



PRELIMINARY TIMING REPORT

City of Athens Signal Timing & Operations Study
Corridor 1: Congress Parkway (SR-2) and Decatur Pike
(SR-30)

Athens, Tennessee

April 2019



AECOM



Preliminary Timing Report

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INTRODUCTION

This document describes the development of preliminary timing plans for twelve (12) intersections along SR-2 (Congress Parkway) and SR-30 (Decatur Pike) in the City of Athens, TN. The intersections are listed in **Table 1 and shown in Figure 1**. Note that the offset T-intersections of Congress Pkwy with Rocky Mountain Rd East and Rocky Mountain Rd West operate as one signalized intersection.

The purpose of this traffic signal optimization analysis is to enhance operation and reduce the delay across the system. Phasing and timing plans recommended in this report will be implemented in the field and evaluated based on field observations and results of before and after travel time data. Additional adjustments to timings made in the field following implementation will be documented.

Table 1: Project Intersections

#	Intersection	Jurisdiction
1	SR-2 Congress Pkwy @ Rocky Mountain Rd W	City of Athens
2	SR 2-Congress Pkwy @ Rocky Mountain Rd E	City of Athens
3	SR 2-Congress Pkwy @ Dennis St	City of Athens
4	SR 2-Congress Pkwy @ Lowe's	City of Athens
5	SR 2-Congress Pkwy @ Layman Rd	City of Athens
6	SR 2-Congress Pkwy @ SR-30 Decatur Pk	City of Athens
7	SR 2-Congress Pkwy @ Congress Crossing	City of Athens
8	SR 2-Congress Pkwy @ Tellico Ave	City of Athens
9	SR 2-Congress Pkwy @ Velma Rd	City of Athens
10	SR-30 Decatur Pk @ Dennis St	City of Athens
11	SR-30 Decatur Pk @ Dupitt St	City of Athens
12	SR-30 Decatur Pk @ Maple St	City of Athens

Figure 1: Location Map



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INVENTORY

AECOM staff completed an inventory of each of the Corridor 1 intersections. Information obtained consists of the intersection configuration, signing and marking configurations, signal phasing, pedestrian crossing dimensions, communication status, and detector status.

TRAFFIC COUNTS

Turning movement counts were collected during weekday AM, weekday midday, and weekday PM periods at the study intersections, shown previously in **Table 1**. Turning movement count data and calculated peak hour information is included in **Appendix A**.

LOCAL CONTROLLER TIMING PARAMETERS

Local controller timings were developed for each of the Corridor 1 intersections. **Table 2** details the methods used to develop the controller values that will be used for each intersection. Clearance calculations for each intersection are shown in **Appendix B**. Note that per new MUTCD standards, yellow and red clearance times are calculated for each intersection based on the travel speed, grade, and intersection width. Such methodology often results in longer clearance times than previous MUTCD recommendations.

Table 2: Local Timing Parameters

Parameter	Value	
PEDESTRIAN INTERVAL		
Pedestrian Change Interval	$(\text{Curb to Curb Distance}) / (\text{Walking Speed})$	
Walking Speed	3.5 Feet per Second	
Walk	4 - 7 Seconds	
Buffer Interval	Following the pedestrian change interval, a buffer interval consisting of a steady UPRaised HAND (symbolizing DON'T WALK) signal indication shall be displayed for at least 3 seconds prior to the release of any conflicting vehicular movement.	
VEHICLE INTERVAL		
Yellow Interval	$t + (V / (2A + 64.4g))$ Minimum of 3 seconds Left turn clearance calculations should be based	t = perception reaction time (1 second) V = posted speed in feet/second (25 mph for left turn clearances) A = deceleration rate (10 feet/second/second) W = intersection width measured from stop bar to far edge of last conflict lane (or crosswalk when the crosswalk is greater than 20' from the intersection) L = length of vehicle (assume 20 feet) g = The average of two field measured approach grades: <ul style="list-style-type: none"> • At the stop bar • At the setback loop (if present) n = detection distance / 20 N = number of lanes
All Red Interval	$(W + L) / V$ Minimum of 1.5 seconds. If greater than 3 seconds, additional time should be added to Yellow clearance	
Minimum Green	Main Street (12 seconds) Side Street (6 seconds) Left Turn (5 seconds)	
Minimum Cycle Length	Cover critical intersection	
Maximum Cycle Length	Cover critical intersection with minimum delay	
Offset Reference	Beginning of Yellow	
Offset Seeking	Short Way	
Free Operation	Isolated signals or as needed, based on counts, on coordinated systems (at least 9 pm to 6 am).	
Lead/Lag by Time of Day	Yes, protected locations with prior approval	
Traffic Responsive Operation	No	
Special Events	No	

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TIME OF DAY SCHEDULE

The objective of the proposed signal timing is to minimize delay for all vehicles within the system and to provide improved mainline progression while minimizing side street delay. The system cycle lengths were selected to service the most critical intersection which is SR-2 Congress Pkwy at SR-30 Decatur Pk.

The corridor consists of twelve intersections which serve numerous commercial establishments, residential areas schools and large employment bases.

The turning movement count inventory data was entered into Synchro using the following guidelines:

- All movements were coded as they appear in the field.
- Signing and marking restrictions were coded as they appear in the field.
- A saturated flow rate of 1,900 vehicles per hour was used.
- Posted speed limits were used for progression speeds.

**TABLE 3:
Existing Time-of-Day/Day-of-Week Schedule**

Day	Day of Week	HH:MM (Start Time)	C/S/O	Cycle (Sec)	Directional Bias
Int 1 & 2 – Congress Pkwy from Rocky Mountain Rd W to Rocky Mountain Rd E					
1 & 7	Sunday/Saturday	00:01	0/0/4	Free	-
1 & 7	Sunday/Saturday	8:00	1/1/1	60	Balanced
1 & 7	Sunday/Saturday	21:00	0/0/4	Free	-
2 - 6	Monday - Friday	00:01	0/0/4	Free	-
2 - 6	Monday - Friday	6:30	1/1/2	110	Balanced
2 - 6	Monday - Friday	21:00	0/0/4	Free	-
Int 3 & 4 – Congress Pkwy at Dennis St/ Lowes and Int 10 Decatur Pk at Dennis St					
1 & 7	Sunday/Saturday	00:01	0/0/4	Free	-
1 & 7	Sunday/Saturday	8:00	1/1/1	75	Balanced
1 & 7	Sunday/Saturday	10:00	2/1/1	90	Balanced
1 & 7	Sunday/Saturday	23:00	0/0/4	Free	-
2 - 6	Monday - Friday	00:01	0/0/4	Free	-
2 - 6	Monday - Friday	6:30	1/1/1	75	Balanced
2 - 6	Monday - Friday	10:00	2/1/1	90	Balanced
2 - 6	Monday - Friday	14:45	3/1/1	100	Balanced
2 - 6	Monday - Friday	16:15	3/2/1	100	Balanced
2 - 6	Monday - Friday	19:00	2/1/1	90	Balanced
2 - 6	Monday - Friday	22:00	0/0/4	Free	-
Int 5 – 9 – Congress Pkwy from Layman Rd to Velma Rd and Int 12 Decatur Pk at Maple St					
1 - 7	Everyday	00:01	0/0/4	Free	-
Int 11 – Decatur Pk at Dupit St					
1 & 7	Sunday / Saturday	00:01	0/0/4	Free	-
2 - 6	Monday - Friday	00:01	0/0/4	Free	-
2 - 6	Monday - Friday	06:30	1/1/1	90	Balanced
2 - 6	Monday - Friday	08:30	0/0/4	Free	-
2 - 6	Monday - Friday	15:00	1/1/1	90	Balanced

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Multiple runs of Synchro were completed to determine the most appropriate combination of cycle, split, and offset (C/S/O) for each signal in the system. The existing time of day schedule was not consistent across the corridor. **Table 3** shows the existing time of day schedule for each intersection. Based on the Synchro analyses, it was determined that coordination all of the signals with one cycle length will maximize operations. **Table 4** shows the proposed time of day schedule.

**TABLE 4:
Proposed Time-of-Day/Day-of-Week Schedule**

Day	Day of Week	HH:MM (Start Time)	C/S/O	Cycle (Sec)	Directional Bias
Int 1 – 12 Congress Pkwy from Rocky Mountain Rd W to Velma Rd and Decatur Pk from Dennis St to Maple St					
1	Sunday/Saturday	00:01	0/0/4	Free	-
1	Sunday/Saturday	9:00	2/1/1	100	Balanced
1	Sunday/Saturday	11:00	2/2/1	120	Balanced
1	Sunday/Saturday	15:00	2/1/1	100	Balanced
2 - 6	Monday - Friday	00:01	0/0/4	Free	-
2 - 6	Monday - Friday	6:30	1/1/1	120	Balanced
2 - 6	Monday - Friday	08:30	2/1/1	100	
2 - 6	Monday - Friday	11:00	2/2/1	120	-
2 - 6	Monday - Friday	15:00	2/3/1	120	North Bound
2 - 6	Monday - Friday	16:00	3/1/1	120	Balanced
2 - 6	Monday - Friday	18:30	2/1/1	100	Balanced
2 - 6	Monday - Friday	22:00	0/0/4	Free	-

TIMING PLANS

Travel patterns along Congress Pkwy and Decatur Pk were relatively balanced in both directions each day. Timing plan offsets were optimized to favor both directions of travel with continuous bands through the corridor in both directions. Synchro Timing Reports for each of the plans described below are included in **Appendix C** and the Time space diagrams showing the progress are included in **Appendix D**.

1/1/1 AM Plan 120 Sec Cycle – This plan will operate during the AM peak period from 6:30 am to 8:30 am. It consists of balanced progression with emphasis on handling the turning movement at the major intersection, Congress Pkwy at Decatur Pk.

1/2/1 AM Plan 90 Sec Cycle – This plan is an alternate to the main 1/1/1 AM plan. It consists of operating some of the smaller intersections along the corridors at a lower cycle length. If utilized it would not operate at the intersection of Congress Pkwy at Decatur Pk, since it cannot operate such a small cycle length with regular traffic volumes. This plan is also a balanced progression plan and is intended to reduce the side street delay.

2/1/1 Off Peak 100 Sec Cycle – This plan will operate during the lower volume portion of the midday from 8:30 am to 11:00 am as well as in the evenings from 6:30 pm to 8:30 pm. It consists of balanced progression with emphasis on handling the turning movement at the major intersection, Congress Pkwy at Decatur Pk. This plan will also operate on weekends during the non-peak periods.

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2/2/1 Midday 120 Sec Cycle – This plan will operate during the midday time from 11:00 am to 3:00 pm. It consists of balanced progression with emphasis on handling the turning movement at the major intersection, Congress Pkwy at Decatur Pk. This plan will also operate on weekends during the peak periods.

2/3/1 School Dismissal Plan 120 Sec Cycle – This plan will operate during the Thomas and Betts let out and school dismissal time period from 3:00 pm to 4:00 PM. It was observed that a heavier westbound split is need at Congress Pkwy at Dennis St for Thomas and Betts as well as a northbound progression along Congress Pkwy for McMinn County High School.

3/1/1 PM 120 Sec Cycle – This plan will operate during the PM peak period from 4:00 pm to 6:30 pm. It consists of balanced progression with emphasis on handling the turning movement at the major intersection, Congress Pkwy at Decatur Pk.

3/2/1 PM 140 Sec Cycle – This plan is an alternate PM peak plan in case the 120 sec cycle length cannot handle the traffic at the major intersection Congress Pkwy at Decatur Pk. This plan can also be utilized in conjunction with plan 3/1/1 to operate during the peak hour of the PM to handle the rush of traffic, then the 3/1/1 plan can operate during the fringe portion of the PM period.

At some locations, there are different signal timing options which may enhance the flow of traffic. These options include a lead-lag optimization at both Congress Pkwy at Decatur Pk and at Decatur Pk at Dennis Street. The use of half-cycles will be considered for some of the minor intersection on the edges of the system such as at Decatur Pk at both Dupit Street and Maple St, and at Congress Pkwy at both Rocky Mountain Rd East and Rocky Mountain Rd West.

APPENDIX A

Turning Movement Counts

APPENDIX B

Clearance Calculations

Congress Parkway @ West Rocky Mount Road Vehicular and Pedestrian Clearance Intervals

Intersection Data																
PHASE	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
DIR		NB		EB	NL	SB										
Approach Grade																
	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%		0.0%	0.0%	0.0%	0.0%		0.0%	0.0%	0.0%	0.0%
Approach Speed																
MPH		45		30	20	45										
FPS	0.00	66.15	0.00	44.10	29.40	66.15	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Clearance Distance																
Feet		105		120	100	105										
Crosswalk Distance																
Feet																

Existing						Calculated					Recommended					
Dir	Phase	YEL	RED	Y+R	PCL	Phase	YEL	RED	Y+R	PCL	Dir	Phase	YEL	RED	Y+R	PCL
0	1					1					0	1				
NB	2	4.5	1.5			2	4.4	1.9	6.3	0	NB	2	4.4	1.9	6.3	
0	3					3					0	3				
EB	4	4.0	1.5			4	3.3	3.2	6.5	0	EB	4	3.5	3.0	6.5	
NL	5	4.0	1.5			5	2.5	4.1	6.6		NL	5	3.6	3.0	6.6	
SB	6	4.5	1.5			6	4.4	1.9	6.3	0	SB	6	4.4	1.9	6.3	
0	8					8				0	8					

- 10** Deceleration Rate in Feet per Second per Second
- 20** Length of Typical Vehicle in Feet
- 3.5** Normal Walking Speed in Feet per Second
- 3.0** Pedestrian Buffer

- Minimum YELLOW **3.0**
- Maximum YELLOW **10.0**
- Minimum RED **1.5**
- Maximum RED **3.0**

Congress Parkway @ East Rocky Mount Road Vehicular and Pedestrian Clearance Intervals

Intersection Data																
PHASE	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
DIR	SL	NB	WB			SB										
Approach Grade				Approach Speed				Clearance Distance				Crosswalk Distance				
	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%		0.0%	0.0%	0.0%	0.0%		0.0%	0.0%	0.0%	0.0%
MPH	20	45	20			45										
FPS	29.40	66.15	29.40	0.00	0.00	66.15	0.00	0.00	0.00	0.00	0.00		0.00	0.00	0.00	0.00
Feet	100	75	100			75										
Feet																

Existing						Calculated					Recommended					
Dir	Phase	YEL	RED	Y+R	PCL	Phase	YEL	RED	Y+R	PCL	Dir	Phase	YEL	RED	Y+R	PCL
SL	1	4.0	1.5			1	2.5	4.1	6.6		SL	1	3.6	3.0	6.6	
NB	2	4.5	1.5			2	4.4	1.5	5.9	0	NB	2	4.4	1.5	5.9	
WB	3	4.0	1.5			3	2.5	4.1	6.6		WB	3	3.6	3.0	6.6	
0	4					4				0	4					
0	5					5				0	5					
SB	6	4.5	1.5			6	4.4	1.5	5.9	0	SB	6	4.4	1.5	5.9	
0	8					8				0	8					

- 10** Deceleration Rate in Feet per Second per Second
- 20** Length of Typical Vehicle in Feet
- 3.5** Normal Walking Speed in Feet per Second
- 3.0** Pedestrian Buffer

- Minimum YELLOW **3.0**
- Maximum YELLOW **10.0**
- Minimum RED **1.5**
- Maximum RED **3.0**

Congress Parkway @ Dennis Street Vehicular and Pedestrian Clearance Intervals

Intersection Data

PHASE	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
DIR	SL	NB	EL	WB	NL	SB	WL	EB								
	0.0%	0.0%	1.0%	-2.0%	0.0%	0.0%	-2.0%	1.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
	20	45	20	30	20	45	20	30								
FPS	29.40	66.15	29.40	44.10	29.40	66.15	29.40	44.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	145	130	125	150	105	120	105	140								
		70		120												

Existing					Calculated					Recommended						
Dir	Phase	YEL	RED	Y+R	PCL	Phase	YEL	RED	Y+R	PCL	Dir	Phase	YEL	RED	Y+R	PCL
SL	1	4.0	2.0			1	2.5	5.7	8.2		SL	1	5.2	3.0	8.2	
NB	2	4.5	1.5			2	4.4	2.3	6.7	20	NB	2	4.4	2.3	6.7	20
EL	3	4.0	1.5			3	2.5	5.0	7.5		EL	3	4.5	3.0	7.5	
WB	4	4.0	2.0			4	3.4	3.9	7.3	35	WB	4	4.3	3.0	7.3	35
NL	5	4.0	2.0			5	2.5	4.3	6.8		NL	5	3.8	3.0	6.8	
SB	6	4.5	1.5			6	4.4	2.2	6.6	0	SB	6	4.4	2.3	6.7	
WL	7	4.0	1.5			7	2.6	4.3	6.9		WL	7	3.9	3.0	6.9	
EB	8	4.0	2.0			8	3.2	3.7	6.9	0	EB	8	4.3	3.0	7.3	

- 10** Deceleration Rate in Feet per Second per Second
- 20** Length of Typical Vehicle in Feet
- 3.5** Normal Walking Speed in Feet per Second
- 3.0** Pedestrian Buffer

- Minimum YELLOW **3.0**
- Maximum YELLOW **10.0**
- Minimum RED **1.5**
- Maximum RED **3.0**

Congress Parkway @ Congress Crossing Shopping Center Vehicular and Pedestrian Clearance Intervals

Intersection Data

PHASE	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
DIR	NL	SB		EB		NB										
	0.0%	0.0%	0.0%	-7.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
	20	45		20		45										
FPS	29.40	66.15	0.00	29.40	0.00	66.15	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Feet	125	155		85		80										
Feet																

Existing						Calculated					Recommended					
Dir	Phase	YEL	RED	Y+R	PCL	Phase	YEL	RED	Y+R	PCL	Dir	Phase	YEL	RED	Y+R	PCL
NL	1	4.0	1.5			1	2.5	5.0	7.5		NL	1	4.5	3.0	7.5	
SB	2	4.5	1.5			2	4.4	2.7	7.1	0	SB	2	4.4	2.7	7.1	
0	3					3					0	3				
EB	4	4.0	1.0			4	2.9	3.6	6.5	0	EB	4	3.5	3.0	6.5	
0	5					5					0	5				
NB	6	4.5	1.5			6	4.4	1.6	6.0	0	NB	6	4.4	2.7	7.1	
0	7					7					0	7				
0	8					8				0	0	8				

- 10** Deceleration Rate in Feet per Second per Second
- 20** Length of Typical Vehicle in Feet
- 3.5** Normal Walking Speed in Feet per Second
- 3.0** Pedestrian Buffer

- Minimum YELLOW **3.0**
- Maximum YELLOW **10.0**
- Minimum RED **1.5**
- Maximum RED **3.0**

Congress Parkway @ Tellico Avenue Vehicular and Pedestrian Clearance Intervals

Intersection Data

PHASE	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
DIR	SB	WB			SL	NB										
	0.0%	-2.3%	0.0%	0.0%	-2.3%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
	45	30			20	45										
FPS	0.00	66.15	0.00	44.10	29.40	66.15	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Feet	85	110			95	115										
Feet																

Existing						Calculated					Recommended					
Dir	Phase	YEL	RED	Y+R	PCL	Phase	YEL	RED	Y+R	PCL	Dir	Phase	YEL	RED	Y+R	PCL
0	1	4.5	1.5			1	4.6	1.6	6.2	0	0	1	4.6	2.1	6.7	
SB	2	4.5	1.5			2	4.6	1.6	6.2	0	SB	2	4.6	2.1	6.7	
0	3					3					0	3				
WB	4	4.0	2.0			4	3.3	3.0	6.3	0	WB	4	3.3	3.0	6.3	
SL	5	3.5	1.5			5	2.6	4.0	6.6		SL	5	3.6	3.0	6.6	
NB	6	4.5	1.5			6	4.4	2.1	6.5	0	NB	6	4.6	2.1	6.7	
0	7					7					0	7				
0	8					8				0	0	8				

- 10** Deceleration Rate in Feet per Second per Second
- 20** Length of Typical Vehicle in Feet
- 3.5** Normal Walking Speed in Feet per Second
- 3.0** Pedestrian Buffer

- Minimum YELLOW **3.0**
- Maximum YELLOW **10.0**
- Minimum RED **1.5**
- Maximum RED **3.0**

Congress Parkway @ Velma Road Vehicular and Pedestrian Clearance Intervals

Intersection Data																
PHASE	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
DIR	SL	NB		EB	NL	SB		WB								
Approach Grade																
	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Approach Speed																
MPH	20	45		30	20	45		30								
FPS	29.40	66.15	0.00	44.10	29.40	66.15	0.00	44.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Clearance Distance																
Feet	145	85		145	65	70		150								
Crosswalk Distance																
Feet																

Existing						Calculated					Recommended					
Dir	Phase	YEL	RED	Y+R	PCL	Phase	YEL	RED	Y+R	PCL	Dir	Phase	YEL	RED	Y+R	PCL
SL	1	4.0	1.0			1	2.5	5.7	8.2		SL	1	5.2	3.0	8.2	
NB	2	4.5	1.5			2	4.4	1.6	6.0	0	NB	2	4.4	1.6	6.0	
0	3					3					0	3				
EB	4	4.0	2.0			4	3.3	3.8	7.1	0	EB	4	4.2	3.0	7.2	
NL	5	4.0	1.5			5	2.5	2.9	5.4		NL	5	3.0	2.9	5.9	
SB	6	4.5	1.5			6	4.4	1.4	5.8	0	SB	6	4.4	1.6	6.0	
0	7					7					0	7				
WB	8	4.0	2.0			8	3.3	3.9	7.2	0	WB	8	4.2	3.0	7.2	

- 10** Deceleration Rate in Feet per Second per Second
- 20** Length of Typical Vehicle in Feet
- 3.5** Normal Walking Speed in Feet per Second
- 3.0** Pedestrian Buffer

- Minimum YELLOW **3.0**
- Maximum YELLOW **10.0**
- Minimum RED **1.5**
- Maximum RED **3.0**

Decatur Pike @ Dennis Street Vehicular and Pedestrian Clearance Intervals

Intersection Data

PHASE	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
DIR	WL	EB	SB	NB	EL	WB										
Approach Grade																
	0.0%	0.0%	0.0%	2.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Approach Speed																
MPH	20	45	20	20	20	35										
FPS	29.40	66.15	29.40	29.40	29.40	51.45	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Clearance Distance																
Feet	125	95	150	150	110	95										
Crosswalk Distance																
Feet																

Existing					Calculated					Recommended						
Dir	Phase	YEL	RED	Y+R	PCL	Phase	YEL	RED	Y+R	PCL	Dir	Phase	YEL	RED	Y+R	PCL
WL	1	4.0	2.5			1	2.5	5.0	7.5		WL	1	4.5	3.0	7.5	
EB	2	4.5	2.0			2	4.4	1.8	6.2	0	EB	2	4.4	2.3	6.7	
SB	3	4.0	2.5			3	2.5	5.8	8.3		SB	3	5.3	3.0	8.3	
NB	4	4.0	2.5			4	2.4	5.8	8.2	0	NB	4	5.2	3.0	8.2	
EL	5	4.0	2.5			5	2.5	4.5	7.0		EL	5	4.0	3.0	7.0	
WB	6	4.5	2.0			6	3.6	2.3	5.9	0	WB	6	4.4	2.3	6.7	
0	7					7					0	7				
0	8					8				0	0	8				

10	Deceleration Rate in Feet per Second per Second
20	Length of Typical Vehicle in Feet
3.5	Normal Walking Speed in Feet per Second
3.0	Pedestrian Buffer

Minimum YELLOW	3.0
Maximum YELLOW	10.0
Minimum RED	1.5
Maximum RED	3.0

Decatur Pike @ Dupit Street Vehicular and Pedestrian Clearance Intervals

Intersection Data																
PHASE	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
DIR	EB	WB	NB	SB												
Approach Grade				Approach Grade				Approach Grade				Approach Grade				
0.0%				0.0%				0.0%				0.0%				
Approach Speed				Approach Speed				Approach Speed				Approach Speed				
MPH	35	35	20	30												
FPS	51.45	51.45	29.40	44.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Clearance Distance				Clearance Distance				Clearance Distance				Clearance Distance				
Feet	80	100	100	85												
Crosswalk Distance				Crosswalk Distance				Crosswalk Distance				Crosswalk Distance				
Feet																

Existing						Calculated					Recommended					
Dir	Phase	YEL	RED	Y+R	PCL	Phase	YEL	RED	Y+R	PCL	Dir	Phase	YEL	RED	Y+R	PCL
EB	1	4.0	1.0			1	3.6	2.0	5.6		EB	1	3.6	2.0	5.6	
WB	2	4.0	1.5			2	3.6	2.4	6.0	0	WB	2	3.6	2.4	6.0	
NB	3	3.5	1.5			3	2.5	4.1	6.6		NB	3	3.6	3.0	6.6	
SB	4	4.0	1.5			4	3.3	2.4	5.7	0	SB	4	3.3	2.4	5.7	
0	5					5					0	5				
0	6					6				0	0	6				
0	7					7					0	7				
0	8					8				0	0	8				

10	Deceleration Rate in Feet per Second per Second
20	Length of Typical Vehicle in Feet
3.5	Normal Walking Speed in Feet per Second
3.0	Pedestrian Buffer

Minimum YELLOW	3.0
Maximum YELLOW	10.0
Minimum RED	1.5
Maximum RED	3.0

Decatur Pike @ Maple Street Vehicular and Pedestrian Clearance Intervals

Intersection Data																
PHASE	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
DIR	WB	EB		NB												
Approach Grade	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
MPH	20	35		20												
FPS	29.40	51.45	0.00	29.40	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Clearance Distance	85	110		85												
Crosswalk Distance		70		85												





Existing						Calculated					Recommended					
Dir	Phase	YEL	RED	Y+R	PCL	Phase	YEL	RED	Y+R	PCL	Dir	Phase	YEL	RED	Y+R	PCL
WB	1	4.0	1.0			1	2.5	3.6	6.1		WB	1	3.1	3.0	6.1	
EB	2	4.0	1.5			2	3.6	2.6	6.2	20	EB	2	3.6	2.6	6.2	20
0	3					3					0	3				
NB	4	4.0	1.5			4	2.5	3.6	6.1	25	NB	4	3.1	3.0	6.1	25
0	5					5					0	5				
0	6					6				0	0	6				
0	7					7					0	7				
0	8					8				0	0	8				

- 10** Deceleration Rate in Feet per Second per Second
- 20** Length of Typical Vehicle in Feet
- 3.5** Normal Walking Speed in Feet per Second
- 3.0** Pedestrian Buffer

- Minimum YELLOW **3.0**
- Maximum YELLOW **10.0**
- Minimum RED **1.5**
- Maximum RED **3.0**

APPENDIX C

Synchro Timing Reports

Lane Group	NWL	NWR	NET	NER	SWL	SWT
Lane Configurations						
Traffic Volume (vph)	67	40	481	126	72	360
Future Volume (vph)	67	40	481	126	72	360
Lane Util. Factor	1.00	1.00	0.95	0.95	1.00	0.95
Frt	0.949		0.969			
Flt Protected	0.970				0.950	
Satd. Flow (prot)	1658	0	3410	0	1752	3471
Flt Permitted	0.970				0.273	
Satd. Flow (perm)	1658	0	3410	0	504	3471
Satd. Flow (RTOR)	21		49			
Adj. Flow (vph)	75	45	697	183	85	424
Lane Group Flow (vph)	120	0	880	0	85	424
Turn Type	Prot		NA		pm+pt	NA
Protected Phases	3		2		1	6
Permitted Phases					6	
Total Split (s)	26.0		78.0		16.0	94.0
Total Lost Time (s)	6.6		5.9		6.6	5.9
Act Effct Green (s)	12.8		83.7		94.0	94.7
Actuated g/C Ratio	0.11		0.70		0.78	0.79
v/c Ratio	0.62		0.37		0.18	0.15
Control Delay	55.2		7.2		4.2	2.8
Queue Delay	0.0		0.2		0.0	0.0
Total Delay	55.2		7.4		4.2	2.8
LOS	E		A		A	A
Approach Delay	55.2		7.4			3.0
Approach LOS	E		A			A

Intersection Summary

Cycle Length: 120

Actuated Cycle Length: 120

Offset: 107 (89%), Referenced to phase 2:NET and 6:SWTL, Start of Yellow

Control Type: Actuated-Coordinated

Maximum v/c Ratio: 0.62

Intersection Signal Delay: 9.7





Intersection LOS: A

Intersection Capacity Utilization 44.1%

ICU Level of Service A























Analysis Period (min) 15

Splits and Phases: 2: Congress Parkway & E Rocky Mount Road

 Ø1	 Ø2 (R)	 Ø3
16 s	78 s	26 s
 Ø6 (R)		
94 s		

Athens, Tennessee
3: Congress Parkway & Dennis St

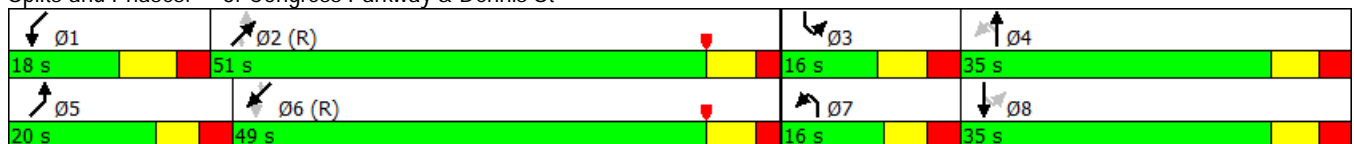
04/19/2019

												
Lane Group	NBL	NBT	NBR	SBL	SBT	SBR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations												
Traffic Volume (vph)	8	139	82	46	88	155	137	381	7	84	384	20
Future Volume (vph)	8	139	82	46	88	155	137	381	7	84	384	20
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.95	1.00	1.00	0.95	1.00
Frt		0.941			0.901				0.850			0.850
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1613	1754	0	1648	1659	0	1770	3438	1615	1736	3438	1538
Flt Permitted	0.423			0.224			0.408			0.422		
Satd. Flow (perm)	718	1754	0	389	1659	0	760	3438	1615	771	3438	1538
Satd. Flow (RTOR)		25			76				182			182
Adj. Flow (vph)	12	211	137	73	109	212	188	495	16	127	486	32
Lane Group Flow (vph)	12	348	0	73	321	0	188	495	16	127	486	32
Turn Type	pm+pt	NA		pm+pt	NA		pm+pt	NA	Perm	pm+pt	NA	Perm
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases	4			8			2		2	6		6
Total Split (s)	16.0	35.0		16.0	35.0		20.0	51.0	51.0	18.0	49.0	49.0
Total Lost Time (s)	6.9	7.3		7.5	7.3		6.8	6.7	6.7	8.2	6.7	6.7
Act Effct Green (s)	31.0	25.5		35.8	32.6		61.9	50.8	50.8	57.2	49.8	49.8
Actuated g/C Ratio	0.26	0.21		0.30	0.27		0.52	0.42	0.42	0.48	0.42	0.42
v/c Ratio	0.05	0.89		0.37	0.63		0.39	0.34	0.02	0.29	0.34	0.04
Control Delay	25.2	67.2		32.1	35.3		11.3	22.7	0.0	8.9	16.5	0.7
Queue Delay	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	25.2	67.2		32.1	35.3		11.3	22.7	0.0	8.9	16.5	0.7
LOS	C	E		C	D		B	C	A	A	B	A
Approach Delay		65.8			34.7			19.1			14.2	
Approach LOS		E			C			B			B	

Intersection Summary

Cycle Length: 120
 Actuated Cycle Length: 120
 Offset: 36 (30%), Referenced to phase 2:NETL and 6:SWTL, Start of Yellow
 Control Type: Actuated-Coordinated
 Maximum v/c Ratio: 0.89
 Intersection Signal Delay: 28.5 Intersection LOS: C
 Intersection Capacity Utilization 62.3% ICU Level of Service B
 Analysis Period (min) 15

Splits and Phases: 3: Congress Parkway & Dennis St



Lane Group	SEL	SET	SER	NWL	NWT	NWR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations												
Traffic Volume (vph)	4	0	0	12	0	22	3	484	20	37	482	6
Future Volume (vph)	4	0	0	12	0	22	3	484	20	37	482	6
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.95	1.00	1.00	0.95	0.95
Fr						0.850			0.850		0.998	
Flt Protected	0.950				0.950		0.950			0.950		
Satd. Flow (prot)	1805	1900	0	0	1458	1496	1805	3438	1468	1517	3466	0
Flt Permitted	0.736				0.757		0.418			0.404		
Satd. Flow (perm)	1398	1900	0	0	1162	1496	794	3438	1468	645	3466	0
Satd. Flow (RTOR)						99			107		2	
Adj. Flow (vph)	12	0	0	32	0	32	8	598	36	65	610	8
Lane Group Flow (vph)	12	0	0	0	32	32	8	598	36	65	618	0
Turn Type	Perm			Perm	NA	Perm	pm+pt	NA	Perm	pm+pt	NA	
Protected Phases		8			4		5	2		1	6	
Permitted Phases	8			4		4	2		2	6		
Total Split (s)	24.0	24.0		24.0	24.0	24.0	16.0	80.0	80.0	16.0	80.0	
Total Lost Time (s)	7.8	7.8			7.8	7.8	7.0	6.6	6.6	6.6	6.9	
Act Effct Green (s)	8.9				8.9	8.9	92.8	90.0	90.0	98.4	97.9	
Actuated g/C Ratio	0.07				0.07	0.07	0.77	0.75	0.75	0.82	0.82	
v/c Ratio	0.12				0.38	0.16	0.01	0.23	0.03	0.11	0.22	
Control Delay	52.5				64.2	1.7	1.7	3.6	0.1	1.8	3.0	
Queue Delay	0.0				0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Total Delay	52.5				64.2	1.7	1.7	3.6	0.1	1.8	3.0	
LOS	D				E	A	A	A	A	A	A	
Approach Delay		52.5			33.0			3.4			2.9	
Approach LOS		D			C			A			A	

Intersection Summary

Cycle Length: 120
 Actuated Cycle Length: 120
 Offset: 46 (38%), Referenced to phase 2:NETL and 6:SWTL, Start of Yellow
 Control Type: Actuated-Coordinated
 Maximum v/c Ratio: 0.38
 Intersection Signal Delay: 4.9
 Intersection LOS: A
 Intersection Capacity Utilization 43.1%
 ICU Level of Service A
 Analysis Period (min) 15

Splits and Phases: 4: Congress Parkway & Lowes Drwy



Lane Group	SEL	SET	SER	NWL	NWT	NWR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations												
Traffic Volume (vph)	21	1	12	14	3	44	11	447	38	33	496	41
Future Volume (vph)	21	1	12	14	3	44	11	447	38	33	496	41
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.95	0.95	1.00	0.95	1.00
Fr		0.869				0.850		0.987				0.850
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1641	1651	0	1877	1976	1680	1530	3378	0	1805	3438	1468
Flt Permitted	0.591			0.736			0.396			0.395		
Satd. Flow (perm)	1021	1651	0	1454	1976	1680	638	3378	0	750	3438	1468
Satd. Flow (RTOR)		28				154		12				164
Adj. Flow (vph)	36	4	28	20	4	72	16	539	52	45	661	48
Lane Group Flow (vph)	36	32	0	20	4	72	16	591	0	45	661	48
Turn Type	pm+pt	NA		pm+pt	NA	Perm	pm+pt	NA		pm+pt	NA	Perm
Protected Phases	7	4		3	8		1	6		5	2	
Permitted Phases	4			8		8	6			2		2
Total Split (s)	20.0	20.0		20.0	20.0	20.0	16.0	64.0		16.0	64.0	64.0
Total Lost Time (s)	7.0	7.6		7.1	7.6	7.6	6.1	6.5		6.3	6.5	6.5
Act Effct Green (s)	15.4	11.7		12.3	8.0	8.0	86.3	82.4		89.5	87.8	87.8
Actuated g/C Ratio	0.13	0.10		0.10	0.07	0.07	0.72	0.69		0.75	0.73	0.73
v/c Ratio	0.21	0.17		0.12	0.03	0.28	0.03	0.25		0.07	0.26	0.04
Control Delay	43.4	22.6		41.1	53.0	2.8	7.5	14.4		2.8	4.2	0.6
Queue Delay	0.0	0.0		0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0
Total Delay	43.4	22.6		41.1	53.0	2.8	7.5	14.4		2.8	4.2	0.6
LOS	D	C		D	D	A	A	B		A	A	A
Approach Delay		33.6			12.8			14.2			3.9	
Approach LOS		C			B			B			A	

