City of Dallas
Department of Street Services
Transportation – Traffic Congestion Management

Tyler – Polk Two Way Conversion Study

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Summary

City of Dallas, Department of Street Services Transportation staff was requested to study converting the Tyler – Polk one way paired streets into two way streets from Pembroke to Canty. Staff analyzed the proposed option of a roundabout on the north end and a traffic signal on the south end.

Converting Tyler and Polk to two way operations increases congestion minimally and all intersections will operate at acceptable levels of service after conversion

Converting the traffic signals from one way to two operations will require the replacement of existing traffic signals. The signals in this area of Oak Cliff date from the 1940's thru the 1960's and much of the underground conduit is either collapsed or undersized and will have to be replaced. State and Federal requirements for compliance with ADA will necessitate reconstruction of curb ramps at all corners of each intersection.

Existing Conditions

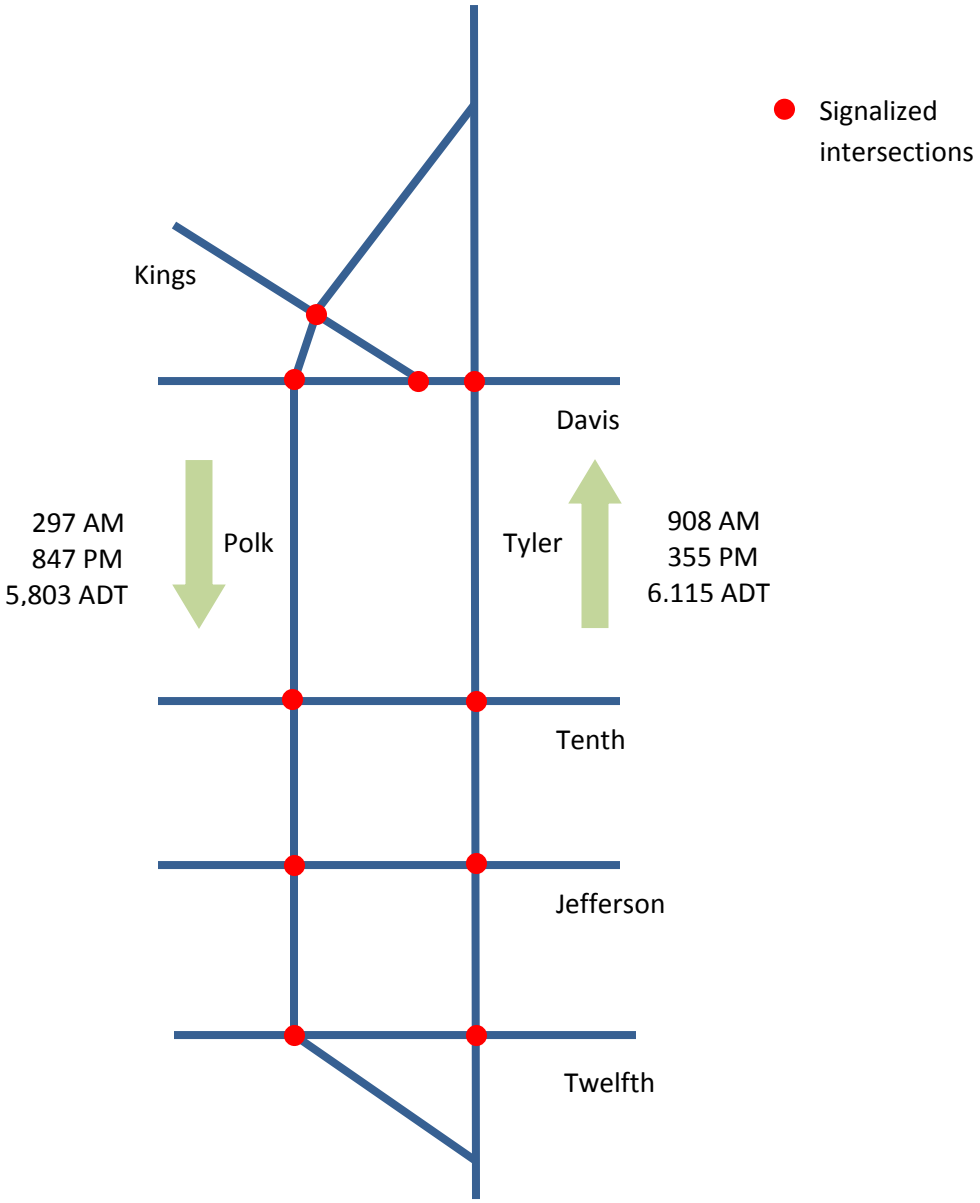
Currently both Tyler and Polk have 3 travel lanes plus a parking lane on the right. Tyler and Polk function as an important commuting corridor for Oak Cliff. During the AM rush hour, 908 vehicles travel northbound along Tyler. Tyler carries vehicles from primarily residential areas south of Twelfth Street, such as the Wynnewood neighborhood. Destinations include Downtown, West Dallas, Market Center area and the Medical District. 297 vehicles travel southbound along Polk.

During the PM rush hour, Polk carries 847 vehicles southbound while Tyler carries 355 vehicles northbound.

Total average daily traffic carried by Tyler and Polk combined: 11,918 vehicles per day.

The East-West streets have individual characters. Twelfth Street connects residential areas to the West, such as Winnetka Heights to I 35E and functions as a bypass around downtown Oak Cliff. Jefferson is the main street in downtown Oak Cliff and is part commercial corridor and part commuter corridor connected to downtown Dallas. Tenth Street carries light traffic during the weekdays, but heavier traffic on Sundays due to the many churches located along Tenth in this area. Davis, State Highway 180 is a commercial corridor, featuring the Bishop Arts District, and connects Kessler Park and Kidd Springs residential areas to I 35 E to the east.

Fig 1 - Existing Conditions



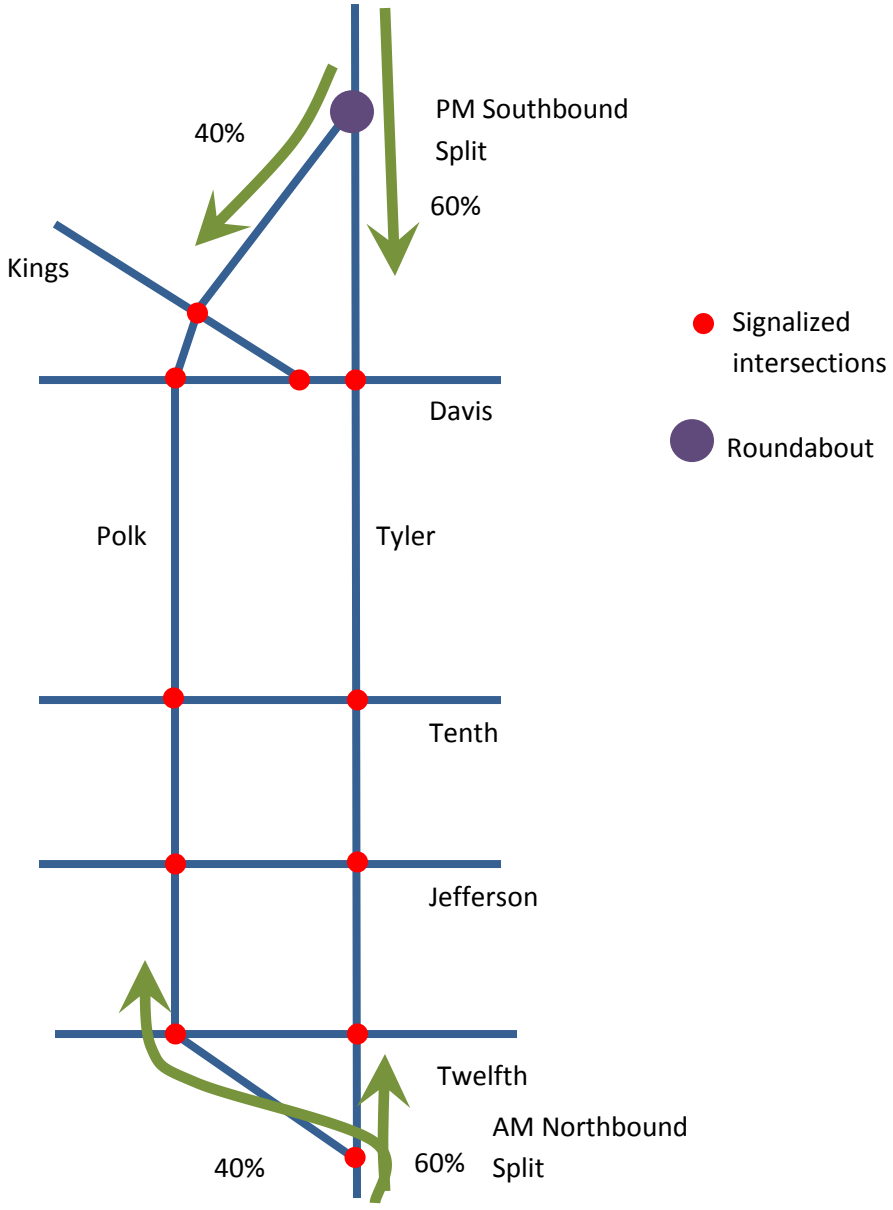
Two Way Conversion – General Considerations

In converting Tyler and Polk to two way operations, Tyler would be converted to 2 lanes in each direction while Polk would be one lane in each direction. Parking will not be restricted. For the purpose of the traffic analysis, it was assumed that there one lane in each direction of both Tyler and Polk Streets.

