus Project Thu Jan 15, 2004 16:46:15 Page 7-1

Patterson Sand and Gravel
Cumulative Conditions - Plus Proposed Project (No Haul Road)
"Highest" - PM Peak Hour

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

Intersection #4 Riosa Rd and 11th St

Cycle (sec): 100 Critical Vol./Cap. (X): 0.198
Loss Time (sec): 0 (Y+R = 4 sec) Average Delay (sec/veh): 8.1
Optimal Cycle: 0 Level Of Service: A

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Stop Sign			Stop Sign			Stop Sign			Stop Sign		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Lanes:	0 0	1! 0	0	0 0	0 1	0	0 1	0 0	0	0 1	0 0	0
Volume Module:												
Base Vol:	3	4	1	0	1	3	10	159	0	1	112	0
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	3	4	1	0	1	3	10	159	0	1	112	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:	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 Volume:	3	4	1	0	1	3	10	159	0	1	112	0
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	3	4	1	0	1	3	10	159	0	1	112	0
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Final Vol.:	3	4	1	0	1	3	10	159	0	1	112	0
Saturation Flow Module:												
Adjustment:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Lanes:	0.37	0.50	0.13	0.00	0.25	0.75	0.06	0.94	0.00	0.01	0.99	0.00
Final Sat.:	284	378	95	0	208	625	50	802	0	7	838	0
Capacity Analysis Module:												
Vol/Sat:	0.01	0.01	0.01	xxxx	0.00	0.00	0.20	0.20	xxxx	0.13	0.13	xxxx
Crit Moves:		****			****		****				****	
Delay/Veh:	7.5	7.5	7.5	0.0	7.1	7.1	8.2	8.2	0.0	7.9	7.9	0.0
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:	7.5	7.5	7.5	0.0	7.1	7.1	8.2	8.2	0.0	7.9	7.9	0.0
LOS by Move:	A	A	A	*	A	A	A	A	*	A	A	*
ApproachDel:		7.5			7.1			8.2			7.9	
Delay Adj:		1.00			1.00			1.00			1.00	
ApprAdjDel:		7.5			7.1			8.2			7.9	
LOS by Appr:		A			A			A			A	

Cumulative PM Plus Project Thu Jan 15, 2004 16:46:15 Page 8-1

Patterson Sand and Gravel
Cumulative Conditions - Plus Proposed Project (No Haul Road)
"Highest" - PM Peak Hour

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

****
Intersection #4 Riosa Rd and 11th St
****

Approach:	North Bound	South Bound	East Bound	West Bound
Movement:	L - T - R	L - T - R	L - T - R	L - T - R
Time Period:	0.25 hour			
HevVeh:	0%	0%	9%	8%
Alpha Value:	0.01			
GroupType:	1	1	1	1
P[C1]:	0.6936	0.6898	0.8550	0.7915
P[C2]:	0.0031	0.0070	0.1305	0.1941
P[C3]:	0.2760	0.2744	0.0125	0.0115
P[C4]:	0.0272	0.0286	0.0019	0.0029
P[C5]:	0.0001	0.0003	0.0000	0.0000
Padj[C1]:	0.00637	0.00643	0.00161	0.00226
Padj[C2]:	0.00328	0.00325	-0.00114	-0.00177
Padj[C3]:	-0.00800	-0.00794	-0.00035	-0.00032
Padj[C4]:	-0.00163	-0.00171	-0.00012	-0.00017
Padj[C5]:	-0.00001	-0.00003	-0.00000	-0.00000
Lane:	L1	L1	L1	L1
LaneType:	LEFTTHRURITE	LEFTTHRURITE	LEFTTHRURITE	LEFTTHRURITE
HeadwayAdj:	0.000	-0.450	0.165	0.138
Volume:	8	4	169	113
Capacity:	756	834	852	846
DegOfUtil:	0.01	0.00	0.20	0.13
DepHeadway:	4.49	4.05	4.20	4.22
ServiceTime:	2.5	2.0	2.2	2.2
Delay:	7.5	7.1	8.2	7.9
Approach:	North Bound	South Bound	East Bound	West Bound
ApproachDel:	7.5	7.1	8.2	7.9
Delay Adj:	1.00	1.00	1.00	1.00
ApprAdjDel:	7.5	7.1	8.2	7.9
LOS by Appr:	A	A	A	A
OverallDel:		8.1		
OverallLOS:		A		

Cumulative PM Plus Project Thu Jan 15, 2004 16:46:15 Page 9-1

Patterson Sand and Gravel
Cumulative Conditions - Plus Proposed Project (No Haul Road)
"Highest" - PM Peak Hour

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

****
Intersection #5 Riosa Rd and Karchner Rd
****

Average Delay (sec/veh): 4.1 Worst Case Level Of Service: A

****

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Stop Sign			Stop Sign			Uncontrolled			Uncontrolled		
Rights:	Include			Include			Include			Include		
Lanes:	0 0	0 0	0	0 0	1! 0	0	0 1	0 0	0	0 0	0 1	0
Volume Module:												
Base Vol:	0	0	0	10	0	22	33	39	0	0	27	7
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	10	0	22	33	39	0	0	27	7
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	0	0	0	10	0	22	33	39	0	0	27	7
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Final Vol.:	0	0	0	10	0	22	33	39	0	0	27	7
Critical Gap Module:												
Critical Gp:	xxxxx	xxxx	xxxxx	6.7	xxxx	6.5	4.3	xxxx	xxxxx	xxxxx	xxxx	xxxxx
FollowUpTim:	xxxxx	xxxx	xxxxx	3.8	xxxx	3.6	2.4	xxxx	xxxxx	xxxxx	xxxx	xxxxx
Capacity Module:												
Cnflict Vol:	xxxx	xxxx	xxxxx	136	xxxx	31	34	xxxx	xxxxx	xxxx	xxxx	xxxxx
Potent Cap.:	xxxx	xxxx	xxxxx	800	xxxx	974	1463	xxxx	xxxxx	xxxx	xxxx	xxxxx
Move Cap.:	xxxx	xxxx	xxxxx	786	xxxx	974	1463	xxxx	xxxxx	xxxx	xxxx	xxxxx
Level Of Service Module:												
Stopped Del:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	7.5	xxxx	xxxxx	xxxxx	xxxx	xxxxx
LOS by Move:	*	*	*	*	*	*	A	*	*	*	*	*
Movement:	LT -	LTR -	RT	LT -	LTR -	RT	LT -	LTR -	RT	LT -	LTR -	RT
Shared Cap.:	xxxx	xxxx	xxxxx	xxxx	906	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx
Shrd StpDel:	xxxxx	xxxx	xxxxx	xxxxx	9.1	xxxxx	7.5	xxxx	xxxxx	xxxxx	xxxx	xxxxx
Shared LOS:	*	*	*	*	A	*	A	*	*	*	*	*
ApproachDel:	xxxxxx				9.1		xxxxxx			xxxxxx		
ApproachLOS:	*				A			*			*	

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Patterson Sand and Gravel
Cumulative Conditions - Plus Proposed Project (No Haul Road)
"Highest" - PM Peak Hour

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

****
Intersection #5 Riosa Rd and Karchner Rd
****

Approach:	North Bound	South Bound	East Bound	West Bound
Movement:	L - T - R	L - T - R	L - T - R	L - T - R
HevVeh:	0%	28%	21%	0%
Grade:	0%	0%	0%	0%
Peds/Hour:	0	0	0	0
Pedestrian Walk Speed: 4.00 feet/sec				
LaneWidth:	12 feet	12 feet	12 feet	12 feet
Time Period: 0.25 hour				

Cumulative AM Plus Project Fri Feb 20, 2004 11:14:26 Page 1-1

Patterson Sand and Gravel
Cumulative Plus "Maximum Practical Mining Rate" (No Haul Road)
"Highest" - AM Peak Hour

Scenario Report

Scenario:	Cumulative AM Plus Project
Command:	Cumulative AM Plus Project
Volume:	Cumulative AM Plus Project
Geometry:	Cumulative AM Plus Project
Impact Fee:	Default Impact Fee
Trip Generation:	Default Trip Generation
Trip Distribution:	Default Trip Distribution
Paths:	Default Paths
Routes:	Default Routes
Configuration:	Default Configuration

Cumulative AM Plus Project Fri Feb 20, 2004 11:14:26 Page 2-1

Patterson Sand and Gravel
Cumulative Plus "Maximum Practical Mining Rate" (No Haul Road)
"Highest" - AM Peak Hour

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 65 and Riosa Road (Sheridan	F	22.6	0.000	F	22.6	0.000	+ 0.000 V/C
# 2 SR 65 and SR 193 (Lincoln)	B	16.0	0.613	B	16.0	0.613	+ 0.000 D/V
# 4 Riosa Rd and 11th St	B	10.4	0.405	B	10.4	0.405	+ 0.000 V/C
# 5 Riosa Rd and Karchner Rd	B	6.1	0.000	B	6.1	0.000	+ 0.000 V/C

Cumulative AM Plus Project Fri Feb 20, 2004 11:14:26 Page 3-1

Patterson Sand and Gravel
Cumulative Plus "Maximum Practical Mining Rate" (No Haul Road)
"Highest" - AM Peak Hour

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

****
Intersection #1 SR 65 and Riosa Road (Sheridan)
****
Average Delay (sec/veh): 22.6 Worst Case 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:	Uncontrolled			Uncontrolled			Stop Sign			Stop Sign		
Rights:	Include			Include			Include			Include		
Lanes:	0 0	1	0 1	1 0	1	0 0	0 0	0	0 0	0 0	1!	0 0
Volume Module:												
Base Vol:	0	319	63	64	581	0	0	0	0	148	0	207
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	319	63	64	581	0	0	0	0	148	0	207
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	0	319	63	64	581	0	0	0	0	148	0	207
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Final Vol.:	0	319	63	64	581	0	0	0	0	148	0	207
Critical Gap Module:												
Critical Gp:	xxxxx	xxxx	xxxxx	4.2	xxxx	xxxxx	xxxxx	xxxx	xxxxx	6.8	xxxx	6.6
FollowUpTim:	xxxxx	xxxx	xxxxx	2.3	xxxx	xxxxx	xxxxx	xxxx	xxxxx	3.8	xxxx	3.6
Capacity Module:												
Cnflict Vol:	xxxx	xxxx	xxxxx	382	xxxx	xxxxx	xxxx	xxxx	xxxxx	1028	xxxx	319
Potent Cap.:	xxxx	xxxx	xxxxx	1124	xxxx	xxxxx	xxxx	xxxx	xxxxx	224	xxxx	647
Move Cap.:	xxxx	xxxx	xxxxx	1124	xxxx	xxxxx	xxxx	xxxx	xxxxx	214	xxxx	647
Level Of Service Module:												
Stopped Del:	xxxxx	xxxx	xxxxx	8.4	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx
LOS by Move:	*	*	*	A	*	*	*	*	*	*	*	*
Movement:	LT -	LTR -	RT	LT -	LTR -	RT	LT -	LTR -	RT	LT -	LTR -	RT
Shared Cap.:	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	351	xxxxx
Shrd StpDel:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	86.3	xxxxx
Shared LOS:	*	*	*	*	*	*	*	*	*	*	F	*
ApproachDel:	xxxxxx			xxxxxx			xxxxxx			86.3		
ApproachLOS:	*			*			*			F		

Cumulative AM Plus Project Fri Feb 20, 2004 11:14:26 Page 4-1

Patterson Sand and Gravel
Cumulative Plus "Maximum Practical Mining Rate" (No Haul Road)
"Highest" - AM Peak Hour

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

****
Intersection #1 SR 65 and Riosa Road (Sheridan)
****

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
HevVeh:	24%			12%			0%			37%		
Grade:	0%			0%			0%			0%		
Peds/Hour:	0			0			0			0		
Pedestrian Walk Speed: 4.00 feet/sec												
LaneWidth:	12 feet			12 feet			12 feet			12 feet		
Time Period: 0.25 hour												

Upstream Signals:

Link Index:	#2											
Dist(miles):	0.000											
Speed (mph):	0.00											
SignalIndex:	#2											
Cycle Time:	0 secs											
InitVolume:	0	0										
Saturation:	0	0										
ArrivalType:	0	0										
G/C:	0.00	0.00										
*** Computation 1: Time for Queue to Clear at Each Upstream Intersection												
P:	0.000	0.000										
gq1:	0.00	0.00										
gq2:	0.00	0.00										
gq:	0.00	0.00										
*** Computation 2: Time Intersection Blocked Because of Upstream Platoons												
alpha:	0.000											
beta:	0.000											
ta (secs):	0.000											
F:	0.000											
f:	0.000	0.000										
vcmax:	0	0										
vcmin:	0	0										
tp:	0.0	0.0										
p:	0.000											
*** Computation 3: Platoon Event Periods												
pdom/psubo:	0.000/0.000/Unconstrained											
*** Computation 4: Conflicting Flows During Each Unblocked Period												
InitCnflVol:	0	xxxxx	xxxxx	382	xxxxx	xxxxx	0	0	0	1028	0	319
UpstreamSat:	0	xxxxx	xxxxx	0	xxxxx	xxxxx	0	0	0	0	0	0
UpstreamAdj:	1.00	x.xxx	x.xxx	1.00	x.xxx	x.xxx	1.00	1.000	1.000	1.00	1.000	1.000
ConflictVol:	0	xxxxx	xxxxx	382	xxxxx	xxxxx	0	0	0	1028	0	319
*** Computation 5: Capactiy for Subject Movement During Unblocked Period												
InitPotCap:	0	xxxxx	xxxxx	1124	xxxxx	xxxxx	0	0	0	224	0	647
UpstreamAdj:	1.00	x.xxx	x.xxx	1.00	x.xxx	x.xxx	1.00	1.000	1.000	1.00	1.000	1.000
PotentCap:	0	xxxxx	xxxxx	1124	xxxxx	xxxxx	0	0	0	224	0	647

Cumulative AM Plus Project Fri Feb 20, 2004 11:14:26 Page 5-1

Patterson Sand and Gravel
Cumulative Plus "Maximum Practical Mining Rate" (No Haul Road)
"Highest" - AM Peak Hour

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

Intersection #2 SR 65 and SR 193 (Lincoln)

Cycle (sec): 100 Critical Vol./Cap. (X): 0.613
Loss Time (sec): 0 (Y+R = 4 sec) Average Delay (sec/veh): 16.0
Optimal Cycle: 48 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				Permitted				Permitted			
Rights:	Include				Include				Include				Ovl			
Min. Green:	0	0	0		0	0	0		0	0	0		0	0	0	
Lanes:	1	0	0	1 0	1	0	0	1 0	0	0	1!	0 0	0	1	0	0 1
Volume Module:																
Base Vol:	0	456		29	196	668		0	0	0		0	62		0	309
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	456		29	196	668		0	0	0		0	62		0	309
User Adj:	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00		1.00	1.00
PHF Adj:	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00		1.00	1.00
PHF Volume:	0	456		29	196	668		0	0	0		0	62		0	309
Reduct Vol:	0	0		0	0	0		0	0	0		0	0		0	0
Reduced Vol:	0	456		29	196	668		0	0	0		0	62		0	309
PCE Adj:	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00		1.00	1.00
MLF Adj:	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00		1.00	1.00
Final Vol.:	0	456		29	196	668		0	0	0		0	62		0	309
Saturation Flow Module:																
Sat/Lane:	1900	1900		1900	1900	1900		1900	1900	1900		1900	1900		1900	1900
Adjustment:	1.00	0.73		0.73	0.70	0.73		1.00	1.00	1.00		1.00	0.57		1.00	0.62
Lanes:	1.00	0.94		0.06	1.00	1.00		0.00	0.00	1.00		0.00	1.00		0.00	1.00
Final Sat.:	1900	1306		83	1321	1390		0	0	1900		0	1082		0	1172
Capacity Analysis Module:																
Vol/Sat:	0.00	0.35		0.35	0.15	0.48		0.00	0.00	0.00		0.00	0.06		0.00	0.26
Crit Moves:		****			****											****
Green/Cycle:	0.00	0.57		0.57	0.24	0.81		0.00	0.00	0.00		0.00	0.19		0.00	0.43
Volume/Cap:	0.00	0.61		0.61	0.61	0.59		0.00	0.00	0.00		0.00	0.30		0.00	0.61
Delay/Veh:	0.0	15.7		15.7	37.2	4.3		0.0	0.0	0.0		0.0	35.8		0.0	24.3
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:	0.0	15.7		15.7	37.2	4.3		0.0	0.0	0.0		0.0	35.8		0.0	24.3
DesignQueue:	0	12		1	8	8		0	0	0		0	3		0	10

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Patterson Sand and Gravel
Cumulative Plus "Maximum Practical Mining Rate" (No Haul Road)
"Highest" - AM Peak Hour

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

Intersection #2 SR 65 and SR 193 (Lincoln)

Approach:	North Bound				South Bound				East Bound				West Bound			
Movement:	L	-	T	- R	L	-	T	- R	L	-	T	- R	L	-	T	- R
HCM Ops Adjusted Lane Utilization Module:																
Lanes:	1	0	0	1 0	1	0	0	1 0	0	0	1!	0 0	0	1	0	0 1
Lane Group:	L		RT	RT	L		RT	RT	LTR	LTR		LTR	LT		LT	R
#LnsInGrps:	1		1	1	1		1	1	1	1		1	1		1	1
HCM Ops Input Saturation Adj Module:																
Lane Width:	12		12	12	12		12	12	12		12	12	12		12	12
CrosswalkWid			8				8				8				8	
% Hev Veh:			22				23				0				24	
Grade:			0%				0%				0%				0%	
Parking/Hr:			No				No				No				No	
Bus Stp/Hr:			0				0				0				0	
Area Type:	< < < < < < < < < < < < < < < < CBD > > > > > > > > > > > > > > > >															
Cnft Ped/Hr:			0				0				0				0	
ExclusiveRT:			Include				Include				Include				Include	
% RT Prtct:			0				0				0				0	
HCM Ops f(lt) Adj Case Module:																
f(lt) Case:	xxxx	xxxx	xxxx		1	xxxx	xxxx		xxxx	xxxx	xxxx		5	xxxx	xxxx	
HCM Ops Saturation Adj Module:																
Ln Wid Adj:	xxxx	1.00	1.00		1.00	1.00	xxxxx		xxxx	xxxx	xxxxx		1.00	xxxx	1.00	
Hev Veh Adj:	xxxx	0.82	0.82		0.81	0.81	xxxxx		xxxx	xxxx	xxxxx		0.81	xxxx	0.81	
Grade Adj:	xxxx	1.00	1.00		1.00	1.00	xxxxx		xxxx	xxxx	xxxxx		1.00	xxxx	1.00	
Parking Adj:	xxxx	1.00	1.00		xxxx	1.00	xxxxx		xxxx	xxxx	xxxxx		xxxx	xxxx	1.00	
Bus Stp Adj:	xxxx	1.00	1.00		xxxx	1.00	xxxxx		xxxx	xxxx	xxxxx		xxxx	xxxx	1.00	
Area Adj:	xxxx	0.90	0.90		0.90	0.90	xxxxx		xxxx	xxxx	xxxxx		0.90	xxxx	0.90	
RT Adj:	xxxx	0.99	0.99		xxxx	xxxx	xxxxx		xxxx	xxxx	xxxxx		xxxx	xxxx	0.85	
LT Adj:	xxxx	xxxx	xxxxx		0.95	xxxx	xxxxx		xxxx	xxxx	xxxxx		0.79	xxxx	xxxxx	
PedBike Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
HCM Sat Adj:	1.00	0.73	0.73		0.70	0.73	1.00		1.00	1.00	1.00		0.57	1.00	0.62	
Usr Sat Adj:	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 Sat Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
Fnl Sat Adj:	1.00	0.73	0.73		0.70	0.73	1.00		1.00	1.00	1.00		0.57	1.00	0.62	
Delay Adjustment Factor Module:																
Coordinated:	< < < < < < < < < < < < < < < < No > > > > > > > > > > > > > > > >															
Signal Type:	< < < < < < < < < < < < < < Actuated > > > > > > > > > > > > > >															
DelAdjFctr:	0.00	1.00	1.00		1.00	1.00	0.00		0.00	0.00	0.00		1.00	0.00	1.00	

Cumulative AM Plus Project Fri Feb 20, 2004 11:14:26 Page 6-2

Patterson Sand and Gravel
Cumulative Plus "Maximum Practical Mining Rate" (No Haul Road)
"Highest" - AM Peak Hour

Level Of Service Detailed Computation Report (Permitted Left Turn Sat Adj)
2000 HCM Operations Method
Base Volume Alternative

Intersection #2 SR 65 and SR 193 (Lincoln)

Approach:	North	South	East	West
Cycle Length, C:	xxxxxx	xxxxxx	xxxxxx	100
Actual Green Time Per Lane Group, G:	xxxxxx	xxxxxx	xxxxxx	39.04
Effective Green Time Per Lane Group, g:	xxxxxx	xxxxxx	xxxxxx	43.04
Opposing Effective Green Time, go:	xxxxxx	xxxxxx	xxxxxx	43.04
Number Of Opposing Lanes, No:	xxxxxx	xxxxxx	xxxxxx	1
Number Of Lanes In Lane Group, N:	xxxxxx	xxxxxx	xxxxxx	1
Adjusted Left-Turn Flow Rate, Vlt:	xxxxxx	xxxxxx	xxxxxx	62
Proportion of Left Turns in Lane Group, Plt:	xxxxxx	xxxxxx	xxxxxx	1.00
Proportion of Left Turns in Opp Flow, Plto:	xxxxxx	xxxxxx	xxxxxx	1.00
Left Turns Per Cycle, LTC:	xxxxxx	xxxxxx	xxxxxx	1.72
Adjusted Opposing Flow Rate, Vo:	xxxxxx	xxxxxx	xxxxxx	0
Opposing Flow Per Lane Per Cycle, Volc:	xxxxxx	xxxxxx	xxxxxx	0.00
Opposing Platoon Ratio, Rpo:	xxxxxx	xxxxxx	xxxxxx	1.00
Lost Time Per Phase, tl:	xxxxxx	xxxxxx	xxxxxx	0.00
Eff grn until arrival of left-turn car, gf:	xxxxxx	xxxxxx	xxxxxx	10.61
Opposing Queue Ratio, qro:	xxxxxx	xxxxxx	xxxxxx	0.57
Eff grn blocked by opposing queue, gq:	xxxxxx	xxxxxx	xxxxxx	0.00
Eff grn while left turns filter thru, gu:	xxxxxx	xxxxxx	xxxxxx	32.43
Max opposing cars arriving during gq-gf, n:	xxxxxx	xxxxxx	xxxxxx	0.00
Proportion of Opposing Thru & RT cars, ptho:	xxxxxx	xxxxxx	xxxxxx	0.00
Left-turn Saturation Factor, fs:	xxxxxx	xxxxxx	xxxxxx	xxxxxx
Proportion of Left Turns in Shared Lane, pl:	xxxxxx	xxxxxx	xxxxxx	1.00
Through-car Equivalents, el1:	xxxxxx	xxxxxx	xxxxxx	1.40
Single Lane Through-car Equivalents, el2:	xxxxxx	xxxxxx	xxxxxx	1.00
Minimum Left Turn Adjustment Factor, fmin:	xxxxxx	xxxxxx	xxxxxx	0.09
Single Lane Left Turn Adjustment Factor, fm:	xxxxxx	xxxxxx	xxxxxx	0.78
Left Turn Adjustment Factor, flt:	xxxxxx	xxxxxx	xxxxxx	0.78

Cumulative AM Plus Project Fri Feb 20, 2004 11:14:26 Page 7-1

Patterson Sand and Gravel
Cumulative Plus "Maximum Practical Mining Rate" (No Haul Road)
"Highest" - AM Peak Hour

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

Intersection #4 Riosa Rd and 11th St

Cycle (sec): 100 Critical Vol./Cap. (X): 0.405
Loss Time (sec): 0 (Y+R = 4 sec) Average Delay (sec/veh): 10.4
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	1! 0	0	0 0	1! 0	0	0 1	0 0	0	0 1	0 0	0
Volume Module:												
Base Vol:	6	4	4	11	7	20	13	137	0	2	289	0
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	6	4	4	11	7	20	13	137	0	2	289	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:	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 Volume:	6	4	4	11	7	20	13	137	0	2	289	0
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	6	4	4	11	7	20	13	137	0	2	289	0
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Final Vol.:	6	4	4	11	7	20	13	137	0	2	289	0
Saturation Flow Module:												
Adjustment:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Lanes:	0.43	0.28	0.29	0.29	0.18	0.53	0.09	0.91	0.00	0.01	0.99	0.00
Final Sat.:	288	192	192	203	129	370	61	639	0	5	713	0
Capacity Analysis Module:												
Vol/Sat:	0.02	0.02	0.02	0.05	0.05	0.05	0.21	0.21	xxxx	0.41	0.41	xxxx
Crit Moves:	****					****		****			****	
Delay/Veh:	8.0	8.0	8.0	8.0	8.0	8.0	9.4	9.4	0.0	11.3	11.3	0.0
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:	8.0	8.0	8.0	8.0	8.0	8.0	9.4	9.4	0.0	11.3	11.3	0.0
LOS by Move:	A	A	A	A	A	A	A	A	*	B	B	*
ApproachDel:	8.0			8.0			9.4			11.3		
Delay Adj:	1.00			1.00			1.00			1.00		
ApprAdjDel:	8.0			8.0			9.4			11.3		
LOS by Appr:	A			A			A			B		

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Patterson Sand and Gravel
Cumulative Plus "Maximum Practical Mining Rate" (No Haul Road)
"Highest" - AM Peak Hour

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

****

Intersection #4 Riosa Rd and 11th St

****

Approach:	North Bound	South Bound	East Bound	West Bound
Movement:	L - T - R	L - T - R	L - T - R	L - T - R
Time Period: 0.25 hour				
HevVeh:	0%	0%	41%	45%
Alpha Value: 0.01				
GroupType:	1	1	1	1
P[C1]:	0.45	0.46	0.56	0.74
P[C2]:	0.02	0.01	0.37	0.20
P[C3]:	0.42	0.43	0.04	0.05
P[C4]:	0.10	0.09	0.03	0.01
P[C5]:	0.00	0.00	0.00	0.00
Padj[C1]:	0.012	0.012	0.005	0.003
Padj[C2]:	0.006	0.006	-0.003	-0.001
Padj[C3]:	-0.012	-0.012	-0.001	-0.001
Padj[C4]:	-0.006	-0.005	-0.002	-0.001
Padj[C5]:	-0.000	-0.000	-0.000	-0.000
Lane:	L1	L1	L1	L1
LaneType:	LEFTTHRURITE	LEFTTHRURITE	LEFTTHRURITE	LEFTTHRURITE
HeadwayAdj:	-0.086	-0.258	0.714	0.766
Volume:	14	38	150	291
Capacity:	672	703	699	718
DegOfUtil:	0.02	0.05	0.21	0.40
DepHeadway:	4.94	4.73	5.07	4.97
ServiceTime:	2.9	2.7	3.1	3.0
Delay:	8.0	8.0	9.4	11.3
Approach:	North Bound	South Bound	East Bound	West Bound
ApproachDel:	8.0	8.0	9.4	11.3
Delay Adj:	1.00	1.00	1.00	1.00
ApprAdjDel:	8.0	8.0	9.4	11.3
LOS by Appr:	A	A	A	B
OverallDel:		10.4		
OverallLOS:		B		

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Patterson Sand and Gravel
Cumulative Plus "Maximum Practical Mining Rate" (No Haul Road)
"Highest" - AM Peak Hour

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

****

Intersection #5 Riosa Rd and Karchner Rd

****

Average Delay (sec/veh): 6.1 Worst Case 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			Uncontrolled			Uncontrolled		
Rights:	Include			Include			Include			Include		
Lanes:	0 0	0 0	0	0 0	1! 0	0	0 1	0 0	0	0 0	0 1	0
Volume Module:												
Base Vol:	0	0	0	23	0	126	63	38	0	0	52	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:	0	0	0	23	0	126	63	38	0	0	52	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:	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 Volume:	0	0	0	23	0	126	63	38	0	0	52	2
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Final Vol.:	0	0	0	23	0	126	63	38	0	0	52	2
Critical Gap Module:												
Critical Gp:	xxxxx	xxxx	xxxxx	7.2	xxxx	7.0	4.7	xxxx	xxxxx	xxxxx	xxxx	xxxxx
FollowUpTim:	xxxxx	xxxx	xxxxx	4.2	xxxx	4.0	2.7	xxxx	xxxxx	xxxxx	xxxx	xxxxx
Capacity Module:												
Cnflict Vol:	xxxx	xxxx	xxxxx	217	xxxx	53	54	xxxx	xxxxx	xxxx	xxxx	xxxxx
Potent Cap.:	xxxx	xxxx	xxxxx	623	xxxx	828	1246	xxxx	xxxxx	xxxx	xxxx	xxxxx
Move Cap.:	xxxx	xxxx	xxxxx	598	xxxx	828	1246	xxxx	xxxxx	xxxx	xxxx	xxxxx
Level Of Service Module:												
Stopped Del:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	8.0	xxxx	xxxxx	xxxxx	xxxx	xxxxx
LOS by Move:	*	*	*	*	*	*	A	*	*	*	*	*
Movement:	LT -	LTR -	RT	LT -	LTR -	RT	LT -	LTR -	RT	LT -	LTR -	RT
Shared Cap.:	xxxx	xxxx	xxxxx	xxxx	782	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx
Shrd StpDel:	xxxxx	xxxx	xxxxx	xxxxx	10.7	xxxxx	8.0	xxxx	xxxxx	xxxxx	xxxx	xxxxx
Shared LOS:	*	*	*	*	B	*	A	*	*	*	*	*
ApproachDel:	xxxxxx			10.7			xxxxxx			xxxxxx		
ApproachLOS:	*			B			*			*		

Cumulative AM Plus Project Fri Feb 20, 2004 11:14:26 Page 10-1

Patterson Sand and Gravel
Cumulative Plus "Maximum Practical Mining Rate" (No Haul Road)
"Highest" - AM Peak Hour

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

****
Intersection #5 Riosa Rd and Karchner Rd
****

Approach:	North Bound	South Bound	East Bound	West Bound
Movement:	L - T - R	L - T - R	L - T - R	L - T - R
HevVeh:	0%	82%	61%	15%
Grade:	0%	0%	0%	0%
Peds/Hour:	0	0	0	0
LaneWidth:	12 feet	12 feet	12 feet	12 feet

Pedestrian Walk Speed: 4.00 feet/sec
Time Period: 0.25 hour

Cumulative PM Plus Project Sat Jan 17, 2004 14:24:22 Page 1-1

Patterson Sand and Gravel
Cumulative Plus "Maximum Practical Mining Rate" (No Haul Road)
"Highest" - PM Peak Hour

Scenario Report

Scenario:	Cumulative PM Plus Project
Command:	Cumulative PM Plus Project
Volume:	Cumulative PM Plus Project
Geometry:	Cumulative PM Plus Project
Impact Fee:	Default Impact Fee
Trip Generation:	Default Trip Generation
Trip Distribution:	Default Trip Distribution
Paths:	Default Paths
Routes:	Default Routes
Configuration:	Default Configuration

Cumulative PM Plus Project Sat Jan 17, 2004 14:24:22 Page 2-1

Patterson Sand and Gravel
Cumulative Plus "Maximum Practical Mining Rate" (No Haul Road)
"Highest" - PM Peak Hour

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 65 and Riosa Road (Sheridan	E	5.8	0.000	E	5.8	0.000	+ 0.000 V/C
# 2 SR 65 and SR 193 (Lincoln)	C	28.2	0.884	C	28.2	0.884	+ 0.000 D/V
# 4 Riosa Rd and 11th St	A	8.1	0.205	A	8.1	0.205	+ 0.000 V/C
# 5 Riosa Rd and Karchner Rd	A	4.3	0.000	A	4.3	0.000	+ 0.000 V/C

Cumulative PM Plus Project Sat Jan 17, 2004 14:24:22 Page 3-1

Patterson Sand and Gravel
Cumulative Plus "Maximum Practical Mining Rate" (No Haul Road)
"Highest" - PM Peak Hour

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

```
*******************************************************************************
Intersection #1 SR 65 and Riosa Road (Sheridan)
*******************************************************************************
Average Delay (sec/veh):       5.8           Worst Case 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:      Uncontrolled     Uncontrolled     Stop Sign        Stop Sign
Rights:          Include          Include          Include          Include
Lanes:       0  0  1  0  1    1  0  1  0  0    0  0  0  0  0    0  0  1! 0  0
------------|---------------||---------------||---------------||---------------|
Volume Module:
Base Vol:       0  601   118   206  437    0    0    0    0   50    0  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:    0  601   118   206  437    0    0    0    0   50    0  100
User Adj:    1.00 1.00  1.00  1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
PHF Adj:     1.00 1.00  1.00  1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
PHF Volume:     0  601   118   206  437    0    0    0    0   50    0  100
Reduct Vol:     0    0     0     0    0    0    0    0    0    0    0    0
Final Vol.:     0  601   118   206  437    0    0    0    0   50    0  100
------------|---------------||---------------||---------------||---------------|
Critical Gap Module:
Critical Gp:xxxxx xxxx xxxxx   4.1 xxxx xxxxx xxxxx xxxx xxxxx   6.5 xxxx   6.3
FollowUpTim:xxxxx xxxx xxxxx   2.2 xxxx xxxxx xxxxx xxxx xxxxx   3.6 xxxx   3.4
------------|---------------||---------------||---------------||---------------|
Capacity Module:
Cnflict Vol: xxxx xxxx xxxxx   719 xxxx xxxxx  xxxx xxxx xxxxx  1450 xxxx   601
Potent Cap.: xxxx xxxx xxxxx   873 xxxx xxxxx  xxxx xxxx xxxxx   140 xxxx   489
Move Cap.:   xxxx xxxx xxxxx   873 xxxx xxxxx  xxxx xxxx xxxxx   114 xxxx   489
------------|---------------||---------------||---------------||---------------|
Level Of Service Module:
Stopped Del:xxxxx xxxx xxxxx  10.4 xxxx xxxxx xxxxx xxxx xxxxx xxxxx xxxx xxxxx
LOS by Move:   *    *    *     B    *    *    *    *    *    *    *    *
Movement:     LT - LTR - RT   LT - LTR - RT   LT - LTR - RT   LT - LTR - RT
Shared Cap.: xxxx xxxx xxxxx  xxxx xxxx xxxxx  xxxx xxxx xxxxx  xxxx  234 xxxxx
Shrd StpDel:xxxxx xxxx xxxxx xxxxx xxxx xxxxx xxxxx xxxx xxxxx xxxxx 44.4 xxxxx
Shared LOS:    *    *    *     *    *    *    *    *    *    *    E    *
ApproachDel:    xxxxxx           xxxxxx           xxxxxx           44.4
ApproachLOS:       *                *                *                E
```


Cumulative PM Plus Project Sat Jan 17, 2004 14:24:22 Page 4-1

Patterson Sand and Gravel
Cumulative Plus "Maximum Practical Mining Rate" (No Haul Road)
"Highest" - PM Peak Hour

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

```
*******************************************************************************
Intersection #1 SR 65 and Riosa Road (Sheridan)
*******************************************************************************
Approach:      North Bound      South Bound      East Bound       West Bound
Movement:    L  -  T  -  R    L  -  T  -  R    L  -  T  -  R    L  -  T  -  R
------------|---------------||---------------||---------------||---------------|
HevVeh:          5%               4%               0%               8%
Grade:           0%               0%               0%               0%
Peds/Hour:       0                0                0                0
Pedestrian Walk Speed: 4.00 feet/sec
LaneWidth:     12 feet          12 feet          12 feet          12 feet
Time Period: 0.25 hour
------------|---------------||---------------||---------------||---------------|
Upstream Signals:
Link Index:       #2
Dist(miles):      0.000
Speed (mph):       0.00
SignalIndex:      #2
Cycle Time:          0 secs
InitVolume:     0     0
Saturation:     0     0
ArrivalType:    0     0
G/C:         0.00  0.00
*** Computation 1: Time for Queue to Clear at Each Upstream Intersection
P:          0.000 0.000
gq1:         0.00  0.00
gq2:         0.00  0.00
gq:          0.00  0.00
*** Computation 2: Time Intersection Blocked Because of Upstream Platoons
alpha:           0.000
beta:            0.000
ta (secs):       0.000
F:               0.000
f:          0.000 0.000
vcmax:          0     0
vcmin:          0     0
tp:           0.0   0.0
p:               0.000
*** Computation 3: Platoon Event Periods
pdom/psubo:     0.000/0.000/Unconstrained
*** Computation 4: Conflicting Flows During Each Unblocked Period
InitCnflVol:   0 xxxxx xxxxx  719 xxxxx xxxxx    0     0     0 1450     0   601
UpstreamSat:   0 xxxxx xxxxx    0 xxxxx xxxxx    0     0     0    0     0     0
UpstreamAdj:1.00 x.xxx x.xxx 1.00 x.xxx x.xxx 1.00 1.000 1.000 1.00 1.000 1.000
ConflictVol:   0 xxxxx xxxxx  719 xxxxx xxxxx    0     0     0 1450     0   601
*** Computation 5: Capactiy for Subject Movement During Unblocked Period
InitPotCap:    0 xxxxx xxxxx  873 xxxxx xxxxx    0     0     0  140     0   489
UpstreamAdj:1.00 x.xxx x.xxx 1.00 x.xxx x.xxx 1.00 1.000 1.000 1.00 1.000 1.000
PotentCap:     0 xxxxx xxxxx  873 xxxxx xxxxx    0     0     0  140     0   489
```

Cumulative PM Plus Project Sat Jan 17, 2004 14:24:22 Page 5-1

Patterson Sand and Gravel
Cumulative Plus "Maximum Practical Mining Rate" (No Haul Road)
"Highest" - PM Peak Hour

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

****
Intersection #2 SR 65 and SR 193 (Lincoln)
****

Cycle (sec):	100	Critical Vol./Cap. (X):	0.884
Loss Time (sec):	0 (Y+R = 4 sec)	Average Delay (sec/veh):	28.2
Optimal Cycle:	160	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				Permitted				Permitted			
Rights:	Include				Include				Include				Ovl			
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Lanes:	1	0	0	1 0	1	0	0	1 0	0	0	1!	0 0	0	1	0	0 1
Volume Module:																
Base Vol:	0	853	22		377	533	0		0	0	0		131	0	311	
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	853	22		377	533	0		0	0	0		131	0	311	
User Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
PHF Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
PHF Volume:	0	853	22		377	533	0		0	0	0		131	0	311	
Reduct Vol:	0	0	0		0	0	0		0	0	0		0	0	0	
Reduced Vol:	0	853	22		377	533	0		0	0	0		131	0	311	
PCE Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
MLF Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
Final Vol.:	0	853	22		377	533	0		0	0	0		131	0	311	
Saturation Flow Module:																
Sat/Lane:	1900	1900	1900		1900	1900	1900		1900	1900	1900		1900	1900	1900	
Adjustment:	1.00	0.87	0.87		0.81	0.85	1.00		1.00	1.00	1.00		0.64	1.00	0.74	
Lanes:	1.00	0.97	0.03		1.00	1.00	0.00		0.00	1.00	0.00		1.00	0.00	1.00	
Final Sat.:	1900	1612	42		1532	1613	0		0	1900	0		1209	0	1398	
Capacity Analysis Module:																
Vol/Sat:	0.00	0.53	0.53		0.25	0.33	0.00		0.00	0.00	0.00		0.11	0.00	0.22	
Crit Moves:		****			****								****			
Green/Cycle:	0.00	0.60	0.60		0.28	0.88	0.00		0.00	0.00	0.00		0.12	0.00	0.40	
Volume/Cap:	0.00	0.88	0.88		0.88	0.38	0.00		0.00	0.00	0.00		0.88	0.00	0.55	
Delay/Veh:	0.0	26.6	26.6		53.6	1.3	0.0		0.0	0.0	0.0		84.9	0.0	24.3	
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:	0.0	26.6	26.6		53.6	1.3	0.0		0.0	0.0	0.0		84.9	0.0	24.3	
DesignQueue:	0	22	1		16	4	0		0	0	0		7	0	11	

****

Cumulative PM Plus Project Sat Jan 17, 2004 14:24:22 Page 6-1

Patterson Sand and Gravel
Cumulative Plus "Maximum Practical Mining Rate" (No Haul Road)
"Highest" - PM Peak Hour

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

****
Intersection #2 SR 65 and SR 193 (Lincoln)
****

Approach:	North Bound				South Bound				East Bound				West Bound			
Movement:	L	-	T	- R	L	-	T	- R	L	-	T	- R	L	-	T	- R
HCM Ops Adjusted Lane Utilization Module:																
Lanes:	1	0	0	1 0	1	0	0	1 0	0	0	1!	0 0	0	1	0	0 1
Lane Group:	L		RT	RT	L		RT	RT	LTR		LTR	LTR	LT		LT	R
#LnsInGrps:	1		1	1	1		1	1	1		1	1	1		1	1
HCM Ops Input Saturation Adj Module:																
Lane Width:	12		12	12	12		12	12	12		12	12	12		12	12
CrosswalkWid			8				8				8				8	
% Hev Veh:			3				6				0				4	
Grade:			0%				0%				0%				0%	
Parking/Hr:			No				No				No				No	
Bus Stp/Hr:			0				0				0				0	
Area Type:	< < < < < < < < < < < < < < < < CBD > > > > > > > > > > > > > > > >															
Cnft Ped/Hr:			0				0				0				0	
ExclusiveRT:			Include				Include				Include				Include	
% RT Prtct:			0				0				0				0	
HCM Ops f(lt) Adj Case Module:																
f(lt) Case:	xxxx	xxxx	xxxx		1	xxxx	xxxx		xxxx	xxxx	xxxx		5	xxxx	xxxx	
HCM Ops Saturation Adj Module:																
Ln Wid Adj:	xxxx	1.00	1.00		1.00	1.00	xxxxx		xxxx	xxxx	xxxxx		1.00	xxxx	1.00	
Hev Veh Adj:	xxxx	0.97	0.97		0.94	0.94	xxxxx		xxxx	xxxx	xxxxx		0.96	xxxx	0.96	
Grade Adj:	xxxx	1.00	1.00		1.00	1.00	xxxxx		xxxx	xxxx	xxxxx		1.00	xxxx	1.00	
Parking Adj:	xxxx	1.00	1.00		xxxx	1.00	xxxxx		xxxx	xxxx	xxxxx		xxxx	xxxx	1.00	
Bus Stp Adj:	xxxx	1.00	1.00		xxxx	1.00	xxxxx		xxxx	xxxx	xxxxx		xxxx	xxxx	1.00	
Area Adj:	xxxx	0.90	0.90		0.90	0.90	xxxxx		xxxx	xxxx	xxxxx		0.90	xxxx	0.90	
RT Adj:	xxxx	1.00	1.00		xxxx	xxxx	xxxxx		xxxx	xxxx	xxxxx		xxxx	xxxx	0.85	
LT Adj:	xxxx	xxxx	xxxxx		0.95	xxxx	xxxxx		xxxx	xxxx	xxxxx		0.74	xxxx	xxxxx	
PedBike Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
HCM Sat Adj:	1.00	0.87	0.87		0.81	0.85	1.00		1.00	1.00	1.00		0.64	1.00	0.74	
Usr Sat Adj:	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 Sat Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
Fnl Sat Adj:	1.00	0.87	0.87		0.81	0.85	1.00		1.00	1.00	1.00		0.64	1.00	0.74	
Delay Adjustment Factor Module:																
Coordinated:	< < < < < < < < < < < < < < < < No > > > > > > > > > > > > > > > >															
Signal Type:	< < < < < < < < < < < < < Actuated > > > > > > > > > > > > > > >															
DelAdjFctr:	0.00	1.00	1.00		1.00	1.00	0.00		0.00	0.00	0.00		1.00	0.00	1.00	

****

Cumulative PM Plus Project Sat Jan 17, 2004 14:24:22 Page 6-2

Patterson Sand and Gravel
Cumulative Plus "Maximum Practical Mining Rate" (No Haul Road)
"Highest" - PM Peak Hour

Level Of Service Detailed Computation Report (Permitted Left Turn Sat Adj)
2000 HCM Operations Method
Base Volume Alternative

Intersection #2 SR 65 and SR 193 (Lincoln)

Approach:	North	South	East	West
Cycle Length, C:	xxxxxx	xxxxxx	xxxxxx	100
Actual Green Time Per Lane Group, G:	xxxxxx	xxxxxx	xxxxxx	8.26
Effective Green Time Per Lane Group, g:	xxxxxx	xxxxxx	xxxxxx	12.26
Opposing Effective Green Time, go:	xxxxxx	xxxxxx	xxxxxx	12.26
Number Of Opposing Lanes, No:	xxxxxx	xxxxxx	xxxxxx	1
Number Of Lanes In Lane Group, N:	xxxxxx	xxxxxx	xxxxxx	1
Adjusted Left-Turn Flow Rate, Vlt:	xxxxxx	xxxxxx	xxxxxx	131
Proportion of Left Turns in Lane Group, Plt:	xxxxxx	xxxxxx	xxxxxx	1.00
Proportion of Left Turns in Opp Flow, Plto:	xxxxxx	xxxxxx	xxxxxx	1.00
Left Turns Per Cycle, LTC:	xxxxxx	xxxxxx	xxxxxx	3.64
Adjusted Opposing Flow Rate, Vo:	xxxxxx	xxxxxx	xxxxxx	0
Opposing Flow Per Lane Per Cycle, Volc:	xxxxxx	xxxxxx	xxxxxx	0.00
Opposing Platoon Ratio, Rpo:	xxxxxx	xxxxxx	xxxxxx	1.00
Lost Time Per Phase, tl:	xxxxxx	xxxxxx	xxxxxx	0.00
Eff grn until arrival of left-turn car, gf:	xxxxxx	xxxxxx	xxxxxx	0.89
Opposing Queue Ratio, qro:	xxxxxx	xxxxxx	xxxxxx	0.88
Eff grn blocked by opposing queue, gq:	xxxxxx	xxxxxx	xxxxxx	0.00
Eff grn while left turns filter thru, gu:	xxxxxx	xxxxxx	xxxxxx	11.37
Max opposing cars arriving during gq-gf, n:	xxxxxx	xxxxxx	xxxxxx	0.00
Proportion of Opposing Thru & RT cars, ptho:	xxxxxx	xxxxxx	xxxxxx	0.00
Left-turn Saturation Factor, fs:	xxxxxx	xxxxxx	xxxxxx	xxxxxx
Proportion of Left Turns in Shared Lane, pl:	xxxxxx	xxxxxx	xxxxxx	1.00
Through-car Equivalents, el1:	xxxxxx	xxxxxx	xxxxxx	1.40
Single Lane Through-car Equivalents, el2:	xxxxxx	xxxxxx	xxxxxx	1.00
Minimum Left Turn Adjustment Factor, fmin:	xxxxxx	xxxxxx	xxxxxx	0.33
Single Lane Left Turn Adjustment Factor, fm:	xxxxxx	xxxxxx	xxxxxx	0.74
Left Turn Adjustment Factor, flt:	xxxxxx	xxxxxx	xxxxxx	0.74

Cumulative PM Plus Project Sat Jan 17, 2004 14:24:22 Page 7-1

Patterson Sand and Gravel
Cumulative Plus "Maximum Practical Mining Rate" (No Haul Road)
"Highest" - PM Peak Hour

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

Intersection #4 Riosa Rd and 11th St

Cycle (sec): 100 Critical Vol./Cap. (X): 0.205
Loss Time (sec): 0 (Y+R = 4 sec) Average Delay (sec/veh): 8.1
Optimal Cycle: 0 Level Of Service: A

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Stop Sign			Stop Sign			Stop Sign			Stop Sign		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Lanes:	0 0	1! 0	0	0 0	0 1	0	0 1	0 0	0	0 1	0 0	0
Volume Module:												
Base Vol:	3	4	1	0	1	3	10	163	0	1	116	0
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	3	4	1	0	1	3	10	163	0	1	116	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:	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 Volume:	3	4	1	0	1	3	10	163	0	1	116	0
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	3	4	1	0	1	3	10	163	0	1	116	0
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Final Vol.:	3	4	1	0	1	3	10	163	0	1	116	0
Saturation Flow Module:												
Adjustment:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Lanes:	0.37	0.50	0.13	0.00	0.25	0.75	0.06	0.94	0.00	0.01	0.99	0.00
Final Sat.:	282	376	94	0	207	622	49	796	0	7	827	0
Capacity Analysis Module:												
Vol/Sat:	0.01	0.01	0.01	xxxx	0.00	0.00	0.20	0.20	xxxx	0.14	0.14	xxxx
Crit Moves:		****			****		****				****	
Delay/Veh:	7.6	7.6	7.6	0.0	7.1	7.1	8.3	8.3	0.0	8.0	8.0	0.0
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:	7.6	7.6	7.6	0.0	7.1	7.1	8.3	8.3	0.0	8.0	8.0	0.0
LOS by Move:	A	A	A	*	A	A	A	A	*	A	A	*
ApproachDel:		7.6			7.1			8.3			8.0	
Delay Adj:		1.00			1.00			1.00			1.00	
ApprAdjDel:		7.6			7.1			8.3			8.0	
LOS by Appr:		A			A			A			A	

Cumulative PM Plus Project Sat Jan 17, 2004 14:24:22 Page 8-1

Patterson Sand and Gravel
Cumulative Plus "Maximum Practical Mining Rate" (No Haul Road)
"Highest" - PM Peak Hour

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

****
Intersection #4 Riosa Rd and 11th St
****

Approach:	North Bound	South Bound	East Bound	West Bound
Movement:	L - T - R	L - T - R	L - T - R	L - T - R
Time Period:	0.25 hour			
HevVeh:	0%	0%	11%	11%
Alpha Value:	0.01			
GroupType:	1	1	1	1
P[C1]:	0.6828	0.6790	0.8486	0.7850
P[C2]:	0.0031	0.0069	0.1369	0.2005
P[C3]:	0.2846	0.2830	0.0124	0.0115
P[C4]:	0.0294	0.0309	0.0020	0.0030
P[C5]:	0.0001	0.0003	0.0000	0.0000
Padj[C1]:	0.00661	0.00667	0.00168	0.00233
Padj[C2]:	0.00341	0.00339	-0.00120	-0.00183
Padj[C3]:	-0.00824	-0.00818	-0.00035	-0.00032
Padj[C4]:	-0.00176	-0.00185	-0.00012	-0.00018
Padj[C5]:	-0.00001	-0.00003	-0.00000	-0.00000
Lane:	L1	L1	L1	L1
LaneType:	LEFTTHRURITE	LEFTTHRURITE	LEFTTHRURITE	LEFTTHRURITE
HeadwayAdj:	0.000	-0.450	0.199	0.189
Volume:	8	4	173	117
Capacity:	752	829	845	835
DegOfUtil:	0.01	0.00	0.20	0.14
DepHeadway:	4.52	4.07	4.24	4.28
ServiceTime:	2.5	2.1	2.2	2.3
Delay:	7.6	7.1	8.3	8.0
Approach:	North Bound	South Bound	East Bound	West Bound
ApproachDel:	7.6	7.1	8.3	8.0
Delay Adj:	1.00	1.00	1.00	1.00
ApprAdjDel:	7.6	7.1	8.3	8.0
LOS by Appr:	A	A	A	A

OverallDel: 8.1
OverallLOS: A

Cumulative PM Plus Project Sat Jan 17, 2004 14:24:22 Page 9-1

Patterson Sand and Gravel
Cumulative Plus "Maximum Practical Mining Rate" (No Haul Road)
"Highest" - PM Peak Hour

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

****
Intersection #5 Riosa Rd and Karchner Rd
****
Average Delay (sec/veh): 4.3 Worst Case Level Of Service: A
****

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	- T	- R	L	- T	- R	L	- T	- R	L	- T	- R
Control:	Stop Sign			Stop Sign			Uncontrolled			Uncontrolled		
Rights:	Include			Include			Include			Include		
Lanes:	0 0	0 0	0	0 0	1! 0	0	0 1	0 0	0	0 0	0 1	0
Volume Module:												
Base Vol:	0	0	0	10	0	26	38	39	0	0	27	7
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	10	0	26	38	39	0	0	27	7
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	0	0	0	10	0	26	38	39	0	0	27	7
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Final Vol.:	0	0	0	10	0	26	38	39	0	0	27	7
Critical Gap Module:												
Critical Gp:	xxxxx	xxxx	xxxxx	6.7	xxxx	6.6	4.4	xxxx	xxxxx	xxxxx	xxxx	xxxxx
FollowUpTim:	xxxxx	xxxx	xxxxx	3.8	xxxx	3.6	2.4	xxxx	xxxxx	xxxxx	xxxx	xxxxx
Capacity Module:												
Cnflict Vol:	xxxx	xxxx	xxxxx	146	xxxx	31	34	xxxx	xxxxx	xxxx	xxxx	xxxxx
Potent Cap.:	xxxx	xxxx	xxxxx	775	xxxx	957	1436	xxxx	xxxxx	xxxx	xxxx	xxxxx
Move Cap.:	xxxx	xxxx	xxxxx	759	xxxx	957	1436	xxxx	xxxxx	xxxx	xxxx	xxxxx
Level Of Service Module:												
Stopped Del:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	7.6	xxxx	xxxxx	xxxxx	xxxx	xxxxx
LOS by Move:	*	*	*	*	*	*	A	*	*	*	*	*
Movement:	LT -	LTR -	RT	LT -	LTR -	RT	LT -	LTR -	RT	LT -	LTR -	RT
Shared Cap.:	xxxx	xxxx	xxxxx	xxxx	892	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx
Shrd StpDel:	xxxxx	xxxx	xxxxx	xxxxx	9.2	xxxxx	7.6	xxxx	xxxxx	xxxxx	xxxx	xxxxx
Shared LOS:	*	*	*	*	A	*	A	*	*	*	*	*
ApproachDel:	xxxxxx				9.2		xxxxxx			xxxxxx		
ApproachLOS:	*				A		*			*		

Cumulative PM Plus Project Sat Jan 17, 2004 14:24:22 Page 10-1

Patterson Sand and Gravel
Cumulative Plus "Maximum Practical Mining Rate" (No Haul Road)
"Highest" - PM Peak Hour

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

****
Intersection #5 Riosa Rd and Karchner Rd
****

Approach:	North Bound	South Bound	East Bound	West Bound
Movement:	L - T - R	L - T - R	L - T - R	L - T - R
HevVeh:	0%	35%	26%	0%
Grade:	0%	0%	0%	0%
Peds/Hour:	0	0	0	0
Pedestrian Walk Speed: 4.00 feet/sec				
LaneWidth:	12 feet	12 feet	12 feet	12 feet
Time Period: 0.25 hour				

D5. Existing Plus Project with Haul Road

Existing AM Plus Project Wed Jan 14, 2004 10:42:41 Page 1-1

Patterson Sand and Gravel
Existing Plus Project (With Haul Road)
"Average Day" - AM Peak Hour

Scenario Report

Scenario:	Existing AM Plus Project
Command:	Existing AM Plus Project
Volume:	Existing AM Plus Project
Geometry:	Existing AM Plus Project
Impact Fee:	Default Impact Fee
Trip Generation:	Default Trip Generation
Trip Distribution:	Default Trip Distribution
Paths:	Default Paths
Routes:	Default Routes
Configuration:	Default Configuration

Existing AM Plus Project Wed Jan 14, 2004 10:42:41 Page 2-1

Patterson Sand and Gravel
Existing Plus Project (With Haul Road)
"Average Day" - AM Peak Hour

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 65 and Riosa Road (Sheridan	B	0.9	0.000	B	0.9	0.000	+ 0.000 V/C
# 2 SR 65 and SR 193 (Lincoln)	C	21.2	0.717	C	21.2	0.717	+ 0.000 D/V
# 3 Old SR 65 and Haul Route	E	2.1	0.000	E	2.1	0.000	+ 0.000 V/C
# 4 Riosa Rd and 11th St	A	7.1	0.056	A	7.1	0.056	+ 0.000 V/C
# 5 Riosa Rd abd Karchner Rd	A	5.1	0.000	A	5.1	0.000	+ 0.000 V/C

Existing AM Plus Project Wed Jan 14, 2004 10:42:41 Page 3-1

Patterson Sand and Gravel
Existing Plus Project (With Haul Road)
"Average Day" - AM Peak Hour

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

****
Intersection #1 SR 65 and Riosa Road (Sheridan)
****
Average Delay (sec/veh): 0.9 Worst Case 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:	Uncontrolled			Uncontrolled			Stop Sign			Stop Sign		
Rights:	Include			Include			Include			Include		
Lanes:	0 0	1	0 1	1 0	1	0 0	0 0	0	0 0	0 0	1!	0 0
Volume Module:												
Base Vol:	0	468	4	16	732	0	0	0	0	12	0	55
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	468	4	16	732	0	0	0	0	12	0	55
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	0	468	4	16	732	0	0	0	0	12	0	55
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Final Vol.:	0	468	4	16	732	0	0	0	0	12	0	55
Critical Gap Module:												
Critical Gp:	xxxxx	xxxx	xxxxx	4.2	xxxx	xxxxx	xxxxx	xxxx	xxxxx	6.4	xxxx	6.2
FollowUpTim:	xxxxx	xxxx	xxxxx	2.3	xxxx	xxxxx	xxxxx	xxxx	xxxxx	3.5	xxxx	3.3
Capacity Module:												
Cnflict Vol:	xxxx	xxxx	xxxxx	472	xxxx	xxxxx	xxxx	xxxx	xxxxx	1232	xxxx	468
Potent Cap.:	xxxx	xxxx	xxxxx	1044	xxxx	xxxxx	xxxx	xxxx	xxxxx	197	xxxx	599
Move Cap.:	xxxx	xxxx	xxxxx	1044	xxxx	xxxxx	xxxx	xxxx	xxxxx	195	xxxx	599
Level Of Service Module:												
Stopped Del:	xxxxx	xxxx	xxxxx	8.5	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx
LOS by Move:	*	*	*	A	*	*	*	*	*	*	*	*
Movement:	LT -	LTR -	RT	LT -	LTR -	RT	LT -	LTR -	RT	LT -	LTR -	RT
Shared Cap.:	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	437	xxxxx
Shrd StpDel:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	14.7	xxxxx
Shared LOS:	*	*	*	*	*	*	*	*	*	*	B	*
ApproachDel:	xxxxxx			xxxxxx			xxxxxx			14.7		
ApproachLOS:	*			*			*			B		

Existing AM Plus Project Wed Jan 14, 2004 10:42:41 Page 4-1

Patterson Sand and Gravel
Existing Plus Project (With Haul Road)
"Average Day" - AM Peak Hour

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

****
Intersection #1 SR 65 and Riosa Road (Sheridan)
****

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
HevVeh:	15%			11%			0%			0%		
Grade:	0%			0%			0%			0%		
Peds/Hour:	0			0			0			0		
Pedestrian Walk Speed: 4.00 feet/sec												
LaneWidth:	12 feet			12 feet			12 feet			12 feet		
Time Period: 0.25 hour												
Upstream Signals:												
Link Index:	#2											
Dist(miles):	0.000											
Speed (mph):	0.00											
SignalIndex:	#2											
Cycle Time:	0 secs											
InitVolume:	0	0										
Saturation:	0	0										
ArrivalType:	0	0										
G/C:	0.00	0.00										
*** Computation 1: Time for Queue to Clear at Each Upstream Intersection												
P:	0.000	0.000										
gq1:	0.00	0.00										
gq2:	0.00	0.00										
gq:	0.00	0.00										
*** Computation 2: Time Intersection Blocked Because of Upstream Platoons												
alpha:	0.000											
beta:	0.000											
ta (secs):	0.000											
F:	0.000											
f:	0.000	0.000										
vcmax:	0	0										
vcmin:	0	0										
tp:	0.0	0.0										
p:	0.000											
*** Computation 3: Platoon Event Periods												
pdom/psubo:	0.000/0.000/Unconstrained											
*** Computation 4: Conflicting Flows During Each Unblocked Period												
InitCnflVol:	0	xxxxx	xxxxx	472	xxxxx	xxxxx	0	0	0	1232	0	468
UpstreamSat:	0	xxxxx	xxxxx	0	xxxxx	xxxxx	0	0	0	0	0	0
UpstreamAdj:	1.00	x.xxx	x.xxx	1.00	x.xxx	x.xxx	1.00	1.000	1.000	1.00	1.000	1.000
ConflictVol:	0	xxxxx	xxxxx	472	xxxxx	xxxxx	0	0	0	1232	0	468
*** Computation 5: Capactiy for Subject Movement During Unblocked Period												
InitPotCap:	0	xxxxx	xxxxx	1044	xxxxx	xxxxx	0	0	0	197	0	599
UpstreamAdj:	1.00	x.xxx	x.xxx	1.00	x.xxx	x.xxx	1.00	1.000	1.000	1.00	1.000	1.000
PotentCap:	0	xxxxx	xxxxx	1044	xxxxx	xxxxx	0	0	0	197	0	599

Existing AM Plus Project Wed Jan 14, 2004 10:42:41 Page 5-1

Patterson Sand and Gravel
Existing Plus Project (With Haul Road)
"Average Day" - AM Peak Hour

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

****
Intersection #2 SR 65 and SR 193 (Lincoln)
****
Cycle (sec): 100 Critical Vol./Cap. (X): 0.717
Loss Time (sec): 0 (Y+R = 4 sec) Average Delay (sec/veh): 21.2
Optimal Cycle: 66 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			Permitted			Permitted		
Rights:	Include			Include			Include			Ovl		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Lanes:	1 0	0 1	0	1 0	0 1	0	0 0	1! 0	0	0 1	0 0	1
Volume Module:												
Base Vol:	0	483	83	138	605	0	0	0	0	249	0	104
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	483	83	138	605	0	0	0	0	249	0	104
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	0	483	83	138	605	0	0	0	0	249	0	104
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	0	483	83	138	605	0	0	0	0	249	0	104
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Final Vol.:	0	483	83	138	605	0	0	0	0	249	0	104
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	1.00	0.75	0.75	0.74	0.78	1.00	1.00	1.00	1.00	0.59	1.00	0.69
Lanes:	1.00	0.85	0.15	1.00	1.00	0.00	0.00	1.00	0.00	1.00	0.00	1.00
Final Sat.:	1900	1220	210	1413	1488	0	0	1900	0	1112	0	1310
Capacity Analysis Module:												
Vol/Sat:	0.00	0.40	0.40	0.10	0.41	0.00	0.00	0.00	0.00	0.22	0.00	0.08
Crit Moves:		****		****						****		
Green/Cycle:	0.00	0.55	0.55	0.14	0.69	0.00	0.00	0.00	0.00	0.31	0.00	0.45
Volume/Cap:	0.00	0.72	0.72	0.72	0.59	0.00	0.00	0.00	0.00	0.72	0.00	0.18
Delay/Veh:	0.0	19.8	19.8	53.6	9.1	0.0	0.0	0.0	0.0	37.5	0.0	16.7
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:	0.0	19.8	19.8	53.6	9.1	0.0	0.0	0.0	0.0	37.5	0.0	16.7
DesignQueue:	0	13	2	7	11	0	0	0	0	10	0	3

****

Existing AM Plus Project Wed Jan 14, 2004 10:42:41 Page 6-1

Patterson Sand and Gravel
Existing Plus Project (With Haul Road)
"Average Day" - AM Peak Hour

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

****
Intersection #2 SR 65 and SR 193 (Lincoln)
****

Approach:	North Bound				South Bound				East Bound				West Bound			
Movement:	L -	T -	R		L -	T -	R		L -	T -	R		L -	T -	R	
HCM Ops Adjusted Lane Utilization Module:																
Lanes:	1 0	0 1	0		1 0	0 1	0		0 0	1! 0	0		0 1	0 0	1	
Lane Group:	L	RT	RT		L	RT	RT		LTR	LTR	LTR		LT	LT	R	
#LnsInGrps:	1	1	1		1	1	1		1	1	1		1	1	1	
HCM Ops Input Saturation Adj Module:																
Lane Width:	12	12	12		12	12	12		12	12	12		12	12	12	
CrosswalkWid		8				8				8				8		
% Hev Veh:		17				15				0				11		
Grade:		0%				0%				0%				0%		
Parking/Hr:		No				No				No				No		
Bus Stp/Hr:		0				0				0				0		
Area Type:	< < < < < < < < < < < < < < < < CBD > > > > > > > > > > > > > > > >															
Cnft Ped/Hr:		0				0				0				0		
ExclusiveRT:		Include				Include				Include				Include		
% RT Prtct:		0				0				0				0		
HCM Ops f(lt) Adj Case Module:																
f(lt) Case:	xxxx	xxxx	xxxx		1	xxxx	xxxx		xxxx	xxxx	xxxx		5	xxxx	xxxx	
HCM Ops Saturation Adj Module:																
Ln Wid Adj:	xxxx	1.00	1.00		1.00	1.00	xxxxx		xxxx	xxxx	xxxxx		1.00	xxxx	1.00	
Hev Veh Adj:	xxxx	0.86	0.86		0.87	0.87	xxxxx		xxxx	xxxx	xxxxx		0.90	xxxx	0.90	
Grade Adj:	xxxx	1.00	1.00		1.00	1.00	xxxxx		xxxx	xxxx	xxxxx		1.00	xxxx	1.00	
Parking Adj:	xxxx	1.00	1.00		xxxx	1.00	xxxxx		xxxx	xxxx	xxxxx		xxxx	xxxx	1.00	
Bus Stp Adj:	xxxx	1.00	1.00		xxxx	1.00	xxxxx		xxxx	xxxx	xxxxx		xxxx	xxxx	1.00	
Area Adj:	xxxx	0.90	0.90		0.90	0.90	xxxxx		xxxx	xxxx	xxxxx		0.90	xxxx	0.90	
RT Adj:	xxxx	0.98	0.98		xxxx	xxxx	xxxxx		xxxx	xxxx	xxxxx		xxxx	xxxx	0.85	
LT Adj:	xxxx	xxxx	xxxxx		0.95	xxxx	xxxxx		xxxx	xxxx	xxxxx		0.72	xxxx	xxxxx	
PedBike Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
HCM Sat Adj:	1.00	0.75	0.75		0.74	0.78	1.00		1.00	1.00	1.00		0.59	1.00	0.69	
Usr Sat Adj:	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 Sat Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
Fnl Sat Adj:	1.00	0.75	0.75		0.74	0.78	1.00		1.00	1.00	1.00		0.59	1.00	0.69	
Delay Adjustment Factor Module:																
Coordinated:	< < < < < < < < < < < < < < No > > > > > > > > > > > > > > > >															
Signal Type:	< < < < < < < < < < < < < Actuated > > > > > > > > > > > > >															
DelAdjFctr:	0.00	1.00	1.00		1.00	1.00	0.00		0.00	0.00	0.00		1.00	0.00	1.00	