Intersection Summary

Cycle Length: 120

Actuated Cycle Length: 120

Offset: 112 (93%), Referenced to phase 2:SWTL and 6:NETL, Start of Yellow

Control Type: Actuated-Coordinated

Maximum v/c Ratio: 0.28

Intersection Signal Delay: 9.9

Intersection LOS: A

Intersection Capacity Utilization 42.6%

ICU Level of Service A

























Analysis Period (min) 15

Splits and Phases: 5: Congress Parkway & Layman Road

Ø1	Ø2 (R)	Ø3	Ø4
16 s	64 s	20 s	20 s
Ø5	Ø6 (R)	Ø7	Ø8
16 s	64 s	20 s	20 s

Athens, Tennessee
 6: Congress Parkway & Decatur Pike

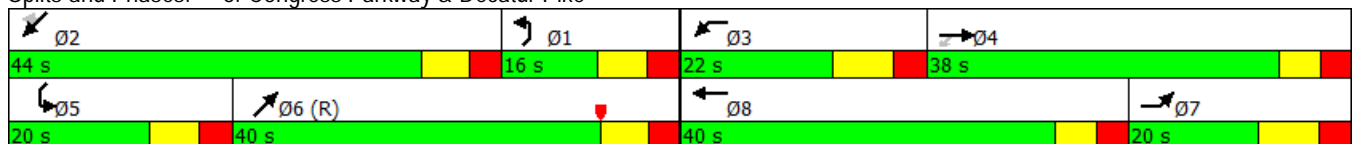
04/19/2019

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations												
Traffic Volume (vph)	79	410	78	132	295	112	42	321	143	69	362	72
Future Volume (vph)	79	410	78	132	295	112	42	321	143	69	362	72
Lane Util. Factor	1.00	0.95	1.00	0.97	0.95	1.00	0.97	0.95	1.00	1.00	0.95	1.00
Flt			0.850			0.850			0.850			0.850
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1753	3440	1456	3400	3406	1553	3502	3374	1538	1703	3438	1568
Flt Permitted	0.950			0.950			0.950			0.950		
Satd. Flow (perm)	1753	3440	1456	3400	3406	1553	3502	3374	1538	1703	3438	1568
Satd. Flow (RTOR)			252			388			388			255
Adj. Flow (vph)	88	494	92	171	328	140	56	369	196	86	483	92
Lane Group Flow (vph)	88	494	92	171	328	140	56	369	196	86	483	92
Turn Type	Prot	NA	Perm	Prot	NA	Free	Prot	NA	Free	Prot	NA	Perm
Protected Phases	7	4		3	8		1	6		5	2	
Permitted Phases			4			Free			Free			2
Total Split (s)	20.0	38.0	38.0	22.0	40.0		16.0	40.0		20.0	44.0	44.0
Total Lost Time (s)	8.4	6.6	6.6	8.5	6.6		7.5	7.2		7.5	7.2	7.2
Act Effct Green (s)	11.6	33.8	33.8	11.1	33.4	120.0	7.9	37.6	120.0	10.6	40.0	40.0
Actuated g/C Ratio	0.10	0.28	0.28	0.09	0.28	1.00	0.07	0.31	1.00	0.09	0.33	0.33
v/c Ratio	0.52	0.51	0.16	0.54	0.35	0.09	0.24	0.35	0.13	0.58	0.42	0.13
Control Delay	44.7	22.4	1.0	45.1	26.6	0.1	52.5	32.4	0.2	52.1	27.2	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	0.0
Total Delay	44.7	22.4	1.0	45.1	26.6	0.1	52.5	32.4	0.2	52.1	27.2	1.3
LOS	D	C	A	D	C	A	D	C	A	D	C	A
Approach Delay		22.4			25.8			24.0			26.8	
Approach LOS		C			C			C			C	

Intersection Summary

Cycle Length: 120
 Actuated Cycle Length: 120
 Offset: 0 (0%), Referenced to phase 6:NET, Start of Yellow, Master Intersection
 Control Type: Actuated-Coordinated
 Maximum v/c Ratio: 0.58
 Intersection Signal Delay: 24.7
 Intersection Capacity Utilization 54.5%
 Analysis Period (min) 15
 Intersection LOS: C
 ICU Level of Service A

Splits and Phases: 6: Congress Parkway & Decatur Pike



Athens, Tennessee
 7: Congress Parkway & Congress Crossing

04/19/2019


Lane Group	SEL	SET	SER	NWL	NWT	NWR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations												
Traffic Volume (vph)	8	0	10	0	0	10	23	465	14	0	492	18
Future Volume (vph)	8	0	10	0	0	10	23	465	14	0	492	18
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.95	1.00	1.00	0.95	1.00
Frt			0.850			0.865			0.850			0.850
Flt Protected	0.950						0.950					
Satd. Flow (prot)	1868	0	983	0	0	1370	1736	3406	1615	0	3471	1524
Flt Permitted	0.950						0.390					
Satd. Flow (perm)	1868	0	983	0	0	1370	712	3406	1615	0	3471	1524
Satd. Flow (RTOR)			105			416			32			100
Adj. Flow (vph)	12	0	12	0	0	16	32	554	20	0	607	24
Lane Group Flow (vph)	12	0	12	0	0	16	32	554	20	0	607	24
Turn Type	Prot		Prot			Perm	pm+pt	NA	Perm		NA	Perm
Protected Phases	4		4				1	6			2	
Permitted Phases						4	6		6			2
Total Split (s)	24.0		24.0			24.0	20.0	96.0	96.0		76.0	76.0
Total Lost Time (s)	6.5		6.5			6.5	7.5	7.1	7.1		7.1	7.1
Act Effct Green (s)	8.0		8.0			8.0	103.8	107.0	107.0		98.9	98.9
Actuated g/C Ratio	0.07		0.07			0.07	0.86	0.89	0.89		0.82	0.82
v/c Ratio	0.10		0.07			0.03	0.05	0.18	0.01		0.21	0.02
Control Delay	54.6		0.9			0.1	1.0	0.8	0.1		4.7	0.8
Queue Delay	0.0		0.0			0.0	0.0	0.0	0.0		0.0	0.0
Total Delay	54.6		0.9			0.1	1.0	0.8	0.1		4.7	0.8
LOS	D		A			A	A	A	A		A	A
Approach Delay		27.8				0.1		0.7			4.6	
Approach LOS		C				A		A			A	

Intersection Summary

Cycle Length: 120
 Actuated Cycle Length: 120
 Offset: 9.9 (8%), Referenced to phase 2:SWT and 6:NETL, Start of Yellow
 Control Type: Actuated-Coordinated
 Maximum v/c Ratio: 0.21
 Intersection Signal Delay: 3.1 Intersection LOS: A
 Intersection Capacity Utilization 37.5% ICU Level of Service A
 Analysis Period (min) 15

Splits and Phases: 7: Congress Parkway & Congress Crossing



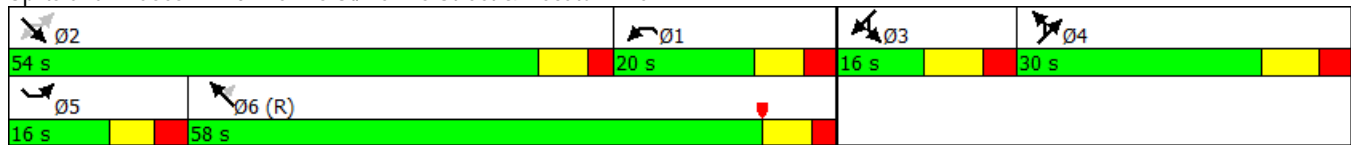


Lane Group	SEL	SET	SER	NWL	NWT	NWR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations												
Traffic Volume (vph)	10	471	241	66	345	8	167	3	81	1	2	4
Future Volume (vph)	10	471	241	66	345	8	167	3	81	1	2	4
Lane Util. Factor	1.00	0.95	1.00	0.97	0.95	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Flt			0.850			0.850		0.861			0.900	
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1805	3374	1538	3433	3406	1615	1718	1562	0	1805	1282	0
Flt Permitted	0.434			0.950			0.950			0.950		
Satd. Flow (perm)	825	3374	1538	3433	3406	1615	1718	1562	0	1805	1282	0
Satd. Flow (RTOR)			242			186		100			8	
Adj. Flow (vph)	16	561	313	89	406	16	196	8	100	4	4	8
Lane Group Flow (vph)	16	561	313	89	406	16	196	108	0	4	12	0
Turn Type	pm+pt	NA	Perm	Prot	NA	Perm	Split	NA		Split	NA	
Protected Phases	5	2		1	6		4	4		3	3	
Permitted Phases	2		2			6						
Total Split (s)	16.0	54.0	54.0	20.0	58.0	58.0	30.0	30.0		16.0	16.0	
Total Lost Time (s)	7.0	6.7	6.7	7.5	6.7	6.7	8.2	8.2		8.3	8.3	
Act Effct Green (s)	60.5	60.8	60.8	12.5	75.2	75.2	18.1	18.1		6.5	6.5	
Actuated g/C Ratio	0.50	0.51	0.51	0.10	0.63	0.63	0.15	0.15		0.05	0.05	
v/c Ratio	0.03	0.33	0.35	0.25	0.19	0.01	0.76	0.34		0.04	0.16	
Control Delay	20.3	20.2	6.8	45.1	6.8	0.0	67.0	12.8		54.0	38.8	
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Total Delay	20.3	20.2	6.8	45.1	6.8	0.0	67.0	12.8		54.0	38.8	
LOS	C	C	A	D	A	A	E	B		D	D	
Approach Delay		15.5			13.3			47.8			42.6	
Approach LOS		B			B			D			D	

Intersection Summary

Cycle Length: 120
 Actuated Cycle Length: 120
 Offset: 78 (65%), Referenced to phase 6:NWT, Start of Yellow
 Control Type: Actuated-Coordinated
 Maximum v/c Ratio: 0.76
 Intersection Signal Delay: 20.8
 Intersection Capacity Utilization 52.6%
 Analysis Period (min) 15
 Intersection LOS: C
 ICU Level of Service A

Splits and Phases: 10: Dennis St/Dennis Street & Decatur Pike





Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (vph)	504	140	14	447	127	7
Future Volume (vph)	504	140	14	447	127	7
Lane Util. Factor	0.95	0.95	1.00	0.95	1.00	1.00
Frt	0.967					0.850
Flt Protected			0.950		0.950	
Satd. Flow (prot)	3422	0	1770	3539	1770	1583
Flt Permitted			0.348		0.950	
Satd. Flow (perm)	3422	0	648	3539	1770	1583
Satd. Flow (RTOR)	55					8
Adj. Flow (vph)	548	152	15	486	138	8
Lane Group Flow (vph)	700	0	15	486	138	8
Turn Type	NA		pm+pt	NA	Prot	Perm
Protected Phases	2		1	6	4	
Permitted Phases			6			2
Total Split (s)	80.0		16.0	96.0	24.0	80.0
Total Lost Time (s)	6.2		6.1	6.2	6.1	6.2
Act Effct Green (s)	88.7		93.6	93.5	14.2	88.7
Actuated g/C Ratio	0.74		0.78	0.78	0.12	0.74
v/c Ratio	0.28		0.03	0.18	0.66	0.01
Control Delay	1.6		3.6	3.8	65.5	4.0
Queue Delay	0.0		0.0	0.0	0.0	0.0
Total Delay	1.6		3.6	3.8	65.5	4.0
LOS	A		A	A	E	A
Approach Delay	1.6			3.8	62.1	
Approach LOS	A			A	E	

Intersection Summary

Cycle Length: 120

Actuated Cycle Length: 120

Offset: 39 (33%), Referenced to phase 2:EBT and 6:WBTL, Start of Yellow

Control Type: Actuated-Coordinated

Maximum v/c Ratio: 0.66

Intersection Signal Delay: 9.0

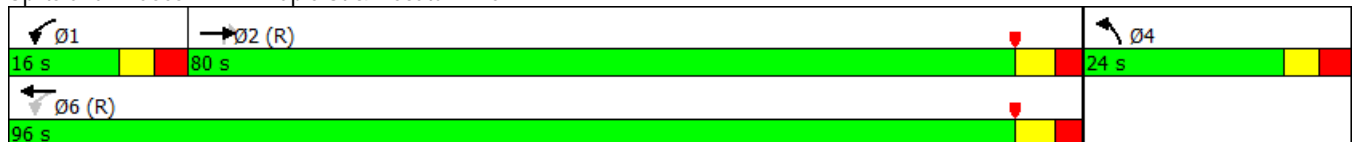
Intersection LOS: A

Intersection Capacity Utilization 41.2%

ICU Level of Service A

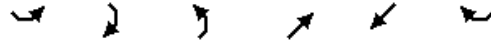
Analysis Period (min) 15

Splits and Phases: 12: Maple St & Decatur Pike



Athens, Tennessee
 1: Congress Parkway & W Rocky Mount Rd

04/19/2019

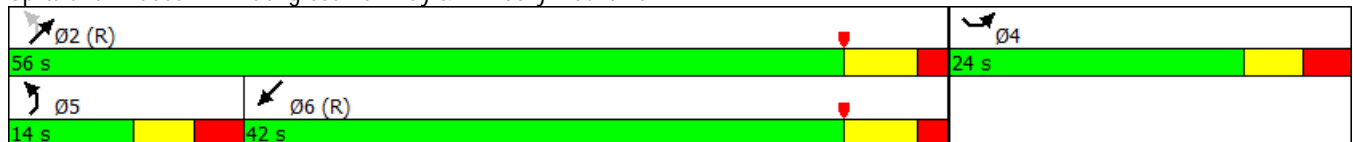


Lane Group	SEL	SER	NEL	NET	SWT	SWR
Lane Configurations						
Traffic Volume (vph)	125	20	12	482	402	25
Future Volume (vph)	125	20	12	482	402	25
Lane Util. Factor	1.00	1.00	1.00	0.95	0.95	0.95
Frt	0.982				0.991	
Flt Protected	0.959		0.950			
Satd. Flow (prot)	1733	0	1671	3505	3432	0
Flt Permitted	0.959		0.409			
Satd. Flow (perm)	1733	0	720	3505	3432	0
Satd. Flow (RTOR)	9				10	
Adj. Flow (vph)	164	26	17	699	473	29
Lane Group Flow (vph)	190	0	17	699	502	0
Turn Type	Prot		pm+pt	NA	NA	
Protected Phases	4		5	2	6	
Permitted Phases			2			
Total Split (s)	24.0		14.0	56.0	42.0	
Total Lost Time (s)	6.5		6.6	6.3	6.3	
Act Effect Green (s)	13.3		53.6	53.9	51.3	
Actuated g/C Ratio	0.17		0.67	0.67	0.64	
v/c Ratio	0.64		0.03	0.30	0.23	
Control Delay	39.3		5.6	6.2	4.6	
Queue Delay	0.0		0.0	0.0	0.0	
Total Delay	39.3		5.6	6.2	4.6	
LOS	D		A	A	A	
Approach Delay	39.3			6.1	4.6	
Approach LOS	D			A	A	

Intersection Summary

Cycle Length: 80
 Actuated Cycle Length: 80
 Offset: 68 (85%), Referenced to phase 2:NETL and 6:SWT, Start of Yellow
 Control Type: Actuated-Coordinated
 Maximum v/c Ratio: 0.64
 Intersection Signal Delay: 10.1
 Intersection Capacity Utilization 32.1%
 Analysis Period (min) 15
 Intersection LOS: B
 ICU Level of Service A

Splits and Phases: 1: Congress Parkway & W Rocky Mount Rd





Lane Group	NWL	NWR	NET	NER	SWL	SWT
Lane Configurations						
Traffic Volume (vph)	67	40	481	126	72	360
Future Volume (vph)	67	40	481	126	72	360
Lane Util. Factor	1.00	1.00	0.95	0.95	1.00	0.95
Frt	0.949		0.969			
Flt Protected	0.970				0.950	
Satd. Flow (prot)	1658	0	3410	0	1752	3471
Flt Permitted	0.970				0.249	
Satd. Flow (perm)	1658	0	3410	0	459	3471
Satd. Flow (RTOR)	33		56			
Adj. Flow (vph)	75	45	697	183	85	424
Lane Group Flow (vph)	120	0	880	0	85	424
Turn Type	Prot		NA		pm+pt	NA
Protected Phases	3		2		1	6
Permitted Phases					6	
Total Split (s)	22.0		44.0		14.0	58.0
Total Lost Time (s)	6.6		5.9		6.6	5.9
Act Effct Green (s)	10.2		50.5		59.5	61.4
Actuated g/C Ratio	0.13		0.63		0.74	0.77
v/c Ratio	0.50		0.41		0.19	0.16
Control Delay	30.6		8.0		4.1	2.7
Queue Delay	0.0		0.1		0.0	0.0
Total Delay	30.6		8.1		4.1	2.7
LOS	C		A		A	A
Approach Delay	30.6		8.1			2.9
Approach LOS	C		A			A

Intersection Summary

Cycle Length: 80

Actuated Cycle Length: 80

Offset: 64 (80%), Referenced to phase 2:NET and 6:SWTL, Start of Yellow

Control Type: Actuated-Coordinated

Maximum v/c Ratio: 0.50

Intersection Signal Delay: 8.1

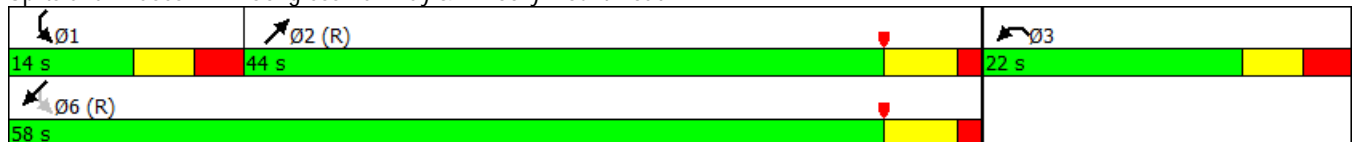
Intersection LOS: A

Intersection Capacity Utilization 44.1%

ICU Level of Service A

Analysis Period (min) 15

Splits and Phases: 2: Congress Parkway & E Rocky Mount Road



Athens, Tennessee
3: Congress Parkway & Dennis St

04/19/2019

Lane Group	NBL	NBT	NBR	SBL	SBT	SBR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations												
Traffic Volume (vph)	8	139	82	46	88	155	137	381	7	84	384	20
Future Volume (vph)	8	139	82	46	88	155	137	381	7	84	384	20
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.95	1.00	1.00	0.95	1.00
Frt		0.941			0.901				0.850			0.850
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1613	1754	0	1648	1659	0	1770	3438	1615	1736	3438	1538
Flt Permitted	0.521			0.270			0.370			0.418		
Satd. Flow (perm)	885	1754	0	468	1659	0	689	3438	1615	764	3438	1538
Satd. Flow (RTOR)		34			103				273			273
Adj. Flow (vph)	12	211	137	73	109	212	188	495	16	127	486	32
Lane Group Flow (vph)	12	348	0	73	321	0	188	495	16	127	486	32
Turn Type	pm+pt	NA		pm+pt	NA		pm+pt	NA	Perm	pm+pt	NA	Perm
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases	4			8			2		2	6		6
Total Split (s)	13.0	19.0		13.0	19.0		18.0	30.0	30.0	18.0	30.0	30.0
Total Lost Time (s)	6.9	7.3		7.5	7.3		6.8	6.7	6.7	8.2	6.7	6.7
Act Effct Green (s)	19.5	14.3		23.0	22.1		35.8	27.6	27.6	31.7	24.8	24.8
Actuated g/C Ratio	0.24	0.18		0.29	0.28		0.45	0.34	0.34	0.40	0.31	0.31
v/c Ratio	0.04	1.02		0.34	0.60		0.43	0.42	0.02	0.31	0.46	0.05
Control Delay	19.8	89.1		25.0	25.2		16.7	19.0	0.0	14.5	20.3	0.1
Queue Delay	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	19.8	89.1		25.0	25.2		16.7	19.0	0.0	14.5	20.3	0.1
LOS	B	F		C	C		B	B	A	B	C	A
Approach Delay		86.8			25.1			18.0			18.1	
Approach LOS		F			C			B			B	

Intersection Summary

Cycle Length: 80

Actuated Cycle Length: 80

Offset: 5 (6%), Referenced to phase 2:NETL and 6:SWTL, Start of Yellow

Control Type: Actuated-Coordinated

Maximum v/c Ratio: 1.02

Intersection Signal Delay: 31.2

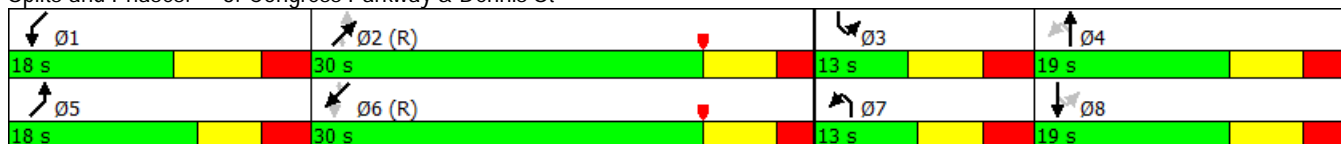
Intersection LOS: C

Intersection Capacity Utilization 62.3%

ICU Level of Service B

Analysis Period (min) 15

Splits and Phases: 3: Congress Parkway & Dennis St



Lane Group	SEL	SET	SER	NWL	NWT	NWR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations												
Traffic Volume (vph)	4	0	0	12	0	22	3	484	20	37	482	6
Future Volume (vph)	4	0	0	12	0	22	3	484	20	37	482	6
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.95	1.00	1.00	0.95	0.95
Flt						0.850			0.850		0.998	
Flt Protected	0.950				0.950		0.950			0.950		
Satd. Flow (prot)	1805	1900	0	0	1458	1496	1805	3438	1468	1517	3466	0
Flt Permitted	0.833				0.833		0.418			0.396		
Satd. Flow (perm)	1583	1900	0	0	1279	1496	794	3438	1468	632	3466	0
Satd. Flow (RTOR)						149			161		2	
Adj. Flow (vph)	12	0	0	32	0	32	8	598	36	65	610	8
Lane Group Flow (vph)	12	0	0	0	32	32	8	598	36	65	618	0
Turn Type	Perm			Perm	NA	Perm	pm+pt	NA	Perm	pm+pt	NA	
Protected Phases		8			4		5	2		1	6	
Permitted Phases	8			4		4	2		2	6		
Total Split (s)	16.0	16.0		16.0	16.0	16.0	16.0	48.0	48.0	16.0	48.0	
Total Lost Time (s)	7.8	7.8			7.8	7.8	7.0	6.6	6.6	6.6	6.9	
Act Effct Green (s)	7.0				7.1	7.1	57.5	54.7	54.7	62.9	63.8	
Actuated g/C Ratio	0.09				0.09	0.09	0.72	0.68	0.68	0.79	0.80	
v/c Ratio	0.09				0.28	0.12	0.01	0.25	0.03	0.11	0.22	
Control Delay	34.2				40.1	0.9	2.3	4.1	0.1	0.7	0.5	
Queue Delay	0.0				0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Total Delay	34.2				40.1	0.9	2.3	4.1	0.1	0.7	0.5	
LOS	C				D	A	A	A	A	A	A	
Approach Delay		34.3			20.5			3.8			0.5	
Approach LOS		C			C			A			A	

Intersection Summary

Cycle Length: 80

Actuated Cycle Length: 80

Offset: 25 (31%), Referenced to phase 2:NETL and 6:SWTL, Start of Yellow

Control Type: Actuated-Coordinated

Maximum v/c Ratio: 0.28

Intersection Signal Delay: 3.3

Intersection LOS: A

Intersection Capacity Utilization 43.1%

ICU Level of Service A

Analysis Period (min) 15

Splits and Phases: 4: Congress Parkway & Lowes Drvwy



Lane Group	SEL	SET	SER	NWL	NWT	NWR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations												
Traffic Volume (vph)	21	1	12	14	3	44	11	447	38	33	496	41
Future Volume (vph)	21	1	12	14	3	44	11	447	38	33	496	41
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.95	0.95	1.00	0.95	1.00
Fr		0.869				0.850		0.987				0.850
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1641	1651	0	1877	1976	1680	1530	3378	0	1805	3438	1468
Flt Permitted	0.641			0.736			0.399			0.367		
Satd. Flow (perm)	1107	1651	0	1454	1976	1680	642	3378	0	697	3438	1468
Satd. Flow (RTOR)		28				230		14				245
Adj. Flow (vph)	36	4	28	20	4	72	16	539	52	45	661	48
Lane Group Flow (vph)	36	32	0	20	4	72	16	591	0	45	661	48
Turn Type	pm+pt	NA		pm+pt	NA	Perm	pm+pt	NA		pm+pt	NA	Perm
Protected Phases	7	4		3	8		1	6		5	2	
Permitted Phases	4			8		8	6			2		2
Total Split (s)	14.0	16.0		14.0	16.0	16.0	14.0	36.0		14.0	36.0	36.0
Total Lost Time (s)	7.0	7.6		7.1	7.6	7.6	6.1	6.5		6.3	6.5	6.5
Act Effect Green (s)	13.6	10.9		11.8	8.0	8.0	48.8	46.0		51.8	51.4	51.4
Actuated g/C Ratio	0.17	0.14		0.15	0.10	0.10	0.61	0.58		0.65	0.64	0.64
v/c Ratio	0.16	0.13		0.08	0.02	0.19	0.04	0.30		0.08	0.30	0.05
Control Delay	24.0	16.0		22.5	32.7	1.1	8.8	18.0		8.3	10.7	0.1
Queue Delay	0.0	0.0		0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0
Total Delay	24.0	16.0		22.5	32.7	1.1	8.8	18.0		8.3	10.7	0.1
LOS	C	B		C	C	A	A	B		A	B	A
Approach Delay		20.2			6.9			17.8			9.9	
Approach LOS		C			A			B			A	

Intersection Summary

Cycle Length: 80

Actuated Cycle Length: 80

Offset: 72 (90%), Referenced to phase 2:SWTL and 6:NETL, Start of Yellow

Control Type: Actuated-Coordinated

Maximum v/c Ratio: 0.30

Intersection Signal Delay: 13.3

Intersection LOS: B

Intersection Capacity Utilization 42.6%

ICU Level of Service A

Analysis Period (min) 15

Splits and Phases: 5: Congress Parkway & Layman Road

Ø1 14 s	Ø2 (R) 36 s	Ø3 14 s	Ø4 16 s
Ø5 14 s	Ø6 (R) 36 s	Ø7 14 s	Ø8 16 s

Athens, Tennessee
6: Congress Parkway & Decatur Pike

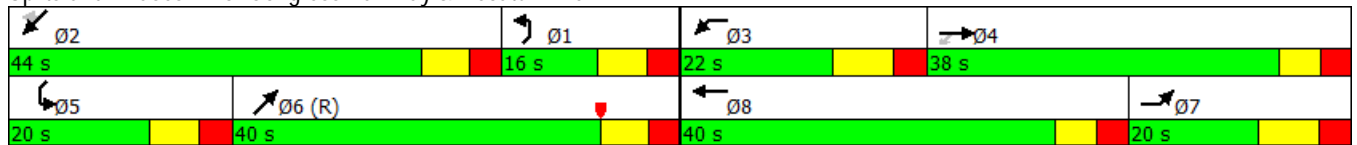
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Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations												
Traffic Volume (vph)	79	410	78	132	295	112	42	321	143	69	362	72
Future Volume (vph)	79	410	78	132	295	112	42	321	143	69	362	72
Lane Util. Factor	1.00	0.95	1.00	0.97	0.95	1.00	0.97	0.95	1.00	1.00	0.95	1.00
Flt			0.850			0.850			0.850			0.850
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1753	3440	1456	3400	3406	1553	3502	3374	1538	1703	3438	1568
Flt Permitted	0.950			0.950			0.950			0.950		
Satd. Flow (perm)	1753	3440	1456	3400	3406	1553	3502	3374	1538	1703	3438	1568
Satd. Flow (RTOR)			252			388			388			255
Adj. Flow (vph)	88	494	92	171	328	140	56	369	196	86	483	92
Lane Group Flow (vph)	88	494	92	171	328	140	56	369	196	86	483	92
Turn Type	Prot	NA	Perm	Prot	NA	Free	Prot	NA	Free	Prot	NA	Perm
Protected Phases	7	4		3	8		1	6		5	2	
Permitted Phases			4			Free			Free			2
Total Split (s)	20.0	38.0	38.0	22.0	40.0		16.0	40.0		20.0	44.0	44.0
Total Lost Time (s)	8.4	6.6	6.6	8.5	6.6		7.5	7.2		7.5	7.2	7.2
Act Effct Green (s)	11.6	33.8	33.8	11.1	33.4	120.0	7.9	37.6	120.0	10.6	40.0	40.0
Actuated g/C Ratio	0.10	0.28	0.28	0.09	0.28	1.00	0.07	0.31	1.00	0.09	0.33	0.33
v/c Ratio	0.52	0.51	0.16	0.54	0.35	0.09	0.24	0.35	0.13	0.58	0.42	0.13
Control Delay	44.7	22.4	1.0	58.3	35.8	0.1	55.5	34.4	0.2	67.5	33.5	0.4
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	44.7	22.4	1.0	58.3	35.8	0.1	55.5	34.4	0.2	67.5	33.5	0.4
LOS	D	C	A	E	D	A	E	C	A	E	C	A
Approach Delay		22.4			34.0			25.5			33.3	
Approach LOS		C			C			C			C	

Intersection Summary

Cycle Length: 120
 Actuated Cycle Length: 120
 Offset: 0 (0%), Referenced to phase 6:NET, Start of Yellow, Master Intersection
 Control Type: Actuated-Coordinated
 Maximum v/c Ratio: 0.58
 Intersection Signal Delay: 28.8
 Intersection LOS: C
 Intersection Capacity Utilization 54.5%
 ICU Level of Service A
 Analysis Period (min) 15

Splits and Phases: 6: Congress Parkway & Decatur Pike



Athens, Tennessee

7: Congress Parkway & Congress Crossing

04/19/2019

Lane Group	SEL	SET	SER	NWL	NWT	NWR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations												
Traffic Volume (vph)	8	0	10	0	0	10	23	465	14	0	492	18
Future Volume (vph)	8	0	10	0	0	10	23	465	14	0	492	18
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.95	1.00	1.00	0.95	1.00
Frt			0.850			0.865			0.850			0.850
Flt Protected	0.950						0.950					
Satd. Flow (prot)	1868	0	983	0	0	1370	1736	3406	1615	0	3471	1524
Flt Permitted	0.950						0.369					
Satd. Flow (perm)	1868	0	983	0	0	1370	674	3406	1615	0	3471	1524
Satd. Flow (RTOR)			158			369			48			150
Adj. Flow (vph)	12	0	12	0	0	16	32	554	20	0	607	24
Lane Group Flow (vph)	12	0	12	0	0	16	32	554	20	0	607	24
Turn Type	Prot		Prot			Perm	pm+pt	NA	Perm		NA	Perm
Protected Phases	4		4				1	6			2	
Permitted Phases						4	6		6			2
Total Split (s)	20.0		20.0			20.0	16.0	60.0	60.0		44.0	44.0
Total Lost Time (s)	6.5		6.5			6.5	7.5	7.1	7.1		7.1	7.1
Act Effct Green (s)	8.0		8.0			8.0	63.8	67.0	67.0		61.5	61.5
Actuated g/C Ratio	0.10		0.10			0.10	0.80	0.84	0.84		0.77	0.77
v/c Ratio	0.06		0.05			0.03	0.05	0.19	0.01		0.23	0.02
Control Delay	33.6		0.4			0.1	3.1	2.7	0.3		5.0	0.1
Queue Delay	0.0		0.0			0.0	0.0	0.0	0.0		0.0	0.0
Total Delay	33.6		0.4			0.1	3.1	2.7	0.3		5.0	0.1
LOS	C		A			A	A	A	A		A	A
Approach Delay		17.0				0.1		2.6			4.8	
Approach LOS		B				A		A			A	

Intersection Summary

Cycle Length: 80

Actuated Cycle Length: 80

Offset: 5 (6%), Referenced to phase 2:SWT and 6:NETL, Start of Yellow

Control Type: Actuated-Coordinated

Maximum v/c Ratio: 0.23

Intersection Signal Delay: 3.9

Intersection LOS: A

Intersection Capacity Utilization 37.5%

ICU Level of Service A

Analysis Period (min) 15

Splits and Phases: 7: Congress Parkway & Congress Crossing

Ø1	Ø2 (R)	Ø4
16 s	44 s	20 s
Ø6 (R)		
60 s		

Athens, Tennessee
 8: Congress Parkway & Tellico Ave

04/19/2019

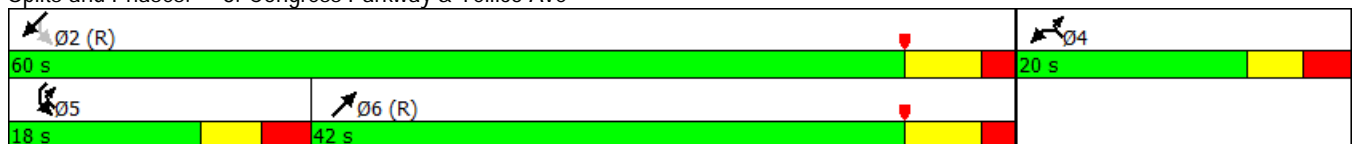


Lane Group	NWL	NWR	NET	NER	SWL	SWT
Lane Configurations						
Traffic Volume (vph)	64	34	403	55	52	440
Future Volume (vph)	64	34	403	55	52	440
Lane Util. Factor	1.00	1.00	0.95	0.95	1.00	0.95
Frt		0.850	0.979			
Flt Protected	0.950				0.950	
Satd. Flow (prot)	1703	1568	3330	0	1720	3506
Flt Permitted	0.950				0.398	
Satd. Flow (perm)	1703	1568	3330	0	721	3506
Satd. Flow (RTOR)		48	30			
Adj. Flow (vph)	80	48	458	76	68	564
Lane Group Flow (vph)	80	48	534	0	68	564
Turn Type	Prot	pt+ov	NA		pm+pt	NA
Protected Phases	4	4 5	6		5	2
Permitted Phases					2	
Total Split (s)	20.0		42.0		18.0	60.0
Total Lost Time (s)	6.3		6.7		6.6	6.7
Act Effct Green (s)	9.2	19.9	51.0		60.4	61.6
Actuated g/C Ratio	0.12	0.25	0.64		0.76	0.77
v/c Ratio	0.41	0.11	0.25		0.11	0.21
Control Delay	38.5	6.8	6.7		3.0	2.6
Queue Delay	0.0	0.0	0.0		0.0	0.0
Total Delay	38.5	6.8	6.7		3.0	2.6
LOS	D	A	A		A	A
Approach Delay	26.6		6.7			2.6
Approach LOS	C		A			A

Intersection Summary

Cycle Length: 80
 Actuated Cycle Length: 80
 Offset: 29 (36%), Referenced to phase 2:SWTL and 6:NET, Start of Yellow
 Control Type: Actuated-Coordinated
 Maximum v/c Ratio: 0.41
 Intersection Signal Delay: 6.7
 Intersection Capacity Utilization 39.2%
 Analysis Period (min) 15
 Intersection LOS: A
 ICU Level of Service A