Two Way with Roundabouts at North End and Traffic Signal at South End

It was assumed that in both peak hours 60% of traffic will choose to use Tyler, while 40% will use Polk Street. See Figure 2.

Figure 2 – Traffic Split with Proposed Option



Results

Existing Conditions plus the two options were modeled using Trafficware Synchro 8 / SimTraffic 8. The results of the modeling are in Tables 1 and 2.

Table 1		Existing			Proposed Two-Way Option								
					No Peak Hour Parking on Tyler Both Directions			No Peak Hour Parking on Tyler Peak Direction			Parking Allowed on Tyler Both Directions		
AM Peak Traffic		LOS	Delay	ICU	LOS	Delay	ICU	LOS	Delay	ICU	LOS	Delay	ICU
Tyler	Davis	C	29.4	62.3%	B	11.3	65.6%	B	11.6	66.1%	C	25.0	78.7%
Tyler	Tenth	A	5.1	38.3%	A	6.7	32.7%	A	6.7	30.8%	A	6.9	45.8%
Tyler	Jefferson	B	11.3	70.2%	B	10.4	68.7%	B	10.4	65.4%	C	22.3	85.4%
Tyler	Twelfth	B	14.3	57.5%	B	15.4	77.1%	B	15.5	75.2%	C	26.5	74.9%
Tyler	Polk (South)	A	0	27.6%	A	8.6	61.2%						
Polk	Kings Hwy	B	12.3	21.7%	A	8.0	39.9%						
Polk	Davis	B	13.0	67.4%	C	21.6	87.4%						
Polk	Tenth	B	11.1	20.5%	A	5.0	38.9%	No Change			No Change		
Polk	Jefferson	B	14.1	48.7%	C	26.6	68.8%						
Polk	Twelfth	B	10.1	57.5%	B	17.1	72.1%						
Davis	Kings Hwy	A	8.8	61.1%	A	2.7	52.7%						

Table 2		Existing			Proposed Two-Way Option								
					No Peak Hour Parking on Tyler Both Directions			No Peak Hour Parking on Tyler Peak Direction			Parking Allowed on Tyler Both Directions		
PM Peak Traffic		LOS	Delay	ICU	LOS	Delay	ICU	LOS	Delay	ICU	LOS	Delay	ICU
Tyler	Davis	B	13.4	65.0%	B	17.4	79.2%	C	20.0	86.4%	C	20.5	80.2%
Tyler	Tenth	A	7.1	18.5%	A	4.5	31.6%	A	5.6	31.6%	A	5.8	42.8%
Tyler	Jefferson	B	14.9	57.2%	C	22.0	70.3%	C	23.4	77.5%	C	28.3	75.0%
Tyler	Twelfth	B	12.7	59.2%	B	19.3	81.1%	C	20.6	87.5%	C	33.6	97.8%
Tyler	Polk (South)	A	0	27.4%	B	15.6	45.0%						
Polk	Kings Hwy	A	5.3	35.6%	A	8.4	41.6%						
Polk	Davis	B	14.5	62.2%	C	20.6	76.7%						
Polk	Tenth	A	5.2	34.3%	A	8.8	32.5%	No Change			No Change		
Polk	Jefferson	B	13.6	66.4%	B	17.3	74.8%						
Polk	Twelfth	B	14.2	59.2%	B	16.8	78.7%						
Davis	Kings Hwy	A	3.2	58.1%	A	2.8	48.2%						

LOS – *Level of Service*
Delay – *Average delay in seconds per vehicle*.
ICU – *Intersection Capacity Utilization – the percentage of an intersection's capacity being used.*

The analysis indicates that with reoptimization of the traffic signal timing and by taking advantage of modern traffic signal equipment and vehicle detection, all intersections in the study area can operate at an acceptable LOS C or better during peak hours. This modern equipment eliminates nearly all of the unused green time that exists with the existing signal operation that operates on a fixed time basis regardless of traffic demands.

Conclusions

Tyler and Polk can be converted to two way traffic with only a small increase in congestion and delay during the AM and PM peak traffic periods. The vehicular demand during peak hours can still be accommodated while incorporating bicycle lanes, all-day parking, and slower traffic speeds resulting from the two-way conversion.

Appendices

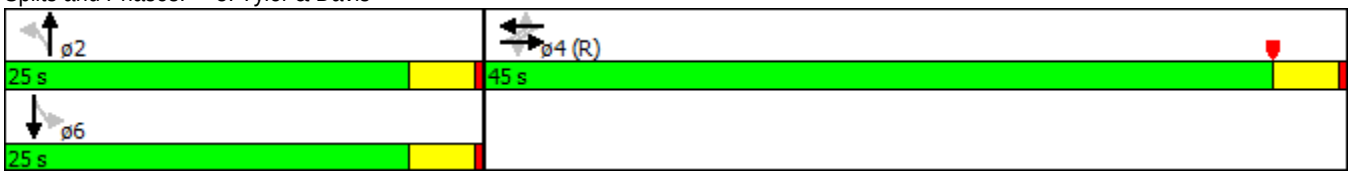
A – Volume Maps
B – Level of Service Maps
C – Synchro modeling results

Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Lane Configurations								
Volume (vph)	28	692	22	203	27	380	45	20
Turn Type	Perm	NA	Perm	NA	Perm	NA	Perm	NA
Protected Phases		4		4		2		6
Permitted Phases	4		4		2		6	
Detector Phase	4	4	4	4	2	2	6	6
Switch Phase								
Minimum Initial (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Minimum Split (s)	20.0	20.0	20.0	20.0	20.0	20.0	20.0	20.0
Total Split (s)	45.0	45.0	45.0	45.0	25.0	25.0	25.0	25.0
Total Split (%)	64.3%	64.3%	64.3%	64.3%	35.7%	35.7%	35.7%	35.7%
Yellow Time (s)	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5
All-Red Time (s)	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0		0.0
Total Lost Time (s)	4.0	4.0	4.0	4.0	4.0	4.0		4.0
Lead/Lag								
Lead-Lag Optimize?								
Recall Mode	C-Max	C-Max	C-Max	C-Max	None	None	None	None
Act Effct Green (s)	41.0	41.0	41.0	41.0	21.0	21.0		21.0
Actuated g/C Ratio	0.59	0.59	0.59	0.59	0.30	0.30		0.30
v/c Ratio	0.05	0.69	0.10	0.26	0.07	1.01		0.43
Control Delay	5.8	9.2	7.7	7.0	9.4	57.5		27.5
Queue Delay	0.0	0.5	0.0	0.0	0.0	0.0		0.0
Total Delay	5.8	9.7	7.7	7.0	9.4	57.5		27.5
LOS	A	A	A	A	A	E		C
Approach Delay		9.6		7.0		55.2		27.5
Approach LOS		A		A		E		C

Intersection Summary

Cycle Length: 70
Actuated Cycle Length: 70
Offset: 25 (36%), Referenced to phase 4:EBWB, Start of Yellow
Natural Cycle: 50
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 1.01
Intersection Signal Delay: 25.2 — Intersection LOS: C
Intersection Capacity Utilization 78.7% — ICU Level of Service D
Analysis Period (min) 15

