



EASTMAN AVENUE PRACTICAL ALTERNATIVE 3 NOON



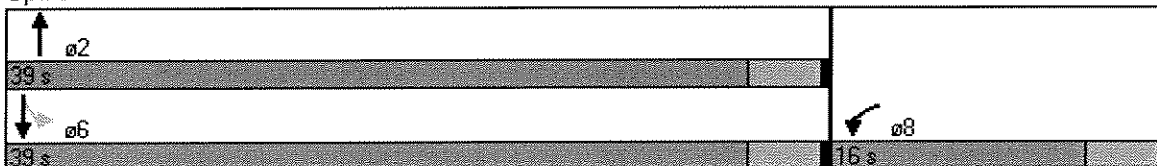
Lane Group	NBT	SBT	ø8
Lane Configurations	↑↑	↑↑	
Volume (vph)	1079	1107	
Turn Type			
Protected Phases	2	6	8
Permitted Phases			
Detector Phases	2	6	
Minimum Initial (s)	4.0	4.0	4.0
Minimum Split (s)	20.0	20.0	10.0
Total Split (s)	39.0	39.0	16.0
Total Split (%)	70.9%	70.9%	29%
Yellow Time (s)	3.5	3.5	3.5
All-Red Time (s)	0.5	0.5	0.5
Lead/Lag			
Lead-Lag Optimize?			
Recall Mode	C-Min	Min	None
Act Effect Green (s)	55.0	55.0	
Actuated g/C Ratio	1.00	1.00	
v/c Ratio	0.33	0.34	
Control Delay	0.2	0.3	
Queue Delay	0.0	0.0	
Total Delay	0.2	0.3	
LOS	A	A	
Approach Delay	0.2	0.3	
Approach LOS	A	A	

Intersection Summary

Cycle Length: 55
 Actuated Cycle Length: 55
 Offset: 11 (20%), Referenced to phase 2:NBT, Start of Green
 Natural Cycle: 40
 Control Type: Actuated-Coordinated
 Maximum v/c Ratio: 0.34
 Intersection Signal Delay: 0.3
 Intersection Capacity Utilization 33.9%
 Analysis Period (min) 15

Intersection LOS: A
 ICU Level of Service A

Splits and Phases: 2: Commerce & Eastman





Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	SBL	SBT	SBR
Lane Configurations											
Volume (vph)	337	192	143	177	155	281	98	1602	289	1553	139
Turn Type	pm+pt		Perm	pm+pt		Perm	pm+pt		pm+pt		pm+ov
Protected Phases	7	4		3	8		5	2	1	6	7
Permitted Phases	4		4	8		8	2		6		6
Detector Phases	7	4	4	3	8	8	5	2	1	6	7
Minimum Initial (s)	5.0	10.0	10.0	5.0	10.0	10.0	5.0	10.0	5.0	10.0	5.0
Minimum Split (s)	11.1	22.1	22.1	11.1	22.1	22.1	11.3	22.3	11.3	22.3	11.1
Total Split (s)	13.0	24.0	24.0	11.1	22.1	22.1	11.3	61.4	13.5	63.6	13.0
Total Split (%)	11.8%	21.8%	21.8%	10.1%	20.1%	20.1%	10.3%	55.8%	12.3%	57.8%	11.8%
Yellow Time (s)	3.6	3.6	3.6	3.6	3.6	3.6	4.3	4.3	4.3	4.3	3.6
All-Red Time (s)	2.5	2.5	2.5	2.5	2.5	2.5	2.0	2.0	2.0	2.0	2.5
Lead/Lag	Lag	Lead	Lead	Lag	Lead	Lead	Lag	Lead	Lag	Lead	Lag
Lead-Lag Optimize?											
Recall Mode	None	Max	Max	None	Max	Max	None	C-Max	None	C-Max	None
Act Effct Green (s)	29.0	20.0	20.0	25.2	18.1	18.1	64.7	57.4	69.1	59.6	72.6
Actuated g/C Ratio	0.26	0.18	0.18	0.23	0.16	0.16	0.59	0.52	0.63	0.54	0.66
v/c Ratio	0.62	0.62	0.41	0.86	0.55	0.89	0.58	0.75	1.42	0.88	0.14
Control Delay	41.6	50.3	17.6	74.7	49.7	59.0	41.5	22.9	240.4	33.4	1.3
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	41.6	50.3	17.6	74.7	49.7	59.0	41.5	22.9	240.4	33.4	1.3
LOS	D	D	B	E	D	E	D	C	F	C	A
Approach Delay		39.0			61.2			23.9		61.4	
Approach LOS		D			E			C		E	