****

Existing AM Plus Project Wed Jan 14, 2004 10:42:41 Page 6-2

Patterson Sand and Gravel
Existing Plus Project (With Haul Road)
"Average Day" - AM Peak Hour

Level Of Service Detailed Computation Report (Permitted Left Turn Sat Adj)
2000 HCM Operations Method
Base Volume Alternative

****

Intersection #2 SR 65 and SR 193 (Lincoln)

****

Approach:	North	South	East	West
Cycle Length, C:	xxxxxx	xxxxxx	xxxxxx	100
Actual Green Time Per Lane Group, G:	xxxxxx	xxxxxx	xxxxxx	27.22
Effective Green Time Per Lane Group, g:	xxxxxx	xxxxxx	xxxxxx	31.22
Opposing Effective Green Time, go:	xxxxxx	xxxxxx	xxxxxx	31.22
Number Of Opposing Lanes, No:	xxxxxx	xxxxxx	xxxxxx	1
Number Of Lanes In Lane Group, N:	xxxxxx	xxxxxx	xxxxxx	1
Adjusted Left-Turn Flow Rate, Vlt:	xxxxxx	xxxxxx	xxxxxx	249
Proportion of Left Turns in Lane Group, Plt:	xxxxxx	xxxxxx	xxxxxx	1.00
Proportion of Left Turns in Opp Flow, Plto:	xxxxxx	xxxxxx	xxxxxx	1.00
Left Turns Per Cycle, LTC:	xxxxxx	xxxxxx	xxxxxx	6.92
Adjusted Opposing Flow Rate, Vo:	xxxxxx	xxxxxx	xxxxxx	0
Opposing Flow Per Lane Per Cycle, Volc:	xxxxxx	xxxxxx	xxxxxx	0.00
Opposing Platoon Ratio, Rpo:	xxxxxx	xxxxxx	xxxxxx	1.00
Lost Time Per Phase, tl:	xxxxxx	xxxxxx	xxxxxx	0.00
Eff grn until arrival of left-turn car, gf:	xxxxxx	xxxxxx	xxxxxx	0.80
Opposing Queue Ratio, qro:	xxxxxx	xxxxxx	xxxxxx	0.69
Eff grn blocked by opposing queue, gq:	xxxxxx	xxxxxx	xxxxxx	0.00
Eff grn while left turns filter thru, gu:	xxxxxx	xxxxxx	xxxxxx	30.42
Max opposing cars arriving during gq-gf, n:	xxxxxx	xxxxxx	xxxxxx	0.00
Proportion of Opposing Thru & RT cars, ptho:	xxxxxx	xxxxxx	xxxxxx	0.00
Left-turn Saturation Factor, fs:	xxxxxx	xxxxxx	xxxxxx	xxxxxx
Proportion of Left Turns in Shared Lane, pl:	xxxxxx	xxxxxx	xxxxxx	1.00
Through-car Equivalents, el1:	xxxxxx	xxxxxx	xxxxxx	1.40
Single Lane Through-car Equivalents, el2:	xxxxxx	xxxxxx	xxxxxx	1.00
Minimum Left Turn Adjustment Factor, fmin:	xxxxxx	xxxxxx	xxxxxx	0.13
Single Lane Left Turn Adjustment Factor, fm:	xxxxxx	xxxxxx	xxxxxx	0.72
Left Turn Adjustment Factor, flt:	xxxxxx	xxxxxx	xxxxxx	0.72

****

Existing AM Plus Project Wed Jan 14, 2004 10:42:41 Page 7-1

Patterson Sand and Gravel
Existing Plus Project (With Haul Road)
"Average Day" - AM Peak Hour

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

****

Intersection #3 Old SR 65 and Haul Route

****

Average Delay (sec/veh): 2.1 Worst Case 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:	Uncontrolled			Uncontrolled			Stop Sign			Stop Sign		
Rights:	Include			Include			Include			Include		
Lanes:	0 0 1	0	1	1 0 1	0	0	0 0 0	0	0	0 0 1!	0	0
Volume Module:												
Base Vol:	0	449	24	7	737	0	0	0	0	56	0	19
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	449	24	7	737	0	0	0	0	56	0	19
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	0	449	24	7	737	0	0	0	0	56	0	19
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Final Vol.:	0	449	24	7	737	0	0	0	0	56	0	19
Critical Gap Module:												
Critical Gp:	xxxxx	xxxx	xxxxx	4.2	xxxx	xxxxx	xxxxx	xxxx	xxxxx	7.0	xxxx	6.8
FollowUpTim:	xxxxx	xxxx	xxxxx	2.3	xxxx	xxxxx	xxxxx	xxxx	xxxxx	4.0	xxxx	3.8
Capacity Module:												
Cnflict Vol:	xxxx	xxxx	xxxxx	473	xxxx	xxxxx	xxxx	xxxx	xxxxx	1200	xxxx	449
Potent Cap.:	xxxx	xxxx	xxxxx	1043	xxxx	xxxxx	xxxx	xxxx	xxxxx	158	xxxx	507
Move Cap.:	xxxx	xxxx	xxxxx	1043	xxxx	xxxxx	xxxx	xxxx	xxxxx	157	xxxx	507
Level Of Service Module:												
Stopped Del:	xxxxx	xxxx	xxxxx	8.5	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx
LOS by Move:	*	*	*	A	*	*	*	*	*	*	*	*
Movement:	LT -	LTR -	RT	LT -	LTR -	RT	LT -	LTR -	RT	LT -	LTR -	RT
Shared Cap.:	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	190	xxxxx
Shrd StpDel:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	35.7	xxxxx
Shared LOS:	*	*	*	*	*	*	*	*	*	*	E	*
ApproachDel:	xxxxxx			xxxxxx			xxxxxx			35.7		
ApproachLOS:	*			*			*			E		

Existing AM Plus Project Wed Jan 14, 2004 10:42:41 Page 8-1

Patterson Sand and Gravel
Existing Plus Project (With Haul Road)
"Average Day" - AM Peak Hour

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

```
*******************************************************************************
Intersection #3 Old SR 65 and Haul Route
*******************************************************************************
Approach:       North Bound      South Bound      East Bound       West Bound
Movement:     L  -  T  -  R    L  -  T  -  R    L  -  T  -  R    L  -  T  -  R
------------|----------------|----------------|----------------|----------------|
HevVeh:             17%              11%              0%               59%
Grade:               0%               0%              0%                0%
Peds/Hour:           0                0               0                 0
Pedestrian Walk Speed: 4.00 feet/sec
LaneWidth:        12 feet          12 feet         12 feet          12 feet
Time Period: 0.25 hour
------------|----------------|----------------|----------------|----------------|
Upstream Signals:
Link Index:        #2
Dist(miles):       0.000
Speed (mph):        0.00
SignalIndex:       #2
Cycle Time:            0 secs
InitVolume:      0     0
Saturation:      0     0
ArrivalType:     0     0
G/C:          0.00  0.00
*** Computation 1: Time for Queue to Clear at Each Upstream Intersection
P:           0.000 0.000
gq1:          0.00  0.00
gq2:          0.00  0.00
gq:           0.00  0.00
*** Computation 2: Time Intersection Blocked Because of Upstream Platoons
alpha:             0.000
beta:              0.000
ta (secs):         0.000
F:                 0.000
f:           0.000 0.000
vcmax:           0     0
vcmin:           0     0
tp:            0.0   0.0
p:                 0.000
*** Computation 3: Platoon Event Periods
pdom/psubo:       0.000/0.000/Unconstrained
*** Computation 4: Conflicting Flows During Each Unblocked Period
InitCnflVol:   0 xxxxx xxxxx  473 xxxxx xxxxx    0     0     0 1200     0   449
UpstreamSat:   0 xxxxx xxxxx    0 xxxxx xxxxx    0     0     0    0     0     0
UpstreamAdj:1.00 x.xxx x.xxx 1.00 x.xxx x.xxx 1.00 1.000 1.000 1.00 1.000 1.000
ConflictVol:   0 xxxxx xxxxx  473 xxxxx xxxxx    0     0     0 1200     0   449
*** Computation 5: Capactiy for Subject Movement During Unblocked Period
InitPotCap:    0 xxxxx xxxxx 1043 xxxxx xxxxx    0     0     0  158     0   507
UpstreamAdj:1.00 x.xxx x.xxx 1.00 x.xxx x.xxx 1.00 1.000 1.000 1.00 1.000 1.000
PotentCap:     0 xxxxx xxxxx 1043 xxxxx xxxxx    0     0     0  158     0   507
```


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Patterson Sand and Gravel
Existing Plus Project (With Haul Road)
"Average Day" - AM Peak Hour

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

```
*******************************************************************************
Intersection #4 Riosa Rd and 11th St
*******************************************************************************
Cycle (sec):        100                 Critical Vol./Cap. (X):        0.056
Loss Time (sec):      0 (Y+R =  4 sec) Average Delay (sec/veh):         7.1
Optimal Cycle:        0                 Level Of Service:                  A
*******************************************************************************
Approach:       North Bound      South Bound      East Bound       West Bound
Movement:     L  -  T  -  R    L  -  T  -  R    L  -  T  -  R    L  -  T  -  R
------------|----------------||----------------||----------------||----------------|
Control:        Stop Sign        Stop Sign        Stop Sign        Stop Sign
Rights:           Include          Include          Include          Include
Min. Green:     0    0    0     0    0    0     0    0    0     0    0    0
Lanes:        0    0   1!    0    0    0    0   1!    0    0     0    1    0    0     0    1    0    0
------------|----------------||----------------||----------------||----------------|
Volume Module:
Base Vol:       3    2    2     6    4   11     6   24    0     1   49    0
Growth Adj:  1.00 1.00 1.00  1.00 1.00 1.00  1.00 1.00 1.00  1.00 1.00 1.00
Initial Bse:    3    2    2     6    4   11     6   24    0     1   49    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:     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 Volume:     3    2    2     6    4   11     6   24    0     1   49    0
Reduct Vol:     0    0    0     0    0    0     0    0    0     0    0    0
Reduced Vol:    3    2    2     6    4   11     6   24    0     1   49    0
PCE Adj:     1.00 1.00 1.00  1.00 1.00 1.00  1.00 1.00 1.00  1.00 1.00 1.00
MLF Adj:     1.00 1.00 1.00  1.00 1.00 1.00  1.00 1.00 1.00  1.00 1.00 1.00
Final Vol.:     3    2    2     6    4   11     6   24    0     1   49    0
------------|----------------||----------------||----------------||----------------|
Saturation Flow Module:
Adjustment:  1.00 1.00 1.00  1.00 1.00 1.00  1.00 1.00 1.00  1.00 1.00 1.00
Lanes:       0.43 0.28 0.29  0.29 0.19 0.52  0.20 0.80 0.00  0.02 0.98 0.00
Final Sat.:   379  252  252   265  176  485   177  708    0    18  878    0
------------|----------------||----------------||----------------||----------------|
Capacity Analysis Module:
Vol/Sat:     0.01 0.01 0.01  0.02 0.02 0.02  0.03 0.03 xxxx  0.06 0.06 xxxx
Crit Moves:  ****            ****            ****            ****
Delay/Veh:    7.0  7.0  7.0   6.9  6.9  6.9   7.2  7.2  0.0   7.2  7.2  0.0
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:   7.0  7.0  7.0   6.9  6.9  6.9   7.2  7.2  0.0   7.2  7.2  0.0
LOS by Move:    A    A    A     A    A    A     A    A    *     A    A    *
ApproachDel:        7.0            6.9            7.2            7.2
Delay Adj:         1.00           1.00           1.00           1.00
ApprAdjDel:         7.0            6.9            7.2            7.2
LOS by Appr:          A              A              A              A
*******************************************************************************
```

Patterson Sand and Gravel
Existing Plus Project (With Haul Road)
"Average Day" - AM Peak Hour

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

****
Intersection #4 Riosa Rd and 11th St
****

Approach:	North Bound	South Bound	East Bound	West Bound
Movement:	L - T - R	L - T - R	L - T - R	L - T - R
Time Period:	0.25 hour			
HevVeh:	0%	0%	0%	0%
Alpha Value:	0.01			
GroupType:	1	1	1	1
P[C1]:	0.8925	0.9058	0.9165	0.9375
P[C2]:	0.0203	0.0071	0.0537	0.0327
P[C3]:	0.0834	0.0846	0.0280	0.0287
P[C4]:	0.0037	0.0025	0.0018	0.0012
P[C5]:	0.0000	0.0000	0.0000	0.0000
Padj[C1]:	0.00198	0.00184	0.00115	0.00093
Padj[C2]:	0.00071	0.00083	-0.00022	-0.00002
Padj[C3]:	-0.00246	-0.00251	-0.00082	-0.00085
Padj[C4]:	-0.00022	-0.00015	-0.00011	-0.00007
Padj[C5]:	-0.00000	-0.00000	-0.00000	-0.00000
Lane:	L1	L1	L1	L1
LaneType:	LEFTTHRURITE	LEFTTHRURITE	LEFTTHRURITE	LEFTTHRURITE
HeadwayAdj:	-0.086	-0.257	0.040	0.004
Volume:	7	21	30	50
Capacity:	883	926	884	896
DegOfUtil:	0.01	0.02	0.03	0.06
DepHeadway:	4.00	3.81	4.04	3.99
ServiceTime:	2.0	1.8	2.0	2.0
Delay:	7.0	6.9	7.2	7.2
Approach:	North Bound	South Bound	East Bound	West Bound
ApproachDel:	7.0	6.9	7.2	7.2
Delay Adj:	1.00	1.00	1.00	1.00
ApprAdjDel:	7.0	6.9	7.2	7.2
LOS by Appr:	A	A	A	A
OverallDel:		7.1		
OverallLOS:		A		

Patterson Sand and Gravel
Existing Plus Project (With Haul Road)
"Average Day" - AM Peak Hour

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

****
Intersection #5 Riosa Rd abd Karchner Rd
****
Average Delay (sec/veh): 5.1 Worst Case Level Of Service: A
****

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	- T	- R	L	- T	- R	L	- T	- R	L	- T	- R
Control:	Stop Sign			Stop Sign			Uncontrolled			Uncontrolled		
Rights:	Include			Include			Include			Include		
Lanes:	0 0	0 0	0	0 0	1! 0	0	0 1	0 0	0	0 0	0 1	0
Volume Module:												
Base Vol:	0	0	0	15	0	43	24	16	0	0	28	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:	0	0	0	15	0	43	24	16	0	0	28	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:	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 Volume:	0	0	0	15	0	43	24	16	0	0	28	1
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Final Vol.:	0	0	0	15	0	43	24	16	0	0	28	1
Critical Gap Module:												
Critical Gp:	xxxxx	xxxx	xxxxx	7.1	xxxx	6.9	4.6	xxxx	xxxxx	xxxxx	xxxx	xxxxx
FollowUpTim:	xxxxx	xxxx	xxxxx	4.1	xxxx	3.9	2.7	xxxx	xxxxx	xxxxx	xxxx	xxxxx
Capacity Module:												
Cnflict Vol:	xxxx	xxxx	xxxxx	93	xxxx	29	29	xxxx	xxxxx	xxxx	xxxx	xxxxx
Potent Cap.:	xxxx	xxxx	xxxxx	764	xxxx	879	1323	xxxx	xxxxx	xxxx	xxxx	xxxxx
Move Cap.:	xxxx	xxxx	xxxxx	753	xxxx	879	1323	xxxx	xxxxx	xxxx	xxxx	xxxxx
Level Of Service Module:												
Stopped Del:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	7.8	xxxx	xxxxx	xxxxx	xxxx	xxxxx
LOS by Move:	*	*	*	*	*	*	A	*	*	*	*	*
Movement:	LT -	LTR -	RT	LT -	LTR -	RT	LT -	LTR -	RT	LT -	LTR -	RT
Shared Cap.:	xxxx	xxxx	xxxxx	xxxx	842	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx
Shrd StpDel:	xxxxx	xxxx	xxxxx	xxxxx	9.6	xxxxx	7.8	xxxx	xxxxx	xxxxx	xxxx	xxxxx
Shared LOS:	*	*	*	*	A	*	A	*	*	*	*	*
ApproachDel:	xxxxxx				9.6		xxxxxx			xxxxxx		
ApproachLOS:	*				A		*			*		

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Patterson Sand and Gravel
Existing Plus Project (With Haul Road)
"Average Day" - AM Peak Hour

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

****
Intersection #5 Riosa Rd abd Karchner Rd
****

Approach:	North Bound	South Bound	East Bound	West Bound
Movement:	L - T - R	L - T - R	L - T - R	L - T - R
HevVeh:	0%	71%	50%	10%
Grade:	0%	0%	0%	0%
Peds/Hour:	0	0	0	0
LaneWidth:	12 feet	12 feet	12 feet	12 feet

Pedestrian Walk Speed: 4.00 feet/sec
Time Period: 0.25 hour

Existing AM Plus Project Wed Jan 14, 2004 11:15:50 Page 1-1

Patterson Sand and Gravel
Existing Plus Project (With Haul Road)
"30th Highest" - AM Peak Hour

Scenario Report

Scenario:	Existing AM Plus Project
Command:	Existing AM Plus Project
Volume:	Existing AM Plus Project
Geometry:	Existing AM Plus Project
Impact Fee:	Default Impact Fee
Trip Generation:	Default Trip Generation
Trip Distribution:	Default Trip Distribution
Paths:	Default Paths
Routes:	Default Routes
Configuration:	Default Configuration

Existing AM Plus Project Wed Jan 14, 2004 11:15:51 Page 2-1

Patterson Sand and Gravel
Existing Plus Project (With Haul Road)
"30th Highest" - AM Peak Hour

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 65 and Riosa Road (Sheridan	B	0.9	0.000	B	0.9	0.000	+ 0.000 V/C
# 2 SR 65 and SR 193 (Lincoln)	C	21.7	0.731	C	21.7	0.731	+ 0.000 D/V
# 3 Old SR 65 and Haul Route	E	3.5	0.000	E	3.5	0.000	+ 0.000 V/C
# 4 Riosa Rd and 11th St	A	7.1	0.056	A	7.1	0.056	+ 0.000 V/C
# 5 Riosa Rd and Karchner Rd	A	5.8	0.000	A	5.8	0.000	+ 0.000 V/C

Patterson Sand and Gravel
Existing Plus Project (With Haul Road)
"30th Highest" - AM Peak Hour

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

```
*******************************************************************************
Intersection #1 SR 65 and Riosa Road (Sheridan)
*******************************************************************************
Average Delay (sec/veh):      0.9          Worst Case 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:      Uncontrolled     Uncontrolled      Stop Sign        Stop Sign
Rights:          Include          Include          Include          Include
Lanes:       0  0  1  0  1    1  0  1  0  0    0  0  0  0  0    0  0  1! 0  0
------------|---------------||---------------||---------------||---------------|
Volume Module:
Base Vol:       0  472    4   16  733    0    0    0    0   12    0   55
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  472    4   16  733    0    0    0    0   12    0   55
User Adj:    1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
PHF Adj:     1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
PHF Volume:     0  472    4   16  733    0    0    0    0   12    0   55
Reduct Vol:     0    0    0    0    0    0    0    0    0    0    0    0
Final Vol.:     0  472    4   16  733    0    0    0    0   12    0   55
------------|---------------||---------------||---------------||---------------|
Critical Gap Module:
Critical Gp:xxxxx xxxx xxxxx  4.2 xxxx xxxxx xxxxx xxxx xxxxx  6.4 xxxx  6.2
FollowUpTim:xxxxx xxxx xxxxx  2.3 xxxx xxxxx xxxxx xxxx xxxxx  3.5 xxxx  3.3
------------|---------------||---------------||---------------||---------------|
Capacity Module:
Cnflict Vol: xxxx xxxx xxxxx  476 xxxx xxxxx  xxxx xxxx xxxxx 1237 xxxx  472
Potent Cap.: xxxx xxxx xxxxx 1041 xxxx xxxxx  xxxx xxxx xxxxx  196 xxxx  596
Move Cap.:   xxxx xxxx xxxxx 1041 xxxx xxxxx  xxxx xxxx xxxxx  194 xxxx  596
------------|---------------||---------------||---------------||---------------|
Level Of Service Module:
Stopped Del:xxxxx xxxx xxxxx  8.5 xxxx xxxxx xxxxx xxxx xxxxx xxxxx xxxx xxxxx
LOS by Move:   *    *    *    A    *    *    *    *    *    *    *    *
Movement:     LT - LTR - RT   LT - LTR - RT   LT - LTR - RT   LT - LTR - RT
Shared Cap.: xxxx xxxx xxxxx xxxx xxxx xxxxx xxxx xxxx xxxxx xxxx  435 xxxxx
Shrd StpDel:xxxxx xxxx xxxxx xxxxx xxxx xxxxx xxxxx xxxx xxxxx xxxxx 14.8 xxxxx
Shared LOS:    *    *    *    *    *    *    *    *    *    *    B    *
ApproachDel:    xxxxxx          xxxxxx          xxxxxx          14.8
ApproachLOS:       *               *               *               B
```


Patterson Sand and Gravel
Existing Plus Project (With Haul Road)
"30th Highest" - AM Peak Hour

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

```
*******************************************************************************
Intersection #1 SR 65 and Riosa Road (Sheridan)
*******************************************************************************
Approach:       North Bound      South Bound       East Bound       West Bound
Movement:     L  -  T  -  R    L  -  T  -  R    L  -  T  -  R    L  -  T  -  R
------------|---------------||---------------||---------------||---------------|
HevVeh:           16%              11%               0%               0%
Grade:             0%               0%               0%               0%
Peds/Hour:         0                0                0                0
Pedestrian Walk Speed: 4.00 feet/sec
LaneWidth:      12 feet          12 feet          12 feet          12 feet
Time Period: 0.25 hour
------------|---------------||---------------||---------------||---------------|
Upstream Signals:
Link Index:       #2
Dist(miles):      0.000
Speed (mph):       0.00
SignalIndex:      #2
Cycle Time:          0 secs
InitVolume:     0     0
Saturation:     0     0
ArrivalType:    0     0
G/C:         0.00  0.00
*** Computation 1: Time for Queue to Clear at Each Upstream Intersection
P:          0.000 0.000
gq1:         0.00  0.00
gq2:         0.00  0.00
gq:          0.00  0.00
*** Computation 2: Time Intersection Blocked Because of Upstream Platoons
alpha:            0.000
beta:             0.000
ta (secs):        0.000
F:                0.000
f:          0.000 0.000
vcmax:          0     0
vcmin:          0     0
tp:           0.0   0.0
p:            0.000
*** Computation 3: Platoon Event Periods
pdom/psubo:      0.000/0.000/Unconstrained
*** Computation 4: Conflicting Flows During Each Unblocked Period
InitCnflVol:   0 xxxxx xxxxx  476 xxxxx xxxxx    0     0     0 1237     0   472
UpstreamSat:   0 xxxxx xxxxx    0 xxxxx xxxxx    0     0     0    0     0     0
UpstreamAdj:1.00 x.xxx x.xxx 1.00 x.xxx x.xxx 1.00 1.000 1.000 1.00 1.000 1.000
ConflictVol:   0 xxxxx xxxxx  476 xxxxx xxxxx    0     0     0 1237     0   472
*** Computation 5: Capactiy for Subject Movement During Unblocked Period
InitPotCap:    0 xxxxx xxxxx 1041 xxxxx xxxxx    0     0     0  196     0   596
UpstreamAdj:1.00 x.xxx x.xxx 1.00 x.xxx x.xxx 1.00 1.000 1.000 1.00 1.000 1.000
PotentCap:     0 xxxxx xxxxx 1041 xxxxx xxxxx    0     0     0  196     0   596
```

Existing AM Plus Project Wed Jan 14, 2004 11:15:51 Page 5-1

Patterson Sand and Gravel
Existing Plus Project (With Haul Road)
"30th Highest" - AM Peak Hour

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

Intersection #2 SR 65 and SR 193 (Lincoln)

Cycle (sec): 100 Critical Vol./Cap. (X): 0.731
Loss Time (sec): 0 (Y+R = 4 sec) Average Delay (sec/veh): 21.7
Optimal Cycle: 69 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				Permitted				Permitted			
Rights:	Include				Include				Include				Ovl			
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Lanes:	1	0	0	1 0	1	0	0	1 0	0	0	1!	0 0	0	1	0	0 1
Volume Module:																
Base Vol:	0	490	83		141	620	0		0	0	0		249	0	104	
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	490	83		141	620	0		0	0	0		249	0	104	
User Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
PHF Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
PHF Volume:	0	490	83		141	620	0		0	0	0		249	0	104	
Reduct Vol:	0	0	0		0	0	0		0	0	0		0	0	0	
Reduced Vol:	0	490	83		141	620	0		0	0	0		249	0	104	
PCE Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
MLF Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
Final Vol.:	0	490	83		141	620	0		0	0	0		249	0	104	
Saturation Flow Module:																
Sat/Lane:	1900	1900	1900		1900	1900	1900		1900	1900	1900		1900	1900	1900	
Adjustment:	1.00	0.75	0.75		0.72	0.76	1.00		1.00	1.00	1.00		0.59	1.00	0.69	
Lanes:	1.00	0.86	0.14		1.00	1.00	0.00		0.00	1.00	0.00		1.00	0.00	1.00	
Final Sat.:	1900	1211	205		1376	1448	0		0	1900	0		1112	0	1310	
Capacity Analysis Module:																
Vol/Sat:	0.00	0.40	0.40		0.10	0.43	0.00		0.00	0.00	0.00		0.22	0.00	0.08	
Crit Moves:		****			****								****			
Green/Cycle:	0.00	0.55	0.55		0.14	0.69	0.00		0.00	0.00	0.00		0.31	0.00	0.45	
Volume/Cap:	0.00	0.73	0.73		0.73	0.62	0.00		0.00	0.00	0.00		0.73	0.00	0.18	
Delay/Veh:	0.0	20.3	20.3		54.5	9.4	0.0		0.0	0.0	0.0		38.9	0.0	16.8	
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	20.3	20.3		54.5	9.4	0.0		0.0	0.0	0.0		38.9	0.0	16.8	
DesignQueue:	0	13	2		7	12	0		0	0	0		10	0	3	

Existing AM Plus Project Wed Jan 14, 2004 11:15:51 Page 6-1

Patterson Sand and Gravel
Existing Plus Project (With Haul Road)
"30th Highest" - AM Peak Hour

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

Intersection #2 SR 65 and SR 193 (Lincoln)

Approach:	North Bound				South Bound				East Bound				West Bound			
Movement:	L	-	T	- R	L	-	T	- R	L	-	T	- R	L	-	T	- R
HCM Ops Adjusted Lane Utilization Module:																
Lanes:	1	0	0	1 0	1	0	0	1 0	0	0	1!	0 0	0	1	0	0 1
Lane Group:	L		RT		RT	L		RT	RT	LTR	LTR	LTR	LT		LT	R
#LnsInGrps:	1		1		1	1		1	1	1	1	1	1		1	1
HCM Ops Input Saturation Adj Module:																
Lane Width:	12		12		12	12		12	12	12	12	12	12		12	12
CrosswalkWid			8					8			8				8	
% Hev Veh:			18					18			0				11	
Grade:			0%					0%			0%				0%	
Parking/Hr:			No					No			No				No	
Bus Stp/Hr:			0					0			0				0	
Area Type:	< < < < < < < < < < < < < < < CBD > > > > > > > > > > > > > > >															
Cnft Ped/Hr:			0					0			0				0	
ExclusiveRT:			Include					Include			Include				Include	
% RT Prtct:			0					0			0				0	
HCM Ops f(lt) Adj Case Module:																
f(lt) Case:	xxxx	xxxx	xxxx		1	xxxx	xxxx		xxxx	xxxx	xxxx		5	xxxx	xxxx	
HCM Ops Saturation Adj Module:																
Ln Wid Adj:	xxxx	1.00	1.00		1.00	1.00	xxxxx		xxxx	xxxx	xxxxx		1.00	xxxx	1.00	
Hev Veh Adj:	xxxx	0.85	0.85		0.85	0.85	xxxxx		xxxx	xxxx	xxxxx		0.90	xxxx	0.90	
Grade Adj:	xxxx	1.00	1.00		1.00	1.00	xxxxx		xxxx	xxxx	xxxxx		1.00	xxxx	1.00	
Parking Adj:	xxxx	1.00	1.00		xxxx	1.00	xxxxx		xxxx	xxxx	xxxxx		xxxx	xxxx	1.00	
Bus Stp Adj:	xxxx	1.00	1.00		xxxx	1.00	xxxxx		xxxx	xxxx	xxxxx		xxxx	xxxx	1.00	
Area Adj:	xxxx	0.90	0.90		0.90	0.90	xxxxx		xxxx	xxxx	xxxxx		0.90	xxxx	0.90	
RT Adj:	xxxx	0.98	0.98		xxxx	xxxx	xxxxx		xxxx	xxxx	xxxxx		xxxx	xxxx	0.85	
LT Adj:	xxxx	xxxx	xxxxx		0.95	xxxx	xxxxx		xxxx	xxxx	xxxxx		0.72	xxxx	xxxxx	
PedBike Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
HCM Sat Adj:	1.00	0.75	0.75		0.72	0.76	1.00		1.00	1.00	1.00		0.59	1.00	0.69	
Usr Sat Adj:	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 Sat Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
Fnl Sat Adj:	1.00	0.75	0.75		0.72	0.76	1.00		1.00	1.00	1.00		0.59	1.00	0.69	
Delay Adjustment Factor Module:																
Coordinated:	< < < < < < < < < < < < < < < No > > > > > > > > > > > > > > >															
Signal Type:	< < < < < < < < < < < < < Actuated > > > > > > > > > > > > >															
DelAdjFctr:	0.00	1.00	1.00		1.00	1.00	0.00		0.00	0.00	0.00		1.00	0.00	1.00	

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Patterson Sand and Gravel
Existing Plus Project (With Haul Road)
"30th Highest" - AM Peak Hour

Level Of Service Detailed Computation Report (Permitted Left Turn Sat Adj)
2000 HCM Operations Method
Base Volume Alternative

****

Intersection #2 SR 65 and SR 193 (Lincoln)

****

Approach:	North	South	East	West
Cycle Length, C:	xxxxxx	xxxxxx	xxxxxx	100
Actual Green Time Per Lane Group, G:	xxxxxx	xxxxxx	xxxxxx	26.64
Effective Green Time Per Lane Group, g:	xxxxxx	xxxxxx	xxxxxx	30.64
Opposing Effective Green Time, go:	xxxxxx	xxxxxx	xxxxxx	30.64
Number Of Opposing Lanes, No:	xxxxxx	xxxxxx	xxxxxx	1
Number Of Lanes In Lane Group, N:	xxxxxx	xxxxxx	xxxxxx	1
Adjusted Left-Turn Flow Rate, Vlt:	xxxxxx	xxxxxx	xxxxxx	249
Proportion of Left Turns in Lane Group, Plt:	xxxxxx	xxxxxx	xxxxxx	1.00
Proportion of Left Turns in Opp Flow, Plto:	xxxxxx	xxxxxx	xxxxxx	1.00
Left Turns Per Cycle, LTC:	xxxxxx	xxxxxx	xxxxxx	6.92
Adjusted Opposing Flow Rate, Vo:	xxxxxx	xxxxxx	xxxxxx	0
Opposing Flow Per Lane Per Cycle, Volc:	xxxxxx	xxxxxx	xxxxxx	0.00
Opposing Platoon Ratio, Rpo:	xxxxxx	xxxxxx	xxxxxx	1.00
Lost Time Per Phase, tl:	xxxxxx	xxxxxx	xxxxxx	0.00
Eff grn until arrival of left-turn car, gf:	xxxxxx	xxxxxx	xxxxxx	0.78
Opposing Queue Ratio, qro:	xxxxxx	xxxxxx	xxxxxx	0.69
Eff grn blocked by opposing queue, gq:	xxxxxx	xxxxxx	xxxxxx	0.00
Eff grn while left turns filter thru, gu:	xxxxxx	xxxxxx	xxxxxx	29.86
Max opposing cars arriving during gq-gf, n:	xxxxxx	xxxxxx	xxxxxx	0.00
Proportion of Opposing Thru & RT cars, ptho:	xxxxxx	xxxxxx	xxxxxx	0.00
Left-turn Saturation Factor, fs:	xxxxxx	xxxxxx	xxxxxx	xxxxxx
Proportion of Left Turns in Shared Lane, pl:	xxxxxx	xxxxxx	xxxxxx	1.00
Through-car Equivalents, el1:	xxxxxx	xxxxxx	xxxxxx	1.40
Single Lane Through-car Equivalents, el2:	xxxxxx	xxxxxx	xxxxxx	1.00
Minimum Left Turn Adjustment Factor, fmin:	xxxxxx	xxxxxx	xxxxxx	0.13
Single Lane Left Turn Adjustment Factor, fm:	xxxxxx	xxxxxx	xxxxxx	0.72
Left Turn Adjustment Factor, flt:	xxxxxx	xxxxxx	xxxxxx	0.72

****

Existing AM Plus Project Wed Jan 14, 2004 11:15:51 Page 7-1

Patterson Sand and Gravel
Existing Plus Project (With Haul Road)
"30th Highest" - AM Peak Hour

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

****

Intersection #3 Old SR 65 and Haul Route

****

Average Delay (sec/veh): 3.5 Worst Case 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:	Uncontrolled			Uncontrolled			Stop Sign			Stop Sign		
Rights:	Include			Include			Include			Include		
Lanes:	0 0	1 0	1	1 0	1 0	0	0 0	0 0	0	0 0	1! 0	0
Volume Module:												
Base Vol:	0	449	33	8	737	0	0	0	0	75	0	23
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	0	449	33	8	737	0	0	0	0	75	0	23
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	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 Volume:	0	449	33	8	737	0	0	0	0	75	0	23
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Final Vol.:	0	449	33	8	737	0	0	0	0	75	0	23
Critical Gap Module:												
Critical Gp:	xxxxx	xxxx	xxxxx	4.2	xxxx	xxxxx	xxxxx	xxxx	xxxxx	7.1	xxxx	6.9
FollowUpTim:	xxxxx	xxxx	xxxxx	2.3	xxxx	xxxxx	xxxxx	xxxx	xxxxx	4.1	xxxx	3.9
Capacity Module:												
Cnflict Vol:	xxxx	xxxx	xxxxx	482	xxxx	xxxxx	xxxx	xxxx	xxxxx	1202	xxxx	449
Potent Cap.:	xxxx	xxxx	xxxxx	1035	xxxx	xxxxx	xxxx	xxxx	xxxxx	151	xxxx	493
Move Cap.:	xxxx	xxxx	xxxxx	1035	xxxx	xxxxx	xxxx	xxxx	xxxxx	151	xxxx	493
Level Of Service Module:												
Stopped Del:	xxxxx	xxxx	xxxxx	8.5	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx
LOS by Move:	*	*	*	A	*	*	*	*	*	*	*	*
Movement:	LT -	LTR -	RT	LT -	LTR -	RT	LT -	LTR -	RT	LT -	LTR -	RT
Shared Cap.:	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	180	xxxxx
Shrd StpDel:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	46.7	xxxxx
Shared LOS:	*	*	*	*	*	*	*	*	*	*	E	*
ApproachDel:	xxxxxx			xxxxxx			xxxxxx			46.7		
ApproachLOS:	*			*			*			E		

Existing AM Plus Project Wed Jan 14, 2004 11:15:51 Page 8-1

Patterson Sand and Gravel
Existing Plus Project (With Haul Road)
"30th Highest" - AM Peak Hour

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

```
*******************************************************************************
Intersection #3 Old SR 65 and Haul Route
*******************************************************************************
Approach:       North Bound      South Bound      East Bound       West Bound
Movement:     L  -  T  -  R    L  -  T  -  R    L  -  T  -  R    L  -  T  -  R
------------|----------------|----------------|----------------|----------------|
HevVeh:             18%              11%              0%               68%
Grade:               0%               0%              0%                0%
Peds/Hour:           0                0               0                 0
Pedestrian Walk Speed: 4.00 feet/sec
LaneWidth:        12 feet          12 feet         12 feet          12 feet
Time Period: 0.25 hour
------------|----------------|----------------|----------------|----------------|
Upstream Signals:
Link Index:        #2
Dist(miles):       0.000
Speed (mph):        0.00
SignalIndex:       #2
Cycle Time:            0 secs
InitVolume:      0      0
Saturation:      0      0
ArrivalType:     0      0
G/C:          0.00   0.00
*** Computation 1: Time for Queue to Clear at Each Upstream Intersection
P:           0.000  0.000
gq1:          0.00   0.00
gq2:          0.00   0.00
gq:           0.00   0.00
*** Computation 2: Time Intersection Blocked Because of Upstream Platoons
alpha:             0.000
beta:              0.000
ta (secs):         0.000
F:                 0.000
f:           0.000  0.000
vcmax:           0      0
vcmin:           0      0
tp:            0.0    0.0
p:                 0.000
*** Computation 3: Platoon Event Periods
pdom/psubo:       0.000/0.000/Unconstrained
*** Computation 4: Conflicting Flows During Each Unblocked Period
InitCnflVol:   0 xxxxx xxxxx  482 xxxxx xxxxx    0     0     0 1202     0   449
UpstreamSat:   0 xxxxx xxxxx    0 xxxxx xxxxx    0     0     0    0     0     0
UpstreamAdj:1.00 x.xxx x.xxx 1.00 x.xxx x.xxx 1.00 1.000 1.000 1.00 1.000 1.000
ConflictVol:   0 xxxxx xxxxx  482 xxxxx xxxxx    0     0     0 1202     0   449
*** Computation 5: Capactiy for Subject Movement During Unblocked Period
InitPotCap:    0 xxxxx xxxxx 1035 xxxxx xxxxx    0     0     0  151     0   493
UpstreamAdj:1.00 x.xxx x.xxx 1.00 x.xxx x.xxx 1.00 1.000 1.000 1.00 1.000 1.000
PotentCap:     0 xxxxx xxxxx 1035 xxxxx xxxxx    0     0     0  151     0   493
```


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Patterson Sand and Gravel
Existing Plus Project (With Haul Road)
"30th Highest" - AM Peak Hour

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

```
*******************************************************************************
Intersection #4 Riosa Rd and 11th St
*******************************************************************************
Cycle (sec):        100                Critical Vol./Cap. (X):         0.056
Loss Time (sec):      0 (Y+R =  4 sec) Average Delay (sec/veh):          7.1
Optimal Cycle:        0                Level Of Service:                    A
*******************************************************************************
Approach:       North Bound      South Bound      East Bound       West Bound
Movement:     L  -  T  -  R    L  -  T  -  R    L  -  T  -  R    L  -  T  -  R
------------||---------------||---------------||---------------||---------------|
Control:        Stop Sign        Stop Sign        Stop Sign        Stop Sign
Rights:           Include          Include          Include          Include
Min. Green:     0    0    0     0    0    0     0    0    0     0    0    0
Lanes:        0  0  1! 0  0    0  0  1! 0  0    0  1  0  0  0    0  1  0  0  0
------------||---------------||---------------||---------------||---------------|
Volume Module:
Base Vol:       3    2    2     6    4   11     6   24    0     1   49    0
Growth Adj:  1.00 1.00 1.00  1.00 1.00 1.00  1.00 1.00 1.00  1.00 1.00 1.00
Initial Bse:    3    2    2     6    4   11     6   24    0     1   49    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:     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 Volume:     3    2    2     6    4   11     6   24    0     1   49    0
Reduct Vol:     0    0    0     0    0    0     0    0    0     0    0    0
Reduced Vol:    3    2    2     6    4   11     6   24    0     1   49    0
PCE Adj:     1.00 1.00 1.00  1.00 1.00 1.00  1.00 1.00 1.00  1.00 1.00 1.00
MLF Adj:     1.00 1.00 1.00  1.00 1.00 1.00  1.00 1.00 1.00  1.00 1.00 1.00
Final Vol.:     3    2    2     6    4   11     6   24    0     1   49    0
------------||---------------||---------------||---------------||---------------|
Saturation Flow Module:
Adjustment:  1.00 1.00 1.00  1.00 1.00 1.00  1.00 1.00 1.00  1.00 1.00 1.00
Lanes:       0.43 0.28 0.29  0.29 0.19 0.52  0.20 0.80 0.00  0.02 0.98 0.00
Final Sat.:   379  252  252   265  176  485   177  708    0    18  878    0
------------||---------------||---------------||---------------||---------------|
Capacity Analysis Module:
Vol/Sat:     0.01 0.01 0.01  0.02 0.02 0.02  0.03 0.03 xxxx  0.06 0.06 xxxx
Crit Moves:  ****             ****             ****             ****
Delay/Veh:    7.0  7.0  7.0   6.9  6.9  6.9   7.2  7.2  0.0   7.2  7.2  0.0
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:   7.0  7.0  7.0   6.9  6.9  6.9   7.2  7.2  0.0   7.2  7.2  0.0
LOS by Move:    A    A    A     A    A    A     A    A    *     A    A    *
ApproachDel:       7.0              6.9              7.2              7.2
Delay Adj:        1.00             1.00             1.00             1.00
ApprAdjDel:        7.0              6.9              7.2              7.2
LOS by Appr:         A                A                A                A
*******************************************************************************
```

Patterson Sand and Gravel
Existing Plus Project (With Haul Road)
"30th Highest" - AM Peak Hour

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

****
Intersection #4 Riosa Rd and 11th St
****

Approach:	North Bound				South Bound				East Bound				West Bound			
Movement:	L	-	T	- R	L	-	T	- R	L	-	T	- R	L	-	T	- R
Time Period:	0.25 hour															
HevVeh:	0%				0%				0%				0%			
Alpha Value:	0.01															
GroupType:	1				1				1				1			
P[C1]:	0.8925				0.9058				0.9165				0.9375			
P[C2]:	0.0203				0.0071				0.0537				0.0327			
P[C3]:	0.0834				0.0846				0.0280				0.0287			
P[C4]:	0.0037				0.0025				0.0018				0.0012			
P[C5]:	0.0000				0.0000				0.0000				0.0000			
Padj[C1]:	0.00198				0.00184				0.00115				0.00093			
Padj[C2]:	0.00071				0.00083				-0.00022				-0.00002			
Padj[C3]:	-0.00246				-0.00251				-0.00082				-0.00085			
Padj[C4]:	-0.00022				-0.00015				-0.00011				-0.00007			
Padj[C5]:	-0.00000				-0.00000				-0.00000				-0.00000			
Lane:	L1				L1				L1				L1			
LaneType:	LEFTTHRURITE				LEFTTHRURITE				LEFTTHRURITE				LEFTTHRURITE			
HeadwayAdj:	-0.086				-0.257				0.040				0.004			
Volume:	7				21				30				50			
Capacity:	883				926				884				896			
DegOfUtil:	0.01				0.02				0.03				0.06			
DepHeadway:	4.00				3.81				4.04				3.99			
ServiceTime:	2.0				1.8				2.0				2.0			
Delay:	7.0				6.9				7.2				7.2			
Approach:	North Bound				South Bound				East Bound				West Bound			
ApproachDel:	7.0				6.9				7.2				7.2			
Delay Adj:	1.00				1.00				1.00				1.00			
ApprAdjDel:	7.0				6.9				7.2				7.2			
LOS by Appr:	A				A				A				A			
OverallDel:								7.1								
OverallLOS:								A								

Patterson Sand and Gravel
Existing Plus Project (With Haul Road)
"30th Highest" - AM Peak Hour

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

****
Intersection #5 Riosa Rd and Karchner Rd
****
Average Delay (sec/veh): 5.8 Worst Case Level Of Service: A
****

Approach:	North Bound						South Bound						East Bound						West Bound					
Movement:	L	-	T	-	R		L	-	T	-	R		L	-	T	-	R		L	-	T	-	R	
Control:	Stop Sign						Stop Sign						Uncontrolled						Uncontrolled					
Rights:	Include						Include						Include						Include					
Lanes:	0	0	0	0	0		0	0	1!	0	0		0	1	0	0	0		0	0	0	1	0	
Volume Module:																								
Base Vol:	0	0	0				15	0	65				34	16	0				0	28	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:	0	0	0				15	0	65				34	16	0				0	28	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:	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 Volume:	0	0	0				15	0	65				34	16	0				0	28	1			
Reduct Vol:	0	0	0				0	0	0				0	0	0				0	0	0			
Final Vol.:	0	0	0				15	0	65				34	16	0				0	28	1			
Critical Gap Module:																								
Critical Gp:	xxxxx	xxxx	xxxxx				7.2	xxxx	7.0				4.7	xxxx	xxxxx				xxxxx	xxxx	xxxxx			
FollowUpTim:	xxxxx	xxxx	xxxxx				4.2	xxxx	4.0				2.7	xxxx	xxxxx				xxxxx	xxxx	xxxxx			
Capacity Module:																								
Cnflict Vol:	xxxx	xxxx	xxxxx				113	xxxx	29				29	xxxx	xxxxx				xxxx	xxxx	xxxxx			
Potent Cap.:	xxxx	xxxx	xxxxx				729	xxxx	863				1279	xxxx	xxxxx				xxxx	xxxx	xxxxx			
Move Cap.:	xxxx	xxxx	xxxxx				714	xxxx	863				1279	xxxx	xxxxx				xxxx	xxxx	xxxxx			
Level Of Service Module:																								
Stopped Del:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx							7.9	xxxx	xxxxx	xxxxx	xxxx	xxxxx						
LOS by Move:	*	*	*	*	*	*							A	*	*	*	*	*						
Movement:	LT	-	LTR	-	RT		LT	-	LTR	-	RT		LT	-	LTR	-	RT		LT	-	LTR	-	RT	
Shared Cap.:	xxxx	xxxx	xxxxx	xxxx	830	xxxxx							xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx						
Shrd StpDel:	xxxxx	xxxx	xxxxx	xxxxx	9.8	xxxxx							7.9	xxxx	xxxxx	xxxxx	xxxx	xxxxx						
Shared LOS:	*	*	*	*	A	*							A	*	*	*	*	*						
ApproachDel:	xxxxxx				9.8								xxxxxx				xxxxxx							
ApproachLOS:	*				A								*				*							

Existing AM Plus Project Wed Jan 14, 2004 11:15:51 Page 12-1

Patterson Sand and Gravel
Existing Plus Project (With Haul Road)
"30th Highest" - AM Peak Hour

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

****
Intersection #5 Riosa Rd and Karchner Rd
****

Approach:	North Bound	South Bound	East Bound	West Bound
Movement:	L - T - R	L - T - R	L - T - R	L - T - R
HevVeh:	0%	79%	60%	10%
Grade:	0%	0%	0%	0%
Peds/Hour:	0	0	0	0
LaneWidth:	12 feet	12 feet	12 feet	12 feet

Pedestrian Walk Speed: 4.00 feet/sec
Time Period: 0.25 hour

Traffix 7.5.0715 (c) 2002 Dowling Assoc. Licensed to DKS ASSOC., SACRAMENTO

Patterson Sand and Gravel
Existing Plus Project (With Haul Road)
"Highest" - AM Peak Hour

Scenario Report

Scenario:	Existing AM Plus Project
Command:	Existing AM Plus Project
Volume:	Existing AM Plus Project
Geometry:	Existing AM Plus Project
Impact Fee:	Default Impact Fee
Trip Generation:	Default Trip Generation
Trip Distribution:	Default Trip Distribution
Paths:	Default Paths
Routes:	Default Routes
Configuration:	Default Configuration

Patterson Sand and Gravel
Existing Plus Project (With Haul Road)
"Highest" - AM Peak Hour

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 65 and Riosa Road (Sheridan	B	0.9	0.000	B	0.9	0.000	+ 0.000 V/C
# 2 SR 65 and SR 193 (Lincoln)	C	22.0	0.743	C	22.0	0.743	+ 0.000 D/V
# 3 Old SR 65 and Haul Route	F	5.6	0.000	F	5.6	0.000	+ 0.000 V/C
# 4 Riosa Rd and 11th St	A	7.1	0.056	A	7.1	0.056	+ 0.000 V/C
# 5 Riosa Rd and Karchner Rd	A	6.4	0.000	A	6.4	0.000	+ 0.000 V/C

Existing AM Plus Project Wed Jan 14, 2004 11:42:04 Page 3-1

Patterson Sand and Gravel
Existing Plus Project (With Haul Road)
"Highest" - AM Peak Hour

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

```
*******************************************************************************
Intersection #1 SR 65 and Riosa Road (Sheridan)
*******************************************************************************
Average Delay (sec/veh):      0.9          Worst Case 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:       Uncontrolled     Uncontrolled      Stop Sign        Stop Sign
Rights:           Include          Include          Include          Include
Lanes:       0  0  1  0  1    1  0  1  0  0    0  0  0  0  0    0  0  1! 0  0
------------|---------------||---------------||---------------||---------------|
Volume Module:
Base Vol:       0  476    4   16  733    0    0    0    0   12    0   55
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  476    4   16  733    0    0    0    0   12    0   55
User Adj:    1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
PHF Adj:     1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
PHF Volume:     0  476    4   16  733    0    0    0    0   12    0   55
Reduct Vol:     0    0    0    0    0    0    0    0    0    0    0    0
Final Vol.:     0  476    4   16  733    0    0    0    0   12    0   55
------------|---------------||---------------||---------------||---------------|
Critical Gap Module:
Critical Gp:xxxxx xxxx xxxxx  4.2 xxxx xxxxx xxxxx xxxx xxxxx  6.4 xxxx  6.2
FollowUpTim:xxxxx xxxx xxxxx  2.3 xxxx xxxxx xxxxx xxxx xxxxx  3.5 xxxx  3.3
------------|---------------||---------------||---------------||---------------|
Capacity Module:
Cnflict Vol: xxxx xxxx xxxxx  480 xxxx xxxxx  xxxx xxxx xxxxx 1241 xxxx  476
Potent Cap.: xxxx xxxx xxxxx 1037 xxxx xxxxx  xxxx xxxx xxxxx  195 xxxx  593
Move Cap.:   xxxx xxxx xxxxx 1037 xxxx xxxxx  xxxx xxxx xxxxx  193 xxxx  593
------------|---------------||---------------||---------------||---------------|
Level Of Service Module:
Stopped Del:xxxxx xxxx xxxxx  8.5 xxxx xxxxx xxxxx xxxx xxxxx xxxxx xxxx xxxxx
LOS by Move:   *    *    *    A    *    *    *    *    *    *    *    *
Movement:     LT - LTR - RT   LT - LTR - RT   LT - LTR - RT   LT - LTR - RT
Shared Cap.: xxxx xxxx xxxxx xxxx xxxx xxxxx xxxx xxxx xxxxx xxxx  432 xxxxx
Shrd StpDel:xxxxx xxxx xxxxx xxxxx xxxx xxxxx xxxxx xxxx xxxxx xxxxx 14.9 xxxxx
Shared LOS:    *    *    *    *    *    *    *    *    *    *    B    *
ApproachDel:    xxxxxx          xxxxxx          xxxxxx            14.9
ApproachLOS:       *               *               *                B
```


Existing AM Plus Project Wed Jan 14, 2004 11:42:04 Page 4-1

Patterson Sand and Gravel
Existing Plus Project (With Haul Road)
"Highest" - AM Peak Hour

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

```
*******************************************************************************
Intersection #1 SR 65 and Riosa Road (Sheridan)
*******************************************************************************
Approach:      North Bound      South Bound      East Bound       West Bound
Movement:    L  -  T  -  R    L  -  T  -  R    L  -  T  -  R    L  -  T  -  R
------------|---------------||---------------||---------------||---------------|
HevVeh:            17%              11%               0%               0%
Grade:              0%               0%               0%               0%
Peds/Hour:          0                0                0                0
Pedestrian Walk Speed: 4.00 feet/sec
LaneWidth:       12 feet          12 feet          12 feet          12 feet
Time Period: 0.25 hour
------------|---------------||---------------||---------------||---------------|
Upstream Signals:
Link Index:       #2
Dist(miles):      0.000
Speed (mph):       0.00
SignalIndex:      #2
Cycle Time:          0 secs
InitVolume:     0     0
Saturation:     0     0
ArrivalType:    0     0
G/C:         0.00  0.00
*** Computation 1: Time for Queue to Clear at Each Upstream Intersection
P:          0.000 0.000
gq1:         0.00  0.00
gq2:         0.00  0.00
gq:          0.00  0.00
*** Computation 2: Time Intersection Blocked Because of Upstream Platoons
alpha:            0.000
beta:             0.000
ta (secs):        0.000
F:                0.000
f:          0.000 0.000
vcmax:          0     0
vcmin:          0     0
tp:           0.0   0.0
p:                0.000
*** Computation 3: Platoon Event Periods
pdom/psubo:      0.000/0.000/Unconstrained
*** Computation 4: Conflicting Flows During Each Unblocked Period
InitCnflVol:   0 xxxxx xxxxx  480 xxxxx xxxxx    0     0     0 1241     0   476
UpstreamSat:   0 xxxxx xxxxx    0 xxxxx xxxxx    0     0     0    0     0     0
UpstreamAdj:1.00 x.xxx x.xxx 1.00 x.xxx x.xxx 1.00 1.000 1.000 1.00 1.000 1.000
ConflictVol:   0 xxxxx xxxxx  480 xxxxx xxxxx    0     0     0 1241     0   476
*** Computation 5: Capactiy for Subject Movement During Unblocked Period
InitPotCap:    0 xxxxx xxxxx 1037 xxxxx xxxxx    0     0     0  195     0   593
UpstreamAdj:1.00 x.xxx x.xxx 1.00 x.xxx x.xxx 1.00 1.000 1.000 1.00 1.000 1.000
PotentCap:     0 xxxxx xxxxx 1037 xxxxx xxxxx    0     0     0  195     0   593
```

Patterson Sand and Gravel
Existing Plus Project (With Haul Road)
"Highest" - AM Peak Hour

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

```
*******************************************************************************
Intersection #2 SR 65 and SR 193 (Lincoln)
*******************************************************************************
Cycle (sec):          100                 Critical Vol./Cap. (X):          0.743
Loss Time (sec):        0 (Y+R =  4 sec) Average Delay (sec/veh):          22.0
Optimal Cycle:         72                 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        Permitted        Permitted
Rights:           Include          Include          Include          Ovl
Min. Green:     0    0    0    0    0    0    0    0    0    0    0    0
Lanes:        1  0  0  1  0    1  0  0  1  0    0  0  1! 0  0    0  1  0  0  1
------------|---------------||---------------||---------------||---------------|
Volume Module:
Base Vol:       0  498   83  144  636    0    0    0    0  249    0  105
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  498   83  144  636    0    0    0    0  249    0  105
User Adj:    1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
PHF Adj:     1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
PHF Volume:     0  498   83  144  636    0    0    0    0  249    0  105
Reduct Vol:     0    0    0    0    0    0    0    0    0    0    0    0
Reduced Vol:    0  498   83  144  636    0    0    0    0  249    0  105
PCE Adj:     1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
MLF Adj:     1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
Final Vol.:     0  498   83  144  636    0    0    0    0  249    0  105
------------|---------------||---------------||---------------||---------------|
Saturation Flow Module:
Sat/Lane:    1900 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900
Adjustment:  1.00 0.74 0.74 0.72 0.76 1.00 1.00 1.00 1.00 0.59 1.00 0.69
Lanes:       1.00 0.86 0.14 1.00 1.00 0.00 0.00 1.00 0.00 1.00 0.00 1.00
Final Sat.:  1900 1205  201 1365 1436    0    0 1900    0 1112    0 1310
------------|---------------||---------------||---------------||---------------|
Capacity Analysis Module:
Vol/Sat:     0.00 0.41 0.41 0.11 0.44 0.00 0.00 0.00 0.00 0.22 0.00 0.08
Crit Moves:       ****      ****                          ****
Green/Cycle: 0.00 0.56 0.56 0.14 0.70 0.00 0.00 0.00 0.00 0.30 0.00 0.44
Volume/Cap:  0.00 0.74 0.74 0.74 0.63 0.00 0.00 0.00 0.00 0.74 0.00 0.18
Delay/Veh:    0.0 20.6 20.6 55.4  9.5  0.0  0.0  0.0  0.0 40.1  0.0 17.0
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 20.6 20.6 55.4  9.5  0.0  0.0  0.0  0.0 40.1  0.0 17.0
DesignQueue:    0   13    2    7   12    0    0    0    0   10    0    3
*******************************************************************************
```


Patterson Sand and Gravel
Existing Plus Project (With Haul Road)
"Highest" - AM Peak Hour

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

```
*******************************************************************************
Intersection #2 SR 65 and SR 193 (Lincoln)
*******************************************************************************
Approach:       North Bound      South Bound      East Bound       West Bound
Movement:     L  -  T  -  R    L  -  T  -  R    L  -  T  -  R    L  -  T  -  R
------------|---------------||---------------||---------------||---------------|
HCM Ops Adjusted Lane Utilization Module:
Lanes:        1  0  0  1  0    1  0  0  1  0    0  0  1! 0  0    0  1  0  0  1
Lane Group:     L   RT    RT     L   RT    RT   LTR  LTR  LTR   LT   LT    R
#LnsInGrps:     1    1     1     1    1     1    1    1    1     1    1    1
------------|---------------||---------------||---------------||---------------|
HCM Ops Input Saturation Adj Module:
Lane Width:    12   12    12    12   12    12   12   12   12    12   12   12
CrosswalkWid          8                8                8                8
% Hev Veh:           19               19                0               11
Grade:               0%               0%               0%               0%
Parking/Hr:          No               No               No               No
Bus Stp/Hr:           0                0                0                0
Area Type:    < < < < < < < < < < < < < < <  CBD  > > > > > > > > > > > > > >
Cnft Ped/Hr:          0                0                0                0
ExclusiveRT:     Include          Include          Include          Include
% RT Prtct:           0                0                0                0
------------|---------------||---------------||---------------||---------------|
HCM Ops f(lt) Adj Case Module:
f(lt) Case:  xxxx xxxx  xxxx     1 xxxx  xxxx  xxxx xxxx  xxxx     5 xxxx  xxxx
------------|---------------||---------------||---------------||---------------|
HCM Ops Saturation Adj Module:
Ln Wid Adj:  xxxx 1.00  1.00  1.00 1.00 xxxxx  xxxx xxxx xxxxx  1.00 xxxx  1.00
Hev Veh Adj: xxxx 0.84  0.84  0.84 0.84 xxxxx  xxxx xxxx xxxxx  0.90 xxxx  0.90
Grade Adj:   xxxx 1.00  1.00  1.00 1.00 xxxxx  xxxx xxxx xxxxx  1.00 xxxx  1.00
Parking Adj: xxxx 1.00  1.00  xxxx 1.00 xxxxx  xxxx xxxx xxxxx  xxxx xxxx  1.00
Bus Stp Adj: xxxx 1.00  1.00  xxxx 1.00 xxxxx  xxxx xxxx xxxxx  xxxx xxxx  1.00
Area Adj:    xxxx 0.90  0.90  0.90 0.90 xxxxx  xxxx xxxx xxxxx  0.90 xxxx  0.90
RT Adj:      xxxx 0.98  0.98  xxxx xxxx xxxxx  xxxx xxxx xxxxx  xxxx xxxx  0.85
LT Adj:      xxxx xxxx xxxxx  0.95 xxxx xxxxx  xxxx xxxx xxxxx  0.72 xxxx xxxxx
PedBike Adj: 1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
HCM Sat Adj: 1.00 0.74  0.74  0.72 0.76  1.00  1.00 1.00  1.00  0.59 1.00  0.69
Usr Sat Adj: 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 Sat Adj: 1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
Fnl Sat Adj: 1.00 0.74  0.74  0.72 0.76  1.00  1.00 1.00  1.00  0.59 1.00  0.69
------------|---------------||---------------||---------------||---------------|
Delay Adjustment Factor Module:
Coordinated:  < < < < < < < < < < < < < < < No  > > > > > > > > > > > > > > >
Signal Type:  < < < < < < < < < < < <    Actuated    > > > > > > > > > > > >
DelAdjFctr:  0.00 1.00  1.00  1.00 1.00  0.00  0.00 0.00  0.00  1.00 0.00  1.00
*******************************************************************************
```

Patterson Sand and Gravel
Existing Plus Project (With Haul Road)
"Highest" - AM Peak Hour

Level Of Service Detailed Computation Report (Permitted Left Turn Sat Adj)
2000 HCM Operations Method
Base Volume Alternative

****
Intersection #2 SR 65 and SR 193 (Lincoln)
****

Approach:	North	South	East	West
Cycle Length, C:	xxxxxx	xxxxxx	xxxxxx	100
Actual Green Time Per Lane Group, G:	xxxxxx	xxxxxx	xxxxxx	26.16
Effective Green Time Per Lane Group, g:	xxxxxx	xxxxxx	xxxxxx	30.16
Opposing Effective Green Time, go:	xxxxxx	xxxxxx	xxxxxx	30.16
Number Of Opposing Lanes, No:	xxxxxx	xxxxxx	xxxxxx	1
Number Of Lanes In Lane Group, N:	xxxxxx	xxxxxx	xxxxxx	1
Adjusted Left-Turn Flow Rate, Vlt:	xxxxxx	xxxxxx	xxxxxx	249
Proportion of Left Turns in Lane Group, Plt:	xxxxxx	xxxxxx	xxxxxx	1.00
Proportion of Left Turns in Opp Flow, Plto:	xxxxxx	xxxxxx	xxxxxx	1.00
Left Turns Per Cycle, LTC:	xxxxxx	xxxxxx	xxxxxx	6.92
Adjusted Opposing Flow Rate, Vo:	xxxxxx	xxxxxx	xxxxxx	0
Opposing Flow Per Lane Per Cycle, Volc:	xxxxxx	xxxxxx	xxxxxx	0.00
Opposing Platoon Ratio, Rpo:	xxxxxx	xxxxxx	xxxxxx	1.00
Lost Time Per Phase, tl:	xxxxxx	xxxxxx	xxxxxx	0.00
Eff grn until arrival of left-turn car, gf:	xxxxxx	xxxxxx	xxxxxx	0.77
Opposing Queue Ratio, qro:	xxxxxx	xxxxxx	xxxxxx	0.70
Eff grn blocked by opposing queue, gq:	xxxxxx	xxxxxx	xxxxxx	0.00
Eff grn while left turns filter thru, gu:	xxxxxx	xxxxxx	xxxxxx	29.39
Max opposing cars arriving during gq-gf, n:	xxxxxx	xxxxxx	xxxxxx	0.00
Proportion of Opposing Thru & RT cars, ptho:	xxxxxx	xxxxxx	xxxxxx	0.00
Left-turn Saturation Factor, fs:	xxxxxx	xxxxxx	xxxxxx	xxxxxx
Proportion of Left Turns in Shared Lane, pl:	xxxxxx	xxxxxx	xxxxxx	1.00
Through-car Equivalents, el1:	xxxxxx	xxxxxx	xxxxxx	1.40
Single Lane Through-car Equivalents, el2:	xxxxxx	xxxxxx	xxxxxx	1.00
Minimum Left Turn Adjustment Factor, fmin:	xxxxxx	xxxxxx	xxxxxx	0.13
Single Lane Left Turn Adjustment Factor, fm:	xxxxxx	xxxxxx	xxxxxx	0.72
Left Turn Adjustment Factor, flt:	xxxxxx	xxxxxx	xxxxxx	0.72

****

Patterson Sand and Gravel
Existing Plus Project (With Haul Road)
"Highest" - AM Peak Hour

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

****
Intersection #3 Old SR 65 and Haul Route
****
Average Delay (sec/veh): 5.6 Worst Case 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:	Uncontrolled			Uncontrolled			Stop Sign			Stop Sign		
Rights:	Include			Include			Include			Include		
Lanes:	0 0 1	0	1	1 0 1	0	0	0 0 0	0	0	0 0 1!	0	0
Volume Module:												
Base Vol:	0	449	41	8	737	0	0	0	0	93	0	27
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	449	41	8	737	0	0	0	0	93	0	27
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	0	449	41	8	737	0	0	0	0	93	0	27
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Final Vol.:	0	449	41	8	737	0	0	0	0	93	0	27
Critical Gap Module:												
Critical Gp:	xxxxx	xxxx	xxxxx	4.2	xxxx	xxxxx	xxxxx	xxxx	xxxxx	7.1	xxxx	6.9
FollowUpTim:	xxxxx	xxxx	xxxxx	2.3	xxxx	xxxxx	xxxxx	xxxx	xxxxx	4.2	xxxx	4.0
Capacity Module:												
Cnflict Vol:	xxxx	xxxx	xxxxx	490	xxxx	xxxxx	xxxx	xxxx	xxxxx	1202	xxxx	449
Potent Cap.:	xxxx	xxxx	xxxxx	1028	xxxx	xxxxx	xxxx	xxxx	xxxxx	148	xxxx	484
Move Cap.:	xxxx	xxxx	xxxxx	1028	xxxx	xxxxx	xxxx	xxxx	xxxxx	147	xxxx	484
Level Of Service Module:												
Stopped Del:	xxxxx	xxxx	xxxxx	8.5	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx
LOS by Move:	*	*	*	A	*	*	*	*	*	*	*	*
Movement:	LT -	LTR -	RT	LT -	LTR -	RT	LT -	LTR -	RT	LT -	LTR -	RT
Shared Cap.:	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	174	xxxxx
Shrd StpDel:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	62.2	xxxxx
Shared LOS:	*	*	*	*	*	*	*	*	*	*	F	*
ApproachDel:	xxxxxx			xxxxxx			xxxxxx			62.2		
ApproachLOS:	*			*			*			F		