Splits and Phases: 8: Congress Parkway & Tellico Ave



Athens, Tennessee
 9: Velma Road & Congress Pkwy

04/19/2019



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations		↕			↕		↕	↕↕		↕	↕↕	
Traffic Volume (vph)	86	19	27	89	19	26	15	406	13	12	366	72
Future Volume (vph)	86	19	27	89	19	26	15	406	13	12	366	72
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.95	0.95	1.00	0.95	0.95
Frt		0.971			0.975			0.992			0.977	
Flt Protected		0.973			0.972		0.950			0.950		
Satd. Flow (prot)	0	1695	0	0	1733	0	1805	3394	0	1641	3407	0
Flt Permitted		0.735			0.740		0.441			0.453		
Satd. Flow (perm)	0	1280	0	0	1319	0	838	3394	0	782	3407	0
Satd. Flow (RTOR)		16			13		8			33		
Adj. Flow (vph)	104	40	40	113	48	36	30	451	24	19	475	88
Lane Group Flow (vph)	0	184	0	0	197	0	30	475	0	19	563	0
Turn Type	Perm	NA		Perm	NA		pm+pt	NA		pm+pt	NA	
Protected Phases		4			8		5	2		1	6	
Permitted Phases	4			8			2			6		
Total Split (s)	24.0	24.0		24.0	24.0		16.0	40.0		16.0	40.0	
Total Lost Time (s)		7.2			7.2		5.9	6.0		8.2	6.0	
Act Effct Green (s)		14.8			14.8		48.9	46.2		47.4	47.0	
Actuated g/C Ratio		0.18			0.18		0.61	0.58		0.59	0.59	
v/c Ratio		0.74			0.78		0.05	0.24		0.04	0.28	
Control Delay		46.1			49.8		4.1	5.6		6.9	9.6	
Queue Delay		0.0			0.0		0.0	0.0		0.0	0.0	
Total Delay		46.1			49.8		4.1	5.6		6.9	9.6	
LOS		D			D		A	A		A	A	
Approach Delay		46.1			49.8			5.5			9.5	
Approach LOS		D			D			A			A	

Intersection Summary

Cycle Length: 80
 Actuated Cycle Length: 80
 Offset: 32 (40%), Referenced to phase 2:NETL and 6:SWTL, Start of Yellow
 Control Type: Actuated-Coordinated
 Maximum v/c Ratio: 0.78
 Intersection Signal Delay: 18.1
 Intersection LOS: B
 Intersection Capacity Utilization 32.4%
 ICU Level of Service A
 Analysis Period (min) 15

Splits and Phases: 9: Velma Road & Congress Pkwy

Ø1	Ø2 (R)	Ø4
16 s	40 s	24 s
Ø5	Ø6 (R)	Ø8
16 s	40 s	24 s

Athens, Tennessee
 10: Dennis St & Decatur Pike

04/19/2019

Lane Group	SEL	SET	SER	NWL	NWT	NWR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations												
Traffic Volume (vph)	10	471	241	66	345	8	167	3	81	1	2	4
Future Volume (vph)	10	471	241	66	345	8	167	3	81	1	2	4
Lane Util. Factor	1.00	0.95	1.00	0.97	0.95	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Flt			0.850			0.850		0.861			0.900	
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1805	3374	1538	3433	3406	1615	1718	1562	0	1805	1282	0
Flt Permitted	0.434			0.950			0.950			0.950		
Satd. Flow (perm)	825	3374	1538	3433	3406	1615	1718	1562	0	1805	1282	0
Satd. Flow (RTOR)			242			186		100			8	
Adj. Flow (vph)	16	561	313	89	406	16	196	8	100	4	4	8
Lane Group Flow (vph)	16	561	313	89	406	16	196	108	0	4	12	0
Turn Type	pm+pt	NA	Perm	Prot	NA	Perm	Split	NA		Split	NA	
Protected Phases	5	2		1	6		4	4		3	3	
Permitted Phases	2		2			6						
Total Split (s)	16.0	54.0	54.0	20.0	58.0	58.0	30.0	30.0		16.0	16.0	
Total Lost Time (s)	7.0	6.7	6.7	7.5	6.7	6.7	8.2	8.2		8.3	8.3	
Act Effct Green (s)	60.5	60.8	60.8	12.5	75.2	75.2	18.1	18.1		6.5	6.5	
Actuated g/C Ratio	0.50	0.51	0.51	0.10	0.63	0.63	0.15	0.15		0.05	0.05	
v/c Ratio	0.03	0.33	0.35	0.25	0.19	0.01	0.76	0.34		0.04	0.16	
Control Delay	20.3	20.2	6.8	41.5	4.6	0.0	67.0	12.8		54.0	38.8	
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Total Delay	20.3	20.2	6.8	41.5	4.6	0.0	67.0	12.8		54.0	38.8	
LOS	C	C	A	D	A	A	E	B		D	D	
Approach Delay		15.5			10.9			47.8			42.6	
Approach LOS		B			B			D			D	

Intersection Summary

Cycle Length: 120
 Actuated Cycle Length: 120
 Offset: 78 (65%), Referenced to phase 6:NWT, Start of Yellow
 Control Type: Actuated-Coordinated
 Maximum v/c Ratio: 0.76
 Intersection Signal Delay: 20.1
 Intersection Capacity Utilization 52.6%
 Analysis Period (min) 15

Intersection LOS: C
 ICU Level of Service A

Splits and Phases: 10: Dennis St & Decatur Pike

Ø2	Ø1	Ø3	Ø4
54 s	20 s	16 s	30 s
Ø5	Ø6 (R)		
16 s	58 s		

Athens, Tennessee
 11: Decatur Pike & Dupit St

04/19/2019

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	27	589	1	1	550	29	0	0	1	37	0	16
Future Volume (vph)	27	589	1	1	550	29	0	0	1	37	0	16
Lane Util. Factor	1.00	0.95	0.95	1.00	0.95	0.95	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.999			0.992			0.850				0.850
Flt Protected	0.950			0.950						0.950		
Satd. Flow (prot)	1736	3436	0	1805	3420	0	1900	1615	0	1805	1524	0
Flt Permitted	0.364			0.371						0.755		
Satd. Flow (perm)	665	3436	0	705	3420	0	1900	1615	0	1434	1524	0
Satd. Flow (RTOR)		1			10			259			382	
Adj. Flow (vph)	32	736	4	4	604	36	0	0	4	64	0	20
Lane Group Flow (vph)	32	740	0	4	640	0	0	4	0	64	20	0
Turn Type	pm+pt	NA		Perm	NA		Perm	NA		Perm	NA	
Protected Phases	1	6			2			4			4	
Permitted Phases	6	6		2	2		4	4		4	4	
Total Split (s)	15.0	59.0		44.0	44.0		21.0	21.0		21.0	21.0	
Total Lost Time (s)	5.6	5.6		6.0	6.0		6.6	6.6		6.6	6.6	
Act Effct Green (s)	61.1	62.3		57.1	57.1			9.6		9.6	9.6	
Actuated g/C Ratio	0.76	0.78		0.71	0.71			0.12		0.12	0.12	
v/c Ratio	0.05	0.28		0.01	0.26			0.01		0.37	0.04	
Control Delay	3.7	3.9		14.0	9.6			0.0		38.3	0.1	
Queue Delay	0.0	0.0		0.0	0.0			0.0		0.0	0.0	
Total Delay	3.7	3.9		14.0	9.6			0.0		38.3	0.1	
LOS	A	A		B	A			A		D	A	
Approach Delay		3.9			9.6						29.2	
Approach LOS		A			A						C	

Intersection Summary

Cycle Length: 80

Actuated Cycle Length: 80

Offset: 43 (54%), Referenced to phase 2:WBTL, Start of Yellow

Control Type: Actuated-Coordinated

Maximum v/c Ratio: 0.37

Intersection Signal Delay: 7.7

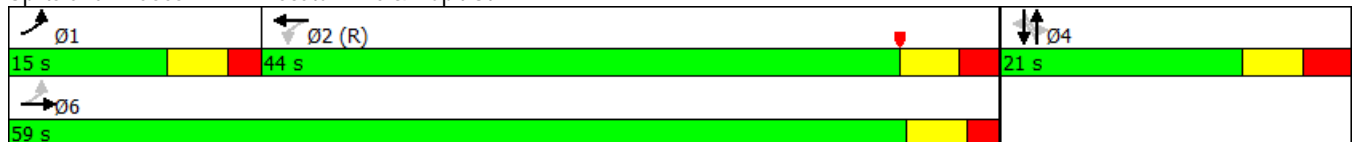
Intersection LOS: A

Intersection Capacity Utilization 41.3%

ICU Level of Service A

Analysis Period (min) 15

Splits and Phases: 11: Decatur Pike & Dupit St



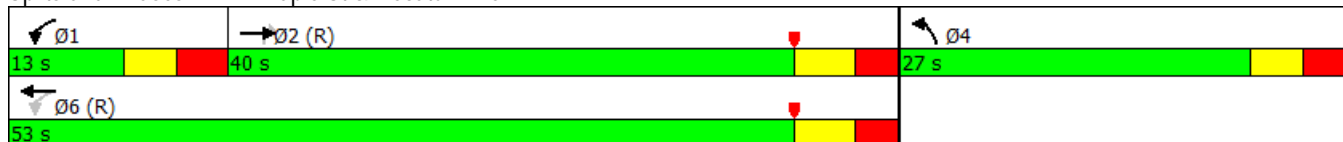


Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↑↑		↶	↑↑	↶	↷
Traffic Volume (vph)	504	140	14	447	127	7
Future Volume (vph)	504	140	14	447	127	7
Lane Util. Factor	0.95	0.95	1.00	0.95	1.00	1.00
Frt	0.967					0.850
Flt Protected			0.950		0.950	
Satd. Flow (prot)	3422	0	1770	3539	1770	1583
Flt Permitted			0.330		0.950	
Satd. Flow (perm)	3422	0	615	3539	1770	1583
Satd. Flow (RTOR)	55					8
Adj. Flow (vph)	548	152	15	486	138	8
Lane Group Flow (vph)	700	0	15	486	138	8
Turn Type	NA		pm+pt	NA	Prot	Perm
Protected Phases	2		1	6	4	
Permitted Phases			6			2
Total Split (s)	40.0		13.0	53.0	27.0	40.0
Total Lost Time (s)	6.2		6.1	6.2	6.1	6.2
Act Effct Green (s)	53.5		56.1	56.0	11.7	53.5
Actuated g/C Ratio	0.67		0.70	0.70	0.15	0.67
v/c Ratio	0.30		0.03	0.20	0.53	0.01
Control Delay	4.6		4.6	4.8	38.7	5.0
Queue Delay	0.0		0.0	0.0	0.0	0.0
Total Delay	4.6		4.6	4.8	38.7	5.0
LOS	A		A	A	D	A
Approach Delay	4.6			4.8	36.8	
Approach LOS	A			A	D	

Intersection Summary

Cycle Length: 80
 Actuated Cycle Length: 80
 Offset: 71 (89%), Referenced to phase 2:EBT and 6:WBTL, Start of Yellow
 Control Type: Actuated-Coordinated
 Maximum v/c Ratio: 0.53
 Intersection Signal Delay: 8.2
 Intersection Capacity Utilization 41.2%
 Analysis Period (min) 15
 Intersection LOS: A
 ICU Level of Service A

Splits and Phases: 12: Maple St & Decatur Pike



Athens, Tennessee
 1: Congress Parkway & W Rocky Mount Rd

04/19/2019

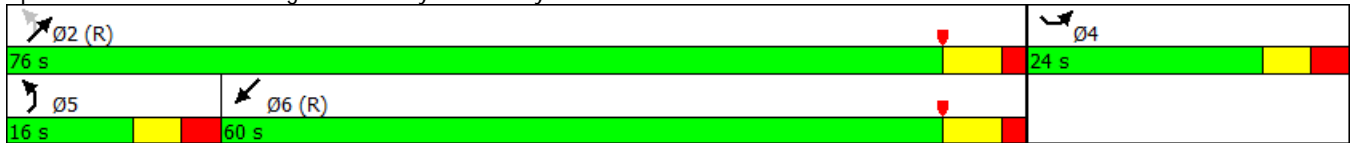


Lane Group	SEL	SER	NEL	NET	SWT	SWR
Lane Configurations						
Traffic Volume (vph)	60	17	9	352	371	43
Future Volume (vph)	60	17	9	352	371	43
Lane Util. Factor	1.00	1.00	1.00	0.95	0.95	0.95
Frt	0.971				0.985	
Flt Protected	0.962		0.950			
Satd. Flow (prot)	1775	0	1752	3610	3368	0
Flt Permitted	0.962		0.444			
Satd. Flow (perm)	1775	0	819	3610	3368	0
Satd. Flow (RTOR)	12				19	
Adj. Flow (vph)	68	19	10	387	417	48
Lane Group Flow (vph)	87	0	10	387	465	0
Turn Type	Prot		pm+pt	NA	NA	
Protected Phases	4		5	2	6	
Permitted Phases			2			
Total Split (s)	24.0		16.0	76.0	60.0	
Total Lost Time (s)	6.5		6.6	6.3	6.3	
Act Effect Green (s)	10.1		79.7	81.3	78.8	
Actuated g/C Ratio	0.10		0.80	0.81	0.79	
v/c Ratio	0.46		0.01	0.13	0.18	
Control Delay	43.8		3.3	3.0	4.2	
Queue Delay	0.0		0.0	0.0	0.0	
Total Delay	43.8		3.3	3.0	4.2	
LOS	D		A	A	A	
Approach Delay	43.8			3.0	4.2	
Approach LOS	D			A	A	

Intersection Summary

Cycle Length: 100
 Actuated Cycle Length: 100
 Offset: 42 (42%), Referenced to phase 2:NETL and 6:SWT, Start of Yellow
 Control Type: Actuated-Coordinated
 Maximum v/c Ratio: 0.46
 Intersection Signal Delay: 7.3
 Intersection Capacity Utilization 29.8%
 Analysis Period (min) 15
 Intersection LOS: A
 ICU Level of Service A

Splits and Phases: 1: Congress Parkway & W Rocky Mount Rd



Athens, Tennessee
 2: Congress Parkway & E Rocky Mount Road

04/19/2019

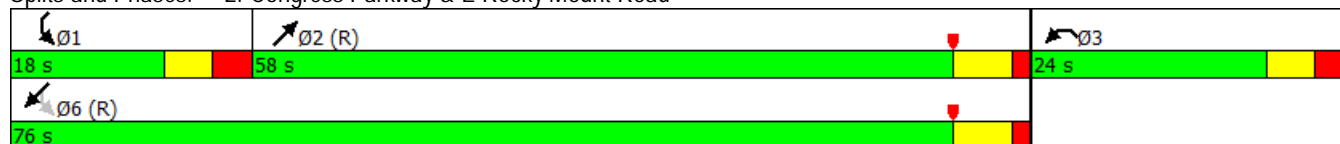


Lane Group	NWL	NWR	NET	NER	SWL	SWT
Lane Configurations						
Traffic Volume (vph)	57	45	350	62	61	357
Future Volume (vph)	57	45	350	62	61	357
Lane Util. Factor	1.00	1.00	0.95	0.95	1.00	0.95
Frt	0.941		0.977			
Flt Protected	0.973				0.950	
Satd. Flow (prot)	1696	0	3439	0	1770	3406
Flt Permitted	0.973				0.445	
Satd. Flow (perm)	1696	0	3439	0	829	3406
Satd. Flow (RTOR)	34		30			
Adj. Flow (vph)	61	48	385	68	69	401
Lane Group Flow (vph)	109	0	453	0	69	401
Turn Type	Prot		NA		pm+pt	NA
Protected Phases	3		2		1	6
Permitted Phases					6	
Total Split (s)	24.0		58.0		18.0	76.0
Total Lost Time (s)	6.6		5.9		6.6	5.9
Act Effct Green (s)	10.4		66.4		76.4	77.1
Actuated g/C Ratio	0.10		0.66		0.76	0.77
v/c Ratio	0.53		0.20		0.10	0.15
Control Delay	38.2		5.9		1.0	1.2
Queue Delay	0.0		0.0		0.0	0.0
Total Delay	38.2		5.9		1.0	1.2
LOS	D		A		A	A
Approach Delay	38.2		5.9			1.2
Approach LOS	D		A			A

Intersection Summary

Cycle Length: 100
 Actuated Cycle Length: 100
 Offset: 33 (33%), Referenced to phase 2:NET and 6:SWTL, Start of Yellow
 Control Type: Actuated-Coordinated
 Maximum v/c Ratio: 0.53
 Intersection Signal Delay: 7.2 Intersection LOS: A
 Intersection Capacity Utilization 39.3% ICU Level of Service A
 Analysis Period (min) 15

Splits and Phases: 2: Congress Parkway & E Rocky Mount Road



Athens, Tennessee
3: Congress Parkway & Dennis St

04/19/2019

Lane Group	NBL	NBT	NBR	SBL	SBT	SBR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations												
Traffic Volume (vph)	8	142	114	55	109	90	99	322	9	129	360	39
Future Volume (vph)	8	142	114	55	109	90	99	322	9	129	360	39
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.95	1.00	1.00	0.95	1.00
Frt		0.934			0.935				0.850			0.850
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1823	1735	0	1796	1719	0	1770	3574	1615	1770	3406	1615
Flt Permitted	0.610			0.302			0.486			0.506		
Satd. Flow (perm)	1171	1735	0	571	1719	0	905	3574	1615	943	3406	1615
Satd. Flow (RTOR)		36			34				218			218
Adj. Flow (vph)	20	163	128	73	136	103	148	358	12	148	419	60
Lane Group Flow (vph)	20	291	0	73	239	0	148	358	12	148	419	60
Turn Type	pm+pt	NA		pm+pt	NA		pm+pt	NA	Perm	pm+pt	NA	Perm
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases	4			8			2		2	6		6
Total Split (s)	16.0	28.0		16.0	28.0		18.0	38.0	38.0	18.0	38.0	38.0
Total Lost Time (s)	6.9	7.3		7.5	7.3		6.8	6.7	6.7	8.2	6.7	6.7
Act Effect Green (s)	24.1	18.5		28.6	25.4		47.2	37.8	37.8	46.2	38.8	38.8
Actuated g/C Ratio	0.24	0.18		0.29	0.25		0.47	0.38	0.38	0.46	0.39	0.39
v/c Ratio	0.06	0.83		0.28	0.52		0.29	0.26	0.02	0.29	0.32	0.08
Control Delay	21.2	54.6		25.0	31.7		12.1	18.1	0.0	9.4	15.5	0.5
Queue Delay	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	21.2	54.6		25.0	31.7		12.1	18.1	0.0	9.4	15.5	0.5
LOS	C	D		C	C		B	B	A	A	B	A
Approach Delay		52.4			30.1			16.0			12.6	
Approach LOS		D			C			B			B	

Intersection Summary

Cycle Length: 100
 Actuated Cycle Length: 100
 Offset: 47.7 (48%), Referenced to phase 2:NETL and 6:SWTL, Start of Yellow
 Control Type: Actuated-Coordinated
 Maximum v/c Ratio: 0.83
 Intersection Signal Delay: 23.7 Intersection LOS: C
 Intersection Capacity Utilization 63.8% ICU Level of Service B
 Analysis Period (min) 15

Splits and Phases: 3: Congress Parkway & Dennis St

Ø1 18 s	Ø2 (R) 38 s	Ø3 16 s	Ø4 28 s
Ø5 18 s	Ø6 (R) 38 s	Ø7 16 s	Ø8 28 s

Athens, Tennessee
 4: Congress Parkway & Lowes Drvwy

04/19/2019

	SEL	SET	SER	NWL	NWT	NWR	NEL	NET	NER	SWL	SWT	SWR	
Lane Group													
Lane Configurations													
Traffic Volume (vph)	12	0	4	35	1	115	2	461	54	124	462	14	
Future Volume (vph)	12	0	4	35	1	115	2	461	54	124	462	14	
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.95	1.00	1.00	0.95	0.95	
Frt		0.850				0.850			0.850		0.991		
Flt Protected	0.950				0.956		0.950		0.950				
Satd. Flow (prot)	1805	1615	0	0	1835	1568	1805	3471	1583	1752	3434	0	
Flt Permitted	0.726				0.738		0.453		0.410				
Satd. Flow (perm)	1379	1615	0	0	1416	1568	861	3471	1583	756	3434	0	
Satd. Flow (RTOR)		444				151			129		10		
Adj. Flow (vph)	20	0	8	44	4	151	4	530	60	159	502	32	
Lane Group Flow (vph)	20	8	0	0	48	151	4	530	60	159	534	0	
Turn Type	Perm	NA		Perm	NA	Perm	pm+pt	NA	Perm	pm+pt	NA		
Protected Phases		8			4		5		2		1		
Permitted Phases	8			4		4		2		2		6	
Total Split (s)	24.0	24.0		24.0	24.0	24.0	16.0	54.0	54.0	22.0	60.0		
Total Lost Time (s)	7.8	7.8			7.8	7.8	7.0	6.6	6.6	6.6	6.9		
Act Effct Green (s)	8.8	8.8			8.8	8.8	67.5	62.3	62.3	76.3	74.0		
Actuated g/C Ratio	0.09	0.09			0.09	0.09	0.68	0.62	0.62	0.76	0.74		
v/c Ratio	0.17	0.01			0.39	0.55	0.01	0.25	0.06	0.24	0.21		
Control Delay	43.9	0.0			51.2	15.0	2.0	6.0	0.2	1.7	2.8		
Queue Delay	0.0	0.0			0.0	0.0	0.0	0.0	0.0	0.0	0.0		
Total Delay	43.9	0.0			51.2	15.0	2.0	6.0	0.2	1.7	2.8		
LOS	D	A			D	B	A	A	A	A	A		
Approach Delay		31.4			23.7			5.4			2.5		
Approach LOS		C			C			A			A		

Intersection Summary

Cycle Length: 100
 Actuated Cycle Length: 100
 Offset: 69 (69%), Referenced to phase 2:NETL and 6:SWTL, Start of Yellow
 Control Type: Actuated-Coordinated
 Maximum v/c Ratio: 0.55
 Intersection Signal Delay: 7.0 Intersection LOS: A
 Intersection Capacity Utilization 45.8% ICU Level of Service A
 Analysis Period (min) 15

Splits and Phases: 4: Congress Parkway & Lowes Drvwy

Ø1	Ø2 (R)	Ø4
22 s	54 s	24 s
Ø5	Ø6 (R)	Ø8
16 s	60 s	24 s

Athens, Tennessee

6: Congress Parkway & Decatur Pike

04/19/2019

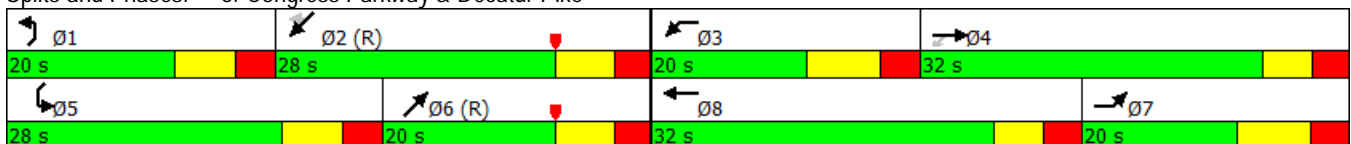


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations												
Traffic Volume (vph)	143	457	118	226	510	183	152	324	256	216	352	167
Future Volume (vph)	143	457	118	226	510	183	152	324	256	216	352	167
Lane Util. Factor	1.00	0.95	1.00	0.97	0.95	1.00	0.97	0.95	1.00	1.00	0.95	1.00
Frt		0.850			0.850			0.850			0.850	
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1736	3440	1615	3502	3406	1583	3433	3505	1615	1770	3343	1599
Flt Permitted	0.950			0.950			0.950			0.950		
Satd. Flow (perm)	1736	3440	1615	3502	3406	1583	3433	3505	1615	1770	3343	1599
Satd. Flow (RTOR)			302			466			466			305
Adj. Flow (vph)	181	466	140	260	580	193	188	368	272	237	405	192
Lane Group Flow (vph)	181	466	140	260	580	193	188	368	272	237	405	192
Turn Type	Prot	NA	Perm	Prot	NA	Free	Prot	NA	Free	Prot	NA	Perm
Protected Phases	7	4		3	8		1	6		5	2	
Permitted Phases			4			Free			Free			2
Total Split (s)	20.0	32.0	32.0	20.0	32.0		20.0	20.0		28.0	28.0	28.0
Total Lost Time (s)	8.4	6.6	6.6	8.5	6.6		7.5	7.2		7.5	7.2	7.2
Act Effct Green (s)	13.3	24.1	24.1	11.0	21.9	100.0	10.5	17.7	100.0	17.5	24.6	24.6
Actuated g/C Ratio	0.13	0.24	0.24	0.11	0.22	1.00	0.10	0.18	1.00	0.18	0.25	0.25
v/c Ratio	0.79	0.56	0.23	0.68	0.78	0.12	0.52	0.60	0.17	0.77	0.49	0.31
Control Delay	47.3	18.1	0.7	49.7	29.5	0.1	64.8	29.0	0.2	56.5	24.2	2.6
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	47.3	18.1	0.7	49.7	29.5	0.1	64.8	29.0	0.2	56.5	24.2	2.6
LOS	D	B	A	D	C	A	E	C	A	E	C	A
Approach Delay		21.7			29.1			27.7			28.4	
Approach LOS		C			C			C			C	

Intersection Summary

Cycle Length: 100
 Actuated Cycle Length: 100
 Offset: 0 (0%), Referenced to phase 2:SWT and 6:NET, Start of Yellow, Master Intersection
 Control Type: Actuated-Coordinated
 Maximum v/c Ratio: 0.79
 Intersection Signal Delay: 26.9 Intersection LOS: C
 Intersection Capacity Utilization 68.5% ICU Level of Service C
 Analysis Period (min) 15

Splits and Phases: 6: Congress Parkway & Decatur Pike



Athens, Tennessee
 7: Congress Parkway & Congress Crossing

04/19/2019

Lane Group	SEL	SET	SER	NWL	NWT	NWR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations												
Traffic Volume (vph)	73	0	87	0	0	27	42	601	2	0	645	82
Future Volume (vph)	73	0	87	0	0	27	42	601	2	0	645	82
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.95	1.00	1.00	0.95	1.00
Fr't			0.850			0.865			0.850			0.850
Flt Protected	0.950						0.950					
Satd. Flow (prot)	1814	0	1577	0	0	1644	1770	3505	1615	0	3438	1615
Flt Permitted	0.950						0.343					
Satd. Flow (perm)	1814	0	1577	0	0	1644	639	3505	1615	0	3438	1615
Satd. Flow (RTOR)			127			311			38			120
Adj. Flow (vph)	88	0	107	0	0	36	48	646	8	0	679	100
Lane Group Flow (vph)	88	0	107	0	0	36	48	646	8	0	679	100
Turn Type	Prot		Prot			Perm	pm+pt	NA	Perm		NA	Perm
Protected Phases	4		4				1	6			2	
Permitted Phases						4	6		6			2
Total Split (s)	26.0		26.0			26.0	18.0	74.0	74.0		56.0	56.0
Total Lost Time (s)	6.5		6.5			6.5	7.5	7.1	7.1		7.1	7.1
Act Effct Green (s)	10.5		10.5			10.5	75.5	75.9	75.9		67.4	67.4
Actuated g/C Ratio	0.10		0.10			0.10	0.76	0.76	0.76		0.67	0.67
v/c Ratio	0.46		0.38			0.08	0.09	0.24	0.01		0.29	0.09
Control Delay	49.4		9.2			0.3	2.7	2.4	0.0		9.7	3.3
Queue Delay	0.0		0.0			0.0	0.0	0.0	0.0		0.0	0.0
Total Delay	49.4		9.2			0.3	2.7	2.4	0.0		9.7	3.3
LOS	D		A			A	A	A	A		A	A
Approach Delay		27.3			0.3			2.4			8.9	
Approach LOS		C			A			A			A	

Intersection Summary

Cycle Length: 100
 Actuated Cycle Length: 100
 Offset: 19.9 (20%), Referenced to phase 2:SWT and 6:NETL, Start of Yellow
 Control Type: Actuated-Coordinated
 Maximum v/c Ratio: 0.46
 Intersection Signal Delay: 8.2 Intersection LOS: A
 Intersection Capacity Utilization 42.0% ICU Level of Service A
 Analysis Period (min) 15

Splits and Phases: 7: Congress Parkway & Congress Crossing



Athens, Tennessee
8: Congress Parkway & Tellico Ave

04/19/2019

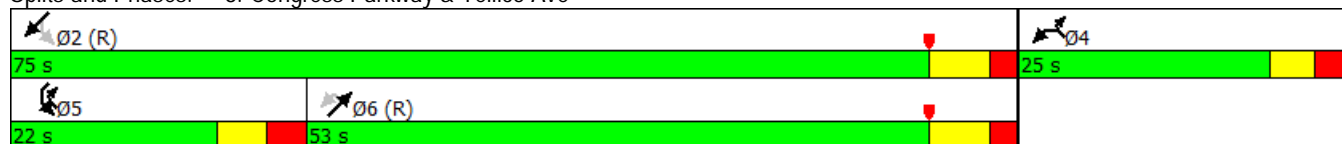


Lane Group	NWL	NWR	NEU	NET	NER	SWL	SWT
Lane Configurations	↖	↗	↘	↙		↖	↗
Traffic Volume (vph)	78	72	2	624	71	87	635
Future Volume (vph)	78	72	2	624	71	87	635
Lane Util. Factor	1.00	1.00	1.00	0.95	0.95	1.00	0.95
Frt		0.850		0.982			
Flt Protected	0.950		0.950			0.950	
Satd. Flow (prot)	1703	1615	1805	3424	0	1753	3506
Flt Permitted	0.950		0.392			0.262	
Satd. Flow (perm)	1703	1615	745	3424	0	483	3506
Satd. Flow (RTOR)		96		19			
Adj. Flow (vph)	100	96	4	664	88	113	683
Lane Group Flow (vph)	100	96	4	752	0	113	683
Turn Type	Prot	pt+ov	Perm	NA		pm+pt	NA
Protected Phases	4	4 5		6		5	2
Permitted Phases			6			2	
Total Split (s)	25.0		53.0	53.0		22.0	75.0
Total Lost Time (s)	6.3		6.7	6.7		6.6	6.7
Act Effect Green (s)	11.2	40.7	46.3	46.3		75.9	75.8
Actuated g/C Ratio	0.11	0.41	0.46	0.46		0.76	0.76
v/c Ratio	0.53	0.13	0.01	0.47		0.17	0.26
Control Delay	51.1	4.4	19.0	23.0		3.8	3.3
Queue Delay	0.0	0.0	0.0	0.0		0.0	0.0
Total Delay	51.1	4.4	19.0	23.0		3.8	3.3
LOS	D	A	B	C		A	A
Approach Delay	28.2			23.0			3.4
Approach LOS	C			C			A

Intersection Summary

Cycle Length: 100
 Actuated Cycle Length: 100
 Offset: 69 (69%), Referenced to phase 2:SWTL and 6:NETU, Start of Yellow
 Control Type: Actuated-Coordinated
 Maximum v/c Ratio: 0.53
 Intersection Signal Delay: 14.6
 Intersection Capacity Utilization 51.5%
 Analysis Period (min) 15
 Intersection LOS: B
 ICU Level of Service A

Splits and Phases: 8: Congress Parkway & Tellico Ave



Athens, Tennessee
 9: Velma Road & Congress Pkwy

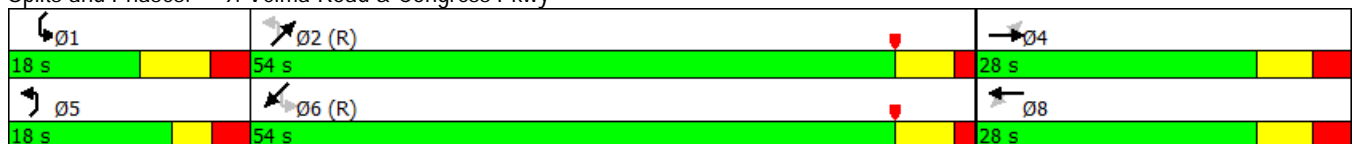
04/19/2019

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations												
Traffic Volume (vph)	61	14	23	61	16	22	38	642	17	20	618	69
Future Volume (vph)	61	14	23	61	16	22	38	642	17	20	618	69
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.95	0.95	1.00	0.95	0.95
Frt		0.957			0.955			0.993			0.981	
Flt Protected		0.974			0.976		0.950			0.950		
Satd. Flow (prot)	0	1679	0	0	1725	0	1805	3485	0	1805	3409	0
Flt Permitted		0.757			0.762		0.354			0.353		
Satd. Flow (perm)	0	1305	0	0	1347	0	673	3485	0	671	3409	0
Satd. Flow (RTOR)		21			23		7			22		
Adj. Flow (vph)	80	24	48	72	24	48	58	669	32	30	631	92
Lane Group Flow (vph)	0	152	0	0	144	0	58	701	0	30	723	0
Turn Type	Perm	NA		Perm	NA		pm+pt	NA		pm+pt	NA	
Protected Phases		4			8		5	2		1	6	
Permitted Phases	4			8			2			6		
Total Split (s)	28.0	28.0		28.0	28.0		18.0	54.0		18.0	54.0	
Total Lost Time (s)		7.2			7.2		5.9	6.0		8.2	6.0	
Act Effct Green (s)		14.5			14.5		67.8	63.5		65.0	62.1	
Actuated g/C Ratio		0.14			0.14		0.68	0.64		0.65	0.62	
v/c Ratio		0.73			0.67		0.11	0.32		0.06	0.34	
Control Delay		54.8			48.3		1.8	2.3		6.2	10.7	
Queue Delay		0.0			0.0		0.0	0.0		0.0	0.0	
Total Delay		54.8			48.3		1.8	2.3		6.2	10.7	
LOS		D			D		A	A		A	B	
Approach Delay		54.8			48.3			2.3			10.6	
Approach LOS		D			D			A			B	

Intersection Summary

Cycle Length: 100
 Actuated Cycle Length: 100
 Offset: 75 (75%), Referenced to phase 2:NETL and 6:SWTL, Start of Yellow
 Control Type: Actuated-Coordinated
 Maximum v/c Ratio: 0.73
 Intersection Signal Delay: 13.8 Intersection LOS: B
 Intersection Capacity Utilization 47.8% ICU Level of Service A
 Analysis Period (min) 15

Splits and Phases: 9: Velma Road & Congress Pkwy



Athens, Tennessee
 10: Dennis St & Decatur Pike

04/19/2019



Lane Group	SEL	SET	SER	NWL	NWT	NWR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations												
Traffic Volume (vph)	41	469	209	214	549	48	211	49	215	46	49	51
Future Volume (vph)	41	469	209	214	549	48	211	49	215	46	49	51
Lane Util. Factor	1.00	0.95	1.00	0.97	0.95	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt			0.850			0.850		0.875			0.925	
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1770	3374	1553	3467	3406	1583	1718	1646	0	1805	1690	0
Flt Permitted	0.186			0.950			0.950			0.950		
Satd. Flow (perm)	346	3374	1553	3467	3406	1583	1718	1646	0	1805	1690	0
Satd. Flow (RTOR)			229			224		219			40	
Adj. Flow (vph)	56	510	235	282	578	68	237	56	283	72	72	72
Lane Group Flow (vph)	56	510	235	282	578	68	237	339	0	72	144	0
Turn Type	pm+pt	NA	Perm	Prot	NA	Perm	Split	NA		Split	NA	
Protected Phases	5	2		1	6		4	4		3	3	
Permitted Phases	2		2			6						
Total Split (s)	17.0	35.0	35.0	22.0	40.0	40.0	25.0	25.0		18.0	18.0	
Total Lost Time (s)	7.0	6.7	6.7	7.5	6.7	6.7	8.2	8.2		8.3	8.3	
Act Effct Green (s)	29.3	29.6	29.6	14.5	39.3	39.3	16.1	16.1		9.1	9.1	
Actuated g/C Ratio	0.29	0.30	0.30	0.14	0.39	0.39	0.16	0.16		0.09	0.09	
v/c Ratio	0.26	0.51	0.38	0.56	0.43	0.09	0.86	0.76		0.44	0.76	
Control Delay	30.2	31.8	6.1	33.0	14.8	0.4	69.2	26.1		51.5	57.0	
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Total Delay	30.2	31.8	6.1	33.0	14.8	0.4	69.2	26.1		51.5	57.0	
LOS	C	C	A	C	B	A	E	C		D	E	
Approach Delay		24.2			19.3			43.8			55.2	
Approach LOS		C			B			D			E	