Intersection Summary

Cycle Length: 110
 Actuated Cycle Length: 110
 Offset: 82 (75%), Referenced to phase 2:NBTL and 6:SBTL, Start of Green
 Natural Cycle: 90
 Control Type: Actuated-Coordinated
 Maximum v/c Ratio: 1.42
 Intersection Signal Delay: 45.0
 Intersection Capacity Utilization 82.8%
 Analysis Period (min) 15
 Intersection LOS: D
 ICU Level of Service E

Splits and Phases: 3: Wackerly & Eastman

61.4 s	13.5 s	24 s	11.1 s
63.6 s	11.3 s	22.1 s	13 s



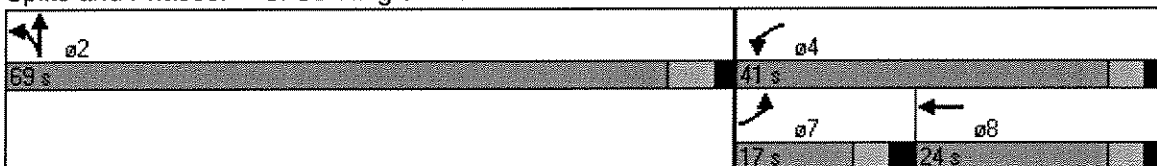
Lane Group	EBL	EBR	WBL	WBT	WBR	NBL	NBT	NBR
Lane Configurations	↖↖	↗↗	↙	↑	↗	↙	↑↑	↗
Volume (vph)	315	2115	259	155	249	183	1668	134
Turn Type	Prot	Free	Prot		Free	Split		Free
Protected Phases	7		4	8		2	2	
Permitted Phases		Free			Free			Free
Detector Phases	7		4	8		2	2	
Minimum Initial (s)	4.0		5.0	4.0		10.0	10.0	
Minimum Split (s)	10.0		17.0	22.0		35.3	35.3	
Total Split (s)	17.0	0.0	41.0	24.0	0.0	69.0	69.0	0.0
Total Split (%)	15.5%	0.0%	37.3%	21.8%	0.0%	62.7%	62.7%	0.0%
Yellow Time (s)	3.5		3.5	3.5		4.3	4.3	
All-Red Time (s)	2.5		2.5	2.5		2.0	2.0	
Lead/Lag	Lead			Lag				
Lead-Lag Optimize?	Yes			Yes				
Recall Mode	None		None	None		C-Max	C-Max	
Act Effect Green (s)	13.0	110.0	33.5	16.5	110.0	68.5	68.5	110.0
Actuated g/C Ratio	0.12	1.00	0.30	0.15	1.00	0.62	0.62	1.00
v/c Ratio	0.84	0.82	0.52	0.60	0.17	0.18	0.82	0.09
Control Delay	57.0	11.6	34.2	48.3	0.2	4.3	10.6	0.1
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	57.0	11.6	34.2	48.3	0.2	4.3	10.6	0.1
LOS	E	B	C	D	A	A	B	A
Approach Delay		17.5		24.7			9.3	
Approach LOS		B		C			A	