Existing AM Plus Project Wed Jan 14, 2004 11:42:04 Page 8-1

Patterson Sand and Gravel
Existing Plus Project (With Haul Road)
"Highest" - AM Peak Hour

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

```
*******************************************************************************
Intersection #3 Old SR 65 and Haul Route
*******************************************************************************
Approach:      North Bound      South Bound      East Bound       West Bound
Movement:    L  -  T  -  R    L  -  T  -  R    L  -  T  -  R    L  -  T  -  R
------------|----------------|----------------|----------------|----------------|
HevVeh:          20%              11%              0%               74%
Grade:            0%               0%              0%                0%
Peds/Hour:        0                0               0                 0
Pedestrian Walk Speed: 4.00 feet/sec
LaneWidth:      12 feet          12 feet         12 feet          12 feet
Time Period: 0.25 hour
------------|----------------|----------------|----------------|----------------|
Upstream Signals:
Link Index:       #2
Dist(miles):     0.000
Speed (mph):      0.00
SignalIndex:      #2
Cycle Time:          0 secs
InitVolume:     0     0
Saturation:     0     0
ArrivalType:    0     0
G/C:         0.00  0.00
*** Computation 1: Time for Queue to Clear at Each Upstream Intersection
P:          0.000 0.000
gq1:         0.00  0.00
gq2:         0.00  0.00
gq:          0.00  0.00
*** Computation 2: Time Intersection Blocked Because of Upstream Platoons
alpha:          0.000
beta:           0.000
ta (secs):      0.000
F:              0.000
f:          0.000 0.000
vcmax:          0     0
vcmin:          0     0
tp:           0.0   0.0
p:              0.000
*** Computation 3: Platoon Event Periods
pdom/psubo:     0.000/0.000/Unconstrained
*** Computation 4: Conflicting Flows During Each Unblocked Period
InitCnflVol:   0 xxxxx xxxxx  490 xxxxx xxxxx    0     0     0 1202     0   449
UpstreamSat:   0 xxxxx xxxxx    0 xxxxx xxxxx    0     0     0    0     0     0
UpstreamAdj:1.00 x.xxx x.xxx 1.00 x.xxx x.xxx 1.00 1.000 1.000 1.00 1.000 1.000
ConflictVol:   0 xxxxx xxxxx  490 xxxxx xxxxx    0     0     0 1202     0   449
*** Computation 5: Capactiy for Subject Movement During Unblocked Period
InitPotCap:    0 xxxxx xxxxx 1028 xxxxx xxxxx    0     0     0  148     0   484
UpstreamAdj:1.00 x.xxx x.xxx 1.00 x.xxx x.xxx 1.00 1.000 1.000 1.00 1.000 1.000
PotentCap:     0 xxxxx xxxxx 1028 xxxxx xxxxx    0     0     0  148     0   484
```


Existing AM Plus Project Wed Jan 14, 2004 11:42:04 Page 9-1

Patterson Sand and Gravel
Existing Plus Project (With Haul Road)
"Highest" - AM Peak Hour

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

```
*******************************************************************************
Intersection #4 Riosa Rd and 11th St
*******************************************************************************
Cycle (sec):        100                Critical Vol./Cap. (X):        0.056
Loss Time (sec):      0 (Y+R =  4 sec) Average Delay (sec/veh):         7.1
Optimal Cycle:        0                Level Of Service:                  A
*******************************************************************************
Approach:      North Bound      South Bound      East Bound       West Bound
Movement:    L  -  T  -  R    L  -  T  -  R    L  -  T  -  R    L  -  T  -  R
------------|----------------||----------------||----------------||----------------|
Control:       Stop Sign        Stop Sign        Stop Sign        Stop Sign
Rights:          Include          Include          Include          Include
Min. Green:    0    0    0    0    0    0    0    0    0    0    0    0
Lanes:       0  0  1! 0  0    0  0  1! 0  0    0  1  0  0  0    0  1  0  0  0
------------|----------------||----------------||----------------||----------------|
Volume Module:
Base Vol:      3    2    2    6    4   11    6   24    0    1   49    0
Growth Adj:  1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
Initial Bse:   3    2    2    6    4   11    6   24    0    1   49    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:     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 Volume:    3    2    2    6    4   11    6   24    0    1   49    0
Reduct Vol:    0    0    0    0    0    0    0    0    0    0    0    0
Reduced Vol:   3    2    2    6    4   11    6   24    0    1   49    0
PCE Adj:     1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
MLF Adj:     1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
Final Vol.:    3    2    2    6    4   11    6   24    0    1   49    0
------------|----------------||----------------||----------------||----------------|
Saturation Flow Module:
Adjustment:  1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
Lanes:       0.43 0.28 0.29 0.29 0.19 0.52 0.20 0.80 0.00 0.02 0.98 0.00
Final Sat.:  379  252  252  265  176  485  177  708    0   18  878    0
------------|----------------||----------------||----------------||----------------|
Capacity Analysis Module:
Vol/Sat:     0.01 0.01 0.01 0.02 0.02 0.02 0.03 0.03 xxxx 0.06 0.06 xxxx
Crit Moves:  ****                ****                ****                ****
Delay/Veh:    7.0  7.0  7.0  6.9  6.9  6.9  7.2  7.2  0.0  7.2  7.2  0.0
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:   7.0  7.0  7.0  6.9  6.9  6.9  7.2  7.2  0.0  7.2  7.2  0.0
LOS by Move:   A    A    A    A    A    A    A    A    *    A    A    *
ApproachDel:       7.0            6.9            7.2            7.2
Delay Adj:        1.00           1.00           1.00           1.00
ApprAdjDel:        7.0            6.9            7.2            7.2
LOS by Appr:       A              A              A              A
*******************************************************************************
```

Existing AM Plus Project Wed Jan 14, 2004 11:42:04 Page 10-1

Patterson Sand and Gravel
Existing Plus Project (With Haul Road)
"Highest" - AM Peak Hour

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

****
Intersection #4 Riosa Rd and 11th St
****

Approach:	North Bound	South Bound	East Bound	West Bound
Movement:	L - T - R	L - T - R	L - T - R	L - T - R
Time Period: 0.25 hour				
HevVeh:	0%	0%	0%	0%
Alpha Value: 0.01				
GroupType:	1	1	1	1
P[C1]:	0.8925	0.9058	0.9165	0.9375
P[C2]:	0.0203	0.0071	0.0537	0.0327
P[C3]:	0.0834	0.0846	0.0280	0.0287
P[C4]:	0.0037	0.0025	0.0018	0.0012
P[C5]:	0.0000	0.0000	0.0000	0.0000
Padj[C1]:	0.00198	0.00184	0.00115	0.00093
Padj[C2]:	0.00071	0.00083	-0.00022	-0.00002
Padj[C3]:	-0.00246	-0.00251	-0.00082	-0.00085
Padj[C4]:	-0.00022	-0.00015	-0.00011	-0.00007
Padj[C5]:	-0.00000	-0.00000	-0.00000	-0.00000
Lane:	L1	L1	L1	L1
LaneType:	LEFTTHRURITE	LEFTTHRURITE	LEFTTHRURITE	LEFTTHRURITE
HeadwayAdj:	-0.086	-0.257	0.040	0.004
Volume:	7	21	30	50
Capacity:	883	926	884	896
DegOfUtil:	0.01	0.02	0.03	0.06
DepHeadway:	4.00	3.81	4.04	3.99
ServiceTime:	2.0	1.8	2.0	2.0
Delay:	7.0	6.9	7.2	7.2
Approach:	North Bound	South Bound	East Bound	West Bound
ApproachDel:	7.0	6.9	7.2	7.2
Delay Adj:	1.00	1.00	1.00	1.00
ApprAdjDel:	7.0	6.9	7.2	7.2
LOS by Appr:	A	A	A	A
OverallDel:		7.1		
OverallLOS:		A		

Existing AM Plus Project Wed Jan 14, 2004 11:42:04 Page 11-1

Patterson Sand and Gravel
Existing Plus Project (With Haul Road)
"Highest" - AM Peak Hour

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

****
Intersection #5 Riosa Rd and Karchner Rd
****
Average Delay (sec/veh): 6.4 Worst Case Level Of Service: A
****

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Stop Sign			Stop Sign			Uncontrolled			Uncontrolled		
Rights:	Include			Include			Include			Include		
Lanes:	0 0	0 0	0	0 0	1! 0	0	0 1	0 0	0	0 0	0 1	0
Volume Module:												
Base Vol:	0	0	0	15	0	88	43	16	0	0	28	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:	0	0	0	15	0	88	43	16	0	0	28	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:	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 Volume:	0	0	0	15	0	88	43	16	0	0	28	1
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Final Vol.:	0	0	0	15	0	88	43	16	0	0	28	1
Critical Gap Module:												
Critical Gp:	xxxxx	xxxx	xxxxx	7.2	xxxx	7.0	4.8	xxxx	xxxxx	xxxxx	xxxx	xxxxx
FollowUpTim:	xxxxx	xxxx	xxxxx	4.2	xxxx	4.0	2.8	xxxx	xxxxx	xxxxx	xxxx	xxxxx
Capacity Module:												
Cnflict Vol:	xxxx	xxxx	xxxxx	131	xxxx	29	29	xxxx	xxxxx	xxxx	xxxx	xxxxx
Potent Cap.:	xxxx	xxxx	xxxxx	704	xxxx	855	1254	xxxx	xxxxx	xxxx	xxxx	xxxxx
Move Cap.:	xxxx	xxxx	xxxxx	685	xxxx	855	1254	xxxx	xxxxx	xxxx	xxxx	xxxxx
Level Of Service Module:												
Stopped Del:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	8.0	xxxx	xxxxx	xxxxx	xxxx	xxxxx
LOS by Move:	*	*	*	*	*	*	A	*	*	*	*	*
Movement:	LT -	LTR -	RT	LT -	LTR -	RT	LT -	LTR -	RT	LT -	LTR -	RT
Shared Cap.:	xxxx	xxxx	xxxxx	xxxx	825	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx
Shrd StpDel:	xxxxx	xxxx	xxxxx	xxxxx	10.0	xxxxx	8.0	xxxx	xxxxx	xxxxx	xxxx	xxxxx
Shared LOS:	*	*	*	*	A	*	A	*	*	*	*	*
ApproachDel:	xxxxxx			10.0			xxxxxx			xxxxxx		
ApproachLOS:	*			A			*			*		

Existing AM Plus Project Wed Jan 14, 2004 11:42:04 Page 12-1

Patterson Sand and Gravel
Existing Plus Project (With Haul Road)
"Highest" - AM Peak Hour

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

****
Intersection #5 Riosa Rd and Karchner Rd
****

Approach:	North Bound	South Bound	East Bound	West Bound
Movement:	L - T - R	L - T - R	L - T - R	L - T - R
HevVeh:	0%	83%	66%	10%
Grade:	0%	0%	0%	0%
Peds/Hour:	0	0	0	0
LaneWidth:	12 feet	12 feet	12 feet	12 feet

Pedestrian Walk Speed: 4.00 feet/sec
Time Period: 0.25 hour

Traffix 7.5.0715 (c) 2002 Dowling Assoc. Licensed to DKS ASSOC., SACRAMENTO

Patterson Sand and Gravel
Existing Plus Project (With Haul Road)
"Average Day" - PM Peak Hour

Scenario Report

Scenario:	Existing PM Plus Project
Command:	Existing PM Plus Project
Volume:	Existing PM Plus Project
Geometry:	Existing PM Plus Project
Impact Fee:	Default Impact Fee
Trip Generation:	Default Trip Generation
Trip Distribution:	Default Trip Distribution
Paths:	Default Paths
Routes:	Default Routes
Configuration:	Default Configuration

Patterson Sand and Gravel
Existing Plus Project (With Haul Road)
"Average Day" - PM Peak Hour

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 65 and Riosa Road (Sheridan	C	1.3	0.000	C	1.3	0.000	+ 0.000 V/C
# 2 SR 65 and SR 193 (Lincoln)	C	31.2	0.911	C	31.2	0.911	+ 0.000 D/V
# 3 Old SR 65 and Haul Route	D	0.8	0.000	D	0.8	0.000	+ 0.000 V/C
# 4 Riosa Rd and 11th St	A	7.4	0.125	A	7.4	0.125	+ 0.000 V/C
# 5 Riosa Rd abd Karchner Rd	A	3.8	0.000	A	3.8	0.000	+ 0.000 V/C

Patterson Sand and Gravel
Existing Plus Project (With Haul Road)
"Average Day" - PM Peak Hour

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

****
Intersection #1 SR 65 and Riosa Road (Sheridan)
****
Average Delay (sec/veh): 1.3 Worst Case 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:	Uncontrolled						Uncontrolled						Stop Sign						Stop Sign					
Rights:	Include						Include						Include						Include					
Lanes:	0	0	1	0	1		1	0	1	0	0		0	0	0	0	0		0	0	1!	0	0	
Volume Module:																								
Base Vol:		0	788		33		71	577		0			0		0		0		12		0		50	
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	788		33		71	577		0			0		0		0		12		0		50	
User Adj:	1.00	1.00		1.00		1.00	1.00	1.00		1.00		1.00	1.00	1.00		1.00		1.00	1.00	1.00		1.00		1.00
PHF Adj:	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
PHF Volume:		0	788		33		71	577		0			0		0		0		12		0		50	
Reduct Vol:		0	0		0		0	0		0			0		0		0		0		0		0	
Final Vol.:		0	788		33		71	577		0			0		0		0		12		0		50	
Critical Gap Module:																								
Critical Gp:	xxxxx	xxxx	xxxxx				4.1	xxxx	xxxxx				xxxxx	xxxx	xxxxx				6.4	xxxx			6.2	
FollowUpTim:	xxxxx	xxxx	xxxxx				2.2	xxxx	xxxxx				xxxxx	xxxx	xxxxx				3.5	xxxx			3.3	
Capacity Module:																								
Cnflict Vol:	xxxx	xxxx	xxxxx				821	xxxx	xxxxx				xxxx	xxxx	xxxxx				1507	xxxx			788	
Potent Cap.:	xxxx	xxxx	xxxxx				800	xxxx	xxxxx				xxxx	xxxx	xxxxx				134	xxxx			394	
Move Cap.:	xxxx	xxxx	xxxxx				800	xxxx	xxxxx				xxxx	xxxx	xxxxx				125	xxxx			394	
Level Of Service Module:																								
Stopped Del:	xxxxx	xxxx	xxxxx				9.9	xxxx	xxxxx				xxxxx	xxxx	xxxxx				xxxxx	xxxx	xxxxx			
LOS by Move:	*	*	*				A	*	*				*	*	*				*	*	*			
Movement:	LT	-	LTR	-	RT		LT	-	LTR	-	RT		LT	-	LTR	-	RT		LT	-	LTR	-	RT	
Shared Cap.:	xxxx	xxxx	xxxxx				xxxx	xxxx	xxxxx				xxxx	xxxx	xxxxx				xxxx	279	xxxxx			
Shrd StpDel:	xxxxx	xxxx	xxxxx				xxxxx	xxxx	xxxxx				xxxxx	xxxx	xxxxx				xxxxx	21.6	xxxxx			
Shared LOS:	*	*	*				*	*	*				*	*	*				*	C	*			
ApproachDel:	xxxxxx						xxxxxx						xxxxxx						21.6					
ApproachLOS:	*						*						*						C					

Patterson Sand and Gravel
Existing Plus Project (With Haul Road)
"Average Day" - PM Peak Hour

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

****
Intersection #1 SR 65 and Riosa Road (Sheridan)
****

Approach:	North Bound						South Bound						East Bound						West Bound					
Movement:	L	-	T	-	R		L	-	T	-	R		L	-	T	-	R		L	-	T	-	R	
HevVeh:			3%						4%						0%						0%			
Grade:			0%						0%						0%						0%			
Peds/Hour:			0						0						0						0			
Pedestrian Walk Speed: 4.00 feet/sec																								
LaneWidth:			12 feet						12 feet						12 feet						12 feet			
Time Period: 0.25 hour																								
Upstream Signals:																								
Link Index:			#2																					
Dist(miles):			0.000																					
Speed (mph):			0.00																					
SignalIndex:			#2																					
Cycle Time:					0		secs																	
InitVolume:		0			0																			
Saturation:		0			0																			
ArrivalType:		0			0																			
G/C:		0.00			0.00																			
*** Computation 1: Time for Queue to Clear at Each Upstream Intersection																								
P:		0.000			0.000																			
gq1:		0.00			0.00																			
gq2:		0.00			0.00																			
gq:		0.00			0.00																			
*** Computation 2: Time Intersection Blocked Because of Upstream Platoons																								
alpha:			0.000																					
beta:			0.000																					
ta (secs):			0.000																					
F:			0.000																					
f:		0.000			0.000																			
vcmax:		0			0																			
vcmin:		0			0																			
tp:		0.0			0.0																			
p:			0.000																					
*** Computation 3: Platoon Event Periods																								
pdom/psubo:			0.000/0.000/Unconstrained																					
*** Computation 4: Conflicting Flows During Each Unblocked Period																								
InitCnflVol:	0	xxxxx	xxxxx			821	xxxxx	xxxxx				0			0			0	1507			0		788
UpstreamSat:	0	xxxxx	xxxxx			0	xxxxx	xxxxx				0			0			0	0			0		0
UpstreamAdj:	1.00	x.xxx	x.xxx		1.00	x.xxx	x.xxx		1.00	1.000	1.000		1.00	1.000										
ConflictVol:	0	xxxxx	xxxxx			821	xxxxx	xxxxx				0			0			0	1507			0		788
*** Computation 5: Capactiy for Subject Movement During Unblocked Period																								
InitPotCap:	0	xxxxx	xxxxx			800	xxxxx	xxxxx				0			0			0	134			0		394
UpstreamAdj:	1.00	x.xxx	x.xxx		1.00	x.xxx	x.xxx		1.00	1.000	1.000		1.00	1.000										
PotentCap:	0	xxxxx	xxxxx			800	xxxxx	xxxxx				0			0			0	134			0		394

Existing PM Plus Project Wed Jan 14, 2004 10:57:07 Page 5-1

Patterson Sand and Gravel
Existing Plus Project (With Haul Road)
"Average Day" - PM Peak Hour

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

Intersection #2 SR 65 and SR 193 (Lincoln)

Cycle (sec): 100 Critical Vol./Cap. (X): 0.911
Loss Time (sec): 0 (Y+R = 4 sec) Average Delay (sec/veh): 31.2
Optimal Cycle: 180 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			Permitted			Permitted		
Rights:	Include			Include			Include			Ovl		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Lanes:	1 0	0 1	0	1 0	0 1	0	0 0	1! 0	0	0 1	0 0	1
Volume Module:												
Base Vol:	0	839	89	177	580	0	0	0	0	281	0	265
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	839	89	177	580	0	0	0	0	281	0	265
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	0	839	89	177	580	0	0	0	0	281	0	265
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	0	839	89	177	580	0	0	0	0	281	0	265
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Final Vol.:	0	839	89	177	580	0	0	0	0	281	0	265
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	1.00	0.87	0.87	0.81	0.86	1.00	1.00	1.00	1.00	0.63	1.00	0.74
Lanes:	1.00	0.90	0.10	1.00	1.00	0.00	0.00	1.00	0.00	1.00	0.00	1.00
Final Sat.:	1900	1494	158	1547	1628	0	0	1900	0	1194	0	1411
Capacity Analysis Module:												
Vol/Sat:	0.00	0.56	0.56	0.11	0.36	0.00	0.00	0.00	0.00	0.24	0.00	0.19
Crit Moves:		****		****						****		
Green/Cycle:	0.00	0.62	0.62	0.13	0.74	0.00	0.00	0.00	0.00	0.26	0.00	0.38
Volume/Cap:	0.00	0.91	0.91	0.91	0.48	0.00	0.00	0.00	0.00	0.91	0.00	0.49
Delay/Veh:	0.0	28.8	28.8	83.7	5.5	0.0	0.0	0.0	0.0	65.6	0.0	24.1
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	0.0	28.8	28.8	83.7	5.5	0.0	0.0	0.0	0.0	65.6	0.0	24.1
DesignQueue:	0	21	2	9	9	0	0	0	0	12	0	9

Existing PM Plus Project Wed Jan 14, 2004 10:57:07 Page 6-1

Patterson Sand and Gravel
Existing Plus Project (With Haul Road)
"Average Day" - PM Peak Hour

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

Intersection #2 SR 65 and SR 193 (Lincoln)

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
HCM Ops Adjusted Lane Utilization Module:												
Lanes:	1 0	0 1	0	1 0	0 1	0	0 0	1! 0	0	0 1	0 0	1
Lane Group:	L	RT	RT	L	RT	RT	LTR	LTR	LTR	LT	LT	R
#LnsInGrps:	1	1	1	1	1	1	1	1	1	1	1	1
HCM Ops Input Saturation Adj Module:												
Lane Width:	12	12	12	12	12	12	12	12	12	12	12	12
CrosswalkWid		8			8			8			8	
% Hev Veh:		2			5			0			3	
Grade:		0%			0%			0%			0%	
Parking/Hr:		No			No			No			No	
Bus Stp/Hr:		0			0			0			0	
Area Type:	< < < < < < < < < < < < < < < CBD > > > > > > > > > > > > > > >											
Cnft Ped/Hr:		0			0			0			0	
ExclusiveRT:		Include			Include			Include			Include	
% RT Prtct:		0			0			0			0	
HCM Ops f(lt) Adj Case Module:												
f(lt) Case:	xxxx	xxxx	xxxx	1	xxxx	xxxx	xxxx	xxxx	xxxx	5	xxxx	xxxx
HCM Ops Saturation Adj Module:												
Ln Wid Adj:	xxxx	1.00	1.00	1.00	1.00	xxxxx	xxxx	xxxx	xxxxx	1.00	xxxx	1.00
Hev Veh Adj:	xxxx	0.98	0.98	0.95	0.95	xxxxx	xxxx	xxxx	xxxxx	0.97	xxxx	0.97
Grade Adj:	xxxx	1.00	1.00	1.00	1.00	xxxxx	xxxx	xxxx	xxxxx	1.00	xxxx	1.00
Parking Adj:	xxxx	1.00	1.00	xxxx	1.00	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	1.00
Bus Stp Adj:	xxxx	1.00	1.00	xxxx	1.00	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	1.00
Area Adj:	xxxx	0.90	0.90	0.90	0.90	xxxxx	xxxx	xxxx	xxxxx	0.90	xxxx	0.90
RT Adj:	xxxx	0.99	0.99	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	0.85
LT Adj:	xxxx	xxxx	xxxxx	0.95	xxxx	xxxxx	xxxx	xxxx	xxxxx	0.72	xxxx	xxxxx
PedBike Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
HCM Sat Adj:	1.00	0.87	0.87	0.81	0.86	1.00	1.00	1.00	1.00	0.63	1.00	0.74
Usr Sat Adj:	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 Sat Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Fnl Sat Adj:	1.00	0.87	0.87	0.81	0.86	1.00	1.00	1.00	1.00	0.63	1.00	0.74
Delay Adjustment Factor Module:												
Coordinated:	< < < < < < < < < < < < < < < No > > > > > > > > > > > > > > >											
Signal Type:	< < < < < < < < < < < < < Actuated > > > > > > > > > > > > >											
DelAdjFctr:	0.00	1.00	1.00	1.00	1.00	0.00	0.00	0.00	0.00	1.00	0.00	1.00

Patterson Sand and Gravel
Existing Plus Project (With Haul Road)
"Average Day" - PM Peak Hour

Level Of Service Detailed Computation Report (Permitted Left Turn Sat Adj)
2000 HCM Operations Method
Base Volume Alternative

****
Intersection #2 SR 65 and SR 193 (Lincoln)
****

Approach:	North	South	East	West
Cycle Length, C:	xxxxxx	xxxxxx	xxxxxx	100
Actual Green Time Per Lane Group, G:	xxxxxx	xxxxxx	xxxxxx	21.81
Effective Green Time Per Lane Group, g:	xxxxxx	xxxxxx	xxxxxx	25.81
Opposing Effective Green Time, go:	xxxxxx	xxxxxx	xxxxxx	25.81
Number Of Opposing Lanes, No:	xxxxxx	xxxxxx	xxxxxx	1
Number Of Lanes In Lane Group, N:	xxxxxx	xxxxxx	xxxxxx	1
Adjusted Left-Turn Flow Rate, Vlt:	xxxxxx	xxxxxx	xxxxxx	281
Proportion of Left Turns in Lane Group, Plt:	xxxxxx	xxxxxx	xxxxxx	1.00
Proportion of Left Turns in Opp Flow, Plto:	xxxxxx	xxxxxx	xxxxxx	1.00
Left Turns Per Cycle, LTC:	xxxxxx	xxxxxx	xxxxxx	7.81
Adjusted Opposing Flow Rate, Vo:	xxxxxx	xxxxxx	xxxxxx	0
Opposing Flow Per Lane Per Cycle, Volc:	xxxxxx	xxxxxx	xxxxxx	0.00
Opposing Platoon Ratio, Rpo:	xxxxxx	xxxxxx	xxxxxx	1.00
Lost Time Per Phase, tl:	xxxxxx	xxxxxx	xxxxxx	0.00
Eff grn until arrival of left-turn car, gf:	xxxxxx	xxxxxx	xxxxxx	0.46
Opposing Queue Ratio, qro:	xxxxxx	xxxxxx	xxxxxx	0.74
Eff grn blocked by opposing queue, gq:	xxxxxx	xxxxxx	xxxxxx	0.00
Eff grn while left turns filter thru, gu:	xxxxxx	xxxxxx	xxxxxx	25.35
Max opposing cars arriving during gq-gf, n:	xxxxxx	xxxxxx	xxxxxx	0.00
Proportion of Opposing Thru & RT cars, ptho:	xxxxxx	xxxxxx	xxxxxx	0.00
Left-turn Saturation Factor, fs:	xxxxxx	xxxxxx	xxxxxx	xxxxxx
Proportion of Left Turns in Shared Lane, pl:	xxxxxx	xxxxxx	xxxxxx	1.00
Through-car Equivalents, el1:	xxxxxx	xxxxxx	xxxxxx	1.40
Single Lane Through-car Equivalents, el2:	xxxxxx	xxxxxx	xxxxxx	1.00
Minimum Left Turn Adjustment Factor, fmin:	xxxxxx	xxxxxx	xxxxxx	0.15
Single Lane Left Turn Adjustment Factor, fm:	xxxxxx	xxxxxx	xxxxxx	0.72
Left Turn Adjustment Factor, flt:	xxxxxx	xxxxxx	xxxxxx	0.72

****

Patterson Sand and Gravel
Existing Plus Project (With Haul Road)
"Average Day" - PM Peak Hour

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

****
Intersection #3 Old SR 65 and Haul Route
****
Average Delay (sec/veh): 0.8 Worst Case 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:	Uncontrolled			Uncontrolled			Stop Sign			Stop Sign		
Rights:	Include			Include			Include			Include		
Lanes:	0 0	1 0	1	1 0	1 0	0	0 0	0 0	0	0 0	1! 0	0
Volume Module:												
Base Vol:	0	778	67	14	575	0	0	0	0	25	0	10
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	778	67	14	575	0	0	0	0	25	0	10
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	0	778	67	14	575	0	0	0	0	25	0	10
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Final Vol.:	0	778	67	14	575	0	0	0	0	25	0	10
Critical Gap Module:												
Critical Gp:	xxxxx	xxxx	xxxxx	4.1	xxxx	xxxxx	xxxxx	xxxx	xxxxx	6.5	xxxx	6.3
FollowUpTim:	xxxxx	xxxx	xxxxx	2.2	xxxx	xxxxx	xxxxx	xxxx	xxxxx	3.6	xxxx	3.4
Capacity Module:												
Cnflict Vol:	xxxx	xxxx	xxxxx	845	xxxx	xxxxx	xxxx	xxxx	xxxxx	1381	xxxx	778
Potent Cap.:	xxxx	xxxx	xxxxx	779	xxxx	xxxxx	xxxx	xxxx	xxxxx	152	xxxx	382
Move Cap.:	xxxx	xxxx	xxxxx	779	xxxx	xxxxx	xxxx	xxxx	xxxxx	150	xxxx	382
Level Of Service Module:												
Stopped Del:	xxxxx	xxxx	xxxxx	9.7	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx
LOS by Move:	*	*	*	A	*	*	*	*	*	*	*	*
Movement:	LT -	LTR -	RT	LT -	LTR -	RT	LT -	LTR -	RT	LT -	LTR -	RT
Shared Cap.:	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	181	xxxxx
Shrd StpDel:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	29.6	xxxxx
Shared LOS:	*	*	*	*	*	*	*	*	*	*	D	*
ApproachDel:	xxxxxx			xxxxxx			xxxxxx			29.6		
ApproachLOS:	*			*			*			D		

Existing PM Plus Project Wed Jan 14, 2004 10:57:07 Page 8-1

Patterson Sand and Gravel
Existing Plus Project (With Haul Road)
"Average Day" - PM Peak Hour

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

```
*******************************************************************************
Intersection #3 Old SR 65 and Haul Route
*******************************************************************************
Approach:       North Bound      South Bound      East Bound       West Bound
Movement:     L  -  T  -  R    L  -  T  -  R    L  -  T  -  R    L  -  T  -  R
------------|----------------|----------------|----------------|----------------|
HevVeh:             4%               5%               0%              11%
Grade:              0%               0%               0%               0%
Peds/Hour:          0                0                0                0
Pedestrian Walk Speed: 4.00 feet/sec
LaneWidth:        12 feet          12 feet          12 feet          12 feet
Time Period: 0.25 hour
------------|----------------|----------------|----------------|----------------|
Upstream Signals:
Link Index:       #2
Dist(miles):      0.000
Speed (mph):       0.00
SignalIndex:      #2
Cycle Time:           0 secs
InitVolume:     0     0
Saturation:     0     0
ArrivalType:    0     0
G/C:         0.00  0.00
*** Computation 1: Time for Queue to Clear at Each Upstream Intersection
P:          0.000 0.000
gq1:         0.00  0.00
gq2:         0.00  0.00
gq:          0.00  0.00
*** Computation 2: Time Intersection Blocked Because of Upstream Platoons
alpha:            0.000
beta:             0.000
ta (secs):        0.000
F:                0.000
f:          0.000 0.000
vcmax:          0     0
vcmin:          0     0
tp:           0.0   0.0
p:              0.000
*** Computation 3: Platoon Event Periods
pdom/psubo:      0.000/0.000/Unconstrained
*** Computation 4: Conflicting Flows During Each Unblocked Period
InitCnflVol:   0 xxxxx xxxxx  845 xxxxx xxxxx    0     0     0 1381     0   778
UpstreamSat:   0 xxxxx xxxxx    0 xxxxx xxxxx    0     0     0    0     0     0
UpstreamAdj:1.00 x.xxx x.xxx 1.00 x.xxx x.xxx 1.00 1.000 1.000 1.00 1.000 1.000
ConflictVol:   0 xxxxx xxxxx  845 xxxxx xxxxx    0     0     0 1381     0   778
*** Computation 5: Capactiy for Subject Movement During Unblocked Period
InitPotCap:    0 xxxxx xxxxx  779 xxxxx xxxxx    0     0     0  152     0   382
UpstreamAdj:1.00 x.xxx x.xxx 1.00 x.xxx x.xxx 1.00 1.000 1.000 1.00 1.000 1.000
PotentCap:     0 xxxxx xxxxx  779 xxxxx xxxxx    0     0     0  152     0   382
```


Existing PM Plus Project Wed Jan 14, 2004 10:57:07 Page 9-1

Patterson Sand and Gravel
Existing Plus Project (With Haul Road)
"Average Day" - PM Peak Hour

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

```
*******************************************************************************
Intersection #4 Riosa Rd and 11th St
*******************************************************************************
Cycle (sec):          100                Critical Vol./Cap. (X):          0.125
Loss Time (sec):        0 (Y+R =  4 sec) Average Delay (sec/veh):          7.4
Optimal Cycle:          0                Level Of Service:                    A
*******************************************************************************
Approach:       North Bound      South Bound      East Bound       West Bound
Movement:     L  -  T  -  R    L  -  T  -  R    L  -  T  -  R    L  -  T  -  R
------------|----------------||----------------||----------------||----------------|
Control:        Stop Sign        Stop Sign        Stop Sign        Stop Sign
Rights:           Include          Include          Include          Include
Min. Green:     0    0    0     0    0    0     0    0    0     0    0    0
Lanes:        0  0  1! 0  0     0  0  0  1  0     0  1  0  0  0     0  1  0  0  0
------------|----------------||----------------||----------------||----------------|
Volume Module:
Base Vol:       2    3    1     0    1    2     6  107    0     1   40    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:    2    3    1     0    1    2     6  107    0     1   40    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:     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 Volume:     2    3    1     0    1    2     6  107    0     1   40    0
Reduct Vol:     0    0    0     0    0    0     0    0    0     0    0    0
Reduced Vol:    2    3    1     0    1    2     6  107    0     1   40    0
PCE Adj:     1.00 1.00 1.00  1.00 1.00 1.00  1.00 1.00 1.00  1.00 1.00 1.00
MLF Adj:     1.00 1.00 1.00  1.00 1.00 1.00  1.00 1.00 1.00  1.00 1.00 1.00
Final Vol.:     2    3    1     0    1    2     6  107    0     1   40    0
------------|----------------||----------------||----------------||----------------|
Saturation Flow Module:
Adjustment:  1.00 1.00 1.00  1.00 1.00 1.00  1.00 1.00 1.00  1.00 1.00 1.00
Lanes:       0.33 0.50 0.17  0.00 0.33 0.67  0.05 0.95 0.00  0.02 0.98 0.00
Final Sat.:   278  416  139     0  303  606    48  857    0    22  867    0
------------|----------------||----------------||----------------||----------------|
Capacity Analysis Module:
Vol/Sat:     0.01 0.01 0.01  xxxx 0.00 0.00  0.12 0.12 xxxx  0.05 0.05 xxxx
Crit Moves:  ****                    ****       ****             ****
Delay/Veh:    7.2  7.2  7.2   0.0  6.8  6.8   7.5  7.5  0.0    7.2  7.2  0.0
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:   7.2  7.2  7.2   0.0  6.8  6.8   7.5  7.5  0.0    7.2  7.2  0.0
LOS by Move:    A    A    A     *    A    A     A    A    *     A    A    *
ApproachDel:       7.2              6.8              7.5              7.2
Delay Adj:        1.00             1.00             1.00             1.00
ApprAdjDel:        7.2              6.8              7.5              7.2
LOS by Appr:         A                A                A                A
*******************************************************************************
```

Existing PM Plus Project Wed Jan 14, 2004 10:57:07 Page 10-1

Patterson Sand and Gravel
Existing Plus Project (With Haul Road)
"Average Day" - PM Peak Hour

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

****
Intersection #4 Riosa Rd and 11th St
****

Approach:	North Bound	South Bound	East Bound	West Bound
Movement:	L - T - R	L - T - R	L - T - R	L - T - R
Time Period: 0.25 hour				
HevVeh:	0%	0%	0%	0%
Alpha Value: 0.01				
GroupType:	1	1	1	1
P[C1]:	0.8328	0.8296	0.9445	0.8667
P[C2]:	0.0027	0.0058	0.0453	0.1232
P[C3]:	0.1584	0.1578	0.0096	0.0088
P[C4]:	0.0062	0.0068	0.0005	0.0013
P[C5]:	0.0000	0.0000	0.0000	0.0000
Padj[C1]:	0.00338	0.00342	0.00066	0.00145
Padj[C2]:	0.00168	0.00166	-0.00035	-0.00112
Padj[C3]:	-0.00469	-0.00466	-0.00028	-0.00025
Padj[C4]:	-0.00037	-0.00041	-0.00003	-0.00008
Padj[C5]:	-0.00000	-0.00000	-0.00000	-0.00000
Lane:	L1	L1	L1	L1
LaneType:	LEFTTHRURITE	LEFTTHRURITE	LEFTTHRURITE	LEFTTHRURITE
HeadwayAdj:	-0.033	-0.400	0.011	0.005
Volume:	6	3	113	41
Capacity:	833	908	905	888
DegOfUtil:	0.01	0.00	0.12	0.05
DepHeadway:	4.18	3.82	3.97	4.02
ServiceTime:	2.2	1.8	2.0	2.0
Delay:	7.2	6.8	7.5	7.2
Approach:	North Bound	South Bound	East Bound	West Bound
ApproachDel:	7.2	6.8	7.5	7.2
Delay Adj:	1.00	1.00	1.00	1.00
ApprAdjDel:	7.2	6.8	7.5	7.2
LOS by Appr:	A	A	A	A

OverallDel: 7.4
OverallLOS: A

Existing PM Plus Project Wed Jan 14, 2004 10:57:07 Page 11-1

Patterson Sand and Gravel
Existing Plus Project (With Haul Road)
"Average Day" - PM Peak Hour

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

****
Intersection #5 Riosa Rd abd Karchner Rd
****

Average Delay (sec/veh): 3.8 Worst Case Level Of Service: A

****

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	- T	- R	L	- T	- R	L	- T	- R	L	- T	- R
Control:	Stop Sign			Stop Sign			Uncontrolled			Uncontrolled		
Rights:	Include			Include			Include			Include		
Lanes:	0 0	0 0	0	0 0	1! 0	0	0 1	0 0	0	0 0	0 1	0
Volume Module:												
Base Vol:	0	0	0	7	0	14	18	23	0	0	19	5
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	7	0	14	18	23	0	0	19	5
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	0	0	0	7	0	14	18	23	0	0	19	5
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Final Vol.:	0	0	0	7	0	14	18	23	0	0	19	5
Critical Gap Module:												
Critical Gp:	xxxxx	xxxx	xxxxx	6.6	xxxx	6.4	4.3	xxxx	xxxxx	xxxxx	xxxx	xxxxx
FollowUpTim:	xxxxx	xxxx	xxxxx	3.7	xxxx	3.5	2.4	xxxx	xxxxx	xxxxx	xxxx	xxxxx
Capacity Module:												
Cnflict Vol:	xxxx	xxxx	xxxxx	81	xxxx	22	24	xxxx	xxxxx	xxxx	xxxx	xxxxx
Potent Cap.:	xxxx	xxxx	xxxxx	882	xxxx	1009	1487	xxxx	xxxxx	xxxx	xxxx	xxxxx
Move Cap.:	xxxx	xxxx	xxxxx	873	xxxx	1009	1487	xxxx	xxxxx	xxxx	xxxx	xxxxx
Level Of Service Module:												
Stopped Del:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	7.5	xxxx	xxxxx	xxxxx	xxxx	xxxxx
LOS by Move:	*	*	*	*	*	*	A	*	*	*	*	*
Movement:	LT -	LTR -	RT	LT -	LTR -	RT	LT -	LTR -	RT	LT -	LTR -	RT
Shared Cap.:	xxxx	xxxx	xxxxx	xxxx	959	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx
Shrd StpDel:	xxxxx	xxxx	xxxxx	xxxxx	8.8	xxxxx	7.5	xxxx	xxxxx	xxxxx	xxxx	xxxxx
Shared LOS:	*	*	*	*	A	*	A	*	*	*	*	*
ApproachDel:	xxxxxx				8.8		xxxxxx			xxxxxx		
ApproachLOS:	*				A		*			*		

Existing PM Plus Project Wed Jan 14, 2004 10:57:07 Page 12-1

Patterson Sand and Gravel
Existing Plus Project (With Haul Road)
"Average Day" - PM Peak Hour

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

****
Intersection #5 Riosa Rd abd Karchner Rd
****

Approach:	North Bound	South Bound	East Bound	West Bound
Movement:	L - T - R	L - T - R	L - T - R	L - T - R
HevVeh:	0%	19%	19%	0%
Grade:	0%	0%	0%	0%
Peds/Hour:	0	0	0	0
LaneWidth:	12 feet	12 feet	12 feet	12 feet

Pedestrian Walk Speed: 4.00 feet/sec
Time Period: 0.25 hour

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Existing PM Plus Project Wed Jan 14, 2004 11:20:35 Page 1-1

Patterson Sand and Gravel
Existing Plus Project (With Haul Road)
"30th Highest" - PM Peak Hour

Scenario Report

Scenario:	Existing PM Plus Project
Command:	Existing PM Plus Project
Volume:	Existing PM Plus Project
Geometry:	Existing PM Plus Project
Impact Fee:	Default Impact Fee
Trip Generation:	Default Trip Generation
Trip Distribution:	Default Trip Distribution
Paths:	Default Paths
Routes:	Default Routes
Configuration:	Default Configuration

Existing PM Plus Project Wed Jan 14, 2004 11:20:36 Page 2-1

Patterson Sand and Gravel
Existing Plus Project (With Haul Road)
"30th Highest" - PM Peak Hour

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 65 and Riosa Road (Sheridan	C	1.3	0.000	C	1.3	0.000	+ 0.000 V/C
# 2 SR 65 and SR 193 (Lincoln)	C	31.9	0.918	C	31.9	0.918	+ 0.000 D/V
# 3 Old SR 65 and Haul Route	D	0.9	0.000	D	0.9	0.000	+ 0.000 V/C
# 4 Riosa Rd and 11th St	A	7.4	0.125	A	7.4	0.125	+ 0.000 V/C
# 5 Riosa Rd and Karchner Rd	A	4.0	0.000	A	4.0	0.000	+ 0.000 V/C

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Existing PM Plus Project   Wed Jan 14, 2004 11:20:36                Page 3-1
-------------------------------------------------------------------------------
                        Patterson Sand and Gravel
                   Existing Plus Project (With Haul Road)
                       "30th Highest" - PM Peak Hour
-------------------------------------------------------------------------------
                     Level Of Service Computation Report
              2000 HCM Unsignalized Method (Base Volume Alternative)
*******************************************************************************
Intersection #1 SR 65 and Riosa Road (Sheridan)
*******************************************************************************
Average Delay (sec/veh):       1.3           Worst Case 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:       Uncontrolled     Uncontrolled       Stop Sign        Stop Sign
Rights:           Include          Include          Include          Include
Lanes:       0  0  1  0  1    1  0  1  0  0    0  0  0  0  0    0  0  1! 0  0
------------|---------------||---------------||---------------||---------------|
Volume Module:
Base Vol:       0  788    33    71  579     0     0    0     0    12    0    50
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  788    33    71  579     0     0    0     0    12    0    50
User Adj:    1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
PHF Adj:     1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
PHF Volume:     0  788    33    71  579     0     0    0     0    12    0    50
Reduct Vol:     0    0     0     0    0     0     0    0     0     0    0     0
Final Vol.:     0  788    33    71  579     0     0    0     0    12    0    50
------------|---------------||---------------||---------------||---------------|
Critical Gap Module:
Critical Gp:xxxxx xxxx xxxxx   4.1 xxxx xxxxx xxxxx xxxx xxxxx   6.4 xxxx   6.2
FollowUpTim:xxxxx xxxx xxxxx   2.2 xxxx xxxxx xxxxx xxxx xxxxx   3.5 xxxx   3.3
------------|---------------||---------------||---------------||---------------|
Capacity Module:
Cnflict Vol: xxxx xxxx xxxxx   821 xxxx xxxxx  xxxx xxxx xxxxx  1509 xxxx   788
Potent Cap.: xxxx xxxx xxxxx   800 xxxx xxxxx  xxxx xxxx xxxxx   134 xxxx   394
Move Cap.:   xxxx xxxx xxxxx   800 xxxx xxxxx  xxxx xxxx xxxxx   125 xxxx   394
------------|---------------||---------------||---------------||---------------|
Level Of Service Module:
Stopped Del:xxxxx xxxx xxxxx   9.9 xxxx xxxxx xxxxx xxxx xxxxx xxxxx xxxx xxxxx
LOS by Move:   *    *     *     A    *     *     *    *     *     *    *     *
Movement:     LT - LTR - RT    LT - LTR - RT    LT - LTR - RT    LT - LTR - RT
Shared Cap.: xxxx xxxx xxxxx  xxxx xxxx xxxxx  xxxx xxxx xxxxx  xxxx  278 xxxxx
Shrd StpDel:xxxxx xxxx xxxxx xxxxx xxxx xxxxx xxxxx xxxx xxxxx xxxxx 21.6 xxxxx
Shared LOS:    *    *     *     *    *     *     *    *     *     *    C     *
ApproachDel:    xxxxxx           xxxxxx           xxxxxx           21.6
ApproachLOS:       *                *                *                C
```

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Existing PM Plus Project   Wed Jan 14, 2004 11:20:36                Page 4-1
-------------------------------------------------------------------------------
                        Patterson Sand and Gravel
                   Existing Plus Project (With Haul Road)
                       "30th Highest" - PM Peak Hour
-------------------------------------------------------------------------------
                  Level Of Service Detailed Computation Report
                        2000 HCM Unsignalized Method
                           Base Volume Alternative
*******************************************************************************
Intersection #1 SR 65 and Riosa Road (Sheridan)
*******************************************************************************
Approach:      North Bound      South Bound      East Bound       West Bound
Movement:    L  -  T  -  R    L  -  T  -  R    L  -  T  -  R    L  -  T  -  R
------------|---------------||---------------||---------------||---------------|
HevVeh:            3%               4%               0%               0%
Grade:             0%               0%               0%               0%
Peds/Hour:         0                0                0                0
Pedestrian Walk Speed: 4.00 feet/sec
LaneWidth:       12 feet          12 feet          12 feet          12 feet
Time Period: 0.25 hour
------------|---------------||---------------||---------------||---------------|
Upstream Signals:
Link Index:       #2
Dist(miles):      0.000
Speed (mph):       0.00
SignalIndex:      #2
Cycle Time:          0 secs
InitVolume:     0     0
Saturation:     0     0
ArrivalType:    0     0
G/C:         0.00  0.00
*** Computation 1: Time for Queue to Clear at Each Upstream Intersection
P:          0.000 0.000
gq1:         0.00  0.00
gq2:         0.00  0.00
gq:          0.00  0.00
*** Computation 2: Time Intersection Blocked Because of Upstream Platoons
alpha:            0.000
beta:             0.000
ta (secs):        0.000
F:                0.000
f:          0.000 0.000
vcmax:          0     0
vcmin:          0     0
tp:           0.0   0.0
p:                0.000
*** Computation 3: Platoon Event Periods
pdom/psubo:      0.000/0.000/Unconstrained
*** Computation 4: Conflicting Flows During Each Unblocked Period
InitCnflVol:   0 xxxxx xxxxx  821 xxxxx xxxxx    0     0     0 1509     0   788
UpstreamSat:   0 xxxxx xxxxx    0 xxxxx xxxxx    0     0     0    0     0     0
UpstreamAdj:1.00 x.xxx x.xxx 1.00 x.xxx x.xxx 1.00 1.000 1.000 1.00 1.000 1.000
ConflictVol:   0 xxxxx xxxxx  821 xxxxx xxxxx    0     0     0 1509     0   788
*** Computation 5: Capactiy for Subject Movement During Unblocked Period
InitPotCap:    0 xxxxx xxxxx  800 xxxxx xxxxx    0     0     0  134     0   394
UpstreamAdj:1.00 x.xxx x.xxx 1.00 x.xxx x.xxx 1.00 1.000 1.000 1.00 1.000 1.000
PotentCap:     0 xxxxx xxxxx  800 xxxxx xxxxx    0     0     0  134     0   394
```

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Patterson Sand and Gravel
Existing Plus Project (With Haul Road)
"30th Highest" - PM Peak Hour

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

Intersection #2 SR 65 and SR 193 (Lincoln)

Cycle (sec): 100 Critical Vol./Cap. (X): 0.918
Loss Time (sec): 0 (Y+R = 4 sec) Average Delay (sec/veh): 31.9
Optimal Cycle: 180 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			Permitted			Permitted		
Rights:	Include			Include			Include			Ovl		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Lanes:	1 0	0 1	0	1 0	0 1	0	0 0	1! 0	0	0 1	0 0	1
Volume Module:												
Base Vol:	0	842	89	177	580	0	0	0	0	281	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:	0	842	89	177	580	0	0	0	0	281	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:	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 Volume:	0	842	89	177	580	0	0	0	0	281	0	266
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	0	842	89	177	580	0	0	0	0	281	0	266
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Final Vol.:	0	842	89	177	580	0	0	0	0	281	0	266
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	1.00	0.86	0.86	0.81	0.86	1.00	1.00	1.00	1.00	0.63	1.00	0.74
Lanes:	1.00	0.90	0.10	1.00	1.00	0.00	0.00	1.00	0.00	1.00	0.00	1.00
Final Sat.:	1900	1481	157	1547	1628	0	0	1900	0	1194	0	1411
Capacity Analysis Module:												
Vol/Sat:	0.00	0.57	0.57	0.11	0.36	0.00	0.00	0.00	0.00	0.24	0.00	0.19
Crit Moves:		****		****						****		
Green/Cycle:	0.00	0.62	0.62	0.12	0.74	0.00	0.00	0.00	0.00	0.26	0.00	0.38
Volume/Cap:	0.00	0.92	0.92	0.92	0.48	0.00	0.00	0.00	0.00	0.92	0.00	0.49
Delay/Veh:	0.0	29.7	29.7	85.7	5.4	0.0	0.0	0.0	0.0	67.3	0.0	24.3
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:	0.0	29.7	29.7	85.7	5.4	0.0	0.0	0.0	0.0	67.3	0.0	24.3
DesignQueue:	0	20	2	9	9	0	0	0	0	12	0	10

Patterson Sand and Gravel
Existing Plus Project (With Haul Road)
"30th Highest" - PM Peak Hour

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

Intersection #2 SR 65 and SR 193 (Lincoln)

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
HCM Ops Adjusted Lane Utilization Module:												
Lanes:	1 0	0 1	0	1 0	0 1	0	0 0	1! 0	0	0 1	0 0	1
Lane Group:	L	RT	RT	L	RT	RT	LTR	LTR	LTR	LT	LT	R
#LnsInGrps:	1	1	1	1	1	1	1	1	1	1	1	1
HCM Ops Input Saturation Adj Module:												
Lane Width:	12	12	12	12	12	12	12	12	12	12	12	12
CrosswalkWid		8			8			8			8	
% Hev Veh:		3			5			0			3	
Grade:		0%			0%			0%			0%	
Parking/Hr:		No			No			No			No	
Bus Stp/Hr:		0			0			0			0	
Area Type:	< < < < < < < < < < < < < < < CBD > > > > > > > > > > > > > > >											
Cnft Ped/Hr:		0			0			0			0	
ExclusiveRT:		Include			Include			Include			Include	
% RT Prtct:		0			0			0			0	
HCM Ops f(lt) Adj Case Module:												
f(lt) Case:	xxxx	xxxx	xxxx		1 xxxx	xxxx	xxxx	xxxx	xxxx		5 xxxx	xxxx
HCM Ops Saturation Adj Module:												
Ln Wid Adj:	xxxx	1.00	1.00	1.00	1.00	xxxxx	xxxx	xxxx	xxxxx	1.00	xxxx	1.00
Hev Veh Adj:	xxxx	0.97	0.97	0.95	0.95	xxxxx	xxxx	xxxx	xxxxx	0.97	xxxx	0.97
Grade Adj:	xxxx	1.00	1.00	1.00	1.00	xxxxx	xxxx	xxxx	xxxxx	1.00	xxxx	1.00
Parking Adj:	xxxx	1.00	1.00	xxxx	1.00	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	1.00
Bus Stp Adj:	xxxx	1.00	1.00	xxxx	1.00	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	1.00
Area Adj:	xxxx	0.90	0.90	0.90	0.90	xxxxx	xxxx	xxxx	xxxxx	0.90	xxxx	0.90
RT Adj:	xxxx	0.99	0.99	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	0.85
LT Adj:	xxxx	xxxx	xxxxx	0.95	xxxx	xxxxx	xxxx	xxxx	xxxxx	0.72	xxxx	xxxxx
PedBike Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
HCM Sat Adj:	1.00	0.86	0.86	0.81	0.86	1.00	1.00	1.00	1.00	0.63	1.00	0.74
Usr Sat Adj:	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 Sat Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Fnl Sat Adj:	1.00	0.86	0.86	0.81	0.86	1.00	1.00	1.00	1.00	0.63	1.00	0.74
Delay Adjustment Factor Module:												
Coordinated:	< < < < < < < < < < < < < < < No > > > > > > > > > > > > > > >											
Signal Type:	< < < < < < < < < < < < < Actuated > > > > > > > > > > > > >											
DelAdjFctr:	0.00	1.00	1.00	1.00	1.00	0.00	0.00	0.00	0.00	1.00	0.00	1.00

Patterson Sand and Gravel
Existing Plus Project (With Haul Road)
"30th Highest" - PM Peak Hour

Level Of Service Detailed Computation Report (Permitted Left Turn Sat Adj)
2000 HCM Operations Method
Base Volume Alternative

****

Intersection #2 SR 65 and SR 193 (Lincoln)

****

Approach:	North	South	East	West
Cycle Length, C:	xxxxxx	xxxxxx	xxxxxx	100
Actual Green Time Per Lane Group, G:	xxxxxx	xxxxxx	xxxxxx	21.62
Effective Green Time Per Lane Group, g:	xxxxxx	xxxxxx	xxxxxx	25.62
Opposing Effective Green Time, go:	xxxxxx	xxxxxx	xxxxxx	25.62
Number Of Opposing Lanes, No:	xxxxxx	xxxxxx	xxxxxx	1
Number Of Lanes In Lane Group, N:	xxxxxx	xxxxxx	xxxxxx	1
Adjusted Left-Turn Flow Rate, Vlt:	xxxxxx	xxxxxx	xxxxxx	281
Proportion of Left Turns in Lane Group, Plt:	xxxxxx	xxxxxx	xxxxxx	1.00
Proportion of Left Turns in Opp Flow, Plto:	xxxxxx	xxxxxx	xxxxxx	1.00
Left Turns Per Cycle, LTC:	xxxxxx	xxxxxx	xxxxxx	7.81
Adjusted Opposing Flow Rate, Vo:	xxxxxx	xxxxxx	xxxxxx	0
Opposing Flow Per Lane Per Cycle, Volc:	xxxxxx	xxxxxx	xxxxxx	0.00
Opposing Platoon Ratio, Rpo:	xxxxxx	xxxxxx	xxxxxx	1.00
Lost Time Per Phase, tl:	xxxxxx	xxxxxx	xxxxxx	0.00
Eff grn until arrival of left-turn car, gf:	xxxxxx	xxxxxx	xxxxxx	0.46
Opposing Queue Ratio, qro:	xxxxxx	xxxxxx	xxxxxx	0.74
Eff grn blocked by opposing queue, gq:	xxxxxx	xxxxxx	xxxxxx	0.00
Eff grn while left turns filter thru, gu:	xxxxxx	xxxxxx	xxxxxx	25.16
Max opposing cars arriving during gq-gf, n:	xxxxxx	xxxxxx	xxxxxx	0.00
Proportion of Opposing Thru & RT cars, ptho:	xxxxxx	xxxxxx	xxxxxx	0.00
Left-turn Saturation Factor, fs:	xxxxxx	xxxxxx	xxxxxx	xxxxxx
Proportion of Left Turns in Shared Lane, pl:	xxxxxx	xxxxxx	xxxxxx	1.00
Through-car Equivalents, el1:	xxxxxx	xxxxxx	xxxxxx	1.40
Single Lane Through-car Equivalents, el2:	xxxxxx	xxxxxx	xxxxxx	1.00
Minimum Left Turn Adjustment Factor, fmin:	xxxxxx	xxxxxx	xxxxxx	0.16
Single Lane Left Turn Adjustment Factor, fm:	xxxxxx	xxxxxx	xxxxxx	0.72
Left Turn Adjustment Factor, flt:	xxxxxx	xxxxxx	xxxxxx	0.72

****

Patterson Sand and Gravel
Existing Plus Project (With Haul Road)
"30th Highest" - PM Peak Hour

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

****

Intersection #3 Old SR 65 and Haul Route

****

Average Delay (sec/veh): 0.9 Worst Case 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:	Uncontrolled			Uncontrolled			Stop Sign			Stop Sign		
Rights:	Include			Include			Include			Include		
Lanes:	0 0	1	0 1	1 0	1	0 0	0 0	0	0 0	0 0	1!	0 0
Volume Module:												
Base Vol:	0	778	69	16	575	0	0	0	0	27	0	10
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	778	69	16	575	0	0	0	0	27	0	10
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	0	778	69	16	575	0	0	0	0	27	0	10
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Final Vol.:	0	778	69	16	575	0	0	0	0	27	0	10
Critical Gap Module:												
Critical Gp:	xxxxx	xxxx	xxxxx	4.1	xxxx	xxxxx	xxxxx	xxxx	xxxxx	6.6	xxxx	6.4
FollowUpTim:	xxxxx	xxxx	xxxxx	2.2	xxxx	xxxxx	xxxxx	xxxx	xxxxx	3.7	xxxx	3.5
Capacity Module:												
Cnflict Vol:	xxxx	xxxx	xxxxx	847	xxxx	xxxxx	xxxx	xxxx	xxxxx	1385	xxxx	778
Potent Cap.:	xxxx	xxxx	xxxxx	777	xxxx	xxxxx	xxxx	xxxx	xxxxx	147	xxxx	373
Move Cap.:	xxxx	xxxx	xxxxx	777	xxxx	xxxxx	xxxx	xxxx	xxxxx	144	xxxx	373
Level Of Service Module:												
Stopped Del:	xxxxx	xxxx	xxxxx	9.7	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx
LOS by Move:	*	*	*	A	*	*	*	*	*	*	*	*
Movement:	LT -	LTR -	RT	LT -	LTR -	RT	LT -	LTR -	RT	LT -	LTR -	RT
Shared Cap.:	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	173	xxxxx
Shrd StpDel:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	31.4	xxxxx
Shared LOS:	*	*	*	*	*	*	*	*	*	*	D	*
ApproachDel:	xxxxxx			xxxxxx			xxxxxx			31.4		
ApproachLOS:	*			*			*			D		

Patterson Sand and Gravel
Existing Plus Project (With Haul Road)
"30th Highest" - PM Peak Hour

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

```
*******************************************************************************
Intersection #3 Old SR 65 and Haul Route
*******************************************************************************
Approach:       North Bound      South Bound      East Bound       West Bound
Movement:     L  -  T  -  R    L  -  T  -  R    L  -  T  -  R    L  -  T  -  R
------------|----------------|----------------|----------------|----------------|
HevVeh:             4%               5%               0%              17%
Grade:              0%               0%               0%               0%
Peds/Hour:          0                0                0                0
Pedestrian Walk Speed: 4.00 feet/sec
LaneWidth:        12 feet          12 feet          12 feet          12 feet
Time Period: 0.25 hour
------------|----------------|----------------|----------------|----------------|
Upstream Signals:
Link Index:        #2
Dist(miles):       0.000
Speed (mph):        0.00
SignalIndex:       #2
Cycle Time:            0 secs
InitVolume:      0     0
Saturation:      0     0
ArrivalType:     0     0
G/C:          0.00  0.00
*** Computation 1: Time for Queue to Clear at Each Upstream Intersection
P:           0.000 0.000
gq1:          0.00  0.00
gq2:          0.00  0.00
gq:           0.00  0.00
*** Computation 2: Time Intersection Blocked Because of Upstream Platoons
alpha:             0.000
beta:              0.000
ta (secs):         0.000
F:                 0.000
f:           0.000 0.000
vcmax:           0     0
vcmin:           0     0
tp:            0.0   0.0
p:                 0.000
*** Computation 3: Platoon Event Periods
pdom/psubo:       0.000/0.000/Unconstrained
*** Computation 4: Conflicting Flows During Each Unblocked Period
InitCnflVol:   0 xxxxx xxxxx  847 xxxxx xxxxx    0     0     0 1385     0   778
UpstreamSat:   0 xxxxx xxxxx    0 xxxxx xxxxx    0     0     0    0     0     0
UpstreamAdj:1.00 x.xxx x.xxx 1.00 x.xxx x.xxx 1.00 1.000 1.000 1.00 1.000 1.000
ConflictVol:   0 xxxxx xxxxx  847 xxxxx xxxxx    0     0     0 1385     0   778
*** Computation 5: Capactiy for Subject Movement During Unblocked Period
InitPotCap:    0 xxxxx xxxxx  777 xxxxx xxxxx    0     0     0  147     0   373
UpstreamAdj:1.00 x.xxx x.xxx 1.00 x.xxx x.xxx 1.00 1.000 1.000 1.00 1.000 1.000
PotentCap:     0 xxxxx xxxxx  777 xxxxx xxxxx    0     0     0  147     0   373
```


Patterson Sand and Gravel
Existing Plus Project (With Haul Road)
"30th Highest" - PM Peak Hour

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

```
*******************************************************************************
Intersection #4 Riosa Rd and 11th St
*******************************************************************************
Cycle (sec):        100                Critical Vol./Cap. (X):         0.125
Loss Time (sec):      0 (Y+R =  4 sec) Average Delay (sec/veh):          7.4
Optimal Cycle:        0                Level Of Service:                    A
*******************************************************************************
Approach:       North Bound      South Bound      East Bound       West Bound
Movement:     L  -  T  -  R    L  -  T  -  R    L  -  T  -  R    L  -  T  -  R
------------||---------------||---------------||---------------||---------------|
Control:        Stop Sign        Stop Sign        Stop Sign        Stop Sign
Rights:           Include          Include          Include          Include
Min. Green:     0    0    0     0    0    0     0    0    0     0    0    0
Lanes:        0  0  1! 0  0     0  0  0  1  0     0  1  0  0  0     0  1  0  0  0
------------||---------------||---------------||---------------||---------------|
Volume Module:
Base Vol:       2    3    1     0    1    2     6  107    0     1   40    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:    2    3    1     0    1    2     6  107    0     1   40    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:     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 Volume:     2    3    1     0    1    2     6  107    0     1   40    0
Reduct Vol:     0    0    0     0    0    0     0    0    0     0    0    0
Reduced Vol:    2    3    1     0    1    2     6  107    0     1   40    0
PCE Adj:     1.00 1.00 1.00  1.00 1.00 1.00  1.00 1.00 1.00  1.00 1.00 1.00
MLF Adj:     1.00 1.00 1.00  1.00 1.00 1.00  1.00 1.00 1.00  1.00 1.00 1.00
Final Vol.:     2    3    1     0    1    2     6  107    0     1   40    0
------------||---------------||---------------||---------------||---------------|
Saturation Flow Module:
Adjustment:  1.00 1.00 1.00  1.00 1.00 1.00  1.00 1.00 1.00  1.00 1.00 1.00
Lanes:       0.33 0.50 0.17  0.00 0.33 0.67  0.05 0.95 0.00  0.02 0.98 0.00
Final Sat.:   278  416  139     0  303  606    48  857    0    22  867    0
------------||---------------||---------------||---------------||---------------|
Capacity Analysis Module:
Vol/Sat:     0.01 0.01 0.01  xxxx 0.00 0.00  0.12 0.12  xxxx  0.05 0.05  xxxx
Crit Moves:  ****                     ****       ****             ****
Delay/Veh:    7.2  7.2  7.2   0.0  6.8  6.8   7.5  7.5   0.0   7.2  7.2   0.0
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:   7.2  7.2  7.2   0.0  6.8  6.8   7.5  7.5   0.0   7.2  7.2   0.0
LOS by Move:    A    A    A     *    A    A     A    A     *     A    A     *
ApproachDel:       7.2              6.8              7.5              7.2
Delay Adj:       1.00             1.00             1.00             1.00
ApprAdjDel:        7.2              6.8              7.5              7.2
LOS by Appr:         A                A                A                A
*******************************************************************************
```

Existing PM Plus Project Wed Jan 14, 2004 11:20:36 Page 10-1

Patterson Sand and Gravel
Existing Plus Project (With Haul Road)
"30th Highest" - PM Peak Hour

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

****
Intersection #4 Riosa Rd and 11th St
****

Approach:	North Bound	South Bound	East Bound	West Bound
Movement:	L - T - R	L - T - R	L - T - R	L - T - R
Time Period: 0.25 hour				
HevVeh:	0%	0%	0%	0%
Alpha Value: 0.01				
GroupType:	1	1	1	1
P[C1]:	0.8328	0.8296	0.9445	0.8667
P[C2]:	0.0027	0.0058	0.0453	0.1232
P[C3]:	0.1584	0.1578	0.0096	0.0088
P[C4]:	0.0062	0.0068	0.0005	0.0013
P[C5]:	0.0000	0.0000	0.0000	0.0000
Padj[C1]:	0.00338	0.00342	0.00066	0.00145
Padj[C2]:	0.00168	0.00166	-0.00035	-0.00112
Padj[C3]:	-0.00469	-0.00466	-0.00028	-0.00025
Padj[C4]:	-0.00037	-0.00041	-0.00003	-0.00008
Padj[C5]:	-0.00000	-0.00000	-0.00000	-0.00000
Lane:	L1	L1	L1	L1
LaneType:	LEFTTHRURITE	LEFTTHRURITE	LEFTTHRURITE	LEFTTHRURITE
HeadwayAdj:	-0.033	-0.400	0.011	0.005
Volume:	6	3	113	41
Capacity:	833	908	905	888
DegOfUtil:	0.01	0.00	0.12	0.05
DepHeadway:	4.18	3.82	3.97	4.02
ServiceTime:	2.2	1.8	2.0	2.0
Delay:	7.2	6.8	7.5	7.2
Approach:	North Bound	South Bound	East Bound	West Bound
ApproachDel:	7.2	6.8	7.5	7.2
Delay Adj:	1.00	1.00	1.00	1.00
ApprAdjDel:	7.2	6.8	7.5	7.2
LOS by Appr:	A	A	A	A
OverallDel:		7.4		
OverallLOS:		A		

