Design Documentation
SR 95 (US 29)
Signal Improvement Project
(Tree St, Muscogee Rd, Morris Ave)

Prepared for:

Escambia County

Prepared by:

American Consulting Engineers of Florida, LLC

4489 Woodbine Road
Pace, Florida 32571
Certificate of Authorization No. 9302

June 2016

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SECTION 1 PROJECT DESCRIPTION

Escambia County (County) contracted American Consulting Engineers of Florida, LLC (American) to develop signal plans for the intersections of US 29 and Tree Street, Muscogee Road and Morris Avenue. This project is part of the LAP agreement between Escambia County and the Florida Department of Transportation (FPID 437039-1-54-01, Contract ART87)

The project is located north of US 90 in Cantonement, FL near International Paper. The project location is shown in Figure 1-1, Project Location Map.

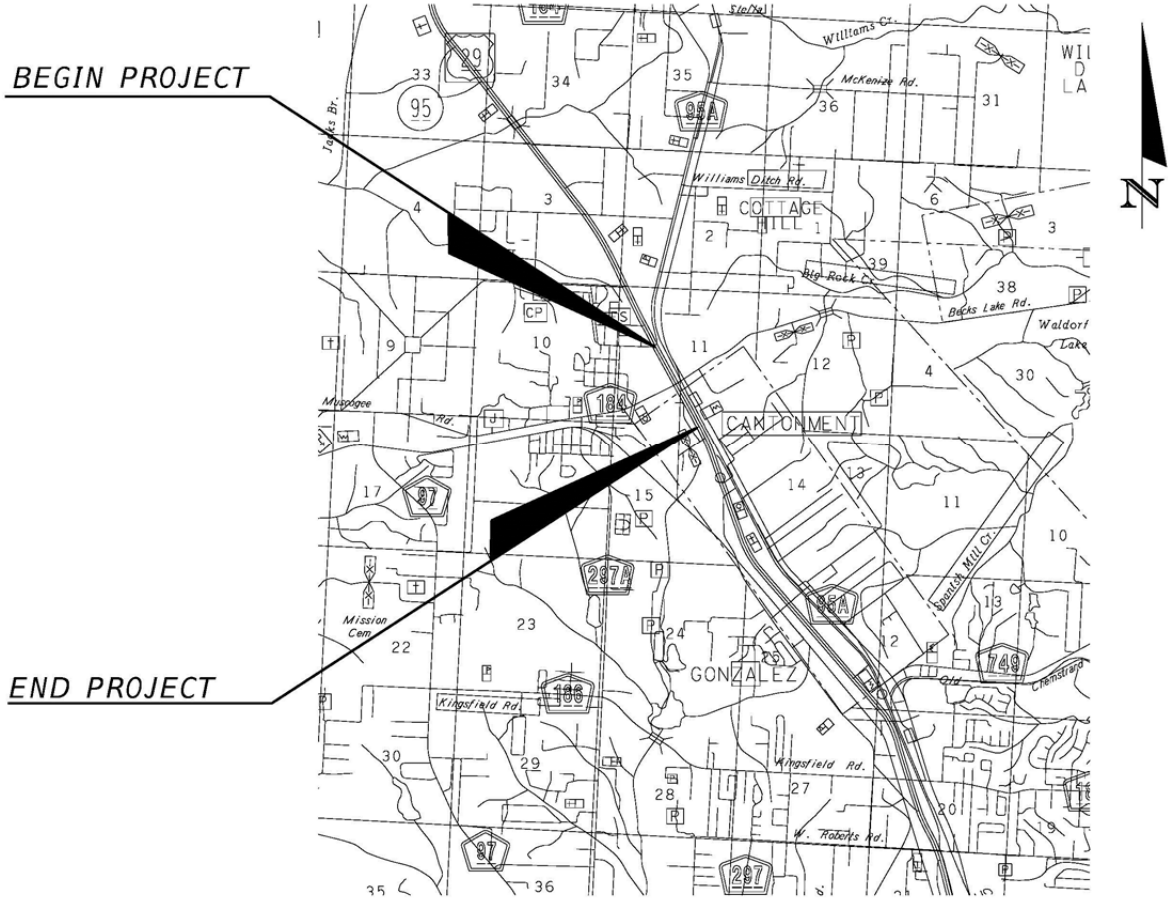

Figure 1-1 Project Location Map

Signal timing analysis was conducted for the three intersections and the calculations are attached in Appendix A.

APPENDIX A

Calculation of All Red & Yellow Times
US 29 at Palafox Hwy/Morris Ave/

Intersection	Direction	V (mph)	W (feet)	Yellow* (sec)	Yellow** (sec)	All Red[1] (sec)
	EB (8)	25	110.0	3.2	3.4	3.5
	NB (6)	40	120.0	4.3	4.4	2.4
	WB (4)	30	112.0	3.6	3.7	3.0
	SB (2)	40	120.0	4.3	4.4	2.4

*Yellow = T + V / (2A+Gg) Where:

[1]All Red = (W + L) / V

L = 20 ft vehicle length
T = 1.4 sec driver reaction time
A = 10/ft/sec^2 deceleration rate
V = approach speed (ft/sec)
G = % grade divided by 100
W= width of intersection (stop bar to far side 2nd crosswalk line)

**Yellow from Table below.

TEM

Table 3.6-1. Florida Yellow Change Interval (0.0 % Grade) Standards*

APPROACH SPEED (MPH)	YELLOW INTERVAL (SECONDS)
25	3.4
30	3.7
35	4.0
40	4.4
45	4.8
50	5.1
55	5.5
60	5.9
65	6.0

* For approach grades other than 0%, use ITE Formula.

Formula 3.6-1

$$Y = t + \frac{1.47v}{2(a + Gg)}$$

Where:

Y= length of yellow interval, sec.
t = perception-reaction time (use 1.4 sec.)
v = speed of approaching vehicles, in mph.
a =deceleration rate in response to the onset of a yellow indication (use 10 ft/sec^2)
g = acceleration due to gravity (use 32.2 ft/sec^2)
G= grade, with uphill positive and downhill negative (percent grade /100)

TEM

3.6.2.2 Red Clearance Interval

A red clearance interval must be used. Providing adequate red clearance intervals can significantly impact intersection safety by reducing the probability of occurrence of right angle crashes, even if drivers run the red signal indication. The red clearance interval shall be

determined using engineering practices. The values are typically computed using ***Formula 3.6-2***, found in ***ITE's Traffic Engineering Handbook***.

Formula 3.6-2

$$R = \frac{W + L}{1.47v}$$

Where:

R = length of red interval, sec.
W = width of the intersection, in feet, measured from the near-side stop line to the far edge of the conflicting traffic lane along the actual vehicle path.
L = Length of vehicle (Use 20 ft.)
v = speed of approaching vehicles, in mph.