Intersection Summary

Cycle Length: 110
 Actuated Cycle Length: 110
 Offset: 96 (87%), Referenced to phase 2:NBTL, Start of Green
 Natural Cycle: 90
 Control Type: Actuated-Coordinated
 Maximum v/c Ratio: 0.84
 Intersection Signal Delay: 15.3
 Intersection Capacity Utilization 73.3%
 Analysis Period (min) 15

Intersection LOS: B
 ICU Level of Service D

Splits and Phases: 8: SB Ring & Eastman



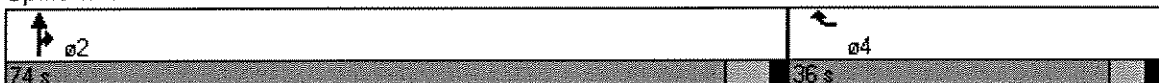


Lane Group	WBR	NBT	NBR
Lane Configurations	↑↑	↑↑↑	↑
Volume (vph)	542	1522	103
Turn Type	custom		Prot
Protected Phases	4	2	2
Permitted Phases	4		
Detector Phases	4	2	2
Minimum Initial (s)	4.0	4.0	4.0
Minimum Split (s)	22.0	22.1	22.1
Total Split (s)	36.0	74.0	74.0
Total Split (%)	32.7%	67.3%	67.3%
Yellow Time (s)	3.5	4.3	4.3
All-Red Time (s)	2.5	1.8	1.8
Lead/Lag			
Lead-Lag Optimize?			
Recall Mode	None	C-Min	C-Min
Act Effct Green (s)	28.7	73.3	73.3
Actuated g/C Ratio	0.26	0.67	0.67
v/c Ratio	0.77	0.49	0.10
Control Delay	37.1	6.2	1.0
Queue Delay	0.0	0.0	0.0
Total Delay	37.1	6.2	1.0
LOS	D	A	A
Approach Delay	37.1	5.9	
Approach LOS	D	A	

Intersection Summary

Cycle Length: 110
 Actuated Cycle Length: 110
 Offset: 18 (16%), Referenced to phase 2:NBT, Start of Green
 Natural Cycle: 45
 Control Type: Actuated-Coordinated
 Maximum v/c Ratio: 0.77
 Intersection Signal Delay: 13.7
 Intersection LOS: B
 Intersection Capacity Utilization 55.0%
 ICU Level of Service B
 Analysis Period (min) 15

Splits and Phases: 13: S. Mall Entrance & Eastman



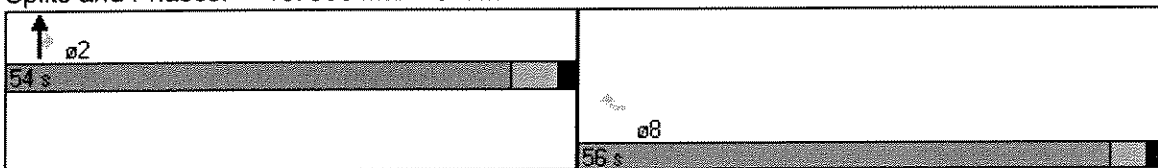


Lane Group	WBR	NBT	NBR
Lane Configurations	↑↑↑↑	↑↑↑	↑
Volume (vph)	547	1078	588
Turn Type	custom		Perm
Protected Phases		2	
Permitted Phases	8		2
Detector Phases	8	2	2
Minimum Initial (s)	4.0	4.0	4.0
Minimum Split (s)	22.0	22.2	22.2
Total Split (s)	56.0	54.0	54.0
Total Split (%)	50.9%	49.1%	49.1%
Yellow Time (s)	3.5	4.3	4.3
All-Red Time (s)	2.5	1.9	1.9
Lead/Lag			
Lead-Lag Optimize?			
Recall Mode	None	C-Max	C-Max
Act Effct Green (s)	21.5	80.5	80.5
Actuated g/C Ratio	0.20	0.73	0.73
v/c Ratio	0.77	0.37	0.46
Control Delay	36.4	4.8	1.7
Queue Delay	0.0	0.0	0.1
Total Delay	36.4	4.8	1.8
LOS	D	A	A
Approach Delay	36.4	4.0	
Approach LOS	D	A	