Existing PM Plus Project Wed Jan 14, 2004 11:20:36 Page 11-1

Patterson Sand and Gravel
Existing Plus Project (With Haul Road)
"30th Highest" - PM Peak Hour

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

****
Intersection #5 Riosa Rd and Karchner Rd
****

Average Delay (sec/veh): 4.0 Worst Case Level Of Service: A

****

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	- T	- R	L	- T	- R	L	- T	- R	L	- T	- R
Control:	Stop Sign			Stop Sign			Uncontrolled			Uncontrolled		
Rights:	Include			Include			Include			Include		
Lanes:	0 0	0 0	0	0 0	1! 0	0	0 1	0 0	0	0 0	0 1	0
Volume Module:												
Base Vol:	0	0	0	7	0	16	21	23	0	0	19	5
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	7	0	16	21	23	0	0	19	5
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	0	0	0	7	0	16	21	23	0	0	19	5
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Final Vol.:	0	0	0	7	0	16	21	23	0	0	19	5
Critical Gap Module:												
Critical Gp:	xxxxx	xxxx	xxxxx	6.7	xxxx	6.5	4.4	xxxx	xxxxx	xxxxx	xxxx	xxxxx
FollowUpTim:	xxxxx	xxxx	xxxxx	3.7	xxxx	3.5	2.4	xxxx	xxxxx	xxxxx	xxxx	xxxxx
Capacity Module:												
Cnflict Vol:	xxxx	xxxx	xxxxx	87	xxxx	22	24	xxxx	xxxxx	xxxx	xxxx	xxxxx
Potent Cap.:	xxxx	xxxx	xxxxx	857	xxxx	988	1448	xxxx	xxxxx	xxxx	xxxx	xxxxx
Move Cap.:	xxxx	xxxx	xxxxx	847	xxxx	988	1448	xxxx	xxxxx	xxxx	xxxx	xxxxx
Level Of Service Module:												
Stopped Del:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	7.5	xxxx	xxxxx	xxxxx	xxxx	xxxxx
LOS by Move:	*	*	*	*	*	*	A	*	*	*	*	*
Movement:	LT -	LTR -	RT	LT -	LTR -	RT	LT -	LTR -	RT	LT -	LTR -	RT
Shared Cap.:	xxxx	xxxx	xxxxx	xxxx	940	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx
Shrd StpDel:	xxxxx	xxxx	xxxxx	xxxxx	8.9	xxxxx	7.5	xxxx	xxxxx	xxxxx	xxxx	xxxxx
Shared LOS:	*	*	*	*	A	*	A	*	*	*	*	*
ApproachDel:	xxxxxx			8.9			xxxxxx			xxxxxx		
ApproachLOS:	*			A			*			*		

Existing PM Plus Project Wed Jan 14, 2004 11:20:36 Page 12-1

Patterson Sand and Gravel
Existing Plus Project (With Haul Road)
"30th Highest" - PM Peak Hour

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

****
Intersection #5 Riosa Rd and Karchner Rd
****

Approach:	North Bound	South Bound	East Bound	West Bound
Movement:	L - T - R	L - T - R	L - T - R	L - T - R
HevVeh:	0%	27%	26%	0%
Grade:	0%	0%	0%	0%
Peds/Hour:	0	0	0	0
Pedestrian Walk Speed: 4.00 feet/sec				
LaneWidth:	12 feet	12 feet	12 feet	12 feet
Time Period: 0.25 hour				

Existing PM Plus Project Wed Jan 14, 2004 11:45:54 Page 1-1

Patterson Sand and Gravel
Existing Plus Project (With Haul Road)
"Highest" - PM Peak Hour

Scenario Report

Scenario:	Existing PM Plus Project
Command:	Existing PM Plus Project
Volume:	Existing PM Plus Project
Geometry:	Existing PM Plus Project
Impact Fee:	Default Impact Fee
Trip Generation:	Default Trip Generation
Trip Distribution:	Default Trip Distribution
Paths:	Default Paths
Routes:	Default Routes
Configuration:	Default Configuration

Existing PM Plus Project Wed Jan 14, 2004 11:45:54 Page 2-1

Patterson Sand and Gravel
Existing Plus Project (With Haul Road)
"Highest" - PM Peak Hour

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 65 and Riosa Road (Sheridan	C	1.3	0.000	C	1.3	0.000	+ 0.000 V/C
# 2 SR 65 and SR 193 (Lincoln)	C	32.1	0.920	C	32.1	0.920	+ 0.000 D/V
# 3 Old SR 65 and Haul Route	D	1.0	0.000	D	1.0	0.000	+ 0.000 V/C
# 4 Riosa Rd and 11th St	A	7.4	0.125	A	7.4	0.125	+ 0.000 V/C
# 5 Riosa Rd and Karchner Rd	A	4.2	0.000	A	4.2	0.000	+ 0.000 V/C

Patterson Sand and Gravel
Existing Plus Project (With Haul Road)
"Highest" - PM Peak Hour

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

****
Intersection #1 SR 65 and Riosa Road (Sheridan)
****
Average Delay (sec/veh): 1.3 Worst Case 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:	Uncontrolled				Uncontrolled				Stop Sign				Stop Sign			
Rights:	Include				Include				Include				Include			
Lanes:	0	0	1	0 1	1	0	1	0 0	0	0	0	0 0	0	0	1!	0 0
Volume Module:																
Base Vol:	0	789		33	71	579		0	0		0	0	12		0	50
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	789		33	71	579		0	0		0	0	12		0	50
User Adj:	1.00	1.00		1.00	1.00	1.00		1.00	1.00		1.00	1.00	1.00		1.00	1.00
PHF Adj:	1.00	1.00		1.00	1.00	1.00		1.00	1.00		1.00	1.00	1.00		1.00	1.00
PHF Volume:	0	789		33	71	579		0	0		0	0	12		0	50
Reduct Vol:	0	0		0	0	0		0	0		0	0	0		0	0
Final Vol.:	0	789		33	71	579		0	0		0	0	12		0	50
Critical Gap Module:																
Critical Gp:	xxxxx	xxxx		xxxxx	4.1	xxxx		xxxxx	xxxxx		xxxx	xxxxx	6.4		xxxx	6.2
FollowUpTim:	xxxxx	xxxx		xxxxx	2.2	xxxx		xxxxx	xxxxx		xxxx	xxxxx	3.5		xxxx	3.3
Capacity Module:																
Cnflict Vol:	xxxx	xxxx		xxxxx	822	xxxx		xxxxx	xxxx		xxxx	xxxxx	1510		xxxx	789
Potent Cap.:	xxxx	xxxx		xxxxx	799	xxxx		xxxxx	xxxx		xxxx	xxxxx	134		xxxx	394
Move Cap.:	xxxx	xxxx		xxxxx	799	xxxx		xxxxx	xxxx		xxxx	xxxxx	125		xxxx	394
Level Of Service Module:																
Stopped Del:	xxxxx	xxxx		xxxxx	9.9	xxxx		xxxxx	xxxxx		xxxx	xxxxx	xxxxx		xxxx	xxxxx
LOS by Move:	*	*		*	A	*		*	*		*	*	*		*	*
Movement:	LT -	LTR -		RT	LT -	LTR -		RT	LT -		LTR -	RT	LT -		LTR -	RT
Shared Cap.:	xxxx	xxxx		xxxxx	xxxx	xxxx		xxxxx	xxxx		xxxx	xxxxx	xxxx		278	xxxxx
Shrd StpDel:	xxxxx	xxxx		xxxxx	xxxxx	xxxx		xxxxx	xxxxx		xxxx	xxxxx	xxxxx		21.6	xxxxx
Shared LOS:	*	*		*	*	*		*	*		*	*	*		C	*
ApproachDel:		xxxxxx				xxxxxx				xxxxxx					21.6	
ApproachLOS:		*				*				*					C	

Patterson Sand and Gravel
Existing Plus Project (With Haul Road)
"Highest" - PM Peak Hour

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

****
Intersection #1 SR 65 and Riosa Road (Sheridan)
****

Approach:	North Bound				South Bound				East Bound				West Bound			
Movement:	L	-	T	- R	L	-	T	- R	L	-	T	- R	L	-	T	- R
HevVeh:			3%				4%				0%				0%	
Grade:			0%				0%				0%				0%	
Peds/Hour:			0				0				0				0	
Pedestrian Walk Speed: 4.00 feet/sec																
LaneWidth:			12 feet				12 feet				12 feet				12 feet	
Time Period: 0.25 hour																
Upstream Signals:																
Link Index:			#2													
Dist(miles):			0.000													
Speed (mph):			0.00													
SignalIndex:			#2													
Cycle Time:			0 secs													
InitVolume:		0		0												
Saturation:		0		0												
ArrivalType:		0		0												
G/C:		0.00		0.00												
*** Computation 1: Time for Queue to Clear at Each Upstream Intersection																
P:		0.000		0.000												
gq1:		0.00		0.00												
gq2:		0.00		0.00												
gq:		0.00		0.00												
*** Computation 2: Time Intersection Blocked Because of Upstream Platoons																
alpha:			0.000													
beta:			0.000													
ta (secs):			0.000													
F:			0.000													
f:		0.000		0.000												
vcmax:		0		0												
vcmin:		0		0												
tp:		0.0		0.0												
p:			0.000													
*** Computation 3: Platoon Event Periods																
pdom/psubo:			0.000/0.000/Unconstrained													
*** Computation 4: Conflicting Flows During Each Unblocked Period																
InitCnflVol:	0	xxxxx	xxxxx	822	xxxxx	xxxxx	0	0	0	1510	0	789				
UpstreamSat:	0	xxxxx	xxxxx	0	xxxxx	xxxxx	0	0	0	0	0	0				
UpstreamAdj:	1.00	x.xxx	x.xxx	1.00	x.xxx	x.xxx	1.00	1.000	1.000	1.00	1.000	1.000				
ConflictVol:	0	xxxxx	xxxxx	822	xxxxx	xxxxx	0	0	0	1510	0	789				
*** Computation 5: Capactiy for Subject Movement During Unblocked Period																
InitPotCap:	0	xxxxx	xxxxx	799	xxxxx	xxxxx	0	0	0	134	0	394				
UpstreamAdj:	1.00	x.xxx	x.xxx	1.00	x.xxx	x.xxx	1.00	1.000	1.000	1.00	1.000	1.000				
PotentCap:	0	xxxxx	xxxxx	799	xxxxx	xxxxx	0	0	0	134	0	394				

Existing PM Plus Project Wed Jan 14, 2004 11:45:54 Page 5-1

Patterson Sand and Gravel
Existing Plus Project (With Haul Road)
"Highest" - PM Peak Hour

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

Intersection #2 SR 65 and SR 193 (Lincoln)

Cycle (sec): 100 Critical Vol./Cap. (X): 0.920
Loss Time (sec): 0 (Y+R = 4 sec) Average Delay (sec/veh): 32.1
Optimal Cycle: 180 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				Permitted				Permitted			
Rights:	Include				Include				Include				Ovl			
Min. Green:	0		0	0	0		0	0	0		0	0	0		0	0
Lanes:	1	0	0	1 0	1	0	0	1 0	0	0	1!	0 0	0	1	0	0 1
Volume Module:																
Base Vol:	0	843		89	178	581		0	0		0	0	281		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:	0	843		89	178	581		0	0		0	0	281		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:	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 Volume:	0	843		89	178	581		0	0		0	0	281		0	266
Reduct Vol:	0	0		0	0	0		0	0		0	0	0		0	0
Reduced Vol:	0	843		89	178	581		0	0		0	0	281		0	266
PCE Adj:	1.00	1.00		1.00	1.00	1.00		1.00	1.00		1.00	1.00	1.00		1.00	1.00
MLF Adj:	1.00	1.00		1.00	1.00	1.00		1.00	1.00		1.00	1.00	1.00		1.00	1.00
Final Vol.:	0	843		89	178	581		0	0		0	0	281		0	266
Saturation Flow Module:																
Sat/Lane:	1900	1900		1900	1900	1900		1900	1900		1900	1900	1900		1900	1900
Adjustment:	1.00	0.86		0.86	0.81	0.86		1.00	1.00		1.00	1.00	0.63		1.00	0.74
Lanes:	1.00	0.90		0.10	1.00	1.00		0.00	0.00		1.00	0.00	1.00		0.00	1.00
Final Sat.:	1900	1481		156	1547	1628		0	0		1900	0	1194		0	1411
Capacity Analysis Module:																
Vol/Sat:	0.00	0.57		0.57	0.12	0.36		0.00	0.00		0.00	0.00	0.24		0.00	0.19
Crit Moves:		****			****								****			
Green/Cycle:	0.00	0.62		0.62	0.13	0.74		0.00	0.00		0.00	0.00	0.26		0.00	0.38
Volume/Cap:	0.00	0.92		0.92	0.92	0.48		0.00	0.00		0.00	0.00	0.92		0.00	0.49
Delay/Veh:	0.0	29.9		29.9	85.9	5.4		0.0	0.0		0.0	0.0	67.7		0.0	24.3
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:	0.0	29.9		29.9	85.9	5.4		0.0	0.0		0.0	0.0	67.7		0.0	24.3
DesignQueue:	0	21		2	9	9		0	0		0	0	12		0	9

Existing PM Plus Project Wed Jan 14, 2004 11:45:54 Page 6-1

Patterson Sand and Gravel
Existing Plus Project (With Haul Road)
"Highest" - PM Peak Hour

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

Intersection #2 SR 65 and SR 193 (Lincoln)

Approach:	North Bound				South Bound				East Bound				West Bound			
Movement:	L	-	T	- R	L	-	T	- R	L	-	T	- R	L	-	T	- R
HCM Ops Adjusted Lane Utilization Module:																
Lanes:	1	0	0	1 0	1	0	0	1 0	0	0	1!	0 0	0	1	0	0 1
Lane Group:	L		RT	RT	L		RT	RT	LTR		LTR	LTR	LT		LT	R
#LnsInGrps:	1		1	1	1		1	1	1		1	1	1		1	1
HCM Ops Input Saturation Adj Module:																
Lane Width:	12		12	12	12		12	12	12		12	12	12		12	12
CrosswalkWid			8				8				8				8	
% Hev Veh:			3				5				0				3	
Grade:			0%				0%				0%				0%	
Parking/Hr:			No				No				No				No	
Bus Stp/Hr:			0				0				0				0	
Area Type:	< < < < < < < < < < < < < < < < CBD > > > > > > > > > > > > > > > >															
Cnft Ped/Hr:			0				0				0				0	
ExclusiveRT:			Include				Include				Include				Include	
% RT Prtct:			0				0				0				0	
HCM Ops f(lt) Adj Case Module:																
f(lt) Case:	xxxx	xxxx		xxxx		1	xxxx		xxxx	xxxx		xxxx		5	xxxx	xxxx
HCM Ops Saturation Adj Module:																
Ln Wid Adj:	xxxx	1.00		1.00	1.00	1.00		xxxxx	xxxx	xxxx		xxxxx	1.00		xxxx	1.00
Hev Veh Adj:	xxxx	0.97		0.97	0.95	0.95		xxxxx	xxxx	xxxx		xxxxx	0.97		xxxx	0.97
Grade Adj:	xxxx	1.00		1.00	1.00	1.00		xxxxx	xxxx	xxxx		xxxxx	1.00		xxxx	1.00
Parking Adj:	xxxx	1.00		1.00	xxxx	1.00		xxxxx	xxxx	xxxx		xxxxx	xxxx		xxxx	1.00
Bus Stp Adj:	xxxx	1.00		1.00	xxxx	1.00		xxxxx	xxxx	xxxx		xxxxx	xxxx		xxxx	1.00
Area Adj:	xxxx	0.90		0.90	0.90	0.90		xxxxx	xxxx	xxxx		xxxxx	0.90		xxxx	0.90
RT Adj:	xxxx	0.99		0.99	xxxx	xxxx		xxxxx	xxxx	xxxx		xxxxx	xxxx		xxxx	0.85
LT Adj:	xxxx	xxxx		xxxxx	0.95	xxxx		xxxxx	xxxx	xxxx		xxxxx	0.72		xxxx	xxxxx
PedBike Adj:	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00		1.00	1.00
HCM Sat Adj:	1.00	0.86		0.86	0.81	0.86		1.00	1.00	1.00		1.00	0.63		1.00	0.74
Usr Sat Adj:	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 Sat Adj:	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00		1.00	1.00
Fnl Sat Adj:	1.00	0.86		0.86	0.81	0.86		1.00	1.00	1.00		1.00	0.63		1.00	0.74
Delay Adjustment Factor Module:																
Coordinated:	< < < < < < < < < < < < < < < < No > > > > > > > > > > > > > > > >															
Signal Type:	< < < < < < < < < < < < < < Actuated > > > > > > > > > > > > > >															
DelAdjFctr:	0.00	1.00		1.00	1.00	1.00		0.00	0.00	0.00		0.00	1.00		0.00	1.00

Patterson Sand and Gravel
Existing Plus Project (With Haul Road)
"Highest" - PM Peak Hour

Level Of Service Detailed Computation Report (Permitted Left Turn Sat Adj)
2000 HCM Operations Method
Base Volume Alternative

****
Intersection #2 SR 65 and SR 193 (Lincoln)
****

Approach:	North	South	East	West
Cycle Length, C:	xxxxxx	xxxxxx	xxxxxx	100
Actual Green Time Per Lane Group, G:	xxxxxx	xxxxxx	xxxxxx	21.58
Effective Green Time Per Lane Group, g:	xxxxxx	xxxxxx	xxxxxx	25.58
Opposing Effective Green Time, go:	xxxxxx	xxxxxx	xxxxxx	25.58
Number Of Opposing Lanes, No:	xxxxxx	xxxxxx	xxxxxx	1
Number Of Lanes In Lane Group, N:	xxxxxx	xxxxxx	xxxxxx	1
Adjusted Left-Turn Flow Rate, Vlt:	xxxxxx	xxxxxx	xxxxxx	281
Proportion of Left Turns in Lane Group, Plt:	xxxxxx	xxxxxx	xxxxxx	1.00
Proportion of Left Turns in Opp Flow, Plto:	xxxxxx	xxxxxx	xxxxxx	1.00
Left Turns Per Cycle, LTC:	xxxxxx	xxxxxx	xxxxxx	7.81
Adjusted Opposing Flow Rate, Vo:	xxxxxx	xxxxxx	xxxxxx	0
Opposing Flow Per Lane Per Cycle, Volc:	xxxxxx	xxxxxx	xxxxxx	0.00
Opposing Platoon Ratio, Rpo:	xxxxxx	xxxxxx	xxxxxx	1.00
Lost Time Per Phase, tl:	xxxxxx	xxxxxx	xxxxxx	0.00
Eff grn until arrival of left-turn car, gf:	xxxxxx	xxxxxx	xxxxxx	0.46
Opposing Queue Ratio, qro:	xxxxxx	xxxxxx	xxxxxx	0.74
Eff grn blocked by opposing queue, gq:	xxxxxx	xxxxxx	xxxxxx	0.00
Eff grn while left turns filter thru, gu:	xxxxxx	xxxxxx	xxxxxx	25.12
Max opposing cars arriving during gq-gf, n:	xxxxxx	xxxxxx	xxxxxx	0.00
Proportion of Opposing Thru & RT cars, ptho:	xxxxxx	xxxxxx	xxxxxx	0.00
Left-turn Saturation Factor, fs:	xxxxxx	xxxxxx	xxxxxx	xxxxxx
Proportion of Left Turns in Shared Lane, pl:	xxxxxx	xxxxxx	xxxxxx	1.00
Through-car Equivalents, el1:	xxxxxx	xxxxxx	xxxxxx	1.40
Single Lane Through-car Equivalents, el2:	xxxxxx	xxxxxx	xxxxxx	1.00
Minimum Left Turn Adjustment Factor, fmin:	xxxxxx	xxxxxx	xxxxxx	0.16
Single Lane Left Turn Adjustment Factor, fm:	xxxxxx	xxxxxx	xxxxxx	0.72
Left Turn Adjustment Factor, flt:	xxxxxx	xxxxxx	xxxxxx	0.72

****

Patterson Sand and Gravel
Existing Plus Project (With Haul Road)
"Highest" - PM Peak Hour

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

****
Intersection #3 Old SR 65 and Haul Route
****
Average Delay (sec/veh): 1.0 Worst Case 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:	Uncontrolled			Uncontrolled			Stop Sign			Stop Sign		
Rights:	Include			Include			Include			Include		
Lanes:	0 0	1	0 1	1 0	1	0 0	0 0	0	0 0	0 0	1!	0 0
Volume Module:												
Base Vol:	0	778	71	16	575	0	0	0	0	29	0	11
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	778	71	16	575	0	0	0	0	29	0	11
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	0	778	71	16	575	0	0	0	0	29	0	11
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Final Vol.:	0	778	71	16	575	0	0	0	0	29	0	11
Critical Gap Module:												
Critical Gp:	xxxxx	xxxx	xxxxx	4.1	xxxx	xxxxx	xxxxx	xxxx	xxxxx	6.6	xxxx	6.4
FollowUpTim:	xxxxx	xxxx	xxxxx	2.2	xxxx	xxxxx	xxxxx	xxxx	xxxxx	3.7	xxxx	3.5
Capacity Module:												
Cnflict Vol:	xxxx	xxxx	xxxxx	849	xxxx	xxxxx	xxxx	xxxx	xxxxx	1385	xxxx	778
Potent Cap.:	xxxx	xxxx	xxxxx	776	xxxx	xxxxx	xxxx	xxxx	xxxxx	143	xxxx	366
Move Cap.:	xxxx	xxxx	xxxxx	776	xxxx	xxxxx	xxxx	xxxx	xxxxx	141	xxxx	366
Level Of Service Module:												
Stopped Del:	xxxxx	xxxx	xxxxx	9.7	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx
LOS by Move:	*	*	*	A	*	*	*	*	*	*	*	*
Movement:	LT -	LTR -	RT	LT -	LTR -	RT	LT -	LTR -	RT	LT -	LTR -	RT
Shared Cap.:	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	169	xxxxx
Shrd StpDel:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	32.7	xxxxx
Shared LOS:	*	*	*	*	*	*	*	*	*	*	D	*
ApproachDel:	xxxxxx			xxxxxx			xxxxxx			32.7		
ApproachLOS:	*			*			*			D		

Existing PM Plus Project Wed Jan 14, 2004 11:45:54 Page 8-1

Patterson Sand and Gravel
Existing Plus Project (With Haul Road)
"Highest" - PM Peak Hour

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

```
*******************************************************************************
Intersection #3 Old SR 65 and Haul Route
*******************************************************************************
Approach:       North Bound      South Bound      East Bound       West Bound
Movement:     L  -  T  -  R    L  -  T  -  R    L  -  T  -  R    L  -  T  -  R
------------|----------------|----------------|----------------|----------------|
HevVeh:             4%               5%               0%              22%
Grade:              0%               0%               0%               0%
Peds/Hour:          0                0                0                0
Pedestrian Walk Speed: 4.00 feet/sec
LaneWidth:        12 feet          12 feet          12 feet          12 feet
Time Period: 0.25 hour
------------|----------------|----------------|----------------|----------------|
Upstream Signals:
Link Index:        #2
Dist(miles):       0.000
Speed (mph):        0.00
SignalIndex:       #2
Cycle Time:            0 secs
InitVolume:      0     0
Saturation:      0     0
ArrivalType:     0     0
G/C:          0.00  0.00
*** Computation 1: Time for Queue to Clear at Each Upstream Intersection
P:           0.000 0.000
gq1:          0.00  0.00
gq2:          0.00  0.00
gq:           0.00  0.00
*** Computation 2: Time Intersection Blocked Because of Upstream Platoons
alpha:            0.000
beta:             0.000
ta (secs):        0.000
F:                0.000
f:           0.000 0.000
vcmax:           0     0
vcmin:           0     0
tp:            0.0   0.0
p:                0.000
*** Computation 3: Platoon Event Periods
pdom/psubo:       0.000/0.000/Unconstrained
*** Computation 4: Conflicting Flows During Each Unblocked Period
InitCnflVol:   0 xxxxx xxxxx  849 xxxxx xxxxx    0     0     0 1385     0   778
UpstreamSat:   0 xxxxx xxxxx    0 xxxxx xxxxx    0     0     0    0     0     0
UpstreamAdj:1.00 x.xxx x.xxx 1.00 x.xxx x.xxx 1.00 1.000 1.000 1.00 1.000 1.000
ConflictVol:   0 xxxxx xxxxx  849 xxxxx xxxxx    0     0     0 1385     0   778
*** Computation 5: Capactiy for Subject Movement During Unblocked Period
InitPotCap:    0 xxxxx xxxxx  776 xxxxx xxxxx    0     0     0  143     0   366
UpstreamAdj:1.00 x.xxx x.xxx 1.00 x.xxx x.xxx 1.00 1.000 1.000 1.00 1.000 1.000
PotentCap:     0 xxxxx xxxxx  776 xxxxx xxxxx    0     0     0  143     0   366
```


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Patterson Sand and Gravel
Existing Plus Project (With Haul Road)
"Highest" - PM Peak Hour

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

```
*******************************************************************************
Intersection #4 Riosa Rd and 11th St
*******************************************************************************
Cycle (sec):        100                Critical Vol./Cap. (X):        0.125
Loss Time (sec):      0 (Y+R =  4 sec) Average Delay (sec/veh):         7.4
Optimal Cycle:        0                Level Of Service:                  A
*******************************************************************************
Approach:       North Bound      South Bound      East Bound       West Bound
Movement:     L  -  T  -  R    L  -  T  -  R    L  -  T  -  R    L  -  T  -  R
------------||---------------||---------------||---------------||---------------|
Control:        Stop Sign        Stop Sign        Stop Sign        Stop Sign
Rights:           Include          Include          Include          Include
Min. Green:     0    0    0     0    0    0     0    0    0     0    0    0
Lanes:        0  0  1! 0  0    0  0  0  1  0    0  1  0  0  0    0  1  0  0  0
------------||---------------||---------------||---------------||---------------|
Volume Module:
Base Vol:       2    3    1     0    1    2     6  107    0     1   40    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:    2    3    1     0    1    2     6  107    0     1   40    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:     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 Volume:     2    3    1     0    1    2     6  107    0     1   40    0
Reduct Vol:     0    0    0     0    0    0     0    0    0     0    0    0
Reduced Vol:    2    3    1     0    1    2     6  107    0     1   40    0
PCE Adj:     1.00 1.00 1.00  1.00 1.00 1.00  1.00 1.00 1.00  1.00 1.00 1.00
MLF Adj:     1.00 1.00 1.00  1.00 1.00 1.00  1.00 1.00 1.00  1.00 1.00 1.00
Final Vol.:     2    3    1     0    1    2     6  107    0     1   40    0
------------||---------------||---------------||---------------||---------------|
Saturation Flow Module:
Adjustment:  1.00 1.00 1.00  1.00 1.00 1.00  1.00 1.00 1.00  1.00 1.00 1.00
Lanes:       0.33 0.50 0.17  0.00 0.33 0.67  0.05 0.95 0.00  0.02 0.98 0.00
Final Sat.:   278  416  139     0  303  606    48  857    0    22  867    0
------------||---------------||---------------||---------------||---------------|
Capacity Analysis Module:
Vol/Sat:     0.01 0.01 0.01  xxxx 0.00 0.00  0.12 0.12  xxxx  0.05 0.05  xxxx
Crit Moves:  ****                    ****       ****             ****
Delay/Veh:    7.2  7.2  7.2   0.0  6.8  6.8   7.5  7.5   0.0   7.2  7.2   0.0
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:   7.2  7.2  7.2   0.0  6.8  6.8   7.5  7.5   0.0   7.2  7.2   0.0
LOS by Move:    A    A    A     *    A    A     A    A     *     A    A     *
ApproachDel:       7.2              6.8              7.5              7.2
Delay Adj:       1.00              1.00             1.00             1.00
ApprAdjDel:        7.2              6.8              7.5              7.2
LOS by Appr:         A                A                A                A
*******************************************************************************
```

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Patterson Sand and Gravel
Existing Plus Project (With Haul Road)
"Highest" - PM Peak Hour

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

****
Intersection #4 Riosa Rd and 11th St
****

Approach:	North Bound	South Bound	East Bound	West Bound
Movement:	L - T - R	L - T - R	L - T - R	L - T - R
Time Period: 0.25 hour				
HevVeh:	0%	0%	0%	0%
Alpha Value: 0.01				
GroupType:	1	1	1	1
P[C1]:	0.8328	0.8296	0.9445	0.8667
P[C2]:	0.0027	0.0058	0.0453	0.1232
P[C3]:	0.1584	0.1578	0.0096	0.0088
P[C4]:	0.0062	0.0068	0.0005	0.0013
P[C5]:	0.0000	0.0000	0.0000	0.0000
Padj[C1]:	0.00338	0.00342	0.00066	0.00145
Padj[C2]:	0.00168	0.00166	-0.00035	-0.00112
Padj[C3]:	-0.00469	-0.00466	-0.00028	-0.00025
Padj[C4]:	-0.00037	-0.00041	-0.00003	-0.00008
Padj[C5]:	-0.00000	-0.00000	-0.00000	-0.00000
Lane:	L1	L1	L1	L1
LaneType:	LEFTTHRURITE	LEFTTHRURITE	LEFTTHRURITE	LEFTTHRURITE
HeadwayAdj:	-0.033	-0.400	0.011	0.005
Volume:	6	3	113	41
Capacity:	833	908	905	888
DegOfUtil:	0.01	0.00	0.12	0.05
DepHeadway:	4.18	3.82	3.97	4.02
ServiceTime:	2.2	1.8	2.0	2.0
Delay:	7.2	6.8	7.5	7.2
Approach:	North Bound	South Bound	East Bound	West Bound
ApproachDel:	7.2	6.8	7.5	7.2
Delay Adj:	1.00	1.00	1.00	1.00
ApprAdjDel:	7.2	6.8	7.5	7.2
LOS by Appr:	A	A	A	A
OverallDel:		7.4		
OverallLOS:		A		

Existing PM Plus Project Wed Jan 14, 2004 11:45:54 Page 11-1

Patterson Sand and Gravel
Existing Plus Project (With Haul Road)
"Highest" - PM Peak Hour

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

****
Intersection #5 Riosa Rd and Karchner Rd
****

Average Delay (sec/veh): 4.2 Worst Case Level Of Service: A

****

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	- T	- R	L	- T	- R	L	- T	- R	L	- T	- R
Control:	Stop Sign			Stop Sign			Uncontrolled			Uncontrolled		
Rights:	Include			Include			Include			Include		
Lanes:	0 0	0 0	0	0 0	1! 0	0	0 1	0 0	0	0 0	0 1	0
Volume Module:												
Base Vol:	0	0	0	7	0	19	23	23	0	0	19	5
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	7	0	19	23	23	0	0	19	5
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	0	0	0	7	0	19	23	23	0	0	19	5
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Final Vol.:	0	0	0	7	0	19	23	23	0	0	19	5
Critical Gap Module:												
Critical Gp:	xxxxx	xxxx	xxxxx	6.7	xxxx	6.5	4.4	xxxx	xxxxx	xxxxx	xxxx	xxxxx
FollowUpTim:	xxxxx	xxxx	xxxxx	3.8	xxxx	3.6	2.5	xxxx	xxxxx	xxxxx	xxxx	xxxxx
Capacity Module:												
Cnflict Vol:	xxxx	xxxx	xxxxx	91	xxxx	22	24	xxxx	xxxxx	xxxx	xxxx	xxxxx
Potent Cap.:	xxxx	xxxx	xxxxx	837	xxxx	970	1438	xxxx	xxxxx	xxxx	xxxx	xxxxx
Move Cap.:	xxxx	xxxx	xxxxx	827	xxxx	970	1438	xxxx	xxxxx	xxxx	xxxx	xxxxx
Level Of Service Module:												
Stopped Del:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	7.5	xxxx	xxxxx	xxxxx	xxxx	xxxxx
LOS by Move:	*	*	*	*	*	*	A	*	*	*	*	*
Movement:	LT -	LTR -	RT	LT -	LTR -	RT	LT -	LTR -	RT	LT -	LTR -	RT
Shared Cap.:	xxxx	xxxx	xxxxx	xxxx	927	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx
Shrd StpDel:	xxxxx	xxxx	xxxxx	xxxxx	9.0	xxxxx	7.5	xxxx	xxxxx	xxxxx	xxxx	xxxxx
Shared LOS:	*	*	*	*	A	*	A	*	*	*	*	*
ApproachDel:	xxxxxx			9.0			xxxxxx			xxxxxx		
ApproachLOS:	*			A			*			*		

Existing PM Plus Project Wed Jan 14, 2004 11:45:54 Page 12-1

Patterson Sand and Gravel
Existing Plus Project (With Haul Road)
"Highest" - PM Peak Hour

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

****
Intersection #5 Riosa Rd and Karchner Rd
****

Approach:	North Bound	South Bound	East Bound	West Bound
Movement:	L - T - R	L - T - R	L - T - R	L - T - R
HevVeh:	0%	34%	28%	0%
Grade:	0%	0%	0%	0%
Peds/Hour:	0	0	0	0
Pedestrian Walk Speed: 4.00 feet/sec				
LaneWidth:	12 feet	12 feet	12 feet	12 feet

Time Period: 0.25 hour

Existing AM Plus Project Wed Jan 14, 2004 13:55:47 Page 1-1

Patterson Sand and Gravel
Existing Plus "Maximum Practical Mining Rate" (With Haul Road)
"Highest" - AM Peak Hour

Scenario Report

Scenario:	Existing AM Plus Project
Command:	Existing AM Plus Project
Volume:	Existing AM Plus Project
Geometry:	Existing AM Plus Project
Impact Fee:	Default Impact Fee
Trip Generation:	Default Trip Generation
Trip Distribution:	Default Trip Distribution
Paths:	Default Paths
Routes:	Default Routes
Configuration:	Default Configuration

Existing AM Plus Project Wed Jan 14, 2004 13:55:48 Page 2-1

Patterson Sand and Gravel
Existing Plus "Maximum Practical Mining Rate" (With Haul Road)
"Highest" - AM Peak Hour

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 65 and Riosa Road (Sheridan	B	0.9	0.000	B	0.9	0.000	+ 0.000 V/C
# 2 SR 65 and SR 193 (Lincoln)	C	23.0	0.767	C	23.0	0.767	+ 0.000 D/V
# 3 Old SR 65 and Haul Route	F	12.7	0.000	F	12.7	0.000	+ 0.000 V/C
# 4 Riosa Rd and 11th St	A	7.1	0.056	A	7.1	0.056	+ 0.000 V/C
# 5 Riosa Rd and Karchner Rd	B	7.1	0.000	B	7.1	0.000	+ 0.000 V/C

Existing AM Plus Project Wed Jan 14, 2004 13:55:48 Page 3-1

Patterson Sand and Gravel
Existing Plus "Maximum Practical Mining Rate" (With Haul Road)
"Highest" - AM Peak Hour

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

```
*******************************************************************************
Intersection #1 SR 65 and Riosa Road (Sheridan)
*******************************************************************************
Average Delay (sec/veh):      0.9          Worst Case 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:      Uncontrolled     Uncontrolled      Stop Sign        Stop Sign
Rights:          Include          Include          Include          Include
Lanes:       0  0  1  0  1    1  0  1  0  0    0  0  0  0  0    0  0  1! 0  0
------------|---------------||---------------||---------------||---------------|
Volume Module:
Base Vol:       0  483    4   16  734    0    0    0    0   12    0   55
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  483    4   16  734    0    0    0    0   12    0   55
User Adj:    1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
PHF Adj:     1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
PHF Volume:     0  483    4   16  734    0    0    0    0   12    0   55
Reduct Vol:     0    0    0    0    0    0    0    0    0    0    0    0
Final Vol.:     0  483    4   16  734    0    0    0    0   12    0   55
------------|---------------||---------------||---------------||---------------|
Critical Gap Module:
Critical Gp:xxxxx xxxx xxxxx  4.2 xxxx xxxxx xxxxx xxxx xxxxx  6.4 xxxx  6.2
FollowUpTim:xxxxx xxxx xxxxx  2.3 xxxx xxxxx xxxxx xxxx xxxxx  3.5 xxxx  3.3
------------|---------------||---------------||---------------||---------------|
Capacity Module:
Cnflict Vol: xxxx xxxx xxxxx  487 xxxx xxxxx  xxxx xxxx xxxxx 1249 xxxx  483
Potent Cap.: xxxx xxxx xxxxx 1031 xxxx xxxxx  xxxx xxxx xxxxx  193 xxxx  588
Move Cap.:   xxxx xxxx xxxxx 1031 xxxx xxxxx  xxxx xxxx xxxxx  191 xxxx  588
------------|---------------||---------------||---------------||---------------|
Level Of Service Module:
Stopped Del:xxxxx xxxx xxxxx  8.5 xxxx xxxxx xxxxx xxxx xxxxx xxxxx xxxx xxxxx
LOS by Move:   *    *    *    A    *    *    *    *    *    *    *    *
Movement:     LT - LTR - RT   LT - LTR - RT   LT - LTR - RT   LT - LTR - RT
Shared Cap.: xxxx xxxx xxxxx xxxx xxxx xxxxx xxxx xxxx xxxxx xxxx  428 xxxxx
Shrd StpDel:xxxxx xxxx xxxxx xxxxx xxxx xxxxx xxxxx xxxx xxxxx xxxxx 15.0 xxxxx
Shared LOS:    *    *    *    *    *    *    *    *    *    *    B    *
ApproachDel:    xxxxxx          xxxxxx          xxxxxx            15.0
ApproachLOS:       *               *               *                B
```


Existing AM Plus Project Wed Jan 14, 2004 13:55:48 Page 4-1

Patterson Sand and Gravel
Existing Plus "Maximum Practical Mining Rate" (With Haul Road)
"Highest" - AM Peak Hour

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

```
*******************************************************************************
Intersection #1 SR 65 and Riosa Road (Sheridan)
*******************************************************************************
Approach:       North Bound      South Bound       East Bound       West Bound
Movement:     L  -  T  -  R    L  -  T  -  R    L  -  T  -  R    L  -  T  -  R
------------|---------------||---------------||---------------||---------------|
HevVeh:            18%              11%              0%               0%
Grade:              0%               0%              0%               0%
Peds/Hour:          0                0               0                0
Pedestrian Walk Speed: 4.00 feet/sec
LaneWidth:       12 feet          12 feet          12 feet          12 feet
Time Period: 0.25 hour
------------|---------------||---------------||---------------||---------------|
Upstream Signals:
Link Index:        #2
Dist(miles):       0.000
Speed (mph):        0.00
SignalIndex:       #2
Cycle Time:           0 secs
InitVolume:      0     0
Saturation:      0     0
ArrivalType:     0     0
G/C:          0.00  0.00
*** Computation 1: Time for Queue to Clear at Each Upstream Intersection
P:           0.000 0.000
gq1:          0.00  0.00
gq2:          0.00  0.00
gq:           0.00  0.00
*** Computation 2: Time Intersection Blocked Because of Upstream Platoons
alpha:            0.000
beta:             0.000
ta (secs):        0.000
F:                0.000
f:           0.000 0.000
vcmax:           0     0
vcmin:           0     0
tp:            0.0   0.0
p:                0.000
*** Computation 3: Platoon Event Periods
pdom/psubo:      0.000/0.000/Unconstrained
*** Computation 4: Conflicting Flows During Each Unblocked Period
InitCnflVol:   0 xxxxx xxxxx  487 xxxxx xxxxx    0     0     0 1249     0   483
UpstreamSat:   0 xxxxx xxxxx    0 xxxxx xxxxx    0     0     0    0     0     0
UpstreamAdj:1.00 x.xxx x.xxx 1.00 x.xxx x.xxx 1.00 1.000 1.000 1.00 1.000 1.000
ConflictVol:   0 xxxxx xxxxx  487 xxxxx xxxxx    0     0     0 1249     0   483
*** Computation 5: Capactiy for Subject Movement During Unblocked Period
InitPotCap:    0 xxxxx xxxxx 1031 xxxxx xxxxx    0     0     0  193     0   588
UpstreamAdj:1.00 x.xxx x.xxx 1.00 x.xxx x.xxx 1.00 1.000 1.000 1.00 1.000 1.000
PotentCap:     0 xxxxx xxxxx 1031 xxxxx xxxxx    0     0     0  193     0   588
```

Existing AM Plus Project Wed Jan 14, 2004 13:55:48 Page 5-1

Patterson Sand and Gravel
Existing Plus "Maximum Practical Mining Rate" (With Haul Road)
"Highest" - AM Peak Hour

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

Intersection #2 SR 65 and SR 193 (Lincoln)

Cycle (sec): 100 Critical Vol./Cap. (X): 0.767
Loss Time (sec): 0 (Y+R = 4 sec) Average Delay (sec/veh): 23.0
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:	Protected				Protected				Permitted				Permitted			
Rights:	Include				Include				Include				Ovl			
Min. Green:	0	0	0		0	0	0		0	0	0		0	0	0	
Lanes:	1	0	0	1 0	1	0	0	1 0	0	0	1!	0 0	0	1	0	0 1
Volume Module:																
Base Vol:	0	511	83		150	662	0		0	0	0		249	0	106	
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	511	83		150	662	0		0	0	0		249	0	106	
User Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
PHF Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
PHF Volume:	0	511	83		150	662	0		0	0	0		249	0	106	
Reduct Vol:	0	0	0		0	0	0		0	0	0		0	0	0	
Reduced Vol:	0	511	83		150	662	0		0	0	0		249	0	106	
PCE Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
MLF Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
Final Vol.:	0	511	83		150	662	0		0	0	0		249	0	106	
Saturation Flow Module:																
Sat/Lane:	1900	1900	1900		1900	1900	1900		1900	1900	1900		1900	1900	1900	
Adjustment:	1.00	0.73	0.73		0.70	0.73	1.00		1.00	1.00	1.00		0.59	1.00	0.69	
Lanes:	1.00	0.86	0.14		1.00	1.00	0.00		0.00	1.00	0.00		1.00	0.00	1.00	
Final Sat.:	1900	1190	193		1321	1390	0		0	1900	0		1112	0	1310	
Capacity Analysis Module:																
Vol/Sat:	0.00	0.43	0.43		0.11	0.48	0.00		0.00	0.00	0.00		0.22	0.00	0.08	
Crit Moves:		****			****								****			
Green/Cycle:	0.00	0.56	0.56		0.15	0.71	0.00		0.00	0.00	0.00		0.29	0.00	0.44	
Volume/Cap:	0.00	0.77	0.77		0.77	0.67	0.00		0.00	0.00	0.00		0.77	0.00	0.18	
Delay/Veh:	0.0	21.6	21.6		57.5	10.0	0.0		0.0	0.0	0.0		42.8	0.0	17.2	
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	21.6	21.6		57.5	10.0	0.0		0.0	0.0	0.0		42.8	0.0	17.2	
DesignQueue:	0	14	2		7	12	0		0	0	0		10	0	3	

Existing AM Plus Project Wed Jan 14, 2004 13:55:48 Page 6-1

Patterson Sand and Gravel
Existing Plus "Maximum Practical Mining Rate" (With Haul Road)
"Highest" - AM Peak Hour

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

Intersection #2 SR 65 and SR 193 (Lincoln)

Approach:	North Bound				South Bound				East Bound				West Bound			
Movement:	L	-	T	- R	L	-	T	- R	L	-	T	- R	L	-	T	- R
HCM Ops Adjusted Lane Utilization Module:																
Lanes:	1	0	0	1 0	1	0	0	1 0	0	0	1!	0 0	0	1	0	0 1
Lane Group:	L		RT		RT	L	RT	RT	LTR	LTR	LTR		LT	LT	R	
#LnsInGrps:	1		1		1	1	1	1	1	1	1		1	1	1	
HCM Ops Input Saturation Adj Module:																
Lane Width:	12		12		12	12	12	12	12	12	12		12	12	12	
CrosswalkWid			8				8				8				8	
% Hev Veh:			21				23				0				11	
Grade:			0%				0%				0%				0%	
Parking/Hr:			No				No				No				No	
Bus Stp/Hr:			0				0				0				0	
Area Type:	< < < < < < < < < < < < < < < < CBD > > > > > > > > > > > > > > > >															
Cnft Ped/Hr:			0				0				0				0	
ExclusiveRT:			Include				Include				Include				Include	
% RT Prtct:			0				0				0				0	
HCM Ops f(lt) Adj Case Module:																
f(lt) Case:	xxxx	xxxx	xxxx		1	xxxx	xxxx		xxxx	xxxx	xxxx		5	xxxx	xxxx	
HCM Ops Saturation Adj Module:																
Ln Wid Adj:	xxxx	1.00	1.00		1.00	1.00	xxxxx		xxxx	xxxx	xxxxx		1.00	xxxx	1.00	
Hev Veh Adj:	xxxx	0.83	0.83		0.81	0.81	xxxxx		xxxx	xxxx	xxxxx		0.90	xxxx	0.90	
Grade Adj:	xxxx	1.00	1.00		1.00	1.00	xxxxx		xxxx	xxxx	xxxxx		1.00	xxxx	1.00	
Parking Adj:	xxxx	1.00	1.00		xxxx	1.00	xxxxx		xxxx	xxxx	xxxxx		xxxx	xxxx	1.00	
Bus Stp Adj:	xxxx	1.00	1.00		xxxx	1.00	xxxxx		xxxx	xxxx	xxxxx		xxxx	xxxx	1.00	
Area Adj:	xxxx	0.90	0.90		0.90	0.90	xxxxx		xxxx	xxxx	xxxxx		0.90	xxxx	0.90	
RT Adj:	xxxx	0.98	0.98		xxxx	xxxx	xxxxx		xxxx	xxxx	xxxxx		xxxx	xxxx	0.85	
LT Adj:	xxxx	xxxx	xxxxx		0.95	xxxx	xxxxx		xxxx	xxxx	xxxxx		0.72	xxxx	xxxxx	
PedBike Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
HCM Sat Adj:	1.00	0.73	0.73		0.70	0.73	1.00		1.00	1.00	1.00		0.59	1.00	0.69	
Usr Sat Adj:	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 Sat Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
Fnl Sat Adj:	1.00	0.73	0.73		0.70	0.73	1.00		1.00	1.00	1.00		0.59	1.00	0.69	
Delay Adjustment Factor Module:																
Coordinated:	< < < < < < < < < < < < < < < < No > > > > > > > > > > > > > > > >															
Signal Type:	< < < < < < < < < < < < < < Actuated > > > > > > > > > > > > > >															
DelAdjFctr:	0.00	1.00	1.00		1.00	1.00	0.00		0.00	0.00	0.00		1.00	0.00	1.00	

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Patterson Sand and Gravel
Existing Plus "Maximum Practical Mining Rate" (With Haul Road)
"Highest" - AM Peak Hour

Level Of Service Detailed Computation Report (Permitted Left Turn Sat Adj)
2000 HCM Operations Method
Base Volume Alternative

****
Intersection #2 SR 65 and SR 193 (Lincoln)
****

Approach:	North	South	East	West
Cycle Length, C:	xxxxxx	xxxxxx	xxxxxx	100
Actual Green Time Per Lane Group, G:	xxxxxx	xxxxxx	xxxxxx	25.20
Effective Green Time Per Lane Group, g:	xxxxxx	xxxxxx	xxxxxx	29.20
Opposing Effective Green Time, go:	xxxxxx	xxxxxx	xxxxxx	29.20
Number Of Opposing Lanes, No:	xxxxxx	xxxxxx	xxxxxx	1
Number Of Lanes In Lane Group, N:	xxxxxx	xxxxxx	xxxxxx	1
Adjusted Left-Turn Flow Rate, Vlt:	xxxxxx	xxxxxx	xxxxxx	249
Proportion of Left Turns in Lane Group, Plt:	xxxxxx	xxxxxx	xxxxxx	1.00
Proportion of Left Turns in Opp Flow, Plto:	xxxxxx	xxxxxx	xxxxxx	1.00
Left Turns Per Cycle, LTC:	xxxxxx	xxxxxx	xxxxxx	6.92
Adjusted Opposing Flow Rate, Vo:	xxxxxx	xxxxxx	xxxxxx	0
Opposing Flow Per Lane Per Cycle, Volc:	xxxxxx	xxxxxx	xxxxxx	0.00
Opposing Platoon Ratio, Rpo:	xxxxxx	xxxxxx	xxxxxx	1.00
Lost Time Per Phase, tl:	xxxxxx	xxxxxx	xxxxxx	0.00
Eff grn until arrival of left-turn car, gf:	xxxxxx	xxxxxx	xxxxxx	0.74
Opposing Queue Ratio, qro:	xxxxxx	xxxxxx	xxxxxx	0.71
Eff grn blocked by opposing queue, gq:	xxxxxx	xxxxxx	xxxxxx	0.00
Eff grn while left turns filter thru, gu:	xxxxxx	xxxxxx	xxxxxx	28.46
Max opposing cars arriving during gq-gf, n:	xxxxxx	xxxxxx	xxxxxx	0.00
Proportion of Opposing Thru & RT cars, ptho:	xxxxxx	xxxxxx	xxxxxx	0.00
Left-turn Saturation Factor, fs:	xxxxxx	xxxxxx	xxxxxx	xxxxxx
Proportion of Left Turns in Shared Lane, pl:	xxxxxx	xxxxxx	xxxxxx	1.00
Through-car Equivalents, el1:	xxxxxx	xxxxxx	xxxxxx	1.40
Single Lane Through-car Equivalents, el2:	xxxxxx	xxxxxx	xxxxxx	1.00
Minimum Left Turn Adjustment Factor, fmin:	xxxxxx	xxxxxx	xxxxxx	0.14
Single Lane Left Turn Adjustment Factor, fm:	xxxxxx	xxxxxx	xxxxxx	0.72
Left Turn Adjustment Factor, flt:	xxxxxx	xxxxxx	xxxxxx	0.72

****

Existing AM Plus Project Wed Jan 14, 2004 13:55:48 Page 7-1

Patterson Sand and Gravel
Existing Plus "Maximum Practical Mining Rate" (With Haul Road)
"Highest" - AM Peak Hour

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

****
Intersection #3 Old SR 65 and Haul Route
****
Average Delay (sec/veh): 12.7 Worst Case 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:	Uncontrolled			Uncontrolled			Stop Sign			Stop Sign		
Rights:	Include			Include			Include			Include		
Lanes:	0 0	1 0	1	1 0	1 0	0	0 0	0 0	0	0 0	1! 0	0
Volume Module:												
Base Vol:	0	449	55	9	737	0	0	0	0	125	0	34
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	449	55	9	737	0	0	0	0	125	0	34
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	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 Volume:	0	449	55	9	737	0	0	0	0	125	0	34
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Final Vol.:	0	449	55	9	737	0	0	0	0	125	0	34
Critical Gap Module:												
Critical Gp:	xxxxx	xxxx	xxxxx	4.2	xxxx	xxxxx	xxxxx	xxxx	xxxxx	7.2	xxxx	7.0
FollowUpTim:	xxxxx	xxxx	xxxxx	2.3	xxxx	xxxxx	xxxxx	xxxx	xxxxx	4.2	xxxx	4.0
Capacity Module:												
Cnflict Vol:	xxxx	xxxx	xxxxx	504	xxxx	xxxxx	xxxx	xxxx	xxxxx	1204	xxxx	449
Potent Cap.:	xxxx	xxxx	xxxxx	1016	xxxx	xxxxx	xxxx	xxxx	xxxxx	143	xxxx	476
Move Cap.:	xxxx	xxxx	xxxxx	1016	xxxx	xxxxx	xxxx	xxxx	xxxxx	142	xxxx	476
Level Of Service Module:												
Stopped Del:	xxxxx	xxxx	xxxxx	8.6	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx
LOS by Move:	*	*	*	A	*	*	*	*	*	*	*	*
Movement:	LT -	LTR -	RT	LT -	LTR -	RT	LT -	LTR -	RT	LT -	LTR -	RT
Shared Cap.:	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	167	xxxxx
Shrd StpDel:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	112	xxxxx
Shared LOS:	*	*	*	*	*	*	*	*	*	*	F	*
ApproachDel:	xxxxxx			xxxxxx			xxxxxx			111.7		
ApproachLOS:	*			*			*			F		

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Patterson Sand and Gravel
Existing Plus "Maximum Practical Mining Rate" (With Haul Road)
"Highest" - AM Peak Hour

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

```
*******************************************************************************
Intersection #3 Old SR 65 and Haul Route
*******************************************************************************
Approach:       North Bound      South Bound       East Bound       West Bound
Movement:     L  -  T  -  R    L  -  T  -  R    L  -  T  -  R    L  -  T  -  R
------------|----------------|----------------|----------------|----------------|
HevVeh:             22%              11%              0%               80%
Grade:               0%               0%              0%                0%
Peds/Hour:           0                0               0                 0
Pedestrian Walk Speed: 4.00 feet/sec
LaneWidth:       12 feet          12 feet         12 feet          12 feet
Time Period: 0.25 hour
------------|----------------|----------------|----------------|----------------|
Upstream Signals:
Link Index:        #2
Dist(miles):       0.000
Speed (mph):        0.00
SignalIndex:       #2
Cycle Time:            0 secs
InitVolume:      0     0
Saturation:      0     0
ArrivalType:     0     0
G/C:          0.00  0.00
*** Computation 1: Time for Queue to Clear at Each Upstream Intersection
P:           0.000 0.000
gq1:          0.00  0.00
gq2:          0.00  0.00
gq:           0.00  0.00
*** Computation 2: Time Intersection Blocked Because of Upstream Platoons
alpha:            0.000
beta:             0.000
ta (secs):        0.000
F:                0.000
f:           0.000 0.000
vcmax:           0     0
vcmin:           0     0
tp:            0.0   0.0
p:                0.000
*** Computation 3: Platoon Event Periods
pdom/psubo:       0.000/0.000/Unconstrained
*** Computation 4: Conflicting Flows During Each Unblocked Period
InitCnflVol:   0 xxxxx xxxxx  504 xxxxx xxxxx    0     0     0 1204     0   449
UpstreamSat:   0 xxxxx xxxxx    0 xxxxx xxxxx    0     0     0    0     0     0
UpstreamAdj:1.00 x.xxx x.xxx 1.00 x.xxx x.xxx 1.00 1.000 1.000 1.00 1.000 1.000
ConflictVol:   0 xxxxx xxxxx  504 xxxxx xxxxx    0     0     0 1204     0   449
*** Computation 5: Capactiy for Subject Movement During Unblocked Period
InitPotCap:    0 xxxxx xxxxx 1016 xxxxx xxxxx    0     0     0  143     0   476
UpstreamAdj:1.00 x.xxx x.xxx 1.00 x.xxx x.xxx 1.00 1.000 1.000 1.00 1.000 1.000
PotentCap:     0 xxxxx xxxxx 1016 xxxxx xxxxx    0     0     0  143     0   476
```


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Patterson Sand and Gravel
Existing Plus "Maximum Practical Mining Rate" (With Haul Road)
"Highest" - AM Peak Hour

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

```
*******************************************************************************
Intersection #4 Riosa Rd and 11th St
*******************************************************************************
Cycle (sec):        100                  Critical Vol./Cap. (X):        0.056
Loss Time (sec):      0 (Y+R =  4 sec) Average Delay (sec/veh):          7.1
Optimal Cycle:        0                  Level Of Service:                  A
*******************************************************************************
Approach:       North Bound      South Bound       East Bound       West Bound
Movement:     L  -  T  -  R    L  -  T  -  R    L  -  T  -  R    L  -  T  -  R
------------|----------------||----------------||----------------||----------------|
Control:        Stop Sign        Stop Sign        Stop Sign        Stop Sign
Rights:           Include          Include          Include          Include
Min. Green:     0    0    0     0    0    0     0    0    0     0    0    0
Lanes:        0  0  1! 0  0    0  0  1! 0  0    0  1  0  0  0    0  1  0  0  0
------------|----------------||----------------||----------------||----------------|
Volume Module:
Base Vol:       3    2    2     6    4   11     6   24    0     1   49    0
Growth Adj:  1.00 1.00 1.00  1.00 1.00 1.00  1.00 1.00 1.00  1.00 1.00 1.00
Initial Bse:    3    2    2     6    4   11     6   24    0     1   49    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:     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 Volume:     3    2    2     6    4   11     6   24    0     1   49    0
Reduct Vol:     0    0    0     0    0    0     0    0    0     0    0    0
Reduced Vol:    3    2    2     6    4   11     6   24    0     1   49    0
PCE Adj:     1.00 1.00 1.00  1.00 1.00 1.00  1.00 1.00 1.00  1.00 1.00 1.00
MLF Adj:     1.00 1.00 1.00  1.00 1.00 1.00  1.00 1.00 1.00  1.00 1.00 1.00
Final Vol.:     3    2    2     6    4   11     6   24    0     1   49    0
------------|----------------||----------------||----------------||----------------|
Saturation Flow Module:
Adjustment:  1.00 1.00 1.00  1.00 1.00 1.00  1.00 1.00 1.00  1.00 1.00 1.00
Lanes:       0.43 0.28 0.29  0.29 0.19 0.52  0.20 0.80 0.00  0.02 0.98 0.00
Final Sat.:   379  252  252   265  176  485   177  708    0    18  878    0
------------|----------------||----------------||----------------||----------------|
Capacity Analysis Module:
Vol/Sat:     0.01 0.01 0.01  0.02 0.02 0.02  0.03 0.03 xxxx  0.06 0.06 xxxx
Crit Moves:  ****                ****             ****             ****
Delay/Veh:    7.0  7.0  7.0   6.9  6.9  6.9   7.2  7.2  0.0   7.2  7.2  0.0
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:   7.0  7.0  7.0   6.9  6.9  6.9   7.2  7.2  0.0   7.2  7.2  0.0
LOS by Move:    A    A    A     A    A    A     A    A    *     A    A    *
ApproachDel:       7.0              6.9              7.2              7.2
Delay Adj:        1.00             1.00             1.00             1.00
ApprAdjDel:        7.0              6.9              7.2              7.2
LOS by Appr:         A                A                A                A
*******************************************************************************
```

Existing AM Plus Project Wed Jan 14, 2004 13:55:48 Page 10-1

Patterson Sand and Gravel
Existing Plus "Maximum Practical Mining Rate" (With Haul Road)
"Highest" - AM Peak Hour

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

****
Intersection #4 Riosa Rd and 11th St
****

Approach:	North Bound	South Bound	East Bound	West Bound
Movement:	L - T - R	L - T - R	L - T - R	L - T - R
Time Period: 0.25 hour				
HevVeh:	0%	0%	0%	0%
Alpha Value: 0.01				
GroupType:	1	1	1	1
P[C1]:	0.8925	0.9058	0.9165	0.9375
P[C2]:	0.0203	0.0071	0.0537	0.0327
P[C3]:	0.0834	0.0846	0.0280	0.0287
P[C4]:	0.0037	0.0025	0.0018	0.0012
P[C5]:	0.0000	0.0000	0.0000	0.0000
Padj[C1]:	0.00198	0.00184	0.00115	0.00093
Padj[C2]:	0.00071	0.00083	-0.00022	-0.00002
Padj[C3]:	-0.00246	-0.00251	-0.00082	-0.00085
Padj[C4]:	-0.00022	-0.00015	-0.00011	-0.00007
Padj[C5]:	-0.00000	-0.00000	-0.00000	-0.00000
Lane:	L1	L1	L1	L1
LaneType:	LEFTTHRURITE	LEFTTHRURITE	LEFTTHRURITE	LEFTTHRURITE
HeadwayAdj:	-0.086	-0.257	0.040	0.004
Volume:	7	21	30	50
Capacity:	883	926	884	896
DegOfUtil:	0.01	0.02	0.03	0.06
DepHeadway:	4.00	3.81	4.04	3.99
ServiceTime:	2.0	1.8	2.0	2.0
Delay:	7.0	6.9	7.2	7.2
Approach:	North Bound	South Bound	East Bound	West Bound
ApproachDel:	7.0	6.9	7.2	7.2
Delay Adj:	1.00	1.00	1.00	1.00
ApprAdjDel:	7.0	6.9	7.2	7.2
LOS by Appr:	A	A	A	A
OverallDel:		7.1		
OverallLOS:		A		

Existing AM Plus Project Wed Jan 14, 2004 13:55:48 Page 11-1

Patterson Sand and Gravel
Existing Plus "Maximum Practical Mining Rate" (With Haul Road)
"Highest" - AM Peak Hour

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

****
Intersection #5 Riosa Rd and Karchner Rd
****

Average Delay (sec/veh): 7.1 Worst Case 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			Uncontrolled			Uncontrolled		
Rights:	Include			Include			Include			Include		
Lanes:	0 0	0 0	0	0 0	1! 0	0	0 1	0 0	0	0 0	0 1	0
Volume Module:												
Base Vol:	0	0	0	15	0	127	58	16	0	0	28	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:	0	0	0	15	0	127	58	16	0	0	28	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:	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 Volume:	0	0	0	15	0	127	58	16	0	0	28	1
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Final Vol.:	0	0	0	15	0	127	58	16	0	0	28	1
Critical Gap Module:												
Critical Gp:	xxxxx	xxxx	xxxxx	7.3	xxxx	7.1	4.8	xxxx	xxxxx	xxxxx	xxxx	xxxxx
FollowUpTim:	xxxxx	xxxx	xxxxx	4.3	xxxx	4.1	2.9	xxxx	xxxxx	xxxxx	xxxx	xxxxx
Capacity Module:												
Cnflict Vol:	xxxx	xxxx	xxxxx	161	xxxx	29	29	xxxx	xxxxx	xxxx	xxxx	xxxxx
Potent Cap.:	xxxx	xxxx	xxxxx	666	xxxx	845	1226	xxxx	xxxxx	xxxx	xxxx	xxxxx
Move Cap.:	xxxx	xxxx	xxxxx	641	xxxx	845	1226	xxxx	xxxxx	xxxx	xxxx	xxxxx
Level Of Service Module:												
Stopped Del:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	8.1	xxxx	xxxxx	xxxxx	xxxx	xxxxx
LOS by Move:	*	*	*	*	*	*	A	*	*	*	*	*
Movement:	LT - LTR - RT			LT - LTR - RT			LT - LTR - RT			LT - LTR - RT		
Shared Cap.:	xxxx	xxxx	xxxxx	xxxx	818	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx
Shrd StpDel:	xxxxx	xxxx	xxxxx	xxxxx	10.3	xxxxx	8.1	xxxx	xxxxx	xxxxx	xxxx	xxxxx
Shared LOS:	*	*	*	*	B	*	A	*	*	*	*	*
ApproachDel:	xxxxxx			10.3			xxxxxx			xxxxxx		
ApproachLOS:	*			B			*			*		

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Patterson Sand and Gravel
Existing Plus "Maximum Practical Mining Rate" (With Haul Road)
"Highest" - AM Peak Hour

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

****
Intersection #5 Riosa Rd and Karchner Rd
****

Approach:	North Bound	South Bound	East Bound	West Bound
Movement:	L - T - R	L - T - R	L - T - R	L - T - R
HevVeh:	0%	88%	73%	10%
Grade:	0%	0%	0%	0%
Peds/Hour:	0	0	0	0
Pedestrian Walk Speed: 4.00 feet/sec				
LaneWidth:	12 feet	12 feet	12 feet	12 feet

Time Period: 0.25 hour

Patterson Sand and Gravel
Existing Plus "Maximum Practical Mining Rate" (With Haul Road)
"Highest" - PM Peak Hour

Scenario Report

Scenario:	Existing PM Plus Project
Command:	Existing PM Plus Project
Volume:	Existing PM Plus Project
Geometry:	Existing PM Plus Project
Impact Fee:	Default Impact Fee
Trip Generation:	Default Trip Generation
Trip Distribution:	Default Trip Distribution
Paths:	Default Paths
Routes:	Default Routes
Configuration:	Default Configuration

Patterson Sand and Gravel
Existing Plus "Maximum Practical Mining Rate" (With Haul Road)
"Highest" - PM Peak Hour

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 65 and Riosa Road (Sheridan	C	1.3	0.000	C	1.3	0.000	+ 0.000 V/C
# 2 SR 65 and SR 193 (Lincoln)	C	32.1	0.920	C	32.1	0.920	+ 0.000 D/V
# 3 Old SR 65 and Haul Route	E	1.1	0.000	E	1.1	0.000	+ 0.000 V/C
# 4 Riosa Rd and 11th St	A	7.4	0.125	A	7.4	0.125	+ 0.000 V/C
# 5 Riosa Rd and Karchner Rd	A	4.5	0.000	A	4.5	0.000	+ 0.000 V/C

Existing PM Plus Project Wed Jan 14, 2004 14:01:07 Page 3-1

Patterson Sand and Gravel
Existing Plus "Maximum Practical Mining Rate" (With Haul Road)
"Highest" - PM Peak Hour