Intersection Summary

Cycle Length: 100

Actuated Cycle Length: 100

Offset: 36 (36%), Referenced to phase 2:SETL and 6:NWT, Start of Yellow

Control Type: Actuated-Coordinated

Maximum v/c Ratio: 0.86

Intersection Signal Delay: 29.5

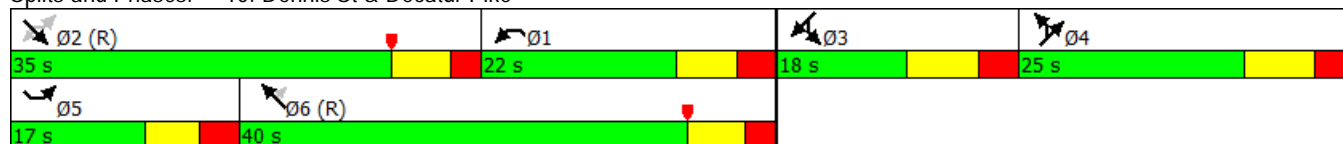
Intersection LOS: C

Intersection Capacity Utilization 66.2%

ICU Level of Service C

Analysis Period (min) 15

Splits and Phases: 10: Dennis St & Decatur Pike



Athens, Tennessee
11: Decatur Pike & Dupit St

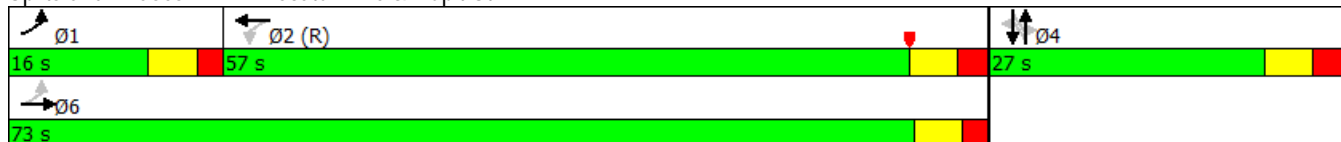
04/19/2019

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	50	877	5	3	877	75	5	0	5	142	0	51
Future Volume (vph)	50	877	5	3	877	75	5	0	5	142	0	51
Lane Util. Factor	1.00	0.95	0.95	1.00	0.95	0.95	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.999			0.987			0.850			0.850	
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1805	3469	0	1805	3438	0	1805	1615	0	1787	1583	0
Flt Permitted	0.206			0.295			0.718			0.752		
Satd. Flow (perm)	391	3469	0	560	3438	0	1364	1615	0	1415	1583	0
Satd. Flow (RTOR)		2			15			167			263	
Adj. Flow (vph)	64	964	8	8	943	91	12	0	8	167	0	60
Lane Group Flow (vph)	64	972	0	8	1034	0	12	8	0	167	60	0
Turn Type	pm+pt	NA		Perm	NA		Perm	NA		Perm	NA	
Protected Phases	1	6			2			4			4	
Permitted Phases	6	6		2	2		4	4		4	4	
Total Split (s)	16.0	73.0		57.0	57.0		27.0	27.0		27.0	27.0	
Total Lost Time (s)	5.6	5.6		6.0	6.0		6.6	6.6		6.6	6.6	
Act Effct Green (s)	71.5	71.5		61.2	61.2		16.3	16.3		16.3	16.3	
Actuated g/C Ratio	0.72	0.72		0.61	0.61		0.16	0.16		0.16	0.16	
v/c Ratio	0.17	0.39		0.02	0.49		0.05	0.02		0.73	0.13	
Control Delay	4.0	3.2		8.7	11.0		33.6	0.0		57.5	0.5	
Queue Delay	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Delay	4.0	3.2		8.7	11.0		33.6	0.0		57.5	0.5	
LOS	A	A		A	B		C	A		E	A	
Approach Delay		3.3			11.0			20.2			42.4	
Approach LOS		A			B			C			D	

Intersection Summary

Cycle Length: 100
 Actuated Cycle Length: 100
 Offset: 22 (22%), Referenced to phase 2:WBTL, Start of Yellow
 Control Type: Actuated-Coordinated
 Maximum v/c Ratio: 0.73
 Intersection Signal Delay: 10.7 Intersection LOS: B
 Intersection Capacity Utilization 66.3% ICU Level of Service C
 Analysis Period (min) 15

Splits and Phases: 11: Decatur Pike & Dupit St



Athens, Tennessee

12: Maple St & Decatur Pike

04/19/2019

Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↑↑		↑	↑↑	↑	↑
Traffic Volume (vph)	834	175	24	686	261	45
Future Volume (vph)	834	175	24	686	261	45
Lane Util. Factor	0.95	0.95	1.00	0.95	1.00	1.00
Fr _t	0.974					0.850
Fl _t Protected			0.950		0.950	
Satd. Flow (prot)	3447	0	1770	3539	1770	1583
Fl _t Permitted			0.186		0.950	
Satd. Flow (perm)	3447	0	346	3539	1770	1583
Satd. Flow (RTOR)	36					27
Adj. Flow (vph)	907	190	26	746	284	49
Lane Group Flow (vph)	1097	0	26	746	284	49
Turn Type	NA		pm+pt	NA	Prot	Perm
Protected Phases	2		1	6	4	
Permitted Phases			6			4
Total Split (s)	57.0		16.0	73.0	27.0	27.0
Total Lost Time (s)	6.2		6.1	6.2	6.1	6.1
Act Effect Green (s)	63.4		68.6	68.5	19.2	19.2
Actuated g/C Ratio	0.63		0.69	0.68	0.19	0.19
v/c Ratio	0.50		0.08	0.31	0.84	0.15
Control Delay	8.5		6.1	6.9	60.4	19.4
Queue Delay	0.0		0.0	0.0	0.0	0.0
Total Delay	8.5		6.1	6.9	60.4	19.4
LOS	A		A	A	E	B
Approach Delay	8.5			6.9	54.4	
Approach LOS	A			A	D	

Intersection Summary

Cycle Length: 100
 Actuated Cycle Length: 100
 Offset: 16 (16%), Referenced to phase 2:EBT and 6:WBTL, Start of Yellow
 Control Type: Actuated-Coordinated
 Maximum v/c Ratio: 0.84
 Intersection Signal Delay: 14.9 Intersection LOS: B
 Intersection Capacity Utilization 53.3% ICU Level of Service A
 Analysis Period (min) 15

Splits and Phases: 12: Maple St & Decatur Pike



Athens, Tennessee
 1: Congress Parkway & W Rocky Mount Rd

04/19/2019



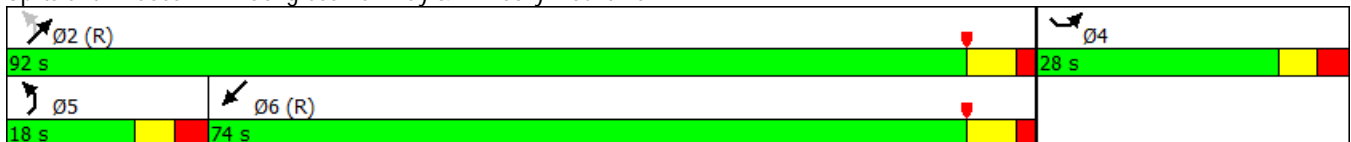
Lane Group	SEL	SER	NEL	NET	SWT	SWR
Lane Configurations						
Traffic Volume (vph)	60	17	9	352	371	43
Future Volume (vph)	60	17	9	352	371	43
Lane Util. Factor	1.00	1.00	1.00	0.95	0.95	0.95
Frt	0.971		0.985			
Flt Protected	0.962	0.950				
Satd. Flow (prot)	1775	0	1752	3610	3368	0
Flt Permitted	0.962	0.452				
Satd. Flow (perm)	1775	0	834	3610	3368	0
Satd. Flow (RTOR)	10		17			
Adj. Flow (vph)	68	19	10	387	417	48
Lane Group Flow (vph)	87	0	10	387	465	0
Turn Type	Prot		pm+pt	NA	NA	
Protected Phases	4		5	2	6	
Permitted Phases			2			
Total Split (s)	28.0		18.0	92.0	74.0	
Total Lost Time (s)	6.5		6.6	6.3	6.3	
Act Effect Green (s)	10.9		98.9	100.4	97.9	
Actuated g/C Ratio	0.09		0.82	0.84	0.82	
v/c Ratio	0.51		0.01	0.13	0.17	
Control Delay	55.9		3.0	2.7	2.4	
Queue Delay	0.0		0.0	0.0	0.2	
Total Delay	55.9		3.0	2.7	2.5	
LOS	E		A	A	A	
Approach Delay	55.9			2.7	2.5	
Approach LOS	E			A	A	

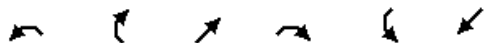
Intersection Summary

Cycle Length: 120
 Actuated Cycle Length: 120
 Offset: 84 (70%), Referenced to phase 2:NETL and 6:SWT, Start of Yellow
 Control Type: Actuated-Coordinated
 Maximum v/c Ratio: 0.51
 Intersection Signal Delay: 7.5
 Intersection Capacity Utilization 29.8%
 Analysis Period (min) 15

Intersection LOS: A
 ICU Level of Service A

Splits and Phases: 1: Congress Parkway & W Rocky Mount Rd





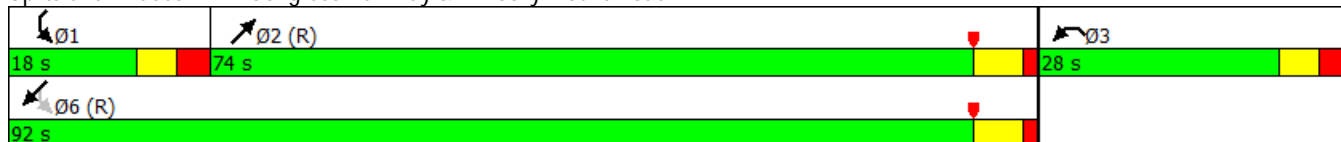
Lane Group	NWL	NWR	NET	NER	SWL	SWT
Lane Configurations						
Traffic Volume (vph)	57	45	350	62	61	357
Future Volume (vph)	57	45	350	62	61	357
Lane Util. Factor	1.00	1.00	0.95	0.95	1.00	0.95
Frt	0.941		0.977			
Flt Protected	0.973				0.950	
Satd. Flow (prot)	1696	0	3439	0	1770	3406
Flt Permitted	0.973				0.455	
Satd. Flow (perm)	1696	0	3439	0	848	3406
Satd. Flow (RTOR)	29		28			
Adj. Flow (vph)	61	48	385	68	69	401
Lane Group Flow (vph)	109	0	453	0	69	401
Turn Type	Prot		NA		pm+pt	NA
Protected Phases	3		2		1	6
Permitted Phases					6	
Total Split (s)	28.0		74.0		18.0	92.0
Total Lost Time (s)	6.6		5.9		6.6	5.9
Act Effct Green (s)	11.5		85.3		95.3	96.0
Actuated g/C Ratio	0.10		0.71		0.79	0.80
v/c Ratio	0.58		0.18		0.10	0.15
Control Delay	49.5		6.3		2.1	1.7
Queue Delay	0.0		0.2		0.0	0.0
Total Delay	49.5		6.6		2.1	1.7
LOS	D		A		A	A
Approach Delay	49.5		6.6			1.7
Approach LOS	D		A			A

Intersection Summary

Cycle Length: 120
 Actuated Cycle Length: 120
 Offset: 82 (68%), Referenced to phase 2:NET and 6:SWTL, Start of Yellow
 Control Type: Actuated-Coordinated
 Maximum v/c Ratio: 0.58
 Intersection Signal Delay: 8.9
 Intersection Capacity Utilization 39.3%
 Analysis Period (min) 15

Intersection LOS: A
 ICU Level of Service A

Splits and Phases: 2: Congress Parkway & E Rocky Mount Road



Lane Group	NBL	NBT	NBR	SBL	SBT	SBR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations												
Traffic Volume (vph)	8	142	114	55	109	90	99	322	9	129	360	39
Future Volume (vph)	8	142	114	55	109	90	99	322	9	129	360	39
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.95	1.00	1.00	0.95	1.00
Frt	0.934		0.935		0.850		0.850					
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1823	1735	0	1796	1719	0	1770	3574	1615	1770	3406	1615
Flt Permitted	0.549			0.257			0.490			0.510		
Satd. Flow (perm)	1054	1735	0	486	1719	0	913	3574	1615	950	3406	1615
Satd. Flow (RTOR)	29		28		182		182				182	
Adj. Flow (vph)	20	163	128	73	136	103	148	358	12	148	419	60
Lane Group Flow (vph)	20	291	0	73	239	0	148	358	12	148	419	60
Turn Type	pm+pt	NA		pm+pt	NA		pm+pt	NA	Perm	pm+pt	NA	Perm
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases	4			8			2		2	6		6
Total Split (s)	16.0	30.0		16.0	30.0		20.0	54.0	54.0	20.0	54.0	54.0
Total Lost Time (s)	6.9	7.3		7.5	7.3		6.8	6.7	6.7	8.2	6.7	6.7
Act Effct Green (s)	26.9	21.1		31.3	28.1		64.1	54.1	54.1	63.7	55.3	55.3
Actuated g/C Ratio	0.22	0.18		0.26	0.23		0.53	0.45	0.45	0.53	0.46	0.46
v/c Ratio	0.07	0.88		0.34	0.56		0.26	0.22	0.01	0.26	0.27	0.07
Control Delay	28.8	70.9		34.5	41.6		10.4	21.0	0.0	11.3	15.1	0.4
Queue Delay	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	28.8	70.9		34.5	41.6		10.4	21.0	0.0	11.3	15.1	0.4
LOS	C	E		C	D		B	C	A	B	B	A
Approach Delay	68.2		40.0		17.5		12.8					
Approach LOS	E		D		B		B					

Intersection Summary

Cycle Length: 120

Actuated Cycle Length: 120

Offset: 4 (3%), Referenced to phase 2:NETL and 6:SWTL, Start of Yellow

Control Type: Actuated-Coordinated

Maximum v/c Ratio: 0.88

Intersection Signal Delay: 28.7

Intersection LOS: C

Intersection Capacity Utilization 63.8%

ICU Level of Service B

Analysis Period (min) 15

Splits and Phases: 3: Congress Parkway & Dennis St



Lane Group	SEL	SET	SER	NWL	NWT	NWR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations												
Traffic Volume (vph)	12	0	4	35	1	115	2	461	54	124	462	14
Future Volume (vph)	12	0	4	35	1	115	2	461	54	124	462	14
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.95	1.00	1.00	0.95	0.95
Frt		0.850				0.850			0.850		0.991	
Flt Protected	0.950				0.956		0.950			0.950		
Satd. Flow (prot)	1805	1615	0	0	1835	1568	1805	3471	1583	1752	3434	0
Flt Permitted	0.726				0.738		0.453			0.419		
Satd. Flow (perm)	1379	1615	0	0	1416	1568	861	3471	1583	773	3434	0
Satd. Flow (RTOR)		446				159			167		9	
Adj. Flow (vph)	20	0	8	44	4	151	4	530	60	159	502	32
Lane Group Flow (vph)	20	8	0	0	48	151	4	530	60	159	534	0
Turn Type	Perm	NA		Perm	NA	Perm	pm+pt	NA	Perm	pm+pt	NA	
Protected Phases		8			4		5	2		1	6	
Permitted Phases	8			4		4	2		2	6		
Total Split (s)	28.0	28.0		28.0	28.0	28.0	16.0	68.0	68.0	24.0	76.0	
Total Lost Time (s)	7.8	7.8			7.8	7.8	7.0	6.6	6.6	6.6	6.9	
Act Effct Green (s)	9.4	9.4			9.4	9.4	86.8	81.6	81.6	95.6	93.3	
Actuated g/C Ratio	0.08	0.08			0.08	0.08	0.72	0.68	0.68	0.80	0.78	
v/c Ratio	0.19	0.01			0.43	0.56	0.01	0.22	0.05	0.23	0.20	
Control Delay	54.0	0.0			63.7	15.2	2.5	7.2	0.1	2.2	1.0	
Queue Delay	0.0	0.0			0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Total Delay	54.0	0.0			63.7	15.2	2.5	7.2	0.1	2.2	1.0	
LOS	D	A			E	B	A	A	A	A	A	
Approach Delay		38.6			26.9			6.4			1.2	
Approach LOS		D			C			A			A	

Intersection Summary

Cycle Length: 120

Actuated Cycle Length: 120

Offset: 15 (13%), Referenced to phase 2:NETL and 6:SWTL, Start of Yellow

Control Type: Actuated-Coordinated

Maximum v/c Ratio: 0.56

Intersection Signal Delay: 7.3

Intersection LOS: A

Intersection Capacity Utilization 45.8%

ICU Level of Service A

Analysis Period (min) 15

Splits and Phases: 4: Congress Parkway & Lowes Drvwy





Table with 13 columns (Lane Group: SEL, SET, SER, NWL, NWT, NWR, NEL, NET, NER, SWL, SWT, SWR) and 28 rows (Lane Configurations, Traffic Volume, Future Volume, Lane Util. Factor, Frt, Flt Protected, Satd. Flow, Flt Permitted, Satd. Flow, Satd. Flow (RTOR), Adj. Flow, Lane Group Flow, Turn Type, Protected Phases, Permitted Phases, Total Split, Total Lost Time, Act Effect Green, Actuated g/C Ratio, v/c Ratio, Control Delay, Queue Delay, Total Delay, LOS, Approach Delay, Approach LOS).

Intersection Summary

Cycle Length: 120
Actuated Cycle Length: 120
Offset: 17 (14%), Referenced to phase 2:SWTL and 6:NETL, Start of Yellow
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 0.38
Intersection Signal Delay: 14.1 Intersection LOS: B
Intersection Capacity Utilization 48.4% ICU Level of Service A
Analysis Period (min) 15

Splits and Phases: 5: Congress Parkway & Layman Road



Athens, Tennessee 6: Congress Parkway & Decatur Pike

04/19/2019

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations												
Traffic Volume (vph)	143	457	118	226	510	183	152	324	256	216	352	167
Future Volume (vph)	143	457	118	226	510	183	152	324	256	216	352	167
Lane Util. Factor	1.00	0.95	1.00	0.97	0.95	1.00	0.97	0.95	1.00	1.00	0.95	1.00
Flt		0.850				0.850			0.850			0.850
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1736	3440	1615	3502	3406	1583	3433	3505	1615	1770	3343	1599
Flt Permitted	0.950			0.950			0.950			0.950		
Satd. Flow (perm)	1736	3440	1615	3502	3406	1583	3433	3505	1615	1770	3343	1599
Satd. Flow (RTOR)			252			388			388			255
Adj. Flow (vph)	181	466	140	260	580	193	188	368	272	237	405	192
Lane Group Flow (vph)	181	466	140	260	580	193	188	368	272	237	405	192
Turn Type	Prot	NA	Perm	Prot	NA	Free	Prot	NA	Free	Prot	NA	Perm
Protected Phases	7	4		3	8		1	6		5	2	
Permitted Phases			4			Free			Free			2
Total Split (s)	24.0	37.0	37.0	25.0	38.0		20.0	30.0		28.0	38.0	38.0
Total Lost Time (s)	8.4	6.6	6.6	8.5	6.6		7.5	7.2		7.5	7.2	7.2
Act Effct Green (s)	16.3	28.0	28.0	13.9	25.6	120.0	12.5	29.0	120.0	19.3	35.8	35.8
Actuated g/C Ratio	0.14	0.23	0.23	0.12	0.21	1.00	0.10	0.24	1.00	0.16	0.30	0.30
v/c Ratio	0.77	0.58	0.25	0.64	0.80	0.12	0.53	0.43	0.17	0.83	0.41	0.29
Control Delay	51.8	25.9	1.2	40.3	38.9	0.1	56.8	41.6	0.2	65.4	28.9	2.7
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	51.8	25.9	1.2	40.3	38.9	0.1	56.8	41.6	0.2	65.4	28.9	2.7
LOS	D	C	A	D	D	A	E	D	A	E	C	A
Approach Delay		27.5			32.0			31.4			33.3	
Approach LOS		C			C			C			C	

Intersection Summary

Cycle Length: 120

Actuated Cycle Length: 120

Offset: 0 (0%), Referenced to phase 6:NET, Start of Yellow, Master Intersection

Control Type: Actuated-Coordinated

Maximum v/c Ratio: 0.83

Intersection Signal Delay: 31.1

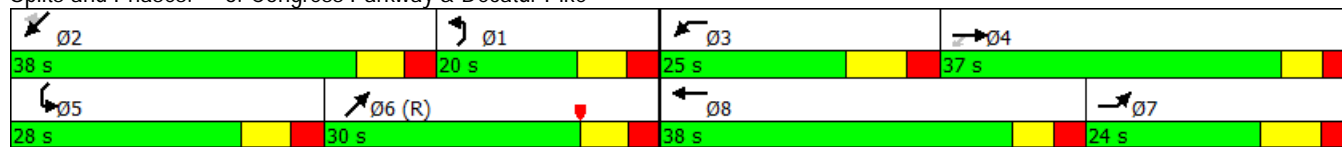
Intersection LOS: C

Intersection Capacity Utilization 68.5%

ICU Level of Service C

Analysis Period (min) 15

Splits and Phases: 6: Congress Parkway & Decatur Pike



Lane Group	SEL	SET	SER	NWL	NWT	NWR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations	↘		↗			↖	↘	↗	↗		↗	↗
Traffic Volume (vph)	73	0	87	0	0	27	42	601	2	0	645	82
Future Volume (vph)	73	0	87	0	0	27	42	601	2	0	645	82
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.95	1.00	1.00	0.95	1.00
Frt			0.850			0.865			0.850			0.850
Flt Protected	0.950						0.950					
Satd. Flow (prot)	1814	0	1577	0	0	1644	1770	3505	1615	0	3438	1615
Flt Permitted	0.950						0.351					
Satd. Flow (perm)	1814	0	1577	0	0	1644	654	3505	1615	0	3438	1615
Satd. Flow (RTOR)			107			353			32			100
Adj. Flow (vph)	88	0	107	0	0	36	48	646	8	0	679	100
Lane Group Flow (vph)	88	0	107	0	0	36	48	646	8	0	679	100
Turn Type	Prot		Prot			Perm	pm+pt	NA	Perm		NA	Perm
Protected Phases	4		4				1	6			2	
Permitted Phases						4	6		6			2
Total Split (s)	24.0		24.0			24.0	18.0	96.0	96.0		78.0	78.0
Total Lost Time (s)	6.5		6.5			6.5	7.5	7.1	7.1		7.1	7.1
Act Effect Green (s)	11.4		11.4			11.4	94.6	95.0	95.0		83.9	83.9
Actuated g/C Ratio	0.10		0.10			0.10	0.79	0.79	0.79		0.70	0.70
v/c Ratio	0.51		0.43			0.08	0.08	0.23	0.01		0.28	0.09
Control Delay	61.7		14.8			0.3	1.7	1.3	0.0		4.5	0.6
Queue Delay	0.0		0.0			0.0	0.0	0.0	0.0		0.0	0.0
Total Delay	61.7		14.8			0.3	1.7	1.3	0.0		4.5	0.6
LOS	E		B			A	A	A	A		A	A
Approach Delay		36.0				0.3		1.4			4.0	
Approach LOS		D				A		A			A	

Intersection Summary

Cycle Length: 120

Actuated Cycle Length: 120

Offset: 18 (15%), Referenced to phase 2:SWT and 6:NETL, Start of Yellow

Control Type: Actuated-Coordinated

Maximum v/c Ratio: 0.51

Intersection Signal Delay: 6.5

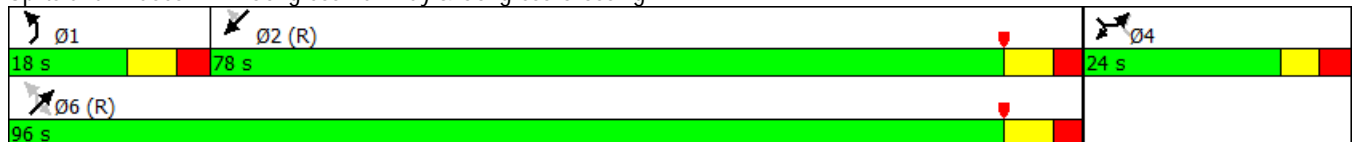
Intersection LOS: A

Intersection Capacity Utilization 42.0%

ICU Level of Service A

Analysis Period (min) 15

Splits and Phases: 7: Congress Parkway & Congress Crossing



Athens, Tennessee
8: Congress Parkway & Tellico Ave



Lane Group	NWL	NWR	NEU	NET	NER	SWL	SWT
Lane Configurations							
Traffic Volume (vph)	78	72	2	624	71	87	635
Future Volume (vph)	78	72	2	624	71	87	635
Lane Util. Factor	1.00	1.00	1.00	0.95	0.95	1.00	0.95
Frt		0.850		0.982			
Flt Protected	0.950		0.950			0.950	
Satd. Flow (prot)	1703	1615	1805	3424	0	1753	3506
Flt Permitted	0.950		0.392			0.278	
Satd. Flow (perm)	1703	1615	745	3424	0	513	3506
Satd. Flow (RTOR)		96		18			
Adj. Flow (vph)	100	96	4	664	88	113	683
Lane Group Flow (vph)	100	96	4	752	0	113	683
Turn Type	Prot	pt+ov	Perm	NA		pm+pt	NA
Protected Phases	4	4 5		6		5	2
Permitted Phases			6			2	
Total Split (s)	28.0		68.0	68.0		24.0	92.0
Total Lost Time (s)	6.3		6.7	6.7		6.6	6.7
Act Effect Green (s)	12.4	45.7	61.3	61.3		94.7	94.6
Actuated g/C Ratio	0.10	0.38	0.51	0.51		0.79	0.79
v/c Ratio	0.57	0.14	0.01	0.43		0.17	0.25
Control Delay	63.3	5.3	15.5	18.0		3.5	3.2
Queue Delay	0.0	0.0	0.0	0.0		0.0	0.0
Total Delay	63.3	5.3	15.5	18.0		3.5	3.2
LOS	E	A	B	B		A	A
Approach Delay	34.9			18.0			3.3
Approach LOS	C			B			A

Intersection Summary

Cycle Length: 120
Actuated Cycle Length: 120
Offset: 74 (62%), Referenced to phase 2:SWTL and 6:NETU, Start of Yellow
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 0.57
Intersection Signal Delay: 13.2
Intersection Capacity Utilization 51.5%
Analysis Period (min) 15
Intersection LOS: B
ICU Level of Service A

Splits and Phases: 8: Congress Parkway & Tellico Ave





Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations		↕			↕		↙	↕		↙	↕	
Traffic Volume (vph)	61	14	23	61	16	22	38	642	17	20	618	69
Future Volume (vph)	61	14	23	61	16	22	38	642	17	20	618	69
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.95	0.95	1.00	0.95	0.95
Frt		0.957			0.955			0.993			0.981	
Flt Protected		0.974			0.976		0.950			0.950		
Satd. Flow (prot)	0	1679	0	0	1725	0	1805	3485	0	1805	3409	0
Flt Permitted		0.737			0.745		0.356			0.358		
Satd. Flow (perm)	0	1271	0	0	1317	0	676	3485	0	680	3409	0
Satd. Flow (RTOR)		17			19			6			20	
Adj. Flow (vph)	80	24	48	72	24	48	58	669	32	30	631	92
Lane Group Flow (vph)	0	152	0	0	144	0	58	701	0	30	723	0
Turn Type	Perm	NA		Perm	NA		pm+pt	NA		pm+pt	NA	
Protected Phases		4			8		5	2		1	6	
Permitted Phases	4			8			2			6		
Total Split (s)	32.0	32.0		32.0	32.0		20.0	68.0		20.0	68.0	
Total Lost Time (s)		7.2			7.2		5.9	6.0		8.2	6.0	
Act Effct Green (s)		16.8			16.8		85.6	81.2		82.7	79.8	
Actuated g/C Ratio		0.14			0.14		0.71	0.68		0.69	0.66	
v/c Ratio		0.79			0.72		0.11	0.30		0.06	0.32	
Control Delay		70.9			61.6		1.7	2.2		6.0	10.0	
Queue Delay		0.0			0.0		0.0	0.0		0.0	0.0	
Total Delay		70.9			61.6		1.7	2.2		6.0	10.0	
LOS		E			E		A	A		A	A	
Approach Delay		70.9			61.6			2.1			9.8	
Approach LOS		E			E			A			A	

Intersection Summary

Cycle Length: 120

Actuated Cycle Length: 120

Offset: 95 (79%), Referenced to phase 2:NETL and 6:SWTL, Start of Yellow

Control Type: Actuated-Coordinated

Maximum v/c Ratio: 0.79

Intersection Signal Delay: 15.8

Intersection LOS: B

Intersection Capacity Utilization 47.8%

ICU Level of Service A

Analysis Period (min) 15

Splits and Phases: 9: Velma Road & Congress Pkwy

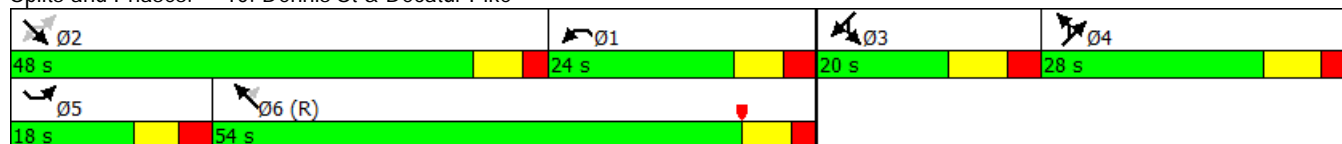
↙ Ø1 20 s	↙ Ø2 (R) 68 s	→ Ø4 32 s
↘ Ø5 20 s	↘ Ø6 (R) 68 s	← Ø8 32 s

	SEL	SET	SER	NWL	NWT	NWR	NEL	NET	NER	SWL	SWT	SWR
Lane Group												
Lane Configurations	↑	↑↑	↑	↑↑	↑↑	↑	↑	↑		↑	↑	
Traffic Volume (vph)	41	469	209	214	549	48	211	49	215	46	49	51
Future Volume (vph)	41	469	209	214	549	48	211	49	215	46	49	51
Lane Util. Factor	1.00	0.95	1.00	0.97	0.95	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Flt			0.850			0.850		0.875			0.925	
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1770	3374	1553	3467	3406	1583	1718	1646	0	1805	1690	0
Flt Permitted	0.260			0.950			0.950			0.950		
Satd. Flow (perm)	484	3374	1553	3467	3406	1583	1718	1646	0	1805	1690	0
Satd. Flow (RTOR)			191			186		182			33	
Adj. Flow (vph)	56	510	235	282	578	68	237	56	283	72	72	72
Lane Group Flow (vph)	56	510	235	282	578	68	237	339	0	72	144	0
Turn Type	pm+pt	NA	Perm	Prot	NA	Perm	Split	NA		Split	NA	
Protected Phases	5	2		1	6		4	4		3	3	
Permitted Phases	2		2			6						
Total Split (s)	18.0	48.0	48.0	24.0	54.0	54.0	28.0	28.0		20.0	20.0	
Total Lost Time (s)	7.0	6.7	6.7	7.5	6.7	6.7	8.2	8.2		8.3	8.3	
Act Effct Green (s)	42.6	42.9	42.9	16.5	54.3	54.3	19.0	19.0		10.9	10.9	
Actuated g/C Ratio	0.36	0.36	0.36	0.14	0.45	0.45	0.16	0.16		0.09	0.09	
v/c Ratio	0.22	0.42	0.35	0.59	0.37	0.08	0.87	0.82		0.44	0.79	
Control Delay	29.1	31.0	8.2	37.6	8.3	0.6	79.4	39.1		60.2	69.4	
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Total Delay	29.1	31.0	8.2	37.6	8.3	0.6	79.4	39.1		60.2	69.4	
LOS	C	C	A	D	A	A	E	D		E	E	
Approach Delay		24.2			16.7			55.6			66.3	
Approach LOS		C			B			E			E	

Intersection Summary

Cycle Length: 120
Actuated Cycle Length: 120
Offset: 69 (58%), Referenced to phase 6:NWT, Start of Yellow
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 0.87
Intersection Signal Delay: 32.2 Intersection LOS: C
Intersection Capacity Utilization 66.2% ICU Level of Service C
Analysis Period (min) 15

Splits and Phases: 10: Dennis St & Decatur Pike



Athens, Tennessee

11: Decatur Pike & Dupit St

04/19/2019

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	50	877	5	3	877	75	5	0	5	142	0	51
Future Volume (vph)	50	877	5	3	877	75	5	0	5	142	0	51
Lane Util. Factor	1.00	0.95	0.95	1.00	0.95	0.95	1.00	1.00	1.00	1.00	1.00	1.00
Flt		0.999			0.987			0.850			0.850	
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1805	3469	0	1805	3438	0	1805	1615	0	1787	1583	0
Flt Permitted	0.217			0.295			0.718			0.752		
Satd. Flow (perm)	412	3469	0	560	3438	0	1364	1615	0	1415	1583	0
Satd. Flow (RTOR)		2			13			181			268	
Adj. Flow (vph)	64	964	8	8	943	91	12	0	8	167	0	60
Lane Group Flow (vph)	64	972	0	8	1034	0	12	8	0	167	60	0
Turn Type	pm+pt	NA		Perm	NA		Perm	NA		Perm	NA	
Protected Phases	1	6			2			4			4	
Permitted Phases	6	6		2	2		4	4		4	4	
Total Split (s)	18.0	90.0		72.0	72.0		30.0	30.0		30.0	30.0	
Total Lost Time (s)	5.6	5.6		6.0	6.0		6.6	6.6		6.6	6.6	
Act Effct Green (s)	89.2	89.2		78.7	78.7		18.6	18.6		18.6	18.6	
Actuated g/C Ratio	0.74	0.74		0.66	0.66		0.16	0.16		0.16	0.16	
v/c Ratio	0.17	0.38		0.02	0.46		0.06	0.02		0.76	0.13	
Control Delay	2.5	2.1		7.7	9.7		41.2	0.0		69.7	0.5	
Queue Delay	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Delay	2.5	2.1		7.7	9.7		41.2	0.0		69.7	0.5	
LOS	A	A		A	A		D	A		E	A	
Approach Delay		2.2			9.7			24.7			51.4	
Approach LOS		A			A			C			D	

Intersection Summary

Cycle Length: 120

Actuated Cycle Length: 120

Offset: 20 (17%), Referenced to phase 2:WBTL, Start of Yellow

Control Type: Actuated-Coordinated

Maximum v/c Ratio: 0.76

Intersection Signal Delay: 10.5

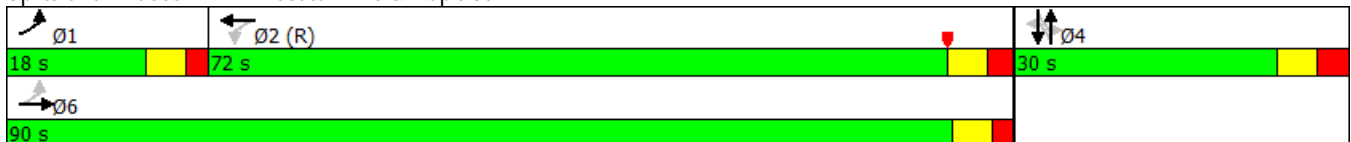
Intersection LOS: B

Intersection Capacity Utilization 66.3%

ICU Level of Service C

Analysis Period (min) 15

Splits and Phases: 11: Decatur Pike & Dupit St

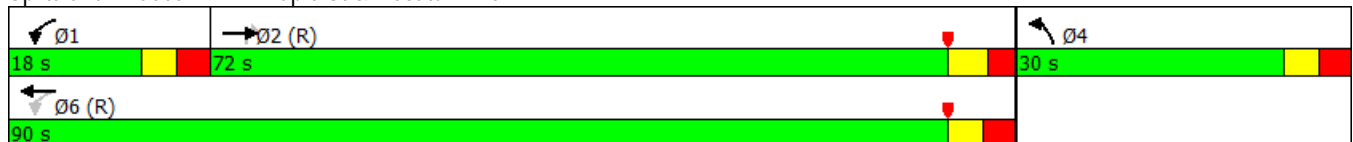


Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↑↑		↑	↑↑	↑	↑
Traffic Volume (vph)	834	175	24	686	261	45
Future Volume (vph)	834	175	24	686	261	45
Lane Util. Factor	0.95	0.95	1.00	0.95	1.00	1.00
Frt	0.974					0.850
Flt Protected			0.950		0.950	
Satd. Flow (prot)	3447	0	1770	3539	1770	1583
Flt Permitted			0.194		0.950	
Satd. Flow (perm)	3447	0	361	3539	1770	1583
Satd. Flow (RTOR)	33					39
Adj. Flow (vph)	907	190	26	746	284	49
Lane Group Flow (vph)	1097	0	26	746	284	49
Turn Type	NA		pm+pt	NA	Prot	Perm
Protected Phases	2		1	6	4	
Permitted Phases			6			2
Total Split (s)	72.0		18.0	90.0	30.0	72.0
Total Lost Time (s)	6.2		6.1	6.1	6.1	6.2
Act Effct Green (s)	78.0		85.6	85.6	22.2	78.0
Actuated g/C Ratio	0.65		0.71	0.71	0.18	0.65
v/c Ratio	0.49		0.08	0.30	0.87	0.05
Control Delay	10.0		6.0	6.8	73.0	4.2
Queue Delay	0.0		0.0	0.0	0.0	0.0
Total Delay	10.0		6.0	6.8	73.0	4.2
LOS	A		A	A	E	A
Approach Delay	10.0			6.8	62.9	
Approach LOS	A			A	E	