The minimum red clearance interval shall be 2.0 seconds and the maximum red clearance interval should normally not exceed 6.0 seconds. Longer red intervals than the minimum 2.0 seconds can be used at the engineer's discretion where width of intersection, sight distance, complex intersections, crash history and any unique conditions exist that may warrant longer red times. The determination shall be based on engineering judgment. The National Cooperative Highway Research Program (NCHRP) Report 731 recommends using a modified ITE formula that allows for 1.0 second reduction due to reaction time delay from the conflicting movement. Therefore, a 1.0 second reduction may be made in the values computed from Formula 3.6-2 and applying engineering judgment. However, the red clearance interval shall be no less than 2.0 seconds.

Calculation of All Red & Yellow Times
US 29 at Muscogee Rd/Becks Lake Rd

Intersection	Direction	V (mph)	W (feet)	Yellow* (sec)	Yellow** (sec)	All Red[1] (sec)
	EB (8)	30	115.0	3.6	3.7	3.1
	NB (6)	40	105.0	4.3	4.4	2.1
	WB (4)	35	115.0	4.0	4	2.6
	SB (2)	40	95.0	4.3	4.4	2.0

*Yellow = T + V / (2A+Gg) Where:

[1]All Red = (W + L) / V

L = 20 ft vehicle length
T = 1.4 sec driver reaction time
A = 10/ft/sec^2 deceleration rate
V = approach speed (ft/sec)
G = % grade divided by 100
W= width of intersection (stop bar to far side 2nd crosswalk line)

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45	4.8
50	5.1
55	5.5
60	5.9
65	6.0

* For approach grades other than 0%, use ITE Formula.

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Calculation of All Red & Yellow Times
US 29 at International Paper/Tree Street

Intersection	Direction	V (mph)	W (feet)	Yellow* (sec)	Yellow** (sec)	All Red[1] (sec)
	EB (8)	25	110.0	3.2	3.4	3.5
	NB (6)	40	105.0	4.3	4.4	2.1
	WB (4)	0	0.0	0.0	0	0.0
	SB (2)	40	100.0	4.3	4.4	2.0

*Yellow = T + V / (2A+Gg) Where:

[1]All Red = (W + L) / V

L = 20 ft vehicle length
T = 1.4 sec driver reaction time
A = 10/ft/sec^2 deceleration rate
V = approach speed (ft/sec)
G = % grade divided by 100
W= width of intersection (stop bar to far side 2nd crosswalk line)

**Yellow from Table below.

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45	4.8
50	5.1
55	5.5
60	5.9
65	6.0

* For approach grades other than 0%, use ITE Formula.

Formula 3.6-1

$$Y = t + \frac{1.47v}{2(a + Gg)}$$

Where:
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t = perception-reaction time (use 1.4 sec.)
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Calculation of Pedestrian Clearance Times
US 29 at Muscogee Rd/Becks Lake Rd

Intersection	Leg	W1 (ft)	W2 (ft) Value1	Value2	Max	Ped Walk[1] (sec)	FDW1 (sec)	FDW2 (sec)	Ped Clear[2] (sec)	Walk+Clear (sec)
Ridge Road at Regency Park Boulevard	*P2 (EB)*	70	80	80	80	*7.0*	17.0	17.0	17.0	24.0
	P6 (WB)	0	0	0	0	*7.0*	-3.0	-10.0	-3.0	4.0
	P4 (NB)	70	80	80	80	7.0	17.0	17.0	17.0	24.0
	P8 (SB)	0	0	0	0	7.0	-3.0	-10.0	-3.0	4.0

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PENSACOLA, FLORIDA

Coordination Timing

COORDINATED SYSTEM

Intersection Location: US 29/Palafox Hwy/Morris Ave.

ID#: 311/ESCC# 086
Date: 06/30/15

Cycle	**1**	**2**	**3**	**4**	**5**	**6**
Length	160					
Min Length	130					

Offsets

Cycle	**1**	**2**	**3**	**4**	**5**	**6**
Offset 1	N/A					
Offset 2						
Offset 3						
Offset 4						
Offset 5						

Cycle	**1**	**2**	**3**	**4**	**5**	**6**
Max Dwell/ Min Cycle:	N/A					

Split Matrix

Cycle	**1**	**2**	**3**	**4**	**5**	**6**
Offset 1	N/A					
Offset 2						
Offset 3						
Offset 4						
Offset 5						

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PENSACOLA, FLORIDA

Coordination Timing

Timing

Phase/Interval	1	2	3	4	5	6	7	8
Approach	SB	NB	OMITTED	EB/WB	NB	SB	OMITTED	OMITTED
Movement	LT TRN	THRU		THRU	LT TRN	THRU		
Initial	5	25		8	5	25		
Passage	2.5	6.0		5.0	2.5	6.0		
Yellow	4.4	4.4		4.8	4.4	4.4		
All Red	2.0	2.4		3.4	2.1	2.1		
Walk								
Don't Walk								
Max 1	15	60		60	15	60		
Max11								

Phase Functions

	1	2	3	4	5	6	7	8
CNA 1		X				X		
WRM		X				X		
INH MAX								
PED RECY								
MIN RCL		X				X		
NON-LOCK	X		X	X				
VEH OMIT								
PED OMIT	X	X	X	X	X	X	X	X
WALK REST								

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Coordination Timing

Phase Allocation

Phase	1	2	3	4	5	6	7	8
Split 1	15	50	0	35	10	50	0	35
Split 2								
Split 3								
Split 4								
Split 5								
Split 6								
Split 7								
Split 8								
Split 9								
Split 10								
Split 11								
Split 12								
Split 13								
Split 14								
Split 15								
Split 16								

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PENSACOLA, FLORIDA

Coordination Timing

Permissives

Phase	1	2	3	4	5	6	7	8	
Split 1	N/A								Start
									End
Split 2									Start
									End
Split 3									Start
									End
Split 4									Start
									End
Split 5									Start
									End
Split 6									Start
									End

Weekday Plan

Day	Sun	Mon	Tues	Wed	Thurs	Fri	Sat
Plan	2	1	1	1	1	1	2

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PENSACOLA, FLORIDA

Coordination Timing

Time Of Day Plans

Plan	Time	CKT PLAN	C/O/S	CKT
1	00:00			FRE ON
	06:30		1/1/1	
	06:30			FRE OFF
	06:30			CN1 ON
	09:00			FRE ON
	09:00			CN1 OFF
	16:00		1/1/1	
	16:00			FRE OFF
	16:00			CN1 ON
	18:00			FRE ON
	18:00			CN1 OFF
2	00:00			FRE ON
	23.59			FRE OFF