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

```
*******************************************************************************
Intersection #1 SR 65 and Riosa Road (Sheridan)
*******************************************************************************
Average Delay (sec/veh):      1.3          Worst Case 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:       Uncontrolled     Uncontrolled      Stop Sign        Stop Sign
Rights:           Include          Include          Include          Include
Lanes:        0  0  1  0  1    1  0  1  0  0    0  0  0  0  0    0  0  1! 0  0
------------|---------------||---------------||---------------||---------------|
Volume Module:
Base Vol:       0  789   33   71  580    0    0    0    0   12    0   50
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  789   33   71  580    0    0    0    0   12    0   50
User Adj:    1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
PHF Adj:     1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
PHF Volume:     0  789   33   71  580    0    0    0    0   12    0   50
Reduct Vol:     0    0    0    0    0    0    0    0    0    0    0    0
Final Vol.:     0  789   33   71  580    0    0    0    0   12    0   50
------------|---------------||---------------||---------------||---------------|
Critical Gap Module:
Critical Gp:xxxxx xxxx xxxxx  4.1 xxxx xxxxx xxxxx xxxx xxxxx  6.4 xxxx  6.2
FollowUpTim:xxxxx xxxx xxxxx  2.2 xxxx xxxxx xxxxx xxxx xxxxx  3.5 xxxx  3.3
------------|---------------||---------------||---------------||---------------|
Capacity Module:
Cnflict Vol: xxxx xxxx xxxxx  822 xxxx xxxxx  xxxx xxxx xxxxx 1511 xxxx  789
Potent Cap.: xxxx xxxx xxxxx  795 xxxx xxxxx  xxxx xxxx xxxxx  134 xxxx  394
Move Cap.:   xxxx xxxx xxxxx  795 xxxx xxxxx  xxxx xxxx xxxxx  125 xxxx  394
------------|---------------||---------------||---------------||---------------|
Level Of Service Module:
Stopped Del:xxxxx xxxx xxxxx 10.0 xxxx xxxxx xxxxx xxxx xxxxx xxxxx xxxx xxxxx
LOS by Move:   *    *    *    A    *    *    *    *    *    *    *    *
Movement:     LT - LTR - RT   LT - LTR - RT   LT - LTR - RT   LT - LTR - RT
Shared Cap.: xxxx xxxx xxxxx xxxx xxxx xxxxx xxxx xxxx xxxxx xxxx  278 xxxxx
Shrd StpDel:xxxxx xxxx xxxxx xxxxx xxxx xxxxx xxxxx xxxx xxxxx xxxxx 21.7 xxxxx
Shared LOS:    *    *    *    *    *    *    *    *    *    C    *
ApproachDel:    xxxxxx          xxxxxx          xxxxxx          21.7
ApproachLOS:       *               *               *               C
```


Existing PM Plus Project Wed Jan 14, 2004 14:01:07 Page 4-1

Patterson Sand and Gravel
Existing Plus "Maximum Practical Mining Rate" (With Haul Road)
"Highest" - PM Peak Hour

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

```
*******************************************************************************
Intersection #1 SR 65 and Riosa Road (Sheridan)
*******************************************************************************
Approach:      North Bound      South Bound      East Bound       West Bound
Movement:     L  -  T  -  R    L  -  T  -  R    L  -  T  -  R    L  -  T  -  R
------------|---------------|---------------|---------------|---------------|
HevVeh:            3%               5%               0%               0%
Grade:             0%               0%               0%               0%
Peds/Hour:         0                0                0                0
Pedestrian Walk Speed: 4.00 feet/sec
LaneWidth:       12 feet          12 feet          12 feet          12 feet
Time Period: 0.25 hour
------------|---------------|---------------|---------------|---------------|
Upstream Signals:
Link Index:       #2
Dist(miles):      0.000
Speed (mph):       0.00
SignalIndex:      #2
Cycle Time:          0 secs
InitVolume:     0     0
Saturation:     0     0
ArrivalType:    0     0
G/C:         0.00  0.00
*** Computation 1: Time for Queue to Clear at Each Upstream Intersection
P:          0.000 0.000
gq1:         0.00  0.00
gq2:         0.00  0.00
gq:          0.00  0.00
*** Computation 2: Time Intersection Blocked Because of Upstream Platoons
alpha:            0.000
beta:             0.000
ta (secs):        0.000
F:                0.000
f:          0.000 0.000
vcmax:          0     0
vcmin:          0     0
tp:           0.0   0.0
p:                0.000
*** Computation 3: Platoon Event Periods
pdom/psubo:      0.000/0.000/Unconstrained
*** Computation 4: Conflicting Flows During Each Unblocked Period
InitCnflVol:   0 xxxxx xxxxx  822 xxxxx xxxxx    0     0     0 1511     0   789
UpstreamSat:   0 xxxxx xxxxx    0 xxxxx xxxxx    0     0     0    0     0     0
UpstreamAdj:1.00 x.xxx x.xxx 1.00 x.xxx x.xxx 1.00 1.000 1.000 1.00 1.000 1.000
ConflictVol:   0 xxxxx xxxxx  822 xxxxx xxxxx    0     0     0 1511     0   789
*** Computation 5: Capactiy for Subject Movement During Unblocked Period
InitPotCap:    0 xxxxx xxxxx  795 xxxxx xxxxx    0     0     0  134     0   394
UpstreamAdj:1.00 x.xxx x.xxx 1.00 x.xxx x.xxx 1.00 1.000 1.000 1.00 1.000 1.000
PotentCap:     0 xxxxx xxxxx  795 xxxxx xxxxx    0     0     0  134     0   394
```

Patterson Sand and Gravel
Existing Plus "Maximum Practical Mining Rate" (With Haul Road)
"Highest" - PM Peak Hour

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

Intersection #2 SR 65 and SR 193 (Lincoln)

Cycle (sec): 100 Critical Vol./Cap. (X): 0.920
Loss Time (sec): 0 (Y+R = 4 sec) Average Delay (sec/veh): 32.1
Optimal Cycle: 180 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			Permitted			Permitted		
Rights:	Include			Include			Include			Ovl		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Lanes:	1 0	0 1	0	1 0	0 1	0	0 0	1! 0	0	0 1	0 0	1
Volume Module:												
Base Vol:	0	844	89	178	584	0	0	0	0	281	0	267
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	844	89	178	584	0	0	0	0	281	0	267
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	0	844	89	178	584	0	0	0	0	281	0	267
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	0	844	89	178	584	0	0	0	0	281	0	267
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Final Vol.:	0	844	89	178	584	0	0	0	0	281	0	267
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	1.00	0.86	0.86	0.81	0.86	1.00	1.00	1.00	1.00	0.63	1.00	0.74
Lanes:	1.00	0.90	0.10	1.00	1.00	0.00	0.00	1.00	0.00	1.00	0.00	1.00
Final Sat.:	1900	1481	156	1547	1628	0	0	1900	0	1194	0	1411
Capacity Analysis Module:												
Vol/Sat:	0.00	0.57	0.57	0.12	0.36	0.00	0.00	0.00	0.00	0.24	0.00	0.19
Crit Moves:		****		****						****		
Green/Cycle:	0.00	0.62	0.62	0.13	0.74	0.00	0.00	0.00	0.00	0.26	0.00	0.38
Volume/Cap:	0.00	0.92	0.92	0.92	0.48	0.00	0.00	0.00	0.00	0.92	0.00	0.50
Delay/Veh:	0.0	30.0	30.0	86.0	5.4	0.0	0.0	0.0	0.0	67.8	0.0	24.4
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	0.0	30.0	30.0	86.0	5.4	0.0	0.0	0.0	0.0	67.8	0.0	24.4
DesignQueue:	0	21	2	9	9	0	0	0	0	12	0	10

Patterson Sand and Gravel
Existing Plus "Maximum Practical Mining Rate" (With Haul Road)
"Highest" - PM Peak Hour

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

Intersection #2 SR 65 and SR 193 (Lincoln)

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
HCM Ops Adjusted Lane Utilization Module:												
Lanes:	1 0	0 1	0	1 0	0 1	0	0 0	1! 0	0	0 1	0 0	1
Lane Group:	L	RT	RT	L	RT	RT	LTR	LTR	LTR	LT	LT	R
#LnsInGrps:	1	1	1	1	1	1	1	1	1	1	1	1
HCM Ops Input Saturation Adj Module:												
Lane Width:	12	12	12	12	12	12	12	12	12	12	12	12
CrosswalkWid		8			8			8			8	
% Hev Veh:		3			5			0			3	
Grade:		0%			0%			0%			0%	
Parking/Hr:		No			No			No			No	
Bus Stp/Hr:		0			0			0			0	
Area Type:	< < < < < < < < < < < < < < < < CBD > > > > > > > > > > > > > > > >											
Cnft Ped/Hr:		0			0			0			0	
ExclusiveRT:		Include			Include			Include			Include	
% RT Prtct:		0			0			0			0	
HCM Ops f(lt) Adj Case Module:												
f(lt) Case:	xxxx	xxxx	xxxx	1	xxxx	xxxx	xxxx	xxxx	xxxx	5	xxxx	xxxx
HCM Ops Saturation Adj Module:												
Ln Wid Adj:	xxxx	1.00	1.00	1.00	1.00	xxxxx	xxxx	xxxx	xxxxx	1.00	xxxx	1.00
Hev Veh Adj:	xxxx	0.97	0.97	0.95	0.95	xxxxx	xxxx	xxxx	xxxxx	0.97	xxxx	0.97
Grade Adj:	xxxx	1.00	1.00	1.00	1.00	xxxxx	xxxx	xxxx	xxxxx	1.00	xxxx	1.00
Parking Adj:	xxxx	1.00	1.00	xxxx	1.00	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	1.00
Bus Stp Adj:	xxxx	1.00	1.00	xxxx	1.00	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	1.00
Area Adj:	xxxx	0.90	0.90	0.90	0.90	xxxxx	xxxx	xxxx	xxxxx	0.90	xxxx	0.90
RT Adj:	xxxx	0.99	0.99	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	0.85
LT Adj:	xxxx	xxxx	xxxxx	0.95	xxxx	xxxxx	xxxx	xxxx	xxxxx	0.72	xxxx	xxxxx
PedBike Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
HCM Sat Adj:	1.00	0.86	0.86	0.81	0.86	1.00	1.00	1.00	1.00	0.63	1.00	0.74
Usr Sat Adj:	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 Sat Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Fnl Sat Adj:	1.00	0.86	0.86	0.81	0.86	1.00	1.00	1.00	1.00	0.63	1.00	0.74

Delay Adjustment Factor Module:
Coordinated: < < < < < < < < < < < < < < < < No > > > > > > > > > > > > > > > >
Signal Type: < < < < < < < < < < < < < Actuated > > > > > > > > > > > > >
DelAdjFctr: 0.00 1.00 1.00 1.00 1.00 0.00 0.00 0.00 0.00 1.00 0.00 1.00

Patterson Sand and Gravel
Existing Plus "Maximum Practical Mining Rate" (With Haul Road)
"Highest" - PM Peak Hour

Level Of Service Detailed Computation Report (Permitted Left Turn Sat Adj)
2000 HCM Operations Method
Base Volume Alternative

****
Intersection #2 SR 65 and SR 193 (Lincoln)
****

Approach:	North	South	East	West
Cycle Length, C:	xxxxxx	xxxxxx	xxxxxx	100
Actual Green Time Per Lane Group, G:	xxxxxx	xxxxxx	xxxxxx	21.56
Effective Green Time Per Lane Group, g:	xxxxxx	xxxxxx	xxxxxx	25.56
Opposing Effective Green Time, go:	xxxxxx	xxxxxx	xxxxxx	25.56
Number Of Opposing Lanes, No:	xxxxxx	xxxxxx	xxxxxx	1
Number Of Lanes In Lane Group, N:	xxxxxx	xxxxxx	xxxxxx	1
Adjusted Left-Turn Flow Rate, Vlt:	xxxxxx	xxxxxx	xxxxxx	281
Proportion of Left Turns in Lane Group, Plt:	xxxxxx	xxxxxx	xxxxxx	1.00
Proportion of Left Turns in Opp Flow, Plto:	xxxxxx	xxxxxx	xxxxxx	1.00
Left Turns Per Cycle, LTC:	xxxxxx	xxxxxx	xxxxxx	7.81
Adjusted Opposing Flow Rate, Vo:	xxxxxx	xxxxxx	xxxxxx	0
Opposing Flow Per Lane Per Cycle, Volc:	xxxxxx	xxxxxx	xxxxxx	0.00
Opposing Platoon Ratio, Rpo:	xxxxxx	xxxxxx	xxxxxx	1.00
Lost Time Per Phase, tl:	xxxxxx	xxxxxx	xxxxxx	0.00
Eff grn until arrival of left-turn car, gf:	xxxxxx	xxxxxx	xxxxxx	0.46
Opposing Queue Ratio, qro:	xxxxxx	xxxxxx	xxxxxx	0.74
Eff grn blocked by opposing queue, gq:	xxxxxx	xxxxxx	xxxxxx	0.00
Eff grn while left turns filter thru, gu:	xxxxxx	xxxxxx	xxxxxx	25.10
Max opposing cars arriving during gq-gf, n:	xxxxxx	xxxxxx	xxxxxx	0.00
Proportion of Opposing Thru & RT cars, ptho:	xxxxxx	xxxxxx	xxxxxx	0.00
Left-turn Saturation Factor, fs:	xxxxxx	xxxxxx	xxxxxx	xxxxxx
Proportion of Left Turns in Shared Lane, pl:	xxxxxx	xxxxxx	xxxxxx	1.00
Through-car Equivalents, el1:	xxxxxx	xxxxxx	xxxxxx	1.40
Single Lane Through-car Equivalents, el2:	xxxxxx	xxxxxx	xxxxxx	1.00
Minimum Left Turn Adjustment Factor, fmin:	xxxxxx	xxxxxx	xxxxxx	0.16
Single Lane Left Turn Adjustment Factor, fm:	xxxxxx	xxxxxx	xxxxxx	0.72
Left Turn Adjustment Factor, flt:	xxxxxx	xxxxxx	xxxxxx	0.72

****

Patterson Sand and Gravel
Existing Plus "Maximum Practical Mining Rate" (With Haul Road)
"Highest" - PM Peak Hour

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

****
Intersection #3 Old SR 65 and Haul Route
****
Average Delay (sec/veh): 1.1 Worst Case 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:	Uncontrolled			Uncontrolled			Stop Sign			Stop Sign		
Rights:	Include			Include			Include			Include		
Lanes:	0 0 1	0 1		1 0 1	0 0		0 0 0	0 0		0 0 1!	0 0	
Volume Module:												
Base Vol:	0	778	74	17	575	0	0	0	0	32	0	11
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	778	74	17	575	0	0	0	0	32	0	11
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	0	778	74	17	575	0	0	0	0	32	0	11
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Final Vol.:	0	778	74	17	575	0	0	0	0	32	0	11
Critical Gap Module:												
Critical Gp:	xxxxx	xxxx	xxxxx	4.1	xxxx	xxxxx	xxxxx	xxxx	xxxxx	6.7	xxxx	6.5
FollowUpTim:	xxxxx	xxxx	xxxxx	2.2	xxxx	xxxxx	xxxxx	xxxx	xxxxx	3.8	xxxx	3.6
Capacity Module:												
Cnflict Vol:	xxxx	xxxx	xxxxx	852	xxxx	xxxxx	xxxx	xxxx	xxxxx	1387	xxxx	778
Potent Cap.:	xxxx	xxxx	xxxxx	774	xxxx	xxxxx	xxxx	xxxx	xxxxx	138	xxxx	356
Move Cap.:	xxxx	xxxx	xxxxx	774	xxxx	xxxxx	xxxx	xxxx	xxxxx	135	xxxx	356
Level Of Service Module:												
Stopped Del:	xxxxx	xxxx	xxxxx	9.8	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx
LOS by Move:	*	*	*	A	*	*	*	*	*	*	*	*
Movement:	LT -	LTR -	RT	LT -	LTR -	RT	LT -	LTR -	RT	LT -	LTR -	RT
Shared Cap.:	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	161	xxxxx
Shrd StpDel:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	35.3	xxxxx
Shared LOS:	*	*	*	*	*	*	*	*	*	*	E	*
ApproachDel:	xxxxxx			xxxxxx			xxxxxx			35.3		
ApproachLOS:	*			*			*			E		

Existing PM Plus Project Wed Jan 14, 2004 14:01:07 Page 8-1

Patterson Sand and Gravel
Existing Plus "Maximum Practical Mining Rate" (With Haul Road)
"Highest" - PM Peak Hour

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

****
Intersection #3 Old SR 65 and Haul Route
****

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
HevVeh:		4%			5%			0%			29%	
Grade:		0%			0%			0%			0%	
Peds/Hour:		0			0			0			0	
Pedestrian Walk Speed: 4.00 feet/sec												
LaneWidth:		12 feet			12 feet			12 feet			12 feet	

Time Period: 0.25 hour

Upstream Signals:

Link Index:	#2	
Dist(miles):	0.000	
Speed (mph):	0.00	
SignalIndex:	#2	
Cycle Time:	0 secs	
InitVolume:	0	0
Saturation:	0	0
ArrivalType:	0	0
G/C:	0.00	0.00

*** Computation 1: Time for Queue to Clear at Each Upstream Intersection

P:	0.000	0.000
gq1:	0.00	0.00
gq2:	0.00	0.00
gq:	0.00	0.00

*** Computation 2: Time Intersection Blocked Because of Upstream Platoons

alpha:	0.000	
beta:	0.000	
ta (secs):	0.000	
F:	0.000	
f:	0.000	0.000
vcmax:	0	0
vcmin:	0	0
tp:	0.0	0.0
p:	0.000	

*** Computation 3: Platoon Event Periods
pdom/psubo: 0.000/0.000/Unconstrained

*** Computation 4: Conflicting Flows During Each Unblocked Period

InitCnflVol:	0	xxxxx	xxxxx	852	xxxxx	xxxxx	0	0	0	1387	0	778
UpstreamSat:	0	xxxxx	xxxxx	0	xxxxx	xxxxx	0	0	0	0	0	0
UpstreamAdj:	1.00	x.xxx	x.xxx	1.00	x.xxx	x.xxx	1.00	1.000	1.000	1.00	1.000	1.000
ConflictVol:	0	xxxxx	xxxxx	852	xxxxx	xxxxx	0	0	0	1387	0	778

*** Computation 5: Capactiy for Subject Movement During Unblocked Period

InitPotCap:	0	xxxxx	xxxxx	774	xxxxx	xxxxx	0	0	0	138	0	356
UpstreamAdj:	1.00	x.xxx	x.xxx	1.00	x.xxx	x.xxx	1.00	1.000	1.000	1.00	1.000	1.000
PotentCap:	0	xxxxx	xxxxx	774	xxxxx	xxxxx	0	0	0	138	0	356

Existing PM Plus Project Wed Jan 14, 2004 14:01:07 Page 9-1

Patterson Sand and Gravel
Existing Plus "Maximum Practical Mining Rate" (With Haul Road)
"Highest" - PM Peak Hour

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

****
Intersection #4 Riosa Rd and 11th St
****

Cycle (sec):	100	Critical Vol./Cap. (X):	0.125
Loss Time (sec):	0 (Y+R = 4 sec)	Average Delay (sec/veh):	7.4
Optimal Cycle:	0	Level Of Service:	A

****

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Stop Sign			Stop Sign			Stop Sign			Stop Sign		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Lanes:	0 0	1! 0	0	0 0	0 1	0	0 1	0 0	0	0 1	0 0	0
Volume Module:												
Base Vol:	2	3	1	0	1	2	6	107	0	1	40	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:	2	3	1	0	1	2	6	107	0	1	40	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:	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 Volume:	2	3	1	0	1	2	6	107	0	1	40	0
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	2	3	1	0	1	2	6	107	0	1	40	0
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Final Vol.:	2	3	1	0	1	2	6	107	0	1	40	0
Saturation Flow Module:												
Adjustment:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Lanes:	0.33	0.50	0.17	0.00	0.33	0.67	0.05	0.95	0.00	0.02	0.98	0.00
Final Sat.:	278	416	139	0	303	606	48	857	0	22	867	0
Capacity Analysis Module:												
Vol/Sat:	0.01	0.01	0.01	xxxx	0.00	0.00	0.12	0.12	xxxx	0.05	0.05	xxxx
Crit Moves:	****					****		****			****	
Delay/Veh:	7.2	7.2	7.2	0.0	6.8	6.8	7.5	7.5	0.0	7.2	7.2	0.0
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:	7.2	7.2	7.2	0.0	6.8	6.8	7.5	7.5	0.0	7.2	7.2	0.0
LOS by Move:	A	A	A	*	A	A	A	A	*	A	A	*
ApproachDel:	7.2			6.8			7.5			7.2		
Delay Adj:	1.00			1.00			1.00			1.00		
ApprAdjDel:	7.2			6.8			7.5			7.2		
LOS by Appr:	A			A			A			A		

****

Patterson Sand and Gravel
Existing Plus "Maximum Practical Mining Rate" (With Haul Road)
"Highest" - PM Peak Hour

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

****
Intersection #4 Riosa Rd and 11th St
****

Approach:	North Bound	South Bound	East Bound	West Bound
Movement:	L - T - R	L - T - R	L - T - R	L - T - R
Time Period:	0.25 hour			
HevVeh:	0%	0%	0%	0%
Alpha Value:	0.01			
GroupType:	1	1	1	1
P[C1]:	0.8328	0.8296	0.9445	0.8667
P[C2]:	0.0027	0.0058	0.0453	0.1232
P[C3]:	0.1584	0.1578	0.0096	0.0088
P[C4]:	0.0062	0.0068	0.0005	0.0013
P[C5]:	0.0000	0.0000	0.0000	0.0000
Padj[C1]:	0.00338	0.00342	0.00066	0.00145
Padj[C2]:	0.00168	0.00166	-0.00035	-0.00112
Padj[C3]:	-0.00469	-0.00466	-0.00028	-0.00025
Padj[C4]:	-0.00037	-0.00041	-0.00003	-0.00008
Padj[C5]:	-0.00000	-0.00000	-0.00000	-0.00000
Lane:	L1	L1	L1	L1
LaneType:	LEFTTHRURITE	LEFTTHRURITE	LEFTTHRURITE	LEFTTHRURITE
HeadwayAdj:	-0.033	-0.400	0.011	0.005
Volume:	6	3	113	41
Capacity:	833	908	905	888
DegOfUtil:	0.01	0.00	0.12	0.05
DepHeadway:	4.18	3.82	3.97	4.02
ServiceTime:	2.2	1.8	2.0	2.0
Delay:	7.2	6.8	7.5	7.2
Approach:	North Bound	South Bound	East Bound	West Bound
ApproachDel:	7.2	6.8	7.5	7.2
Delay Adj:	1.00	1.00	1.00	1.00
ApprAdjDel:	7.2	6.8	7.5	7.2
LOS by Appr:	A	A	A	A
OverallDel:		7.4		
OverallLOS:		A		

Patterson Sand and Gravel
Existing Plus "Maximum Practical Mining Rate" (With Haul Road)
"Highest" - PM Peak Hour

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

****
Intersection #5 Riosa Rd and Karchner Rd
****
Average Delay (sec/veh): 4.5 Worst Case Level Of Service: A
****

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	- T	- R	L	- T	- R	L	- T	- R	L	- T	- R
Control:	Stop Sign			Stop Sign			Uncontrolled			Uncontrolled		
Rights:	Include			Include			Include			Include		
Lanes:	0 0	0 0	0	0 0	1! 0	0	0 1	0 0	0	0 0	0 1	0
Volume Module:												
Base Vol:	0	0	0	7	0	23	28	23	0	0	19	5
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	7	0	23	28	23	0	0	19	5
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	0	0	0	7	0	23	28	23	0	0	19	5
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Final Vol.:	0	0	0	7	0	23	28	23	0	0	19	5
Critical Gap Module:												
Critical Gp:	xxxxx	xxxx	xxxxx	6.8	xxxx	6.6	4.4	xxxx	xxxxx	xxxxx	xxxx	xxxxx
FollowUpTim:	xxxxx	xxxx	xxxxx	3.9	xxxx	3.7	2.5	xxxx	xxxxx	xxxxx	xxxx	xxxxx
Capacity Module:												
Cnflict Vol:	xxxx	xxxx	xxxxx	101	xxxx	22	24	xxxx	xxxxx	xxxx	xxxx	xxxxx
Potent Cap.:	xxxx	xxxx	xxxxx	808	xxxx	949	1401	xxxx	xxxxx	xxxx	xxxx	xxxxx
Move Cap.:	xxxx	xxxx	xxxxx	795	xxxx	949	1401	xxxx	xxxxx	xxxx	xxxx	xxxxx
Level Of Service Module:												
Stopped Del:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	7.6	xxxx	xxxxx	xxxxx	xxxx	xxxxx
LOS by Move:	*	*	*	*	*	*	A	*	*	*	*	*
Movement:	LT -	LTR -	RT	LT -	LTR -	RT	LT -	LTR -	RT	LT -	LTR -	RT
Shared Cap.:	xxxx	xxxx	xxxxx	xxxx	908	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx
Shrd StpDel:	xxxxx	xxxx	xxxxx	xxxxx	9.1	xxxxx	7.6	xxxx	xxxxx	xxxxx	xxxx	xxxxx
Shared LOS:	*	*	*	*	A	*	A	*	*	*	*	*
ApproachDel:	xxxxxx				9.1		xxxxxx			xxxxxx		
ApproachLOS:	*				A		*			*		

Existing PM Plus Project Wed Jan 14, 2004 14:01:07 Page 12-1

Patterson Sand and Gravel
Existing Plus "Maximum Practical Mining Rate" (With Haul Road)
"Highest" - PM Peak Hour

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

****
Intersection #5 Riosa Rd and Karchner Rd
****

Approach:	North Bound	South Bound	East Bound	West Bound
Movement:	L - T - R	L - T - R	L - T - R	L - T - R
HevVeh:	0%	43%	35%	0%
Grade:	0%	0%	0%	0%
Peds/Hour:	0	0	0	0
LaneWidth:	12 feet	12 feet	12 feet	12 feet

Pedestrian Walk Speed: 4.00 feet/sec
Time Period: 0.25 hour

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D6. Cumulative Plus Project with Haul Road

Cumulative AM Plus Project Sat Jan 17, 2004 12:08:09 Page 1-1

Patterson Sand and Gravel
Cumulative Conditions -Plus Proposed Project (With Haul Road)
"Average Day" - AM Peak Hour

Scenario Report

Scenario:	Cumulative AM Plus Project
Command:	Cumulative AM Plus Project
Volume:	Cumulative AM Plus Project
Geometry:	Cumulative AM Plus Project
Impact Fee:	Default Impact Fee
Trip Generation:	Default Trip Generation
Trip Distribution:	Default Trip Distribution
Paths:	Default Paths
Routes:	Default Routes
Configuration:	Default Configuration

Cumulative AM Plus Project Sat Jan 17, 2004 12:08:09 Page 2-1

Patterson Sand and Gravel
Cumulative Conditions -Plus Proposed Project (With Haul Road)
"Average Day" - AM Peak Hour

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 65 and Riosa Road (Sheridan	B	2.2	0.000	B	2.2	0.000	+ 0.000 V/C
# 2 SR 65 and SR 193 (Lincoln)	B	15.6	0.571	B	15.6	0.571	+ 0.000 D/V
# 3 Old SR 65 and Haul Route	C	2.3	0.000	C	2.3	0.000	+ 0.000 V/C
# 4 Riosa Rd and 11th St	A	7.6	0.139	A	7.6	0.139	+ 0.000 V/C
# 5 Riosa Rd abd Karchner Rd	A	4.3	0.000	A	4.3	0.000	+ 0.000 V/C

Cumulative AM Plus Project Sat Jan 17, 2004 12:08:09 Page 3-1

Patterson Sand and Gravel
Cumulative Conditions -Plus Proposed Project (With Haul Road)
"Average Day" - AM Peak Hour

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

Intersection #1 SR 65 and Riosa Road (Sheridan)

Average Delay (sec/veh): 2.2 Worst Case 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:	Uncontrolled				Uncontrolled				Stop Sign				Stop Sign			
Rights:	Include				Include				Include				Include			
Lanes:	0	0	1	0 1	1	0	1	0 0	0	0	0	0 0	0	0	1!	0 0
Volume Module:																
Base Vol:	0	364		5	43	600		0	0	0		0	15	0		153
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	364		5	43	600		0	0	0		0	15	0		153
User Adj:	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00
PHF Adj:	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00
PHF Volume:	0	364		5	43	600		0	0	0		0	15	0		153
Reduct Vol:	0	0		0	0	0		0	0	0		0	0	0		0
Final Vol.:	0	364		5	43	600		0	0	0		0	15	0		153
Critical Gap Module:																
Critical Gp:	xxxxx	xxxx		xxxxx	4.2	xxxx		xxxxx	xxxxx	xxxx		xxxxx	6.4	xxxx		6.2
FollowUpTim:	xxxxx	xxxx		xxxxx	2.3	xxxx		xxxxx	xxxxx	xxxx		xxxxx	3.5	xxxx		3.3
Capacity Module:																
Cnflict Vol:	xxxx	xxxx		xxxxx	369	xxxx		xxxxx	xxxx	xxxx		xxxxx	1050	xxxx		364
Potent Cap.:	xxxx	xxxx		xxxxx	1142	xxxx		xxxxx	xxxx	xxxx		xxxxx	254	xxxx		685
Move Cap.:	xxxx	xxxx		xxxxx	1142	xxxx		xxxxx	xxxx	xxxx		xxxxx	247	xxxx		685
Level Of Service Module:																
Stopped Del:	xxxxx	xxxx		xxxxx	8.3	xxxx		xxxxx	xxxxx	xxxx		xxxxx	xxxxx	xxxx		xxxxx
LOS by Move:	*	*		*	A	*		*	*	*		*	*	*		*
Movement:	LT -	LTR -		RT	LT -	LTR -		RT	LT -	LTR -		RT	LT -	LTR -		RT
Shared Cap.:	xxxx	xxxx		xxxxx	xxxx	xxxx		xxxxx	xxxx	xxxx		xxxxx	xxxx	591		xxxxx
Shrd StpDel:	xxxxx	xxxx		xxxxx	xxxxx	xxxx		xxxxx	xxxxx	xxxx		xxxxx	xxxxx	13.5		xxxxx
Shared LOS:	*	*		*	*	*		*	*	*		*	*	B		*
ApproachDel:	xxxxxx				xxxxxx				xxxxxx				13.5			
ApproachLOS:	*				*				*				B			

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Cumulative AM Plus Project Sat Jan 17, 2004 12:08:09 Page 4-1

Patterson Sand and Gravel
Cumulative Conditions -Plus Proposed Project (With Haul Road)
"Average Day" - AM Peak Hour

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

Intersection #1 SR 65 and Riosa Road (Sheridan)

Approach:	North Bound				South Bound				East Bound				West Bound			
Movement:	L	-	T	- R	L	-	T	- R	L	-	T	- R	L	-	T	- R
HevVeh:	16%				11%				0%				0%			
Grade:	0%				0%				0%				0%			
Peds/Hour:	0				0				0				0			
Pedestrian Walk Speed: 4.00 feet/sec																
LaneWidth:	12 feet				12 feet				12 feet				12 feet			
Time Period: 0.25 hour																
Upstream Signals:																
Link Index:	#2															
Dist(miles):	0.000															
Speed (mph):	0.00															
SignalIndex:	#2															
Cycle Time:	0 secs															
InitVolume:	0	0														
Saturation:	0	0														
ArrivalType:	0	0														
G/C:	0.00	0.00														
*** Computation 1: Time for Queue to Clear at Each Upstream Intersection																
P:	0.000	0.000														
gq1:	0.00	0.00														
gq2:	0.00	0.00														
gq:	0.00	0.00														
*** Computation 2: Time Intersection Blocked Because of Upstream Platoons																
alpha:	0.000															
beta:	0.000															
ta (secs):	0.000															
F:	0.000															
f:	0.000	0.000														
vcmax:	0	0														
vcmin:	0	0														
tp:	0.0	0.0														
p:	0.000															
*** Computation 3: Platoon Event Periods																
pdom/psubo:	0.000/0.000/Unconstrained															
*** Computation 4: Conflicting Flows During Each Unblocked Period																
InitCnflVol:	0	xxxxx	xxxxx	369	xxxxx	xxxxx	0	0	0	1050	0	364				
UpstreamSat:	0	xxxxx	xxxxx	0	xxxxx	xxxxx	0	0	0	0	0	0				
UpstreamAdj:	1.00	x.xxx	x.xxx	1.00	x.xxx	x.xxx	1.00	1.000	1.000	1.00	1.000	1.000				
ConflictVol:	0	xxxxx	xxxxx	369	xxxxx	xxxxx	0	0	0	1050	0	364				
*** Computation 5: Capactiy for Subject Movement During Unblocked Period																
InitPotCap:	0	xxxxx	xxxxx	1142	xxxxx	xxxxx	0	0	0	254	0	685				
UpstreamAdj:	1.00	x.xxx	x.xxx	1.00	x.xxx	x.xxx	1.00	1.000	1.000	1.00	1.000	1.000				
PotentCap:	0	xxxxx	xxxxx	1142	xxxxx	xxxxx	0	0	0	254	0	685				

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Cumulative AM Plus Project Sat Jan 17, 2004 12:08:09 Page 5-1

Patterson Sand and Gravel
Cumulative Conditions -Plus Proposed Project (With Haul Road)
"Average Day" - AM Peak Hour

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

Intersection #2 SR 65 and SR 193 (Lincoln)

Cycle (sec): 100 Critical Vol./Cap. (X): 0.571
Loss Time (sec): 0 (Y+R = 4 sec) Average Delay (sec/veh): 15.6
Optimal Cycle: 43 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				Permitted				Permitted			
Rights:	Include				Include				Include				Ovl			
Min. Green:	0	0	0		0	0	0		0	0	0		0	0	0	
Lanes:	1	0	0	1 0	1	0	0	1 0	0	0	1!	0 0	0	1	0	0 1
Volume Module:																
Base Vol:	0	432	29		180	613	0		0	0	0		62	0	301	
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	432	29		180	613	0		0	0	0		62	0	301	
User Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
PHF Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
PHF Volume:	0	432	29		180	613	0		0	0	0		62	0	301	
Reduct Vol:	0	0	0		0	0	0		0	0	0		0	0	0	
Reduced Vol:	0	432	29		180	613	0		0	0	0		62	0	301	
PCE Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
MLF Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
Final Vol.:	0	432	29		180	613	0		0	0	0		62	0	301	
Saturation Flow Module:																
Sat/Lane:	1900	1900	1900		1900	1900	1900		1900	1900	1900		1900	1900	1900	
Adjustment:	1.00	0.76	0.76		0.74	0.78	1.00		1.00	1.00	1.00		0.58	1.00	0.63	
Lanes:	1.00	0.94	0.06		1.00	1.00	0.00		0.00	1.00	0.00		1.00	0.00	1.00	
Final Sat.:	1900	1358	91		1400	1474	0		0	1900	0		1101	0	1192	
Capacity Analysis Module:																
Vol/Sat:	0.00	0.32	0.32		0.13	0.42	0.00		0.00	0.00	0.00		0.06	0.00	0.25	
Crit Moves:		****			****										****	
Green/Cycle:	0.00	0.56	0.56		0.23	0.78	0.00		0.00	0.00	0.00		0.22	0.00	0.44	
Volume/Cap:	0.00	0.57	0.57		0.57	0.53	0.00		0.00	0.00	0.00		0.26	0.00	0.57	
Delay/Veh:	0.0	15.3	15.3		36.9	4.5	0.0		0.0	0.0	0.0		33.0	0.0	22.3	
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:	0.0	15.3	15.3		36.9	4.5	0.0		0.0	0.0	0.0		33.0	0.0	22.3	
DesignQueue:	0	11	1		8	8	0		0	0	0		3	0	10	

Cumulative AM Plus Project Sat Jan 17, 2004 12:08:09 Page 6-1

Patterson Sand and Gravel
Cumulative Conditions -Plus Proposed Project (With Haul Road)
"Average Day" - AM Peak Hour

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

Intersection #2 SR 65 and SR 193 (Lincoln)

Approach:	North Bound				South Bound				East Bound				West Bound			
Movement:	L	-	T	- R	L	-	T	- R	L	-	T	- R	L	-	T	- R
HCM Ops Adjusted Lane Utilization Module:																
Lanes:	1	0	0	1 0	1	0	0	1 0	0	0	1!	0 0	0	1	0	0 1
Lane Group:	L		RT		RT	L		RT	RT	LTR	LTR	LTR	LT		LT	R
#LnsInGrps:	1		1		1	1		1	1	1	1	1	1		1	1
HCM Ops Input Saturation Adj Module:																
Lane Width:	12		12		12	12		12	12	12	12	12	12		12	12
CrosswalkWid			8					8			8				8	
% Hev Veh:			17					16			0				22	
Grade:			0%					0%			0%				0%	
Parking/Hr:			No					No			No				No	
Bus Stp/Hr:			0					0			0				0	
Area Type:	< < < < < < < < < < < < < < < < CBD > > > > > > > > > > > > > > > >															
Cnft Ped/Hr:			0					0			0				0	
ExclusiveRT:			Include					Include			Include				Include	
% RT Prtct:			0					0			0				0	
HCM Ops f(lt) Adj Case Module:																
f(lt) Case:	xxxx	xxxx	xxxx		1	xxxx	xxxx		xxxx	xxxx	xxxx		5	xxxx	xxxx	
HCM Ops Saturation Adj Module:																
Ln Wid Adj:	xxxx	1.00	1.00		1.00	1.00	xxxxx		xxxx	xxxx	xxxxx		1.00	xxxx	1.00	
Hev Veh Adj:	xxxx	0.86	0.86		0.86	0.86	xxxxx		xxxx	xxxx	xxxxx		0.82	xxxx	0.82	
Grade Adj:	xxxx	1.00	1.00		1.00	1.00	xxxxx		xxxx	xxxx	xxxxx		1.00	xxxx	1.00	
Parking Adj:	xxxx	1.00	1.00		xxxx	1.00	xxxxx		xxxx	xxxx	xxxxx		xxxx	xxxx	1.00	
Bus Stp Adj:	xxxx	1.00	1.00		xxxx	1.00	xxxxx		xxxx	xxxx	xxxxx		xxxx	xxxx	1.00	
Area Adj:	xxxx	0.90	0.90		0.90	0.90	xxxxx		xxxx	xxxx	xxxxx		0.90	xxxx	0.90	
RT Adj:	xxxx	0.99	0.99		xxxx	xxxx	xxxxx		xxxx	xxxx	xxxxx		xxxx	xxxx	0.85	
LT Adj:	xxxx	xxxx	xxxxx		0.95	xxxx	xxxxx		xxxx	xxxx	xxxxx		0.79	xxxx	xxxxx	
PedBike Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
HCM Sat Adj:	1.00	0.76	0.76		0.74	0.78	1.00		1.00	1.00	1.00		0.58	1.00	0.63	
Usr Sat Adj:	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 Sat Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
Fnl Sat Adj:	1.00	0.76	0.76		0.74	0.78	1.00		1.00	1.00	1.00		0.58	1.00	0.63	
Delay Adjustment Factor Module:																
Coordinated:	< < < < < < < < < < < < < < < < No > > > > > > > > > > > > > > > >															
Signal Type:	< < < < < < < < < < < < < Actuated > > > > > > > > > > > > > > >															
DelAdjFctr:	0.00	1.00	1.00		1.00	1.00	0.00		0.00	0.00	0.00		1.00	0.00	1.00	

Cumulative AM Plus Project Sat Jan 17, 2004 12:08:09 Page 6-2

Patterson Sand and Gravel
Cumulative Conditions -Plus Proposed Project (With Haul Road)
"Average Day" - AM Peak Hour

Level Of Service Detailed Computation Report (Permitted Left Turn Sat Adj)
2000 HCM Operations Method
Base Volume Alternative

****
Intersection #2 SR 65 and SR 193 (Lincoln)
****

Approach:	North	South	East	West
Cycle Length, C:	xxxxxx	xxxxxx	xxxxxx	100
Actual Green Time Per Lane Group, G:	xxxxxx	xxxxxx	xxxxxx	40.25
Effective Green Time Per Lane Group, g:	xxxxxx	xxxxxx	xxxxxx	44.25
Opposing Effective Green Time, go:	xxxxxx	xxxxxx	xxxxxx	44.25
Number Of Opposing Lanes, No:	xxxxxx	xxxxxx	xxxxxx	1
Number Of Lanes In Lane Group, N:	xxxxxx	xxxxxx	xxxxxx	1
Adjusted Left-Turn Flow Rate, Vlt:	xxxxxx	xxxxxx	xxxxxx	62
Proportion of Left Turns in Lane Group, Plt:	xxxxxx	xxxxxx	xxxxxx	1.00
Proportion of Left Turns in Opp Flow, Plto:	xxxxxx	xxxxxx	xxxxxx	1.00
Left Turns Per Cycle, LTC:	xxxxxx	xxxxxx	xxxxxx	1.72
Adjusted Opposing Flow Rate, Vo:	xxxxxx	xxxxxx	xxxxxx	0
Opposing Flow Per Lane Per Cycle, Volc:	xxxxxx	xxxxxx	xxxxxx	0.00
Opposing Platoon Ratio, Rpo:	xxxxxx	xxxxxx	xxxxxx	1.00
Lost Time Per Phase, tl:	xxxxxx	xxxxxx	xxxxxx	0.00
Eff grn until arrival of left-turn car, gf:	xxxxxx	xxxxxx	xxxxxx	10.94
Opposing Queue Ratio, qro:	xxxxxx	xxxxxx	xxxxxx	0.56
Eff grn blocked by opposing queue, gq:	xxxxxx	xxxxxx	xxxxxx	0.00
Eff grn while left turns filter thru, gu:	xxxxxx	xxxxxx	xxxxxx	33.31
Max opposing cars arriving during gq-gf, n:	xxxxxx	xxxxxx	xxxxxx	0.00
Proportion of Opposing Thru & RT cars, ptho:	xxxxxx	xxxxxx	xxxxxx	0.00
Left-turn Saturation Factor, fs:	xxxxxx	xxxxxx	xxxxxx	xxxxxx
Proportion of Left Turns in Shared Lane, pl:	xxxxxx	xxxxxx	xxxxxx	1.00
Through-car Equivalents, el1:	xxxxxx	xxxxxx	xxxxxx	1.40
Single Lane Through-car Equivalents, el2:	xxxxxx	xxxxxx	xxxxxx	1.00
Minimum Left Turn Adjustment Factor, fmin:	xxxxxx	xxxxxx	xxxxxx	0.09
Single Lane Left Turn Adjustment Factor, fm:	xxxxxx	xxxxxx	xxxxxx	0.78
Left Turn Adjustment Factor, flt:	xxxxxx	xxxxxx	xxxxxx	0.78

****

Cumulative AM Plus Project Sat Jan 17, 2004 12:08:09 Page 7-1

Patterson Sand and Gravel
Cumulative Conditions -Plus Proposed Project (With Haul Road)
"Average Day" - AM Peak Hour

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

****
Intersection #3 Old SR 65 and Haul Route
****
Average Delay (sec/veh): 2.3 Worst Case 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:	Uncontrolled			Uncontrolled			Stop Sign			Stop Sign		
Rights:	Include			Include			Include			Include		
Lanes:	0 0 1	0 1		1 0 1	0 0		0 0 0	0 0		0 0 1!	0 0	
Volume Module:												
Base Vol:	0	324	27	19	596	0	0	0	0	64	0	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:	0	324	27	19	596	0	0	0	0	64	0	40
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	0	324	27	19	596	0	0	0	0	64	0	40
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Final Vol.:	0	324	27	19	596	0	0	0	0	64	0	40
Critical Gap Module:												
Critical Gp:	xxxxx	xxxx	xxxxx	4.2	xxxx	xxxxx	xxxxx	xxxx	xxxxx	6.9	xxxx	6.7
FollowUpTim:	xxxxx	xxxx	xxxxx	2.3	xxxx	xxxxx	xxxxx	xxxx	xxxxx	3.9	xxxx	3.7
Capacity Module:												
Cnflict Vol:	xxxx	xxxx	xxxxx	351	xxxx	xxxxx	xxxx	xxxx	xxxxx	958	xxxx	324
Potent Cap.:	xxxx	xxxx	xxxxx	1154	xxxx	xxxxx	xxxx	xxxx	xxxxx	238	xxxx	624
Move Cap.:	xxxx	xxxx	xxxxx	1154	xxxx	xxxxx	xxxx	xxxx	xxxxx	235	xxxx	624
Level Of Service Module:												
Stopped Del:	xxxxx	xxxx	xxxxx	8.2	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx
LOS by Move:	*	*	*	A	*	*	*	*	*	*	*	*
Movement:	LT -	LTR -	RT	LT -	LTR -	RT	LT -	LTR -	RT	LT -	LTR -	RT
Shared Cap.:	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	309	xxxxx
Shrd StpDel:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	22.5	xxxxx
Shared LOS:	*	*	*	*	*	*	*	*	*	*	C	*
ApproachDel:	xxxxxx			xxxxxx			xxxxxx			22.5		
ApproachLOS:	*			*			*			C		

Cumulative AM Plus Project Sat Jan 17, 2004 12:08:09 Page 8-1

Patterson Sand and Gravel
Cumulative Conditions -Plus Proposed Project (With Haul Road)
"Average Day" - AM Peak Hour

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

```
*******************************************************************************
Intersection #3 Old SR 65 and Haul Route
*******************************************************************************
Approach:       North Bound      South Bound      East Bound       West Bound
Movement:     L  -  T  -  R    L  -  T  -  R    L  -  T  -  R    L  -  T  -  R
------------|----------------|----------------|----------------|----------------|
HevVeh:             18%              12%              0%               47%
Grade:               0%               0%              0%                0%
Peds/Hour:           0                0               0                 0
Pedestrian Walk Speed: 4.00 feet/sec
LaneWidth:        12 feet          12 feet         12 feet          12 feet
Time Period: 0.25 hour
------------|----------------|----------------|----------------|----------------|
Upstream Signals:
Link Index:        #2
Dist(miles):       0.000
Speed (mph):        0.00
SignalIndex:       #2
Cycle Time:            0 secs
InitVolume:      0     0
Saturation:      0     0
ArrivalType:     0     0
G/C:          0.00  0.00
*** Computation 1: Time for Queue to Clear at Each Upstream Intersection
P:           0.000 0.000
gq1:          0.00  0.00
gq2:          0.00  0.00
gq:           0.00  0.00
*** Computation 2: Time Intersection Blocked Because of Upstream Platoons
alpha:             0.000
beta:              0.000
ta (secs):         0.000
F:                 0.000
f:           0.000 0.000
vcmax:           0     0
vcmin:           0     0
tp:            0.0   0.0
p:                 0.000
*** Computation 3: Platoon Event Periods
pdom/psubo:       0.000/0.000/Unconstrained
*** Computation 4: Conflicting Flows During Each Unblocked Period
InitCnflVol:   0 xxxxx xxxxx  351 xxxxx xxxxx    0     0     0  958     0   324
UpstreamSat:   0 xxxxx xxxxx    0 xxxxx xxxxx    0     0     0    0     0     0
UpstreamAdj:1.00 x.xxx x.xxx 1.00 x.xxx x.xxx 1.00 1.000 1.000 1.00 1.000 1.000
ConflictVol:   0 xxxxx xxxxx  351 xxxxx xxxxx    0     0     0  958     0   324
*** Computation 5: Capactiy for Subject Movement During Unblocked Period
InitPotCap:    0 xxxxx xxxxx 1154 xxxxx xxxxx    0     0     0  238     0   624
UpstreamAdj:1.00 x.xxx x.xxx 1.00 x.xxx x.xxx 1.00 1.000 1.000 1.00 1.000 1.000
PotentCap:     0 xxxxx xxxxx 1154 xxxxx xxxxx    0     0     0  238     0   624
```


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Patterson Sand and Gravel
Cumulative Conditions -Plus Proposed Project (With Haul Road)
"Average Day" - AM Peak Hour

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

```
*******************************************************************************
Intersection #4 Riosa Rd and 11th St
*******************************************************************************
Cycle (sec):          100                Critical Vol./Cap. (X):          0.139
Loss Time (sec):        0 (Y+R =  4 sec) Average Delay (sec/veh):          7.6
Optimal Cycle:          0                Level Of Service:                    A
*******************************************************************************
Approach:       North Bound      South Bound      East Bound       West Bound
Movement:     L  -  T  -  R    L  -  T  -  R    L  -  T  -  R    L  -  T  -  R
------------|----------------||----------------||----------------||----------------|
Control:        Stop Sign        Stop Sign        Stop Sign        Stop Sign
Rights:           Include          Include          Include          Include
Min. Green:     0    0    0     0    0    0     0    0    0     0    0    0
Lanes:        0  0  1! 0  0    0  0  1! 0  0    0  1  0  0  0    0  1  0  0  0
------------|----------------||----------------||----------------||----------------|
Volume Module:
Base Vol:       6    4    4    11    7   20    13   62    0     2  119    0
Growth Adj:  1.00 1.00 1.00  1.00 1.00 1.00  1.00 1.00 1.00  1.00 1.00 1.00
Initial Bse:    6    4    4    11    7   20    13   62    0     2  119    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:     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 Volume:     6    4    4    11    7   20    13   62    0     2  119    0
Reduct Vol:     0    0    0     0    0    0     0    0    0     0    0    0
Reduced Vol:    6    4    4    11    7   20    13   62    0     2  119    0
PCE Adj:     1.00 1.00 1.00  1.00 1.00 1.00  1.00 1.00 1.00  1.00 1.00 1.00
MLF Adj:     1.00 1.00 1.00  1.00 1.00 1.00  1.00 1.00 1.00  1.00 1.00 1.00
Final Vol.:     6    4    4    11    7   20    13   62    0     2  119    0
------------|----------------||----------------||----------------||----------------|
Saturation Flow Module:
Adjustment:  1.00 1.00 1.00  1.00 1.00 1.00  1.00 1.00 1.00  1.00 1.00 1.00
Lanes:       0.43 0.28 0.29  0.29 0.18 0.53  0.17 0.83 0.00  0.02 0.98 0.00
Final Sat.:   346  231  231   246  156  446   148  705    0    14  855    0
------------|----------------||----------------||----------------||----------------|
Capacity Analysis Module:
Vol/Sat:     0.02 0.02 0.02  0.04 0.04 0.04  0.09 0.09 xxxx  0.14 0.14 xxxx
Crit Moves:  ****                      ****       ****            ****
Delay/Veh:    7.3  7.3  7.3   7.2  7.2  7.2   7.5  7.5  0.0   7.7  7.7  0.0
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:   7.3  7.3  7.3   7.2  7.2  7.2   7.5  7.5  0.0   7.7  7.7  0.0
LOS by Move:    A    A    A     A    A    A     A    A    *     A    A    *
ApproachDel:       7.3              7.2              7.5              7.7
Delay Adj:        1.00             1.00             1.00             1.00
ApprAdjDel:        7.3              7.2              7.5              7.7
LOS by Appr:         A                A                A                A
*******************************************************************************
```

Cumulative AM Plus Project Sat Jan 17, 2004 12:08:09 Page 10-1

Patterson Sand and Gravel
Cumulative Conditions -Plus Proposed Project (With Haul Road)
"Average Day" - AM Peak Hour

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

****
Intersection #4 Riosa Rd and 11th St
****

Approach:	North Bound	South Bound	East Bound	West Bound
Movement:	L - T - R	L - T - R	L - T - R	L - T - R
Time Period:	0.25 hour			
HevVeh:	0%	0%	0%	0%
Alpha Value:	0.01			
GroupType:	1	1	1	1
P[C1]:	0.7545	0.7752	0.8123	0.8599
P[C2]:	0.0338	0.0130	0.1291	0.0814
P[C3]:	0.1913	0.1966	0.0500	0.0529
P[C4]:	0.0199	0.0150	0.0086	0.0057
P[C5]:	0.0005	0.0002	0.0001	0.0001
Padj[C1]:	0.00478	0.00452	0.00255	0.00205
Padj[C2]:	0.00199	0.00214	-0.00062	-0.00017
Padj[C3]:	-0.00553	-0.00574	-0.00141	-0.00153
Padj[C4]:	-0.00119	-0.00090	-0.00051	-0.00034
Padj[C5]:	-0.00005	-0.00002	-0.00001	-0.00001
Lane:	L1	L1	L1	L1
LaneType:	LEFTTHRURITE	LEFTTHRURITE	LEFTTHRURITE	LEFTTHRURITE
HeadwayAdj:	-0.086	-0.258	0.035	0.003
Volume:	14	38	75	121
Capacity:	808	848	852	870
DegOfUtil:	0.02	0.04	0.09	0.14
DepHeadway:	4.26	4.06	4.16	4.08
ServiceTime:	2.3	2.1	2.2	2.1
Delay:	7.3	7.2	7.5	7.7
Approach:	North Bound	South Bound	East Bound	West Bound
ApproachDel:	7.3	7.2	7.5	7.7
Delay Adj:	1.00	1.00	1.00	1.00
ApprAdjDel:	7.3	7.2	7.5	7.7
LOS by Appr:	A	A	A	A
OverallDel:		7.6		
OverallLOS:		A		

Cumulative AM Plus Project Sat Jan 17, 2004 12:08:09 Page 11-1

Patterson Sand and Gravel
Cumulative Conditions -Plus Proposed Project (With Haul Road)
"Average Day" - AM Peak Hour

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

****
Intersection #5 Riosa Rd abd Karchner Rd
****
Average Delay (sec/veh): 4.3 Worst Case Level Of Service: A
****

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	- T	- R	L	- T	- R	L	- T	- R	L	- T	- R
Control:	Stop Sign			Stop Sign			Uncontrolled			Uncontrolled		
Rights:	Include			Include			Include			Include		
Lanes:	0 0	0 0	0	0 0	1! 0	0	0 1	0 0	0	0 0	0 1	0
Volume Module:												
Base Vol:	0	0	0	23	0	44	30	38	0	0	52	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:	0	0	0	23	0	44	30	38	0	0	52	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:	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 Volume:	0	0	0	23	0	44	30	38	0	0	52	2
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Final Vol.:	0	0	0	23	0	44	30	38	0	0	52	2
Critical Gap Module:												
Critical Gp:	xxxxx	xxxx	xxxxx	7.0	xxxx	6.8	4.5	xxxx	xxxxx	xxxxx	xxxx	xxxxx
FollowUpTim:	xxxxx	xxxx	xxxxx	4.0	xxxx	3.8	2.6	xxxx	xxxxx	xxxxx	xxxx	xxxxx
Capacity Module:												
Cnflict Vol:	xxxx	xxxx	xxxxx	151	xxxx	53	54	xxxx	xxxxx	xxxx	xxxx	xxxxx
Potent Cap.:	xxxx	xxxx	xxxxx	720	xxxx	870	1330	xxxx	xxxxx	xxxx	xxxx	xxxxx
Move Cap.:	xxxx	xxxx	xxxxx	708	xxxx	870	1330	xxxx	xxxxx	xxxx	xxxx	xxxxx
Level Of Service Module:												
Stopped Del:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	7.8	xxxx	xxxxx	xxxxx	xxxx	xxxxx
LOS by Move:	*	*	*	*	*	*	A	*	*	*	*	*
Movement:	LT -	LTR -	RT	LT -	LTR -	RT	LT -	LTR -	RT	LT -	LTR -	RT
Shared Cap.:	xxxx	xxxx	xxxxx	xxxx	807	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx
Shrd StpDel:	xxxxx	xxxx	xxxxx	xxxxx	9.9	xxxxx	7.8	xxxx	xxxxx	xxxxx	xxxx	xxxxx
Shared LOS:	*	*	*	*	A	*	A	*	*	*	*	*
ApproachDel:	xxxxxx				9.9		xxxxxx			xxxxxx		
ApproachLOS:	*				A		*			*		

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Patterson Sand and Gravel
Cumulative Conditions -Plus Proposed Project (With Haul Road)
"Average Day" - AM Peak Hour

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

****
Intersection #5 Riosa Rd abd Karchner Rd
****

Approach:	North Bound	South Bound	East Bound	West Bound
Movement:	L - T - R	L - T - R	L - T - R	L - T - R
HevVeh:	0%	61%	42%	15%
Grade:	0%	0%	0%	0%
Peds/Hour:	0	0	0	0
LaneWidth:	12 feet	12 feet	12 feet	12 feet

Pedestrian Walk Speed: 4.00 feet/sec
Time Period: 0.25 hour

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Patterson Sand and Gravel
Cumulative Conditions -Plus Proposed Project (With Haul Road)
"30th Highest" - AM Peak Hour

Scenario Report

Scenario:	Cumulative AM Plus Project
Command:	Cumulative AM Plus Project
Volume:	Cumulative AM Plus Project
Geometry:	Cumulative AM Plus Project
Impact Fee:	Default Impact Fee
Trip Generation:	Default Trip Generation
Trip Distribution:	Default Trip Distribution
Paths:	Default Paths
Routes:	Default Routes
Configuration:	Default Configuration

Cumulative AM Plus Project Sat Jan 17, 2004 12:25:14 Page 2-1

Patterson Sand and Gravel
Cumulative Conditions -Plus Proposed Project (With Haul Road)
"30th Highest" - AM Peak Hour

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 65 and Riosa Road (Sheridan	B	2.2	0.000	B	2.2	0.000	+ 0.000 V/C
# 2 SR 65 and SR 193 (Lincoln)	B	15.8	0.585	B	15.8	0.585	+ 0.000 D/V
# 3 Old SR 65 and Haul Route	D	3.2	0.000	D	3.2	0.000	+ 0.000 V/C
# 4 Riosa Rd and 11th St	A	7.6	0.139	A	7.6	0.139	+ 0.000 V/C
# 5 Riosa Rd and Karchner Rd	B	4.9	0.000	B	4.9	0.000	+ 0.000 V/C

Cumulative AM Plus Project Sat Jan 17, 2004 12:25:14 Page 3-1

Patterson Sand and Gravel
Cumulative Conditions -Plus Proposed Project (With Haul Road)
"30th Highest" - AM Peak Hour

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

****
Intersection #1 SR 65 and Riosa Road (Sheridan)
****
Average Delay (sec/veh): 2.2 Worst Case 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:	Uncontrolled			Uncontrolled			Stop Sign			Stop Sign		
Rights:	Include			Include			Include			Include		
Lanes:	0 0 1	0	1	1 0 1	0	0	0 0 0	0	0	0 0 1!	0	0
Volume Module:												
Base Vol:	0	368	5	43	600	0	0	0	0	15	0	153
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	368	5	43	600	0	0	0	0	15	0	153
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	0	368	5	43	600	0	0	0	0	15	0	153
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Final Vol.:	0	368	5	43	600	0	0	0	0	15	0	153
Critical Gap Module:												
Critical Gp:	xxxxx	xxxx	xxxxx	4.2	xxxx	xxxxx	xxxxx	xxxx	xxxxx	6.4	xxxx	6.2
FollowUpTim:	xxxxx	xxxx	xxxxx	2.3	xxxx	xxxxx	xxxxx	xxxx	xxxxx	3.5	xxxx	3.3
Capacity Module:												
Cnflict Vol:	xxxx	xxxx	xxxxx	373	xxxx	xxxxx	xxxx	xxxx	xxxxx	1054	xxxx	368
Potent Cap.:	xxxx	xxxx	xxxxx	1138	xxxx	xxxxx	xxxx	xxxx	xxxxx	252	xxxx	682
Move Cap.:	xxxx	xxxx	xxxxx	1138	xxxx	xxxxx	xxxx	xxxx	xxxxx	245	xxxx	682
Level Of Service Module:												
Stopped Del:	xxxxx	xxxx	xxxxx	8.3	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx
LOS by Move:	*	*	*	A	*	*	*	*	*	*	*	*
Movement:	LT -	LTR -	RT	LT -	LTR -	RT	LT -	LTR -	RT	LT -	LTR -	RT
Shared Cap.:	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	588	xxxxx
Shrd StpDel:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	13.5	xxxxx
Shared LOS:	*	*	*	*	*	*	*	*	*	*	B	*
ApproachDel:	xxxxxx			xxxxxx			xxxxxx			13.5		
ApproachLOS:	*			*			*			B		

Cumulative AM Plus Project Sat Jan 17, 2004 12:25:14 Page 4-1

Patterson Sand and Gravel
Cumulative Conditions -Plus Proposed Project (With Haul Road)
"30th Highest" - AM Peak Hour

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

****
Intersection #1 SR 65 and Riosa Road (Sheridan)
****

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
HevVeh:	17%			11%			0%			0%		
Grade:	0%			0%			0%			0%		
Peds/Hour:	0			0			0			0		
Pedestrian Walk Speed: 4.00 feet/sec												
LaneWidth:	12 feet			12 feet			12 feet			12 feet		
Time Period: 0.25 hour												
Upstream Signals:												
Link Index:	#2											
Dist(miles):	0.000											
Speed (mph):	0.00											
SignalIndex:	#2											
Cycle Time:	0 secs											
InitVolume:	0	0										
Saturation:	0	0										
ArrivalType:	0	0										
G/C:	0.00	0.00										
*** Computation 1: Time for Queue to Clear at Each Upstream Intersection												
P:	0.000	0.000										
gq1:	0.00	0.00										
gq2:	0.00	0.00										
gq:	0.00	0.00										
*** Computation 2: Time Intersection Blocked Because of Upstream Platoons												
alpha:	0.000											
beta:	0.000											
ta (secs):	0.000											
F:	0.000											
f:	0.000	0.000										
vcmax:	0	0										
vcmin:	0	0										
tp:	0.0	0.0										
p:	0.000											
*** Computation 3: Platoon Event Periods												
pdom/psubo:	0.000/0.000/Unconstrained											
*** Computation 4: Conflicting Flows During Each Unblocked Period												
InitCnflVol:	0	xxxxx	xxxxx	373	xxxxx	xxxxx	0	0	0	1054	0	368
UpstreamSat:	0	xxxxx	xxxxx	0	xxxxx	xxxxx	0	0	0	0	0	0
UpstreamAdj:	1.00	x.xxx	x.xxx	1.00	x.xxx	x.xxx	1.00	1.000	1.000	1.00	1.000	1.000
ConflictVol:	0	xxxxx	xxxxx	373	xxxxx	xxxxx	0	0	0	1054	0	368
*** Computation 5: Capactiy for Subject Movement During Unblocked Period												
InitPotCap:	0	xxxxx	xxxxx	1138	xxxxx	xxxxx	0	0	0	252	0	682
UpstreamAdj:	1.00	x.xxx	x.xxx	1.00	x.xxx	x.xxx	1.00	1.000	1.000	1.00	1.000	1.000
PotentCap:	0	xxxxx	xxxxx	1138	xxxxx	xxxxx	0	0	0	252	0	682

Cumulative AM Plus Project Sat Jan 17, 2004 12:25:14 Page 5-1

Patterson Sand and Gravel
Cumulative Conditions -Plus Proposed Project (With Haul Road)
"30th Highest" - AM Peak Hour

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

Intersection #2 SR 65 and SR 193 (Lincoln)

Cycle (sec): 100 Critical Vol./Cap. (X): 0.585
Loss Time (sec): 0 (Y+R = 4 sec) Average Delay (sec/veh): 15.8
Optimal Cycle: 45 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				Permitted				Permitted			
Rights:	Include				Include				Include				Ovl			
Min. Green:	0	0	0		0	0	0		0	0	0		0	0	0	
Lanes:	1 0	0 1	0		1 0	0 1	0		0 0	1! 0	0		0 1	0 0	1	
Volume Module:																
Base Vol:	0	439	29		184	627	0		0	0	0		62	0	303	
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	439	29		184	627	0		0	0	0		62	0	303	
User Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
PHF Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
PHF Volume:	0	439	29		184	627	0		0	0	0		62	0	303	
Reduct Vol:	0	0	0		0	0	0		0	0	0		0	0	0	
Reduced Vol:	0	439	29		184	627	0		0	0	0		62	0	303	
PCE Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
MLF Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
Final Vol.:	0	439	29		184	627	0		0	0	0		62	0	303	
Saturation Flow Module:																
Sat/Lane:	1900	1900	1900		1900	1900	1900		1900	1900	1900		1900	1900	1900	
Adjustment:	1.00	0.75	0.75		0.72	0.76	1.00		1.00	1.00	1.00		0.57	1.00	0.62	
Lanes:	1.00	0.94	0.06		1.00	1.00	0.00		0.00	1.00	0.00		1.00	0.00	1.00	
Final Sat.:	1900	1335	88		1376	1448	0		0	1900	0		1091	0	1182	
Capacity Analysis Module:																
Vol/Sat:	0.00	0.33	0.33		0.13	0.43	0.00		0.00	0.00	0.00		0.06	0.00	0.26	
Crit Moves:		****			****										****	
Green/Cycle:	0.00	0.56	0.56		0.23	0.79	0.00		0.00	0.00	0.00		0.21	0.00	0.44	
Volume/Cap:	0.00	0.59	0.59		0.59	0.55	0.00		0.00	0.00	0.00		0.27	0.00	0.59	
Delay/Veh:	0.0	15.4	15.4		37.2	4.4	0.0		0.0	0.0	0.0		33.8	0.0	23.0	
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	15.4	15.4		37.2	4.4	0.0		0.0	0.0	0.0		33.8	0.0	23.0	
DesignQueue:	0	11	1		8	8	0		0	0	0		3	0	10	

Cumulative AM Plus Project Sat Jan 17, 2004 12:25:14 Page 6-1

Patterson Sand and Gravel
Cumulative Conditions -Plus Proposed Project (With Haul Road)
"30th Highest" - AM Peak Hour

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

Intersection #2 SR 65 and SR 193 (Lincoln)