Intersection Summary

Cycle Length: 120
 Actuated Cycle Length: 120
 Offset: 22 (18%), Referenced to phase 2:EBT and 6:WBTL, Start of Yellow
 Control Type: Actuated-Coordinated
 Maximum v/c Ratio: 0.87
 Intersection Signal Delay: 16.9
 Intersection Capacity Utilization 53.3%
 Analysis Period (min) 15
 Intersection LOS: B
 ICU Level of Service A

Splits and Phases: 12: Maple St & Decatur Pike



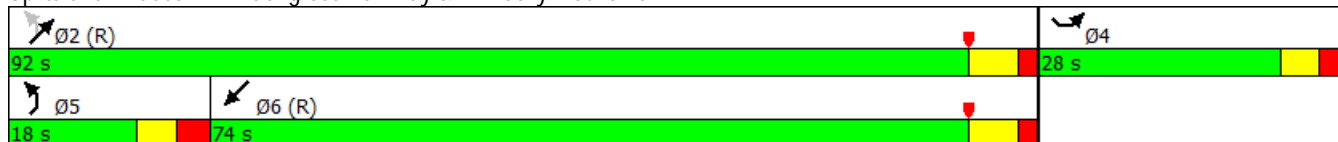


Lane Group	SEL	SER	NEL	NET	SWT	SWR
Lane Configurations						
Traffic Volume (vph)	60	17	9	352	371	43
Future Volume (vph)	60	17	9	352	371	43
Lane Util. Factor	1.00	1.00	1.00	0.95	0.95	0.95
Frt	0.971				0.985	
Flt Protected	0.962		0.950			
Satd. Flow (prot)	1775	0	1752	3610	3368	0
Flt Permitted	0.962		0.452			
Satd. Flow (perm)	1775	0	834	3610	3368	0
Satd. Flow (RTOR)	10				17	
Adj. Flow (vph)	68	19	10	387	417	48
Lane Group Flow (vph)	87	0	10	387	465	0
Turn Type	Prot		pm+pt	NA	NA	
Protected Phases	4		5	2	6	
Permitted Phases			2			
Total Split (s)	28.0		18.0	92.0	74.0	
Total Lost Time (s)	6.5		6.6	6.3	6.3	
Act Effect Green (s)	10.9		98.9	100.4	97.9	
Actuated g/C Ratio	0.09		0.82	0.84	0.82	
v/c Ratio	0.51		0.01	0.13	0.17	
Control Delay	55.9		3.0	2.7	3.0	
Queue Delay	0.0		0.0	0.0	0.2	
Total Delay	55.9		3.0	2.7	3.1	
LOS	E		A	A	A	
Approach Delay	55.9			2.7	3.1	
Approach LOS	E			A	A	

Intersection Summary

Cycle Length: 120
 Actuated Cycle Length: 120
 Offset: 61 (51%), Referenced to phase 2:NETL and 6:SWT, Start of Yellow
 Control Type: Actuated-Coordinated
 Maximum v/c Ratio: 0.51
 Intersection Signal Delay: 7.8 Intersection LOS: A
 Intersection Capacity Utilization 29.8% ICU Level of Service A
 Analysis Period (min) 15

Splits and Phases: 1: Congress Parkway & W Rocky Mount Rd



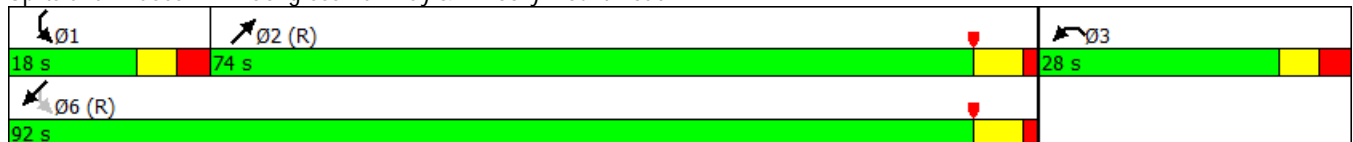


Lane Group	NWL	NWR	NET	NER	SWL	SWT
Lane Configurations						
Traffic Volume (vph)	57	45	350	62	61	357
Future Volume (vph)	57	45	350	62	61	357
Lane Util. Factor	1.00	1.00	0.95	0.95	1.00	0.95
Frt	0.941		0.977			
Flt Protected	0.973				0.950	
Satd. Flow (prot)	1696	0	3439	0	1770	3406
Flt Permitted	0.973				0.455	
Satd. Flow (perm)	1696	0	3439	0	848	3406
Satd. Flow (RTOR)	29		28			
Adj. Flow (vph)	61	48	385	68	69	401
Lane Group Flow (vph)	109	0	453	0	69	401
Turn Type	Prot		NA		pm+pt	NA
Protected Phases	3		2		1	6
Permitted Phases					6	
Total Split (s)	28.0		74.0		18.0	92.0
Total Lost Time (s)	6.6		5.9		6.6	5.9
Act Effct Green (s)	11.5		85.3		95.3	96.0
Actuated g/C Ratio	0.10		0.71		0.79	0.80
v/c Ratio	0.58		0.18		0.10	0.15
Control Delay	49.5		6.6		0.6	1.1
Queue Delay	0.0		0.2		0.0	0.0
Total Delay	49.5		6.8		0.6	1.1
LOS	D		A		A	A
Approach Delay	49.5		6.8			1.0
Approach LOS	D		A			A

Intersection Summary























Cycle Length: 120
 Actuated Cycle Length: 120
 Offset: 61 (51%), Referenced to phase 2:NET and 6:SWTL, Start of Yellow
 Control Type: Actuated-Coordinated
 Maximum v/c Ratio: 0.58
 Intersection Signal Delay: 8.7
 Intersection Capacity Utilization 39.3%
 Analysis Period (min) 15
 Intersection LOS: A
 ICU Level of Service A

Splits and Phases: 2: Congress Parkway & E Rocky Mount Road



Athens, Tennessee
3: Congress Parkway & Dennis St

04/19/2019

												
Lane Group	NBL	NBT	NBR	SBL	SBT	SBR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations												
Traffic Volume (vph)	8	142	114	55	109	90	99	322	9	129	360	39
Future Volume (vph)	8	142	114	55	109	90	99	322	9	129	360	39
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.95	1.00	1.00	0.95	1.00
Frt		0.934			0.935				0.850			0.850
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1823	1735	0	1796	1719	0	1770	3574	1615	1770	3406	1615
Flt Permitted	0.515			0.285			0.492			0.510		
Satd. Flow (perm)	988	1735	0	539	1719	0	916	3574	1615	950	3406	1615
Satd. Flow (RTOR)		30			29				182			182
Adj. Flow (vph)	20	163	128	73	136	103	148	358	12	148	419	60
Lane Group Flow (vph)	20	291	0	73	239	0	148	358	12	148	419	60
Turn Type	pm+pt	NA		pm+pt	NA		pm+pt	NA	Perm	pm+pt	NA	Perm
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases	4			8			2		2	6		6
Total Split (s)	14.0	32.0		14.0	32.0		20.0	54.0	54.0	20.0	54.0	54.0
Total Lost Time (s)	6.9	7.3		7.5	7.3		6.8	6.7	6.7	8.2	6.7	6.7
Act Effct Green (s)	27.6	21.9		30.0	27.6		64.8	54.8	54.8	64.4	56.0	56.0
Actuated g/C Ratio	0.23	0.18		0.25	0.23		0.54	0.46	0.46	0.54	0.47	0.47
v/c Ratio	0.07	0.85		0.36	0.57		0.26	0.22	0.01	0.26	0.26	0.07
Control Delay	28.9	65.3		35.5	41.9		11.7	18.3	0.0	20.6	32.9	3.3
Queue Delay	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	28.9	65.3		35.5	41.9		11.7	18.3	0.0	20.6	32.9	3.3
LOS	C	E		D	D		B	B	A	C	C	A
Approach Delay		62.9			40.4			16.0			27.2	
Approach LOS		E			D			B			C	

Intersection Summary

Cycle Length: 120
 Actuated Cycle Length: 120
 Offset: 88 (73%), Referenced to phase 2:NETL and 6:SWTL, Start of Yellow
 Control Type: Actuated-Coordinated
 Maximum v/c Ratio: 0.85
 Intersection Signal Delay: 32.5 Intersection LOS: C
 Intersection Capacity Utilization 63.8% ICU Level of Service B
 Analysis Period (min) 15

Splits and Phases: 3: Congress Parkway & Dennis St



Lane Group	SEL	SET	SER	NWL	NWT	NWR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations	↖	↗		↖	↗	↖	↗	↖↗	↖	↖	↖↗	
Traffic Volume (vph)	12	0	4	35	1	115	2	461	54	124	462	14
Future Volume (vph)	12	0	4	35	1	115	2	461	54	124	462	14
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.95	1.00	1.00	0.95	0.95
Frt		0.850				0.850			0.850		0.991	
Flt Protected	0.950				0.956		0.950			0.950		
Satd. Flow (prot)	1805	1615	0	0	1835	1568	1805	3471	1583	1752	3434	0
Flt Permitted	0.726				0.738		0.453			0.419		
Satd. Flow (perm)	1379	1615	0	0	1416	1568	861	3471	1583	773	3434	0
Satd. Flow (RTOR)		446				159			167		9	
Adj. Flow (vph)	20	0	8	44	4	151	4	530	60	159	502	32
Lane Group Flow (vph)	20	8	0	0	48	151	4	530	60	159	534	0
Turn Type	Perm	NA		Perm	NA	Perm	pm+pt	NA	Perm	pm+pt	NA	
Protected Phases		8			4		5	2		1	6	
Permitted Phases	8			4		4	2		2	6		
Total Split (s)	28.0	28.0		28.0	28.0	28.0	16.0	68.0	68.0	24.0	76.0	
Total Lost Time (s)	7.8	7.8			7.8	7.8	7.0	6.6	6.6	6.6	6.9	
Act Effct Green (s)	9.4	9.4			9.4	9.4	86.8	81.6	81.6	95.6	93.3	
Actuated g/C Ratio	0.08	0.08			0.08	0.08	0.72	0.68	0.68	0.80	0.78	
v/c Ratio	0.19	0.01			0.43	0.56	0.01	0.22	0.05	0.23	0.20	
Control Delay	54.0	0.0			63.7	15.2	2.5	6.9	0.1	8.2	9.0	
Queue Delay	0.0	0.0			0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Total Delay	54.0	0.0			63.7	15.2	2.5	6.9	0.1	8.2	9.0	
LOS	D	A			E	B	A	A	A	A	A	
Approach Delay		38.6			26.9			6.2			8.8	
Approach LOS		D			C			A			A	

Intersection Summary

Cycle Length: 120

Actuated Cycle Length: 120

Offset: 96 (80%), Referenced to phase 2:NETL and 6:SWTL, Start of Yellow

Control Type: Actuated-Coordinated

Maximum v/c Ratio: 0.56

Intersection Signal Delay: 10.7

Intersection LOS: B

Intersection Capacity Utilization 45.8%

ICU Level of Service A

Analysis Period (min) 15

Splits and Phases: 4: Congress Parkway & Lowes Drvwy



Athens, Tennessee
 5: Congress Parkway & Layman Road

04/19/2019

Lane Group	SEL	SET	SER	NWL	NWT	NWR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations												
Traffic Volume (vph)	85	10	43	29	12	77	30	554	15	76	528	90
Future Volume (vph)	85	10	43	29	12	77	30	554	15	76	528	90
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.95	0.95	1.00	0.95	1.00
Fr		0.882				0.850		0.994				0.850
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1787	1676	0	1877	1830	1663	1805	3511	0	1736	3438	1599
Flt Permitted	0.512			0.708			0.423			0.354		
Satd. Flow (perm)	963	1676	0	1399	1830	1663	804	3511	0	647	3438	1599
Satd. Flow (RTOR)		60				154		5				164
Adj. Flow (vph)	96	16	60	32	16	96	36	602	24	92	593	103
Lane Group Flow (vph)	96	76	0	32	16	96	36	626	0	92	593	103
Turn Type	pm+pt	NA		pm+pt	NA	Perm	pm+pt	NA		pm+pt	NA	Perm
Protected Phases	7	4		3	8		1	6		5	2	
Permitted Phases	4			8		8	6			2		2
Total Split (s)	18.0	22.0		18.0	22.0	22.0	16.0	64.0		16.0	64.0	64.0
Total Lost Time (s)	7.0	7.6		7.1	7.6	7.6	6.1	6.5		6.3	6.5	6.5
Act Effct Green (s)	23.4	16.2		15.9	8.2	8.2	73.4	66.6		78.3	72.9	72.9
Actuated g/C Ratio	0.20	0.14		0.13	0.07	0.07	0.61	0.56		0.65	0.61	0.61
v/c Ratio	0.38	0.27		0.15	0.13	0.37	0.07	0.32		0.19	0.28	0.10
Control Delay	43.1	20.5		39.0	54.8	5.3	4.2	10.9		9.5	14.2	4.4
Queue Delay	0.0	0.0		0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0
Total Delay	43.1	20.5		39.0	54.8	5.3	4.2	10.9		9.5	14.2	4.4
LOS	D	C		D	D	A	A	B		A	B	A
Approach Delay		33.1			18.3			10.5			12.4	
Approach LOS		C			B			B			B	

Intersection Summary

Cycle Length: 120
 Actuated Cycle Length: 120
 Offset: 2 (2%), Referenced to phase 2:SWTL and 6:NETL, Start of Yellow
 Control Type: Actuated-Coordinated
 Maximum v/c Ratio: 0.38
 Intersection Signal Delay: 14.2 Intersection LOS: B
 Intersection Capacity Utilization 48.4% ICU Level of Service A
 Analysis Period (min) 15

Splits and Phases: 5: Congress Parkway & Layman Road

Ø1	Ø2 (R)	Ø3	Ø4
16 s	64 s	18 s	22 s
Ø5	Ø6 (R)	Ø7	Ø8
16 s	64 s	18 s	22 s

Athens, Tennessee
 6: Congress Parkway & Decatur Pike

04/19/2019



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations	↖	↗	↘	↖	↗	↘	↖	↗	↘	↖	↗	↘
Traffic Volume (vph)	143	457	118	226	510	183	152	324	256	216	352	167
Future Volume (vph)	143	457	118	226	510	183	152	324	256	216	352	167
Lane Util. Factor	1.00	0.95	1.00	0.97	0.95	1.00	0.97	0.95	1.00	1.00	0.95	1.00
Frt			0.850			0.850			0.850			0.850
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1736	3440	1615	3502	3406	1583	3433	3505	1615	1770	3343	1599
Flt Permitted	0.950			0.950			0.950			0.950		
Satd. Flow (perm)	1736	3440	1615	3502	3406	1583	3433	3505	1615	1770	3343	1599
Satd. Flow (RTOR)			252			388			388			255
Adj. Flow (vph)	181	466	140	260	580	193	188	368	272	237	405	192
Lane Group Flow (vph)	181	466	140	260	580	193	188	368	272	237	405	192
Turn Type	Prot	NA	Perm	Prot	NA	Free	Prot	NA	Free	Prot	NA	Perm
Protected Phases	7	4		3	8		1	6		5	2	
Permitted Phases			4			Free			Free			2
Total Split (s)	24.0	34.0	34.0	25.0	35.0		23.0	33.0		28.0	38.0	38.0
Total Lost Time (s)	8.4	6.6	6.6	8.5	6.6		7.5	7.2		7.5	7.2	7.2
Act Effct Green (s)	15.8	26.7	26.7	13.9	24.9	120.0	15.5	30.6	120.0	19.0	34.1	34.1
Actuated g/C Ratio	0.13	0.22	0.22	0.12	0.21	1.00	0.13	0.26	1.00	0.16	0.28	0.28
v/c Ratio	0.80	0.61	0.25	0.64	0.82	0.12	0.42	0.41	0.17	0.85	0.43	0.30
Control Delay	55.2	27.4	1.3	40.3	40.8	0.1	43.1	32.1	0.2	68.2	29.8	2.8
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	55.2	27.4	1.3	40.3	40.8	0.1	43.1	32.1	0.2	68.2	29.8	2.8
LOS	E	C	A	D	D	A	D	C	A	E	C	A
Approach Delay		29.1			33.1			24.1			34.5	
Approach LOS		C			C			C			C	

Intersection Summary

Cycle Length: 120

Actuated Cycle Length: 120

Offset: 0 (0%), Referenced to phase 6:NET, Start of Yellow, Master Intersection

Control Type: Actuated-Coordinated

Maximum v/c Ratio: 0.85

Intersection Signal Delay: 30.4

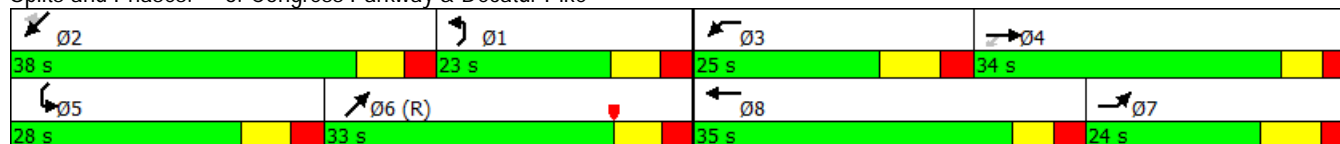
Intersection LOS: C

Intersection Capacity Utilization 68.5%

ICU Level of Service C

Analysis Period (min) 15

Splits and Phases: 6: Congress Parkway & Decatur Pike



Athens, Tennessee
7: Congress Parkway & Congress Crossing

04/19/2019

Lane Group	SEL	SET	SER	NWL	NWT	NWR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations												
Traffic Volume (vph)	73	0	87	0	0	27	42	601	2	0	645	82
Future Volume (vph)	73	0	87	0	0	27	42	601	2	0	645	82
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.95	1.00	1.00	0.95	1.00
Flt			0.850			0.865			0.850			0.850
Flt Protected	0.950						0.950					
Satd. Flow (prot)	1814	0	1577	0	0	1644	1770	3505	1615	0	3438	1615
Flt Permitted	0.950						0.351					
Satd. Flow (perm)	1814	0	1577	0	0	1644	654	3505	1615	0	3438	1615
Satd. Flow (RTOR)			107			353			32			100
Adj. Flow (vph)	88	0	107	0	0	36	48	646	8	0	679	100
Lane Group Flow (vph)	88	0	107	0	0	36	48	646	8	0	679	100
Turn Type	Prot		Prot			Perm	pm+pt	NA	Perm		NA	Perm
Protected Phases	4		4				1	6			2	
Permitted Phases						4	6		6			2
Total Split (s)	24.0		24.0			24.0	18.0	96.0	96.0		78.0	78.0
Total Lost Time (s)	6.5		6.5			6.5	7.5	7.1	7.1		7.1	7.1
Act Effct Green (s)	11.4		11.4			11.4	94.6	95.0	95.0		83.9	83.9
Actuated g/C Ratio	0.10		0.10			0.10	0.79	0.79	0.79		0.70	0.70
v/c Ratio	0.51		0.43			0.08	0.08	0.23	0.01		0.28	0.09
Control Delay	61.7		14.8			0.3	1.7	1.3	0.0		4.5	0.6
Queue Delay	0.0		0.0			0.0	0.0	0.0	0.0		0.0	0.0
Total Delay	61.7		14.8			0.3	1.7	1.3	0.0		4.5	0.6
LOS	E		B			A	A	A	A		A	A
Approach Delay		36.0				0.3		1.4			4.0	
Approach LOS		D				A		A			A	

Intersection Summary

Cycle Length: 120

Actuated Cycle Length: 120

Offset: 18 (15%), Referenced to phase 2:SWT and 6:NETL, Start of Yellow

Control Type: Actuated-Coordinated

Maximum v/c Ratio: 0.51

Intersection Signal Delay: 6.5

Intersection LOS: A

Intersection Capacity Utilization 42.0%

ICU Level of Service A

Analysis Period (min) 15

Splits and Phases: 7: Congress Parkway & Congress Crossing

	Ø1		Ø2 (R)		Ø4
18 s		78 s		24 s	
	Ø6 (R)				
96 s					

Athens, Tennessee
8: Congress Parkway & Tellico Ave

04/19/2019



Lane Group	NWL	NWR	NEU	NET	NER	SWL	SWT
Lane Configurations							
Traffic Volume (vph)	78	72	2	624	71	87	635
Future Volume (vph)	78	72	2	624	71	87	635
Lane Util. Factor	1.00	1.00	1.00	0.95	0.95	1.00	0.95
Frt		0.850		0.982			
Flt Protected	0.950		0.950			0.950	
Satd. Flow (prot)	1703	1615	1805	3424	0	1753	3506
Flt Permitted	0.950		0.392			0.278	
Satd. Flow (perm)	1703	1615	745	3424	0	513	3506
Satd. Flow (RTOR)		96		18			
Adj. Flow (vph)	100	96	4	664	88	113	683
Lane Group Flow (vph)	100	96	4	752	0	113	683
Turn Type	Prot	pt+ov	Perm	NA		pm+pt	NA
Protected Phases	4	4 5		6		5	2
Permitted Phases			6			2	
Total Split (s)	28.0		68.0	68.0		24.0	92.0
Total Lost Time (s)	6.3		6.7	6.7		6.6	6.7
Act Effect Green (s)	12.4	45.7	61.3	61.3		94.7	94.6
Actuated g/C Ratio	0.10	0.38	0.51	0.51		0.79	0.79
v/c Ratio	0.57	0.14	0.01	0.43		0.17	0.25
Control Delay	63.3	5.3	15.5	18.8		3.5	3.2
Queue Delay	0.0	0.0	0.0	0.0		0.0	0.0
Total Delay	63.3	5.3	15.5	18.8		3.5	3.2
LOS	E	A	B	B		A	A
Approach Delay	34.9			18.8			3.3
Approach LOS	C			B			A

Intersection Summary

Cycle Length: 120
 Actuated Cycle Length: 120
 Offset: 74 (62%), Referenced to phase 2:SWTL and 6:NETU, Start of Yellow
 Control Type: Actuated-Coordinated
 Maximum v/c Ratio: 0.57
 Intersection Signal Delay: 13.5 Intersection LOS: B
 Intersection Capacity Utilization 51.5% ICU Level of Service A
 Analysis Period (min) 15

Splits and Phases: 8: Congress Parkway & Tellico Ave

Ø2 (R)	Ø4
92 s	28 s
Ø5	Ø6 (R)
24 s	68 s

Athens, Tennessee
 9: Velma Road & Congress Pkwy

04/19/2019



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations		↕			↕		↙	↕		↙	↕	↘
Traffic Volume (vph)	61	14	23	61	16	22	38	642	17	20	618	69
Future Volume (vph)	61	14	23	61	16	22	38	642	17	20	618	69
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.95	0.95	1.00	0.95	0.95
Frt		0.957			0.955			0.993			0.981	
Flt Protected		0.974			0.976		0.950			0.950		
Satd. Flow (prot)	0	1679	0	0	1725	0	1805	3485	0	1805	3409	0
Flt Permitted		0.737			0.745		0.356			0.358		
Satd. Flow (perm)	0	1271	0	0	1317	0	676	3485	0	680	3409	0
Satd. Flow (RTOR)		17			19			6			20	
Adj. Flow (vph)	80	24	48	72	24	48	58	669	32	30	631	92
Lane Group Flow (vph)	0	152	0	0	144	0	58	701	0	30	723	0
Turn Type	Perm	NA		Perm	NA		pm+pt	NA		pm+pt	NA	
Protected Phases		4			8		5	2		1	6	
Permitted Phases	4			8			2			6		
Total Split (s)	32.0	32.0		32.0	32.0		20.0	68.0		20.0	68.0	
Total Lost Time (s)		7.2			7.2		5.9	6.0		8.2	6.0	
Act Effct Green (s)		16.8			16.8		85.6	81.2		82.7	79.8	
Actuated g/C Ratio		0.14			0.14		0.71	0.68		0.69	0.66	
v/c Ratio		0.79			0.72		0.11	0.30		0.06	0.32	
Control Delay		70.9			61.6		1.7	2.2		6.0	10.0	
Queue Delay		0.0			0.0		0.0	0.0		0.0	0.0	
Total Delay		70.9			61.6		1.7	2.2		6.0	10.0	
LOS		E			E		A	A		A	A	
Approach Delay		70.9			61.6			2.1			9.8	
Approach LOS		E			E			A			A	

Intersection Summary

Cycle Length: 120
 Actuated Cycle Length: 120
 Offset: 95 (79%), Referenced to phase 2:NETL and 6:SWTL, Start of Yellow
 Control Type: Actuated-Coordinated
 Maximum v/c Ratio: 0.79
 Intersection Signal Delay: 15.8
 Intersection Capacity Utilization 47.8%
 Analysis Period (min) 15
 Intersection LOS: B
 ICU Level of Service A

Splits and Phases: 9: Velma Road & Congress Pkwy

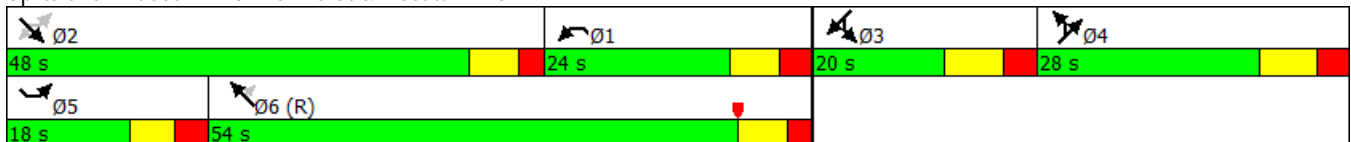


Lane Group	SEL	SET	SER	NWL	NWT	NWR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations												
Traffic Volume (vph)	41	469	209	214	549	48	211	49	215	46	49	51
Future Volume (vph)	41	469	209	214	549	48	211	49	215	46	49	51
Lane Util. Factor	1.00	0.95	1.00	0.97	0.95	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Fr't			0.850			0.850		0.875			0.925	
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1770	3374	1553	3467	3406	1583	1718	1646	0	1805	1690	0
Flt Permitted	0.260			0.950			0.950			0.950		
Satd. Flow (perm)	484	3374	1553	3467	3406	1583	1718	1646	0	1805	1690	0
Satd. Flow (RTOR)			191			186		182			33	
Adj. Flow (vph)	56	510	235	282	578	68	237	56	283	72	72	72
Lane Group Flow (vph)	56	510	235	282	578	68	237	339	0	72	144	0
Turn Type	pm+pt	NA	Perm	Prot	NA	Perm	Split	NA		Split	NA	
Protected Phases	5	2		1	6		4	4		3	3	
Permitted Phases	2		2			6						
Total Split (s)	18.0	48.0	48.0	24.0	54.0	54.0	28.0	28.0		20.0	20.0	
Total Lost Time (s)	7.0	6.7	6.7	7.5	6.7	6.7	8.2	8.2		8.3	8.3	
Act Effct Green (s)	42.6	42.9	42.9	16.5	54.3	54.3	19.0	19.0		10.9	10.9	
Actuated g/C Ratio	0.36	0.36	0.36	0.14	0.45	0.45	0.16	0.16		0.09	0.09	
v/c Ratio	0.22	0.42	0.35	0.59	0.37	0.08	0.87	0.82		0.44	0.79	
Control Delay	29.1	31.0	8.2	38.2	8.9	0.6	79.4	39.1		60.2	69.4	
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Total Delay	29.1	31.0	8.2	38.2	8.9	0.6	79.4	39.1		60.2	69.4	
LOS	C	C	A	D	A	A	E	D		E	E	
Approach Delay		24.2			17.2			55.6			66.3	
Approach LOS		C			B			E			E	

Intersection Summary

Cycle Length: 120
 Actuated Cycle Length: 120
 Offset: 69 (58%), Referenced to phase 6:NWT, Start of Yellow
 Control Type: Actuated-Coordinated
 Maximum v/c Ratio: 0.87
 Intersection Signal Delay: 32.4
 Intersection Capacity Utilization 66.2%
 Analysis Period (min) 15
 Intersection LOS: C
 ICU Level of Service C

Splits and Phases: 10: Dennis St & Decatur Pike



Athens, Tennessee

11: Decatur Pike & Dupit St

04/19/2019

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	50	877	5	3	877	75	5	0	5	142	0	51
Future Volume (vph)	50	877	5	3	877	75	5	0	5	142	0	51
Lane Util. Factor	1.00	0.95	0.95	1.00	0.95	0.95	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.999			0.987			0.850			0.850	
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1805	3469	0	1805	3438	0	1805	1615	0	1787	1583	0
Flt Permitted	0.217			0.295			0.718			0.752		
Satd. Flow (perm)	412	3469	0	560	3438	0	1364	1615	0	1415	1583	0
Satd. Flow (RTOR)		2			13			181			268	
Adj. Flow (vph)	64	964	8	8	943	91	12	0	8	167	0	60
Lane Group Flow (vph)	64	972	0	8	1034	0	12	8	0	167	60	0
Turn Type	pm+pt	NA		Perm	NA		Perm	NA		Perm	NA	
Protected Phases	1	6			2			4			4	
Permitted Phases	6	6		2	2		4	4		4	4	
Total Split (s)	18.0	90.0		72.0	72.0		30.0	30.0		30.0	30.0	
Total Lost Time (s)	5.6	5.6		6.0	6.0		6.6	6.6		6.6	6.6	
Act Effct Green (s)	89.2	89.2		78.7	78.7		18.6	18.6		18.6	18.6	
Actuated g/C Ratio	0.74	0.74		0.66	0.66		0.16	0.16		0.16	0.16	
v/c Ratio	0.17	0.38		0.02	0.46		0.06	0.02		0.76	0.13	
Control Delay	1.9	1.4		7.7	9.7		41.2	0.0		69.7	0.5	
Queue Delay	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Delay	1.9	1.4		7.7	9.7		41.2	0.0		69.7	0.5	
LOS	A	A		A	A		D	A		E	A	
Approach Delay		1.5			9.7			24.7			51.4	
Approach LOS		A			A			C			D	

Intersection Summary

Cycle Length: 120

Actuated Cycle Length: 120

Offset: 20 (17%), Referenced to phase 2:WBTL, Start of Yellow

Control Type: Actuated-Coordinated

Maximum v/c Ratio: 0.76

Intersection Signal Delay: 10.2

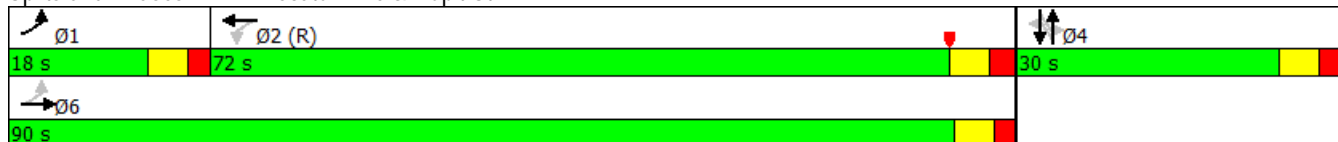
Intersection LOS: B

Intersection Capacity Utilization 66.3%

ICU Level of Service C

Analysis Period (min) 15

Splits and Phases: 11: Decatur Pike & Dupit St





Lane Group	SEL	SER	NEL	NET	SWT	SWR
Lane Configurations						
Traffic Volume (vph)	69	21	12	389	493	50
Future Volume (vph)	69	21	12	389	493	50
Lane Util. Factor	1.00	1.00	1.00	0.95	0.95	0.95
Frt	0.968				0.986	
Flt Protected	0.963		0.950			
Satd. Flow (prot)	1771	0	1805	3539	3435	0
Flt Permitted	0.963		0.386			
Satd. Flow (perm)	1771	0	733	3539	3435	0
Satd. Flow (RTOR)	11				15	
Adj. Flow (vph)	88	27	14	469	554	56
Lane Group Flow (vph)	115	0	14	469	610	0
Turn Type	Prot		pm+pt	NA	NA	
Protected Phases	4		5	2	6	
Permitted Phases			2			
Total Split (s)	26.0		18.0	94.0	76.0	
Total Lost Time (s)	6.5		6.6	6.3	6.3	
Act Effct Green (s)	12.5		94.4	94.7	89.7	
Actuated g/C Ratio	0.10		0.79	0.79	0.75	
v/c Ratio	0.59		0.02	0.17	0.24	
Control Delay	58.2		3.5	3.5	4.9	
Queue Delay	0.0		0.0	0.0	0.3	
Total Delay	58.2		3.5	3.5	5.1	
LOS	E		A	A	A	
Approach Delay	58.2			3.5	5.1	
Approach LOS	E			A	A	

Intersection Summary

Cycle Length: 120

Actuated Cycle Length: 120

Offset: 118 (98%), Referenced to phase 2:NETL and 6:SWT, Start of Yellow

Control Type: Actuated-Coordinated

Maximum v/c Ratio: 0.59

Intersection Signal Delay: 9.5

Intersection LOS: A

Intersection Capacity Utilization 32.6%

ICU Level of Service A

Analysis Period (min) 15

Splits and Phases: 1: Congress Parkway & W Rocky Mount Rd

	Ø2 (R)	94 s		Ø4	26 s
	Ø5	18 s		Ø6 (R)	76 s



Lane Group	NWL	NWR	NET	NER	SWL	SWT
Lane Configurations						
Traffic Volume (vph)	106	52	381	77	104	437
Future Volume (vph)	106	52	381	77	104	437
Lane Util. Factor	1.00	1.00	0.95	0.95	1.00	0.95
Frt	0.956		0.975			
Flt Protected	0.967				0.950	
Satd. Flow (prot)	1722	0	3456	0	1805	3471
Flt Permitted	0.967				0.396	
Satd. Flow (perm)	1722	0	3456	0	752	3471
Satd. Flow (RTOR)	18		30			
Adj. Flow (vph)	129	63	459	93	117	491
Lane Group Flow (vph)	192	0	552	0	117	491
Turn Type	Prot		NA		pm+pt	NA
Protected Phases	3		2		1	6
Permitted Phases					6	
Total Split (s)	30.0		70.0		20.0	90.0
Total Lost Time (s)	6.6		5.9		6.6	5.9
Act Effct Green (s)	17.3		75.9		89.5	90.2
Actuated g/C Ratio	0.14		0.63		0.75	0.75
v/c Ratio	0.73		0.25		0.19	0.19
Control Delay	59.8		10.3		3.1	2.5
Queue Delay	0.0		0.3		0.0	0.0
Total Delay	59.8		10.6		3.1	2.5
LOS	E		B		A	A
Approach Delay	59.8		10.6			2.6
Approach LOS	E		B			A

Intersection Summary

Cycle Length: 120
 Actuated Cycle Length: 120
 Offset: 115 (96%), Referenced to phase 2:NET and 6:SWTL, Start of Yellow
 Control Type: Actuated-Coordinated
 Maximum v/c Ratio: 0.73
 Intersection Signal Delay: 14.0
 Intersection Capacity Utilization 43.7%
 Analysis Period (min) 15
 Intersection LOS: B
 ICU Level of Service A