Controller: Peek 3000 SN: 218 Date: 07/07/00
Signal Monitor: Double Diamond SN: 1162852 08/02/08
Timings: Coordinated Timings by Gene Syfrett with (HNTB) requested by Cliff Johnson FDOT

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PENSACOLA, FLORIDA

Coordination Timing

COORDINATED SYSTEM

Intersection Location: US 29/Muscogee Rd./Beck's Lake Rd

ID#: 207/ESCC# 088
Date: 06/19/15

Cycle	**1**	**2**	**3**	**4**	**5**	**6**
Length	160	160				
Min Length	100	100				

Offsets

Cycle	**1**	**2**	**3**	**4**	**5**	**6**
Offset 1	N/A					
Offset 2						
Offset 3						
Offset 4						
Offset 5						

Cycle	**1**	**2**	**3**	**4**	**5**	**6**
Max Dwell/ Min Cycle:	N/A					

Split Matrix

Cycle	**1**	**2**	**3**	**4**	**5**	**6**
Offset 1	N/A					
Offset 2						
Offset 3						
Offset 4						
Offset 5						

THE COUNTY OF ESCAMBIA

PENSACOLA, FLORIDA

Coordination Timing

Timing

Phase/Interval	1	2	3	4	5	6	7	8
Approach	SB	NB	WB	EB	NB	SB	EB	WB
Movement	LT TRN	THRU	LT TRN	THRU	LT TRN	THRU	LT TRN	THRU
Initial	5	20	6	6	5	20	6	6
Passage	4.0	4.5	4.0	4.0	4.0	4.5	4.0	4.0
Yellow	4.0	4.4	4.0	3.7	4.4	4.4	3.7	4.0
All Red	2.2	2.4	2.4	3.4	2.2	2.5	3.4	2.7
Walk	0	7		7				
Don't Walk	0	13		15				
Max 1	15	80	15	30	25	80	30	30
Max11								

Phase Functions

	1	2	3	4	5	6	7	8
CNA 1		X				X		
WRM		X				X		
INH MAX								
PED RECY		X				X		
MIN RCL		X				X		
NON-LOCK	X		X	X	X		X	X
VEH OMIT								
PED OMIT	X		X		X		X	
WALK REST		X				X		

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PENSACOLA, FLORIDA

Coordination Timing

Phase Allocation

Phase	1	2	3	4	5	6	7	8
Split 1	20	40	20	20	20	40	20	20
Split 2	20	40	20	20	20	40	20	20
Split 3								
Split 4								
Split 5								
Split 6								
Split 7								
Split 8								
Split 9								
Split 10								
Split 11								
Split 12								
Split 13								
Split 14								
Split 15								
Split 16								

THE COUNTY OF ESCAMBIA

PENSACOLA, FLORIDA

Coordination Timing

Permissives

Phase	1	2	3	4	5	6	7	8	
Split 1	N/A								Start
									End
Split 2									Start
									End
Split 3									Start
									End
Split 4									Start
									End
Split 5									Start
									End
Split 6									Start
									End

Weekday Plan

Day	Sun	Mon	Tues	Wed	Thurs	Fri	Sat
Plan	2	1	1	1	1	1	1

THE COUNTY OF ESCAMBIA

PENSACOLA, FLORIDA

Coordination Timing

Time Of Day Plans

Plan	Time	CKT PLAN	C/O/S	CKT
1	00:00			FRE ON
	06:30		1/1/1	
	06:30			FRE OFF
	06:30			CN1 ON
	09:00			FRE ON
	09:00			CN1 OFF
	16:00		1/1/1	
	16:00			FRE OFF
	16:00			CN1 ON
	18:00			FRE ON
	18:00			CN1 OFF
2	00:00			FRE ON
	23.59			FRE OFF

Controller: Peek 3000 SN: 10824 Date: 02/11/00
Signal Monitor: Double Diamond SN: 1162077 04/02/08
Timings: Coordinated Timings by Gene Syfrett with (HNTB) requested by Cliff Johnson FDOT

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PENSACOLA, FLORIDA

Coordination Timing

COORDINATED SYSTEM

Intersection Location: US 29/International Paper/(Tree Street)

ID#: 269/ESCC# ?
Date: 07/01/15

Cycle	**1**	**2**	**3**	**4**	**5**	**6**
Length	160	160				
Min Length	100	100				

Offsets

Cycle	**1**	**2**	**3**	**4**	**5**	**6**
Offset 1	N/A					
Offset 2						
Offset 3						
Offset 4						
Offset 5						

Cycle	**1**	**2**	**3**	**4**	**5**	**6**
Max Dwell/ Min Cycle:	N/A					

Split Matrix

Cycle	**1**	**2**	**3**	**4**	**5**	**6**
Offset 1	N/A					
Offset 2						
Offset 3						
Offset 4						
Offset 5						

THE COUNTY OF ESCAMBIA

PENSACOLA, FLORIDA

Coordination Timing

Timing

Phase/Interval	1	2	3	4	5	6	7	8
Approach	NB	NB/SB	EB	OMITTED	OMITTED	OMITTED	OMITTED	OMITTED
Movement	LT TRN	THRU	LT/RT TRN					
Initial	5.0	15	15					
Passage	3.0	4.0	4.0					
Yellow	4.4	4.4	3.4					
All Red	2.0	3.0	3.0					
Walk								
Don't Walk								
Max 1	25	80	40					
Max11								

Phase Functions

	1	2	3	4	5	6	7	8
CNA 1		X				X		
WRM		X				X		
INH MAX								
PED RECY								
MIN RCL		X				X		
NON-LOCK	X		X	X			X	X
VEH OMIT								
PED OMIT	X		X	X		X	X	X
WALK REST		X				X		

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PENSACOLA, FLORIDA

Coordination Timing

Phase Allocation

Phase	1	2	3	4	5	6	7	8
Split 1	20	60	20	0	20	60	20	0
Split 2	20	60	20	0	20	60	20	0
Split 3								
Split 4								
Split 5								
Split 6								
Split 7								
Split 8								
Split 9								
Split 10								
Split 11								
Split 12								
Split 13								
Split 14								
Split 15								
Split 16								

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PENSACOLA, FLORIDA

Coordination Timing

Permissives

Phase	1	2	3	4	5	6	7	8	
Split 1	N/A								Start
									End
Split 2									Start
									End
Split 3									Start
									End
Split 4									Start
									End
Split 5									Start
									End
Split 6									Start
									End

Weekday Plan

Day	Sun	Mon	Tues	Wed	Thurs	Fri	Sat
Plan	2	1	1	1	1	1	2

THE COUNTY OF ESCAMBIA

PENSACOLA, FLORIDA

Coordination Timing

Time Of Day Plans

Plan	Time	CKT PLAN	C/O/S	CKT
1	00:00			FRE ON
	06:30		1/1/1	
	06:30			FRE OFF
	06:30			CN1 ON
	09:00			FRE ON
	09:00			CN1 OFF
	16:00		1/1/1	
	16:00			FRE OFF
	16:00			CN1 ON
	18:00			FRE ON
	18:00			CN1 OFF
2	00:00			FRE ON
	23.59			FRE OFF