Approach:	North Bound				South Bound				East Bound				West Bound			
Movement:	L	- T	-	R	L	- T	-	R	L	- T	-	R	L	- T	-	R
HCM Ops Adjusted Lane Utilization Module:																
Lanes:	1 0	0 1	0		1 0	0 1	0		0 0	1! 0	0		0 1	0 0	1	
Lane Group:	L	RT	RT		L	RT	RT		LTR	LTR	LTR		LT	LT	R	
#LnsInGrps:	1	1	1		1	1	1		1	1	1		1	1	1	
HCM Ops Input Saturation Adj Module:																
Lane Width:	12	12	12		12	12	12		12	12	12		12	12	12	
CrosswalkWid		8				8				8				8		
% Hev Veh:		19				18				0				23		
Grade:		0%				0%				0%				0%		
Parking/Hr:		No				No				No				No		
Bus Stp/Hr:		0				0				0				0		
Area Type:	< < < < < < < < < < < < < < < < CBD > > > > > > > > > > > > > > > >															
Cnft Ped/Hr:		0				0				0				0		
ExclusiveRT:		Include				Include				Include				Include		
% RT Prtct:		0				0				0				0		
HCM Ops f(lt) Adj Case Module:																
f(lt) Case:	xxxx	xxxx	xxxx		1	xxxx	xxxx		xxxx	xxxx	xxxx		5	xxxx	xxxx	
HCM Ops Saturation Adj Module:																
Ln Wid Adj:	xxxx	1.00	1.00		1.00	1.00	xxxxx		xxxx	xxxx	xxxxx		1.00	xxxx	1.00	
Hev Veh Adj:	xxxx	0.84	0.84		0.85	0.85	xxxxx		xxxx	xxxx	xxxxx		0.81	xxxx	0.81	
Grade Adj:	xxxx	1.00	1.00		1.00	1.00	xxxxx		xxxx	xxxx	xxxxx		1.00	xxxx	1.00	
Parking Adj:	xxxx	1.00	1.00		xxxx	1.00	xxxxx		xxxx	xxxx	xxxxx		xxxx	xxxx	1.00	
Bus Stp Adj:	xxxx	1.00	1.00		xxxx	1.00	xxxxx		xxxx	xxxx	xxxxx		xxxx	xxxx	1.00	
Area Adj:	xxxx	0.90	0.90		0.90	0.90	xxxxx		xxxx	xxxx	xxxxx		0.90	xxxx	0.90	
RT Adj:	xxxx	0.99	0.99		xxxx	xxxx	xxxxx		xxxx	xxxx	xxxxx		xxxx	xxxx	0.85	
LT Adj:	xxxx	xxxx	xxxxx		0.95	xxxx	xxxxx		xxxx	xxxx	xxxxx		0.79	xxxx	xxxxx	
PedBike Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
HCM Sat Adj:	1.00	0.75	0.75		0.72	0.76	1.00		1.00	1.00	1.00		0.57	1.00	0.62	
Usr Sat Adj:	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 Sat Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
Fnl Sat Adj:	1.00	0.75	0.75		0.72	0.76	1.00		1.00	1.00	1.00		0.57	1.00	0.62	
Delay Adjustment Factor Module:																
Coordinated:	< < < < < < < < < < < < < < < < No > > > > > > > > > > > > > > > >															
Signal Type:	< < < < < < < < < < < < < Actuated > > > > > > > > > > > > > >															
DelAdjFctr:	0.00	1.00	1.00		1.00	1.00	0.00		0.00	0.00	0.00		1.00	0.00	1.00	

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Patterson Sand and Gravel
Cumulative Conditions -Plus Proposed Project (With Haul Road)
"30th Highest" - AM Peak Hour

Level Of Service Detailed Computation Report (Permitted Left Turn Sat Adj)
2000 HCM Operations Method
Base Volume Alternative

****
Intersection #2 SR 65 and SR 193 (Lincoln)
****

Approach:	North	South	East	West
Cycle Length, C:	xxxxxx	xxxxxx	xxxxxx	100
Actual Green Time Per Lane Group, G:	xxxxxx	xxxxxx	xxxxxx	39.82
Effective Green Time Per Lane Group, g:	xxxxxx	xxxxxx	xxxxxx	43.82
Opposing Effective Green Time, go:	xxxxxx	xxxxxx	xxxxxx	43.82
Number Of Opposing Lanes, No:	xxxxxx	xxxxxx	xxxxxx	1
Number Of Lanes In Lane Group, N:	xxxxxx	xxxxxx	xxxxxx	1
Adjusted Left-Turn Flow Rate, Vlt:	xxxxxx	xxxxxx	xxxxxx	62
Proportion of Left Turns in Lane Group, Plt:	xxxxxx	xxxxxx	xxxxxx	1.00
Proportion of Left Turns in Opp Flow, Plto:	xxxxxx	xxxxxx	xxxxxx	1.00
Left Turns Per Cycle, LTC:	xxxxxx	xxxxxx	xxxxxx	1.72
Adjusted Opposing Flow Rate, Vo:	xxxxxx	xxxxxx	xxxxxx	0
Opposing Flow Per Lane Per Cycle, Volc:	xxxxxx	xxxxxx	xxxxxx	0.00
Opposing Platoon Ratio, Rpo:	xxxxxx	xxxxxx	xxxxxx	1.00
Lost Time Per Phase, tl:	xxxxxx	xxxxxx	xxxxxx	0.00
Eff grn until arrival of left-turn car, gf:	xxxxxx	xxxxxx	xxxxxx	10.83
Opposing Queue Ratio, qro:	xxxxxx	xxxxxx	xxxxxx	0.56
Eff grn blocked by opposing queue, gq:	xxxxxx	xxxxxx	xxxxxx	0.00
Eff grn while left turns filter thru, gu:	xxxxxx	xxxxxx	xxxxxx	32.99
Max opposing cars arriving during gq-gf, n:	xxxxxx	xxxxxx	xxxxxx	0.00
Proportion of Opposing Thru & RT cars, ptho:	xxxxxx	xxxxxx	xxxxxx	0.00
Left-turn Saturation Factor, fs:	xxxxxx	xxxxxx	xxxxxx	xxxxxx
Proportion of Left Turns in Shared Lane, pl:	xxxxxx	xxxxxx	xxxxxx	1.00
Through-car Equivalents, el1:	xxxxxx	xxxxxx	xxxxxx	1.40
Single Lane Through-car Equivalents, el2:	xxxxxx	xxxxxx	xxxxxx	1.00
Minimum Left Turn Adjustment Factor, fmin:	xxxxxx	xxxxxx	xxxxxx	0.09
Single Lane Left Turn Adjustment Factor, fm:	xxxxxx	xxxxxx	xxxxxx	0.78
Left Turn Adjustment Factor, flt:	xxxxxx	xxxxxx	xxxxxx	0.78

****

Cumulative AM Plus Project Sat Jan 17, 2004 12:25:14 Page 7-1

Patterson Sand and Gravel
Cumulative Conditions -Plus Proposed Project (With Haul Road)
"30th Highest" - AM Peak Hour

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

****
Intersection #3 Old SR 65 and Haul Route
****
Average Delay (sec/veh): 3.2 Worst Case 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:	Uncontrolled			Uncontrolled			Stop Sign			Stop Sign		
Rights:	Include			Include			Include			Include		
Lanes:	0 0 1	0 1		1 0 1	0 0		0 0 0	0 0		0 0 1!	0 0	
Volume Module:												
Base Vol:	0	324	35	19	596	0	0	0	0	82	0	44
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	324	35	19	596	0	0	0	0	82	0	44
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	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 Volume:	0	324	35	19	596	0	0	0	0	82	0	44
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Final Vol.:	0	324	35	19	596	0	0	0	0	82	0	44
Critical Gap Module:												
Critical Gp:	xxxxx	xxxx	xxxxx	4.2	xxxx	xxxxx	xxxxx	xxxx	xxxxx	7.0	xxxx	6.8
FollowUpTim:	xxxxx	xxxx	xxxxx	2.3	xxxx	xxxxx	xxxxx	xxxx	xxxxx	4.0	xxxx	3.8
Capacity Module:												
Cnflict Vol:	xxxx	xxxx	xxxxx	359	xxxx	xxxxx	xxxx	xxxx	xxxxx	958	xxxx	324
Potent Cap.:	xxxx	xxxx	xxxxx	1146	xxxx	xxxxx	xxxx	xxxx	xxxxx	228	xxxx	606
Move Cap.:	xxxx	xxxx	xxxxx	1146	xxxx	xxxxx	xxxx	xxxx	xxxxx	226	xxxx	606
Level Of Service Module:												
Stopped Del:	xxxxx	xxxx	xxxxx	8.2	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx
LOS by Move:	*	*	*	A	*	*	*	*	*	*	*	*
Movement:	LT -	LTR -	RT	LT -	LTR -	RT	LT -	LTR -	RT	LT -	LTR -	RT
Shared Cap.:	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	289	xxxxx
Shrd StpDel:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	26.8	xxxxx
Shared LOS:	*	*	*	*	*	*	*	*	*	*	D	*
ApproachDel:	xxxxxx			xxxxxx			xxxxxx			26.8		
ApproachLOS:	*			*			*			D		

Cumulative AM Plus Project Sat Jan 17, 2004 12:25:14 Page 8-1

Patterson Sand and Gravel
Cumulative Conditions -Plus Proposed Project (With Haul Road)
"30th Highest" - AM Peak Hour

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

```
*******************************************************************************
Intersection #3 Old SR 65 and Haul Route
*******************************************************************************
Approach:       North Bound      South Bound       East Bound       West Bound
Movement:     L  -  T  -  R    L  -  T  -  R    L  -  T  -  R    L  -  T  -  R
------------|----------------|----------------|----------------|----------------|
HevVeh:             20%              12%              0%               57%
Grade:               0%               0%              0%                0%
Peds/Hour:           0                0               0                 0
Pedestrian Walk Speed: 4.00 feet/sec
LaneWidth:        12 feet          12 feet         12 feet          12 feet
Time Period: 0.25 hour
------------|----------------|----------------|----------------|----------------|
Upstream Signals:
Link Index:        #2
Dist(miles):       0.000
Speed (mph):        0.00
SignalIndex:       #2
Cycle Time:            0 secs
InitVolume:      0     0
Saturation:      0     0
ArrivalType:     0     0
G/C:          0.00  0.00
*** Computation 1: Time for Queue to Clear at Each Upstream Intersection
P:           0.000 0.000
gq1:          0.00  0.00
gq2:          0.00  0.00
gq:           0.00  0.00
*** Computation 2: Time Intersection Blocked Because of Upstream Platoons
alpha:             0.000
beta:              0.000
ta (secs):         0.000
F:                 0.000
f:           0.000 0.000
vcmax:           0     0
vcmin:           0     0
tp:            0.0   0.0
p:                 0.000
*** Computation 3: Platoon Event Periods
pdom/psubo:       0.000/0.000/Unconstrained
*** Computation 4: Conflicting Flows During Each Unblocked Period
InitCnflVol:   0 xxxxx xxxxx  359 xxxxx xxxxx    0     0     0  958     0   324
UpstreamSat:   0 xxxxx xxxxx    0 xxxxx xxxxx    0     0     0    0     0     0
UpstreamAdj:1.00 x.xxx x.xxx 1.00 x.xxx x.xxx 1.00 1.000 1.000 1.00 1.000 1.000
ConflictVol:   0 xxxxx xxxxx  359 xxxxx xxxxx    0     0     0  958     0   324
*** Computation 5: Capactiy for Subject Movement During Unblocked Period
InitPotCap:    0 xxxxx xxxxx 1146 xxxxx xxxxx    0     0     0  228     0   606
UpstreamAdj:1.00 x.xxx x.xxx 1.00 x.xxx x.xxx 1.00 1.000 1.000 1.00 1.000 1.000
PotentCap:     0 xxxxx xxxxx 1146 xxxxx xxxxx    0     0     0  228     0   606
```


Cumulative AM Plus Project Sat Jan 17, 2004 12:25:14 Page 9-1

Patterson Sand and Gravel
Cumulative Conditions -Plus Proposed Project (With Haul Road)
"30th Highest" - AM Peak Hour

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

```
*******************************************************************************
Intersection #4 Riosa Rd and 11th St
*******************************************************************************
Cycle (sec):          100                Critical Vol./Cap. (X):          0.139
Loss Time (sec):        0 (Y+R =  4 sec) Average Delay (sec/veh):           7.6
Optimal Cycle:          0                Level Of Service:                    A
*******************************************************************************
Approach:       North Bound      South Bound       East Bound       West Bound
Movement:     L  -  T  -  R    L  -  T  -  R    L  -  T  -  R    L  -  T  -  R
------------|----------------||----------------||----------------||----------------|
Control:        Stop Sign        Stop Sign        Stop Sign        Stop Sign
Rights:           Include          Include          Include          Include
Min. Green:     0    0    0     0    0    0     0    0    0     0    0    0
Lanes:        0  0  1! 0  0     0  0  1! 0  0     0  1  0  0  0     0  1  0  0  0
------------|----------------||----------------||----------------||----------------|
Volume Module:
Base Vol:       6    4    4    11    7   20    13   62    0     2  119    0
Growth Adj:  1.00 1.00 1.00  1.00 1.00 1.00  1.00 1.00 1.00  1.00 1.00 1.00
Initial Bse:    6    4    4    11    7   20    13   62    0     2  119    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:     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 Volume:     6    4    4    11    7   20    13   62    0     2  119    0
Reduct Vol:     0    0    0     0    0    0     0    0    0     0    0    0
Reduced Vol:    6    4    4    11    7   20    13   62    0     2  119    0
PCE Adj:     1.00 1.00 1.00  1.00 1.00 1.00  1.00 1.00 1.00  1.00 1.00 1.00
MLF Adj:     1.00 1.00 1.00  1.00 1.00 1.00  1.00 1.00 1.00  1.00 1.00 1.00
Final Vol.:     6    4    4    11    7   20    13   62    0     2  119    0
------------|----------------||----------------||----------------||----------------|
Saturation Flow Module:
Adjustment:  1.00 1.00 1.00  1.00 1.00 1.00  1.00 1.00 1.00  1.00 1.00 1.00
Lanes:       0.43 0.28 0.29  0.29 0.18 0.53  0.17 0.83 0.00  0.02 0.98 0.00
Final Sat.:   346  231  231   246  156  446   148  705    0    14  855    0
------------|----------------||----------------||----------------||----------------|
Capacity Analysis Module:
Vol/Sat:     0.02 0.02 0.02  0.04 0.04 0.04  0.09 0.09 xxxx  0.14 0.14 xxxx
Crit Moves:  ****                      ****       ****            ****
Delay/Veh:    7.3  7.3  7.3   7.2  7.2  7.2   7.5  7.5  0.0   7.7  7.7  0.0
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:   7.3  7.3  7.3   7.2  7.2  7.2   7.5  7.5  0.0   7.7  7.7  0.0
LOS by Move:    A    A    A     A    A    A     A    A    *     A    A    *
ApproachDel:       7.3              7.2              7.5              7.7
Delay Adj:        1.00             1.00             1.00             1.00
ApprAdjDel:        7.3              7.2              7.5              7.7
LOS by Appr:         A                A                A                A
*******************************************************************************
```

Cumulative AM Plus Project Sat Jan 17, 2004 12:25:14 Page 10-1

Patterson Sand and Gravel
Cumulative Conditions -Plus Proposed Project (With Haul Road)
"30th Highest" - AM Peak Hour

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

****
Intersection #4 Riosa Rd and 11th St
****

Approach:	North Bound	South Bound	East Bound	West Bound
Movement:	L - T - R	L - T - R	L - T - R	L - T - R
Time Period: 0.25 hour				
HevVeh:	0%	0%	0%	0%
Alpha Value: 0.01				
GroupType:	1	1	1	1
P[C1]:	0.7545	0.7752	0.8123	0.8599
P[C2]:	0.0338	0.0130	0.1291	0.0814
P[C3]:	0.1913	0.1966	0.0500	0.0529
P[C4]:	0.0199	0.0150	0.0086	0.0057
P[C5]:	0.0005	0.0002	0.0001	0.0001
Padj[C1]:	0.00478	0.00452	0.00255	0.00205
Padj[C2]:	0.00199	0.00214	-0.00062	-0.00017
Padj[C3]:	-0.00553	-0.00574	-0.00141	-0.00153
Padj[C4]:	-0.00119	-0.00090	-0.00051	-0.00034
Padj[C5]:	-0.00005	-0.00002	-0.00001	-0.00001
Lane:	L1	L1	L1	L1
LaneType:	LEFTTHRURITE	LEFTTHRURITE	LEFTTHRURITE	LEFTTHRURITE
HeadwayAdj:	-0.086	-0.258	0.035	0.003
Volume:	14	38	75	121
Capacity:	808	848	852	870
DegOfUtil:	0.02	0.04	0.09	0.14
DepHeadway:	4.26	4.06	4.16	4.08
ServiceTime:	2.3	2.1	2.2	2.1
Delay:	7.3	7.2	7.5	7.7
Approach:	North Bound	South Bound	East Bound	West Bound
ApproachDel:	7.3	7.2	7.5	7.7
Delay Adj:	1.00	1.00	1.00	1.00
ApprAdjDel:	7.3	7.2	7.5	7.7
LOS by Appr:	A	A	A	A
OverallDel:		7.6		
OverallLOS:		A		

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Patterson Sand and Gravel
Cumulative Conditions -Plus Proposed Project (With Haul Road)
"30th Highest" - AM Peak Hour

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

****
Intersection #5 Riosa Rd and Karchner Rd
****
Average Delay (sec/veh): 4.9 Worst Case 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			Uncontrolled			Uncontrolled		
Rights:	Include			Include			Include			Include		
Lanes:	0 0	0 0	0	0 0	1! 0	0	0 1	0 0	0	0 0	0 1	0
Volume Module:												
Base Vol:	0	0	0	23	0	67	39	38	0	0	52	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:	0	0	0	23	0	67	39	38	0	0	52	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:	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 Volume:	0	0	0	23	0	67	39	38	0	0	52	2
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Final Vol.:	0	0	0	23	0	67	39	38	0	0	52	2
Critical Gap Module:												
Critical Gp:	xxxxx	xxxx	xxxxx	7.1	xxxx	6.9	4.6	xxxx	xxxxx	xxxxx	xxxx	xxxxx
FollowUpTim:	xxxxx	xxxx	xxxxx	4.1	xxxx	3.9	2.6	xxxx	xxxxx	xxxxx	xxxx	xxxxx
Capacity Module:												
Cnflict Vol:	xxxx	xxxx	xxxxx	169	xxxx	53	54	xxxx	xxxxx	xxxx	xxxx	xxxxx
Potent Cap.:	xxxx	xxxx	xxxxx	685	xxxx	850	1302	xxxx	xxxxx	xxxx	xxxx	xxxxx
Move Cap.:	xxxx	xxxx	xxxxx	669	xxxx	850	1302	xxxx	xxxxx	xxxx	xxxx	xxxxx
Level Of Service Module:												
Stopped Del:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	7.8	xxxx	xxxxx	xxxxx	xxxx	xxxxx
LOS by Move:	*	*	*	*	*	*	A	*	*	*	*	*
Movement:	LT -	LTR -	RT	LT -	LTR -	RT	LT -	LTR -	RT	LT -	LTR -	RT
Shared Cap.:	xxxx	xxxx	xxxxx	xxxx	795	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx
Shrd StpDel:	xxxxx	xxxx	xxxxx	xxxxx	10.1	xxxxx	7.8	xxxx	xxxxx	xxxxx	xxxx	xxxxx
Shared LOS:	*	*	*	*	B	*	A	*	*	*	*	*
ApproachDel:	xxxxxx				10.1		xxxxxx			xxxxxx		
ApproachLOS:	*				B			*			*	

Cumulative AM Plus Project Sat Jan 17, 2004 12:25:14 Page 12-1

Patterson Sand and Gravel
Cumulative Conditions -Plus Proposed Project (With Haul Road)
"30th Highest" - AM Peak Hour

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

****
Intersection #5 Riosa Rd and Karchner Rd
****

Approach:	North Bound	South Bound	East Bound	West Bound
Movement:	L - T - R	L - T - R	L - T - R	L - T - R
HevVeh:	0%	71%	48%	15%
Grade:	0%	0%	0%	0%
Peds/Hour:	0	0	0	0
Pedestrian Walk Speed: 4.00 feet/sec				
LaneWidth:	12 feet	12 feet	12 feet	12 feet

Time Period: 0.25 hour

Traffix 7.5.0715 (c) 2002 Dowling Assoc. Licensed to DKS ASSOC., SACRAMENTO

Cumulative AM Plus Project Sat Jan 17, 2004 13:23:22 Page 1-1

Patterson Sand and Gravel
Cumulative Conditions -Plus Proposed Project (With Haul Road)
"Highest" - AM Peak Hour

Scenario Report

Scenario:	Cumulative AM Plus Project
Command:	Cumulative AM Plus Project
Volume:	Cumulative AM Plus Project
Geometry:	Cumulative AM Plus Project
Impact Fee:	Default Impact Fee
Trip Generation:	Default Trip Generation
Trip Distribution:	Default Trip Distribution
Paths:	Default Paths
Routes:	Default Routes
Configuration:	Default Configuration

Cumulative AM Plus Project Sat Jan 17, 2004 13:23:22 Page 2-1

Patterson Sand and Gravel
Cumulative Conditions -Plus Proposed Project (With Haul Road)
"Highest" - AM Peak Hour

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 65 and Riosa Road (Sheridan	B	2.2	0.000	B	2.2	0.000	+ 0.000 V/C
# 2 SR 65 and SR 193 (Lincoln)	B	15.8	0.594	B	15.8	0.594	+ 0.000 D/V
# 3 Old SR 65 and Haul Route	D	4.4	0.000	D	4.4	0.000	+ 0.000 V/C
# 4 Riosa Rd and 11th St	A	7.6	0.139	A	7.6	0.139	+ 0.000 V/C
# 5 Riosa Rd and Karchner Rd	B	5.4	0.000	B	5.4	0.000	+ 0.000 V/C

Cumulative AM Plus Project Sat Jan 17, 2004 13:23:22 Page 3-1

Patterson Sand and Gravel
Cumulative Conditions -Plus Proposed Project (With Haul Road)
"Highest" - AM Peak Hour

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

Intersection #1 SR 65 and Riosa Road (Sheridan)

Average Delay (sec/veh): 2.2 Worst Case 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:	Uncontrolled				Uncontrolled				Stop Sign				Stop Sign			
Rights:	Include				Include				Include				Include			
Lanes:	0	0	1	0 1	1	0	1	0 0	0	0	0	0 0	0	0	1!	0 0
Volume Module:																
Base Vol:	0	372		5	43	601		0	0	0		0	15	0		153
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	372		5	43	601		0	0	0		0	15	0		153
User Adj:	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00
PHF Adj:	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00
PHF Volume:	0	372		5	43	601		0	0	0		0	15	0		153
Reduct Vol:	0	0		0	0	0		0	0	0		0	0	0		0
Final Vol.:	0	372		5	43	601		0	0	0		0	15	0		153
Critical Gap Module:																
Critical Gp:	xxxxx	xxxx		xxxxx	4.2	xxxx		xxxxx	xxxxx	xxxx		xxxxx	6.4	xxxx		6.2
FollowUpTim:	xxxxx	xxxx		xxxxx	2.3	xxxx		xxxxx	xxxxx	xxxx		xxxxx	3.5	xxxx		3.3
Capacity Module:																
Cnflict Vol:	xxxx	xxxx		xxxxx	377	xxxx		xxxxx	xxxx	xxxx		xxxxx	1059	xxxx		372
Potent Cap.:	xxxx	xxxx		xxxxx	1129	xxxx		xxxxx	xxxx	xxxx		xxxxx	251	xxxx		678
Move Cap.:	xxxx	xxxx		xxxxx	1129	xxxx		xxxxx	xxxx	xxxx		xxxxx	243	xxxx		678
Level Of Service Module:																
Stopped Del:	xxxxx	xxxx		xxxxx	8.3	xxxx		xxxxx	xxxxx	xxxx		xxxxx	xxxxx	xxxx		xxxxx
LOS by Move:	*	*		*	A	*		*	*	*		*	*	*		*
Movement:	LT -	LTR -		RT	LT -	LTR -		RT	LT -	LTR -		RT	LT -	LTR -		RT
Shared Cap.:	xxxx	xxxx		xxxxx	xxxx	xxxx		xxxxx	xxxx	xxxx		xxxxx	xxxx	585		xxxxx
Shrd StpDel:	xxxxx	xxxx		xxxxx	xxxxx	xxxx		xxxxx	xxxxx	xxxx		xxxxx	xxxxx	13.6		xxxxx
Shared LOS:	*	*		*	*	*		*	*	*		*	*	B		*
ApproachDel:	xxxxxx				xxxxxx				xxxxxx				13.6			
ApproachLOS:	*				*				*				B			

Cumulative AM Plus Project Sat Jan 17, 2004 13:23:22 Page 4-1

Patterson Sand and Gravel
Cumulative Conditions -Plus Proposed Project (With Haul Road)
"Highest" - AM Peak Hour

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

Intersection #1 SR 65 and Riosa Road (Sheridan)

Approach:	North Bound				South Bound				East Bound				West Bound			
Movement:	L	-	T	- R	L	-	T	- R	L	-	T	- R	L	-	T	- R
HevVeh:	18%				12%				0%				0%			
Grade:	0%				0%				0%				0%			
Peds/Hour:	0				0				0				0			
Pedestrian Walk Speed: 4.00 feet/sec																
LaneWidth:	12 feet				12 feet				12 feet				12 feet			
Time Period: 0.25 hour																
Upstream Signals:																
Link Index:	#2															
Dist(miles):	0.000															
Speed (mph):	0.00															
SignalIndex:	#2															
Cycle Time:	0 secs															
InitVolume:	0	0														
Saturation:	0	0														
ArrivalType:	0	0														
G/C:	0.00	0.00														
*** Computation 1: Time for Queue to Clear at Each Upstream Intersection																
P:	0.000	0.000														
gq1:	0.00	0.00														
gq2:	0.00	0.00														
gq:	0.00	0.00														
*** Computation 2: Time Intersection Blocked Because of Upstream Platoons																
alpha:	0.000															
beta:	0.000															
ta (secs):	0.000															
F:	0.000															
f:	0.000	0.000														
vcmax:	0	0														
vcmin:	0	0														
tp:	0.0	0.0														
p:	0.000															
*** Computation 3: Platoon Event Periods																
pdom/psubo:	0.000/0.000/Unconstrained															
*** Computation 4: Conflicting Flows During Each Unblocked Period																
InitCnflVol:	0	xxxxx	xxxxx	377	xxxxx	xxxxx	0	0	0	1059	0	372				
UpstreamSat:	0	xxxxx	xxxxx	0	xxxxx	xxxxx	0	0	0	0	0	0				
UpstreamAdj:	1.00	x.xxx	x.xxx	1.00	x.xxx	x.xxx	1.00	1.000	1.000	1.00	1.000	1.000				
ConflictVol:	0	xxxxx	xxxxx	377	xxxxx	xxxxx	0	0	0	1059	0	372				
*** Computation 5: Capactiy for Subject Movement During Unblocked Period																
InitPotCap:	0	xxxxx	xxxxx	1129	xxxxx	xxxxx	0	0	0	251	0	678				
UpstreamAdj:	1.00	x.xxx	x.xxx	1.00	x.xxx	x.xxx	1.00	1.000	1.000	1.00	1.000	1.000				
PotentCap:	0	xxxxx	xxxxx	1129	xxxxx	xxxxx	0	0	0	251	0	678				

Cumulative AM Plus Project Sat Jan 17, 2004 13:23:22 Page 5-1

Patterson Sand and Gravel
Cumulative Conditions -Plus Proposed Project (With Haul Road)
"Highest" - AM Peak Hour

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

****

Intersection #2 SR 65 and SR 193 (Lincoln)

****

Cycle (sec): 100 Critical Vol./Cap. (X): 0.594
Loss Time (sec): 0 (Y+R = 4 sec) Average Delay (sec/veh): 15.8
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:	Protected				Protected				Permitted				Permitted			
Rights:	Include				Include				Include				Ovl			
Min. Green:	0	0	0		0	0	0		0	0	0		0	0	0	
Lanes:	1	0	0	1 0	1	0	0	1 0	0	0	1!	0 0	0	1	0	0 1
Volume Module:																
Base Vol:	0	445	29		188	641	0		0	0	0		62	0	305	
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	445	29		188	641	0		0	0	0		62	0	305	
User Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
PHF Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
PHF Volume:	0	445	29		188	641	0		0	0	0		62	0	305	
Reduct Vol:	0	0	0		0	0	0		0	0	0		0	0	0	
Reduced Vol:	0	445	29		188	641	0		0	0	0		62	0	305	
PCE Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
MLF Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
Final Vol.:	0	445	29		188	641	0		0	0	0		62	0	305	
Saturation Flow Module:																
Sat/Lane:	1900	1900	1900		1900	1900	1900		1900	1900	1900		1900	1900	1900	
Adjustment:	1.00	0.74	0.74		0.72	0.76	1.00		1.00	1.00	1.00		0.57	1.00	0.62	
Lanes:	1.00	0.94	0.06		1.00	1.00	0.00		0.00	1.00	0.00		1.00	0.00	1.00	
Final Sat.:	1900	1325	86		1365	1436	0		0	1900	0		1091	0	1182	
Capacity Analysis Module:																
Vol/Sat:	0.00	0.34	0.34		0.14	0.45	0.00		0.00	0.00	0.00		0.06	0.00	0.26	
Crit Moves:		****			****										****	
Green/Cycle:	0.00	0.57	0.57		0.23	0.80	0.00		0.00	0.00	0.00		0.20	0.00	0.43	
Volume/Cap:	0.00	0.59	0.59		0.59	0.56	0.00		0.00	0.00	0.00		0.28	0.00	0.59	
Delay/Veh:	0.0	15.4	15.4		37.2	4.3	0.0		0.0	0.0	0.0		34.4	0.0	23.4	
User DelAdj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
AdjDel/Veh:	0.0	15.4	15.4		37.2	4.3	0.0		0.0	0.0	0.0		34.4	0.0	23.4	
DesignQueue:	0	12	1		8	8	0		0	0	0		3	0	10	

****

Cumulative AM Plus Project Sat Jan 17, 2004 13:23:22 Page 6-1

Patterson Sand and Gravel
Cumulative Conditions -Plus Proposed Project (With Haul Road)
"Highest" - AM Peak Hour

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

****

Intersection #2 SR 65 and SR 193 (Lincoln)

****

Approach:	North Bound				South Bound				East Bound				West Bound			
Movement:	L	-	T	- R	L	-	T	- R	L	-	T	- R	L	-	T	- R
HCM Ops Adjusted Lane Utilization Module:																
Lanes:	1	0	0	1 0	1	0	0	1 0	0	0	1!	0 0	0	1	0	0 1
Lane Group:	L		RT	RT	L		RT	RT	LTR	LTR		LTR	LT		LT	R
#LnsInGrps:	1		1	1	1		1	1	1	1		1	1		1	1
HCM Ops Input Saturation Adj Module:																
Lane Width:	12		12	12	12		12	12	12	12		12	12		12	12
CrosswalkWid			8				8			8					8	
% Hev Veh:			20				19			0					23	
Grade:			0%				0%			0%					0%	
Parking/Hr:			No				No			No					No	
Bus Stp/Hr:			0				0			0					0	
Area Type:	< < < < < < < < < < < < < < < < CBD > > > > > > > > > > > > > > > >															
Cnft Ped/Hr:			0				0			0					0	
ExclusiveRT:			Include				Include			Include					Include	
% RT Prtct:			0				0			0					0	
HCM Ops f(lt) Adj Case Module:																
f(lt) Case:	xxxx	xxxx	xxxx		1	xxxx	xxxx		xxxx	xxxx	xxxx		5	xxxx	xxxx	
HCM Ops Saturation Adj Module:																
Ln Wid Adj:	xxxx	1.00	1.00		1.00	1.00	xxxxx		xxxx	xxxx	xxxxx		1.00	xxxx	1.00	
Hev Veh Adj:	xxxx	0.83	0.83		0.84	0.84	xxxxx		xxxx	xxxx	xxxxx		0.81	xxxx	0.81	
Grade Adj:	xxxx	1.00	1.00		1.00	1.00	xxxxx		xxxx	xxxx	xxxxx		1.00	xxxx	1.00	
Parking Adj:	xxxx	1.00	1.00		xxxx	1.00	xxxxx		xxxx	xxxx	xxxxx		xxxx	xxxx	1.00	
Bus Stp Adj:	xxxx	1.00	1.00		xxxx	1.00	xxxxx		xxxx	xxxx	xxxxx		xxxx	xxxx	1.00	
Area Adj:	xxxx	0.90	0.90		0.90	0.90	xxxxx		xxxx	xxxx	xxxxx		0.90	xxxx	0.90	
RT Adj:	xxxx	0.99	0.99		xxxx	xxxx	xxxxx		xxxx	xxxx	xxxxx		xxxx	xxxx	0.85	
LT Adj:	xxxx	xxxx	xxxxx		0.95	xxxx	xxxxx		xxxx	xxxx	xxxxx		0.79	xxxx	xxxxx	
PedBike Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
HCM Sat Adj:	1.00	0.74	0.74		0.72	0.76	1.00		1.00	1.00	1.00		0.57	1.00	0.62	
Usr Sat Adj:	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 Sat Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
Fnl Sat Adj:	1.00	0.74	0.74		0.72	0.76	1.00		1.00	1.00	1.00		0.57	1.00	0.62	
Delay Adjustment Factor Module:																
Coordinated:	< < < < < < < < < < < < < < < < No > > > > > > > > > > > > > > > >															
Signal Type:	< < < < < < < < < < < < < Actuated > > > > > > > > > > > > >															
DelAdjFctr:	0.00	1.00	1.00		1.00	1.00	0.00		0.00	0.00	0.00		1.00	0.00	1.00	

****

Cumulative AM Plus Project Sat Jan 17, 2004 13:23:22 Page 6-2

Patterson Sand and Gravel
Cumulative Conditions -Plus Proposed Project (With Haul Road)
"Highest" - AM Peak Hour

Level Of Service Detailed Computation Report (Permitted Left Turn Sat Adj)
2000 HCM Operations Method
Base Volume Alternative

****
Intersection #2 SR 65 and SR 193 (Lincoln)
****

Approach:	North	South	East	West
Cycle Length, C:	xxxxxx	xxxxxx	xxxxxx	100
Actual Green Time Per Lane Group, G:	xxxxxx	xxxxxx	xxxxxx	39.46
Effective Green Time Per Lane Group, g:	xxxxxx	xxxxxx	xxxxxx	43.46
Opposing Effective Green Time, go:	xxxxxx	xxxxxx	xxxxxx	43.46
Number Of Opposing Lanes, No:	xxxxxx	xxxxxx	xxxxxx	1
Number Of Lanes In Lane Group, N:	xxxxxx	xxxxxx	xxxxxx	1
Adjusted Left-Turn Flow Rate, Vlt:	xxxxxx	xxxxxx	xxxxxx	62
Proportion of Left Turns in Lane Group, Plt:	xxxxxx	xxxxxx	xxxxxx	1.00
Proportion of Left Turns in Opp Flow, Plto:	xxxxxx	xxxxxx	xxxxxx	1.00
Left Turns Per Cycle, LTC:	xxxxxx	xxxxxx	xxxxxx	1.72
Adjusted Opposing Flow Rate, Vo:	xxxxxx	xxxxxx	xxxxxx	0
Opposing Flow Per Lane Per Cycle, Volc:	xxxxxx	xxxxxx	xxxxxx	0.00
Opposing Platoon Ratio, Rpo:	xxxxxx	xxxxxx	xxxxxx	1.00
Lost Time Per Phase, tl:	xxxxxx	xxxxxx	xxxxxx	0.00
Eff grn until arrival of left-turn car, gf:	xxxxxx	xxxxxx	xxxxxx	10.73
Opposing Queue Ratio, qro:	xxxxxx	xxxxxx	xxxxxx	0.57
Eff grn blocked by opposing queue, gq:	xxxxxx	xxxxxx	xxxxxx	0.00
Eff grn while left turns filter thru, gu:	xxxxxx	xxxxxx	xxxxxx	32.73
Max opposing cars arriving during gq-gf, n:	xxxxxx	xxxxxx	xxxxxx	0.00
Proportion of Opposing Thru & RT cars, ptho:	xxxxxx	xxxxxx	xxxxxx	0.00
Left-turn Saturation Factor, fs:	xxxxxx	xxxxxx	xxxxxx	xxxxxx
Proportion of Left Turns in Shared Lane, pl:	xxxxxx	xxxxxx	xxxxxx	1.00
Through-car Equivalents, el1:	xxxxxx	xxxxxx	xxxxxx	1.40
Single Lane Through-car Equivalents, el2:	xxxxxx	xxxxxx	xxxxxx	1.00
Minimum Left Turn Adjustment Factor, fmin:	xxxxxx	xxxxxx	xxxxxx	0.09
Single Lane Left Turn Adjustment Factor, fm:	xxxxxx	xxxxxx	xxxxxx	0.78
Left Turn Adjustment Factor, flt:	xxxxxx	xxxxxx	xxxxxx	0.78

****

Cumulative AM Plus Project Sat Jan 17, 2004 13:23:22 Page 7-1

Patterson Sand and Gravel
Cumulative Conditions -Plus Proposed Project (With Haul Road)
"Highest" - AM Peak Hour

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

****
Intersection #3 Old SR 65 and Haul Route
****
Average Delay (sec/veh): 4.4 Worst Case 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:	Uncontrolled			Uncontrolled			Stop Sign			Stop Sign		
Rights:	Include			Include			Include			Include		
Lanes:	0 0 1	0	1	1 0 1	0	0	0 0 0	0	0	0 0 1!	0	0
Volume Module:												
Base Vol:	0	324	44	20	596	0	0	0	0	101	0	48
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	324	44	20	596	0	0	0	0	101	0	48
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	0	324	44	20	596	0	0	0	0	101	0	48
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Final Vol.:	0	324	44	20	596	0	0	0	0	101	0	48
Critical Gap Module:												
Critical Gp:	xxxxx	xxxx	xxxxx	4.2	xxxx	xxxxx	xxxxx	xxxx	xxxxx	7.0	xxxx	6.8
FollowUpTim:	xxxxx	xxxx	xxxxx	2.3	xxxx	xxxxx	xxxxx	xxxx	xxxxx	4.1	xxxx	3.9
Capacity Module:												
Cnflict Vol:	xxxx	xxxx	xxxxx	368	xxxx	xxxxx	xxxx	xxxx	xxxxx	960	xxxx	324
Potent Cap.:	xxxx	xxxx	xxxxx	1137	xxxx	xxxxx	xxxx	xxxx	xxxxx	222	xxxx	596
Move Cap.:	xxxx	xxxx	xxxxx	1137	xxxx	xxxxx	xxxx	xxxx	xxxxx	219	xxxx	596
Level Of Service Module:												
Stopped Del:	xxxxx	xxxx	xxxxx	8.2	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx
LOS by Move:	*	*	*	A	*	*	*	*	*	*	*	*
Movement:	LT -	LTR -	RT	LT -	LTR -	RT	LT -	LTR -	RT	LT -	LTR -	RT
Shared Cap.:	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	276	xxxxx
Shrd StpDel:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	32.4	xxxxx
Shared LOS:	*	*	*	*	*	*	*	*	*	*	D	*
ApproachDel:	xxxxxx			xxxxxx			xxxxxx			32.4		
ApproachLOS:	*			*			*			D		

Cumulative AM Plus Project Sat Jan 17, 2004 13:23:22 Page 8-1

Patterson Sand and Gravel
Cumulative Conditions -Plus Proposed Project (With Haul Road)
"Highest" - AM Peak Hour

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

****
Intersection #3 Old SR 65 and Haul Route
****

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
HevVeh:		21%			12%			0%			63%	
Grade:		0%			0%			0%			0%	
Peds/Hour:		0			0			0			0	

Pedestrian Walk Speed: 4.00 feet/sec

LaneWidth:	12 feet	12 feet	12 feet	12 feet

Time Period: 0.25 hour

Upstream Signals:

Link Index:	#2	
Dist(miles):	0.000	
Speed (mph):	0.00	
SignalIndex:	#2	
Cycle Time:	0 secs	
InitVolume:	0	0
Saturation:	0	0
ArrivalType:	0	0
G/C:	0.00	0.00

*** Computation 1: Time for Queue to Clear at Each Upstream Intersection

P:	0.000	0.000
gq1:	0.00	0.00
gq2:	0.00	0.00
gq:	0.00	0.00

*** Computation 2: Time Intersection Blocked Because of Upstream Platoons

alpha:	0.000	
beta:	0.000	
ta (secs):	0.000	
F:	0.000	
f:	0.000	0.000
vcmax:	0	0
vcmin:	0	0
tp:	0.0	0.0
p:	0.000	

*** Computation 3: Platoon Event Periods
pdom/psubo: 0.000/0.000/Unconstrained

*** Computation 4: Conflicting Flows During Each Unblocked Period

InitCnflVol:	0	xxxxx	xxxxx	368	xxxxx	xxxxx	0	0	0	960	0	324
UpstreamSat:	0	xxxxx	xxxxx	0	xxxxx	xxxxx	0	0	0	0	0	0
UpstreamAdj:	1.00	x.xxx	x.xxx	1.00	x.xxx	x.xxx	1.00	1.000	1.000	1.00	1.000	1.000
ConflictVol:	0	xxxxx	xxxxx	368	xxxxx	xxxxx	0	0	0	960	0	324

*** Computation 5: Capactiy for Subject Movement During Unblocked Period

InitPotCap:	0	xxxxx	xxxxx	1137	xxxxx	xxxxx	0	0	0	222	0	596
UpstreamAdj:	1.00	x.xxx	x.xxx	1.00	x.xxx	x.xxx	1.00	1.000	1.000	1.00	1.000	1.000
PotentCap:	0	xxxxx	xxxxx	1137	xxxxx	xxxxx	0	0	0	222	0	596

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Patterson Sand and Gravel
Cumulative Conditions -Plus Proposed Project (With Haul Road)
"Highest" - AM Peak Hour

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

****
Intersection #4 Riosa Rd and 11th St
****

Cycle (sec):	100	Critical Vol./Cap. (X):	0.139
Loss Time (sec):	0 (Y+R = 4 sec)	Average Delay (sec/veh):	7.6
Optimal Cycle:	0	Level Of Service:	A

****

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Stop Sign			Stop Sign			Stop Sign			Stop Sign		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Lanes:	0 0	1! 0	0	0 0	1! 0	0	0 1	0 0	0	0 1	0 0	0
Volume Module:												
Base Vol:	6	4	4	11	7	20	13	62	0	2	119	0
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	6	4	4	11	7	20	13	62	0	2	119	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:	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 Volume:	6	4	4	11	7	20	13	62	0	2	119	0
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	6	4	4	11	7	20	13	62	0	2	119	0
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Final Vol.:	6	4	4	11	7	20	13	62	0	2	119	0
Saturation Flow Module:												
Adjustment:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Lanes:	0.43	0.28	0.29	0.29	0.18	0.53	0.17	0.83	0.00	0.02	0.98	0.00
Final Sat.:	346	231	231	246	156	446	148	705	0	14	855	0
Capacity Analysis Module:												
Vol/Sat:	0.02	0.02	0.02	0.04	0.04	0.04	0.09	0.09	xxxx	0.14	0.14	xxxx
Crit Moves:	****					****		****			****	
Delay/Veh:	7.3	7.3	7.3	7.2	7.2	7.2	7.5	7.5	0.0	7.7	7.7	0.0
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:	7.3	7.3	7.3	7.2	7.2	7.2	7.5	7.5	0.0	7.7	7.7	0.0
LOS by Move:	A	A	A	A	A	A	A	A	*	A	A	*
ApproachDel:		7.3			7.2			7.5			7.7	
Delay Adj:		1.00			1.00			1.00			1.00	
ApprAdjDel:		7.3			7.2			7.5			7.7	
LOS by Appr:		A			A			A			A	

****

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Patterson Sand and Gravel
Cumulative Conditions -Plus Proposed Project (With Haul Road)
"Highest" - AM Peak Hour

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

****
Intersection #4 Riosa Rd and 11th St
****

Approach:	North Bound	South Bound	East Bound	West Bound
Movement:	L - T - R	L - T - R	L - T - R	L - T - R
Time Period: 0.25 hour				
HevVeh:	0%	0%	0%	0%
Alpha Value: 0.01				
GroupType:	1	1	1	1
P[C1]:	0.7545	0.7752	0.8123	0.8599
P[C2]:	0.0338	0.0130	0.1291	0.0814
P[C3]:	0.1913	0.1966	0.0500	0.0529
P[C4]:	0.0199	0.0150	0.0086	0.0057
P[C5]:	0.0005	0.0002	0.0001	0.0001
Padj[C1]:	0.00478	0.00452	0.00255	0.00205
Padj[C2]:	0.00199	0.00214	-0.00062	-0.00017
Padj[C3]:	-0.00553	-0.00574	-0.00141	-0.00153
Padj[C4]:	-0.00119	-0.00090	-0.00051	-0.00034
Padj[C5]:	-0.00005	-0.00002	-0.00001	-0.00001
Lane:	L1	L1	L1	L1
LaneType:	LEFTTHRURITE	LEFTTHRURITE	LEFTTHRURITE	LEFTTHRURITE
HeadwayAdj:	-0.086	-0.258	0.035	0.003
Volume:	14	38	75	121
Capacity:	808	848	852	870
DegOfUtil:	0.02	0.04	0.09	0.14
DepHeadway:	4.26	4.06	4.16	4.08
ServiceTime:	2.3	2.1	2.2	2.1
Delay:	7.3	7.2	7.5	7.7
Approach:	North Bound	South Bound	East Bound	West Bound
ApproachDel:	7.3	7.2	7.5	7.7
Delay Adj:	1.00	1.00	1.00	1.00
ApprAdjDel:	7.3	7.2	7.5	7.7
LOS by Appr:	A	A	A	A
OverallDel:		7.6		
OverallLOS:		A		

Cumulative AM Plus Project Sat Jan 17, 2004 13:23:22 Page 11-1

Patterson Sand and Gravel
Cumulative Conditions -Plus Proposed Project (With Haul Road)
"Highest" - AM Peak Hour

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

****
Intersection #5 Riosa Rd and Karchner Rd
****

Average Delay (sec/veh): 5.4 Worst Case 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			Uncontrolled			Uncontrolled		
Rights:	Include			Include			Include			Include		
Lanes:	0 0	0 0	0	0 0	1! 0	0	0 1	0 0	0	0 0	0 1	0
Volume Module:												
Base Vol:	0	0	0	23	0	89	48	38	0	0	52	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:	0	0	0	23	0	89	48	38	0	0	52	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:	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 Volume:	0	0	0	23	0	89	48	38	0	0	52	2
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Final Vol.:	0	0	0	23	0	89	48	38	0	0	52	2
Critical Gap Module:												
Critical Gp:	xxxxx	xxxx	xxxxx	7.2	xxxx	7.0	4.6	xxxx	xxxxx	xxxxx	xxxx	xxxxx
FollowUpTim:	xxxxx	xxxx	xxxxx	4.2	xxxx	4.0	2.7	xxxx	xxxxx	xxxxx	xxxx	xxxxx
Capacity Module:												
Cnflict Vol:	xxxx	xxxx	xxxxx	187	xxxx	53	54	xxxx	xxxxx	xxxx	xxxx	xxxxx
Potent Cap.:	xxxx	xxxx	xxxxx	660	xxxx	840	1276	xxxx	xxxxx	xxxx	xxxx	xxxxx
Move Cap.:	xxxx	xxxx	xxxxx	640	xxxx	840	1276	xxxx	xxxxx	xxxx	xxxx	xxxxx
Level Of Service Module:												
Stopped Del:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	7.9	xxxx	xxxxx	xxxxx	xxxx	xxxxx
LOS by Move:	*	*	*	*	*	*	A	*	*	*	*	*
Movement:	LT -	LTR -	RT	LT -	LTR -	RT	LT -	LTR -	RT	LT -	LTR -	RT
Shared Cap.:	xxxx	xxxx	xxxxx	xxxx	789	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx
Shrd StpDel:	xxxxx	xxxx	xxxxx	xxxxx	10.3	xxxxx	7.9	xxxx	xxxxx	xxxxx	xxxx	xxxxx
Shared LOS:	*	*	*	*	B	*	A	*	*	*	*	*
ApproachDel:	xxxxxx			10.3			xxxxxx			xxxxxx		
ApproachLOS:	*			B			*			*		

Cumulative AM Plus Project Sat Jan 17, 2004 13:23:22 Page 12-1

Patterson Sand and Gravel
Cumulative Conditions -Plus Proposed Project (With Haul Road)
"Highest" - AM Peak Hour

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

****
Intersection #5 Riosa Rd and Karchner Rd
****

Approach:	North Bound	South Bound	East Bound	West Bound
Movement:	L - T - R	L - T - R	L - T - R	L - T - R
HevVeh:	0%	76%	54%	15%
Grade:	0%	0%	0%	0%
Peds/Hour:	0	0	0	0
LaneWidth:	12 feet	12 feet	12 feet	12 feet

Pedestrian Walk Speed: 4.00 feet/sec
Time Period: 0.25 hour

Cumulative PM Plus Project Fri Feb 20, 2004 11:01:35 Page 1-1

Patterson Sand and Gravel
Cumulative Conditions - Plus Proposed Project (With Haul Road)
"Average Day" - PM Peak Hour

Scenario Report

Scenario:	Cumulative PM Plus Project
Command:	Cumulative PM Plus Project
Volume:	Cumulative PM Plus Project
Geometry:	Cumulative PM Plus Project
Impact Fee:	Default Impact Fee
Trip Generation:	Default Trip Generation
Trip Distribution:	Default Trip Distribution
Paths:	Default Paths
Routes:	Default Routes
Configuration:	Default Configuration

Cumulative PM Plus Project Fri Feb 20, 2004 11:01:36 Page 2-1

Patterson Sand and Gravel
Cumulative Conditions - Plus Proposed Project (With Haul Road)
"Average Day" - PM Peak Hour

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 65 and Riosa Road (Sheridan	C	2.5	0.000	C	2.5	0.000	+ 0.000 V/C
# 2 SR 65 and SR 193 (Lincoln)	C	27.7	0.877	C	27.7	0.877	+ 0.000 D/V
# 3 Old SR 65 and Haul Route	C	1.0	0.000	C	1.0	0.000	+ 0.000 V/C
# 4 Riosa Rd and 11th St	A	7.5	0.121	A	7.5	0.121	+ 0.000 V/C
# 5 Riosa Rd abd Karchner Rd	A	3.8	0.000	A	3.8	0.000	+ 0.000 V/C

Cumulative PM Plus Project Fri Feb 20, 2004 11:01:36 Page 3-1

Patterson Sand and Gravel
Cumulative Conditions - Plus Proposed Project (With Haul Road)
"Average Day" - PM Peak Hour

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

****
Intersection #1 SR 65 and Riosa Road (Sheridan)
****
Average Delay (sec/veh): 2.5 Worst Case 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:	Uncontrolled			Uncontrolled			Stop Sign			Stop Sign		
Rights:	Include			Include			Include			Include		
Lanes:	0 0 1	0	1	1 0 1	0	0	0 0 0	0	0	0 0 1!	0	0
Volume Module:												
Base Vol:	0	653	36	170	470	0	0	0	0	14	0	82
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	653	36	170	470	0	0	0	0	14	0	82
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	0	653	36	170	470	0	0	0	0	14	0	82
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Final Vol.:	0	653	36	170	470	0	0	0	0	14	0	82
Critical Gap Module:												
Critical Gp:	xxxxx	xxxx	xxxxx	4.1	xxxx	xxxxx	xxxxx	xxxx	xxxxx	6.4	xxxx	6.2
FollowUpTim:	xxxxx	xxxx	xxxxx	2.2	xxxx	xxxxx	xxxxx	xxxx	xxxxx	3.5	xxxx	3.3
Capacity Module:												
Cnflict Vol:	xxxx	xxxx	xxxxx	689	xxxx	xxxxx	xxxx	xxxx	xxxxx	1463	xxxx	653
Potent Cap.:	xxxx	xxxx	xxxxx	901	xxxx	xxxxx	xxxx	xxxx	xxxxx	143	xxxx	471
Move Cap.:	xxxx	xxxx	xxxxx	901	xxxx	xxxxx	xxxx	xxxx	xxxxx	122	xxxx	471
Level Of Service Module:												
Stopped Del:	xxxxx	xxxx	xxxxx	9.9	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx
LOS by Move:	*	*	*	A	*	*	*	*	*	*	*	*
Movement:	LT -	LTR -	RT	LT -	LTR -	RT	LT -	LTR -	RT	LT -	LTR -	RT
Shared Cap.:	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	333	xxxxx
Shrd StpDel:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	20.2	xxxxx
Shared LOS:	*	*	*	*	*	*	*	*	*	*	C	*
ApproachDel:	xxxxxx			xxxxxx			xxxxxx			20.2		
ApproachLOS:	*			*			*			C		

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Patterson Sand and Gravel
Cumulative Conditions - Plus Proposed Project (With Haul Road)
"Average Day" - PM Peak Hour

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

****
Intersection #1 SR 65 and Riosa Road (Sheridan)
****

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
HevVeh:		3%			3%			0%			0%	
Grade:		0%			0%			0%			0%	
Peds/Hour:		0			0			0			0	
Pedestrian Walk Speed: 4.00 feet/sec												
LaneWidth:		12 feet			12 feet			12 feet			12 feet	
Time Period: 0.25 hour												

Upstream Signals:
Link Index: #2
Dist(miles): 0.000
Speed (mph): 0.00
SignalIndex: #2
Cycle Time: 0 secs

InitVolume:	0	0
Saturation:	0	0
ArrivalType:	0	0
G/C:	0.00	0.00

*** Computation 1: Time for Queue to Clear at Each Upstream Intersection

P:	0.000	0.000
gq1:	0.00	0.00
gq2:	0.00	0.00
gq:	0.00	0.00

*** Computation 2: Time Intersection Blocked Because of Upstream Platoons

alpha:	0.000	
beta:	0.000	
ta (secs):	0.000	
F:	0.000	
f:	0.000	0.000
vcmax:	0	0
vcmin:	0	0
tp:	0.0	0.0
p:	0.000	

*** Computation 3: Platoon Event Periods
pdom/psubo: 0.000/0.000/Unconstrained

*** Computation 4: Conflicting Flows During Each Unblocked Period

InitCnflVol:	0	xxxxx	xxxxx	689	xxxxx	xxxxx	0	0	0	1463	0	653
UpstreamSat:	0	xxxxx	xxxxx	0	xxxxx	xxxxx	0	0	0	0	0	0
UpstreamAdj:	1.00	x.xxx	x.xxx	1.00	x.xxx	x.xxx	1.00	1.000	1.000	1.00	1.000	1.000
ConflictVol:	0	xxxxx	xxxxx	689	xxxxx	xxxxx	0	0	0	1463	0	653

*** Computation 5: Capactiy for Subject Movement During Unblocked Period

InitPotCap:	0	xxxxx	xxxxx	901	xxxxx	xxxxx	0	0	0	143	0	471
UpstreamAdj:	1.00	x.xxx	x.xxx	1.00	x.xxx	x.xxx	1.00	1.000	1.000	1.00	1.000	1.000
PotentCap:	0	xxxxx	xxxxx	901	xxxxx	xxxxx	0	0	0	143	0	471

Cumulative PM Plus Project Fri Feb 20, 2004 11:01:36 Page 5-1

Patterson Sand and Gravel
Cumulative Conditions - Plus Proposed Project (With Haul Road)
"Average Day" - PM Peak Hour

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

****

Intersection #2 SR 65 and SR 193 (Lincoln)

****

Cycle (sec): 100 Critical Vol./Cap. (X): 0.877
Loss Time (sec): 0 (Y+R = 4 sec) Average Delay (sec/veh): 27.7
Optimal Cycle: 151 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					Permitted					Permitted				
Rights:	Include					Include					Include					Ovl				
Min. Green:	0	0	0			0	0	0			0	0	0			0	0	0		
Lanes:	1	0	0	1	0	1	0	0	1	0	0	0	1!	0	0	0	1	0	0	1
Volume Module:																				
Base Vol:	0	848		22		375	530		0		0	0		0		131		0		308
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	848		22		375	530		0		0	0		0		131		0		308
User Adj:	1.00	1.00		1.00		1.00	1.00		1.00		1.00	1.00		1.00		1.00		1.00		1.00
PHF Adj:	1.00	1.00		1.00		1.00	1.00		1.00		1.00	1.00		1.00		1.00		1.00		1.00
PHF Volume:	0	848		22		375	530		0		0	0		0		131		0		308
Reduct Vol:	0	0		0		0	0		0		0	0		0		0		0		0
Reduced Vol:	0	848		22		375	530		0		0	0		0		131		0		308
PCE Adj:	1.00	1.00		1.00		1.00	1.00		1.00		1.00	1.00		1.00		1.00		1.00		1.00
MLF Adj:	1.00	1.00		1.00		1.00	1.00		1.00		1.00	1.00		1.00		1.00		1.00		1.00
Final Vol.:	0	848		22		375	530		0		0	0		0		131		0		308
Saturation Flow Module:																				
Sat/Lane:	1900	1900		1900		1900	1900		1900		1900	1900		1900		1900		1900		1900
Adjustment:	1.00	0.87		0.87		0.81	0.86		1.00		1.00	1.00		1.00		0.64		1.00		0.74
Lanes:	1.00	0.97		0.03		1.00	1.00		0.00		0.00	1.00		0.00		1.00		0.00		1.00
Final Sat.:	1900	1612		42		1547	1628		0		0	1900		0		1209		0		1398
Capacity Analysis Module:																				
Vol/Sat:	0.00	0.53		0.53		0.24	0.33		0.00		0.00	0.00		0.00		0.11		0.00		0.22
Crit Moves:		****				****										****				
Green/Cycle:	0.00	0.60		0.60		0.28	0.88		0.00		0.00	0.00		0.00		0.12		0.00		0.40
Volume/Cap:	0.00	0.88		0.88		0.88	0.37		0.00		0.00	0.00		0.00		0.88		0.00		0.55
Delay/Veh:	0.0	25.8		25.8		52.7	1.3		0.0		0.0	0.0		0.0		83.1		0.0		24.3
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:	0.0	25.8		25.8		52.7	1.3		0.0		0.0	0.0		0.0		83.1		0.0		24.3
DesignQueue:	0	21		1		16	4		0		0	0		0		6		0		11

****

Cumulative PM Plus Project Fri Feb 20, 2004 11:01:36 Page 6-1

Patterson Sand and Gravel
Cumulative Conditions - Plus Proposed Project (With Haul Road)
"Average Day" - PM Peak Hour

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

****

Intersection #2 SR 65 and SR 193 (Lincoln)

****

Approach:	North Bound				South Bound				East Bound				West Bound			
Movement:	L	-	T	-	R	L	-	T	-	R	L	-	T	-	R	L	-	T	-	R
HCM Ops Adjusted Lane Utilization Module:																				
Lanes:	1	0	0	1	0	1	0	0	1	0	0	0	1!	0	0	0	1	0	0	1
Lane Group:	L		RT		RT	L		RT		RT	LTR		LTR		LTR	LT		LT		R
#LnsInGrps:	1		1		1	1		1		1	1		1		1	1		1		1
HCM Ops Input Saturation Adj Module:																				
Lane Width:	12		12		12	12		12		12	12		12		12	12		12		12
CrosswalkWid			8					8					8					8		
% Hev Veh:			3					5					0					4		
Grade:			0%					0%					0%					0%		
Parking/Hr:			No					No					No					No		
Bus Stp/Hr:			0					0					0					0		
Area Type:	< < < < < < < < < < < < < < < < CBD > > > > > > > > > > > > > > > >																			
Cnft Ped/Hr:			0					0					0					0		
ExclusiveRT:			Include					Include					Include					Include		
% RT Prtct:			0					0					0					0		
HCM Ops f(lt) Adj Case Module:																				
f(lt) Case:	xxxx	xxxx		xxxx		1	xxxx		xxxx		xxxx	xxxx		xxxx		5	xxxx		xxxx	
HCM Ops Saturation Adj Module:																				
Ln Wid Adj:	xxxx	1.00		1.00		1.00	1.00		xxxxx		xxxx	xxxx		xxxxx		1.00	xxxx		1.00	
Hev Veh Adj:	xxxx	0.97		0.97		0.95	0.95		xxxxx		xxxx	xxxx		xxxxx		0.96	xxxx		0.96	
Grade Adj:	xxxx	1.00		1.00		1.00	1.00		xxxxx		xxxx	xxxx		xxxxx		1.00	xxxx		1.00	
Parking Adj:	xxxx	1.00		1.00		xxxx	1.00		xxxxx		xxxx	xxxx		xxxxx		xxxx	xxxx		1.00	
Bus Stp Adj:	xxxx	1.00		1.00		xxxx	1.00		xxxxx		xxxx	xxxx		xxxxx		xxxx	xxxx		1.00	
Area Adj:	xxxx	0.90		0.90		0.90	0.90		xxxxx		xxxx	xxxx		xxxxx		0.90	xxxx		0.90	
RT Adj:	xxxx	1.00		1.00		xxxx	xxxx		xxxxx		xxxx	xxxx		xxxxx		xxxx	xxxx		0.85	
LT Adj:	xxxx	xxxx		xxxxx		0.95	xxxx		xxxxx		xxxx	xxxx		xxxxx		0.74	xxxx		xxxxx	
PedBike Adj:	1.00	1.00		1.00		1.00	1.00		1.00		1.00	1.00		1.00		1.00	1.00		1.00	
HCM Sat Adj:	1.00	0.87		0.87		0.81	0.86		1.00		1.00	1.00		1.00		0.64	1.00		0.74	
Usr Sat Adj:	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 Sat Adj:	1.00	1.00		1.00		1.00	1.00		1.00		1.00	1.00		1.00		1.00	1.00		1.00	
Fnl Sat Adj:	1.00	0.87		0.87		0.81	0.86		1.00		1.00	1.00		1.00		0.64	1.00		0.74	
Delay Adjustment Factor Module:																				
Coordinated:	< < < < < < < < < < < < < < < < No > > > > > > > > > > > > > > > >																			
Signal Type:	< < < < < < < < < < < < < < Actuated > > > > > > > > > > > > > >																			
DelAdjFctr:	0.00	1.00		1.00		1.00	1.00		0.00		0.00	0.00		0.00		1.00	0.00		1.00	

****

Cumulative PM Plus Project Fri Feb 20, 2004 11:01:36 Page 6-2

Patterson Sand and Gravel
Cumulative Conditions - Plus Proposed Project (With Haul Road)
"Average Day" - PM Peak Hour

Level Of Service Detailed Computation Report (Permitted Left Turn Sat Adj)
2000 HCM Operations Method
Base Volume Alternative

****
Intersection #2 SR 65 and SR 193 (Lincoln)
****

Approach:	North	South	East	West
Cycle Length, C:	xxxxxx	xxxxxx	xxxxxx	100
Actual Green Time Per Lane Group, G:	xxxxxx	xxxxxx	xxxxxx	8.35
Effective Green Time Per Lane Group, g:	xxxxxx	xxxxxx	xxxxxx	12.35
Opposing Effective Green Time, go:	xxxxxx	xxxxxx	xxxxxx	12.35
Number Of Opposing Lanes, No:	xxxxxx	xxxxxx	xxxxxx	1
Number Of Lanes In Lane Group, N:	xxxxxx	xxxxxx	xxxxxx	1
Adjusted Left-Turn Flow Rate, Vlt:	xxxxxx	xxxxxx	xxxxxx	131
Proportion of Left Turns in Lane Group, Plt:	xxxxxx	xxxxxx	xxxxxx	1.00
Proportion of Left Turns in Opp Flow, Plto:	xxxxxx	xxxxxx	xxxxxx	1.00
Left Turns Per Cycle, LTC:	xxxxxx	xxxxxx	xxxxxx	3.64
Adjusted Opposing Flow Rate, Vo:	xxxxxx	xxxxxx	xxxxxx	0
Opposing Flow Per Lane Per Cycle, Volc:	xxxxxx	xxxxxx	xxxxxx	0.00
Opposing Platoon Ratio, Rpo:	xxxxxx	xxxxxx	xxxxxx	1.00
Lost Time Per Phase, tl:	xxxxxx	xxxxxx	xxxxxx	0.00
Eff grn until arrival of left-turn car, gf:	xxxxxx	xxxxxx	xxxxxx	0.90
Opposing Queue Ratio, qro:	xxxxxx	xxxxxx	xxxxxx	0.88
Eff grn blocked by opposing queue, gq:	xxxxxx	xxxxxx	xxxxxx	0.00
Eff grn while left turns filter thru, gu:	xxxxxx	xxxxxx	xxxxxx	11.45
Max opposing cars arriving during gq-gf, n:	xxxxxx	xxxxxx	xxxxxx	0.00
Proportion of Opposing Thru & RT cars, ptho:	xxxxxx	xxxxxx	xxxxxx	0.00
Left-turn Saturation Factor, fs:	xxxxxx	xxxxxx	xxxxxx	xxxxxx
Proportion of Left Turns in Shared Lane, pl:	xxxxxx	xxxxxx	xxxxxx	1.00
Through-car Equivalents, el1:	xxxxxx	xxxxxx	xxxxxx	1.40
Single Lane Through-car Equivalents, el2:	xxxxxx	xxxxxx	xxxxxx	1.00
Minimum Left Turn Adjustment Factor, fmin:	xxxxxx	xxxxxx	xxxxxx	0.32
Single Lane Left Turn Adjustment Factor, fm:	xxxxxx	xxxxxx	xxxxxx	0.74
Left Turn Adjustment Factor, flt:	xxxxxx	xxxxxx	xxxxxx	0.74

****

Cumulative PM Plus Project Fri Feb 20, 2004 11:01:36 Page 7-1

Patterson Sand and Gravel
Cumulative Conditions - Plus Proposed Project (With Haul Road)
"Average Day" - PM Peak Hour