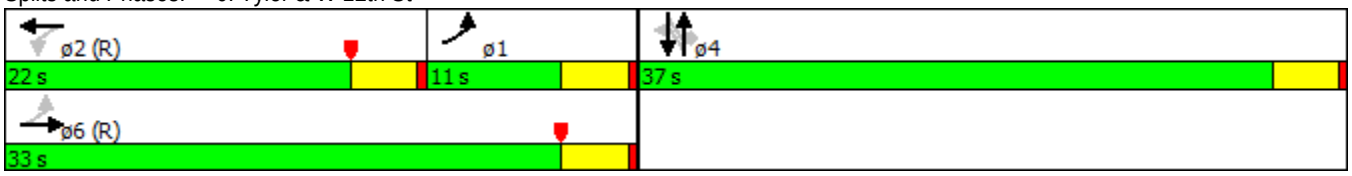
Splits and Phases: 3: Tyler & Davis



Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	NBR	SBL	SBT
Lane Configurations									
Volume (vph)	56	932	41	279	12	672	245	5	64
Turn Type	pm+pt	NA	Perm	NA	Perm	NA	Perm	Perm	NA
Protected Phases	1	6		2		4			4
Permitted Phases	6		2		4		4	4	
Detector Phase	1	6	2	2	4	4	4	4	4
Switch Phase									
Minimum Initial (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Minimum Split (s)	8.0	20.0	20.0	20.0	20.0	20.0	20.0	20.0	20.0
Total Split (s)	11.0	33.0	22.0	22.0	37.0	37.0	37.0	37.0	37.0
Total Split (%)	15.7%	47.1%	31.4%	31.4%	52.9%	52.9%	52.9%	52.9%	52.9%
Yellow Time (s)	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5
All-Red Time (s)	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0
Total Lost Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0		4.0
Lead/Lag	Lag		Lead	Lead					
Lead-Lag Optimize?	Yes		Yes	Yes					
Recall Mode	None	C-Max	C-Max	C-Max	None	None	None	None	None
Act Effct Green (s)	30.8	30.8	24.2	24.2	31.2	31.2	31.2		31.2
Actuated g/C Ratio	0.44	0.44	0.35	0.35	0.45	0.45	0.45		0.45
v/c Ratio	0.13	0.66	0.40	0.30	0.02	0.88	0.36		0.10
Control Delay	7.2	11.3	37.0	18.1	11.0	27.9	9.9		10.1
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0
Total Delay	7.2	11.3	37.0	18.1	11.0	27.9	9.9		10.1
LOS	A	B	D	B	B	C	A		B
Approach Delay		11.1		20.1		22.9			10.1
Approach LOS		B		C		C			B

Intersection Summary	
Cycle Length: 70	
Actuated Cycle Length: 70	
Offset: 2 (3%), Referenced to phase 2:WBTL and 6:EBTL, Start of Yellow	
Natural Cycle: 60	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 0.88	
Intersection Signal Delay: 17.1	Intersection LOS: B
Intersection Capacity Utilization 74.9%	ICU Level of Service D
Analysis Period (min) 15	

Splits and Phases: 6: Tyler & W 12th St

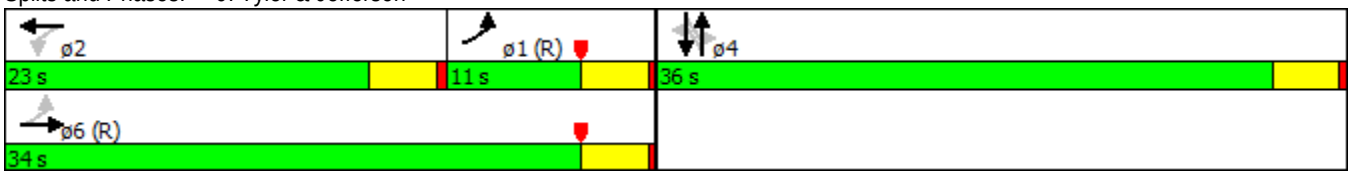


Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Lane Configurations								
Volume (vph)	39	861	32	190	10	548	15	30
Turn Type	pm+pt	NA	Perm	NA	Perm	NA	Perm	NA
Protected Phases	1	6		2		4		4
Permitted Phases	6		2		4		4	
Detector Phase	1	6	2	2	4	4	4	4
Switch Phase								
Minimum Initial (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Minimum Split (s)	8.0	20.0	20.0	20.0	20.0	20.0	20.0	20.0
Total Split (s)	11.0	34.0	23.0	23.0	36.0	36.0	36.0	36.0
Total Split (%)	15.7%	48.6%	32.9%	32.9%	51.4%	51.4%	51.4%	51.4%
Yellow Time (s)	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5
All-Red Time (s)	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5
Lost Time Adjust (s)		0.0		0.0	0.0	0.0		0.0
Total Lost Time (s)		4.0		4.0	4.0	4.0		4.0
Lead/Lag	Lag		Lead	Lead				
Lead-Lag Optimize?	Yes		Yes	Yes				
Recall Mode	C-Max	C-Max	None	None	None	None	None	None
Act Effct Green (s)		30.0		12.7	32.0	32.0		32.0
Actuated g/C Ratio		0.43		0.18	0.46	0.46		0.46
v/c Ratio		0.67		0.76	0.02	1.01		0.12
Control Delay		8.1		37.1	4.4	38.9		8.6
Queue Delay		0.0		0.0	0.0	0.0		0.0
Total Delay		8.1		37.1	4.4	38.9		8.6
LOS		A		D	A	D		A
Approach Delay		8.1		37.1		38.4		8.6
Approach LOS		A		D		D		A

Intersection Summary

Cycle Length: 70
Actuated Cycle Length: 70
Offset: 29 (41%), Referenced to phase 1:EBL and 6:EBTL, Start of Yellow
Natural Cycle: 60
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 1.01
Intersection Signal Delay: 23.8 Intersection LOS: C
Intersection Capacity Utilization 85.4% ICU Level of Service E
Analysis Period (min) 15

Splits and Phases: 9: Tyler & Jefferson



Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Lane Configurations								
Volume (vph)	15	64	5	16	4	572	2	42
Turn Type	Perm	NA	Perm	NA	Perm	NA	Perm	NA
Protected Phases		4		4		2		6
Permitted Phases	4		4		2		6	
Detector Phase	4	4	4	4	2	2	6	6
Switch Phase								
Minimum Initial (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Minimum Split (s)	20.0	20.0	20.0	20.0	20.0	20.0	20.0	20.0
Total Split (s)	20.0	20.0	20.0	20.0	50.0	50.0	50.0	50.0
Total Split (%)	28.6%	28.6%	28.6%	28.6%	71.4%	71.4%	71.4%	71.4%
Yellow Time (s)	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5
All-Red Time (s)	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5
Lost Time Adjust (s)		0.0		0.0	0.0	0.0		0.0
Total Lost Time (s)		4.0		4.0	4.0	4.0		4.0
Lead/Lag								
Lead-Lag Optimize?								
Recall Mode	None	None	None	None	C-Max	C-Max	C-Max	C-Max
Act Effct Green (s)		8.8		8.8	55.9	55.9		55.9
Actuated g/C Ratio		0.13		0.13	0.80	0.80		0.80
v/c Ratio		0.40		0.12	0.00	0.46		0.03
Control Delay		51.2		24.1	0.8	0.9		2.3
Queue Delay		0.0		0.0	0.0	0.0		0.0
Total Delay		51.2		24.1	0.8	0.9		2.3
LOS		D		C	A	A		A
Approach Delay		51.2		24.1		0.9		2.3
Approach LOS		D		C		A		A

Intersection Summary

Cycle Length: 70
Actuated Cycle Length: 70
Offset: 24 (34%), Referenced to phase 2:NBTL and 6:SBTL, Start of Yellow
Natural Cycle: 50
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 0.46
Intersection Signal Delay: 6.9 Intersection LOS: A
Intersection Capacity Utilization 45.8% ICU Level of Service A
Analysis Period (min) 15

Splits and Phases: 12: Tyler & Tenth

Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Lane Configurations								
Volume (vph)	4	67	3	10	36	401	9	187
Turn Type	Perm	NA	Perm	NA	Perm	NA	Perm	NA
Protected Phases		4		4		2		2
Permitted Phases	4		4		2		2	
Detector Phase	4	4	4	4	2	2	2	2
Switch Phase								
Minimum Initial (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Minimum Split (s)	20.0	20.0	20.0	20.0	20.0	20.0	20.0	20.0
Total Split (s)	22.0	22.0	22.0	22.0	48.0	48.0	48.0	48.0
Total Split (%)	31.4%	31.4%	31.4%	31.4%	68.6%	68.6%	68.6%	68.6%
Yellow Time (s)	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5
All-Red Time (s)	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5
Lost Time Adjust (s)		0.0		0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)		4.0		4.0	4.0	4.0	4.0	4.0
Lead/Lag								
Lead-Lag Optimize?								
Recall Mode	None	None	None	None	C-Max	C-Max	C-Max	C-Max
Act Effct Green (s)		8.4		8.4	56.3	56.3	56.3	56.3
Actuated g/C Ratio		0.12		0.12	0.80	0.80	0.80	0.80
v/c Ratio		0.37		0.08	0.04	0.29	0.01	0.14
Control Delay		31.3		12.1	1.8	1.9	1.8	1.8
Queue Delay		0.0		0.0	0.0	0.0	0.0	0.0
Total Delay		31.3		12.1	1.8	1.9	1.8	1.8
LOS		C		B	A	A	A	A
Approach Delay		31.3		12.1		1.9		1.8
Approach LOS		C		B		A		A