Controller: Peek 3000 SN: 21248204 Date: 04/25/01
Signal Monitor: Transyt 1200 SN: 13565 02/1990
Timings: Coordinated Timings by Gene Syfrett with (HNTB) requested by Cliff Johnson FDOT

Phasings
1: SR 95 (US 29) & Tree St

3/24/2016

Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Volume (vph)	22	1	3	608	1291	35
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0	100	480			385
Storage Lanes	1	1	1			1
Taper Length (ft)	25		25			
Lane Util. Factor	1.00	1.00	1.00	0.95	0.95	1.00
Frt		0.850				0.850
Flt Protected	0.950		0.950			
Satd. Flow (prot)	1037	1615	1787	3282	3406	1568
Flt Permitted	0.950		0.162			
Satd. Flow (perm)	1037	1615	305	3282	3406	1568
Right Turn on Red		Yes				Yes
Satd. Flow (RTOR)		1				38
Link Speed (mph)	25			40	40	
Link Distance (ft)	284			717	1882	
Travel Time (s)	7.7			12.2	32.1	
Lane Group Flow (vph)	24	1	3	661	1403	38
Turn Type	Perm	Perm	pm+pt	NA	NA	Perm
Protected Phases			5	2	6	
Permitted Phases	4	4	2			6
Detector Phase	4	4	5	2	6	6
Switch Phase						
Minimum Initial (s)	15.0	15.0	5.0	15.0	15.0	15.0
Minimum Split (s)	40.0	40.0	25.0	80.0	80.0	80.0
Total Split (s)	40.0	40.0	25.0	120.0	95.0	95.0
Total Split (%)	25.0%	25.0%	15.6%	75.0%	59.4%	59.4%
Yellow Time (s)	3.4	3.4	4.4	4.4	4.4	4.4
All-Red Time (s)	2.0	2.0	3.0	3.0	3.0	3.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	5.4	5.4	7.4	7.4	7.4	7.4
Lead/Lag			Lead		Lag	Lag
Lead-Lag Optimize?			Yes		Yes	Yes
Recall Mode	None	None	None	C-Max	C-Max	C-Max
Act Effct Green (s)	15.0	15.0	140.4	143.3	140.7	140.7
Actuated g/C Ratio	0.09	0.09	0.88	0.90	0.88	0.88
v/c Ratio	0.25	0.01	0.01	0.22	0.47	0.03
Control Delay	74.3	48.0	2.3	2.3	1.1	0.1
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	74.3	48.0	2.3	2.3	1.1	0.1
LOS	E	D	A	A	A	A
Approach Delay	73.2			2.3	1.1	
Approach LOS	E			A	A	
90th %ile Green (s)	15.0	15.0	5.7	132.2	119.1	119.1
90th %ile Term Code	Min	Min	Gap	Coord	Coord	Coord
70th %ile Green (s)	15.0	15.0	0.0	132.2	132.2	132.2
70th %ile Term Code	Min	Min	Skip	Coord	Coord	Coord
50th %ile Green (s)	15.0	15.0	0.0	132.2	132.2	132.2
50th %ile Term Code	Min	Min	Skip	Coord	Coord	Coord

Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
30th %ile Green (s)	0.0	0.0	0.0	152.6	152.6	152.6
30th %ile Term Code	Skip	Skip	Skip	Coord	Coord	Coord
10th %ile Green (s)	0.0	0.0	0.0	152.6	152.6	152.6
10th %ile Term Code	Skip	Skip	Skip	Coord	Coord	Coord
Queue Length 50th (ft)	24	0	1	66	41	0
Queue Length 95th (ft)	57	7	2	81	74	m1
Internal Link Dist (ft)	204			637	1802	
Turn Bay Length (ft)		100	480			385
Base Capacity (vph)	224	350	430	2939	2995	1383
Starvation Cap Reductn	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.11	0.00	0.01	0.22	0.47	0.03

Intersection Summary	
Area Type: Other	
Cycle Length: 160	
Actuated Cycle Length: 160	
Offset: 42 (26%), Referenced to phase 2:NBTL and 6:SBT, Start of Green	
Natural Cycle: 145	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 0.47	
Intersection Signal Delay: 2.3	Intersection LOS: A
Intersection Capacity Utilization 58.9%	ICU Level of Service B
Analysis Period (min) 15	
m Volume for 95th percentile queue is metered by upstream signal.	