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

****
Intersection #3 Old SR 65 and Haul Route
****
Average Delay (sec/veh): 1.0 Worst Case 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:	Uncontrolled				Uncontrolled				Stop Sign				Stop Sign			
Rights:	Include				Include				Include				Include			
Lanes:	0	0	1	0 1	1	0	1	0 0	0	0	0	0 0	0	0	1!	0 0
Volume Module:																
Base Vol:	0	637		75	33	451		0	0		0	0	29		0	15
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	637		75	33	451		0	0		0	0	29		0	15
User Adj:	1.00	1.00		1.00	1.00	1.00		1.00	1.00		1.00	1.00	1.00		1.00	1.00
PHF Adj:	1.00	1.00		1.00	1.00	1.00		1.00	1.00		1.00	1.00	1.00		1.00	1.00
PHF Volume:	0	637		75	33	451		0	0		0	0	29		0	15
Reduct Vol:	0	0		0	0	0		0	0		0	0	0		0	0
Final Vol.:	0	637		75	33	451		0	0		0	0	29		0	15
Critical Gap Module:																
Critical Gp:	xxxxx	xxxx	xxxxx	4.1	xxxx	xxxxx	xxxxx	xxxx	xxxxx		6.5	xxxx		6.3		
FollowUpTim:	xxxxx	xxxx	xxxxx	2.2	xxxx	xxxxx	xxxxx	xxxx	xxxxx		3.6	xxxx		3.4		
Capacity Module:																
Cnflict Vol:	xxxx	xxxx	xxxxx	712	xxxx	xxxxx	xxxx	xxxx	xxxxx		1154	xxxx		637		
Potent Cap.:	xxxx	xxxx	xxxxx	874	xxxx	xxxxx	xxxx	xxxx	xxxxx		211	xxxx		465		
Move Cap.:	xxxx	xxxx	xxxxx	874	xxxx	xxxxx	xxxx	xxxx	xxxxx		205	xxxx		465		
Level Of Service Module:																
Stopped Del:	xxxxx	xxxx	xxxxx	9.3	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx				
LOS by Move:	*	*	*	A	*	*	*	*	*	*	*	*				
Movement:	LT -	LTR -	RT	LT -	LTR -	RT	LT -	LTR -	RT	LT -	LTR -	RT				
Shared Cap.:	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	253	xxxxx				
Shrd StpDel:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	22.2	xxxxx				
Shared LOS:	*	*	*	*	*	*	*	*	*	*	C	*				
ApproachDel:	xxxxxx			xxxxxx			xxxxxx			22.2						
ApproachLOS:	*			*			*			C						

Cumulative PM Plus Project Fri Feb 20, 2004 11:01:36 Page 8-1

Patterson Sand and Gravel
Cumulative Conditions - Plus Proposed Project (With Haul Road)
"Average Day" - PM Peak Hour

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

```
*******************************************************************************
Intersection #3 Old SR 65 and Haul Route
*******************************************************************************
Approach:       North Bound      South Bound       East Bound       West Bound
Movement:     L  -  T  -  R    L  -  T  -  R    L  -  T  -  R    L  -  T  -  R
------------|----------------|----------------|----------------|----------------|
HevVeh:             4%               5%               0%               9%
Grade:              0%               0%               0%               0%
Peds/Hour:          0                0                0                0
Pedestrian Walk Speed: 4.00 feet/sec
LaneWidth:        12 feet          12 feet          12 feet          12 feet
Time Period: 0.25 hour
------------|----------------|----------------|----------------|----------------|
Upstream Signals:
Link Index:       #2
Dist(miles):      0.000
Speed (mph):       0.00
SignalIndex:      #2
Cycle Time:           0 secs
InitVolume:     0     0
Saturation:     0     0
ArrivalType:    0     0
G/C:         0.00  0.00
*** Computation 1: Time for Queue to Clear at Each Upstream Intersection
P:          0.000 0.000
gq1:         0.00  0.00
gq2:         0.00  0.00
gq:          0.00  0.00
*** Computation 2: Time Intersection Blocked Because of Upstream Platoons
alpha:            0.000
beta:             0.000
ta (secs):        0.000
F:                0.000
f:          0.000 0.000
vcmax:          0     0
vcmin:          0     0
tp:           0.0   0.0
p:                0.000
*** Computation 3: Platoon Event Periods
pdom/psubo:      0.000/0.000/Unconstrained
*** Computation 4: Conflicting Flows During Each Unblocked Period
InitCnflVol:   0 xxxxx xxxxx  712 xxxxx xxxxx    0     0     0 1154     0   637
UpstreamSat:   0 xxxxx xxxxx    0 xxxxx xxxxx    0     0     0    0     0     0
UpstreamAdj:1.00 x.xxx x.xxx 1.00 x.xxx x.xxx 1.00 1.000 1.000 1.00 1.000 1.000
ConflictVol:   0 xxxxx xxxxx  712 xxxxx xxxxx    0     0     0 1154     0   637
*** Computation 5: Capactiy for Subject Movement During Unblocked Period
InitPotCap:    0 xxxxx xxxxx  874 xxxxx xxxxx    0     0     0  211     0   465
UpstreamAdj:1.00 x.xxx x.xxx 1.00 x.xxx x.xxx 1.00 1.000 1.000 1.00 1.000 1.000
PotentCap:     0 xxxxx xxxxx  874 xxxxx xxxxx    0     0     0  211     0   465
```


Cumulative PM Plus Project Fri Feb 20, 2004 11:01:36 Page 9-1

Patterson Sand and Gravel
Cumulative Conditions - Plus Proposed Project (With Haul Road)
"Average Day" - PM Peak Hour

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

```
*******************************************************************************
Intersection #4 Riosa Rd and 11th St
*******************************************************************************
Cycle (sec):        100                 Critical Vol./Cap. (X):        0.121
Loss Time (sec):      0 (Y+R =  4 sec) Average Delay (sec/veh):         7.5
Optimal Cycle:        0                 Level Of Service:                  A
*******************************************************************************
Approach:       North Bound      South Bound       East Bound       West Bound
Movement:     L  -  T  -  R    L  -  T  -  R    L  -  T  -  R    L  -  T  -  R
------------|----------------||----------------||----------------||----------------|
Control:        Stop Sign        Stop Sign        Stop Sign        Stop Sign
Rights:           Include          Include          Include          Include
Min. Green:     0    0    0     0    0    0     0    0    0     0    0    0
Lanes:        0  0  1! 0  0     0  0  0  1  0     0  1  0  0  0     0  1  0  0  0
------------|----------------||----------------||----------------||----------------|
Volume Module:
Base Vol:       3    4    1     0    1    3    10   98    0     1   77    0
Growth Adj:  1.00 1.00 1.00  1.00 1.00 1.00  1.00 1.00 1.00  1.00 1.00 1.00
Initial Bse:    3    4    1     0    1    3    10   98    0     1   77    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:     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 Volume:     3    4    1     0    1    3    10   98    0     1   77    0
Reduct Vol:     0    0    0     0    0    0     0    0    0     0    0    0
Reduced Vol:    3    4    1     0    1    3    10   98    0     1   77    0
PCE Adj:     1.00 1.00 1.00  1.00 1.00 1.00  1.00 1.00 1.00  1.00 1.00 1.00
MLF Adj:     1.00 1.00 1.00  1.00 1.00 1.00  1.00 1.00 1.00  1.00 1.00 1.00
Final Vol.:     3    4    1     0    1    3    10   98    0     1   77    0
------------|----------------||----------------||----------------||----------------|
Saturation Flow Module:
Adjustment:  1.00 1.00 1.00  1.00 1.00 1.00  1.00 1.00 1.00  1.00 1.00 1.00
Lanes:       0.37 0.50 0.13  0.00 0.25 0.75  0.09 0.91 0.00  0.01 0.99 0.00
Final Sat.:   303  404  101     0  224  673    83  810    0    11  877    0
------------|----------------||----------------||----------------||----------------|
Capacity Analysis Module:
Vol/Sat:     0.01 0.01 0.01  xxxx 0.00 0.00  0.12 0.12  xxxx  0.09 0.09  xxxx
Crit Moves:  ****                 ****        ****              ****
Delay/Veh:    7.3  7.3  7.3   0.0  6.9  6.9   7.6  7.6   0.0   7.4  7.4   0.0
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:   7.3  7.3  7.3   0.0  6.9  6.9   7.6  7.6   0.0   7.4  7.4   0.0
LOS by Move:   A    A    A     *    A    A     A    A     *     A    A     *
ApproachDel:        7.3              6.9              7.6              7.4
Delay Adj:         1.00             1.00             1.00             1.00
ApprAdjDel:         7.3              6.9              7.6              7.4
LOS by Appr:         A                A                A                A
*******************************************************************************
```

Cumulative PM Plus Project Fri Feb 20, 2004 11:01:36 Page 10-1

Patterson Sand and Gravel
Cumulative Conditions - Plus Proposed Project (With Haul Road)
"Average Day" - PM Peak Hour

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

Intersection #4 Riosa Rd and 11th St

Approach:	North Bound	South Bound	East Bound	West Bound
Movement:	L - T - R	L - T - R	L - T - R	L - T - R
Time Period: 0.25 hour				
HevVeh:	0%	0%	0%	0%
Alpha Value: 0.01				
GroupType:	1	1	1	1
P[C1]:	0.7995	0.7953	0.9003	0.8676
P[C2]:	0.0034	0.0076	0.0860	0.1187
P[C3]:	0.1858	0.1848	0.0125	0.0120
P[C4]:	0.0112	0.0122	0.0012	0.0017
P[C5]:	0.0000	0.0001	0.0000	0.0000
Padj[C1]:	0.00409	0.00414	0.00115	0.00148
Padj[C2]:	0.00205	0.00202	-0.00071	-0.00103
Padj[C3]:	-0.00546	-0.00542	-0.00036	-0.00034
Padj[C4]:	-0.00067	-0.00073	-0.00007	-0.00010
Padj[C5]:	-0.00000	-0.00001	-0.00000	-0.00000
Lane:	L1	L1	L1	L1
LaneType:	LEFTTHRURITE	LEFTTHRURITE	LEFTTHRURITE	LEFTTHRURITE
HeadwayAdj:	0.000	-0.450	0.019	0.003
Volume:	8	4	108	78
Capacity:	809	897	892	888
DegOfUtil:	0.01	0.00	0.12	0.09
DepHeadway:	4.28	3.83	4.01	4.02
ServiceTime:	2.3	1.8	2.0	2.0
Delay:	7.3	6.9	7.6	7.4
Approach:	North Bound	South Bound	East Bound	West Bound
ApproachDel:	7.3	6.9	7.6	7.4
Delay Adj:	1.00	1.00	1.00	1.00
ApprAdjDel:	7.3	6.9	7.6	7.4
LOS by Appr:	A	A	A	A
OverallDel:		7.5		
OverallLOS:		A		

Cumulative PM Plus Project Fri Feb 20, 2004 11:01:36 Page 11-1

Patterson Sand and Gravel
Cumulative Conditions - Plus Proposed Project (With Haul Road)
"Average Day" - PM Peak Hour

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

Intersection #5 Riosa Rd abd Karchner Rd

Average Delay (sec/veh): 3.8 Worst Case Level Of Service: A

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	- T	- R	L	- T	- R	L	- T	- R	L	- T	- R
Control:	Stop Sign			Stop Sign			Uncontrolled			Uncontrolled		
Rights:	Include			Include			Include			Include		
Lanes:	0 0	0 0	0	0 0	1! 0	0	0 1	0 0	0	0 0	0 1	0
Volume Module:												
Base Vol:	0	0	0	10	0	17	28	39	0	0	27	7
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	10	0	17	28	39	0	0	27	7
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	0	0	0	10	0	17	28	39	0	0	27	7
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Final Vol.:	0	0	0	10	0	17	28	39	0	0	27	7
Critical Gap Module:												
Critical Gp:	xxxxx	xxxx	xxxxx	6.6	xxxx	6.4	4.3	xxxx	xxxxx	xxxxx	xxxx	xxxxx
FollowUpTim:	xxxxx	xxxx	xxxxx	3.6	xxxx	3.4	2.3	xxxx	xxxxx	xxxxx	xxxx	xxxxx
Capacity Module:												
Cnflict Vol:	xxxx	xxxx	xxxxx	126	xxxx	31	34	xxxx	xxxxx	xxxx	xxxx	xxxxx
Potent Cap.:	xxxx	xxxx	xxxxx	839	xxxx	1008	1497	xxxx	xxxxx	xxxx	xxxx	xxxxx
Move Cap.:	xxxx	xxxx	xxxxx	827	xxxx	1008	1497	xxxx	xxxxx	xxxx	xxxx	xxxxx
Level Of Service Module:												
Stopped Del:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	7.4	xxxx	xxxxx	xxxxx	xxxx	xxxxx
LOS by Move:	*	*	*	*	*	*	A	*	*	*	*	*
Movement:	LT -	LTR -	RT	LT -	LTR -	RT	LT -	LTR -	RT	LT -	LTR -	RT
Shared Cap.:	xxxx	xxxx	xxxxx	xxxx	932	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx
Shrd StpDel:	xxxxx	xxxx	xxxxx	xxxxx	9.0	xxxxx	7.4	xxxx	xxxxx	xxxxx	xxxx	xxxxx
Shared LOS:	*	*	*	*	A	*	A	*	*	*	*	*
ApproachDel:	xxxxxx			9.0			xxxxxx			xxxxxx		
ApproachLOS:	*			A			*			*		

Cumulative PM Plus Project Fri Feb 20, 2004 11:01:36 Page 12-1

Patterson Sand and Gravel
Cumulative Conditions - Plus Proposed Project (With Haul Road)
"Average Day" - PM Peak Hour

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

****
Intersection #5 Riosa Rd abd Karchner Rd
****

Approach:	North Bound	South Bound	East Bound	West Bound
Movement:	L - T - R	L - T - R	L - T - R	L - T - R
HevVeh:	0%	15%	15%	0%
Grade:	0%	0%	0%	0%
Peds/Hour:	0	0	0	0
LaneWidth:	12 feet	12 feet	12 feet	12 feet

Pedestrian Walk Speed: 4.00 feet/sec
Time Period: 0.25 hour

Traffix 7.5.0715 (c) 2002 Dowling Assoc. Licensed to DKS ASSOC., SACRAMENTO

Cumulative PM Plus Project Sat Jan 17, 2004 12:46:53 Page 1-1

Patterson Sand and Gravel
Cumulative Conditions - Plus Proposed Project (With Haul Road)
"30th Highest" - PM Peak Hour

Scenario Report

Scenario:	Cumulative PM Plus Project
Command:	Cumulative PM Plus Project
Volume:	Cumulative PM Plus Project
Geometry:	Cumulative PM Plus Project
Impact Fee:	Default Impact Fee
Trip Generation:	Default Trip Generation
Trip Distribution:	Default Trip Distribution
Paths:	Default Paths
Routes:	Default Routes
Configuration:	Default Configuration

Cumulative PM Plus Project Sat Jan 17, 2004 12:46:54 Page 2-1

Patterson Sand and Gravel
Cumulative Conditions - Plus Proposed Project (With Haul Road)
"30th Highest" - PM Peak Hour

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 65 and Riosa Road (Sheridan	C	2.5	0.000	C	2.5	0.000	+ 0.000 V/C
# 2 SR 65 and SR 193 (Lincoln)	C	28.0	0.881	C	28.0	0.881	+ 0.000 D/V
# 3 Old SR 65 and Haul Route	C	1.1	0.000	C	1.1	0.000	+ 0.000 V/C
# 4 Riosa Rd and 11th St	A	7.5	0.121	A	7.5	0.121	+ 0.000 V/C
# 5 Riosa Rd and Karchner Rd	A	4.0	0.000	A	4.0	0.000	+ 0.000 V/C

Patterson Sand and Gravel
Cumulative Conditions - Plus Proposed Project (With Haul Road)
"30th Highest" - PM Peak Hour

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

****
Intersection #1 SR 65 and Riosa Road (Sheridan)
****
Average Delay (sec/veh): 2.5 Worst Case 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:	Uncontrolled			Uncontrolled			Stop Sign			Stop Sign		
Rights:	Include			Include			Include			Include		
Lanes:	0 0 1	0	1	1 0 1	0	0	0 0 0	0	0	0 0 1!	0	0
Volume Module:												
Base Vol:	0	653	36	170	470	0	0	0	0	14	0	82
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	653	36	170	470	0	0	0	0	14	0	82
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	0	653	36	170	470	0	0	0	0	14	0	82
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Final Vol.:	0	653	36	170	470	0	0	0	0	14	0	82
Critical Gap Module:												
Critical Gp:	xxxxx	xxxx	xxxxx	4.1	xxxx	xxxxx	xxxxx	xxxx	xxxxx	6.4	xxxx	6.2
FollowUpTim:	xxxxx	xxxx	xxxxx	2.2	xxxx	xxxxx	xxxxx	xxxx	xxxxx	3.5	xxxx	3.3
Capacity Module:												
Cnflict Vol:	xxxx	xxxx	xxxxx	689	xxxx	xxxxx	xxxx	xxxx	xxxxx	1463	xxxx	653
Potent Cap.:	xxxx	xxxx	xxxxx	901	xxxx	xxxxx	xxxx	xxxx	xxxxx	143	xxxx	471
Move Cap.:	xxxx	xxxx	xxxxx	901	xxxx	xxxxx	xxxx	xxxx	xxxxx	122	xxxx	471
Level Of Service Module:												
Stopped Del:	xxxxx	xxxx	xxxxx	9.9	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx
LOS by Move:	*	*	*	A	*	*	*	*	*	*	*	*
Movement:	LT - LTR - RT			LT - LTR - RT			LT - LTR - RT			LT - LTR - RT		
Shared Cap.:	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	333	xxxxx
Shrd StpDel:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	20.2	xxxxx
Shared LOS:	*	*	*	*	*	*	*	*	*	*	C	*
ApproachDel:	xxxxxx			xxxxxx			xxxxxx			20.2		
ApproachLOS:	*			*			*			C		

Patterson Sand and Gravel
Cumulative Conditions - Plus Proposed Project (With Haul Road)
"30th Highest" - PM Peak Hour

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

****
Intersection #1 SR 65 and Riosa Road (Sheridan)
****

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
HevVeh:		3%			3%			0%			0%	
Grade:		0%			0%			0%			0%	
Peds/Hour:		0			0			0			0	
Pedestrian Walk Speed: 4.00 feet/sec												
LaneWidth:		12 feet			12 feet			12 feet			12 feet	
Time Period: 0.25 hour												
Upstream Signals:												
Link Index:		#2										
Dist(miles):		0.000										
Speed (mph):		0.00										
SignalIndex:		#2										
Cycle Time:		0 secs										
InitVolume:	0	0										
Saturation:	0	0										
ArrivalType:	0	0										
G/C:	0.00	0.00										
*** Computation 1: Time for Queue to Clear at Each Upstream Intersection												
P:	0.000	0.000										
gq1:	0.00	0.00										
gq2:	0.00	0.00										
gq:	0.00	0.00										
*** Computation 2: Time Intersection Blocked Because of Upstream Platoons												
alpha:		0.000										
beta:		0.000										
ta (secs):		0.000										
F:		0.000										
f:	0.000	0.000										
vcmax:	0	0										
vcmin:	0	0										
tp:	0.0	0.0										
p:		0.000										
*** Computation 3: Platoon Event Periods												
pdom/psubo:		0.000/0.000/Unconstrained										
*** Computation 4: Conflicting Flows During Each Unblocked Period												
InitCnflVol:	0	xxxxx	xxxxx	689	xxxxx	xxxxx	0	0	0	1463	0	653
UpstreamSat:	0	xxxxx	xxxxx	0	xxxxx	xxxxx	0	0	0	0	0	0
UpstreamAdj:	1.00	x.xxx	x.xxx	1.00	x.xxx	x.xxx	1.00	1.000	1.000	1.00	1.000	1.000
ConflictVol:	0	xxxxx	xxxxx	689	xxxxx	xxxxx	0	0	0	1463	0	653
*** Computation 5: Capactiy for Subject Movement During Unblocked Period												
InitPotCap:	0	xxxxx	xxxxx	901	xxxxx	xxxxx	0	0	0	143	0	471
UpstreamAdj:	1.00	x.xxx	x.xxx	1.00	x.xxx	x.xxx	1.00	1.000	1.000	1.00	1.000	1.000
PotentCap:	0	xxxxx	xxxxx	901	xxxxx	xxxxx	0	0	0	143	0	471

Cumulative PM Plus Project Sat Jan 17, 2004 12:46:54 Page 5-1

Patterson Sand and Gravel
Cumulative Conditions - Plus Proposed Project (With Haul Road)
"30th Highest" - PM Peak Hour

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

****
Intersection #2 SR 65 and SR 193 (Lincoln)
****

Cycle (sec): 100 Critical Vol./Cap. (X): 0.881
Loss Time (sec): 0 (Y+R = 4 sec) Average Delay (sec/veh): 28.0
Optimal Cycle: 156 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			Permitted			Permitted		
Rights:	Include			Include			Include			Ovl		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Lanes:	1 0 0 1 0			1 0 0 1 0			0 0 1! 0 0			0 1 0 0 1		
Volume Module:												
Base Vol:	0	851	22	375	530	0	0	0	0	131	0	309
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	851	22	375	530	0	0	0	0	131	0	309
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	0	851	22	375	530	0	0	0	0	131	0	309
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	0	851	22	375	530	0	0	0	0	131	0	309
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Final Vol.:	0	851	22	375	530	0	0	0	0	131	0	309
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	1.00	0.87	0.87	0.81	0.85	1.00	1.00	1.00	1.00	0.64	1.00	0.74
Lanes:	1.00	0.97	0.03	1.00	1.00	0.00	0.00	1.00	0.00	1.00	0.00	1.00
Final Sat.:	1900	1612	42	1532	1613	0	0	1900	0	1209	0	1398
Capacity Analysis Module:												
Vol/Sat:	0.00	0.53	0.53	0.24	0.33	0.00	0.00	0.00	0.00	0.11	0.00	0.22
Crit Moves:		****		****						****		
Green/Cycle:	0.00	0.60	0.60	0.28	0.88	0.00	0.00	0.00	0.00	0.12	0.00	0.40
Volume/Cap:	0.00	0.88	0.88	0.88	0.37	0.00	0.00	0.00	0.00	0.88	0.00	0.55
Delay/Veh:	0.0	26.3	26.3	53.3	1.3	0.0	0.0	0.0	0.0	84.2	0.0	24.2
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	26.3	26.3	53.3	1.3	0.0	0.0	0.0	0.0	84.2	0.0	24.2
DesignQueue:	0	22	1	16	4	0	0	0	0	7	0	11

****

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Patterson Sand and Gravel
Cumulative Conditions - Plus Proposed Project (With Haul Road)
"30th Highest" - PM Peak Hour

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

****
Intersection #2 SR 65 and SR 193 (Lincoln)
****

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
HCM Ops Adjusted Lane Utilization Module:												
Lanes:	1 0 0 1 0			1 0 0 1 0			0 0 1! 0 0			0 1 0 0 1		
Lane Group:	L	RT	RT	L	RT	RT	LTR	LTR	LTR	LT	LT	R
#LnsInGrps:	1	1	1	1	1	1	1	1	1	1	1	1
HCM Ops Input Saturation Adj Module:												
Lane Width:	12	12	12	12	12	12	12	12	12	12	12	12
CrosswalkWid		8			8			8			8	
% Hev Veh:		3			6			0			4	
Grade:		0%			0%			0%			0%	
Parking/Hr:		No			No			No			No	
Bus Stp/Hr:		0			0			0			0	
Area Type:	< < < < < < < < < < < < < < < CBD > > > > > > > > > > > > > > >											
Cnft Ped/Hr:		0			0			0			0	
ExclusiveRT:		Include			Include			Include			Include	
% RT Prtct:		0			0			0			0	
HCM Ops f(lt) Adj Case Module:												
f(lt) Case:	xxxx	xxxx	xxxx	1	xxxx	xxxx	xxxx	xxxx	xxxx	5	xxxx	xxxx
HCM Ops Saturation Adj Module:												
Ln Wid Adj:	xxxx	1.00	1.00	1.00	1.00	xxxxx	xxxx	xxxx	xxxxx	1.00	xxxx	1.00
Hev Veh Adj:	xxxx	0.97	0.97	0.94	0.94	xxxxx	xxxx	xxxx	xxxxx	0.96	xxxx	0.96
Grade Adj:	xxxx	1.00	1.00	1.00	1.00	xxxxx	xxxx	xxxx	xxxxx	1.00	xxxx	1.00
Parking Adj:	xxxx	1.00	1.00	xxxx	1.00	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	1.00
Bus Stp Adj:	xxxx	1.00	1.00	xxxx	1.00	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	1.00
Area Adj:	xxxx	0.90	0.90	0.90	0.90	xxxxx	xxxx	xxxx	xxxxx	0.90	xxxx	0.90
RT Adj:	xxxx	1.00	1.00	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	0.85
LT Adj:	xxxx	xxxx	xxxxx	0.95	xxxx	xxxxx	xxxx	xxxx	xxxxx	0.74	xxxx	xxxxx
PedBike Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
HCM Sat Adj:	1.00	0.87	0.87	0.81	0.85	1.00	1.00	1.00	1.00	0.64	1.00	0.74
Usr Sat Adj:	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 Sat Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Fnl Sat Adj:	1.00	0.87	0.87	0.81	0.85	1.00	1.00	1.00	1.00	0.64	1.00	0.74
Delay Adjustment Factor Module:												
Coordinated:	< < < < < < < < < < < < < < < No > > > > > > > > > > > > > > >											
Signal Type:	< < < < < < < < < < < < < Actuated > > > > > > > > > > > > > > >											
DelAdjFctr:	0.00	1.00	1.00	1.00	1.00	0.00	0.00	0.00	0.00	1.00	0.00	1.00

****

Patterson Sand and Gravel
Cumulative Conditions - Plus Proposed Project (With Haul Road)
"30th Highest" - PM Peak Hour

Level Of Service Detailed Computation Report (Permitted Left Turn Sat Adj)
2000 HCM Operations Method
Base Volume Alternative

****

Intersection #2 SR 65 and SR 193 (Lincoln)

****

Approach:	North	South	East	West
Cycle Length, C:	xxxxxx	xxxxxx	xxxxxx	100
Actual Green Time Per Lane Group, G:	xxxxxx	xxxxxx	xxxxxx	8.30
Effective Green Time Per Lane Group, g:	xxxxxx	xxxxxx	xxxxxx	12.30
Opposing Effective Green Time, go:	xxxxxx	xxxxxx	xxxxxx	12.30
Number Of Opposing Lanes, No:	xxxxxx	xxxxxx	xxxxxx	1
Number Of Lanes In Lane Group, N:	xxxxxx	xxxxxx	xxxxxx	1
Adjusted Left-Turn Flow Rate, Vlt:	xxxxxx	xxxxxx	xxxxxx	131
Proportion of Left Turns in Lane Group, Plt:	xxxxxx	xxxxxx	xxxxxx	1.00
Proportion of Left Turns in Opp Flow, Plto:	xxxxxx	xxxxxx	xxxxxx	1.00
Left Turns Per Cycle, LTC:	xxxxxx	xxxxxx	xxxxxx	3.64
Adjusted Opposing Flow Rate, Vo:	xxxxxx	xxxxxx	xxxxxx	0
Opposing Flow Per Lane Per Cycle, Volc:	xxxxxx	xxxxxx	xxxxxx	0.00
Opposing Platoon Ratio, Rpo:	xxxxxx	xxxxxx	xxxxxx	1.00
Lost Time Per Phase, tl:	xxxxxx	xxxxxx	xxxxxx	0.00
Eff grn until arrival of left-turn car, gf:	xxxxxx	xxxxxx	xxxxxx	0.90
Opposing Queue Ratio, qro:	xxxxxx	xxxxxx	xxxxxx	0.88
Eff grn blocked by opposing queue, gq:	xxxxxx	xxxxxx	xxxxxx	0.00
Eff grn while left turns filter thru, gu:	xxxxxx	xxxxxx	xxxxxx	11.40
Max opposing cars arriving during gq-gf, n:	xxxxxx	xxxxxx	xxxxxx	0.00
Proportion of Opposing Thru & RT cars, ptho:	xxxxxx	xxxxxx	xxxxxx	0.00
Left-turn Saturation Factor, fs:	xxxxxx	xxxxxx	xxxxxx	xxxxxx
Proportion of Left Turns in Shared Lane, pl:	xxxxxx	xxxxxx	xxxxxx	1.00
Through-car Equivalents, el1:	xxxxxx	xxxxxx	xxxxxx	1.40
Single Lane Through-car Equivalents, el2:	xxxxxx	xxxxxx	xxxxxx	1.00
Minimum Left Turn Adjustment Factor, fmin:	xxxxxx	xxxxxx	xxxxxx	0.33
Single Lane Left Turn Adjustment Factor, fm:	xxxxxx	xxxxxx	xxxxxx	0.74
Left Turn Adjustment Factor, flt:	xxxxxx	xxxxxx	xxxxxx	0.74

****

Patterson Sand and Gravel
Cumulative Conditions - Plus Proposed Project (With Haul Road)
"30th Highest" - PM Peak Hour

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

****

Intersection #3 Old SR 65 and Haul Route

****

Average Delay (sec/veh): 1.1 Worst Case 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:	Uncontrolled			Uncontrolled			Stop Sign			Stop Sign		
Rights:	Include			Include			Include			Include		
Lanes:	0 0	1 0	1	1 0	1 0	0	0 0	0 0	0	0 0	1! 0	0
Volume Module:												
Base Vol:	0	637	77	33	451	0	0	0	0	31	0	16
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	0	637	77	33	451	0	0	0	0	31	0	16
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	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 Volume:	0	637	77	33	451	0	0	0	0	31	0	16
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Final Vol.:	0	637	77	33	451	0	0	0	0	31	0	16
Critical Gap Module:												
Critical Gp:	xxxxx	xxxx	xxxxx	4.1	xxxx	xxxxx	xxxxx	xxxx	xxxxx	6.5	xxxx	6.3
FollowUpTim:	xxxxx	xxxx	xxxxx	2.2	xxxx	xxxxx	xxxxx	xxxx	xxxxx	3.6	xxxx	3.4
Capacity Module:												
Cnflict Vol:	xxxx	xxxx	xxxxx	714	xxxx	xxxxx	xxxx	xxxx	xxxxx	1154	xxxx	637
Potent Cap.:	xxxx	xxxx	xxxxx	872	xxxx	xxxxx	xxxx	xxxx	xxxxx	206	xxxx	456
Move Cap.:	xxxx	xxxx	xxxxx	872	xxxx	xxxxx	xxxx	xxxx	xxxxx	200	xxxx	456
Level Of Service Module:												
Stopped Del:	xxxxx	xxxx	xxxxx	9.3	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx
LOS by Move:	*	*	*	A	*	*	*	*	*	*	*	*
Movement:	LT -	LTR -	RT	LT -	LTR -	RT	LT -	LTR -	RT	LT -	LTR -	RT
Shared Cap.:	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	248	xxxxx
Shrd StpDel:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	22.9	xxxxx
Shared LOS:	*	*	*	*	*	*	*	*	*	*	C	*
ApproachDel:	xxxxxx			xxxxxx			xxxxxx			22.9		
ApproachLOS:	*			*			*			C		

Cumulative PM Plus Project Sat Jan 17, 2004 12:46:54 Page 8-1

Patterson Sand and Gravel
Cumulative Conditions - Plus Proposed Project (With Haul Road)
"30th Highest" - PM Peak Hour

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

****
Intersection #3 Old SR 65 and Haul Route
****

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
HevVeh:		4%			5%			0%			14%	
Grade:		0%			0%			0%			0%	
Peds/Hour:		0			0			0			0	
Pedestrian Walk Speed: 4.00 feet/sec												
LaneWidth:		12 feet			12 feet			12 feet			12 feet	
Time Period: 0.25 hour												
Upstream Signals:												
Link Index:		#2										
Dist(miles):		0.000										
Speed (mph):		0.00										
SignalIndex:		#2										
Cycle Time:		0 secs										
InitVolume:	0	0										
Saturation:	0	0										
ArrivalType:	0	0										
G/C:	0.00	0.00										

*** Computation 1: Time for Queue to Clear at Each Upstream Intersection

P:	0.000	0.000
gq1:	0.00	0.00
gq2:	0.00	0.00
gq:	0.00	0.00

*** Computation 2: Time Intersection Blocked Because of Upstream Platoons

alpha:		0.000										
beta:		0.000										
ta (secs):		0.000										
F:		0.000										
f:	0.000	0.000										
vcmax:	0	0										
vcmin:	0	0										
tp:	0.0	0.0										
p:		0.000										

*** Computation 3: Platoon Event Periods
pdom/psubo: 0.000/0.000/Unconstrained

*** Computation 4: Conflicting Flows During Each Unblocked Period

InitCnflVol:	0	xxxxx	xxxxx	714	xxxxx	xxxxx	0	0	0	1154	0	637
UpstreamSat:	0	xxxxx	xxxxx	0	xxxxx	xxxxx	0	0	0	0	0	0
UpstreamAdj:	1.00	x.xxx	x.xxx	1.00	x.xxx	x.xxx	1.00	1.000	1.000	1.00	1.000	1.000
ConflictVol:	0	xxxxx	xxxxx	714	xxxxx	xxxxx	0	0	0	1154	0	637

*** Computation 5: Capactiy for Subject Movement During Unblocked Period

InitPotCap:	0	xxxxx	xxxxx	872	xxxxx	xxxxx	0	0	0	206	0	456
UpstreamAdj:	1.00	x.xxx	x.xxx	1.00	x.xxx	x.xxx	1.00	1.000	1.000	1.00	1.000	1.000
PotentCap:	0	xxxxx	xxxxx	872	xxxxx	xxxxx	0	0	0	206	0	456

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Patterson Sand and Gravel
Cumulative Conditions - Plus Proposed Project (With Haul Road)
"30th Highest" - PM Peak Hour

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

****
Intersection #4 Riosa Rd and 11th St
****

Cycle (sec):	100	Critical Vol./Cap. (X):	0.121
Loss Time (sec):	0 (Y+R = 4 sec)	Average Delay (sec/veh):	7.5
Optimal Cycle:	0	Level Of Service:	A

****

Approach:	North Bound				South Bound				East Bound				West Bound			
Movement:	L	T	R		L	T	R		L	T	R		L	T	R	
Control:	Stop Sign				Stop Sign				Stop Sign				Stop Sign			
Rights:	Include				Include				Include				Include			
Min. Green:	0	0	0		0	0	0		0	0	0		0	0	0	
Lanes:	0	0	1!	0	0	0	0	1	0	0	1	0	0	1	0	0
Volume Module:																
Base Vol:	3	4	1		0	1	3		10	98	0		1	77	0	
Growth Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
Initial Bse:	3	4	1		0	1	3		10	98	0		1	77	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:	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 Volume:	3	4	1		0	1	3		10	98	0		1	77	0	
Reduct Vol:	0	0	0		0	0	0		0	0	0		0	0	0	
Reduced Vol:	3	4	1		0	1	3		10	98	0		1	77	0	
PCE Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
MLF Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
Final Vol.:	3	4	1		0	1	3		10	98	0		1	77	0	
Saturation Flow Module:																
Adjustment:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
Lanes:	0.37	0.50	0.13		0.00	0.25	0.75		0.09	0.91	0.00		0.01	0.99	0.00	
Final Sat.:	303	404	101		0	224	673		83	810	0		11	877	0	
Capacity Analysis Module:																
Vol/Sat:	0.01	0.01	0.01	xxxx	0.00	0.00	0.12	0.12	xxxx	0.09	0.09	xxxx				
Crit Moves:	****				****		****			****						
Delay/Veh:	7.3	7.3	7.3	0.0	6.9	6.9	7.6	7.6	0.0	7.4	7.4	0.0				
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:	7.3	7.3	7.3	0.0	6.9	6.9	7.6	7.6	0.0	7.4	7.4	0.0				
LOS by Move:	A	A	A	*	A	A	A	A	*	A	A	*				
ApproachDel:	7.3				6.9		7.6			7.4						
Delay Adj:	1.00				1.00		1.00			1.00						
ApprAdjDel:	7.3				6.9		7.6			7.4						
LOS by Appr:	A				A		A			A						

****

Patterson Sand and Gravel
Cumulative Conditions - Plus Proposed Project (With Haul Road)
"30th Highest" - PM Peak Hour

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

****
Intersection #4 Riosa Rd and 11th St
****

Approach:	North Bound	South Bound	East Bound	West Bound
Movement:	L - T - R	L - T - R	L - T - R	L - T - R
Time Period:	0.25 hour			
HevVeh:	0%	0%	0%	0%
Alpha Value:	0.01			
GroupType:	1	1	1	1
P[C1]:	0.7995	0.7953	0.9003	0.8676
P[C2]:	0.0034	0.0076	0.0860	0.1187
P[C3]:	0.1858	0.1848	0.0125	0.0120
P[C4]:	0.0112	0.0122	0.0012	0.0017
P[C5]:	0.0000	0.0001	0.0000	0.0000
Padj[C1]:	0.00409	0.00414	0.00115	0.00148
Padj[C2]:	0.00205	0.00202	-0.00071	-0.00103
Padj[C3]:	-0.00546	-0.00542	-0.00036	-0.00034
Padj[C4]:	-0.00067	-0.00073	-0.00007	-0.00010
Padj[C5]:	-0.00000	-0.00001	-0.00000	-0.00000
Lane:	L1	L1	L1	L1
LaneType:	LEFTTHRURITE	LEFTTHRURITE	LEFTTHRURITE	LEFTTHRURITE
HeadwayAdj:	0.000	-0.450	0.019	0.003
Volume:	8	4	108	78
Capacity:	809	897	892	888
DegOfUtil:	0.01	0.00	0.12	0.09
DepHeadway:	4.28	3.83	4.01	4.02
ServiceTime:	2.3	1.8	2.0	2.0
Delay:	7.3	6.9	7.6	7.4
Approach:	North Bound	South Bound	East Bound	West Bound
ApproachDel:	7.3	6.9	7.6	7.4
Delay Adj:	1.00	1.00	1.00	1.00
ApprAdjDel:	7.3	6.9	7.6	7.4
LOS by Appr:	A	A	A	A
OverallDel:		7.5		
OverallLOS:		A		

Patterson Sand and Gravel
Cumulative Conditions - Plus Proposed Project (With Haul Road)
"30th Highest" - PM Peak Hour

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

****
Intersection #5 Riosa Rd and Karchner Rd
****
Average Delay (sec/veh): 4.0 Worst Case Level Of Service: A
****

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Stop Sign			Stop Sign			Uncontrolled			Uncontrolled		
Rights:	Include			Include			Include			Include		
Lanes:	0 0 0 0 0			0 0 1! 0 0			0 1 0 0 0			0 0 0 1 0		
Volume Module:												
Base Vol:	0	0	0	10	0	19	30	39	0	0	27	7
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	10	0	19	30	39	0	0	27	7
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	0	0	0	10	0	19	30	39	0	0	27	7
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Final Vol.:	0	0	0	10	0	19	30	39	0	0	27	7
Critical Gap Module:												
Critical Gp:	xxxxx	xxxx	xxxxx	6.8	xxxx	6.6	4.4	xxxx	xxxxx	xxxxx	xxxx	xxxxx
FollowUpTim:	xxxxx	xxxx	xxxxx	3.9	xxxx	3.7	2.5	xxxx	xxxxx	xxxxx	xxxx	xxxxx
Capacity Module:												
Cnflict Vol:	xxxx	xxxx	xxxxx	130	xxxx	31	34	xxxx	xxxxx	xxxx	xxxx	xxxxx
Potent Cap.:	xxxx	xxxx	xxxxx	774	xxxx	935	1409	xxxx	xxxxx	xxxx	xxxx	xxxxx
Move Cap.:	xxxx	xxxx	xxxxx	761	xxxx	935	1409	xxxx	xxxxx	xxxx	xxxx	xxxxx
Level Of Service Module:												
Stopped Del:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	7.6	xxxx	xxxxx	xxxxx	xxxx	xxxxx
LOS by Move:	*	*	*	*	*	*	A	*	*	*	*	*
Movement:	LT - LTR - RT			LT - LTR - RT			LT - LTR - RT			LT - LTR - RT		
Shared Cap.:	xxxx	xxxx	xxxxx	xxxx	867	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx
Shrd StpDel:	xxxxx	xxxx	xxxxx	xxxxx	9.3	xxxxx	7.6	xxxx	xxxxx	xxxxx	xxxx	xxxxx
Shared LOS:	*	*	*	*	A	*	A	*	*	*	*	*
ApproachDel:	xxxxxx				9.3		xxxxxx			xxxxxx		
ApproachLOS:	*				A		*			*		

Cumulative PM Plus Project Sat Jan 17, 2004 12:46:54 Page 12-1

Patterson Sand and Gravel
Cumulative Conditions - Plus Proposed Project (With Haul Road)
"30th Highest" - PM Peak Hour

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

****
Intersection #5 Riosa Rd and Karchner Rd
****

Approach:	North Bound	South Bound	East Bound	West Bound
Movement:	L - T - R	L - T - R	L - T - R	L - T - R
HevVeh:	0%	44%	31%	0%
Grade:	0%	0%	0%	0%
Peds/Hour:	0	0	0	0
Pedestrian Walk Speed: 4.00 feet/sec				
LaneWidth:	12 feet	12 feet	12 feet	12 feet
Time Period: 0.25 hour				

Cumulative PM Plus Project Sat Jan 17, 2004 13:34:05 Page 1-1

Patterson Sand and Gravel
Cumulative Conditions - Plus Proposed Project (With Haul Road)
"Highest" - PM Peak Hour

Scenario Report

Scenario:	Cumulative PM Plus Project
Command:	Cumulative PM Plus Project
Volume:	Cumulative PM Plus Project
Geometry:	Cumulative PM Plus Project
Impact Fee:	Default Impact Fee
Trip Generation:	Default Trip Generation
Trip Distribution:	Default Trip Distribution
Paths:	Default Paths
Routes:	Default Routes
Configuration:	Default Configuration

Cumulative PM Plus Project Sat Jan 17, 2004 13:34:05 Page 2-1

Patterson Sand and Gravel
Cumulative Conditions - Plus Proposed Project (With Haul Road)
"Highest" - PM Peak Hour

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 65 and Riosa Road (Sheridan	C	2.5	0.000	C	2.5	0.000	+ 0.000 V/C
# 2 SR 65 and SR 193 (Lincoln)	C	28.1	0.882	C	28.1	0.882	+ 0.000 D/V
# 3 Old SR 65 and Haul Route	C	1.2	0.000	C	1.2	0.000	+ 0.000 V/C
# 4 Riosa Rd and 11th St	A	7.5	0.121	A	7.5	0.121	+ 0.000 V/C
# 5 Riosa Rd and Karchner Rd	A	4.1	0.000	A	4.1	0.000	+ 0.000 V/C

Cumulative PM Plus Project Sat Jan 17, 2004 13:34:05 Page 3-1

Patterson Sand and Gravel
Cumulative Conditions - Plus Proposed Project (With Haul Road)
"Highest" - PM Peak Hour

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

****
Intersection #1 SR 65 and Riosa Road (Sheridan)
****
Average Delay (sec/veh): 2.5 Worst Case 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:	Uncontrolled				Uncontrolled				Stop Sign				Stop Sign			
Rights:	Include				Include				Include				Include			
Lanes:	0	0	1	0 1	1	0	1	0 0	0	0	0	0 0	0	0	1!	0 0
Volume Module:																
Base Vol:	0	654	36		170	471	0		0	0	0		14	0	82	
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	654	36		170	471	0		0	0	0		14	0	82	
User Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
PHF Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
PHF Volume:	0	654	36		170	471	0		0	0	0		14	0	82	
Reduct Vol:	0	0	0		0	0	0		0	0	0		0	0	0	
Final Vol.:	0	654	36		170	471	0		0	0	0		14	0	82	
Critical Gap Module:																
Critical Gp:	xxxxx	xxxx	xxxxx		4.1	xxxx	xxxxx		xxxxx	xxxx	xxxxx		6.4	xxxx	6.2	
FollowUpTim:	xxxxx	xxxx	xxxxx		2.2	xxxx	xxxxx		xxxxx	xxxx	xxxxx		3.5	xxxx	3.3	
Capacity Module:																
Cnflict Vol:	xxxx	xxxx	xxxxx		690	xxxx	xxxxx		xxxx	xxxx	xxxxx		1465	xxxx	654	
Potent Cap.:	xxxx	xxxx	xxxxx		895	xxxx	xxxxx		xxxx	xxxx	xxxxx		143	xxxx	470	
Move Cap.:	xxxx	xxxx	xxxxx		895	xxxx	xxxxx		xxxx	xxxx	xxxxx		122	xxxx	470	
Level Of Service Module:																
Stopped Del:	xxxxx	xxxx	xxxxx		10.0	xxxx	xxxxx		xxxxx	xxxx	xxxxx		xxxxx	xxxx	xxxxx	
LOS by Move:	*	*	*		A	*	*		*	*	*		*	*	*	
Movement:	LT -	LTR -	RT		LT -	LTR -	RT		LT -	LTR -	RT		LT -	LTR -	RT	
Shared Cap.:	xxxx	xxxx	xxxxx		xxxx	xxxx	xxxxx		xxxx	xxxx	xxxxx		xxxx	332	xxxxx	
Shrd StpDel:	xxxxx	xxxx	xxxxx		xxxxx	xxxx	xxxxx		xxxxx	xxxx	xxxxx		xxxxx	20.2	xxxxx	
Shared LOS:	*	*	*		*	*	*		*	*	*		*	C	*	
ApproachDel:	xxxxxx				xxxxxx				xxxxxx				20.2			
ApproachLOS:	*				*				*				C			

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Cumulative PM Plus Project Sat Jan 17, 2004 13:34:05 Page 4-1

Patterson Sand and Gravel
Cumulative Conditions - Plus Proposed Project (With Haul Road)
"Highest" - PM Peak Hour

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

****
Intersection #1 SR 65 and Riosa Road (Sheridan)
****

Approach:	North Bound				South Bound				East Bound				West Bound			
Movement:	L	-	T	- R	L	-	T	- R	L	-	T	- R	L	-	T	- R
HevVeh:			3%				4%				0%				0%	
Grade:			0%				0%				0%				0%	
Peds/Hour:			0				0				0				0	
Pedestrian Walk Speed: 4.00 feet/sec																
LaneWidth:			12 feet				12 feet				12 feet				12 feet	
Time Period: 0.25 hour																
Upstream Signals:																
Link Index:			#2													
Dist(miles):			0.000													
Speed (mph):			0.00													
SignalIndex:			#2													
Cycle Time:				0 secs												
InitVolume:			0	0												
Saturation:			0	0												
ArrivalType:			0	0												
G/C:			0.00	0.00												
*** Computation 1: Time for Queue to Clear at Each Upstream Intersection																
P:			0.000	0.000												
gq1:			0.00	0.00												
gq2:			0.00	0.00												
gq:			0.00	0.00												
*** Computation 2: Time Intersection Blocked Because of Upstream Platoons																
alpha:			0.000													
beta:			0.000													
ta (secs):			0.000													
F:			0.000													
f:			0.000	0.000												
vcmax:			0	0												
vcmin:			0	0												
tp:			0.0	0.0												
p:			0.000													
*** Computation 3: Platoon Event Periods																
pdom/psubo:			0.000/0.000/Unconstrained													
*** Computation 4: Conflicting Flows During Each Unblocked Period																
InitCnflVol:	0	xxxxx	xxxxx		690	xxxxx	xxxxx		0	0	0		1465	0	654	
UpstreamSat:	0	xxxxx	xxxxx		0	xxxxx	xxxxx		0	0	0		0	0	0	
UpstreamAdj:	1.00	x.xxx	x.xxx	1.00	x.xxx	x.xxx	1.00	1.000	1.000	1.00	1.000	1.000				
ConflictVol:	0	xxxxx	xxxxx		690	xxxxx	xxxxx		0	0	0		1465	0	654	
*** Computation 5: Capactiy for Subject Movement During Unblocked Period																
InitPotCap:	0	xxxxx	xxxxx		895	xxxxx	xxxxx		0	0	0		143	0	470	
UpstreamAdj:	1.00	x.xxx	x.xxx	1.00	x.xxx	x.xxx	1.00	1.000	1.000	1.00	1.000	1.000				
PotentCap:	0	xxxxx	xxxxx		895	xxxxx	xxxxx		0	0	0		143	0	470	

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Cumulative PM Plus Project Sat Jan 17, 2004 13:34:05 Page 5-1

Patterson Sand and Gravel
Cumulative Conditions - Plus Proposed Project (With Haul Road)
"Highest" - PM Peak Hour

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

Intersection #2 SR 65 and SR 193 (Lincoln)

Cycle (sec): 100 Critical Vol./Cap. (X): 0.882
Loss Time (sec): 0 (Y+R = 4 sec) Average Delay (sec/veh): 28.1
Optimal Cycle: 158 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				Permitted				Permitted			
Rights:	Include				Include				Include				Ovl			
Min. Green:	0	0	0		0	0	0		0	0	0		0	0	0	
Lanes:	1	0	0	1 0	1	0	0	1 0	0	0	1!	0 0	0	1	0	0 1
Volume Module:																
Base Vol:	0	852	22		376	531	0		0	0	0		131	0	309	
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	852	22		376	531	0		0	0	0		131	0	309	
User Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
PHF Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
PHF Volume:	0	852	22		376	531	0		0	0	0		131	0	309	
Reduct Vol:	0	0	0		0	0	0		0	0	0		0	0	0	
Reduced Vol:	0	852	22		376	531	0		0	0	0		131	0	309	
PCE Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
MLF Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
Final Vol.:	0	852	22		376	531	0		0	0	0		131	0	309	
Saturation Flow Module:																
Sat/Lane:	1900	1900	1900		1900	1900	1900		1900	1900	1900		1900	1900	1900	
Adjustment:	1.00	0.87	0.87		0.81	0.85	1.00		1.00	1.00	1.00		0.64	1.00	0.74	
Lanes:	1.00	0.97	0.03		1.00	1.00	0.00		0.00	1.00	0.00		1.00	0.00	1.00	
Final Sat.:	1900	1612	42		1532	1613	0		0	1900	0		1209	0	1398	
Capacity Analysis Module:																
Vol/Sat:	0.00	0.53	0.53		0.25	0.33	0.00		0.00	0.00	0.00		0.11	0.00	0.22	
Crit Moves:		****			****								****			
Green/Cycle:	0.00	0.60	0.60		0.28	0.88	0.00		0.00	0.00	0.00		0.12	0.00	0.40	
Volume/Cap:	0.00	0.88	0.88		0.88	0.38	0.00		0.00	0.00	0.00		0.88	0.00	0.55	
Delay/Veh:	0.0	26.4	26.4		53.5	1.3	0.0		0.0	0.0	0.0		84.5	0.0	24.2	
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	26.4	26.4		53.5	1.3	0.0		0.0	0.0	0.0		84.5	0.0	24.2	
DesignQueue:	0	22	1		16	4	0		0	0	0		7	0	11	

Cumulative PM Plus Project Sat Jan 17, 2004 13:34:05 Page 6-1

Patterson Sand and Gravel
Cumulative Conditions - Plus Proposed Project (With Haul Road)
"Highest" - PM Peak Hour

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

Intersection #2 SR 65 and SR 193 (Lincoln)

Approach:	North Bound				South Bound				East Bound				West Bound			
Movement:	L	-	T	- R	L	-	T	- R	L	-	T	- R	L	-	T	- R
HCM Ops Adjusted Lane Utilization Module:																
Lanes:	1	0	0	1 0	1	0	0	1 0	0	0	1!	0 0	0	1	0	0 1
Lane Group:	L		RT		RT	L	RT	RT	LTR	LTR	LTR		LT	LT	R	
#LnsInGrps:	1		1		1	1	1	1	1	1	1		1	1	1	
HCM Ops Input Saturation Adj Module:																
Lane Width:	12	12	12		12	12	12		12	12	12		12	12	12	
CrosswalkWid		8				8				8				8		
% Hev Veh:		3				6				0				4		
Grade:		0%				0%				0%				0%		
Parking/Hr:		No				No				No				No		
Bus Stp/Hr:		0				0				0				0		
Area Type:	< < < < < < < < < < < < < < < < CBD > > > > > > > > > > > > > > > >															
Cnft Ped/Hr:		0				0				0				0		
ExclusiveRT:		Include				Include				Include				Include		
% RT Prtct:		0				0				0				0		
HCM Ops f(lt) Adj Case Module:																
f(lt) Case:	xxxx	xxxx	xxxx		1	xxxx	xxxx		xxxx	xxxx	xxxx		5	xxxx	xxxx	
HCM Ops Saturation Adj Module:																
Ln Wid Adj:	xxxx	1.00	1.00		1.00	1.00	xxxxx		xxxx	xxxx	xxxxx		1.00	xxxx	1.00	
Hev Veh Adj:	xxxx	0.97	0.97		0.94	0.94	xxxxx		xxxx	xxxx	xxxxx		0.96	xxxx	0.96	
Grade Adj:	xxxx	1.00	1.00		1.00	1.00	xxxxx		xxxx	xxxx	xxxxx		1.00	xxxx	1.00	
Parking Adj:	xxxx	1.00	1.00		xxxx	1.00	xxxxx		xxxx	xxxx	xxxxx		xxxx	xxxx	1.00	
Bus Stp Adj:	xxxx	1.00	1.00		xxxx	1.00	xxxxx		xxxx	xxxx	xxxxx		xxxx	xxxx	1.00	
Area Adj:	xxxx	0.90	0.90		0.90	0.90	xxxxx		xxxx	xxxx	xxxxx		0.90	xxxx	0.90	
RT Adj:	xxxx	1.00	1.00		xxxx	xxxx	xxxxx		xxxx	xxxx	xxxxx		xxxx	xxxx	0.85	
LT Adj:	xxxx	xxxx	xxxxx		0.95	xxxx	xxxxx		xxxx	xxxx	xxxxx		0.74	xxxx	xxxxx	
PedBike Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
HCM Sat Adj:	1.00	0.87	0.87		0.81	0.85	1.00		1.00	1.00	1.00		0.64	1.00	0.74	
Usr Sat Adj:	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 Sat Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
Fnl Sat Adj:	1.00	0.87	0.87		0.81	0.85	1.00		1.00	1.00	1.00		0.64	1.00	0.74	
Delay Adjustment Factor Module:																
Coordinated:	< < < < < < < < < < < < < < < < No > > > > > > > > > > > > > > > >															
Signal Type:	< < < < < < < < < < < < < < Actuated > > > > > > > > > > > > > >															
DelAdjFctr:	0.00	1.00	1.00		1.00	1.00	0.00		0.00	0.00	0.00		1.00	0.00	1.00	

Patterson Sand and Gravel
Cumulative Conditions - Plus Proposed Project (With Haul Road)
"Highest" - PM Peak Hour

Level Of Service Detailed Computation Report (Permitted Left Turn Sat Adj)
2000 HCM Operations Method
Base Volume Alternative

****
Intersection #2 SR 65 and SR 193 (Lincoln)
****

Approach:	North	South	East	West
Cycle Length, C:	xxxxxx	xxxxxx	xxxxxx	100
Actual Green Time Per Lane Group, G:	xxxxxx	xxxxxx	xxxxxx	8.28
Effective Green Time Per Lane Group, g:	xxxxxx	xxxxxx	xxxxxx	12.28
Opposing Effective Green Time, go:	xxxxxx	xxxxxx	xxxxxx	12.28
Number Of Opposing Lanes, No:	xxxxxx	xxxxxx	xxxxxx	1
Number Of Lanes In Lane Group, N:	xxxxxx	xxxxxx	xxxxxx	1
Adjusted Left-Turn Flow Rate, Vlt:	xxxxxx	xxxxxx	xxxxxx	131
Proportion of Left Turns in Lane Group, Plt:	xxxxxx	xxxxxx	xxxxxx	1.00
Proportion of Left Turns in Opp Flow, Plto:	xxxxxx	xxxxxx	xxxxxx	1.00
Left Turns Per Cycle, LTC:	xxxxxx	xxxxxx	xxxxxx	3.64
Adjusted Opposing Flow Rate, Vo:	xxxxxx	xxxxxx	xxxxxx	0
Opposing Flow Per Lane Per Cycle, Volc:	xxxxxx	xxxxxx	xxxxxx	0.00
Opposing Platoon Ratio, Rpo:	xxxxxx	xxxxxx	xxxxxx	1.00
Lost Time Per Phase, tl:	xxxxxx	xxxxxx	xxxxxx	0.00
Eff grn until arrival of left-turn car, gf:	xxxxxx	xxxxxx	xxxxxx	0.89
Opposing Queue Ratio, qro:	xxxxxx	xxxxxx	xxxxxx	0.88
Eff grn blocked by opposing queue, gq:	xxxxxx	xxxxxx	xxxxxx	0.00
Eff grn while left turns filter thru, gu:	xxxxxx	xxxxxx	xxxxxx	11.39
Max opposing cars arriving during gq-gf, n:	xxxxxx	xxxxxx	xxxxxx	0.00
Proportion of Opposing Thru & RT cars, ptho:	xxxxxx	xxxxxx	xxxxxx	0.00
Left-turn Saturation Factor, fs:	xxxxxx	xxxxxx	xxxxxx	xxxxxx
Proportion of Left Turns in Shared Lane, pl:	xxxxxx	xxxxxx	xxxxxx	1.00
Through-car Equivalents, el1:	xxxxxx	xxxxxx	xxxxxx	1.40
Single Lane Through-car Equivalents, el2:	xxxxxx	xxxxxx	xxxxxx	1.00
Minimum Left Turn Adjustment Factor, fmin:	xxxxxx	xxxxxx	xxxxxx	0.33
Single Lane Left Turn Adjustment Factor, fm:	xxxxxx	xxxxxx	xxxxxx	0.73
Left Turn Adjustment Factor, flt:	xxxxxx	xxxxxx	xxxxxx	0.73

****

Patterson Sand and Gravel
Cumulative Conditions - Plus Proposed Project (With Haul Road)
"Highest" - PM Peak Hour

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

****
Intersection #3 Old SR 65 and Haul Route
****

Average Delay (sec/veh): 1.2 Worst Case 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:	Uncontrolled			Uncontrolled			Stop Sign			Stop Sign		
Rights:	Include			Include			Include			Include		
Lanes:	0 0	1 0	1	1 0	1 0	0	0 0	0 0	0	0 0	1! 0	0
Volume Module:												
Base Vol:	0	637	79	34	451	0	0	0	0	33	0	16
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	0	637	79	34	451	0	0	0	0	33	0	16
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	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 Volume:	0	637	79	34	451	0	0	0	0	33	0	16
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Final Vol.:	0	637	79	34	451	0	0	0	0	33	0	16
Critical Gap Module:												
Critical Gp:	xxxxx	xxxx	xxxxx	4.1	xxxx	xxxxx	xxxxx	xxxx	xxxxx	6.6	xxxx	6.4
FollowUpTim:	xxxxx	xxxx	xxxxx	2.2	xxxx	xxxxx	xxxxx	xxxx	xxxxx	3.7	xxxx	3.5
Capacity Module:												
Cnflict Vol:	xxxx	xxxx	xxxxx	716	xxxx	xxxxx	xxxx	xxxx	xxxxx	1156	xxxx	637
Potent Cap.:	xxxx	xxxx	xxxxx	871	xxxx	xxxxx	xxxx	xxxx	xxxxx	202	xxxx	450
Move Cap.:	xxxx	xxxx	xxxxx	871	xxxx	xxxxx	xxxx	xxxx	xxxxx	196	xxxx	450
Level Of Service Module:												
Stopped Del:	xxxxx	xxxx	xxxxx	9.3	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx
LOS by Move:	*	*	*	A	*	*	*	*	*	*	*	*
Movement:	LT -	LTR -	RT	LT -	LTR -	RT	LT -	LTR -	RT	LT -	LTR -	RT
Shared Cap.:	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	240	xxxxx
Shrd StpDel:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	23.8	xxxxx
Shared LOS:	*	*	*	*	*	*	*	*	*	*	C	*
ApproachDel:	xxxxxx			xxxxxx			xxxxxx			23.8		
ApproachLOS:	*			*			*			C		

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Patterson Sand and Gravel
Cumulative Conditions - Plus Proposed Project (With Haul Road)
"Highest" - PM Peak Hour

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

```
*******************************************************************************
Intersection #3 Old SR 65 and Haul Route
*******************************************************************************
Approach:       North Bound      South Bound      East Bound       West Bound
Movement:     L  -  T  -  R    L  -  T  -  R    L  -  T  -  R    L  -  T  -  R
------------|----------------|----------------|----------------|----------------|
HevVeh:             4%               5%               0%              18%
Grade:              0%               0%               0%               0%
Peds/Hour:          0                0                0                0
Pedestrian Walk Speed: 4.00 feet/sec
LaneWidth:        12 feet          12 feet          12 feet          12 feet
Time Period: 0.25 hour
------------|----------------|----------------|----------------|----------------|
Upstream Signals:
Link Index:       #2
Dist(miles):      0.000
Speed (mph):       0.00
SignalIndex:      #2
Cycle Time:           0 secs
InitVolume:     0     0
Saturation:     0     0
ArrivalType:    0     0
G/C:         0.00  0.00
*** Computation 1: Time for Queue to Clear at Each Upstream Intersection
P:          0.000 0.000
gq1:         0.00  0.00
gq2:         0.00  0.00
gq:          0.00  0.00
*** Computation 2: Time Intersection Blocked Because of Upstream Platoons
alpha:            0.000
beta:             0.000
ta (secs):        0.000
F:                0.000
f:          0.000 0.000
vcmax:          0     0
vcmin:          0     0
tp:           0.0   0.0
p:              0.000
*** Computation 3: Platoon Event Periods
pdom/psubo:       0.000/0.000/Unconstrained
*** Computation 4: Conflicting Flows During Each Unblocked Period
InitCnflVol:   0 xxxxx xxxxx  716 xxxxx xxxxx    0     0     0 1156     0   637
UpstreamSat:   0 xxxxx xxxxx    0 xxxxx xxxxx    0     0     0    0     0     0
UpstreamAdj:1.00 x.xxx x.xxx 1.00 x.xxx x.xxx 1.00 1.000 1.000 1.00 1.000 1.000
ConflictVol:   0 xxxxx xxxxx  716 xxxxx xxxxx    0     0     0 1156     0   637
*** Computation 5: Capactiy for Subject Movement During Unblocked Period
InitPotCap:    0 xxxxx xxxxx  871 xxxxx xxxxx    0     0     0  202     0   450
UpstreamAdj:1.00 x.xxx x.xxx 1.00 x.xxx x.xxx 1.00 1.000 1.000 1.00 1.000 1.000
PotentCap:     0 xxxxx xxxxx  871 xxxxx xxxxx    0     0     0  202     0   450
```


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Patterson Sand and Gravel
Cumulative Conditions - Plus Proposed Project (With Haul Road)
"Highest" - PM Peak Hour

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

```
*******************************************************************************
Intersection #4 Riosa Rd and 11th St
*******************************************************************************
Cycle (sec):        100                Critical Vol./Cap. (X):        0.121
Loss Time (sec):      0 (Y+R =  4 sec) Average Delay (sec/veh):        7.5
Optimal Cycle:        0                Level Of Service:                A
*******************************************************************************
Approach:       North Bound      South Bound      East Bound       West Bound
Movement:     L  -  T  -  R    L  -  T  -  R    L  -  T  -  R    L  -  T  -  R
------------||---------------||---------------||---------------||---------------|
Control:        Stop Sign        Stop Sign        Stop Sign        Stop Sign
Rights:           Include          Include          Include          Include
Min. Green:     0    0    0    0    0    0    0    0    0    0    0    0
Lanes:        0  0  1! 0  0    0  0  0  1  0    0  1  0  0  0    0  1  0  0
------------||---------------||---------------||---------------||---------------|
Volume Module:
Base Vol:       3    4    1    0    1    3   10   98    0    1   77    0
Growth Adj:  1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
Initial Bse:    3    4    1    0    1    3   10   98    0    1   77    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:     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 Volume:     3    4    1    0    1    3   10   98    0    1   77    0
Reduct Vol:     0    0    0    0    0    0    0    0    0    0    0    0
Reduced Vol:    3    4    1    0    1    3   10   98    0    1   77    0
PCE Adj:     1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
MLF Adj:     1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
Final Vol.:     3    4    1    0    1    3   10   98    0    1   77    0
------------||---------------||---------------||---------------||---------------|
Saturation Flow Module:
Adjustment:  1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
Lanes:       0.37 0.50 0.13 0.00 0.25 0.75 0.09 0.91 0.00 0.01 0.99 0.00
Final Sat.:   303  404  101    0  224  673   83  810    0   11  877    0
------------||---------------||---------------||---------------||---------------|
Capacity Analysis Module:
Vol/Sat:     0.01 0.01 0.01 xxxx 0.00 0.00 0.12 0.12 xxxx 0.09 0.09 xxxx
Crit Moves:  ****                ****      ****           ****
Delay/Veh:    7.3  7.3  7.3  0.0  6.9  6.9  7.6  7.6  0.0  7.4  7.4  0.0
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:   7.3  7.3  7.3  0.0  6.9  6.9  7.6  7.6  0.0  7.4  7.4  0.0
LOS by Move:   A    A    A    *    A    A    A    A    *    A    A    *
ApproachDel:        7.3              6.9              7.6              7.4
Delay Adj:         1.00             1.00             1.00             1.00
ApprAdjDel:         7.3              6.9              7.6              7.4
LOS by Appr:         A                A                A                A
*******************************************************************************
```

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Patterson Sand and Gravel
Cumulative Conditions - Plus Proposed Project (With Haul Road)
"Highest" - PM Peak Hour