Intersection Summary

Cycle Length: 110
 Actuated Cycle Length: 110
 Offset: 12 (11%), Referenced to phase 2:NBT, Start of Green
 Natural Cycle: 45
 Control Type: Actuated-Coordinated
 Maximum v/c Ratio: 0.77
 Intersection Signal Delay: 12.0
 Intersection Capacity Utilization 44.6%
 Analysis Period (min) 15
 Intersection LOS: B
 ICU Level of Service A

Splits and Phases: 16: Joe Mann & Eastman



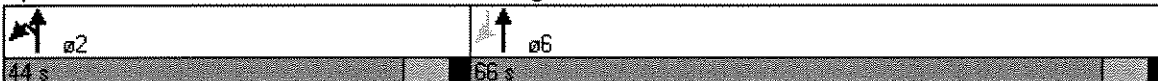


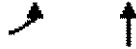
Lane Group	NBL	NBT	SBR
Lane Configurations	↔↔	↑↑	↔↔
Volume (vph)	854	1087	1253
Turn Type	Prot		custom
Protected Phases	2	2 6	
Permitted Phases			6
Detector Phases	2	2 6	6
Minimum Initial (s)	4.0		4.0
Minimum Split (s)	22.3		22.3
Total Split (s)	44.0	110.0	66.0
Total Split (%)	40.0%	100.0%	60.0%
Yellow Time (s)	4.3		4.3
All-Red Time (s)	2.0		2.0
Lead/Lag			
Lead-Lag Optimize?			
Recall Mode	C-Min		Min
Act Effct Green (s)	45.1	110.0	56.9
Actuated g/C Ratio	0.41	1.00	0.52
v/c Ratio	0.66	0.33	0.83
Control Delay	25.5	0.3	25.3
Queue Delay	0.0	0.0	0.0
Total Delay	25.5	0.3	25.3
LOS	C	A	C
Approach Delay		11.3	25.3
Approach LOS		B	C

Intersection Summary

Cycle Length: 110
 Actuated Cycle Length: 110
 Offset: 108 (98%), Referenced to phase 2:NBTL, Start of Green
 Natural Cycle: 55
 Control Type: Actuated-Coordinated
 Maximum v/c Ratio: 0.83
 Intersection Signal Delay: 16.8
 Intersection LOS: B
 Intersection Capacity Utilization 74.9%
 ICU Level of Service D
 Analysis Period (min) 15

Splits and Phases: 28: Eastman & SB Ring





Lane Group	EBL	NBT
Lane Configurations	↗↖	↕↗↖
Volume (vph)	273	1544
Turn Type		
Protected Phases	4	2
Permitted Phases		
Detector Phases	4	2
Minimum Initial (s)	4.0	4.0
Minimum Split (s)	22.0	22.1
Total Split (s)	30.0	80.0
Total Split (%)	27.3%	72.7%
Yellow Time (s)	3.5	4.3
All-Red Time (s)	2.5	1.8
Lead/Lag		
Lead-Lag Optimize?		
Recall Mode	None	C-Min
Act Effct Green (s)	16.4	85.6
Actuated g/C Ratio	0.15	0.78
v/c Ratio	0.58	0.52
Control Delay	44.5	3.2
Queue Delay	0.0	0.0
Total Delay	44.5	3.2
LOS	D	A
Approach Delay	44.5	3.2
Approach LOS	D	A