Splits and Phases: 1: SR 95 (US 29) & Tree St

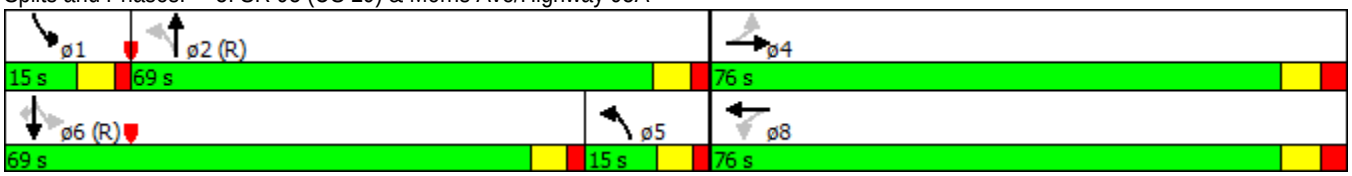
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	0	9	14	404	3	1	2	397	5	1	1055	5
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0		0	0		0	110		0	555		210
Storage Lanes	0		0	0		0	1		0	1		1
Taper Length (ft)	25			25			25			25		
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		0.919						0.998				0.850
Flt Protected					0.953		0.950			0.950		
Satd. Flow (prot)	0	1729	0	0	1709	0	1787	3307	0	1787	3438	1599
Flt Permitted					0.710		0.153			0.418		
Satd. Flow (perm)	0	1729	0	0	1273	0	288	3307	0	786	3438	1599
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		15						1				82
Link Speed (mph)		25			30			40			40	
Link Distance (ft)		571			595			553			784	
Travel Time (s)		15.6			13.5			9.4			13.4	
Lane Group Flow (vph)	0	25	0	0	443	0	2	437	0	1	1147	5
Turn Type		NA		Perm	NA		pm+pt	NA		pm+pt	NA	Perm
Protected Phases		4			8		5	2		1	6	
Permitted Phases	4			8			2			6		6
Detector Phase	4	4		8	8		5	2		1	6	6
Switch Phase												
Minimum Initial (s)	8.0	8.0		8.0	8.0		5.0	25.0		5.0	25.0	25.0
Minimum Split (s)	60.0	60.0		60.0	60.0		15.0	60.0		15.0	60.0	60.0
Total Split (s)	76.0	76.0		76.0	76.0		15.0	69.0		15.0	69.0	69.0
Total Split (%)	47.5%	47.5%		47.5%	47.5%		9.4%	43.1%		9.4%	43.1%	43.1%
Yellow Time (s)	4.8	4.8		4.8	4.8		4.4	4.4		4.4	4.4	4.4
All-Red Time (s)	3.4	3.4		3.4	3.4		2.1	2.4		2.0	2.1	2.1
Lost Time Adjust (s)		0.0			0.0		0.0	0.0		0.0	0.0	0.0
Total Lost Time (s)		8.2			8.2		6.5	6.8		6.4	6.5	6.5
Lead/Lag							Lag	Lag		Lead	Lead	Lead
Lead-Lag Optimize?							Yes	Yes		Yes	Yes	Yes
Recall Mode	None	None		None	None		None	C-Max		None	C-Max	C-Max
Act Effct Green (s)		61.6			61.6		81.3	81.0		80.8	80.7	80.7
Actuated g/C Ratio		0.38			0.38		0.51	0.51		0.50	0.50	0.50
v/c Ratio		0.04			0.90		0.01	0.26		0.00	0.66	0.01
Control Delay		15.2			68.8		23.0	19.7		27.0	33.9	0.0
Queue Delay		0.0			0.0		0.0	0.0		0.0	0.0	0.0
Total Delay		15.2			68.8		23.0	19.7		27.0	33.9	0.0
LOS		B			E		C	B		C	C	A
Approach Delay		15.2			68.8			19.8			33.8	
Approach LOS		B			E			B			C	
90th %ile Green (s)	67.8	67.8		67.8	67.8		8.5	65.0		5.8	62.5	62.5
90th %ile Term Code	Hold	Hold		Max	Max		Hold	Coord		Gap	Coord	Coord
70th %ile Green (s)	67.8	67.8		67.8	67.8		0.0	77.2		0.0	77.5	77.5
70th %ile Term Code	Hold	Hold		Max	Max		Skip	Coord		Skip	Coord	Coord
50th %ile Green (s)	64.4	64.4		64.4	64.4		0.0	80.6		0.0	80.9	80.9
50th %ile Term Code	Hold	Hold		Gap	Gap		Skip	Coord		Skip	Coord	Coord

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
30th %ile Green (s)	58.9	58.9		58.9	58.9		0.0	86.1		0.0	86.4	86.4
30th %ile Term Code	Hold	Hold		Gap	Gap		Skip	Coord		Skip	Coord	Coord
10th %ile Green (s)	49.1	49.1		49.1	49.1		0.0	95.9		0.0	96.2	96.2
10th %ile Term Code	Hold	Hold		Gap	Gap		Skip	Coord		Skip	Coord	Coord
Queue Length 50th (ft)		6			423		1	108		1	460	0
Queue Length 95th (ft)		26			#585		m3	135		5	673	0
Internal Link Dist (ft)		491			515			473			704	
Turn Bay Length (ft)							110			555		210
Base Capacity (vph)		741			539		226	1674		450	1734	847
Starvation Cap Reductn		0			0		0	0		0	0	0
Spillback Cap Reductn		0			0		0	0		0	0	0
Storage Cap Reductn		0			0		0	0		0	0	0
Reduced v/c Ratio		0.03			0.82		0.01	0.26		0.00	0.66	0.01

Intersection Summary

Area Type: Other
Cycle Length: 160
Actuated Cycle Length: 160
Offset: 20 (13%), Referenced to phase 2:NBTL and 6:SBTL, Start of Green
Natural Cycle: 135
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 0.90
Intersection Signal Delay: 38.1 Intersection LOS: D
Intersection Capacity Utilization 70.7% ICU Level of Service C
Analysis Period (min) 15
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.
m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 5: SR 95 (US 29) & Morris Ave/Highway 95A

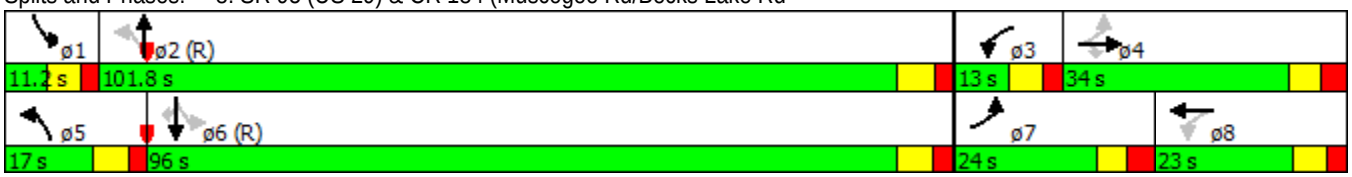


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	138	6	170	21	8	11	76	511	17	3	1274	230
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	135		135	125		0	285		0	290		605
Storage Lanes	1		1	1		0	1		0	1		1
Taper Length (ft)	25			25			25			25		
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			0.850		0.914			0.995				0.850
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1687	1881	1495	1641	1539	0	1770	3245	0	1787	3406	1599
Flt Permitted	0.336			0.769			0.126			0.436		
Satd. Flow (perm)	597	1881	1495	1328	1539	0	235	3245	0	820	3406	1599
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			145		12			4				250
Link Speed (mph)		30			35			40			40	
Link Distance (ft)		842			669			1882			1130	
Travel Time (s)		19.1			13.0			32.1			19.3	
Lane Group Flow (vph)	150	7	185	23	21	0	83	573	0	3	1385	250
Turn Type	pm+pt	NA	Perm	pm+pt	NA		pm+pt	NA		pm+pt	NA	Perm
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases	4		4	8			2			6		6
Detector Phase	7	4	4	3	8		5	2		1	6	6
Switch Phase												
Minimum Initial (s)	6.0	6.0	6.0	6.0	6.0		5.0	20.0		5.0	20.0	20.0
Minimum Split (s)	13.1	23.1	23.1	12.4	22.7		11.6	26.8		11.2	26.9	26.9
Total Split (s)	24.0	34.0	34.0	13.0	23.0		17.0	101.8		11.2	96.0	96.0
Total Split (%)	15.0%	21.3%	21.3%	8.1%	14.4%		10.6%	63.6%		7.0%	60.0%	60.0%
Yellow Time (s)	3.7	3.7	3.7	4.0	4.0		4.4	4.4		4.0	4.4	4.4
All-Red Time (s)	3.4	3.4	3.4	2.4	2.7		2.2	2.4		2.2	2.5	2.5
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0		0.0	0.0	0.0
Total Lost Time (s)	7.1	7.1	7.1	6.4	6.7		6.6	6.8		6.2	6.9	6.9
Lead/Lag	Lead	Lag	Lag	Lead	Lag		Lead	Lag		Lead	Lag	Lag
Lead-Lag Optimize?												
Recall Mode	None	None	None	None	None		None	C-Max		None	C-Max	C-Max
Act Effct Green (s)	25.5	17.7	17.7	12.0	7.8		120.3	118.0		112.6	105.4	105.4
Actuated g/C Ratio	0.16	0.11	0.11	0.08	0.05		0.75	0.74		0.70	0.66	0.66
v/c Ratio	0.73	0.03	0.63	0.21	0.24		0.32	0.24		0.00	0.62	0.22
Control Delay	81.0	62.3	27.2	58.4	49.2		10.4	7.8		3.0	8.8	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	81.0	62.3	27.2	58.4	49.2		10.4	7.8		3.0	8.8	0.3
LOS	F	E	C	E	D		B	A		A	A	A
Approach Delay		51.5			54.0			8.2			7.5	
Approach LOS		D			D			A			A	
90th %ile Green (s)	16.9	20.8	20.8	6.6	10.2		10.5	99.3		6.8	95.1	95.1
90th %ile Term Code	Max	Gap	Gap	Max	Gap		Gap	Coord		Gap	Coord	Coord
70th %ile Green (s)	16.9	19.1	19.1	6.6	8.5		9.4	114.0		0.0	97.9	97.9
70th %ile Term Code	Max	Hold	Hold	Max	Gap		Gap	Coord		Skip	Coord	Coord
50th %ile Green (s)	16.9	18.0	18.0	6.6	7.4		8.6	115.1		0.0	99.8	99.8
50th %ile Term Code	Max	Hold	Hold	Max	Gap		Gap	Coord		Skip	Coord	Coord