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

****
Intersection #4 Riosa Rd and 11th St
****

Approach:	North Bound	South Bound	East Bound	West Bound
Movement:	L - T - R	L - T - R	L - T - R	L - T - R
Time Period: 0.25 hour				
HevVeh:	0%	0%	0%	0%
Alpha Value: 0.01				
GroupType:	1	1	1	1
P[C1]:	0.7995	0.7953	0.9003	0.8676
P[C2]:	0.0034	0.0076	0.0860	0.1187
P[C3]:	0.1858	0.1848	0.0125	0.0120
P[C4]:	0.0112	0.0122	0.0012	0.0017
P[C5]:	0.0000	0.0001	0.0000	0.0000
Padj[C1]:	0.00409	0.00414	0.00115	0.00148
Padj[C2]:	0.00205	0.00202	-0.00071	-0.00103
Padj[C3]:	-0.00546	-0.00542	-0.00036	-0.00034
Padj[C4]:	-0.00067	-0.00073	-0.00007	-0.00010
Padj[C5]:	-0.00000	-0.00001	-0.00000	-0.00000
Lane:	L1	L1	L1	L1
LaneType:	LEFTTHRURITE	LEFTTHRURITE	LEFTTHRURITE	LEFTTHRURITE
HeadwayAdj:	0.000	-0.450	0.019	0.003
Volume:	8	4	108	78
Capacity:	809	897	892	888
DegOfUtil:	0.01	0.00	0.12	0.09
DepHeadway:	4.28	3.83	4.01	4.02
ServiceTime:	2.3	1.8	2.0	2.0
Delay:	7.3	6.9	7.6	7.4
Approach:	North Bound	South Bound	East Bound	West Bound
ApproachDel:	7.3	6.9	7.6	7.4
Delay Adj:	1.00	1.00	1.00	1.00
ApprAdjDel:	7.3	6.9	7.6	7.4
LOS by Appr:	A	A	A	A
OverallDel:		7.5		
OverallLOS:		A		

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Patterson Sand and Gravel
Cumulative Conditions - Plus Proposed Project (With Haul Road)
"Highest" - PM Peak Hour

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

****
Intersection #5 Riosa Rd and Karchner Rd
****
Average Delay (sec/veh): 4.1 Worst Case Level Of Service: A
****

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	- T	- R	L	- T	- R	L	- T	- R	L	- T	- R
Control:	Stop Sign			Stop Sign			Uncontrolled			Uncontrolled		
Rights:	Include			Include			Include			Include		
Lanes:	0 0	0 0	0	0 0	1! 0	0	0 1	0 0	0	0 0	0 1	0
Volume Module:												
Base Vol:	0	0	0	10	0	22	33	39	0	0	27	7
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	10	0	22	33	39	0	0	27	7
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	0	0	0	10	0	22	33	39	0	0	27	7
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Final Vol.:	0	0	0	10	0	22	33	39	0	0	27	7
Critical Gap Module:												
Critical Gp:	xxxxx	xxxx	xxxxx	6.7	xxxx	6.5	4.3	xxxx	xxxxx	xxxxx	xxxx	xxxxx
FollowUpTim:	xxxxx	xxxx	xxxxx	3.8	xxxx	3.6	2.4	xxxx	xxxxx	xxxxx	xxxx	xxxxx
Capacity Module:												
Cnflict Vol:	xxxx	xxxx	xxxxx	136	xxxx	31	34	xxxx	xxxxx	xxxx	xxxx	xxxxx
Potent Cap.:	xxxx	xxxx	xxxxx	800	xxxx	974	1463	xxxx	xxxxx	xxxx	xxxx	xxxxx
Move Cap.:	xxxx	xxxx	xxxxx	786	xxxx	974	1463	xxxx	xxxxx	xxxx	xxxx	xxxxx
Level Of Service Module:												
Stopped Del:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	7.5	xxxx	xxxxx	xxxxx	xxxx	xxxxx
LOS by Move:	*	*	*	*	*	*	A	*	*	*	*	*
Movement:	LT -	LTR -	RT	LT -	LTR -	RT	LT -	LTR -	RT	LT -	LTR -	RT
Shared Cap.:	xxxx	xxxx	xxxxx	xxxx	906	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx
Shrd StpDel:	xxxxx	xxxx	xxxxx	xxxxx	9.1	xxxxx	7.5	xxxx	xxxxx	xxxxx	xxxx	xxxxx
Shared LOS:	*	*	*	*	A	*	A	*	*	*	*	*
ApproachDel:	xxxxxx				9.1		xxxxxx			xxxxxx		
ApproachLOS:	*				A		*			*		

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Patterson Sand and Gravel
Cumulative Conditions - Plus Proposed Project (With Haul Road)
"Highest" - PM Peak Hour

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

****
Intersection #5 Riosa Rd and Karchner Rd
****

Approach:	North Bound	South Bound	East Bound	West Bound
Movement:	L - T - R	L - T - R	L - T - R	L - T - R
HevVeh:	0%	28%	21%	0%
Grade:	0%	0%	0%	0%
Peds/Hour:	0	0	0	0
Pedestrian Walk Speed: 4.00 feet/sec				
LaneWidth:	12 feet	12 feet	12 feet	12 feet

Time Period: 0.25 hour

Cumulative AM Plus Project Fri Feb 20, 2004 11:05:05 Page 1-1

Patterson Sand and Gravel
Cumulative Plus "Maximum Practical Mining Rate" (With Haul Road)
"Highest" - AM Peak Hour

Scenario Report

Scenario:	Cumulative AM Plus Project
Command:	Cumulative AM Plus Project
Volume:	Cumulative AM Plus Project
Geometry:	Cumulative AM Plus Project
Impact Fee:	Default Impact Fee
Trip Generation:	Default Trip Generation
Trip Distribution:	Default Trip Distribution
Paths:	Default Paths
Routes:	Default Routes
Configuration:	Default Configuration

Cumulative AM Plus Project Fri Feb 20, 2004 11:05:06 Page 2-1

Patterson Sand and Gravel
Cumulative Plus "Maximum Practical Mining Rate" (With Haul Road)
"Highest" - AM Peak Hour

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 65 and Riosa Road (Sheridan	B	2.2	0.000	B	2.2	0.000	+ 0.000 V/C
# 2 SR 65 and SR 193 (Lincoln)	B	16.0	0.613	B	16.0	0.613	+ 0.000 D/V
# 3 Old SR 65 and Haul Route	E	7.6	0.000	E	7.6	0.000	+ 0.000 V/C
# 4 Riosa Rd and 11th St	A	7.6	0.139	A	7.6	0.139	+ 0.000 V/C
# 5 Riosa Rd and Karchner Rd	B	6.1	0.000	B	6.1	0.000	+ 0.000 V/C

Cumulative AM Plus Project Fri Feb 20, 2004 11:05:06 Page 3-1

Patterson Sand and Gravel
Cumulative Plus "Maximum Practical Mining Rate" (With Haul Road)
"Highest" - AM Peak Hour

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

```
*******************************************************************************
Intersection #1 SR 65 and Riosa Road (Sheridan)
*******************************************************************************
Average Delay (sec/veh):       2.2           Worst Case 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:       Uncontrolled     Uncontrolled      Stop Sign        Stop Sign
Rights:          Include          Include          Include          Include
Lanes:        0  0  1  0  1    1  0  1  0  0    0  0  0  0  0    0  0  1! 0  0
------------|---------------||---------------||---------------||---------------|
Volume Module:
Base Vol:       0  378    5    43  602    0    0    0    0    15    0  153
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  378    5    43  602    0    0    0    0    15    0  153
User Adj:    1.00 1.00 1.00  1.00 1.00 1.00 1.00 1.00 1.00  1.00 1.00 1.00
PHF Adj:     1.00 1.00 1.00  1.00 1.00 1.00 1.00 1.00 1.00  1.00 1.00 1.00
PHF Volume:     0  378    5    43  602    0    0    0    0    15    0  153
Reduct Vol:     0    0    0     0    0    0    0    0    0     0    0    0
Final Vol.:     0  378    5    43  602    0    0    0    0    15    0  153
------------|---------------||---------------||---------------||---------------|
Critical Gap Module:
Critical Gp:xxxxx xxxx xxxxx   4.2 xxxx xxxxx xxxxx xxxx xxxxx   6.4 xxxx   6.2
FollowUpTim:xxxxx xxxx xxxxx   2.3 xxxx xxxxx xxxxx xxxx xxxxx   3.5 xxxx   3.3
------------|---------------||---------------||---------------||---------------|
Capacity Module:
Cnflict Vol: xxxx xxxx xxxxx   383 xxxx xxxxx  xxxx xxxx xxxxx  1066 xxxx   378
Potent Cap.: xxxx xxxx xxxxx  1123 xxxx xxxxx  xxxx xxxx xxxxx   248 xxxx   673
Move Cap.:   xxxx xxxx xxxxx  1123 xxxx xxxxx  xxxx xxxx xxxxx   241 xxxx   673
------------|---------------||---------------||---------------||---------------|
Level Of Service Module:
Stopped Del:xxxxx xxxx xxxxx   8.3 xxxx xxxxx xxxxx xxxx xxxxx xxxxx xxxx xxxxx
LOS by Move:   *    *    *     A    *    *     *    *    *     *    *    *
Movement:     LT - LTR - RT    LT - LTR - RT    LT - LTR - RT    LT - LTR - RT
Shared Cap.: xxxx xxxx xxxxx  xxxx xxxx xxxxx  xxxx xxxx xxxxx  xxxx  580 xxxxx
Shrd StpDel:xxxxx xxxx xxxxx xxxxx xxxx xxxxx xxxxx xxxx xxxxx xxxxx 13.7 xxxxx
Shared LOS:    *    *    *     *    *    *     *    *    *     *    B    *
ApproachDel:    xxxxxx          xxxxxx          xxxxxx          13.7
ApproachLOS:       *               *               *               B
```


Cumulative AM Plus Project Fri Feb 20, 2004 11:05:06 Page 4-1

Patterson Sand and Gravel
Cumulative Plus "Maximum Practical Mining Rate" (With Haul Road)
"Highest" - AM Peak Hour

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

```
*******************************************************************************
Intersection #1 SR 65 and Riosa Road (Sheridan)
*******************************************************************************
Approach:      North Bound      South Bound      East Bound       West Bound
Movement:     L  -  T  -  R    L  -  T  -  R    L  -  T  -  R    L  -  T  -  R
------------|---------------||---------------||---------------||---------------|
HevVeh:            19%              12%              0%               0%
Grade:              0%               0%              0%               0%
Peds/Hour:          0                0               0                0
Pedestrian Walk Speed: 4.00 feet/sec
LaneWidth:       12 feet          12 feet         12 feet          12 feet
Time Period: 0.25 hour
------------|---------------||---------------||---------------||---------------|
Upstream Signals:
Link Index:       #2
Dist(miles):      0.000
Speed (mph):       0.00
SignalIndex:      #2
Cycle Time:           0 secs
InitVolume:     0     0
Saturation:     0     0
ArrivalType:    0     0
G/C:         0.00  0.00
*** Computation 1: Time for Queue to Clear at Each Upstream Intersection
P:          0.000 0.000
gq1:         0.00  0.00
gq2:         0.00  0.00
gq:          0.00  0.00
*** Computation 2: Time Intersection Blocked Because of Upstream Platoons
alpha:            0.000
beta:             0.000
ta (secs):        0.000
F:                0.000
f:          0.000 0.000
vcmax:          0     0
vcmin:          0     0
tp:           0.0   0.0
p:                0.000
*** Computation 3: Platoon Event Periods
pdom/psubo:      0.000/0.000/Unconstrained
*** Computation 4: Conflicting Flows During Each Unblocked Period
InitCnflVol:   0 xxxxx xxxxx  383 xxxxx xxxxx    0     0     0 1066     0   378
UpstreamSat:   0 xxxxx xxxxx    0 xxxxx xxxxx    0     0     0    0     0     0
UpstreamAdj:1.00 x.xxx x.xxx 1.00 x.xxx x.xxx 1.00 1.000 1.000 1.00 1.000 1.000
ConflictVol:   0 xxxxx xxxxx  383 xxxxx xxxxx    0     0     0 1066     0   378
*** Computation 5: Capactiy for Subject Movement During Unblocked Period
InitPotCap:    0 xxxxx xxxxx 1123 xxxxx xxxxx    0     0     0  248     0   673
UpstreamAdj:1.00 x.xxx x.xxx 1.00 x.xxx x.xxx 1.00 1.000 1.000 1.00 1.000 1.000
PotentCap:     0 xxxxx xxxxx 1123 xxxxx xxxxx    0     0     0  248     0   673
```

Cumulative AM Plus Project Fri Feb 20, 2004 11:05:06 Page 5-1

Patterson Sand and Gravel
Cumulative Plus "Maximum Practical Mining Rate" (With Haul Road)
"Highest" - AM Peak Hour

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

Intersection #2 SR 65 and SR 193 (Lincoln)

Cycle (sec): 100 Critical Vol./Cap. (X): 0.613
Loss Time (sec): 0 (Y+R = 4 sec) Average Delay (sec/veh): 16.0
Optimal Cycle: 48 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				Permitted				Permitted			
Rights:	Include				Include				Include				Ovl			
Min. Green:	0	0	0		0	0	0		0	0	0		0	0	0	
Lanes:	1	0	0	1 0	1	0	0	1 0	0	0	1!	0 0	0	1	0	0 1
Volume Module:																
Base Vol:	0	456		29	196	668		0	0	0		0	62		0	309
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	456		29	196	668		0	0	0		0	62		0	309
User Adj:	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00		1.00	1.00
PHF Adj:	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00		1.00	1.00
PHF Volume:	0	456		29	196	668		0	0	0		0	62		0	309
Reduct Vol:	0	0		0	0	0		0	0	0		0	0		0	0
Reduced Vol:	0	456		29	196	668		0	0	0		0	62		0	309
PCE Adj:	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00		1.00	1.00
MLF Adj:	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00		1.00	1.00
Final Vol.:	0	456		29	196	668		0	0	0		0	62		0	309
Saturation Flow Module:																
Sat/Lane:	1900	1900		1900	1900	1900		1900	1900	1900		1900	1900		1900	1900
Adjustment:	1.00	0.73		0.73	0.70	0.73		1.00	1.00	1.00		1.00	0.57		1.00	0.62
Lanes:	1.00	0.94		0.06	1.00	1.00		0.00	0.00	1.00		0.00	1.00		0.00	1.00
Final Sat.:	1900	1306		83	1321	1390		0	0	1900		0	1082		0	1172
Capacity Analysis Module:																
Vol/Sat:	0.00	0.35		0.35	0.15	0.48		0.00	0.00	0.00		0.00	0.06		0.00	0.26
Crit Moves:		****			****											****
Green/Cycle:	0.00	0.57		0.57	0.24	0.81		0.00	0.00	0.00		0.00	0.19		0.00	0.43
Volume/Cap:	0.00	0.61		0.61	0.61	0.59		0.00	0.00	0.00		0.00	0.30		0.00	0.61
Delay/Veh:	0.0	15.7		15.7	37.2	4.3		0.0	0.0	0.0		0.0	35.8		0.0	24.3
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:	0.0	15.7		15.7	37.2	4.3		0.0	0.0	0.0		0.0	35.8		0.0	24.3
DesignQueue:	0	12		1	8	8		0	0	0		0	3		0	10

Cumulative AM Plus Project Fri Feb 20, 2004 11:05:06 Page 6-1

Patterson Sand and Gravel
Cumulative Plus "Maximum Practical Mining Rate" (With Haul Road)
"Highest" - AM Peak Hour

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

Intersection #2 SR 65 and SR 193 (Lincoln)

Approach:	North Bound				South Bound				East Bound				West Bound			
Movement:	L	-	T	- R	L	-	T	- R	L	-	T	- R	L	-	T	- R
HCM Ops Adjusted Lane Utilization Module:																
Lanes:	1	0	0	1 0	1	0	0	1 0	0	0	1!	0 0	0	1	0	0 1
Lane Group:	L		RT	RT	L		RT	RT	LTR	LTR		LTR	LT		LT	R
#LnsInGrps:	1		1	1	1		1	1	1	1		1	1		1	1
HCM Ops Input Saturation Adj Module:																
Lane Width:	12		12	12	12		12	12	12		12	12	12		12	12
CrosswalkWid			8				8				8				8	
% Hev Veh:			22				23				0				24	
Grade:			0%				0%				0%				0%	
Parking/Hr:			No				No				No				No	
Bus Stp/Hr:			0				0				0				0	
Area Type:	< < < < < < < < < < < < < < < < CBD > > > > > > > > > > > > > > > >															
Cnft Ped/Hr:			0				0				0				0	
ExclusiveRT:			Include				Include				Include				Include	
% RT Prtct:			0				0				0				0	
HCM Ops f(lt) Adj Case Module:																
f(lt) Case:	xxxx	xxxx	xxxx		1	xxxx	xxxx		xxxx	xxxx	xxxx		5	xxxx	xxxx	
HCM Ops Saturation Adj Module:																
Ln Wid Adj:	xxxx	1.00	1.00	1.00	1.00	xxxxx		xxxx	xxxx	xxxxx		1.00	xxxx		1.00	
Hev Veh Adj:	xxxx	0.82	0.82	0.81	0.81	xxxxx		xxxx	xxxx	xxxxx		0.81	xxxx		0.81	
Grade Adj:	xxxx	1.00	1.00	1.00	1.00	xxxxx		xxxx	xxxx	xxxxx		1.00	xxxx		1.00	
Parking Adj:	xxxx	1.00	1.00	xxxx	1.00	xxxxx		xxxx	xxxx	xxxxx		xxxx	xxxx		1.00	
Bus Stp Adj:	xxxx	1.00	1.00	xxxx	1.00	xxxxx		xxxx	xxxx	xxxxx		xxxx	xxxx		1.00	
Area Adj:	xxxx	0.90	0.90	0.90	0.90	xxxxx		xxxx	xxxx	xxxxx		0.90	xxxx		0.90	
RT Adj:	xxxx	0.99	0.99	xxxx	xxxx	xxxxx		xxxx	xxxx	xxxxx		xxxx	xxxx		0.85	
LT Adj:	xxxx	xxxx	xxxxx	0.95	xxxx	xxxxx		xxxx	xxxx	xxxxx		0.79	xxxx		xxxxx	
PedBike Adj:	1.00	1.00	1.00	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00		1.00	
HCM Sat Adj:	1.00	0.73	0.73	0.70	0.73	1.00		1.00	1.00	1.00		0.57	1.00		0.62	
Usr Sat Adj:	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 Sat Adj:	1.00	1.00	1.00	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00		1.00	
Fnl Sat Adj:	1.00	0.73	0.73	0.70	0.73	1.00		1.00	1.00	1.00		0.57	1.00		0.62	
Delay Adjustment Factor Module:																
Coordinated:	< < < < < < < < < < < < < < < < No > > > > > > > > > > > > > > > >															
Signal Type:	< < < < < < < < < < < < < < Actuated > > > > > > > > > > > > > >															
DelAdjFctr:	0.00	1.00	1.00	1.00	1.00	0.00		0.00	0.00	0.00		1.00	0.00		1.00	

Cumulative AM Plus Project Fri Feb 20, 2004 11:05:06 Page 6-2

Patterson Sand and Gravel
Cumulative Plus "Maximum Practical Mining Rate" (With Haul Road)
"Highest" - AM Peak Hour

Level Of Service Detailed Computation Report (Permitted Left Turn Sat Adj)
2000 HCM Operations Method
Base Volume Alternative

****
Intersection #2 SR 65 and SR 193 (Lincoln)
****

Approach:	North	South	East	West
Cycle Length, C:	xxxxxx	xxxxxx	xxxxxx	100
Actual Green Time Per Lane Group, G:	xxxxxx	xxxxxx	xxxxxx	39.04
Effective Green Time Per Lane Group, g:	xxxxxx	xxxxxx	xxxxxx	43.04
Opposing Effective Green Time, go:	xxxxxx	xxxxxx	xxxxxx	43.04
Number Of Opposing Lanes, No:	xxxxxx	xxxxxx	xxxxxx	1
Number Of Lanes In Lane Group, N:	xxxxxx	xxxxxx	xxxxxx	1
Adjusted Left-Turn Flow Rate, Vlt:	xxxxxx	xxxxxx	xxxxxx	62
Proportion of Left Turns in Lane Group, Plt:	xxxxxx	xxxxxx	xxxxxx	1.00
Proportion of Left Turns in Opp Flow, Plto:	xxxxxx	xxxxxx	xxxxxx	1.00
Left Turns Per Cycle, LTC:	xxxxxx	xxxxxx	xxxxxx	1.72
Adjusted Opposing Flow Rate, Vo:	xxxxxx	xxxxxx	xxxxxx	0
Opposing Flow Per Lane Per Cycle, Volc:	xxxxxx	xxxxxx	xxxxxx	0.00
Opposing Platoon Ratio, Rpo:	xxxxxx	xxxxxx	xxxxxx	1.00
Lost Time Per Phase, tl:	xxxxxx	xxxxxx	xxxxxx	0.00
Eff grn until arrival of left-turn car, gf:	xxxxxx	xxxxxx	xxxxxx	10.61
Opposing Queue Ratio, qro:	xxxxxx	xxxxxx	xxxxxx	0.57
Eff grn blocked by opposing queue, gq:	xxxxxx	xxxxxx	xxxxxx	0.00
Eff grn while left turns filter thru, gu:	xxxxxx	xxxxxx	xxxxxx	32.43
Max opposing cars arriving during gq-gf, n:	xxxxxx	xxxxxx	xxxxxx	0.00
Proportion of Opposing Thru & RT cars, ptho:	xxxxxx	xxxxxx	xxxxxx	0.00
Left-turn Saturation Factor, fs:	xxxxxx	xxxxxx	xxxxxx	xxxxxx
Proportion of Left Turns in Shared Lane, pl:	xxxxxx	xxxxxx	xxxxxx	1.00
Through-car Equivalents, el1:	xxxxxx	xxxxxx	xxxxxx	1.40
Single Lane Through-car Equivalents, el2:	xxxxxx	xxxxxx	xxxxxx	1.00
Minimum Left Turn Adjustment Factor, fmin:	xxxxxx	xxxxxx	xxxxxx	0.09
Single Lane Left Turn Adjustment Factor, fm:	xxxxxx	xxxxxx	xxxxxx	0.78
Left Turn Adjustment Factor, flt:	xxxxxx	xxxxxx	xxxxxx	0.78

****

Cumulative AM Plus Project Fri Feb 20, 2004 11:05:06 Page 7-1

Patterson Sand and Gravel
Cumulative Plus "Maximum Practical Mining Rate" (With Haul Road)
"Highest" - AM Peak Hour

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

****
Intersection #3 Old SR 65 and Haul Route
****
Average Delay (sec/veh): 7.6 Worst Case 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:	Uncontrolled			Uncontrolled			Stop Sign			Stop Sign		
Rights:	Include			Include			Include			Include		
Lanes:	0 0 1	0	1	1 0 1	0	0	0 0 0	0	0	0 0 1!	0	0
Volume Module:												
Base Vol:	0	324	58	21	596	0	0	0	0	133	0	54
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	324	58	21	596	0	0	0	0	133	0	54
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	0	324	58	21	596	0	0	0	0	133	0	54
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Final Vol.:	0	324	58	21	596	0	0	0	0	133	0	54
Critical Gap Module:												
Critical Gp:	xxxxx	xxxx	xxxxx	4.2	xxxx	xxxxx	xxxxx	xxxx	xxxxx	7.1	xxxx	6.9
FollowUpTim:	xxxxx	xxxx	xxxxx	2.3	xxxx	xxxxx	xxxxx	xxxx	xxxxx	4.1	xxxx	3.9
Capacity Module:												
Cnflict Vol:	xxxx	xxxx	xxxxx	382	xxxx	xxxxx	xxxx	xxxx	xxxxx	962	xxxx	324
Potent Cap.:	xxxx	xxxx	xxxxx	1124	xxxx	xxxxx	xxxx	xxxx	xxxxx	216	xxxx	584
Move Cap.:	xxxx	xxxx	xxxxx	1124	xxxx	xxxxx	xxxx	xxxx	xxxxx	213	xxxx	584
Level Of Service Module:												
Stopped Del:	xxxxx	xxxx	xxxxx	8.3	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx
LOS by Move:	*	*	*	A	*	*	*	*	*	*	*	*
Movement:	LT -	LTR -	RT	LT -	LTR -	RT	LT -	LTR -	RT	LT -	LTR -	RT
Shared Cap.:	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	261	xxxxx
Shrd StpDel:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	47.4	xxxxx
Shared LOS:	*	*	*	*	*	*	*	*	*	*	E	*
ApproachDel:	xxxxxx			xxxxxx			xxxxxx			47.4		
ApproachLOS:	*			*			*			E		

Cumulative AM Plus Project Fri Feb 20, 2004 11:05:06 Page 8-1

Patterson Sand and Gravel
Cumulative Plus "Maximum Practical Mining Rate" (With Haul Road)
"Highest" - AM Peak Hour

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

```
*******************************************************************************
Intersection #3 Old SR 65 and Haul Route
*******************************************************************************
Approach:       North Bound      South Bound      East Bound       West Bound
Movement:     L  -  T  -  R    L  -  T  -  R    L  -  T  -  R    L  -  T  -  R
------------|----------------|----------------|----------------|----------------|
HevVeh:           24%              12%              0%               70%
Grade:             0%               0%              0%                0%
Peds/Hour:         0                0               0                 0
Pedestrian Walk Speed: 4.00 feet/sec
LaneWidth:       12 feet          12 feet          12 feet          12 feet
Time Period: 0.25 hour
------------|----------------|----------------|----------------|----------------|
Upstream Signals:
Link Index:        #2
Dist(miles):       0.000
Speed (mph):        0.00
SignalIndex:       #2
Cycle Time:            0 secs
InitVolume:      0     0
Saturation:      0     0
ArrivalType:     0     0
G/C:          0.00  0.00
*** Computation 1: Time for Queue to Clear at Each Upstream Intersection
P:           0.000 0.000
gq1:          0.00  0.00
gq2:          0.00  0.00
gq:           0.00  0.00
*** Computation 2: Time Intersection Blocked Because of Upstream Platoons
alpha:        0.000
beta:         0.000
ta (secs):    0.000
F:            0.000
f:           0.000 0.000
vcmax:           0     0
vcmin:           0     0
tp:            0.0   0.0
p:            0.000
*** Computation 3: Platoon Event Periods
pdom/psubo:      0.000/0.000/Unconstrained
*** Computation 4: Conflicting Flows During Each Unblocked Period
InitCnflVol:   0 xxxxx xxxxx  382 xxxxx xxxxx    0     0     0  962     0   324
UpstreamSat:   0 xxxxx xxxxx    0 xxxxx xxxxx    0     0     0    0     0     0
UpstreamAdj:1.00 x.xxx x.xxx 1.00 x.xxx x.xxx 1.00 1.000 1.000 1.00 1.000 1.000
ConflictVol:   0 xxxxx xxxxx  382 xxxxx xxxxx    0     0     0  962     0   324
*** Computation 5: Capactiy for Subject Movement During Unblocked Period
InitPotCap:    0 xxxxx xxxxx 1124 xxxxx xxxxx    0     0     0  216     0   584
UpstreamAdj:1.00 x.xxx x.xxx 1.00 x.xxx x.xxx 1.00 1.000 1.000 1.00 1.000 1.000
PotentCap:     0 xxxxx xxxxx 1124 xxxxx xxxxx    0     0     0  216     0   584
```


Cumulative AM Plus Project Fri Feb 20, 2004 11:05:06 Page 9-1

Patterson Sand and Gravel
Cumulative Plus "Maximum Practical Mining Rate" (With Haul Road)
"Highest" - AM Peak Hour

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

```
*******************************************************************************
Intersection #4 Riosa Rd and 11th St
*******************************************************************************
Cycle (sec):        100                Critical Vol./Cap. (X):        0.139
Loss Time (sec):      0 (Y+R =  4 sec) Average Delay (sec/veh):         7.6
Optimal Cycle:        0                Level Of Service:                  A
*******************************************************************************
Approach:       North Bound      South Bound      East Bound       West Bound
Movement:     L  -  T  -  R    L  -  T  -  R    L  -  T  -  R    L  -  T  -  R
------------|----------------||----------------||----------------||----------------|
Control:        Stop Sign        Stop Sign        Stop Sign        Stop Sign
Rights:           Include          Include          Include          Include
Min. Green:     0    0    0     0    0    0     0    0    0     0    0    0
Lanes:        0  0  1! 0  0    0  0  1! 0  0    0  1  0  0  0    0  1  0  0  0
------------|----------------||----------------||----------------||----------------|
Volume Module:
Base Vol:       6    4    4    11    7   20    13   62    0     2  119    0
Growth Adj:  1.00 1.00 1.00  1.00 1.00 1.00  1.00 1.00 1.00  1.00 1.00 1.00
Initial Bse:    6    4    4    11    7   20    13   62    0     2  119    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:     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 Volume:     6    4    4    11    7   20    13   62    0     2  119    0
Reduct Vol:     0    0    0     0    0    0     0    0    0     0    0    0
Reduced Vol:    6    4    4    11    7   20    13   62    0     2  119    0
PCE Adj:     1.00 1.00 1.00  1.00 1.00 1.00  1.00 1.00 1.00  1.00 1.00 1.00
MLF Adj:     1.00 1.00 1.00  1.00 1.00 1.00  1.00 1.00 1.00  1.00 1.00 1.00
Final Vol.:     6    4    4    11    7   20    13   62    0     2  119    0
------------|----------------||----------------||----------------||----------------|
Saturation Flow Module:
Adjustment:  1.00 1.00 1.00  1.00 1.00 1.00  1.00 1.00 1.00  1.00 1.00 1.00
Lanes:       0.43 0.28 0.29  0.29 0.18 0.53  0.17 0.83 0.00  0.02 0.98 0.00
Final Sat.:   346  231  231   246  156  446   148  705    0    14  855    0
------------|----------------||----------------||----------------||----------------|
Capacity Analysis Module:
Vol/Sat:     0.02 0.02 0.02  0.04 0.04 0.04  0.09 0.09 xxxx  0.14 0.14 xxxx
Crit Moves:  ****                    ****       ****              ****
Delay/Veh:    7.3  7.3  7.3   7.2  7.2  7.2   7.5  7.5  0.0   7.7  7.7  0.0
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:   7.3  7.3  7.3   7.2  7.2  7.2   7.5  7.5  0.0   7.7  7.7  0.0
LOS by Move:   A    A    A     A    A    A     A    A    *     A    A    *
ApproachDel:        7.3              7.2              7.5              7.7
Delay Adj:         1.00             1.00             1.00             1.00
ApprAdjDel:         7.3              7.2              7.5              7.7
LOS by Appr:         A                A                A                A
*******************************************************************************
```

Cumulative AM Plus Project Fri Feb 20, 2004 11:05:06 Page 10-1

Patterson Sand and Gravel
Cumulative Plus "Maximum Practical Mining Rate" (With Haul Road)
"Highest" - AM Peak Hour

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

****

Intersection #4 Riosa Rd and 11th St

****

Approach:	North Bound	South Bound	East Bound	West Bound
Movement:	L - T - R	L - T - R	L - T - R	L - T - R
Time Period: 0.25 hour				
HevVeh:	0%	0%	0%	0%
Alpha Value: 0.01				
GroupType:	1	1	1	1
P[C1]:	0.7545	0.7752	0.8123	0.8599
P[C2]:	0.0338	0.0130	0.1291	0.0814
P[C3]:	0.1913	0.1966	0.0500	0.0529
P[C4]:	0.0199	0.0150	0.0086	0.0057
P[C5]:	0.0005	0.0002	0.0001	0.0001
Padj[C1]:	0.00478	0.00452	0.00255	0.00205
Padj[C2]:	0.00199	0.00214	-0.00062	-0.00017
Padj[C3]:	-0.00553	-0.00574	-0.00141	-0.00153
Padj[C4]:	-0.00119	-0.00090	-0.00051	-0.00034
Padj[C5]:	-0.00005	-0.00002	-0.00001	-0.00001
Lane:	L1	L1	L1	L1
LaneType:	LEFTTHRURITE	LEFTTHRURITE	LEFTTHRURITE	LEFTTHRURITE
HeadwayAdj:	-0.086	-0.258	0.035	0.003
Volume:	14	38	75	121
Capacity:	808	848	852	870
DegOfUtil:	0.02	0.04	0.09	0.14
DepHeadway:	4.26	4.06	4.16	4.08
ServiceTime:	2.3	2.1	2.2	2.1
Delay:	7.3	7.2	7.5	7.7
Approach:	North Bound	South Bound	East Bound	West Bound
ApproachDel:	7.3	7.2	7.5	7.7
Delay Adj:	1.00	1.00	1.00	1.00
ApprAdjDel:	7.3	7.2	7.5	7.7
LOS by Appr:	A	A	A	A
OverallDel:		7.6		
OverallLOS:		A		

Cumulative AM Plus Project Fri Feb 20, 2004 11:05:06 Page 11-1

Patterson Sand and Gravel
Cumulative Plus "Maximum Practical Mining Rate" (With Haul Road)
"Highest" - AM Peak Hour

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

****

Intersection #5 Riosa Rd and Karchner Rd

****

Average Delay (sec/veh): 6.1 Worst Case 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			Uncontrolled			Uncontrolled		
Rights:	Include			Include			Include			Include		
Lanes:	0 0	0 0	0	0 0	1! 0	0	0 1	0 0	0	0 0	0 1	0
Volume Module:												
Base Vol:	0	0	0	23	0	126	63	38	0	0	52	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:	0	0	0	23	0	126	63	38	0	0	52	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:	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 Volume:	0	0	0	23	0	126	63	38	0	0	52	2
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Final Vol.:	0	0	0	23	0	126	63	38	0	0	52	2
Critical Gap Module:												
Critical Gp:	xxxxx	xxxx	xxxxx	7.2	xxxx	7.0	4.7	xxxx	xxxxx	xxxxx	xxxx	xxxxx
FollowUpTim:	xxxxx	xxxx	xxxxx	4.2	xxxx	4.0	2.7	xxxx	xxxxx	xxxxx	xxxx	xxxxx
Capacity Module:												
Cnflict Vol:	xxxx	xxxx	xxxxx	217	xxxx	53	54	xxxx	xxxxx	xxxx	xxxx	xxxxx
Potent Cap.:	xxxx	xxxx	xxxxx	623	xxxx	828	1246	xxxx	xxxxx	xxxx	xxxx	xxxxx
Move Cap.:	xxxx	xxxx	xxxxx	598	xxxx	828	1246	xxxx	xxxxx	xxxx	xxxx	xxxxx
Level Of Service Module:												
Stopped Del:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	8.0	xxxx	xxxxx	xxxxx	xxxx	xxxxx
LOS by Move:	*	*	*	*	*	*	A	*	*	*	*	*
Movement:	LT -	LTR -	RT	LT -	LTR -	RT	LT -	LTR -	RT	LT -	LTR -	RT
Shared Cap.:	xxxx	xxxx	xxxxx	xxxx	782	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx
Shrd StpDel:	xxxxx	xxxx	xxxxx	xxxxx	10.7	xxxxx	8.0	xxxx	xxxxx	xxxxx	xxxx	xxxxx
Shared LOS:	*	*	*	*	B	*	A	*	*	*	*	*
ApproachDel:	xxxxxx			10.7			xxxxxx			xxxxxx		
ApproachLOS:	*			B			*			*		

Cumulative AM Plus Project Fri Feb 20, 2004 11:05:06 Page 12-1

Patterson Sand and Gravel
Cumulative Plus "Maximum Practical Mining Rate" (With Haul Road)
"Highest" - AM Peak Hour

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

****
Intersection #5 Riosa Rd and Karchner Rd
****

Approach:	North Bound	South Bound	East Bound	West Bound
Movement:	L - T - R	L - T - R	L - T - R	L - T - R
HevVeh:	0%	82%	61%	15%
Grade:	0%	0%	0%	0%
Peds/Hour:	0	0	0	0
Pedestrian Walk Speed: 4.00 feet/sec				
LaneWidth:	12 feet	12 feet	12 feet	12 feet

Time Period: 0.25 hour

Cumulative PM Plus Project Fri Feb 20, 2004 11:03:46 Page 1-1

Patterson Sand and Gravel
Cumulative Plus "Maximum Practical Mining Rate" (No Haul Road)
"Highest" - PM Peak Hour

Scenario Report

Scenario:	Cumulative PM Plus Project
Command:	Cumulative PM Plus Project
Volume:	Cumulative PM Plus Project
Geometry:	Cumulative PM Plus Project
Impact Fee:	Default Impact Fee
Trip Generation:	Default Trip Generation
Trip Distribution:	Default Trip Distribution
Paths:	Default Paths
Routes:	Default Routes
Configuration:	Default Configuration

Cumulative PM Plus Project Fri Feb 20, 2004 11:03:47 Page 2-1

Patterson Sand and Gravel
Cumulative Plus "Maximum Practical Mining Rate" (No Haul Road)
"Highest" - PM Peak Hour

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 65 and Riosa Road (Sheridan	C	2.5	0.000	C	2.5	0.000	+ 0.000 V/C
# 2 SR 65 and SR 193 (Lincoln)	C	28.2	0.884	C	28.2	0.884	+ 0.000 D/V
# 3 Old SR 65 and Haul Route	D	1.3	0.000	D	1.3	0.000	+ 0.000 V/C
# 4 Riosa Rd and 11th St	A	7.5	0.121	A	7.5	0.121	+ 0.000 V/C
# 5 Riosa Rd and Karchner Rd	A	4.3	0.000	A	4.3	0.000	+ 0.000 V/C

Cumulative PM Plus Project Fri Feb 20, 2004 11:03:47 Page 3-1

Patterson Sand and Gravel
Cumulative Plus "Maximum Practical Mining Rate" (No Haul Road)
"Highest" - PM Peak Hour

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

```
*******************************************************************************
Intersection #1 SR 65 and Riosa Road (Sheridan)
*******************************************************************************
Average Delay (sec/veh):      2.5          Worst Case 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:       Uncontrolled     Uncontrolled      Stop Sign        Stop Sign
Rights:           Include          Include          Include          Include
Lanes:        0  0  1  0  1    1  0  1  0  0    0  0  0  0  0    0  0  1! 0  0
------------|---------------||---------------||---------------||---------------|
Volume Module:
Base Vol:        0  654   36   170  473    0    0    0    0   14    0   82
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  654   36   170  473    0    0    0    0   14    0   82
User Adj:     1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
PHF Adj:      1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
PHF Volume:      0  654   36   170  473    0    0    0    0   14    0   82
Reduct Vol:      0    0    0     0    0    0    0    0    0    0    0    0
Final Vol.:      0  654   36   170  473    0    0    0    0   14    0   82
------------|---------------||---------------||---------------||---------------|
Critical Gap Module:
Critical Gp:xxxxx xxxx xxxxx   4.1 xxxx xxxxx xxxxx xxxx xxxxx   6.4 xxxx   6.2
FollowUpTim:xxxxx xxxx xxxxx   2.2 xxxx xxxxx xxxxx xxxx xxxxx   3.5 xxxx   3.3
------------|---------------||---------------||---------------||---------------|
Capacity Module:
Cnflict Vol: xxxx xxxx xxxxx   690 xxxx xxxxx  xxxx xxxx xxxxx  1467 xxxx   654
Potent Cap.: xxxx xxxx xxxxx   895 xxxx xxxxx  xxxx xxxx xxxxx   142 xxxx   470
Move Cap.:   xxxx xxxx xxxxx   895 xxxx xxxxx  xxxx xxxx xxxxx   121 xxxx   470
------------|---------------||---------------||---------------||---------------|
Level Of Service Module:
Stopped Del:xxxxx xxxx xxxxx  10.0 xxxx xxxxx xxxxx xxxx xxxxx xxxxx xxxx xxxxx
LOS by Move:   *    *    *     A    *    *     *    *    *     *    *    *
Movement:     LT - LTR - RT   LT - LTR - RT   LT - LTR - RT   LT - LTR - RT
Shared Cap.: xxxx xxxx xxxxx  xxxx xxxx xxxxx  xxxx xxxx xxxxx  xxxx  331 xxxxx
Shrd StpDel:xxxxx xxxx xxxxx xxxxx xxxx xxxxx xxxxx xxxx xxxxx xxxxx 20.2 xxxxx
Shared LOS:    *    *    *     *    *    *     *    *    *     *    C    *
ApproachDel:    xxxxxx          xxxxxx          xxxxxx          20.2
ApproachLOS:       *               *               *              C
```


Cumulative PM Plus Project Fri Feb 20, 2004 11:03:47 Page 4-1

Patterson Sand and Gravel
Cumulative Plus "Maximum Practical Mining Rate" (No Haul Road)
"Highest" - PM Peak Hour

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

```
*******************************************************************************
Intersection #1 SR 65 and Riosa Road (Sheridan)
*******************************************************************************
Approach:       North Bound      South Bound      East Bound       West Bound
Movement:     L  -  T  -  R    L  -  T  -  R    L  -  T  -  R    L  -  T  -  R
------------|---------------||---------------||---------------||---------------|
HevVeh:             3%               4%               0%               0%
Grade:              0%               0%               0%               0%
Peds/Hour:          0                0                0                0
Pedestrian Walk Speed: 4.00 feet/sec
LaneWidth:       12 feet          12 feet          12 feet          12 feet
Time Period: 0.25 hour
------------|---------------||---------------||---------------||---------------|
Upstream Signals:
Link Index:       #2
Dist(miles):      0.000
Speed (mph):       0.00
SignalIndex:      #2
Cycle Time:          0 secs
InitVolume:     0     0
Saturation:     0     0
ArrivalType:    0     0
G/C:         0.00  0.00
*** Computation 1: Time for Queue to Clear at Each Upstream Intersection
P:          0.000 0.000
gq1:         0.00  0.00
gq2:         0.00  0.00
gq:          0.00  0.00
*** Computation 2: Time Intersection Blocked Because of Upstream Platoons
alpha:            0.000
beta:             0.000
ta (secs):        0.000
F:                0.000
f:          0.000 0.000
vcmax:          0     0
vcmin:          0     0
tp:           0.0   0.0
p:            0.000
*** Computation 3: Platoon Event Periods
pdom/psubo:      0.000/0.000/Unconstrained
*** Computation 4: Conflicting Flows During Each Unblocked Period
InitCnflVol:    0 xxxxx xxxxx  690 xxxxx xxxxx    0     0     0 1467     0   654
UpstreamSat:    0 xxxxx xxxxx    0 xxxxx xxxxx    0     0     0    0     0     0
UpstreamAdj:1.00 x.xxx x.xxx 1.00 x.xxx x.xxx 1.00 1.000 1.000 1.00 1.000 1.000
ConflictVol:    0 xxxxx xxxxx  690 xxxxx xxxxx    0     0     0 1467     0   654
*** Computation 5: Capactiy for Subject Movement During Unblocked Period
InitPotCap:     0 xxxxx xxxxx  895 xxxxx xxxxx    0     0     0  142     0   470
UpstreamAdj:1.00 x.xxx x.xxx 1.00 x.xxx x.xxx 1.00 1.000 1.000 1.00 1.000 1.000
PotentCap:      0 xxxxx xxxxx  895 xxxxx xxxxx    0     0     0  142     0   470
```

Cumulative PM Plus Project Fri Feb 20, 2004 11:03:47 Page 5-1

Patterson Sand and Gravel
Cumulative Plus "Maximum Practical Mining Rate" (No Haul Road)
"Highest" - PM Peak Hour

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

Intersection #2 SR 65 and SR 193 (Lincoln)

Cycle (sec): 100 Critical Vol./Cap. (X): 0.884
Loss Time (sec): 0 (Y+R = 4 sec) Average Delay (sec/veh): 28.2
Optimal Cycle: 160 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				Permitted				Permitted			
Rights:	Include				Include				Include				Ovl			
Min. Green:	0	0	0		0	0	0		0	0	0		0	0	0	
Lanes:	1	0	0	1 0	1	0	0	1 0	0	0	1!	0 0	0	1	0	0 1
Volume Module:																
Base Vol:	0	853	22		377	533	0		0	0	0		131	0	311	
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	853	22		377	533	0		0	0	0		131	0	311	
User Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
PHF Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
PHF Volume:	0	853	22		377	533	0		0	0	0		131	0	311	
Reduct Vol:	0	0	0		0	0	0		0	0	0		0	0	0	
Reduced Vol:	0	853	22		377	533	0		0	0	0		131	0	311	
PCE Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
MLF Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
Final Vol.:	0	853	22		377	533	0		0	0	0		131	0	311	
Saturation Flow Module:																
Sat/Lane:	1900	1900	1900		1900	1900	1900		1900	1900	1900		1900	1900	1900	
Adjustment:	1.00	0.87	0.87		0.81	0.85	1.00		1.00	1.00	1.00		0.64	1.00	0.74	
Lanes:	1.00	0.97	0.03		1.00	1.00	0.00		0.00	1.00	0.00		1.00	0.00	1.00	
Final Sat.:	1900	1612	42		1532	1613	0		0	1900	0		1209	0	1398	
Capacity Analysis Module:																
Vol/Sat:	0.00	0.53	0.53		0.25	0.33	0.00		0.00	0.00	0.00		0.11	0.00	0.22	
Crit Moves:		****			****								****			
Green/Cycle:	0.00	0.60	0.60		0.28	0.88	0.00		0.00	0.00	0.00		0.12	0.00	0.40	
Volume/Cap:	0.00	0.88	0.88		0.88	0.38	0.00		0.00	0.00	0.00		0.88	0.00	0.55	
Delay/Veh:	0.0	26.6	26.6		53.6	1.3	0.0		0.0	0.0	0.0		84.9	0.0	24.3	
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:	0.0	26.6	26.6		53.6	1.3	0.0		0.0	0.0	0.0		84.9	0.0	24.3	
DesignQueue:	0	22	1		16	4	0		0	0	0		7	0	11	

Cumulative PM Plus Project Fri Feb 20, 2004 11:03:47 Page 6-1

Patterson Sand and Gravel
Cumulative Plus "Maximum Practical Mining Rate" (No Haul Road)
"Highest" - PM Peak Hour

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

Intersection #2 SR 65 and SR 193 (Lincoln)

Approach:	North Bound				South Bound				East Bound				West Bound			
Movement:	L	-	T	- R	L	-	T	- R	L	-	T	- R	L	-	T	- R
HCM Ops Adjusted Lane Utilization Module:																
Lanes:	1	0	0	1 0	1	0	0	1 0	0	0	1!	0 0	0	1	0	0 1
Lane Group:	L		RT		RT	L	RT	RT	LTR	LTR	LTR		LT	LT	R	
#LnsInGrps:	1		1		1	1	1	1	1	1	1		1	1	1	
HCM Ops Input Saturation Adj Module:																
Lane Width:	12		12		12	12	12	12	12	12	12		12	12	12	
CrosswalkWid			8				8				8				8	
% Hev Veh:			3				6				0				4	
Grade:			0%				0%				0%				0%	
Parking/Hr:			No				No				No				No	
Bus Stp/Hr:			0				0				0				0	
Area Type:	< < < < < < < < < < < < < < < < CBD > > > > > > > > > > > > > > > >															
Cnft Ped/Hr:			0				0				0				0	
ExclusiveRT:			Include				Include				Include				Include	
% RT Prtct:			0				0				0				0	
HCM Ops f(lt) Adj Case Module:																
f(lt) Case:	xxxx	xxxx	xxxx		1	xxxx	xxxx		xxxx	xxxx	xxxx		5	xxxx	xxxx	
HCM Ops Saturation Adj Module:																
Ln Wid Adj:	xxxx	1.00	1.00		1.00	1.00	xxxxx		xxxx	xxxx	xxxxx		1.00	xxxx	1.00	
Hev Veh Adj:	xxxx	0.97	0.97		0.94	0.94	xxxxx		xxxx	xxxx	xxxxx		0.96	xxxx	0.96	
Grade Adj:	xxxx	1.00	1.00		1.00	1.00	xxxxx		xxxx	xxxx	xxxxx		1.00	xxxx	1.00	
Parking Adj:	xxxx	1.00	1.00		xxxx	1.00	xxxxx		xxxx	xxxx	xxxxx		xxxx	xxxx	1.00	
Bus Stp Adj:	xxxx	1.00	1.00		xxxx	1.00	xxxxx		xxxx	xxxx	xxxxx		xxxx	xxxx	1.00	
Area Adj:	xxxx	0.90	0.90		0.90	0.90	xxxxx		xxxx	xxxx	xxxxx		0.90	xxxx	0.90	
RT Adj:	xxxx	1.00	1.00		xxxx	xxxx	xxxxx		xxxx	xxxx	xxxxx		xxxx	xxxx	0.85	
LT Adj:	xxxx	xxxx	xxxxx		0.95	xxxx	xxxxx		xxxx	xxxx	xxxxx		0.74	xxxx	xxxxx	
PedBike Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
HCM Sat Adj:	1.00	0.87	0.87		0.81	0.85	1.00		1.00	1.00	1.00		0.64	1.00	0.74	
Usr Sat Adj:	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 Sat Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
Fnl Sat Adj:	1.00	0.87	0.87		0.81	0.85	1.00		1.00	1.00	1.00		0.64	1.00	0.74	
Delay Adjustment Factor Module:																
Coordinated:	< < < < < < < < < < < < < < < < No > > > > > > > > > > > > > > > >															
Signal Type:	< < < < < < < < < < < < < Actuated > > > > > > > > > > > > > >															
DelAdjFctr:	0.00	1.00	1.00		1.00	1.00	0.00		0.00	0.00	0.00		1.00	0.00	1.00	

Cumulative PM Plus Project Fri Feb 20, 2004 11:03:47 Page 6-2

Patterson Sand and Gravel
Cumulative Plus "Maximum Practical Mining Rate" (No Haul Road)
"Highest" - PM Peak Hour

Level Of Service Detailed Computation Report (Permitted Left Turn Sat Adj)
2000 HCM Operations Method
Base Volume Alternative

****
Intersection #2 SR 65 and SR 193 (Lincoln)
****

Approach:	North	South	East	West
Cycle Length, C:	xxxxxx	xxxxxx	xxxxxx	100
Actual Green Time Per Lane Group, G:	xxxxxx	xxxxxx	xxxxxx	8.26
Effective Green Time Per Lane Group, g:	xxxxxx	xxxxxx	xxxxxx	12.26
Opposing Effective Green Time, go:	xxxxxx	xxxxxx	xxxxxx	12.26
Number Of Opposing Lanes, No:	xxxxxx	xxxxxx	xxxxxx	1
Number Of Lanes In Lane Group, N:	xxxxxx	xxxxxx	xxxxxx	1
Adjusted Left-Turn Flow Rate, Vlt:	xxxxxx	xxxxxx	xxxxxx	131
Proportion of Left Turns in Lane Group, Plt:	xxxxxx	xxxxxx	xxxxxx	1.00
Proportion of Left Turns in Opp Flow, Plto:	xxxxxx	xxxxxx	xxxxxx	1.00
Left Turns Per Cycle, LTC:	xxxxxx	xxxxxx	xxxxxx	3.64
Adjusted Opposing Flow Rate, Vo:	xxxxxx	xxxxxx	xxxxxx	0
Opposing Flow Per Lane Per Cycle, Volc:	xxxxxx	xxxxxx	xxxxxx	0.00
Opposing Platoon Ratio, Rpo:	xxxxxx	xxxxxx	xxxxxx	1.00
Lost Time Per Phase, tl:	xxxxxx	xxxxxx	xxxxxx	0.00
Eff grn until arrival of left-turn car, gf:	xxxxxx	xxxxxx	xxxxxx	0.89
Opposing Queue Ratio, qro:	xxxxxx	xxxxxx	xxxxxx	0.88
Eff grn blocked by opposing queue, gq:	xxxxxx	xxxxxx	xxxxxx	0.00
Eff grn while left turns filter thru, gu:	xxxxxx	xxxxxx	xxxxxx	11.37
Max opposing cars arriving during gq-gf, n:	xxxxxx	xxxxxx	xxxxxx	0.00
Proportion of Opposing Thru & RT cars, ptho:	xxxxxx	xxxxxx	xxxxxx	0.00
Left-turn Saturation Factor, fs:	xxxxxx	xxxxxx	xxxxxx	xxxxxx
Proportion of Left Turns in Shared Lane, pl:	xxxxxx	xxxxxx	xxxxxx	1.00
Through-car Equivalents, el1:	xxxxxx	xxxxxx	xxxxxx	1.40
Single Lane Through-car Equivalents, el2:	xxxxxx	xxxxxx	xxxxxx	1.00
Minimum Left Turn Adjustment Factor, fmin:	xxxxxx	xxxxxx	xxxxxx	0.33
Single Lane Left Turn Adjustment Factor, fm:	xxxxxx	xxxxxx	xxxxxx	0.74
Left Turn Adjustment Factor, flt:	xxxxxx	xxxxxx	xxxxxx	0.74

****

Cumulative PM Plus Project Fri Feb 20, 2004 11:03:47 Page 7-1

Patterson Sand and Gravel
Cumulative Plus "Maximum Practical Mining Rate" (No Haul Road)
"Highest" - PM Peak Hour

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

****
Intersection #3 Old SR 65 and Haul Route
****
Average Delay (sec/veh): 1.3 Worst Case 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:	Uncontrolled			Uncontrolled			Stop Sign			Stop Sign		
Rights:	Include			Include			Include			Include		
Lanes:	0 0 1	0	1	1 0 1	0	0	0 0 0	0	0	0 0 1!	0	0
Volume Module:												
Base Vol:	0	637	82	36	451	0	0	0	0	36	0	17
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	637	82	36	451	0	0	0	0	36	0	17
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	0	637	82	36	451	0	0	0	0	36	0	17
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Final Vol.:	0	637	82	36	451	0	0	0	0	36	0	17
Critical Gap Module:												
Critical Gp:	xxxxx	xxxx	xxxxx	4.1	xxxx	xxxxx	xxxxx	xxxx	xxxxx	6.6	xxxx	6.4
FollowUpTim:	xxxxx	xxxx	xxxxx	2.2	xxxx	xxxxx	xxxxx	xxxx	xxxxx	3.7	xxxx	3.5
Capacity Module:												
Cnflict Vol:	xxxx	xxxx	xxxxx	719	xxxx	xxxxx	xxxx	xxxx	xxxxx	1160	xxxx	637
Potent Cap.:	xxxx	xxxx	xxxxx	869	xxxx	xxxxx	xxxx	xxxx	xxxxx	196	xxxx	440
Move Cap.:	xxxx	xxxx	xxxxx	869	xxxx	xxxxx	xxxx	xxxx	xxxxx	189	xxxx	440
Level Of Service Module:												
Stopped Del:	xxxxx	xxxx	xxxxx	9.3	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx
LOS by Move:	*	*	*	A	*	*	*	*	*	*	*	*
Movement:	LT -	LTR -	RT	LT -	LTR -	RT	LT -	LTR -	RT	LT -	LTR -	RT
Shared Cap.:	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	232	xxxxx
Shrd StpDel:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	25.1	xxxxx
Shared LOS:	*	*	*	*	*	*	*	*	*	*	D	*
ApproachDel:	xxxxxx			xxxxxx			xxxxxx			25.1		
ApproachLOS:	*			*			*			D		

Cumulative PM Plus Project Fri Feb 20, 2004 11:03:47 Page 8-1

Patterson Sand and Gravel
Cumulative Plus "Maximum Practical Mining Rate" (No Haul Road)
"Highest" - PM Peak Hour

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

```
*******************************************************************************
Intersection #3 Old SR 65 and Haul Route
*******************************************************************************
Approach:       North Bound      South Bound      East Bound       West Bound
Movement:     L  -  T  -  R    L  -  T  -  R    L  -  T  -  R    L  -  T  -  R
------------|----------------|----------------|----------------|----------------|
HevVeh:             5%               5%               0%              24%
Grade:              0%               0%               0%               0%
Peds/Hour:          0                0                0                0
Pedestrian Walk Speed: 4.00 feet/sec
LaneWidth:        12 feet          12 feet          12 feet          12 feet
Time Period: 0.25 hour
------------|----------------|----------------|----------------|----------------|
Upstream Signals:
Link Index:        #2
Dist(miles):       0.000
Speed (mph):        0.00
SignalIndex:       #2
Cycle Time:            0 secs
InitVolume:      0     0
Saturation:      0     0
ArrivalType:     0     0
G/C:          0.00  0.00
*** Computation 1: Time for Queue to Clear at Each Upstream Intersection
P:           0.000 0.000
gq1:          0.00  0.00
gq2:          0.00  0.00
gq:           0.00  0.00
*** Computation 2: Time Intersection Blocked Because of Upstream Platoons
alpha:            0.000
beta:             0.000
ta (secs):        0.000
F:                0.000
f:           0.000 0.000
vcmax:           0     0
vcmin:           0     0
tp:            0.0   0.0
p:                0.000
*** Computation 3: Platoon Event Periods
pdom/psubo:       0.000/0.000/Unconstrained
*** Computation 4: Conflicting Flows During Each Unblocked Period
InitCnflVol:   0 xxxxx xxxxx  719 xxxxx xxxxx    0     0     0 1160     0   637
UpstreamSat:   0 xxxxx xxxxx    0 xxxxx xxxxx    0     0     0    0     0     0
UpstreamAdj:1.00 x.xxx x.xxx 1.00 x.xxx x.xxx 1.00 1.000 1.000 1.00 1.000 1.000
ConflictVol:   0 xxxxx xxxxx  719 xxxxx xxxxx    0     0     0 1160     0   637
*** Computation 5: Capactiy for Subject Movement During Unblocked Period
InitPotCap:    0 xxxxx xxxxx  869 xxxxx xxxxx    0     0     0  196     0   440
UpstreamAdj:1.00 x.xxx x.xxx 1.00 x.xxx x.xxx 1.00 1.000 1.000 1.00 1.000 1.000
PotentCap:     0 xxxxx xxxxx  869 xxxxx xxxxx    0     0     0  196     0   440
```

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Patterson Sand and Gravel
Cumulative Plus "Maximum Practical Mining Rate" (No Haul Road)
"Highest" - PM Peak Hour

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

```
*******************************************************************************
Intersection #4 Riosa Rd and 11th St
*******************************************************************************
Cycle (sec):        100                Critical Vol./Cap. (X):          0.121
Loss Time (sec):      0 (Y+R =  4 sec) Average Delay (sec/veh):          7.5
Optimal Cycle:        0                Level Of Service:                    A
*******************************************************************************
Approach:       North Bound      South Bound      East Bound       West Bound
Movement:     L  -  T  -  R    L  -  T  -  R    L  -  T  -  R    L  -  T  -  R
------------|----------------||----------------||----------------||----------------|
Control:        Stop Sign        Stop Sign        Stop Sign        Stop Sign
Rights:           Include          Include          Include          Include
Min. Green:     0    0    0     0    0    0     0    0    0     0    0    0
Lanes:        0  0  1! 0  0    0  0  0  1  0    0  1  0  0  0    0  1  0  0  0
------------|----------------||----------------||----------------||----------------|
Volume Module:
Base Vol:       3    4    1     0    1    3    10   98    0     1   77    0
Growth Adj:  1.00 1.00 1.00  1.00 1.00 1.00  1.00 1.00 1.00  1.00 1.00 1.00
Initial Bse:    3    4    1     0    1    3    10   98    0     1   77    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:     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 Volume:     3    4    1     0    1    3    10   98    0     1   77    0
Reduct Vol:     0    0    0     0    0    0     0    0    0     0    0    0
Reduced Vol:    3    4    1     0    1    3    10   98    0     1   77    0
PCE Adj:     1.00 1.00 1.00  1.00 1.00 1.00  1.00 1.00 1.00  1.00 1.00 1.00
MLF Adj:     1.00 1.00 1.00  1.00 1.00 1.00  1.00 1.00 1.00  1.00 1.00 1.00
Final Vol.:     3    4    1     0    1    3    10   98    0     1   77    0
------------|----------------||----------------||----------------||----------------|
Saturation Flow Module:
Adjustment:  1.00 1.00 1.00  1.00 1.00 1.00  1.00 1.00 1.00  1.00 1.00 1.00
Lanes:       0.37 0.50 0.13  0.00 0.25 0.75  0.09 0.91 0.00  0.01 0.99 0.00
Final Sat.:   303  404  101     0  224  673    83  810    0    11  877    0
------------|----------------||----------------||----------------||----------------|
Capacity Analysis Module:
Vol/Sat:     0.01 0.01 0.01  xxxx 0.00 0.00  0.12 0.12  xxxx  0.09 0.09  xxxx
Crit Moves:  ****                 ****        ****             ****
Delay/Veh:    7.3  7.3  7.3   0.0  6.9  6.9   7.6  7.6   0.0   7.4  7.4   0.0
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:   7.3  7.3  7.3   0.0  6.9  6.9   7.6  7.6   0.0   7.4  7.4   0.0
LOS by Move:   A    A    A     *    A    A     A    A     *     A    A     *
ApproachDel:        7.3              6.9              7.6              7.4
Delay Adj:         1.00             1.00             1.00             1.00
ApprAdjDel:         7.3              6.9              7.6              7.4
LOS by Appr:         A                A                A                A
*******************************************************************************
```

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Patterson Sand and Gravel
Cumulative Plus "Maximum Practical Mining Rate" (No Haul Road)
"Highest" - PM Peak Hour

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

****
Intersection #4 Riosa Rd and 11th St
****

Approach:	North Bound	South Bound	East Bound	West Bound
Movement:	L - T - R	L - T - R	L - T - R	L - T - R
Time Period: 0.25 hour				
HevVeh:	0%	0%	0%	0%
Alpha Value: 0.01				
GroupType:	1	1	1	1
P[C1]:	0.7995	0.7953	0.9003	0.8676
P[C2]:	0.0034	0.0076	0.0860	0.1187
P[C3]:	0.1858	0.1848	0.0125	0.0120
P[C4]:	0.0112	0.0122	0.0012	0.0017
P[C5]:	0.0000	0.0001	0.0000	0.0000
Padj[C1]:	0.00409	0.00414	0.00115	0.00148
Padj[C2]:	0.00205	0.00202	-0.00071	-0.00103
Padj[C3]:	-0.00546	-0.00542	-0.00036	-0.00034
Padj[C4]:	-0.00067	-0.00073	-0.00007	-0.00010
Padj[C5]:	-0.00000	-0.00001	-0.00000	-0.00000
Lane:	L1	L1	L1	L1
LaneType:	LEFTTHRURITE	LEFTTHRURITE	LEFTTHRURITE	LEFTTHRURITE
HeadwayAdj:	0.000	-0.450	0.019	0.003
Volume:	8	4	108	78
Capacity:	809	897	892	888
DegOfUtil:	0.01	0.00	0.12	0.09
DepHeadway:	4.28	3.83	4.01	4.02
ServiceTime:	2.3	1.8	2.0	2.0
Delay:	7.3	6.9	7.6	7.4
Approach:	North Bound	South Bound	East Bound	West Bound
ApproachDel:	7.3	6.9	7.6	7.4
Delay Adj:	1.00	1.00	1.00	1.00
ApprAdjDel:	7.3	6.9	7.6	7.4
LOS by Appr:	A	A	A	A
OverallDel:		7.5		
OverallLOS:		A		

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Patterson Sand and Gravel
Cumulative Plus "Maximum Practical Mining Rate" (No Haul Road)
"Highest" - PM Peak Hour

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

****
Intersection #5 Riosa Rd and Karchner Rd
****
Average Delay (sec/veh): 4.3 Worst Case Level Of Service: A
****

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	- T	- R	L	- T	- R	L	- T	- R	L	- T	- R
Control:	Stop Sign			Stop Sign			Uncontrolled			Uncontrolled		
Rights:	Include			Include			Include			Include		
Lanes:	0 0	0 0	0	0 0	1! 0	0	0 1	0 0	0	0 0	0 1	0
Volume Module:												
Base Vol:	0	0	0	10	0	26	38	39	0	0	27	7
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	10	0	26	38	39	0	0	27	7
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	0	0	0	10	0	26	38	39	0	0	27	7
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Final Vol.:	0	0	0	10	0	26	38	39	0	0	27	7
Critical Gap Module:												
Critical Gp:	xxxxx	xxxx	xxxxx	6.7	xxxx	6.6	4.4	xxxx	xxxxx	xxxxx	xxxx	xxxxx
FollowUpTim:	xxxxx	xxxx	xxxxx	3.8	xxxx	3.6	2.4	xxxx	xxxxx	xxxxx	xxxx	xxxxx
Capacity Module:												
Cnflict Vol:	xxxx	xxxx	xxxxx	146	xxxx	31	34	xxxx	xxxxx	xxxx	xxxx	xxxxx
Potent Cap.:	xxxx	xxxx	xxxxx	775	xxxx	957	1436	xxxx	xxxxx	xxxx	xxxx	xxxxx
Move Cap.:	xxxx	xxxx	xxxxx	759	xxxx	957	1436	xxxx	xxxxx	xxxx	xxxx	xxxxx
Level Of Service Module:												
Stopped Del:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	7.6	xxxx	xxxxx	xxxxx	xxxx	xxxxx
LOS by Move:	*	*	*	*	*	*	A	*	*	*	*	*
Movement:	LT -	LTR -	RT	LT -	LTR -	RT	LT -	LTR -	RT	LT -	LTR -	RT
Shared Cap.:	xxxx	xxxx	xxxxx	xxxx	892	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx
Shrd StpDel:	xxxxx	xxxx	xxxxx	xxxxx	9.2	xxxxx	7.6	xxxx	xxxxx	xxxxx	xxxx	xxxxx
Shared LOS:	*	*	*	*	A	*	A	*	*	*	*	*
ApproachDel:	xxxxxx			9.2			xxxxxx			xxxxxx		
ApproachLOS:	*			A			*			*		

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Patterson Sand and Gravel
Cumulative Plus "Maximum Practical Mining Rate" (No Haul Road)
"Highest" - PM Peak Hour

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

****
Intersection #5 Riosa Rd and Karchner Rd
****

Approach:	North Bound	South Bound	East Bound	West Bound
Movement:	L - T - R	L - T - R	L - T - R	L - T - R
HevVeh:	0%	35%	26%	0%
Grade:	0%	0%	0%	0%
Peds/Hour:	0	0	0	0
Pedestrian Walk Speed: 4.00 feet/sec				
LaneWidth:	12 feet	12 feet	12 feet	12 feet
Time Period: 0.25 hour				

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