Intersection Summary	
Cycle Length: 70	
Actuated Cycle Length: 70	
Offset: 30 (43%), Referenced to phase 2:NBSB, Start of Yellow	
Natural Cycle: 40	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 0.37	
Intersection Signal Delay: 5.1	Intersection LOS: A
Intersection Capacity Utilization 38.9%	ICU Level of Service A
Analysis Period (min) 15	

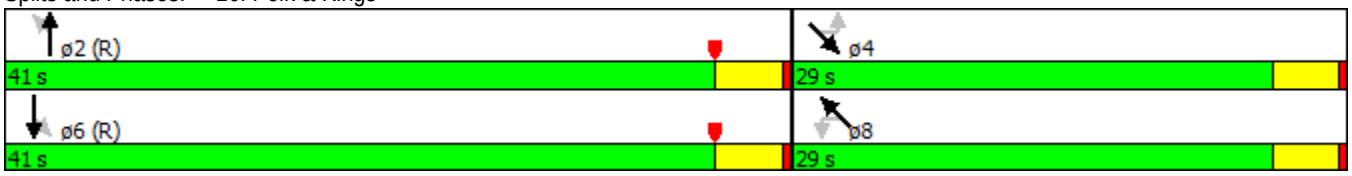
Splits and Phases: 13: Polk & Tenth

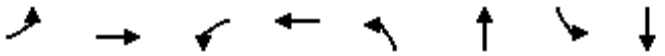
Lane Group	NBL	NBT	SBL	SBT	SEL	SET	NWL	NWT
Lane Configurations								
Volume (vph)	5	470	8	160	20	15	7	78
Turn Type	Perm	NA	Perm	NA	Perm	NA	Perm	NA
Protected Phases		2		6		4		8
Permitted Phases	2		6		4		8	
Detector Phase	2	2	6	6	4	4	8	8
Switch Phase								
Minimum Initial (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Minimum Split (s)	20.0	20.0	20.0	20.0	20.0	20.0	20.0	20.0
Total Split (s)	41.0	41.0	41.0	41.0	29.0	29.0	29.0	29.0
Total Split (%)	58.6%	58.6%	58.6%	58.6%	41.4%	41.4%	41.4%	41.4%
Yellow Time (s)	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5
All-Red Time (s)	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5
Lost Time Adjust (s)	0.0	0.0	0.0	0.0		0.0		0.0
Total Lost Time (s)	4.0	4.0	4.0	4.0		4.0		4.0
Lead/Lag								
Lead-Lag Optimize?								
Recall Mode	C-Max	C-Max	C-Max	C-Max	None	None	None	None
Act Effct Green (s)	55.8	55.8	55.8	55.8		8.9		8.9
Actuated g/C Ratio	0.80	0.80	0.80	0.80		0.13		0.13
v/c Ratio	0.01	0.34	0.01	0.12		0.25		0.41
Control Delay	2.6	2.7	2.8	2.7		23.2		37.4
Queue Delay	0.0	0.5	0.0	0.0		0.0		0.0
Total Delay	2.6	3.1	2.8	2.7		23.2		37.4
LOS	A	A	A	A		C		D
Approach Delay		3.1		2.7		23.2		37.4
Approach LOS		A		A		C		D

Intersection Summary

Cycle Length: 70
Actuated Cycle Length: 70
Offset: 52 (74%), Referenced to phase 2:NBTL and 6:SBTL, Start of Yellow
Natural Cycle: 40
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 0.41
Intersection Signal Delay: 8.1 Intersection LOS: A
Intersection Capacity Utilization 39.9% ICU Level of Service A
Analysis Period (min) 15

Splits and Phases: 16: Polk & Kings





Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Lane Configurations								
Volume (vph)	120	807	5	218	40	353	5	163
Turn Type	Perm	NA	Perm	NA	Perm	NA	Perm	NA
Protected Phases		4		4		2		2
Permitted Phases	4		4		2		2	
Detector Phase	4	4	4	4	2	2	2	2
Switch Phase								
Minimum Initial (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Minimum Split (s)	20.0	20.0	20.0	20.0	20.0	20.0	20.0	20.0
Total Split (s)	46.0	46.0	46.0	46.0	24.0	24.0	24.0	24.0
Total Split (%)	65.7%	65.7%	65.7%	65.7%	34.3%	34.3%	34.3%	34.3%
Yellow Time (s)	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5
All-Red Time (s)	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lead/Lag								
Lead-Lag Optimize?								
Recall Mode	C-Max	C-Max	C-Max	C-Max	None	None	None	None
Act Effct Green (s)	44.0	44.0	44.0	44.0	18.0	18.0	18.0	18.0
Actuated g/C Ratio	0.63	0.63	0.63	0.63	0.26	0.26	0.26	0.26
v/c Ratio	0.18	0.86	0.04	0.21	0.16	0.80	0.04	0.39
Control Delay	6.9	21.1	5.0	4.8	20.6	37.8	19.0	22.6
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.6
Total Delay	6.9	21.1	5.0	4.8	20.6	37.8	19.0	24.3
LOS	A	C	A	A	C	D	B	C
Approach Delay		19.4		4.8		36.1		24.1
Approach LOS		B		A		D		C

Intersection Summary	
Cycle Length: 70	
Actuated Cycle Length: 70	
Offset: 25 (36%), Referenced to phase 4:EBWB, Start of Yellow	
Natural Cycle: 60	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 0.86	
Intersection Signal Delay: 21.6	Intersection LOS: C
Intersection Capacity Utilization 87.4%	ICU Level of Service E
Analysis Period (min) 15	

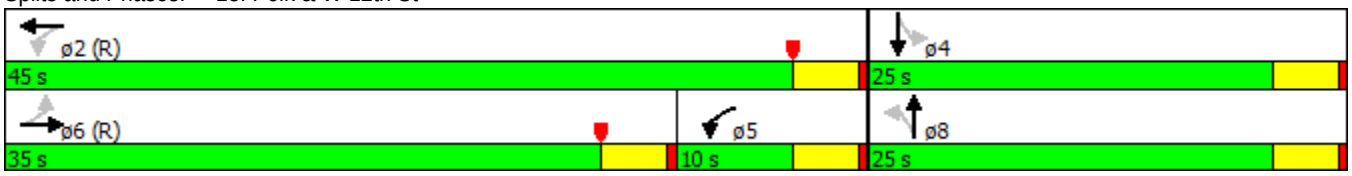
Splits and Phases: 17: Polk & Davis

Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Lane Configurations								
Volume (vph)	152	932	5	273	104	207	65	148
Turn Type	Perm	NA	pm+pt	NA	Perm	NA	Perm	NA
Protected Phases		6	5	2		8		4
Permitted Phases	6		2		8		4	
Detector Phase	6	6	5	2	8	8	4	4
Switch Phase								
Minimum Initial (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Minimum Split (s)	20.0	20.0	8.0	20.0	20.0	20.0	20.0	20.0
Total Split (s)	35.0	35.0	10.0	45.0	25.0	25.0	25.0	25.0
Total Split (%)	50.0%	50.0%	14.3%	64.3%	35.7%	35.7%	35.7%	35.7%
Yellow Time (s)	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5
All-Red Time (s)	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5
Lost Time Adjust (s)		0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)		4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lead/Lag	Lead	Lead	Lag					
Lead-Lag Optimize?	Yes	Yes	Yes					
Recall Mode	C-Max	C-Max	None	C-Max	None	None	None	None
Act Effct Green (s)		46.0	48.0	48.0	14.0	14.0	14.0	14.0
Actuated g/C Ratio		0.66	0.69	0.69	0.20	0.20	0.20	0.20
v/c Ratio		0.68	0.02	0.13	0.65	0.61	0.44	0.56
Control Delay		12.7	0.8	1.0	56.3	46.8	26.4	22.1
Queue Delay		0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay		12.7	0.8	1.0	56.3	46.8	26.4	22.1
LOS		B	A	A	E	D	C	C
Approach Delay		12.7		1.0		50.0		23.2
Approach LOS		B		A		D		C

Intersection Summary

Cycle Length: 70
Actuated Cycle Length: 70
Offset: 4 (6%), Referenced to phase 2:WBTL and 6:EBTL, Start of Yellow
Natural Cycle: 60
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 0.68
Intersection Signal Delay: 18.0 Intersection LOS: B
Intersection Capacity Utilization 72.1% ICU Level of Service C
Analysis Period (min) 15