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
30th %ile Green (s)	16.9	16.9	16.9	0.0	0.0		7.5	129.2		0.0	115.0	115.0
30th %ile Term Code	Max	Hold	Hold	Skip	Skip		Gap	Coord		Skip	Coord	Coord
10th %ile Green (s)	13.5	13.5	13.5	0.0	0.0		6.9	132.6		0.0	119.0	119.0
10th %ile Term Code	Gap	Hold	Hold	Skip	Skip		Gap	Coord		Skip	Coord	Coord
Queue Length 50th (ft)	141	7	39	20	9		23	94		1	266	0
Queue Length 95th (ft)	212	23	124	46	40		42	154		m1	204	m0
Internal Link Dist (ft)		762			589			1802			1050	
Turn Bay Length (ft)	135		135	125			285			290		605
Base Capacity (vph)	212	316	371	112	167		276	2395		617	2243	1138
Starvation Cap Reductn	0	0	0	0	0		0	0		0	0	0
Spillback Cap Reductn	0	0	0	0	0		0	0		0	0	0
Storage Cap Reductn	0	0	0	0	0		0	0		0	0	0
Reduced v/c Ratio	0.71	0.02	0.50	0.21	0.13		0.30	0.24		0.00	0.62	0.22

Intersection Summary	
Area Type: Other	
Cycle Length: 160	
Actuated Cycle Length: 160	
Offset: 8 (5%), Referenced to phase 2:NBTL and 6:SBTL, Start of Green	
Natural Cycle: 90	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 0.73	
Intersection Signal Delay: 14.1	Intersection LOS: B
Intersection Capacity Utilization 70.9%	ICU Level of Service C
Analysis Period (min) 15	
m Volume for 95th percentile queue is metered by upstream signal.	

Splits and Phases: 8: SR 95 (US 29) & CR 184 (Muscogee Rd/Becks Lake Rd



Phasings
1: SR 95 (US 29) & Tree St

4/1/2016

Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Volume (vph)	27	3	1	1382	872	27
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0	100	480			385
Storage Lanes	1	1	1			1
Taper Length (ft)	25		25			
Right Turn on Red		Yes				Yes
Link Speed (mph)	25			40	40	
Link Distance (ft)	284			717	1882	
Travel Time (s)	7.7			12.2	32.1	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles (%)	90%	10%	0%	4%	5%	2%
Shared Lane Traffic (%)						
Lane Group Flow (vph)	29	3	1	1502	948	29
Turn Type	Perm	Perm	pm+pt	NA	NA	Perm
Protected Phases			5	2	6	
Permitted Phases	4	4	2			6
Detector Phase	4	4	5	2	6	6
Switch Phase						
Minimum Initial (s)	15.0	15.0	5.0	15.0	15.0	15.0
Minimum Split (s)	40.0	40.0	25.0	80.0	80.0	80.0
Total Split (s)	42.0	42.0	27.0	118.0	91.0	91.0
Total Split (%)	26.3%	26.3%	16.9%	73.8%	56.9%	56.9%
Maximum Green (s)	36.6	36.6	19.6	110.6	83.6	83.6
Yellow Time (s)	3.4	3.4	4.4	4.4	4.4	4.4
All-Red Time (s)	2.0	2.0	3.0	3.0	3.0	3.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	5.4	5.4	7.4	7.4	7.4	7.4
Lead/Lag			Lead		Lag	Lag
Lead-Lag Optimize?			Yes		Yes	Yes
Vehicle Extension (s)	4.0	4.0	3.0	4.0	4.0	4.0
Recall Mode	None	None	None	C-Max	C-Max	C-Max
Walk Time (s)	5.0	5.0		5.0	5.0	5.0
Flash Dont Walk (s)	11.0	11.0		11.0	11.0	11.0
Pedestrian Calls (#/hr)	0	0		0	0	0
v/c Ratio	0.32	0.02	0.00	0.48	0.31	0.02
Control Delay	77.3	41.0	3.0	3.6	2.4	0.6
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	77.3	41.0	3.0	3.6	2.4	0.6
90th %ile Green (s)	16.7	16.7	5.6	130.5	117.5	117.5
90th %ile Term Code	Gap	Gap	Gap	Coord	Coord	Coord
70th %ile Green (s)	15.0	15.0	0.0	132.2	132.2	132.2
70th %ile Term Code	Min	Min	Skip	Coord	Coord	Coord
50th %ile Green (s)	15.0	15.0	0.0	132.2	132.2	132.2
50th %ile Term Code	Min	Min	Skip	Coord	Coord	Coord
30th %ile Green (s)	0.0	0.0	0.0	152.6	152.6	152.6
30th %ile Term Code	Skip	Skip	Skip	Coord	Coord	Coord
10th %ile Green (s)	0.0	0.0	0.0	152.6	152.6	152.6
10th %ile Term Code	Skip	Skip	Skip	Coord	Coord	Coord

Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Queue Length 50th (ft)	29	0	0	211	69	0
Queue Length 95th (ft)	65	12	1	262	108	3
Internal Link Dist (ft)	204			637	1802	
Turn Bay Length (ft)		100	480			385
Base Capacity (vph)	217	338	615	3101	3016	1392
Starvation Cap Reductn	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.13	0.01	0.00	0.48	0.31	0.02

Intersection Summary	
Area Type:	Other
Cycle Length: 160	
Actuated Cycle Length: 160	
Offset: 1 (1%), Referenced to phase 2:NBTL and 6:SBT, Start of Green	
Natural Cycle: 145	
Control Type: Actuated-Coordinated	

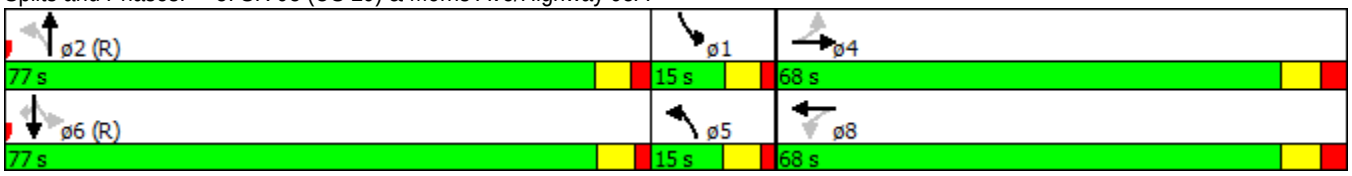
Splits and Phases: 1: SR 95 (US 29) & Tree St

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	2	3	6	263	13	3	16	1014	10	3	533	7
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0		0	0		0	110		0	555		210
Storage Lanes	0		0	0		0	1		0	1		1
Taper Length (ft)	25			25			25			25		
Right Turn on Red			Yes			Yes			Yes			Yes
Link Speed (mph)		25			30			40			40	
Link Distance (ft)		571			595			553			784	
Travel Time (s)		15.6			13.5			9.4			13.4	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles (%)	0%	0%	0%	6%	0%	0%	0%	3%	1%	0%	7%	0%
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	12	0	0	303	0	17	1113	0	3	579	8
Turn Type	Perm	NA		Perm	NA		pm+pt	NA		pm+pt	NA	Perm
Protected Phases		4			8		5	2		1	6	
Permitted Phases	4			8			2			6		6
Detector Phase	4	4		8	8		5	2		1	6	6
Switch Phase												
Minimum Initial (s)	8.0	8.0		8.0	8.0		5.0	25.0		5.0	25.0	25.0
Minimum Split (s)	60.0	60.0		60.0	60.0		15.0	60.0		15.0	60.0	60.0
Total Split (s)	68.0	68.0		68.0	68.0		15.0	77.0		15.0	77.0	77.0
Total Split (%)	42.5%	42.5%		42.5%	42.5%		9.4%	48.1%		9.4%	48.1%	48.1%
Maximum Green (s)	59.8	59.8		59.8	59.8		8.5	70.2		8.6	70.5	70.5
Yellow Time (s)	4.8	4.8		4.8	4.8		4.4	4.4		4.4	4.4	4.4
All-Red Time (s)	3.4	3.4		3.4	3.4		2.1	2.4		2.0	2.1	2.1
Lost Time Adjust (s)		0.0			0.0		0.0	0.0		0.0	0.0	0.0
Total Lost Time (s)		8.2			8.2		6.5	6.8		6.4	6.5	6.5
Lead/Lag							Lag	Lead		Lag	Lead	Lead
Lead-Lag Optimize?							Yes	Yes		Yes	Yes	Yes
Vehicle Extension (s)	5.0	5.0		5.0	5.0		3.0	6.0		3.0	6.0	6.0
Recall Mode	None	None		None	None		None	C-Max		None	C-Max	C-Max
Walk Time (s)	5.0	5.0		5.0	5.0			5.0			5.0	5.0
Flash Dont Walk (s)	11.0	11.0		11.0	11.0			11.0			11.0	11.0
Pedestrian Calls (#/hr)	0	0		0	0			0			0	0
v/c Ratio		0.03			0.83		0.03	0.52		0.01	0.29	0.01
Control Delay		23.5			72.0		11.2	14.3		15.3	19.4	0.0
Queue Delay		0.0			0.0		0.0	0.0		0.0	0.0	0.0
Total Delay		23.5			72.0		11.2	14.3		15.3	19.4	0.0
90th %ile Green (s)	57.2	57.2		57.2	57.2		5.6	75.7		5.7	76.0	76.0
90th %ile Term Code	Hold	Hold		Gap	Gap		Gap	Coord		Hold	Coord	Coord
70th %ile Green (s)	50.5	50.5		50.5	50.5		5.5	94.5		0.0	82.8	82.8
70th %ile Term Code	Hold	Hold		Gap	Gap		Gap	Coord		Skip	Coord	Coord
50th %ile Green (s)	44.8	44.8		44.8	44.8		5.5	100.2		0.0	88.5	88.5
50th %ile Term Code	Hold	Hold		Gap	Gap		Gap	Coord		Skip	Coord	Coord
30th %ile Green (s)	39.5	39.5		39.5	39.5		0.0	105.5		0.0	105.8	105.8
30th %ile Term Code	Hold	Hold		Gap	Gap		Skip	Coord		Skip	Coord	Coord
10th %ile Green (s)	31.7	31.7		31.7	31.7		0.0	113.3		0.0	113.6	113.6
10th %ile Term Code	Hold	Hold		Gap	Gap		Skip	Coord		Skip	Coord	Coord

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Queue Length 50th (ft)		4			299		5	219		1	167	0
Queue Length 95th (ft)		19			380		m10	m278		7	247	0
Internal Link Dist (ft)		491			515			473			704	
Turn Bay Length (ft)							110			555		210
Base Capacity (vph)		628			489		546	2141		299	1968	975
Starvation Cap Reductn		0			0		0	0		0	0	0
Spillback Cap Reductn		0			0		0	0		0	0	0
Storage Cap Reductn		0			0		0	0		0	0	0
Reduced v/c Ratio		0.02			0.62		0.03	0.52		0.01	0.29	0.01

Intersection Summary	
Area Type:	Other
Cycle Length: 160	
Actuated Cycle Length: 160	
Offset: 6 (4%), Referenced to phase 2:NBTL and 6:SBTL, Start of Green	
Natural Cycle: 135	
Control Type: Actuated-Coordinated	
m Volume for 95th percentile queue is metered by upstream signal.	