Intersection Summary

Cycle Length: 110
 Actuated Cycle Length: 110
 Offset: 6 (5%), Referenced to phase 2:NBTL, Start of Green
 Natural Cycle: 55
 Control Type: Actuated-Coordinated
 Maximum v/c Ratio: 0.58
 Intersection Signal Delay: 8.5
 Intersection Capacity Utilization 93.5%
 Analysis Period (min) 15

Intersection LOS: A
 ICU Level of Service F

Splits and Phases: 33: Fairground South & Eastman

 02	 04
00 s	30 s



Lane Group	WBL	SBL	SBT
Lane Configurations	↖↖	↗	↕↕
Volume (vph)	349	288	1815
Turn Type		Split	
Protected Phases	4	6	6
Permitted Phases			
Detector Phases	4	6	6
Minimum Initial (s)	4.0	4.0	4.0
Minimum Split (s)	22.0	22.2	22.2
Total Split (s)	22.0	89.0	89.0
Total Split (%)	19.8%	80.2%	80.2%
Yellow Time (s)	3.5	4.3	4.3
All-Red Time (s)	2.5	1.9	1.9
Lead/Lag			
Lead-Lag Optimize?			
Recall Mode	None	C-Min	C-Min
Act Effct Green (s)	18.0	85.0	85.0
Actuated g/C Ratio	0.16	0.77	0.77
v/c Ratio	0.68	0.23	0.73
Control Delay	49.4	4.3	9.0
Queue Delay	0.0	0.0	0.0
Total Delay	49.4	4.3	9.0
LOS	D	A	A
Approach Delay	49.4		8.4
Approach LOS	D		A

Intersection Summary

Cycle Length: 111
 Actuated Cycle Length: 111
 Offset: 68 (61%), Referenced to phase 6:SBTL, Start of Green
 Natural Cycle: 65
 Control Type: Actuated-Coordinated
 Maximum v/c Ratio: 0.73
 Intersection Signal Delay: 14.2
 Intersection Capacity Utilization 93.5%
 Analysis Period (min) 15

Intersection LOS: B
 ICU Level of Service F

Splits and Phases: 34: Fairground South & SB Ring

↖ ø6 89 s	↗ ø4 22 s
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Lane Group	EBT	EBR	WBL	NBR
Lane Configurations	↑↑↑	↑	↘	↗
Volume (vph)	1897	191	338	492
Turn Type		Perm	Prot	Over
Protected Phases	4		2	2
Permitted Phases		4		
Detector Phases	4	4	2	2
Minimum Initial (s)	4.0	4.0	4.0	4.0
Minimum Split (s)	22.0	22.0	22.0	22.0
Total Split (s)	68.0	68.0	42.0	42.0
Total Split (%)	61.8%	61.8%	38.2%	38.2%
Yellow Time (s)	3.5	3.5	3.5	3.5
All-Red Time (s)	2.5	2.5	2.5	2.5
Lead/Lag				
Lead-Lag Optimize?				
Recall Mode	C-Max	C-Max	Max	Max
Act Effct Green (s)	64.0	64.0	38.0	38.0
Actuated g/C Ratio	0.58	0.58	0.35	0.35
v/c Ratio	0.70	0.23	0.60	0.56
Control Delay	17.8	11.9	30.2	31.9
Queue Delay	0.0	0.0	0.0	0.0
Total Delay	17.8	11.9	30.2	31.9
LOS	B	B	C	C
Approach Delay	17.2		30.2	31.9
Approach LOS	B		C	C

Intersection Summary

Cycle Length: 110
 Actuated Cycle Length: 110
 Offset: 107 (97%), Referenced to phase 4:EBT, Start of Green
 Natural Cycle: 55
 Control Type: Actuated-Coordinated
 Maximum v/c Ratio: 0.70
 Intersection Signal Delay: 21.2
 Intersection Capacity Utilization 62.0%
 Analysis Period (min) 15

Intersection LOS: C
 ICU Level of Service B

Splits and Phases: 36: SB Ring & Airport

ø2	ø4
42 s	68 s