Splits and Phases: 18: Polk & W 12th St

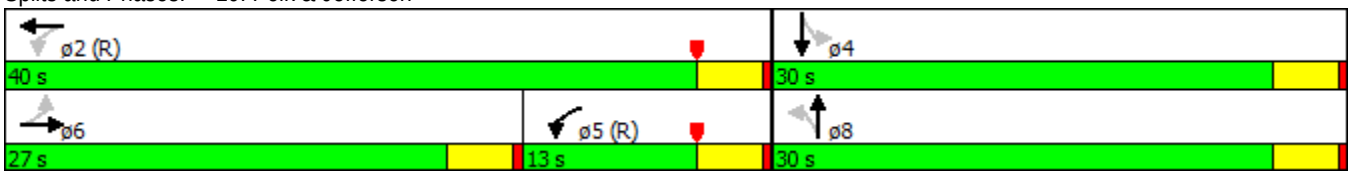


Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Lane Configurations								
Volume (vph)	158	848	5	181	114	262	52	118
Turn Type	Perm	NA	pm+pt	NA	Perm	NA	Perm	NA
Protected Phases		6	5	2		8		4
Permitted Phases	6		2		8		4	
Detector Phase	6	6	5	2	8	8	4	4
Switch Phase								
Minimum Initial (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Minimum Split (s)	20.0	20.0	20.0	20.0	20.0	20.0	20.0	20.0
Total Split (s)	27.0	27.0	13.0	40.0	30.0	30.0	30.0	30.0
Total Split (%)	38.6%	38.6%	18.6%	57.1%	42.9%	42.9%	42.9%	42.9%
Yellow Time (s)	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5
All-Red Time (s)	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5
Lost Time Adjust (s)		0.0		0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)		4.0		4.0	4.0	4.0	4.0	4.0
Lead/Lag	Lead	Lead	Lag					
Lead-Lag Optimize?	Yes	Yes	Yes					
Recall Mode	None	None	C-Max	C-Max	None	None	None	None
Act Effct Green (s)		32.3		45.3	16.7	16.7	16.7	16.7
Actuated g/C Ratio		0.46		0.65	0.24	0.24	0.24	0.24
v/c Ratio		0.90		0.10	0.45	0.66	0.36	0.35
Control Delay		30.2		0.9	22.3	25.5	36.4	28.9
Queue Delay		0.0		0.0	0.0	0.0	0.0	0.0
Total Delay		30.2		0.9	22.3	25.5	36.4	28.9
LOS		C		A	C	C	D	C
Approach Delay		30.2		0.9		24.6		30.9
Approach LOS		C		A		C		C

Intersection Summary

Cycle Length: 70
Actuated Cycle Length: 70
Offset: 36 (51%), Referenced to phase 2:WBTL and 5:WBL, Start of Yellow
Natural Cycle: 80
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 0.90
Intersection Signal Delay: 26.1 Intersection LOS: C
Intersection Capacity Utilization 68.8% ICU Level of Service C
Analysis Period (min) 15

Splits and Phases: 19: Polk & Jefferson



Lane Group	SET	NWT	NWR	SWL	ø5
Lane Configurations					
Volume (vph)	282	316	935	121	
Turn Type	NA	NA	pm+ov	Prot	
Protected Phases	2	6	4	4	5
Permitted Phases	2		6		
Detector Phase	2	6	4	4	
Switch Phase					
Minimum Initial (s)	4.0	4.0	4.0	4.0	4.0
Minimum Split (s)	20.0	20.0	20.0	20.0	20.0
Total Split (s)	50.0	30.0	20.0	20.0	20.0
Total Split (%)	71.4%	42.9%	28.6%	28.6%	29%
Yellow Time (s)	3.5	3.5	3.5	3.5	3.5
All-Red Time (s)	0.5	0.5	0.5	0.5	0.5
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	
Total Lost Time (s)	4.0	4.0	4.0	4.0	
Lead/Lag		Lag			Lead
Lead-Lag Optimize?		Yes			Yes
Recall Mode	C-Max	Max	Max	Max	Max
Act Effct Green (s)	46.0	26.0	46.0	16.0	
Actuated g/C Ratio	0.66	0.37	0.66	0.23	
v/c Ratio	0.25	0.50	0.73	0.17	
Control Delay	7.4	20.0	4.1	25.6	
Queue Delay	0.0	0.0	0.0	0.0	
Total Delay	7.4	20.0	4.1	25.6	
LOS	A	C	A	C	
Approach Delay	7.4	8.1		25.6	
Approach LOS	A	A		C	

Intersection Summary

Cycle Length: 70
Actuated Cycle Length: 70
Offset: 0 (0%), Referenced to phase 2:SETL, Start of Green
Natural Cycle: 60
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 0.73
Intersection Signal Delay: 9.3 — Intersection LOS: A
Intersection Capacity Utilization 61.2% — ICU Level of Service B
Analysis Period (min) 15

Splits and Phases: 22: Tyler & Polk

Lane Group	EBL	EBT	WBL	WBT	SEL	SET	NWL	NWT
Lane Configurations								
Volume (vph)	50	718	10	205	5	10	20	25
Turn Type	Perm	NA	Perm	NA	Perm	NA	Perm	NA
Protected Phases		2		2		4		4
Permitted Phases	2		2		4		4	
Detector Phase	2	2	2	2	4	4	4	4
Switch Phase								
Minimum Initial (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Minimum Split (s)	20.0	20.0	20.0	20.0	20.0	20.0	20.0	20.0
Total Split (s)	47.0	47.0	47.0	47.0	23.0	23.0	23.0	23.0
Total Split (%)	67.1%	67.1%	67.1%	67.1%	32.9%	32.9%	32.9%	32.9%
Yellow Time (s)	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5
All-Red Time (s)	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5
Lost Time Adjust (s)	0.0	0.0	0.0	0.0		0.0		0.0
Total Lost Time (s)	4.0	4.0	4.0	4.0		4.0		4.0
Lead/Lag								
Lead-Lag Optimize?								
Recall Mode	C-Max	C-Max	C-Max	C-Max	None	None	None	None
Act Effct Green (s)	60.0	60.0	60.0	60.0		7.6		7.6
Actuated g/C Ratio	0.86	0.86	0.86	0.86		0.11		0.11
v/c Ratio	0.06	0.53	0.02	0.16		0.11		0.31
Control Delay	1.0	1.3	1.5	1.2		29.3		23.7
Queue Delay	0.0	0.1	0.0	0.2		0.0		0.0
Total Delay	1.0	1.4	1.5	1.4		29.3		23.7
LOS	A	A	A	A		C		C
Approach Delay		1.4		1.4		29.3		23.7
Approach LOS		A		A		C		C

Intersection Summary

Cycle Length: 70
Actuated Cycle Length: 70
Offset: 30 (43%), Referenced to phase 2:EBWB, Start of Yellow
Natural Cycle: 60
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 0.53
Intersection Signal Delay: 2.9 — Intersection LOS: A
Intersection Capacity Utilization 52.7% — ICU Level of Service A
Analysis Period (min) 15

Splits and Phases: 24: Kings & Davis

Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Lane Configurations								
Volume (vph)	13	219	142	721	6	248	80	290
Turn Type	Perm	NA	Perm	NA	Perm	NA	Perm	NA
Protected Phases		4		4		2		2
Permitted Phases	4		4		2		2	
Detector Phase	4	4	4	4	2	2	2	2
Switch Phase								
Minimum Initial (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Minimum Split (s)	20.0	20.0	20.0	20.0	20.0	20.0	20.0	20.0
Total Split (s)	46.0	46.0	46.0	46.0	24.0	24.0	24.0	24.0
Total Split (%)	65.7%	65.7%	65.7%	65.7%	34.3%	34.3%	34.3%	34.3%
Yellow Time (s)	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5
All-Red Time (s)	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lead/Lag								
Lead-Lag Optimize?								
Recall Mode	C-Max	C-Max	C-Max	C-Max	None	None	None	None
Act Effct Green (s)	44.9	44.9	44.9	44.9	17.1	17.1	17.1	17.1
Actuated g/C Ratio	0.64	0.64	0.64	0.64	0.24	0.24	0.24	0.24
v/c Ratio	0.06	0.20	0.21	0.75	0.05	0.69	0.58	0.71
Control Delay	4.5	4.3	6.9	14.9	23.5	37.8	38.5	32.8
Queue Delay	0.0	0.5	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	4.5	4.8	6.9	14.9	23.5	37.8	38.5	32.8
LOS	A	A	A	B	C	D	D	C
Approach Delay		4.8		13.7		37.4		34.0
Approach LOS		A		B		D		C