Splits and Phases: 2: Congress Parkway & E Rocky Mount Road

Ø1	Ø2 (R)	Ø3
20 s	70 s	30 s
Ø6 (R)		
90 s		

Athens, Tennessee
 3: Congress Parkway & Dennis St

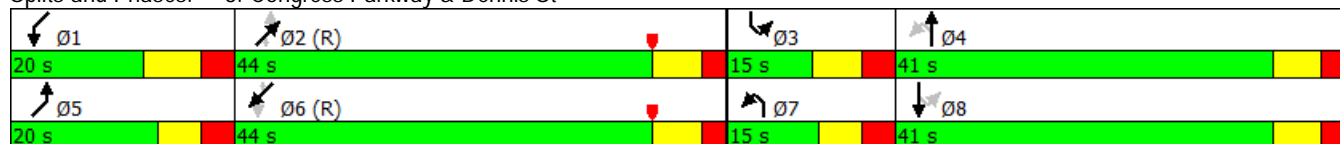
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Lane Group	NBL	NBT	NBR	SBL	SBT	SBR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations												
Traffic Volume (vph)	12	130	104	36	119	152	117	335	9	138	405	33
Future Volume (vph)	12	130	104	36	119	152	117	335	9	138	405	33
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.95	1.00	1.00	0.95	1.00
Frt		0.923			0.918				0.850			0.850
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1458	1729	0	1796	1692	0	1805	3539	1455	1770	3539	1615
Flt Permitted	0.399			0.275			0.433			0.500		
Satd. Flow (perm)	613	1729	0	520	1692	0	823	3539	1455	931	3539	1615
Satd. Flow (RTOR)		44			50				182			182
Adj. Flow (vph)	12	151	160	52	143	173	144	353	16	168	500	44
Lane Group Flow (vph)	12	311	0	52	316	0	144	353	16	168	500	44
Turn Type	pm+pt	NA		pm+pt	NA		pm+pt	NA	Perm	pm+pt	NA	Perm
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases	4			8			2		2	6		6
Total Split (s)	15.0	41.0		15.0	41.0		20.0	44.0	44.0	20.0	44.0	44.0
Total Lost Time (s)	6.9	7.3		7.5	7.3		6.8	6.7	6.7	8.2	6.7	6.7
Act Effect Green (s)	29.9	24.3		33.4	30.6		61.1	50.9	50.9	62.0	52.8	52.8
Actuated g/C Ratio	0.25	0.20		0.28	0.26		0.51	0.42	0.42	0.52	0.44	0.44
v/c Ratio	0.06	0.81		0.24	0.68		0.29	0.24	0.02	0.30	0.32	0.05
Control Delay	24.8	54.8		28.6	40.8		10.6	19.7	0.1	12.1	18.3	0.7
Queue Delay	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	24.8	54.8		28.6	40.8		10.6	19.7	0.1	12.1	18.3	0.7
LOS	C	D		C	D		B	B	A	B	B	A
Approach Delay		53.7			39.0			16.5			15.8	
Approach LOS		D			D			B			B	

Intersection Summary

Cycle Length: 120
 Actuated Cycle Length: 120
 Offset: 31 (26%), Referenced to phase 2:NETL and 6:SWTL, Start of Yellow
 Control Type: Actuated-Coordinated
 Maximum v/c Ratio: 0.81
 Intersection Signal Delay: 26.8
 Intersection Capacity Utilization 65.0%
 Analysis Period (min) 15
 Intersection LOS: C
 ICU Level of Service C

Splits and Phases: 3: Congress Parkway & Dennis St



Lane Group	SEL	SET	SER	NWL	NWT	NWR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations												
Traffic Volume (vph)	15	4	3	38	1	101	0	428	29	90	514	10
Future Volume (vph)	15	4	3	38	1	101	0	428	29	90	514	10
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.95	1.00	1.00	0.95	0.95
Frt		0.925				0.850			0.850		0.996	
Flt Protected	0.950				0.956					0.950		
Satd. Flow (prot)	1805	1758	0	0	1835	1599	1900	3505	1615	1752	3500	0
Flt Permitted	0.723				0.731					0.434		
Satd. Flow (perm)	1374	1758	0	0	1403	1599	1900	3505	1615	801	3500	0
Satd. Flow (RTOR)		8				159			167		4	
Adj. Flow (vph)	20	8	8	48	4	125	0	498	44	123	598	16
Lane Group Flow (vph)	20	16	0	0	52	125	0	498	44	123	614	0
Turn Type	Perm	NA		Perm	NA	Perm	pm+pt	NA	Perm	pm+pt	NA	
Protected Phases		8			4		5	2		1	6	
Permitted Phases	8			4		4	2		2	6		
Total Split (s)	28.0	28.0		28.0	28.0	28.0	16.0	68.0	68.0	24.0	76.0	
Total Lost Time (s)	7.8	7.8			7.8	7.8	7.0	6.6	6.6	6.6	6.9	
Act Effct Green (s)	9.8	9.8			9.8	9.8		81.8	81.8	95.8	95.5	
Actuated g/C Ratio	0.08	0.08			0.08	0.08		0.68	0.68	0.80	0.80	
v/c Ratio	0.18	0.11			0.46	0.45		0.21	0.04	0.18	0.22	
Control Delay	53.3	35.3			64.3	8.8		5.5	0.1	1.8	1.7	
Queue Delay	0.0	0.0			0.0	0.0		0.0	0.0	0.0	0.0	
Total Delay	53.3	35.3			64.3	8.8		5.5	0.1	1.8	1.7	
LOS	D	D			E	A		A	A	A	A	
Approach Delay		45.3			25.1			5.0			1.7	
Approach LOS		D			C			A			A	

Intersection Summary

Cycle Length: 120

Actuated Cycle Length: 120

Offset: 39 (33%), Referenced to phase 2:NETL and 6:SWTL, Start of Yellow

Control Type: Actuated-Coordinated

Maximum v/c Ratio: 0.46

Intersection Signal Delay: 6.7

Intersection LOS: A

Intersection Capacity Utilization 45.6%

ICU Level of Service A

Analysis Period (min) 15

Splits and Phases: 4: Congress Parkway & Lowes Drvwy



Athens, Tennessee
 5: Congress Parkway & Layman Road

04/19/2019

Lane Group	SEL	SET	SER	NWL	NWT	NWR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations												
Traffic Volume (vph)	85	11	30	32	16	94	27	505	25	66	548	67
Future Volume (vph)	85	11	30	32	16	94	27	505	25	66	548	67
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.95	0.95	1.00	0.95	1.00
Frt		0.897				0.850		0.993				0.850
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1787	1704	0	1877	1864	1680	1805	3485	0	1805	3505	1615
Flt Permitted	0.534			0.715			0.429			0.343		
Satd. Flow (perm)	1005	1704	0	1413	1864	1680	815	3485	0	652	3505	1615
Satd. Flow (RTOR)		44				152		5				162
Adj. Flow (vph)	123	20	44	40	28	108	38	616	32	105	589	80
Lane Group Flow (vph)	123	64	0	40	28	108	38	648	0	105	589	80
Turn Type	pm+pt	NA		pm+pt	NA	Perm	pm+pt	NA		pm+pt	NA	Perm
Protected Phases	7	4		3	8		1	6		5	2	
Permitted Phases	4			8		8	6			2		2
Total Split (s)	18.0	24.0		18.0	24.0	24.0	16.0	58.0		20.0	62.0	62.0
Total Lost Time (s)	7.0	7.6		7.1	7.6	7.6	6.1	6.5		6.3	6.5	6.5
Act Effct Green (s)	23.0	13.7		16.4	8.4	8.4	72.6	65.8		77.9	72.4	72.4
Actuated g/C Ratio	0.19	0.11		0.14	0.07	0.07	0.60	0.55		0.65	0.60	0.60
v/c Ratio	0.47	0.27		0.18	0.22	0.42	0.07	0.34		0.21	0.28	0.08
Control Delay	45.5	25.2		39.2	56.6	7.7	4.4	8.2		4.3	6.1	0.4
Queue Delay	0.0	0.0		0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0
Total Delay	45.5	25.2		39.2	56.6	7.7	4.4	8.2		4.3	6.1	0.4
LOS	D	C		D	E	A	A	A		A	A	A
Approach Delay		38.6			22.6			8.0			5.3	
Approach LOS		D			C			A			A	

Intersection Summary

Cycle Length: 120
 Actuated Cycle Length: 120
 Offset: 45 (38%), Referenced to phase 2:SWTL and 6:NETL, Start of Yellow
 Control Type: Actuated-Coordinated
 Maximum v/c Ratio: 0.47
 Intersection Signal Delay: 11.4
 Intersection LOS: B
 Intersection Capacity Utilization 47.5%
 ICU Level of Service A
 Analysis Period (min) 15

Splits and Phases: 5: Congress Parkway & Layman Road

Ø1 16 s	Ø2 (R) 62 s	Ø3 18 s	Ø4 24 s
Ø5 20 s	Ø6 (R) 58 s	Ø7 18 s	Ø8 24 s

Athens, Tennessee
 6: Congress Parkway & Decatur Pike

04/19/2019

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations												
Traffic Volume (vph)	148	539	109	213	599	189	141	343	199	207	353	153
Future Volume (vph)	148	539	109	213	599	189	141	343	199	207	353	153
Lane Util. Factor	1.00	0.95	1.00	0.97	0.95	1.00	0.97	0.95	1.00	1.00	0.95	1.00
Frt			0.850			0.850			0.850			0.850
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1805	3575	1599	3433	3505	1553	3335	3574	1583	1770	3505	1568
Flt Permitted	0.950			0.950			0.950			0.950		
Satd. Flow (perm)	1805	3575	1599	3433	3505	1553	3335	3574	1583	1770	3505	1568
Satd. Flow (RTOR)			252			388			388			252
Adj. Flow (vph)	176	573	128	251	681	228	176	440	229	244	376	191
Lane Group Flow (vph)	176	573	128	251	681	228	176	440	229	244	376	191
Turn Type	Prot	NA	Perm	Prot	NA	Free	Prot	NA	Free	Prot	NA	Perm
Protected Phases	7	4		3	8		1	6		5	2	
Permitted Phases			4			Free			Free			2
Total Split (s)	23.0	37.0	37.0	23.0	37.0		20.0	30.0		30.0	40.0	40.0
Total Lost Time (s)	8.4	6.6	6.6	8.5	6.6		7.5	7.2		7.5	7.2	7.2
Act Effct Green (s)	14.6	31.8	31.8	13.1	30.4	120.0	12.5	25.1	120.0	20.2	32.8	32.8
Actuated g/C Ratio	0.12	0.26	0.26	0.11	0.25	1.00	0.10	0.21	1.00	0.17	0.27	0.27
v/c Ratio	0.80	0.61	0.21	0.67	0.77	0.15	0.51	0.59	0.14	0.82	0.39	0.31
Control Delay	61.3	26.0	1.1	45.4	34.8	0.2	57.3	47.8	0.2	57.5	25.2	1.8
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	61.3	26.0	1.1	45.4	34.8	0.2	57.3	47.8	0.2	57.5	25.2	1.8
LOS	E	C	A	D	C	A	E	D	A	E	C	A
Approach Delay		29.5			30.3			36.9			29.4	
Approach LOS		C			C			D			C	

Intersection Summary

Cycle Length: 120

Actuated Cycle Length: 120

Offset: 0 (0%), Referenced to phase 2:SWT and 6:NET, Start of Yellow, Master Intersection

Control Type: Actuated-Coordinated

Maximum v/c Ratio: 0.82

Intersection Signal Delay: 31.4

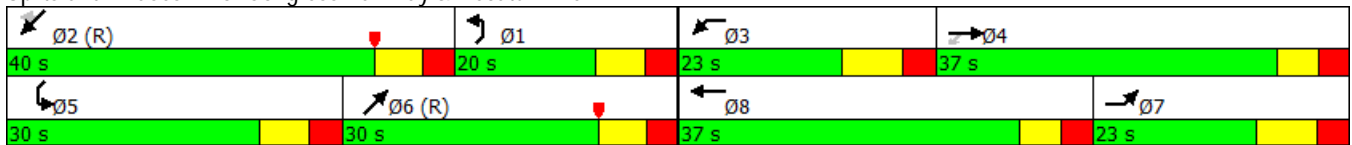
Intersection LOS: C

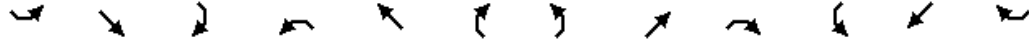
Intersection Capacity Utilization 70.7%

ICU Level of Service C

Analysis Period (min) 15

Splits and Phases: 6: Congress Parkway & Decatur Pike





Lane Group	SEL	SET	SER	NWL	NWT	NWR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations												
Traffic Volume (vph)	81	0	73	0	0	12	54	618	0	0	639	67
Future Volume (vph)	81	0	73	0	0	12	54	618	0	0	639	67
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.95	1.00	1.00	0.95	1.00
Flt			0.850				0.865					0.850
Flt Protected	0.950						0.950					
Satd. Flow (prot)	1850	0	1623	0	0	1644	1770	3539	1900	0	3505	1568
Flt Permitted	0.950						0.359					
Satd. Flow (perm)	1850	0	1623	0	0	1644	669	3539	1900	0	3505	1568
Satd. Flow (RTOR)			105				268					100
Adj. Flow (vph)	116	0	100	0	0	16	76	763	0	0	652	80
Lane Group Flow (vph)	116	0	100	0	0	16	76	763	0	0	652	80
Turn Type	Prot		Prot			Perm	pm+pt	NA	Perm		NA	Perm
Protected Phases	4		4				1	6			2	
Permitted Phases						4	6		6			2
Total Split (s)	28.0		28.0			28.0	20.0	92.0	92.0		72.0	72.0
Total Lost Time (s)	6.5		6.5			6.5	7.5	7.1	7.1		7.1	7.1
Act Effct Green (s)	12.8		12.8			12.8	93.2	93.6			81.9	81.9
Actuated g/C Ratio	0.11		0.11			0.11	0.78	0.78			0.68	0.68
v/c Ratio	0.59		0.37			0.04	0.13	0.28			0.27	0.07
Control Delay	62.4		12.2			0.2	2.2	1.8			9.6	2.7
Queue Delay	0.0		0.0			0.0	0.0	0.0			0.0	0.0
Total Delay	62.4		12.2			0.2	2.2	1.8			9.6	2.7
LOS	E		B			A	A	A			A	A
Approach Delay		39.2				0.2		1.8			8.8	
Approach LOS		D				A		A			A	

Intersection Summary

Cycle Length: 120
 Actuated Cycle Length: 120
 Offset: 36.9 (31%), Referenced to phase 2:SWT and 6:NETL, Start of Yellow
 Control Type: Actuated-Coordinated
 Maximum v/c Ratio: 0.59
 Intersection Signal Delay: 9.1 Intersection LOS: A
 Intersection Capacity Utilization 42.9% ICU Level of Service A
 Analysis Period (min) 15

Splits and Phases: 7: Congress Parkway & Congress Crossing



Athens, Tennessee
 8: Congress Parkway & Tellico Ave

04/19/2019

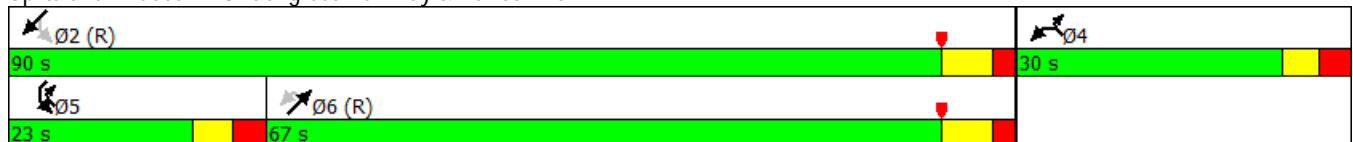


Lane Group	NWL	NWR	NEU	NET	NER	SWL	SWT
Lane Configurations							
Traffic Volume (vph)	96	84	2	625	81	76	603
Future Volume (vph)	96	84	2	625	81	76	603
Lane Util. Factor	1.00	1.00	1.00	0.95	0.95	1.00	0.95
Frt		0.850		0.984			
Flt Protected	0.950		0.950			0.950	
Satd. Flow (prot)	1787	1615	1805	3483	0	1673	3540
Flt Permitted	0.950		0.400			0.271	
Satd. Flow (perm)	1787	1615	760	3483	0	477	3540
Satd. Flow (RTOR)		100		15			
Adj. Flow (vph)	108	100	4	791	92	101	663
Lane Group Flow (vph)	108	100	4	883	0	101	663
Turn Type	Prot	pt+ov	Perm	NA		pm+pt	NA
Protected Phases	4	4 5		6		5	2
Permitted Phases			6			2	
Total Split (s)	30.0		67.0	67.0		23.0	90.0
Total Lost Time (s)	6.3		6.7	6.7		6.6	6.7
Act Effect Green (s)	12.6	26.4	80.6	80.6		94.5	94.4
Actuated g/C Ratio	0.10	0.22	0.67	0.67		0.79	0.79
v/c Ratio	0.58	0.23	0.01	0.38		0.23	0.24
Control Delay	62.8	7.9	3.5	3.2		3.5	2.8
Queue Delay	0.0	0.0	0.0	0.0		0.0	0.0
Total Delay	62.8	7.9	3.5	3.2		3.5	2.8
LOS	E	A	A	A		A	A
Approach Delay	36.4			3.2			2.9
Approach LOS	D			A			A

Intersection Summary

Cycle Length: 120
 Actuated Cycle Length: 120
 Offset: 112 (93%), Referenced to phase 2:SWTL and 6:NETU, Start of Yellow
 Control Type: Actuated-Coordinated
 Maximum v/c Ratio: 0.58
 Intersection Signal Delay: 6.8
 Intersection Capacity Utilization 50.9%
 Analysis Period (min) 15
 Intersection LOS: A
 ICU Level of Service A

Splits and Phases: 8: Congress Parkway & Tellico Ave



Athens, Tennessee
 9: Velma Road & Congress Pkwy

04/19/2019



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations		↕			↕		↗	↕		↖	↕	
Traffic Volume (vph)	80	26	30	77	27	24	25	649	15	32	577	120
Future Volume (vph)	80	26	30	77	27	24	25	649	15	32	577	120
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.95	0.95	1.00	0.95	0.95
Frt		0.963			0.972			0.996			0.972	
Flt Protected		0.977			0.975		0.950			0.950		
Satd. Flow (prot)	0	1637	0	0	1754	0	1805	3527	0	1671	3419	0
Flt Permitted		0.741			0.697		0.347			0.283		
Satd. Flow (perm)	0	1241	0	0	1254	0	659	3527	0	498	3419	0
Satd. Flow (RTOR)		14			10		3			35		
Adj. Flow (vph)	92	48	52	92	48	36	47	822	20	59	614	140
Lane Group Flow (vph)	0	192	0	0	176	0	47	842	0	59	754	0
Turn Type	Perm	NA		Perm	NA		pm+pt	NA		pm+pt	NA	
Protected Phases		4			8		5	2		1	6	
Permitted Phases	4			8			2			6		
Total Split (s)	30.0	30.0		30.0	30.0		20.0	65.0		25.0	70.0	
Total Lost Time (s)		7.2			7.2		5.9	6.0		8.2	6.0	
Act Effct Green (s)		19.5			19.5		80.4	75.0		80.7	77.2	
Actuated g/C Ratio		0.16			0.16		0.67	0.62		0.67	0.64	
v/c Ratio		0.90			0.83		0.09	0.38		0.15	0.34	
Control Delay		85.5			75.4		6.1	9.9		7.0	10.8	
Queue Delay		0.0			0.0		0.0	0.0		0.0	0.0	
Total Delay		85.5			75.4		6.1	9.9		7.0	10.8	
LOS		F			E		A	A		A	B	
Approach Delay		85.5			75.4			9.7			10.5	
Approach LOS		F			E			A			B	

Intersection Summary

Cycle Length: 120
 Actuated Cycle Length: 120
 Offset: 105 (88%), Referenced to phase 2:NETL and 6:SWTL, Start of Yellow
 Control Type: Actuated-Coordinated
 Maximum v/c Ratio: 0.90
 Intersection Signal Delay: 22.6
 Intersection Capacity Utilization 46.7%
 Analysis Period (min) 15
 Intersection LOS: C
 ICU Level of Service A

Splits and Phases: 9: Velma Road & Congress Pkwy

Ø1	Ø2 (R)	Ø4
25 s	65 s	30 s
Ø5	Ø6 (R)	Ø8
20 s	70 s	30 s

Athens, Tennessee
 10: Dennis St & Decatur Pike

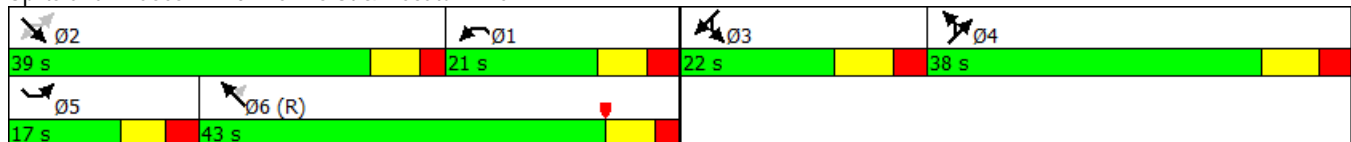
04/19/2019

Lane Group	SEL	SET	SER	NWL	NWT	NWR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations												
Traffic Volume (vph)	38	547	267	205	647	47	226	41	202	45	37	47
Future Volume (vph)	38	547	267	205	647	47	226	41	202	45	37	47
Lane Util. Factor	1.00	0.95	1.00	0.97	0.95	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Flt			0.850			0.850		0.878			0.917	
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1734	3354	1528	3460	3385	1583	1735	1652	0	1770	1742	0
Flt Permitted	0.223			0.950			0.950			0.950		
Satd. Flow (perm)	407	3354	1528	3460	3385	1583	1735	1652	0	1770	1742	0
Satd. Flow (RTOR)			191			186		173			42	
Adj. Flow (vph)	103	559	243	221	606	56	248	48	208	56	52	64
Lane Group Flow (vph)	103	559	243	221	606	56	248	256	0	56	116	0
Turn Type	pm+pt	NA	Perm	Prot	NA	Perm	Split	NA		Split	NA	
Protected Phases	5	2		1	6		4	4		3	3	
Permitted Phases	2		2			6						
Total Split (s)	17.0	39.0	39.0	21.0	43.0	43.0	38.0	38.0		22.0	22.0	
Total Lost Time (s)	7.0	6.7	6.7	7.5	6.7	6.7	8.2	8.2		8.3	8.3	
Act Effct Green (s)	42.9	43.2	43.2	13.5	47.6	47.6	22.3	22.3		10.3	10.3	
Actuated g/C Ratio	0.36	0.36	0.36	0.11	0.40	0.40	0.19	0.19		0.09	0.09	
v/c Ratio	0.41	0.46	0.36	0.57	0.45	0.08	0.77	0.57		0.37	0.62	
Control Delay	34.6	32.9	10.0	40.9	15.1	0.5	61.7	19.3		57.6	47.6	
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Total Delay	34.6	32.9	10.0	40.9	15.1	0.5	61.7	19.3		57.6	47.6	
LOS	C	C	A	D	B	A	E	B		E	D	
Approach Delay		26.9			20.6			40.1			50.9	
Approach LOS		C			C			D			D	

Intersection Summary

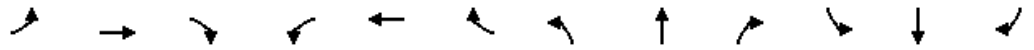
Cycle Length: 120
 Actuated Cycle Length: 120
 Offset: 92 (77%), Referenced to phase 6:NWT, Start of Yellow
 Control Type: Actuated-Coordinated
 Maximum v/c Ratio: 0.77
 Intersection Signal Delay: 29.0 Intersection LOS: C
 Intersection Capacity Utilization 65.7% ICU Level of Service C
 Analysis Period (min) 15

Splits and Phases: 10: Dennis St & Decatur Pike



Athens, Tennessee
11: Decatur Pike & Dupit St

04/19/2019



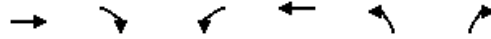
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↖	↗		↖	↗		↖	↗		↖	↗	
Traffic Volume (vph)	72	887	5	5	943	71	4	2	3	141	0	58
Future Volume (vph)	72	887	5	5	943	71	4	2	3	141	0	58
Lane Util. Factor	1.00	0.95	0.95	1.00	0.95	0.95	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.999			0.985			0.925			0.850	
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1805	3536	0	1805	3462	0	1805	1758	0	1805	1615	0
Flt Permitted	0.202			0.301			0.706			0.752		
Satd. Flow (perm)	384	3536	0	572	3462	0	1341	1758	0	1429	1615	0
Satd. Flow (RTOR)		2			16			4			252	
Adj. Flow (vph)	92	944	8	12	972	108	8	4	4	152	0	79
Lane Group Flow (vph)	92	952	0	12	1080	0	8	8	0	152	79	0
Turn Type	pm+pt	NA		Perm	NA		Perm	NA		Perm	NA	
Protected Phases	1	6			2			4			4	
Permitted Phases	6	6		2	2		4	4		4	4	
Total Split (s)	17.0	90.0		73.0	73.0		30.0	30.0		30.0	30.0	
Total Lost Time (s)	5.6	5.6		6.0	6.0		6.6	6.6		6.6	6.6	
Act Effct Green (s)	90.2	90.2		76.9	76.9		17.6	17.6		17.6	17.6	
Actuated g/C Ratio	0.75	0.75		0.64	0.64		0.15	0.15		0.15	0.15	
v/c Ratio	0.25	0.36		0.03	0.49		0.04	0.03		0.73	0.17	
Control Delay	2.1	1.0		8.6	12.0		41.2	31.2		67.8	0.8	
Queue Delay	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Delay	2.1	1.0		8.6	12.0		41.2	31.2		67.8	0.8	
LOS	A	A		A	B		D	C		E	A	
Approach Delay		1.1			12.0			36.2			44.9	
Approach LOS		A			B			D			D	

Intersection Summary

Cycle Length: 120
 Actuated Cycle Length: 120
 Offset: 43 (36%), Referenced to phase 2:WBTL and 6:EBTL, Start of Yellow
 Control Type: Actuated-Coordinated
 Maximum v/c Ratio: 0.73
 Intersection Signal Delay: 10.6
 Intersection Capacity Utilization 75.2%
 Analysis Period (min) 15
 Intersection LOS: B
 ICU Level of Service D

Splits and Phases: 11: Decatur Pike & Dupit St



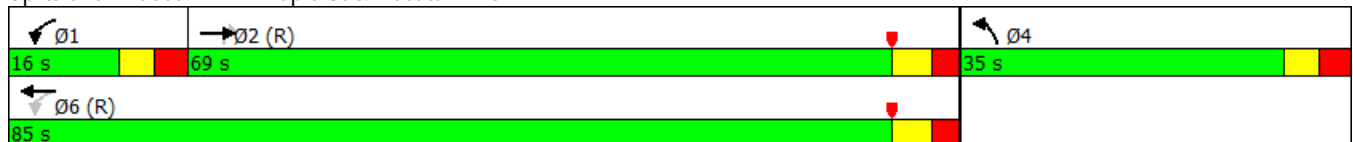


Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↑↑		↵	↑↑	↵	↵
Traffic Volume (vph)	899	133	26	754	276	38
Future Volume (vph)	899	133	26	754	276	38
Lane Util. Factor	0.95	0.95	1.00	0.95	1.00	1.00
Frt	0.981					0.850
Flt Protected			0.950		0.950	
Satd. Flow (prot)	3472	0	1770	3539	1770	1583
Flt Permitted			0.169		0.950	
Satd. Flow (perm)	3472	0	315	3539	1770	1583
Satd. Flow (RTOR)	20					29
Adj. Flow (vph)	977	145	28	820	300	41
Lane Group Flow (vph)	1122	0	28	820	300	41
Turn Type	NA		pm+pt	NA	Prot	Perm
Protected Phases	2		1	6	4	
Permitted Phases			6			2
Total Split (s)	69.0		16.0	85.0	35.0	69.0
Total Lost Time (s)	6.2		6.1	6.2	6.1	6.2
Act Effct Green (s)	71.2		78.9	78.8	28.9	71.2
Actuated g/C Ratio	0.59		0.66	0.66	0.24	0.59
v/c Ratio	0.54		0.10	0.35	0.70	0.04
Control Delay	13.1		7.9	9.7	51.8	6.0
Queue Delay	0.0		0.0	0.0	0.0	0.0
Total Delay	13.1		7.9	9.7	51.8	6.0
LOS	B		A	A	D	A
Approach Delay	13.1			9.7	46.3	
Approach LOS	B			A	D	

Intersection Summary

Cycle Length: 120
 Actuated Cycle Length: 120
 Offset: 28 (23%), Referenced to phase 2:EBT and 6:WBTL, Start of Yellow
 Control Type: Actuated-Coordinated
 Maximum v/c Ratio: 0.70
 Intersection Signal Delay: 16.7
 Intersection Capacity Utilization 54.6%
 Analysis Period (min) 15
 Intersection LOS: B
 ICU Level of Service A

Splits and Phases: 12: Maple St & Decatur Pike



Athens, Tennessee

1: Congress Parkway & W Rocky Mount Rd

04/19/2019

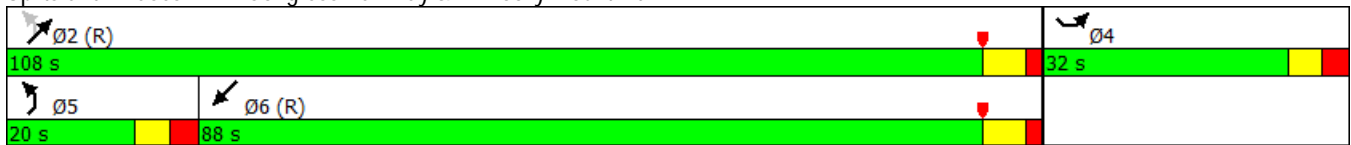


Lane Group	SEL	SER	NEL	NET	SWT	SWR
Lane Configurations						
Traffic Volume (vph)	69	21	12	389	493	50
Future Volume (vph)	69	21	12	389	493	50
Lane Util. Factor	1.00	1.00	1.00	0.95	0.95	0.95
Frt	0.968				0.986	
Flt Protected	0.963		0.950			
Satd. Flow (prot)	1771	0	1805	3539	3435	0
Flt Permitted	0.963		0.391			
Satd. Flow (perm)	1771	0	743	3539	3435	0
Satd. Flow (RTOR)	10				13	
Adj. Flow (vph)	88	27	14	469	554	56
Lane Group Flow (vph)	115	0	14	469	610	0
Turn Type	Prot		pm+pt	NA	NA	
Protected Phases	4		5	2	6	
Permitted Phases			2			
Total Split (s)	32.0		20.0	108.0	88.0	
Total Lost Time (s)	6.5		6.6	6.3	6.3	
Act Effect Green (s)	13.7		113.2	113.5	108.5	
Actuated g/C Ratio	0.10		0.81	0.81	0.78	
v/c Ratio	0.64		0.02	0.16	0.23	
Control Delay	70.3		3.3	3.3	6.5	
Queue Delay	0.0		0.0	0.0	0.3	
Total Delay	70.3		3.3	3.3	6.8	
LOS	E		A	A	A	
Approach Delay	70.3			3.3	6.8	
Approach LOS	E			A	A	

Intersection Summary

Cycle Length: 140
 Actuated Cycle Length: 140
 Offset: 132 (94%), Referenced to phase 2:NETL and 6:SWT, Start of Yellow
 Control Type: Actuated-Coordinated
 Maximum v/c Ratio: 0.64
 Intersection Signal Delay: 11.4
 Intersection LOS: B
 Intersection Capacity Utilization 32.6%
 ICU Level of Service A
 Analysis Period (min) 15

Splits and Phases: 1: Congress Parkway & W Rocky Mount Rd



Athens, Tennessee
 2: Congress Parkway & E Rocky Mount Road

04/19/2019

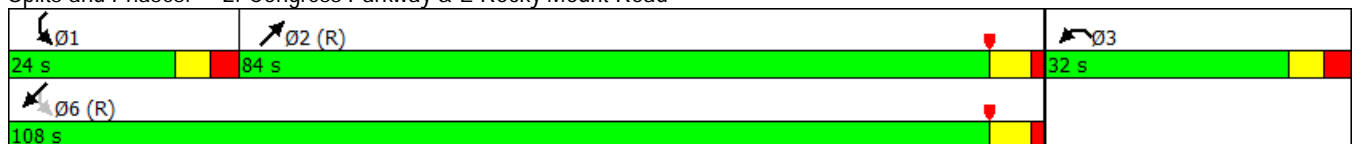


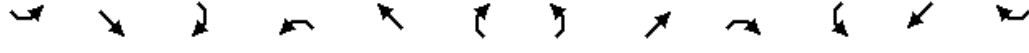
Lane Group	NWL	NWR	NET	NER	SWL	SWT
Lane Configurations						
Traffic Volume (vph)	106	52	381	77	104	437
Future Volume (vph)	106	52	381	77	104	437
Lane Util. Factor	1.00	1.00	0.95	0.95	1.00	0.95
Frt	0.956		0.975			
Flt Protected	0.967				0.950	
Satd. Flow (prot)	1722	0	3456	0	1805	3471
Flt Permitted	0.967				0.403	
Satd. Flow (perm)	1722	0	3456	0	766	3471
Satd. Flow (RTOR)	15		27			
Adj. Flow (vph)	129	63	459	93	117	491
Lane Group Flow (vph)	192	0	552	0	117	491
Turn Type	Prot		NA		pm+pt	NA
Protected Phases	3		2		1	6
Permitted Phases					6	
Total Split (s)	32.0		84.0		24.0	108.0
Total Lost Time (s)	6.6		5.9		6.6	5.9
Act Effct Green (s)	19.4		93.6		107.4	108.1
Actuated g/C Ratio	0.14		0.67		0.77	0.77
v/c Ratio	0.76		0.24		0.18	0.18
Control Delay	72.4		9.5		3.2	2.7
Queue Delay	0.0		0.3		0.0	0.0
Total Delay	72.4		9.9		3.2	2.7
LOS	E		A		A	A
Approach Delay	72.4		9.9			2.8
Approach LOS	E		A			A

Intersection Summary

Cycle Length: 140
 Actuated Cycle Length: 140
 Offset: 123 (88%), Referenced to phase 2:NET and 6:SWTL, Start of Yellow
 Control Type: Actuated-Coordinated
 Maximum v/c Ratio: 0.76
 Intersection Signal Delay: 15.6
 Intersection Capacity Utilization 43.7%
 Analysis Period (min) 15
 Intersection LOS: B
 ICU Level of Service A

Splits and Phases: 2: Congress Parkway & E Rocky Mount Road





Lane Group	SEL	SET	SER	NWL	NWT	NWR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations												
Traffic Volume (vph)	15	4	3	38	1	101	0	428	29	90	514	10
Future Volume (vph)	15	4	3	38	1	101	0	428	29	90	514	10
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.95	1.00	1.00	0.95	0.95
Frt		0.925				0.850			0.850		0.996	
Flt Protected	0.950				0.956					0.950		
Satd. Flow (prot)	1805	1758	0	0	1835	1599	1900	3505	1615	1752	3500	0
Flt Permitted	0.723				0.731					0.441		
Satd. Flow (perm)	1374	1758	0	0	1403	1599	1900	3505	1615	813	3500	0
Satd. Flow (RTOR)		8				125			92		3	
Adj. Flow (vph)	20	8	8	48	4	125	0	498	44	123	598	16
Lane Group Flow (vph)	20	16	0	0	52	125	0	498	44	123	614	0
Turn Type	Perm	NA		Perm	NA	Perm	pm+pt	NA	Perm	pm+pt	NA	
Protected Phases		8			4		5	2		1	6	
Permitted Phases	8			4		4	2		2	6		
Total Split (s)	42.0	42.0		42.0	42.0	42.0	18.0	74.0	74.0	24.0	80.0	
Total Lost Time (s)	7.8	7.8			7.8	7.8	7.0	6.6	6.6	6.6	6.9	
Act Effct Green (s)	10.4	10.4			10.4	10.4		101.1	101.1	115.2	114.9	
Actuated g/C Ratio	0.07	0.07			0.07	0.07		0.72	0.72	0.82	0.82	
v/c Ratio	0.20	0.12			0.50	0.53		0.20	0.04	0.17	0.21	
Control Delay	63.5	41.0			77.3	18.1		6.8	0.3	2.1	1.7	
Queue Delay	0.0	0.0			0.0	0.0		0.0	0.0	0.0	0.0	
Total Delay	63.5	41.0			77.3	18.1		6.8	0.3	2.1	1.7	
LOS	E	D			E	B		A	A	A	A	
Approach Delay		53.5			35.5			6.3			1.7	
Approach LOS		D			D			A			A	