Intersection Summary	
Cycle Length: 70	
Actuated Cycle Length: 70	
Offset: 3 (4%), Referenced to phase 4:EBWB, Start of Yellow	
Natural Cycle: 60	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 0.75	
Intersection Signal Delay: 20.5	Intersection LOS: C
Intersection Capacity Utilization 80.2%	ICU Level of Service D
Analysis Period (min) 15	

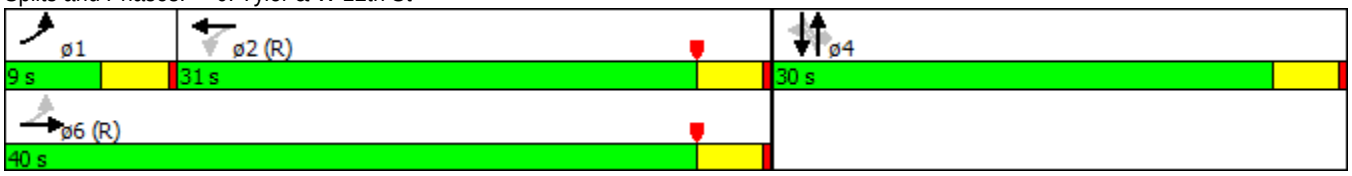
Splits and Phases: 3: Tyler & Davis

Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	NBR	SBL	SBT
Lane Configurations									
Volume (vph)	9	311	210	1033	6	211	44	68	403
Turn Type	pm+pt	NA	Perm	NA	Perm	NA	Perm	Perm	NA
Protected Phases	1	6		2		4			4
Permitted Phases	6		2		4		4	4	
Detector Phase	1	6	2	2	4	4	4	4	4
Switch Phase									
Minimum Initial (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Minimum Split (s)	8.0	20.0	20.0	20.0	20.0	20.0	20.0	20.0	20.0
Total Split (s)	9.0	40.0	31.0	31.0	30.0	30.0	30.0	30.0	30.0
Total Split (%)	12.9%	57.1%	44.3%	44.3%	42.9%	42.9%	42.9%	42.9%	42.9%
Yellow Time (s)	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5
All-Red Time (s)	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5
Lost Time Adjust (s)	0.0	0.0		0.0	0.0	0.0	0.0		0.0
Total Lost Time (s)	4.0	4.0		4.0	4.0	4.0	4.0		4.0
Lead/Lag	Lead		Lag	Lag					
Lead-Lag Optimize?	Yes		Yes	Yes					
Recall Mode	None	C-Max	C-Max	C-Max	None	None	None	None	None
Act Effct Green (s)	37.1	37.1		35.3	24.9	24.9	24.9		24.9
Actuated g/C Ratio	0.53	0.53		0.50	0.36	0.36	0.36		0.36
v/c Ratio	0.04	0.19		1.00	0.03	0.35	0.08		0.91
Control Delay	5.3	5.0		44.5	17.0	19.1	3.6		32.8
Queue Delay	0.0	0.0		0.0	0.0	0.0	0.0		0.0
Total Delay	5.3	5.0		44.5	17.0	19.1	3.6		32.8
LOS	A	A		D	B	B	A		C
Approach Delay		5.0		44.5		16.4			32.8
Approach LOS		A		D		B			C

Intersection Summary

Cycle Length: 70
Actuated Cycle Length: 70
Offset: 12 (17%), Referenced to phase 2:WBTL and 6:EBTL, Start of Yellow
Natural Cycle: 90
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 1.00
Intersection Signal Delay: 33.6 Intersection LOS: C
Intersection Capacity Utilization 97.8% ICU Level of Service F
Analysis Period (min) 15

Splits and Phases: 6: Tyler & W 12th St

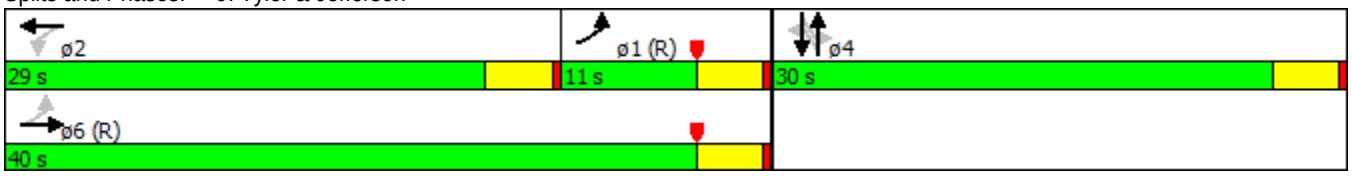


Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Lane Configurations								
Volume (vph)	6	299	170	773	7	244	69	331
Turn Type	pm+pt	NA	Perm	NA	Perm	NA	Perm	NA
Protected Phases	1	6		2		4		4
Permitted Phases	6		2		4		4	
Detector Phase	1	6	2	2	4	4	4	4
Switch Phase								
Minimum Initial (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Minimum Split (s)	8.0	20.0	20.0	20.0	20.0	20.0	20.0	20.0
Total Split (s)	11.0	40.0	29.0	29.0	30.0	30.0	30.0	30.0
Total Split (%)	15.7%	57.1%	41.4%	41.4%	42.9%	42.9%	42.9%	42.9%
Yellow Time (s)	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5
All-Red Time (s)	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5
Lost Time Adjust (s)		0.0		0.0	0.0	0.0		0.0
Total Lost Time (s)		4.0		4.0	4.0	4.0		4.0
Lead/Lag	Lag		Lead	Lead				
Lead-Lag Optimize?	Yes		Yes	Yes				
Recall Mode	C-Max	C-Max	None	None	None	None	None	None
Act Effct Green (s)		38.4		27.4	23.6	23.6		23.6
Actuated g/C Ratio		0.55		0.39	0.34	0.34		0.34
v/c Ratio		0.19		0.97	0.04	0.50		0.89
Control Delay		1.2		45.9	10.1	16.2		47.1
Queue Delay		0.0		0.0	0.0	0.0		0.0
Total Delay		1.2		45.9	10.1	16.2		47.1
LOS		A		D	B	B		D
Approach Delay		1.2		45.9		16.1		47.1
Approach LOS		A		D		B		D

Intersection Summary

Cycle Length: 70
Actuated Cycle Length: 70
Offset: 36 (51%), Referenced to phase 1:EBL and 6:EBTL, Start of Yellow
Natural Cycle: 70
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 0.97
Intersection Signal Delay: 34.9 Intersection LOS: C
Intersection Capacity Utilization 88.3% ICU Level of Service E
Analysis Period (min) 15

Splits and Phases: 9: Tyler & Jefferson



Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Lane Configurations								
Volume (vph)	1	27	10	54	6	282	8	415
Turn Type	Perm	NA	Perm	NA	Perm	NA	Perm	NA
Protected Phases		4		4		2		2
Permitted Phases	4		4		2		2	
Detector Phase	4	4	4	4	2	2	2	2
Switch Phase								
Minimum Initial (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Minimum Split (s)	20.0	20.0	20.0	20.0	20.0	20.0	20.0	20.0
Total Split (s)	22.0	22.0	22.0	22.0	48.0	48.0	48.0	48.0
Total Split (%)	31.4%	31.4%	31.4%	31.4%	68.6%	68.6%	68.6%	68.6%
Yellow Time (s)	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5
All-Red Time (s)	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5
Lost Time Adjust (s)		0.0		0.0	0.0	0.0		0.0
Total Lost Time (s)		4.0		4.0	4.0	4.0		4.0
Lead/Lag								
Lead-Lag Optimize?								
Recall Mode	None	None	None	None	C-Max	C-Max	C-Max	C-Max
Act Effct Green (s)		8.2		8.2	56.5	56.5		56.5
Actuated g/C Ratio		0.12		0.12	0.81	0.81		0.81
v/c Ratio		0.14		0.36	0.01	0.22		0.31
Control Delay		21.5		31.1	4.0	3.1		2.7
Queue Delay		0.0		0.0	0.0	0.0		0.0
Total Delay		21.5		31.1	4.0	3.1		2.7
LOS		C		C	A	A		A
Approach Delay		21.5		31.1		3.1		2.7
Approach LOS		C		C		A		A

Intersection Summary

Cycle Length: 70
Actuated Cycle Length: 70
Offset: 66 (94%), Referenced to phase 2:NBSB and 6:, Start of Yellow
Natural Cycle: 40
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 0.36
Intersection Signal Delay: 5.9 Intersection LOS: A
Intersection Capacity Utilization 42.8% ICU Level of Service A
Analysis Period (min) 15

Splits and Phases: 12: Tyler & Tenth

Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Lane Configurations								
Volume (vph)	2	14	9	60	18	90	8	374
Turn Type	Perm	NA	Perm	NA	Perm	NA	Perm	NA
Protected Phases		4		4		2		2
Permitted Phases	4		4		2		2	
Detector Phase	4	4	4	4	2	2	2	2
Switch Phase								
Minimum Initial (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Minimum Split (s)	20.0	20.0	20.0	20.0	20.0	20.0	20.0	20.0
Total Split (s)	21.0	21.0	21.0	21.0	49.0	49.0	49.0	49.0
Total Split (%)	30.0%	30.0%	30.0%	30.0%	70.0%	70.0%	70.0%	70.0%
Yellow Time (s)	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5
All-Red Time (s)	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5
Lost Time Adjust (s)		0.0		0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)		4.0		4.0	4.0	4.0	4.0	4.0
Lead/Lag								
Lead-Lag Optimize?								
Recall Mode	None	None	None	None	C-Max	C-Max	C-Max	C-Max
Act Effct Green (s)		8.3		8.3	56.4	56.4	56.4	56.4
Actuated g/C Ratio		0.12		0.12	0.81	0.81	0.81	0.81
v/c Ratio		0.10		0.37	0.03	0.07	0.01	0.28
Control Delay		23.7		49.5	0.2	0.2	3.4	3.4
Queue Delay		0.0		0.0	0.0	0.0	0.0	0.0
Total Delay		23.7		49.5	0.2	0.2	3.4	3.4
LOS		C		D	A	A	A	A
Approach Delay		23.7		49.5		0.2		3.4
Approach LOS		C		D		A		A

Intersection Summary	
Cycle Length: 70	
Actuated Cycle Length: 70	
Offset: 62 (89%), Referenced to phase 2:NBSB, Start of Yellow	
Natural Cycle: 40	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 0.37	
Intersection Signal Delay: 9.0	Intersection LOS: A
Intersection Capacity Utilization 32.5%	ICU Level of Service A
Analysis Period (min) 15	

Splits and Phases: 13: Polk & Tenth

Lane Group	NBL	NBT	SBL	SBT	SEL	SET	NWL	NWT
Lane Configurations								
Volume (vph)	7	40	21	520	7	18	15	58
Turn Type	Perm	NA	Perm	NA	Perm	NA	Perm	NA
Protected Phases		2		2		4		8
Permitted Phases	2		2		4		8	
Detector Phase	2	2	2	2	4	4	8	8
Switch Phase								
Minimum Initial (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Minimum Split (s)	20.0	20.0	20.0	20.0	20.0	20.0	20.0	20.0
Total Split (s)	46.0	46.0	46.0	46.0	24.0	24.0	24.0	24.0
Total Split (%)	65.7%	65.7%	65.7%	65.7%	34.3%	34.3%	34.3%	34.3%
Yellow Time (s)	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5
All-Red Time (s)	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5
Lost Time Adjust (s)	0.0	0.0	0.0	0.0		0.0		0.0
Total Lost Time (s)	4.0	4.0	4.0	4.0		4.0		4.0
Lead/Lag								
Lead-Lag Optimize?								
Recall Mode	C-Max	C-Max	C-Max	C-Max	None	None	None	None
Act Effct Green (s)	56.2	56.2	56.2	56.2		8.5		8.5
Actuated g/C Ratio	0.80	0.80	0.80	0.80		0.12		0.12
v/c Ratio	0.01	0.03	0.02	0.40		0.22		0.38
Control Delay	4.4	3.9	2.6	3.9		19.9		38.5
Queue Delay	0.0	0.0	0.0	0.1		0.0		0.0
Total Delay	4.4	3.9	2.6	4.0		19.9		38.5
LOS	A	A	A	A		B		D
Approach Delay		4.0		3.9		19.9		38.5
Approach LOS		A		A		B		D

Intersection Summary

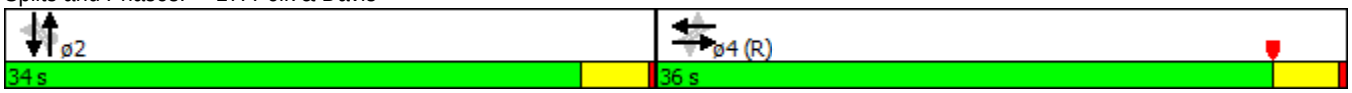
Cycle Length: 70
Actuated Cycle Length: 70
Offset: 43 (61%), Referenced to phase 2:NBSB and 6:, Start of Yellow
Natural Cycle: 45
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 0.40
Intersection Signal Delay: 8.4 — Intersection LOS: A
Intersection Capacity Utilization 41.6% — ICU Level of Service A
Analysis Period (min) 15

Splits and Phases: 16: Polk & Kings

Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Lane Configurations								
Volume (vph)	20	234	36	616	75	25	10	360
Turn Type	Perm	NA	Perm	NA	Perm	NA	Perm	NA
Protected Phases		4		4		2		2
Permitted Phases	4		4		2		2	
Detector Phase	4	4	4	4	2	2	2	2
Switch Phase								
Minimum Initial (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Minimum Split (s)	20.0	20.0	20.0	20.0	20.0	20.0	20.0	20.0
Total Split (s)	36.0	36.0	36.0	36.0	34.0	34.0	34.0	34.0
Total Split (%)	51.4%	51.4%	51.4%	51.4%	48.6%	48.6%	48.6%	48.6%
Yellow Time (s)	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5
All-Red Time (s)	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lead/Lag								
Lead-Lag Optimize?								
Recall Mode	C-Max	C-Max	C-Max	C-Max	None	None	None	None
Act Effct Green (s)	35.6	35.6	35.6	35.6	26.4	26.4	26.4	26.4
Actuated g/C Ratio	0.51	0.51	0.51	0.51	0.38	0.38	0.38	0.38
v/c Ratio	0.11	0.34	0.08	0.71	0.75	0.04	0.02	0.84
Control Delay	12.6	11.7	8.4	13.5	60.3	11.3	8.7	27.5
Queue Delay	0.0	0.0	0.0	0.3	0.0	0.0	0.0	1.8
Total Delay	12.6	11.7	8.4	13.8	60.3	11.3	8.7	29.3
LOS	B	B	A	B	E	B	A	C
Approach Delay		11.8		13.5		47.2		28.9
Approach LOS		B		B		D		C

Intersection Summary	
Cycle Length: 70	
Actuated Cycle Length: 70	
Offset: 3 (4%), Referenced to phase 4:EBWB, Start of Yellow	
Natural Cycle: 50	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 0.84	
Intersection Signal Delay: 20.6	Intersection LOS: C
Intersection Capacity Utilization 76.7%	ICU Level of Service D
Analysis Period (min) 15	

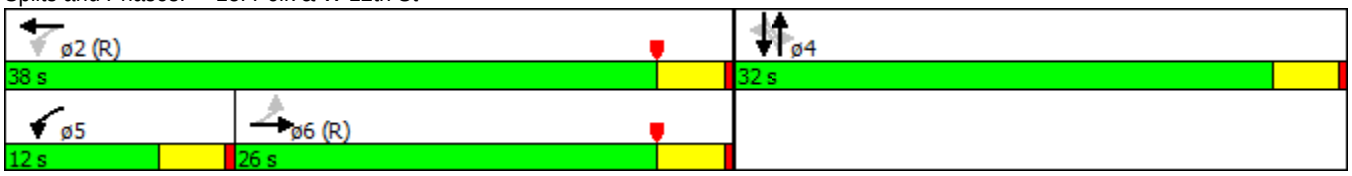
Splits and Phases: 17: Polk & Davis



Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Lane Configurations								
Volume (vph)	26	309	57	1014	89	109	20	269
Turn Type	Perm	NA	pm+pt	NA	Perm	NA	Perm	NA
Protected Phases		6	5	2		4		4
Permitted Phases	6		2		4		4	
Detector Phase	6	6	5	2	4	4	4	4
Switch Phase								
Minimum Initial (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Minimum Split (s)	20.0	20.0	8.0	20.0	20.0	20.0	20.0	20.0
Total Split (s)	26.0	26.0	12.0	38.0	32.0	32.0	32.0	32.0
Total Split (%)	37.1%	37.1%	17.1%	54.3%	45.7%	45.7%	45.7%	45.7%
Yellow Time (s)	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5
All-Red Time (s)	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5
Lost Time Adjust (s)		0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)		4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lead/Lag	Lag	Lag	Lead					
Lead-Lag Optimize?	Yes	Yes	Yes					
Recall Mode	C-Max	C-Max	None	C-Max	None	None	None	None
Act Effct Green (s)		34.0	40.7	40.7	21.3	21.3	21.3	21.3
Actuated g/C Ratio		0.49	0.58	0.58	0.30	0.30	0.30	0.30
v/c Ratio		0.30	0.11	0.54	0.64	0.21	0.06	0.72
Control Delay		13.5	12.4	12.1	60.1	36.8	14.4	26.0
Queue Delay		0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay		13.5	12.4	12.1	60.1	36.8	14.4	26.0
LOS		B	B	B	E	D	B	C
Approach Delay		13.5		12.1		47.2		25.4
Approach LOS		B		B		D		C