Intersection Summary

Cycle Length: 140
 Actuated Cycle Length: 140
 Offset: 78 (56%), Referenced to phase 2:NETL and 6:SWTL, Start of Yellow
 Control Type: Actuated-Coordinated
 Maximum v/c Ratio: 0.53
 Intersection Signal Delay: 8.6
 Intersection Capacity Utilization 45.6%
 Analysis Period (min) 15
 Intersection LOS: A
 ICU Level of Service A

Splits and Phases: 4: Congress Parkway & Lowes Drvwy

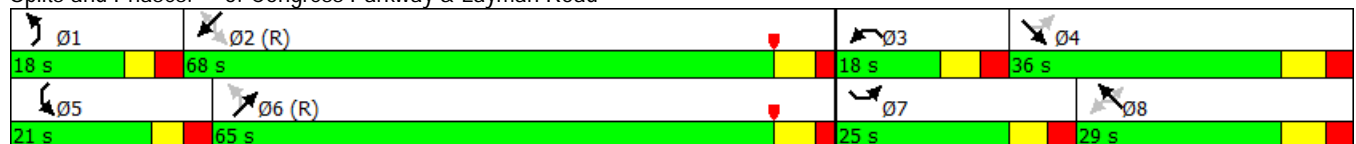


Lane Group	SEL	SET	SER	NWL	NWT	NWR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations	↔	↔		↔	↕	↕	↔	↕↕		↔	↕↕	↕
Traffic Volume (vph)	85	11	30	32	16	94	27	505	25	66	548	67
Future Volume (vph)	85	11	30	32	16	94	27	505	25	66	548	67
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.95	0.95	1.00	0.95	1.00
Fr		0.897				0.850		0.993				0.850
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1787	1704	0	1877	1864	1680	1805	3485	0	1805	3505	1615
Flt Permitted	0.435			0.715			0.418			0.354		
Satd. Flow (perm)	818	1704	0	1413	1864	1680	794	3485	0	673	3505	1615
Satd. Flow (RTOR)		44				130		5				139
Adj. Flow (vph)	123	20	44	40	28	108	38	616	32	105	589	80
Lane Group Flow (vph)	123	64	0	40	28	108	38	648	0	105	589	80
Turn Type	pm+pt	NA		pm+pt	NA	Perm	pm+pt	NA		pm+pt	NA	Perm
Protected Phases	7	4		3	8		1	6		5	2	
Permitted Phases	4			8		8	6			2		2
Total Split (s)	25.0	36.0		18.0	29.0	29.0	18.0	65.0		21.0	68.0	68.0
Total Lost Time (s)	7.0	7.6		7.1	7.6	7.6	6.1	6.5		6.3	6.5	6.5
Act Effct Green (s)	29.4	17.0		16.9	8.5	8.5	88.8	81.9		93.4	86.2	86.2
Actuated g/C Ratio	0.21	0.12		0.12	0.06	0.06	0.63	0.58		0.67	0.62	0.62
v/c Ratio	0.46	0.26		0.20	0.25	0.48	0.07	0.32		0.20	0.27	0.08
Control Delay	51.3	26.0		45.7	68.0	13.3	4.6	9.2		4.0	5.8	0.3
Queue Delay	0.0	0.0		0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0
Total Delay	51.3	26.0		45.7	68.0	13.3	4.6	9.2		4.0	5.8	0.3
LOS	D	C		D	E	B	A	A		A	A	A
Approach Delay		42.6			29.4			9.0			5.0	
Approach LOS		D			C			A			A	

Intersection Summary

Cycle Length: 140
 Actuated Cycle Length: 140
 Offset: 49 (35%), Referenced to phase 2:SWTL and 6:NETL, Start of Yellow
 Control Type: Actuated-Coordinated
 Maximum v/c Ratio: 0.48
 Intersection Signal Delay: 12.7
 Intersection LOS: B
 Intersection Capacity Utilization 47.5%
 ICU Level of Service A
 Analysis Period (min) 15

Splits and Phases: 5: Congress Parkway & Layman Road



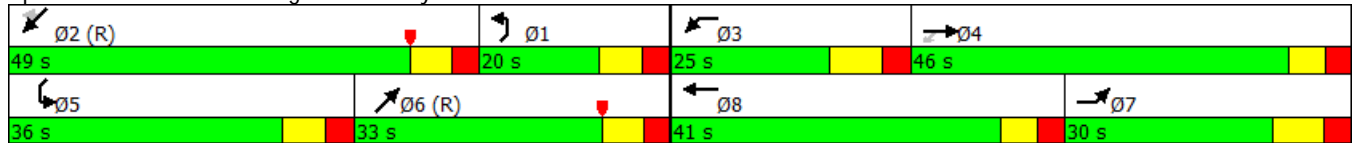


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations	↔	↕↕	↔	↔↔	↕↕	↔	↔↔	↕↕	↔	↔	↕↕	↔
Traffic Volume (vph)	148	539	109	213	599	189	141	343	199	207	353	153
Future Volume (vph)	148	539	109	213	599	189	141	343	199	207	353	153
Lane Util. Factor	1.00	0.95	1.00	0.97	0.95	1.00	0.97	0.95	1.00	1.00	0.95	1.00
Frt			0.850			0.850			0.850			0.850
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1805	3575	1599	3433	3505	1553	3335	3574	1583	1770	3505	1568
Flt Permitted	0.950			0.950			0.950			0.950		
Satd. Flow (perm)	1805	3575	1599	3433	3505	1553	3335	3574	1583	1770	3505	1568
Satd. Flow (RTOR)			216			333			333			218
Adj. Flow (vph)	176	573	128	251	681	228	176	440	229	244	376	191
Lane Group Flow (vph)	176	573	128	251	681	228	176	440	229	244	376	191
Turn Type	Prot	NA	Perm	Prot	NA	Free	Prot	NA	Free	Prot	NA	Perm
Protected Phases	7	4		3	8		1	6		5	2	
Permitted Phases			4			Free			Free			2
Total Split (s)	30.0	46.0	46.0	25.0	41.0		20.0	33.0		36.0	49.0	49.0
Total Lost Time (s)	8.4	6.6	6.6	8.5	6.6		7.5	7.2		7.5	7.2	7.2
Act Effct Green (s)	21.6	41.2	41.2	14.7	34.4	140.0	12.5	30.7	140.0	23.6	41.8	41.8
Actuated g/C Ratio	0.15	0.29	0.29	0.10	0.25	1.00	0.09	0.22	1.00	0.17	0.30	0.30
v/c Ratio	0.63	0.55	0.21	0.70	0.79	0.15	0.59	0.56	0.14	0.82	0.36	0.31
Control Delay	43.4	22.5	0.9	53.1	43.9	0.2	68.9	51.6	0.2	64.6	31.1	5.0
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	43.4	22.5	0.9	53.1	43.9	0.2	68.9	51.6	0.2	64.6	31.1	5.0
LOS	D	C	A	D	D	A	E	D	A	E	C	A
Approach Delay		23.5			37.3			41.3			35.1	
Approach LOS		C			D			D			D	

Intersection Summary

Cycle Length: 140
 Actuated Cycle Length: 140
 Offset: 0 (0%), Referenced to phase 2:SWT and 6:NET, Start of Yellow, Master Intersection
 Control Type: Actuated-Coordinated
 Maximum v/c Ratio: 0.82
 Intersection Signal Delay: 34.4
 Intersection Capacity Utilization 70.7%
 Analysis Period (min) 15
 Intersection LOS: C
 ICU Level of Service C

Splits and Phases: 6: Congress Parkway & Decatur Pike

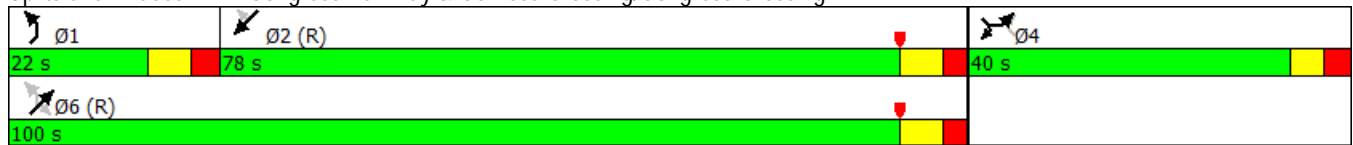


Lane Group	SEL	SET	SER	NWL	NWT	NWR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations												
Traffic Volume (vph)	81	0	73	0	0	12	54	618	0	0	639	67
Future Volume (vph)	81	0	73	0	0	12	54	618	0	0	639	67
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.95	1.00	1.00	0.95	1.00
Frt			0.850			0.865						0.850
Flt Protected	0.950						0.950					
Satd. Flow (prot)	1850	0	1623	0	0	1644	1770	3539	1900	0	3505	1568
Flt Permitted	0.950						0.365					
Satd. Flow (perm)	1850	0	1623	0	0	1644	680	3539	1900	0	3505	1568
Satd. Flow (RTOR)			100			244						86
Adj. Flow (vph)	116	0	100	0	0	16	76	763	0	0	652	80
Lane Group Flow (vph)	116	0	100	0	0	16	76	763	0	0	652	80
Turn Type	Prot		Prot			Perm	pm+pt	NA	Perm		NA	Perm
Protected Phases	4		4				1	6			2	
Permitted Phases						4	6		6			2
Total Split (s)	40.0		40.0			40.0	22.0	100.0	100.0		78.0	78.0
Total Lost Time (s)	6.5		6.5			6.5	7.5	7.1	7.1		7.1	7.1
Act Effct Green (s)	14.1		14.1			14.1	111.9	112.3			98.0	98.0
Actuated g/C Ratio	0.10		0.10			0.10	0.80	0.80			0.70	0.70
v/c Ratio	0.62		0.40			0.04	0.13	0.27			0.27	0.07
Control Delay	74.3		14.6			0.2	2.8	2.4			9.1	2.9
Queue Delay	0.0		0.0			0.0	0.0	0.0			0.0	0.0
Total Delay	74.3		14.6			0.2	2.8	2.4			9.1	2.9
LOS	E		B			A	A	A			A	A
Approach Delay		46.7			0.2			2.4			8.4	
Approach LOS		D			A			A			A	

Intersection Summary

Cycle Length: 140
 Actuated Cycle Length: 140
 Offset: 29 (21%), Referenced to phase 2:SWT and 6:NETL, Start of Yellow
 Control Type: Actuated-Coordinated
 Maximum v/c Ratio: 0.62
 Intersection Signal Delay: 10.1
 Intersection Capacity Utilization 42.9%
 Analysis Period (min) 15
 Intersection LOS: B
 ICU Level of Service A

Splits and Phases: 7: Congress Parkway & Congress Crossing/Congress Crossing



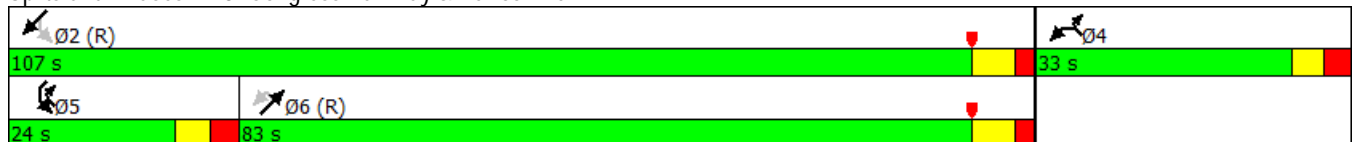


Lane Group	NWL	NWR	NEU	NET	NER	SWL	SWT
Lane Configurations							
Traffic Volume (vph)	96	84	2	625	81	76	603
Future Volume (vph)	96	84	2	625	81	76	603
Lane Util. Factor	1.00	1.00	1.00	0.95	0.95	1.00	0.95
Frt		0.850		0.984			
Flt Protected	0.950		0.950			0.950	
Satd. Flow (prot)	1787	1615	1805	3483	0	1673	3540
Flt Permitted	0.950		0.400			0.279	
Satd. Flow (perm)	1787	1615	760	3483	0	491	3540
Satd. Flow (RTOR)		100		14			
Adj. Flow (vph)	108	100	4	791	92	101	663
Lane Group Flow (vph)	108	100	4	883	0	101	663
Turn Type	Prot	pt+ov	Perm	NA		pm+pt	NA
Protected Phases	4	4 5		6		5	2
Permitted Phases			6			2	
Total Split (s)	33.0		83.0	83.0		24.0	107.0
Total Lost Time (s)	6.3		6.7	6.7		6.6	6.7
Act Effct Green (s)	13.8	27.7	99.3	99.3		113.3	113.2
Actuated g/C Ratio	0.10	0.20	0.71	0.71		0.81	0.81
v/c Ratio	0.61	0.25	0.01	0.36		0.22	0.23
Control Delay	74.9	9.2	0.5	1.0		3.3	2.6
Queue Delay	0.0	0.0	0.0	0.0		0.0	0.0
Total Delay	74.9	9.2	0.5	1.0		3.3	2.6
LOS	E	A	A	A		A	A
Approach Delay	43.3			1.0			2.7
Approach LOS	D			A			A

Intersection Summary

Cycle Length: 140
 Actuated Cycle Length: 140
 Offset: 126 (90%), Referenced to phase 2:SWTL and 6:NETU, Start of Yellow
 Control Type: Actuated-Coordinated
 Maximum v/c Ratio: 0.61
 Intersection Signal Delay: 6.4
 Intersection Capacity Utilization 50.9%
 Analysis Period (min) 15
 Intersection LOS: A
 ICU Level of Service A

Splits and Phases: 8: Congress Parkway & Tellico Ave



Athens, Tennessee
 9: Velma Road & Congress Pkwy

04/19/2019

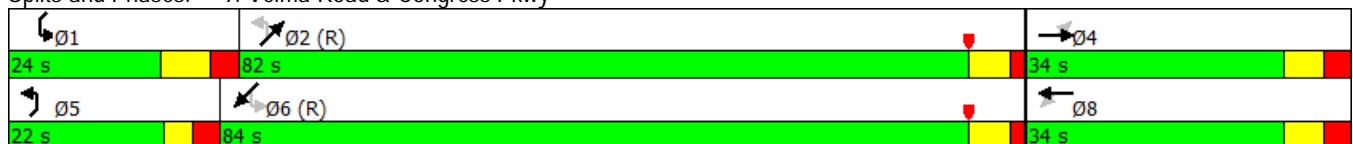


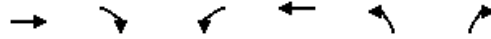
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations		↕			↕		↕	↕		↕	↕	
Traffic Volume (vph)	80	26	30	77	27	24	25	649	15	32	577	120
Future Volume (vph)	80	26	30	77	27	24	25	649	15	32	577	120
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.95	0.95	1.00	0.95	0.95
Frt		0.963			0.972			0.996			0.972	
Flt Protected		0.977			0.975		0.950			0.950		
Satd. Flow (prot)	0	1637	0	0	1754	0	1805	3527	0	1671	3419	0
Flt Permitted		0.735			0.690		0.347			0.288		
Satd. Flow (perm)	0	1231	0	0	1241	0	659	3527	0	507	3419	0
Satd. Flow (RTOR)		12			8			3			32	
Adj. Flow (vph)	92	48	52	92	48	36	47	822	20	59	614	140
Lane Group Flow (vph)	0	192	0	0	176	0	47	842	0	59	754	0
Turn Type	Perm	NA		Perm	NA		pm+pt	NA		pm+pt	NA	
Protected Phases		4			8		5	2		1	6	
Permitted Phases	4			8			2			6		
Total Split (s)	34.0	34.0		34.0	34.0		22.0	82.0		24.0	84.0	
Total Lost Time (s)		7.2			7.2		5.9	6.0		8.2	6.0	
Act Effct Green (s)		22.7			22.7		97.2	91.8		97.7	94.0	
Actuated g/C Ratio		0.16			0.16		0.69	0.66		0.70	0.67	
v/c Ratio		0.92			0.85		0.09	0.36		0.14	0.33	
Control Delay		97.7			86.6		6.8	10.5		7.0	10.7	
Queue Delay		0.0			0.0		0.0	0.0		0.0	0.0	
Total Delay		97.7			86.6		6.8	10.5		7.0	10.7	
LOS		F			F		A	B		A	B	
Approach Delay		97.7			86.6			10.3			10.4	
Approach LOS		F			F			B			B	

Intersection Summary

Cycle Length: 140
 Actuated Cycle Length: 140
 Offset: 121 (86%), Referenced to phase 2:NETL and 6:SWTL, Start of Yellow
 Control Type: Actuated-Coordinated
 Maximum v/c Ratio: 0.92
 Intersection Signal Delay: 24.9
 Intersection LOS: C
 Intersection Capacity Utilization 46.7%
 ICU Level of Service A
 Analysis Period (min) 15

Splits and Phases: 9: Velma Road & Congress Pkwy



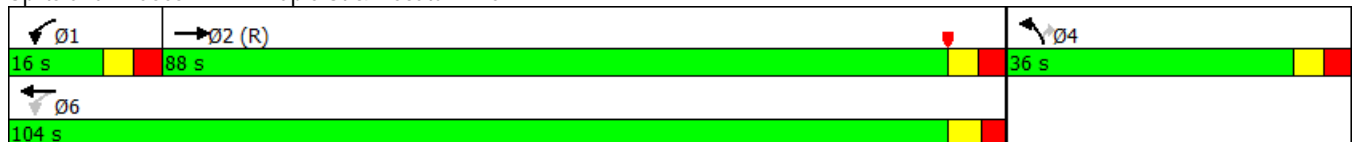


Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↑↑		↑	↑↑	↑	↑
Traffic Volume (vph)	899	133	26	754	276	38
Future Volume (vph)	899	133	26	754	276	38
Lane Util. Factor	0.95	0.95	1.00	0.95	1.00	1.00
Frt	0.981					0.850
Flt Protected			0.950		0.950	
Satd. Flow (prot)	3472	0	1770	3539	1770	1583
Flt Permitted			0.190		0.950	
Satd. Flow (perm)	3472	0	354	3539	1770	1583
Satd. Flow (RTOR)	20					15
Adj. Flow (vph)	977	145	28	820	300	41
Lane Group Flow (vph)	1122	0	28	820	300	41
Turn Type	NA		pm+pt	NA	Prot	Perm
Protected Phases	2		1	6	4	
Permitted Phases			6			4
Total Split (s)	88.0		16.0	104.0	36.0	36.0
Total Lost Time (s)	6.1		6.1	6.2	6.1	6.1
Act Effect Green (s)	93.0		100.6	100.5	27.2	27.2
Actuated g/C Ratio	0.66		0.72	0.72	0.19	0.19
v/c Ratio	0.48		0.09	0.32	0.87	0.13
Control Delay	4.1		6.9	7.9	79.7	32.7
Queue Delay	0.0		0.0	0.0	0.0	0.0
Total Delay	4.1		6.9	7.9	79.7	32.7
LOS	A		A	A	E	C
Approach Delay	4.1			7.9	74.0	
Approach LOS	A			A	E	

Intersection Summary

Cycle Length: 140
 Actuated Cycle Length: 140
 Offset: 51 (36%), Referenced to phase 2:EBT, Start of Yellow
 Control Type: Actuated-Coordinated
 Maximum v/c Ratio: 0.87
 Intersection Signal Delay: 15.8
 Intersection Capacity Utilization 54.5%
 Analysis Period (min) 15
 Intersection LOS: B
 ICU Level of Service A

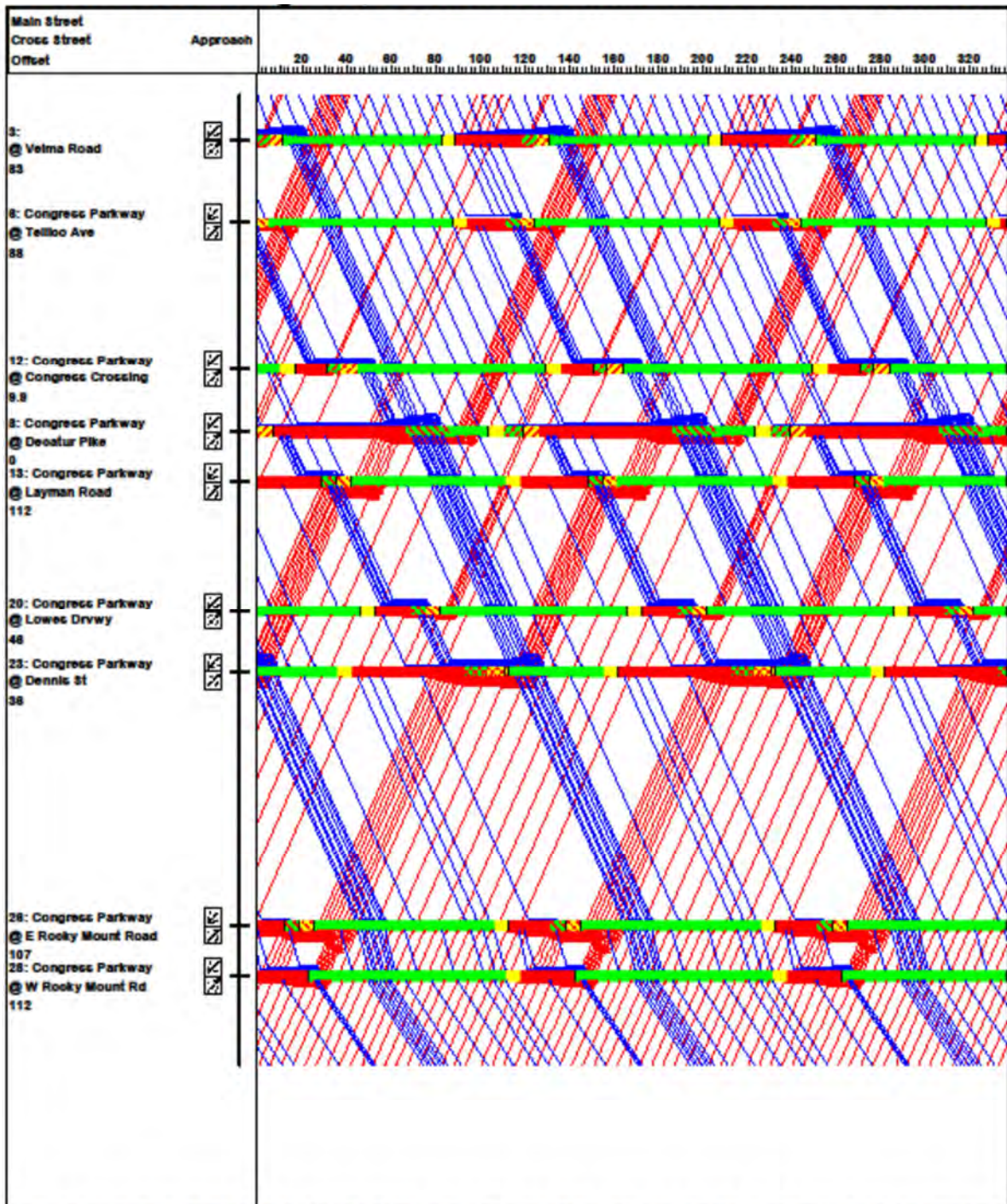
Splits and Phases: 12: Maple St & Decatur Pike