Intersection Summary	
Cycle Length: 70	
Actuated Cycle Length: 70	
Offset: 9 (13%), Referenced to phase 2:WBTL and 6:EBTL, Start of Yellow	
Natural Cycle: 50	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 0.72	
Intersection Signal Delay: 18.3	Intersection LOS: B
Intersection Capacity Utilization 78.7%	ICU Level of Service D
Analysis Period (min) 15	

Splits and Phases: 18: Polk & W 12th St

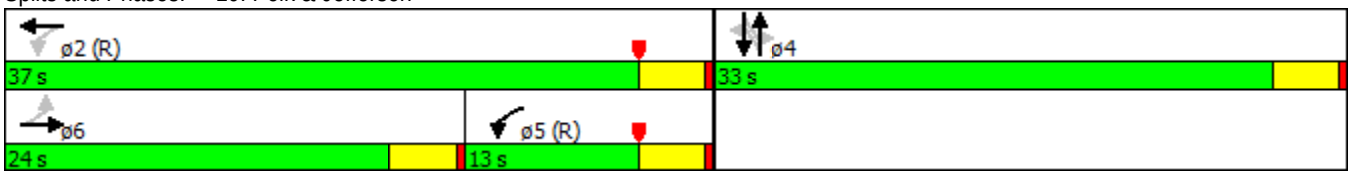


Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Lane Configurations								
Volume (vph)	35	298	47	750	79	62	15	270
Turn Type	Perm	NA	pm+pt	NA	Perm	NA	Perm	NA
Protected Phases		6	5	2		4		4
Permitted Phases	6		2		4		4	
Detector Phase	6	6	5	2	4	4	4	4
Switch Phase								
Minimum Initial (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Minimum Split (s)	20.0	20.0	8.0	20.0	20.0	20.0	20.0	20.0
Total Split (s)	24.0	24.0	13.0	37.0	33.0	33.0	33.0	33.0
Total Split (%)	34.3%	34.3%	18.6%	52.9%	47.1%	47.1%	47.1%	47.1%
Yellow Time (s)	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5
All-Red Time (s)	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5
Lost Time Adjust (s)		0.0		0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)		4.0		4.0	4.0	4.0	4.0	4.0
Lead/Lag	Lead	Lead	Lag					
Lead-Lag Optimize?	Yes	Yes	Yes					
Recall Mode	None	None	C-Max	C-Max	None	None	None	None
Act Effct Green (s)		15.7		39.7	22.3	22.3	22.3	22.3
Actuated g/C Ratio		0.22		0.57	0.32	0.32	0.32	0.32
v/c Ratio		0.70		0.45	0.63	0.12	0.04	0.76
Control Delay		29.1		1.6	42.6	14.5	15.4	31.9
Queue Delay		0.0		0.0	0.0	0.0	0.0	0.0
Total Delay		29.1		1.6	42.6	14.5	15.4	31.9
LOS		C		A	D	B	B	C
Approach Delay		29.1		1.6		30.0		31.4
Approach LOS		C		A		C		C

Intersection Summary

Cycle Length: 70
Actuated Cycle Length: 70
Offset: 36 (51%), Referenced to phase 2:WBTL and 5:WBL, Start of Yellow
Natural Cycle: 50
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 0.76
Intersection Signal Delay: 17.3 Intersection LOS: B
Intersection Capacity Utilization 74.8% ICU Level of Service D
Analysis Period (min) 15

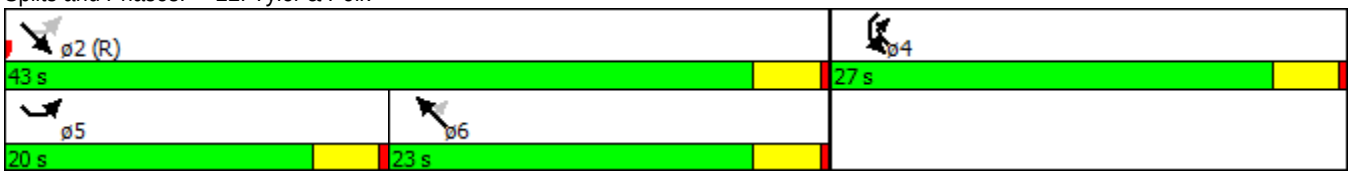
Splits and Phases: 19: Polk & Jefferson



Lane Group	SET	NWT	NWR	SWL	ø5
Lane Configurations					
Volume (vph)	390	201	261	624	
Turn Type	NA	NA	pm+ov	Prot	
Protected Phases	2	6	4	4	5
Permitted Phases	2		6		
Detector Phase	2	6	4	4	
Switch Phase					
Minimum Initial (s)	4.0	4.0	4.0	4.0	4.0
Minimum Split (s)	20.0	20.0	20.0	20.0	20.0
Total Split (s)	43.0	23.0	27.0	27.0	20.0
Total Split (%)	61.4%	32.9%	38.6%	38.6%	29%
Yellow Time (s)	3.5	3.5	3.5	3.5	3.5
All-Red Time (s)	0.5	0.5	0.5	0.5	0.5
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	
Total Lost Time (s)	4.0	4.0	4.0	4.0	
Lead/Lag		Lag			Lead
Lead-Lag Optimize?		Yes			Yes
Recall Mode	C-Max	Max	Max	Max	Max
Act Effct Green (s)	39.0	19.0	46.0	23.0	
Actuated g/C Ratio	0.56	0.27	0.66	0.33	
v/c Ratio	0.41	0.43	0.25	0.60	
Control Delay	19.2	24.3	1.2	14.8	
Queue Delay	0.0	0.0	0.0	0.0	
Total Delay	19.2	24.3	1.2	14.8	
LOS	B	C	A	B	
Approach Delay	19.2	11.2		14.8	
Approach LOS	B	B		B	

Intersection Summary	
Cycle Length: 70	
Actuated Cycle Length: 70	
Offset: 0 (0%), Referenced to phase 2:SETL, Start of Green	
Natural Cycle: 60	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 0.60	
Intersection Signal Delay: 14.9	Intersection LOS: B
Intersection Capacity Utilization 45.0%	ICU Level of Service A
Analysis Period (min) 15	

Splits and Phases: 22: Tyler & Polk



Lane Group	EBL	EBT	WBL	WBT	SEL	SET	NWL	NWT
Lane Configurations								
Volume (vph)	17	214	46	645	10	30	5	15
Turn Type	Perm	NA	Perm	NA	Perm	NA	Perm	NA
Protected Phases		2		2		4		4
Permitted Phases	2		2		4		4	
Detector Phase	2	2	2	2	4	4	4	4
Switch Phase								
Minimum Initial (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Minimum Split (s)	20.0	20.0	20.0	20.0	20.0	20.0	20.0	20.0
Total Split (s)	48.0	48.0	48.0	48.0	22.0	22.0	22.0	22.0
Total Split (%)	68.6%	68.6%	68.6%	68.6%	31.4%	31.4%	31.4%	31.4%
Yellow Time (s)	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5
All-Red Time (s)	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5
Lost Time Adjust (s)	0.0	0.0	0.0	0.0		0.0		0.0
Total Lost Time (s)	4.0	4.0	4.0	4.0		4.0		4.0
Lead/Lag								
Lead-Lag Optimize?								
Recall Mode	C-Max	C-Max	C-Max	C-Max	None	None	None	None
Act Effct Green (s)	60.3	60.3	60.3	60.3		7.3		7.3
Actuated g/C Ratio	0.86	0.86	0.86	0.86		0.10		0.10
v/c Ratio	0.03	0.16	0.05	0.47		0.26		0.13
Control Delay	1.1	0.9	0.2	0.7		29.9		34.4
Queue Delay	0.0	0.0	0.0	0.2		0.0		0.0
Total Delay	1.1	0.9	0.2	0.9		29.9		34.4
LOS	A	A	A	A		C		C
Approach Delay		0.9		0.9		29.9		34.4
Approach LOS		A		A		C		C

Intersection Summary

Cycle Length: 70
Actuated Cycle Length: 70
Offset: 8 (11%), Referenced to phase 2:EBWB, Start of Yellow
Natural Cycle: 55
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 0.47
Intersection Signal Delay: 2.7 — Intersection LOS: A
Intersection Capacity Utilization 48.2% — ICU Level of Service A
Analysis Period (min) 15

Splits and Phases: 24: Kings & Davis