APPENDIX D

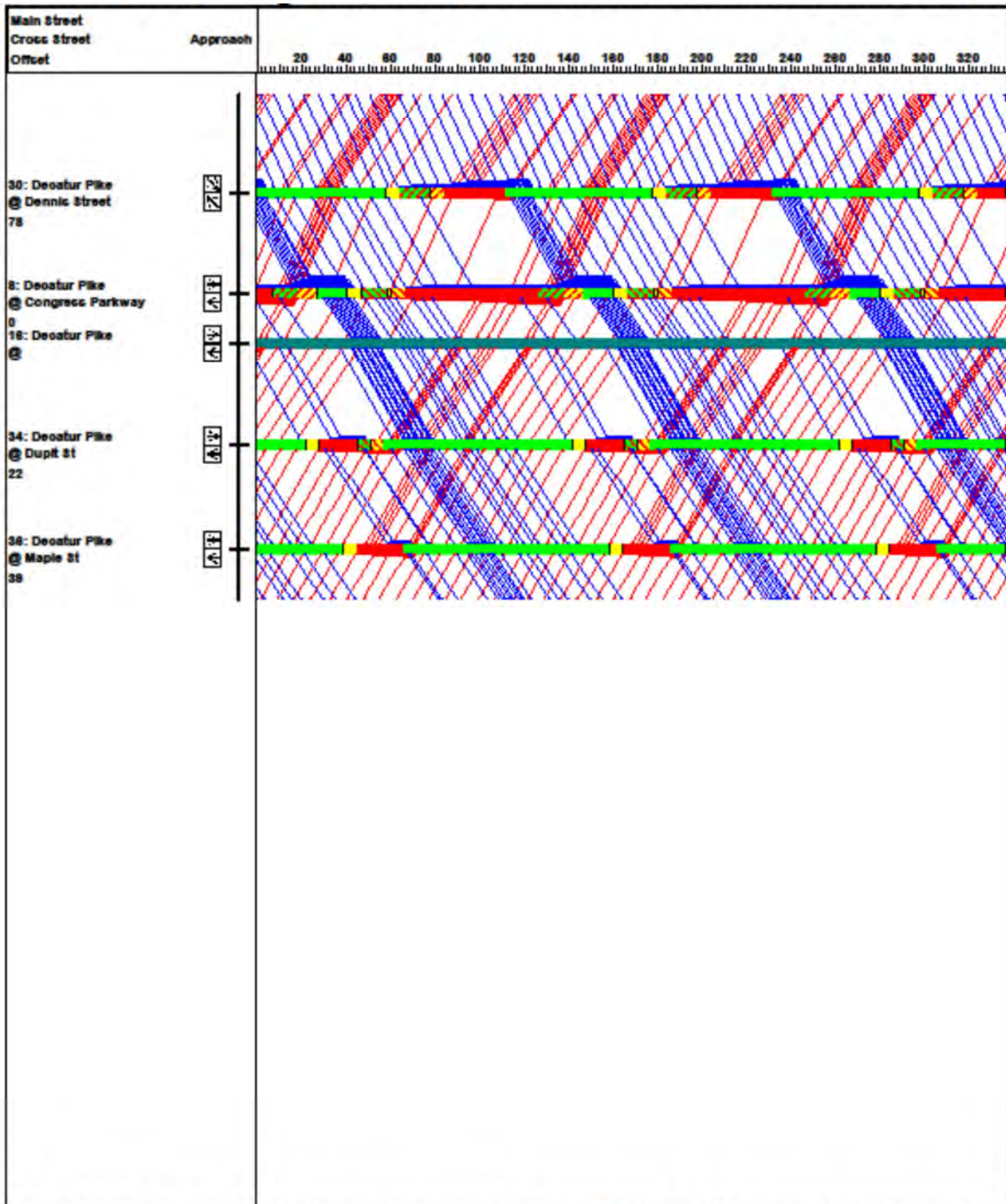
Time Space Diagrams

Time-Space Diagram - Congress Parkway



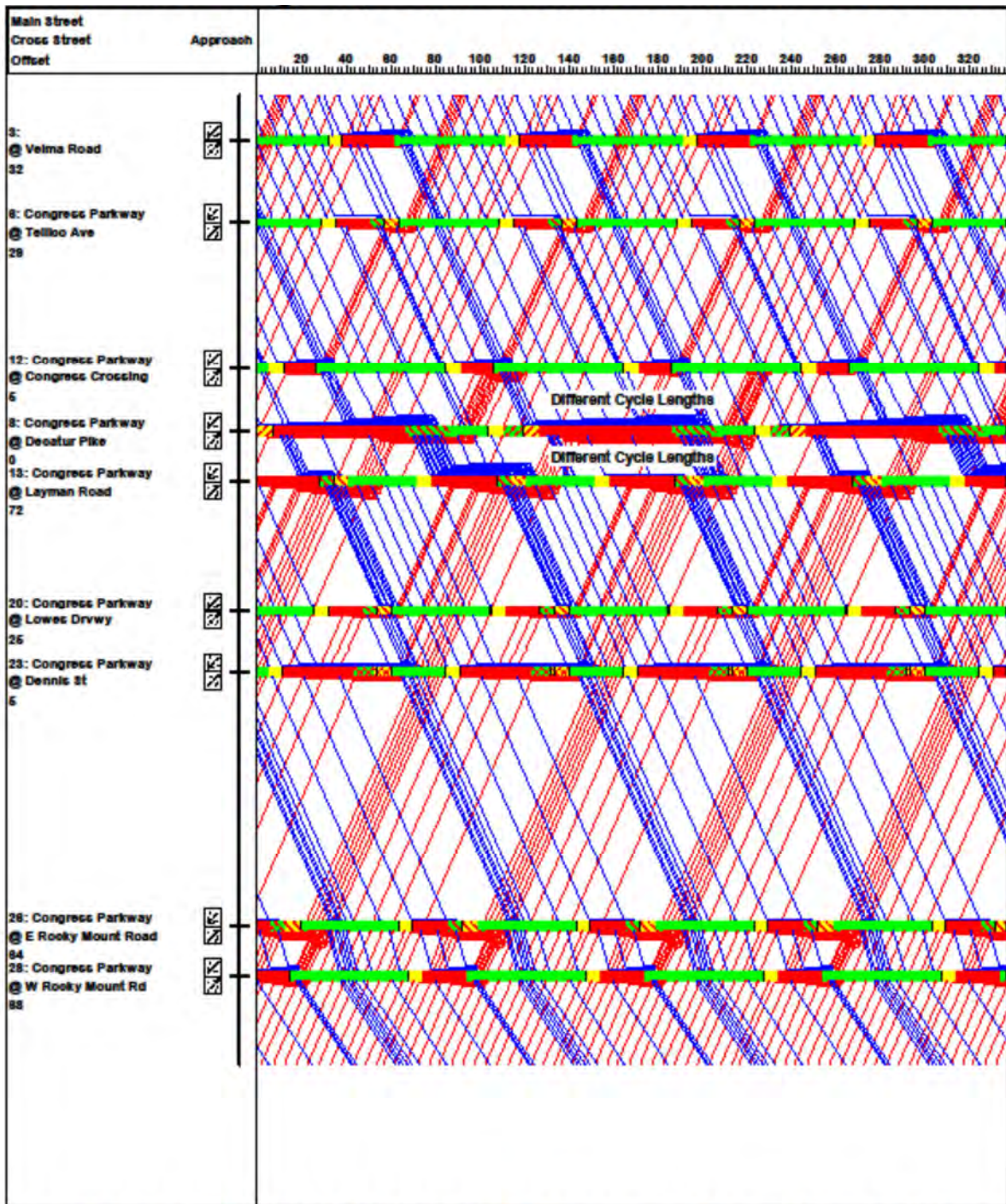
AM New 120

Time-Space Diagram - Decatur Pike



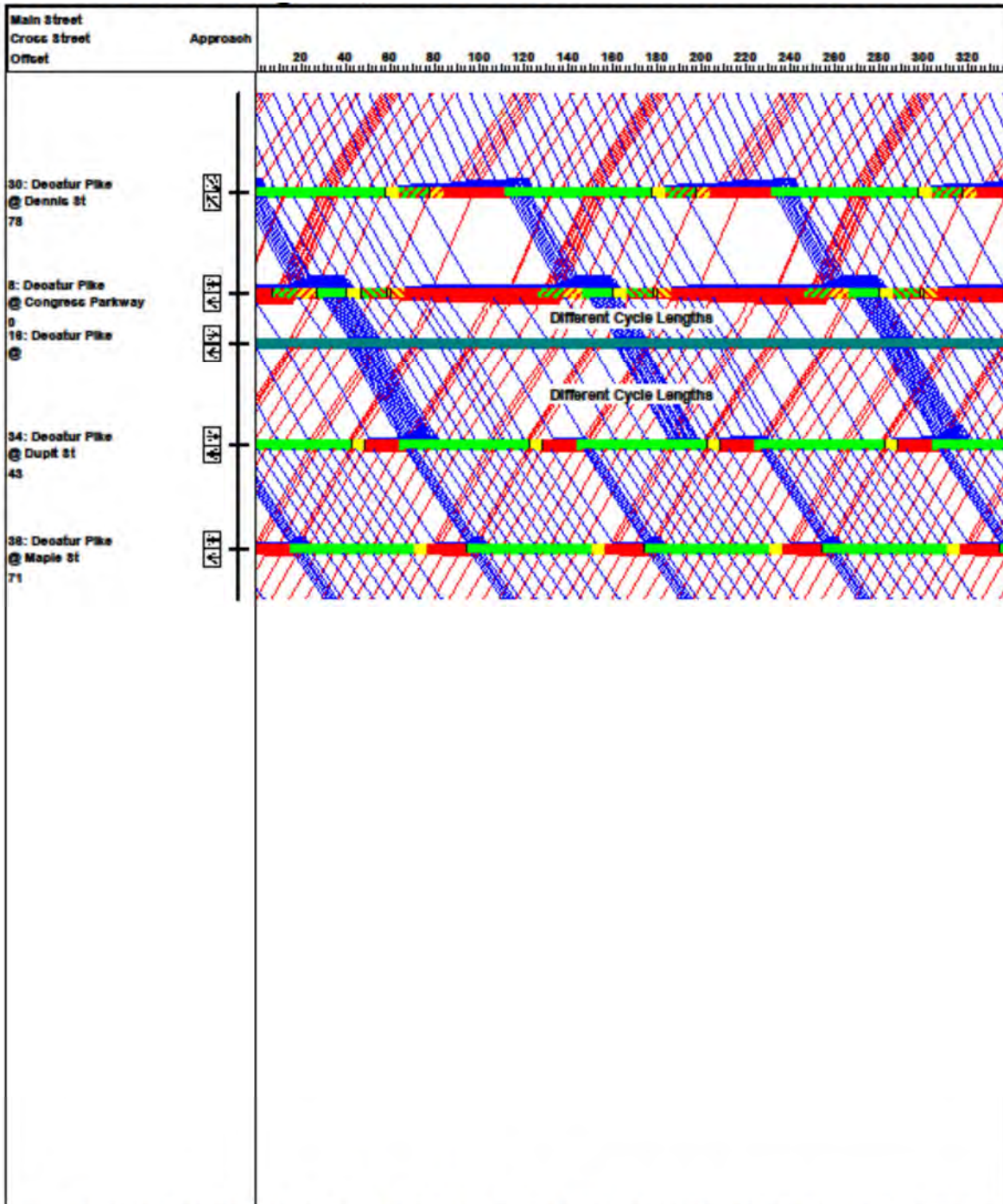
AM New 120

Time-Space Diagram - Congress Parkway



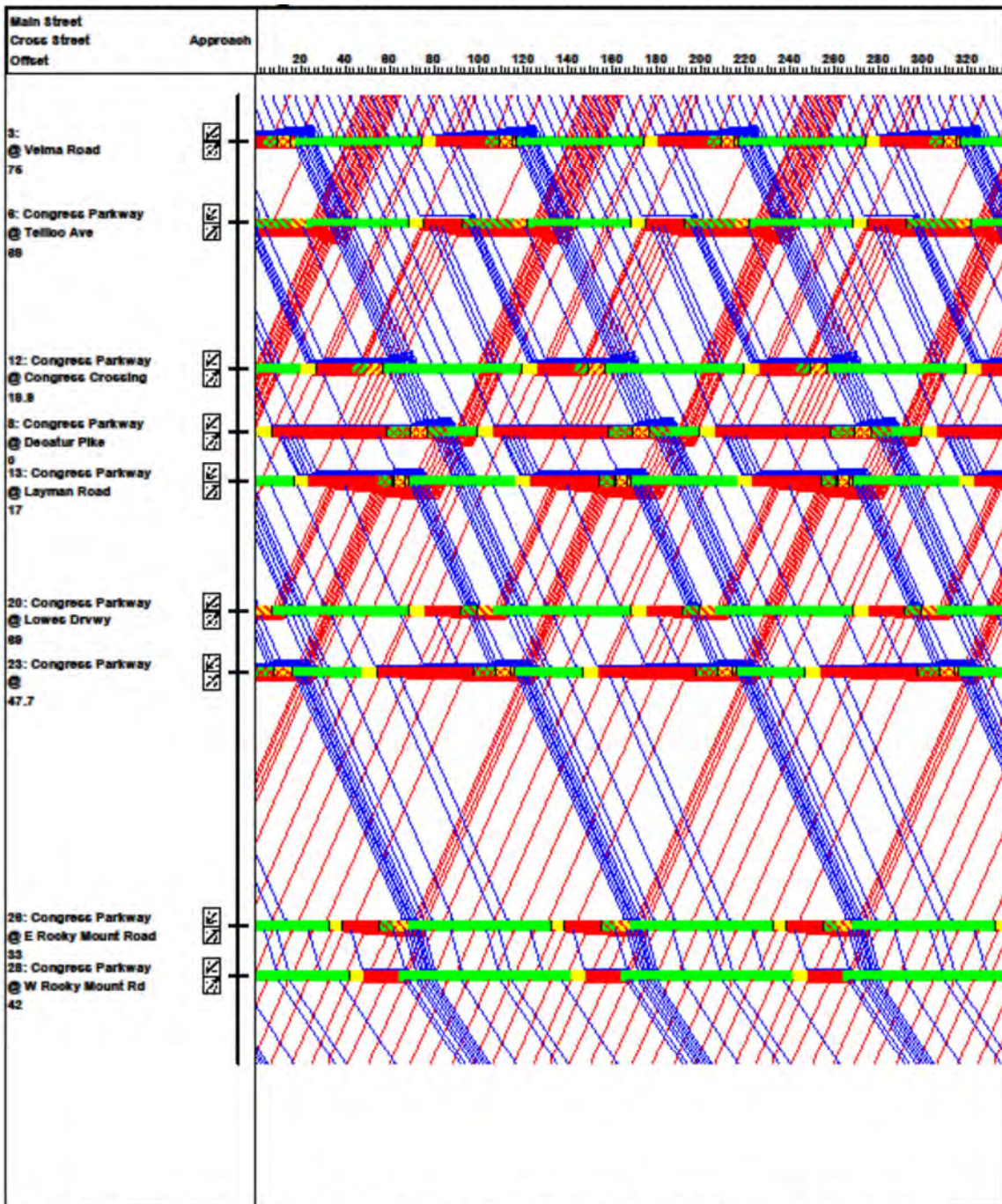
AM New

Time-Space Diagram - Decatur Pike



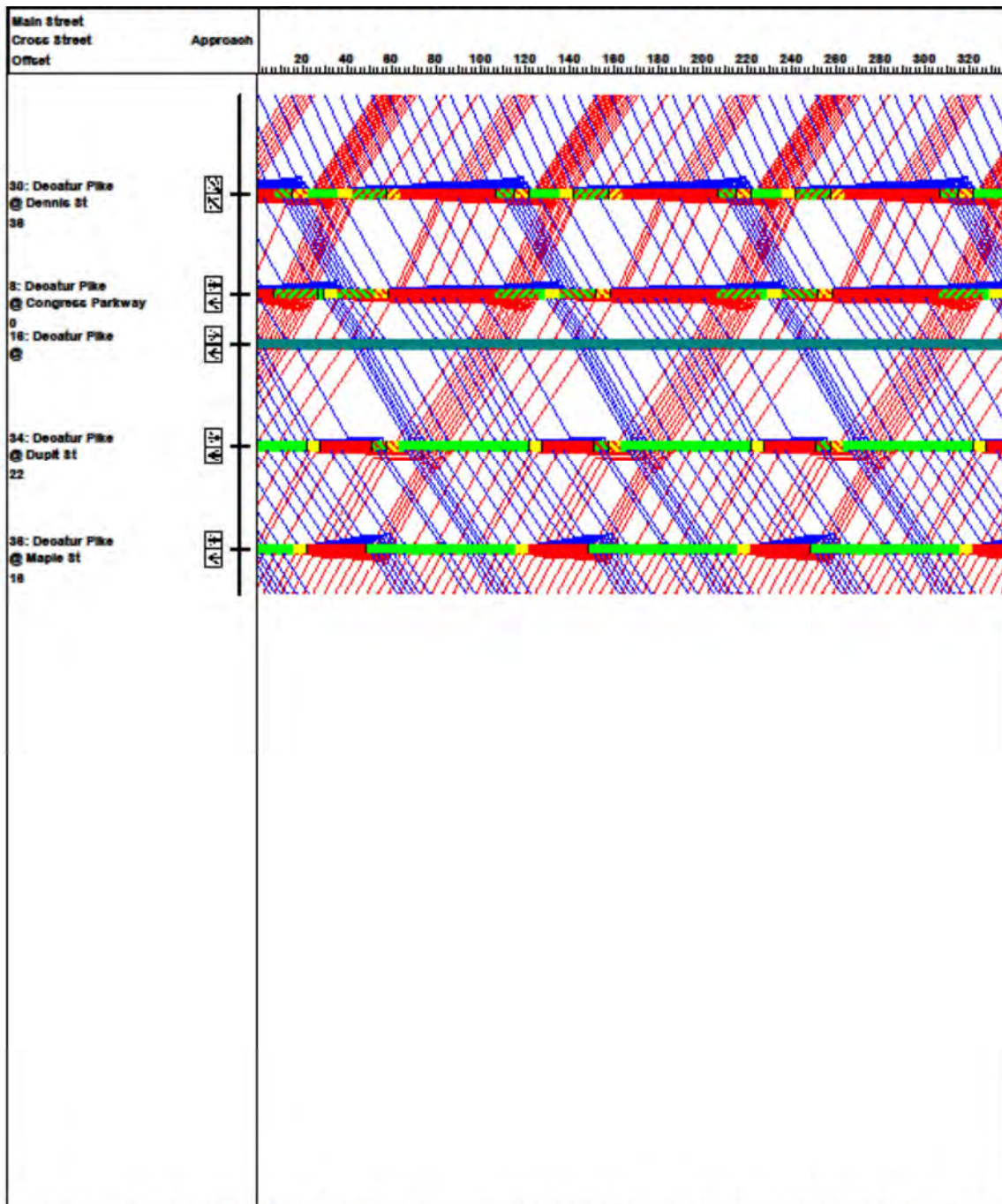
AM New 80

Time-Space Diagram -



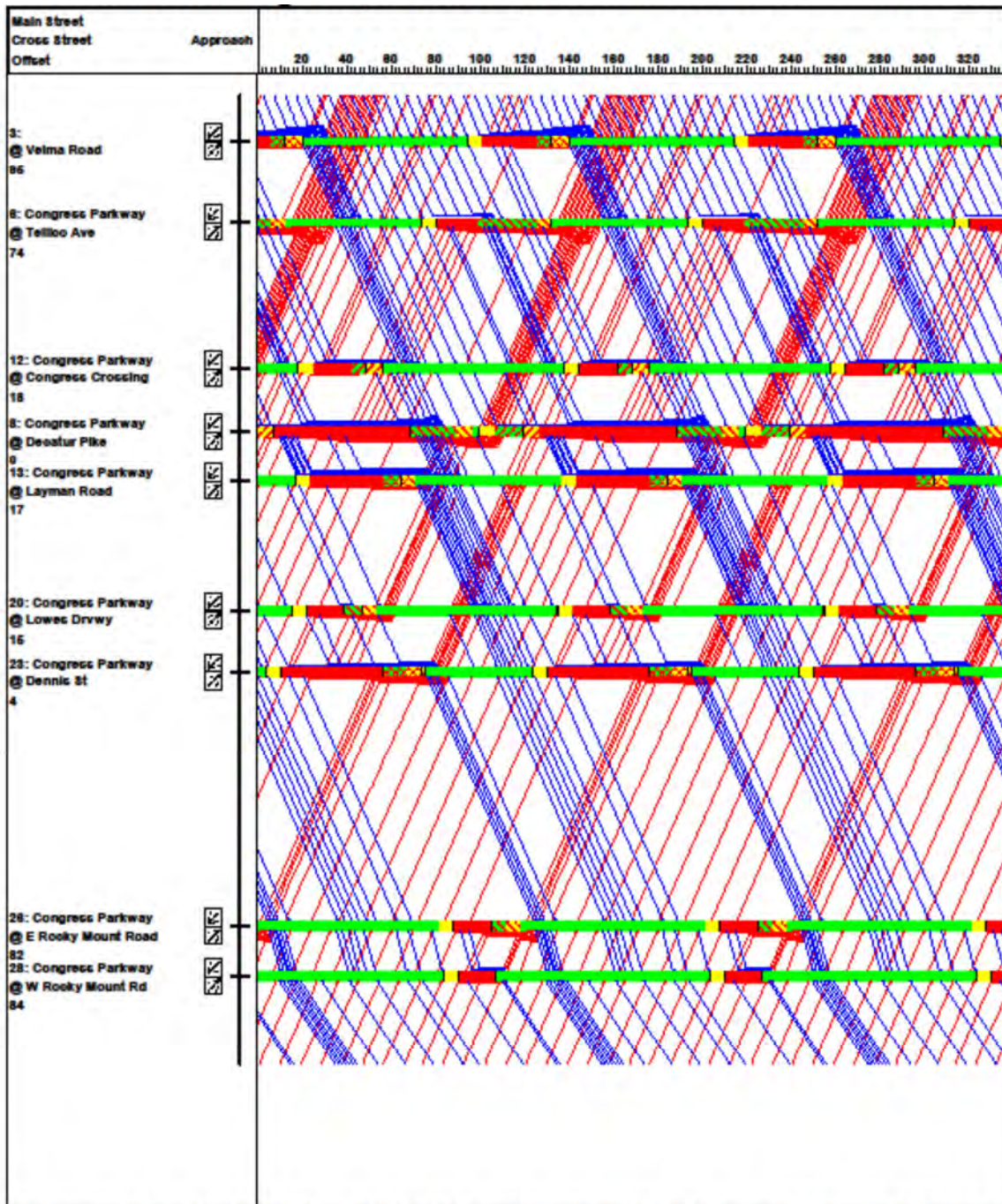
Mid New 100

Time-Space Diagram - Decatur Pike



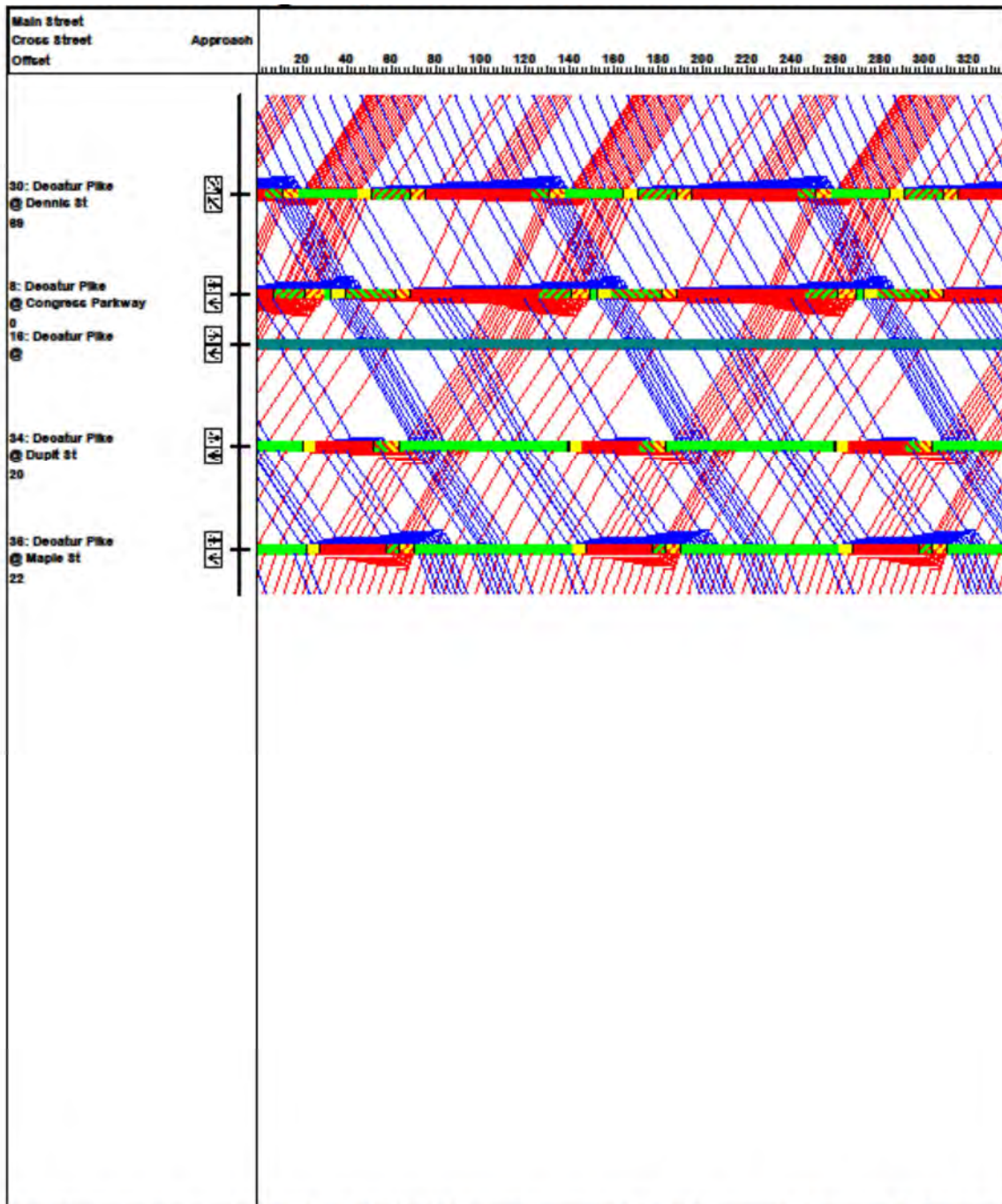
Mid New 100

Time-Space Diagram -



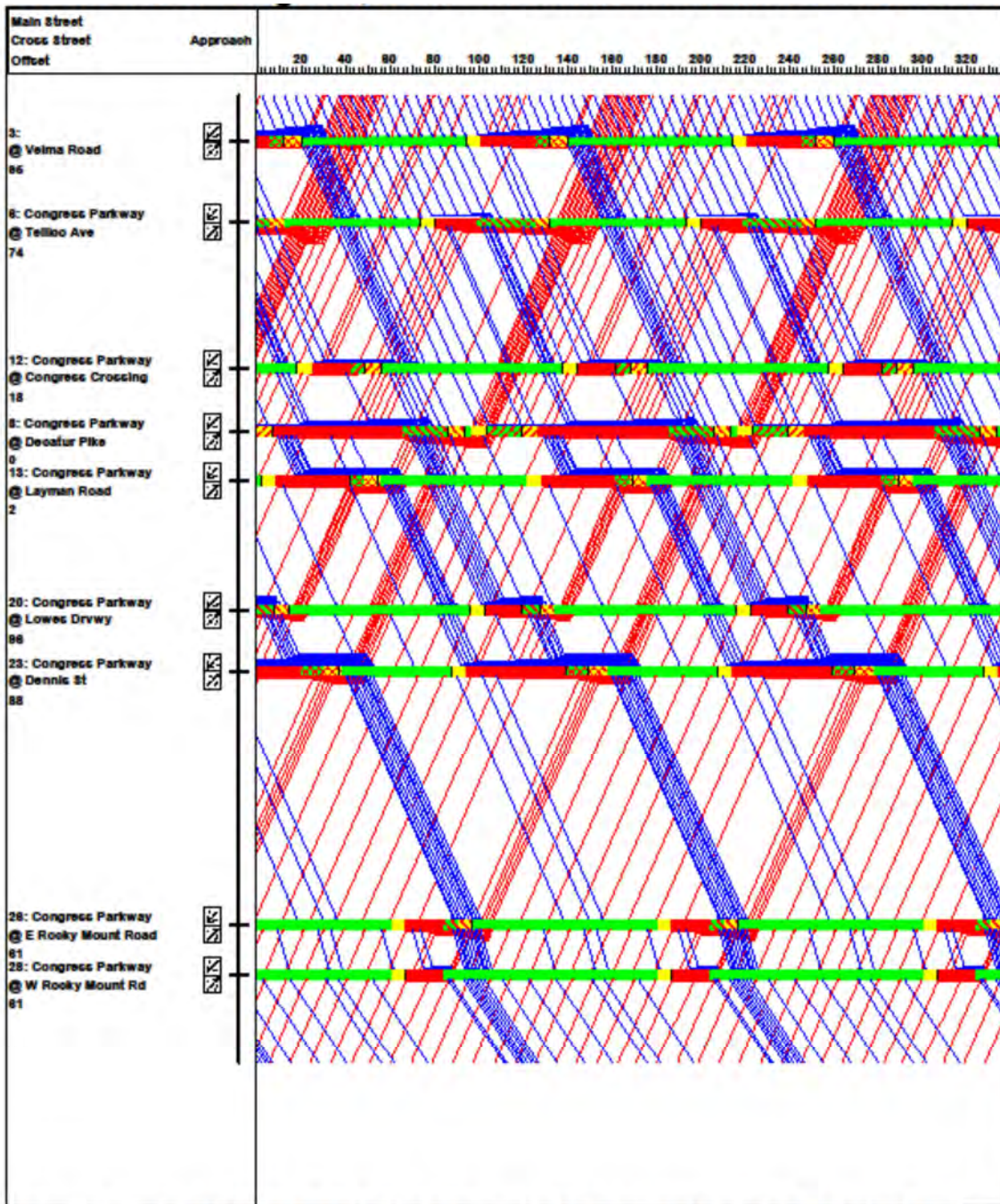
Mid New 120

Time-Space Diagram - Decatur Pike



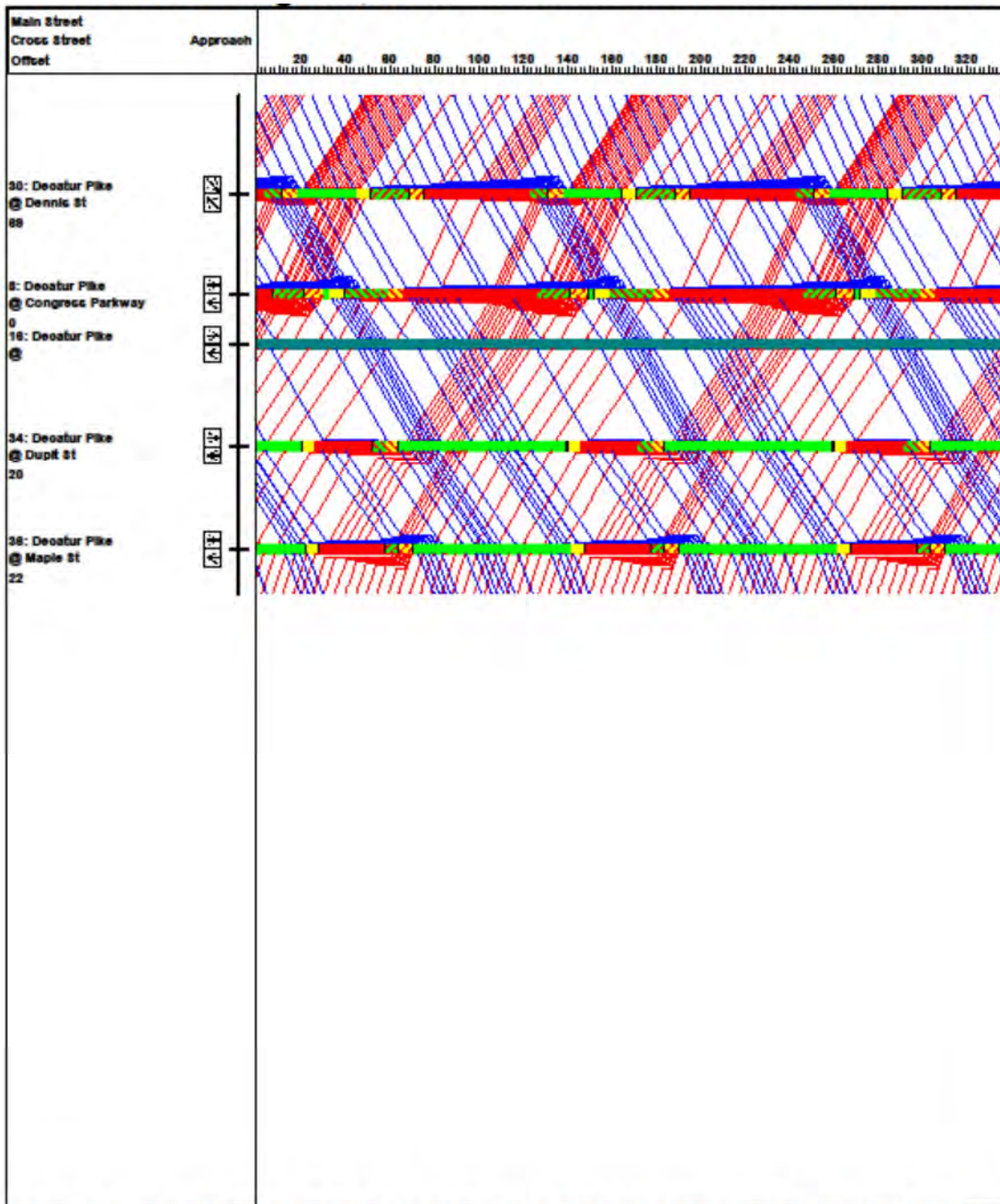
Mid New 120

Time-Space Diagram -



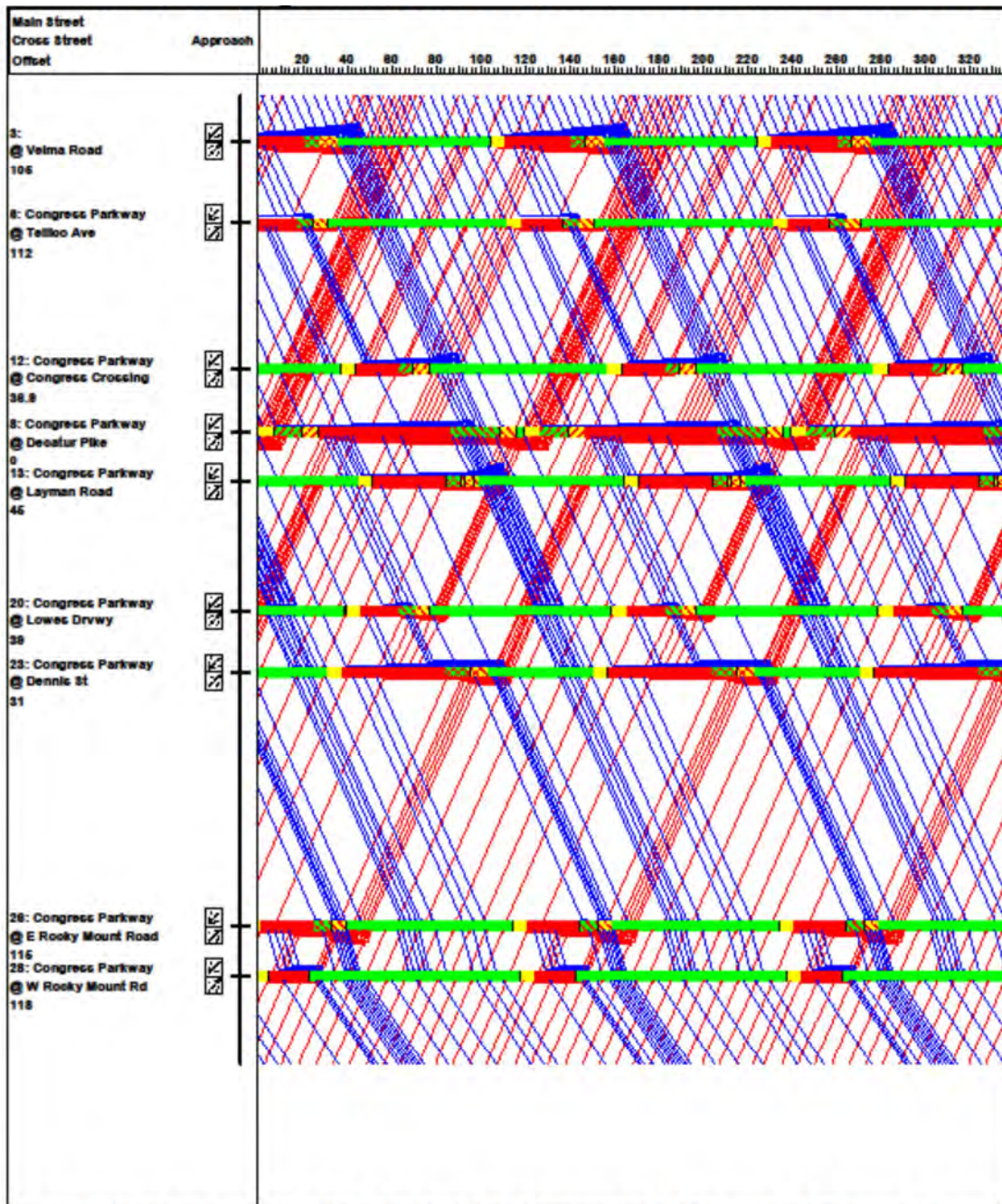
School New 120

Time-Space Diagram - Decatur Pike



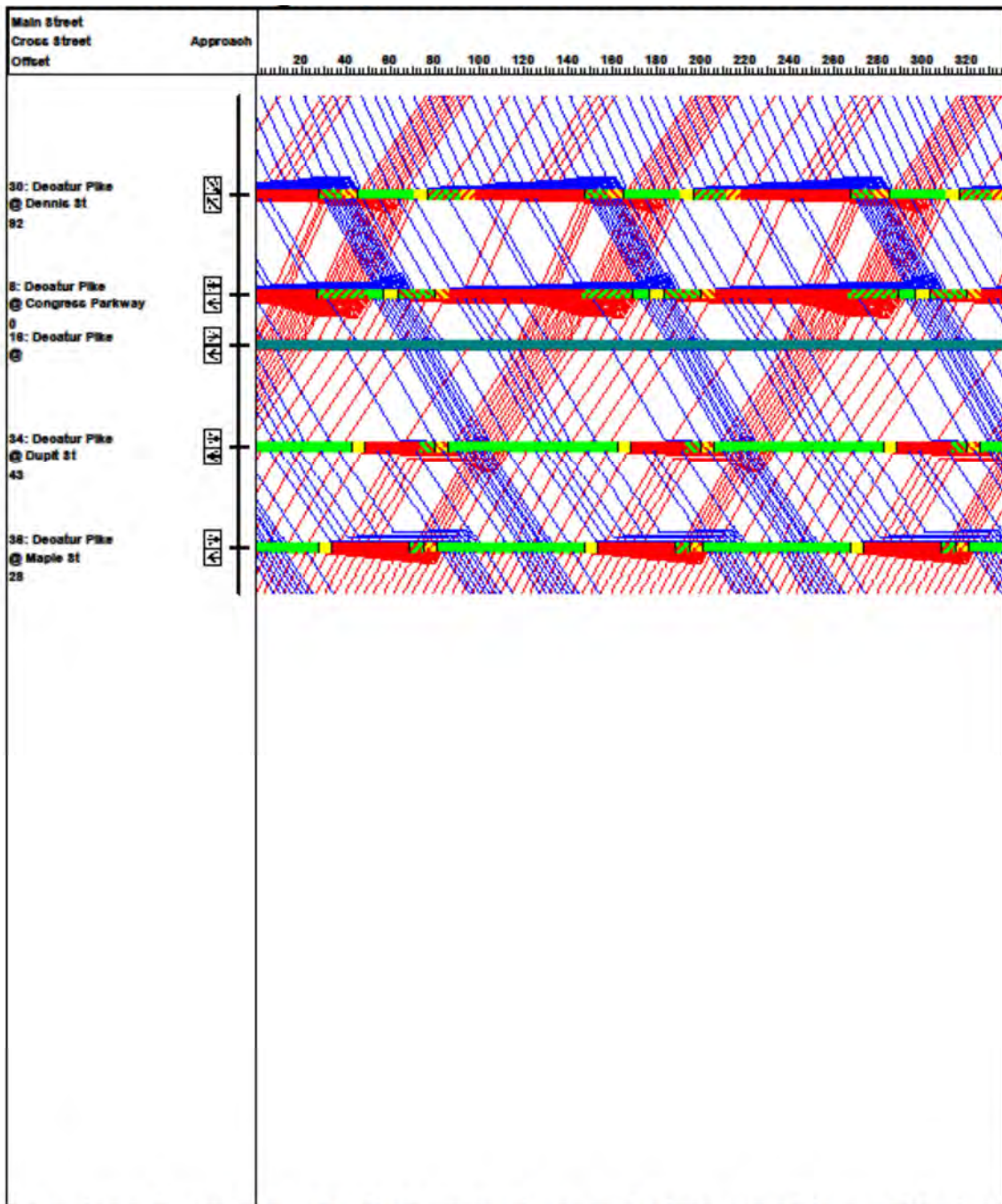
School New 120

Time-Space Diagram -



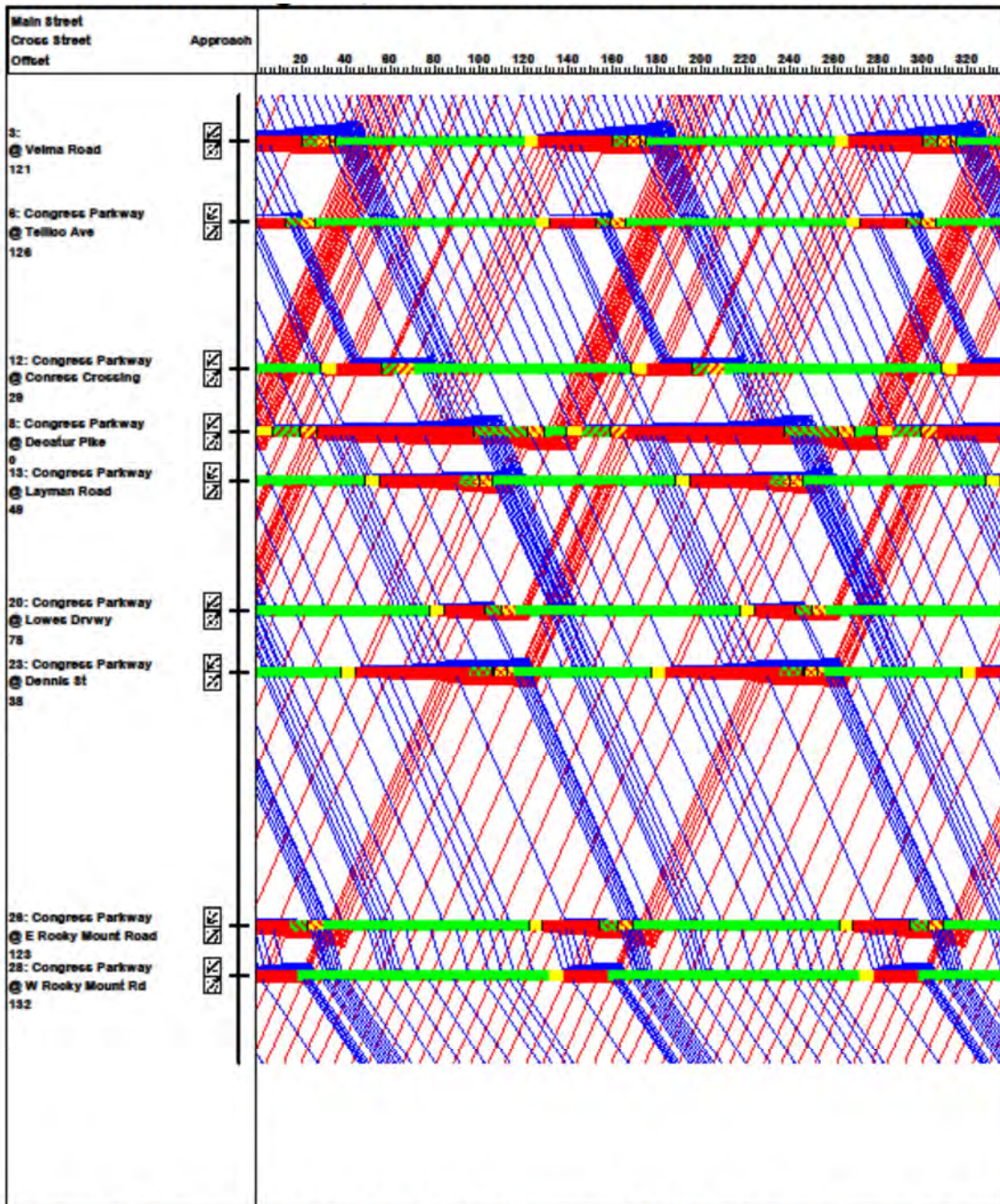
PM New 120

Time-Space Diagram - Decatur Pike



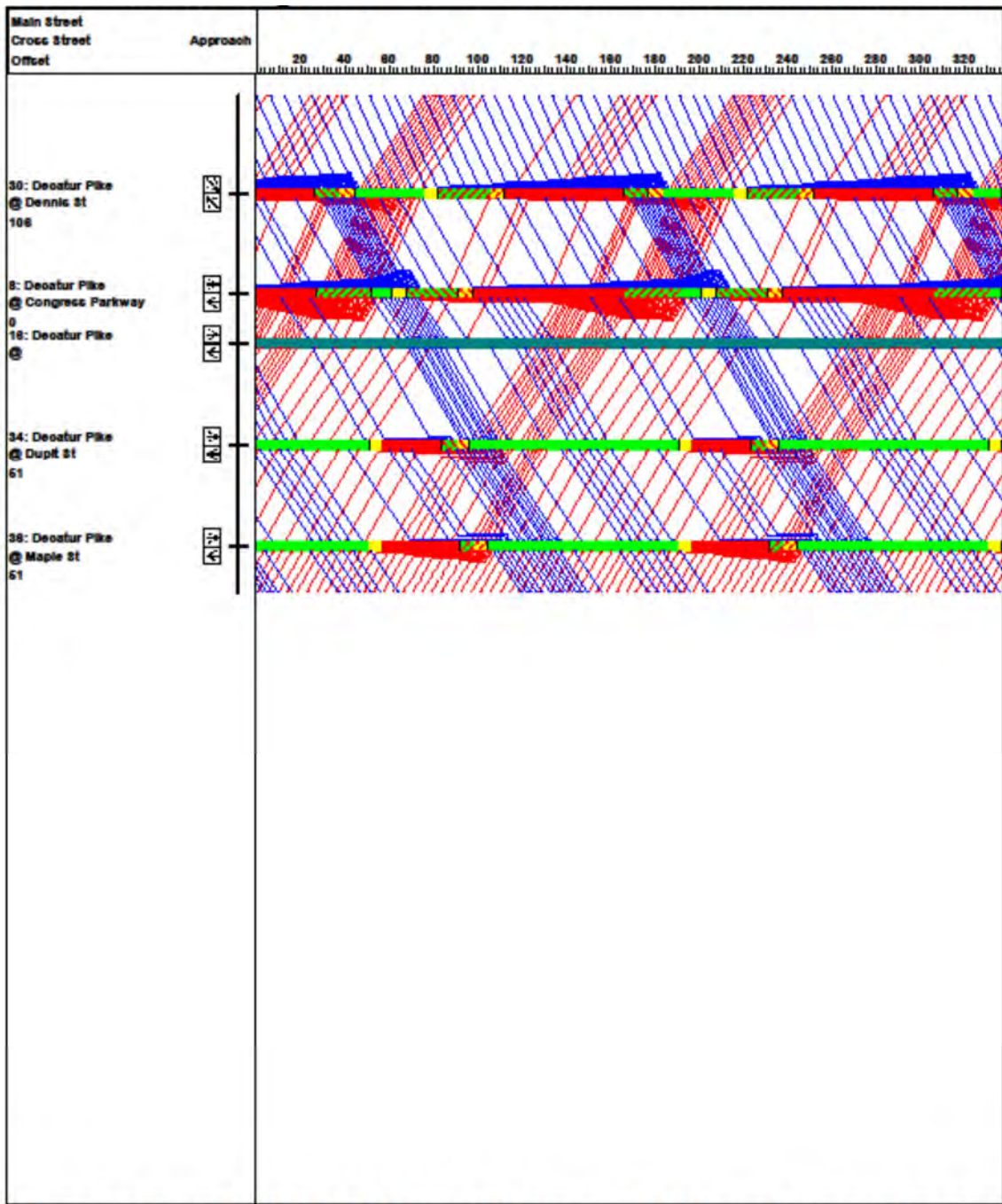
PM New 120

Time-Space Diagram -



PM New 140

Time-Space Diagram - Decatur Pike



PM New 140