Splits and Phases: 5: SR 95 (US 29) & Morris Ave/Highway 95A



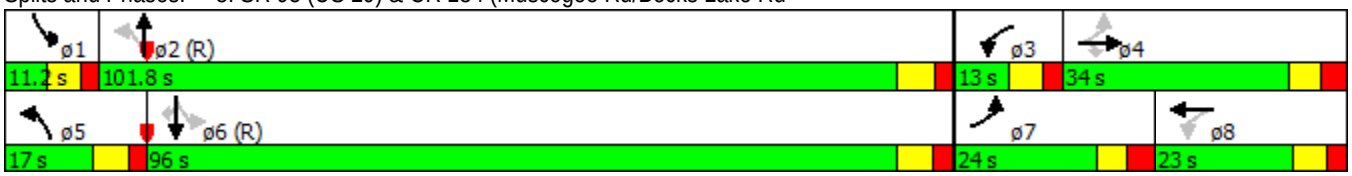
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	243	20	141	31	18	10	190	1137	16	7	637	146
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	135		135	125		0	285		0	290		605
Storage Lanes	1		1	1		0	1		0	1		1
Taper Length (ft)	25			25			25			25		
Right Turn on Red			Yes			Yes			Yes			Yes
Link Speed (mph)		30			35			40			40	
Link Distance (ft)		842			669			1882			1130	
Travel Time (s)		19.1			13.0			32.1			19.3	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles (%)	3%	1%	5%	10%	10%	15%	1%	5%	1%	0%	7%	1%
Shared Lane Traffic (%)												
Lane Group Flow (vph)	264	22	153	34	31	0	207	1253	0	8	692	159
Turn Type	pm+pt	NA	Perm	pm+pt	NA		pm+pt	NA		pm+pt	NA	Perm
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases	4		4	8			2			6		6
Detector Phase	7	4	4	3	8		5	2		1	6	6
Switch Phase												
Minimum Initial (s)	6.0	6.0	6.0	6.0	6.0		5.0	20.0		5.0	20.0	20.0
Minimum Split (s)	13.1	23.1	23.1	12.4	22.7		11.6	26.8		11.2	26.9	26.9
Total Split (s)	24.0	34.0	34.0	13.0	23.0		17.0	101.8		11.2	96.0	96.0
Total Split (%)	15.0%	21.3%	21.3%	8.1%	14.4%		10.6%	63.6%		7.0%	60.0%	60.0%
Maximum Green (s)	16.9	26.9	26.9	6.6	16.3		10.4	95.0		5.0	89.1	89.1
Yellow Time (s)	3.7	3.7	3.7	4.0	4.0		4.4	4.4		4.0	4.4	4.4
All-Red Time (s)	3.4	3.4	3.4	2.4	2.7		2.2	2.4		2.2	2.5	2.5
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0		0.0	0.0	0.0
Total Lost Time (s)	7.1	7.1	7.1	6.4	6.7		6.6	6.8		6.2	6.9	6.9
Lead/Lag	Lead	Lag	Lag	Lead	Lag		Lead	Lag		Lead	Lag	Lag
Lead-Lag Optimize?												
Vehicle Extension (s)	4.0	4.0	4.0	4.0	4.0		4.0	4.5		4.0	4.5	4.5
Recall Mode	None	None	None	None	None		None	C-Max		None	C-Max	C-Max
Walk Time (s)		5.0	5.0		5.0			5.0			5.0	5.0
Flash Dont Walk (s)		11.0	11.0		11.0			11.0			11.0	11.0
Pedestrian Calls (#/hr)		0	0		0			0			0	0
v/c Ratio	1.11	0.10	0.48	0.27	0.32		0.38	0.51		0.03	0.34	0.15
Control Delay	145.5	62.6	13.7	56.9	60.3		7.6	10.0		4.3	11.8	1.8
Queue Delay	0.0	0.0	0.0	0.0	0.0		0.0	0.0		0.0	0.0	0.0
Total Delay	145.5	62.6	13.7	56.9	60.3		7.6	10.0		4.3	11.8	1.8
90th %ile Green (s)	16.9	22.3	22.3	6.6	11.7		15.0	97.5		7.1	89.1	89.1
90th %ile Term Code	Max	Hold	Hold	Max	Gap		Max	Coord		Gap	Coord	Coord
70th %ile Green (s)	16.9	20.4	20.4	6.6	9.8		13.9	112.7		0.0	92.1	92.1
70th %ile Term Code	Max	Hold	Hold	Max	Gap		Gap	Coord		Skip	Coord	Coord
50th %ile Green (s)	16.9	19.0	19.0	6.6	8.4		12.4	114.1		0.0	95.0	95.0
50th %ile Term Code	Max	Hold	Hold	Max	Gap		Gap	Coord		Skip	Coord	Coord
30th %ile Green (s)	16.9	17.6	17.6	6.6	7.0		11.1	115.5		0.0	97.7	97.7
30th %ile Term Code	Max	Hold	Hold	Max	Gap		Gap	Coord		Skip	Coord	Coord
10th %ile Green (s)	16.9	16.9	16.9	0.0	0.0		8.7	129.2		0.0	113.8	113.8
10th %ile Term Code	Max	Hold	Hold	Skip	Skip		Gap	Coord		Skip	Coord	Coord

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Queue Length 50th (ft)	~282	21	0	29	20		40	128		1	153	12
Queue Length 95th (ft)	#393	50	70	61	57		56	141		m3	173	20
Internal Link Dist (ft)		762			589			1802			1050	
Turn Bay Length (ft)	135		135	125			285			290		605
Base Capacity (vph)	238	316	385	128	173		542	2442		302	2056	1038
Starvation Cap Reductn	0	0	0	0	0		0	0		0	0	0
Spillback Cap Reductn	0	0	0	0	0		0	0		0	0	0
Storage Cap Reductn	0	0	0	0	0		0	0		0	0	0
Reduced v/c Ratio	1.11	0.07	0.40	0.27	0.18		0.38	0.51		0.03	0.34	0.15

Intersection Summary

Area Type: Other
Cycle Length: 160
Actuated Cycle Length: 160
Offset: 2 (1%), Referenced to phase 2:NBTL and 6:SBTL, Start of Green
Natural Cycle: 90
Control Type: Actuated-Coordinated
~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.
m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 8: SR 95 (US 29) & CR 184 (Muscogee Rd/Becks Lake Rd



HSA CONSULTING GROUP, INC.
1315 COUNTRY CLUB RD.
GULF BREEZE, FLA. 32563

ALL VEHICLES

INTERSECTION OF US 29 & MORRIS AVE

COUNTED BY: DS COUNT DATE: 21-Jan-16 FILE NAME: US29 & morris tmc.xls

	US 29 Southbound				CR 95A Westbound				US 29 Northbound				Morris Ave Eastbound				
Time	Left	Thru	Right	RTOR	Left	Thru	Right	RTOR	Left	Thru	Right	RTOR	Left	Thru	Right	RTOR	TOTAL
6:00	0	133	0	0	101	2	0	0	0	47	10	1	0	0	0	0	294
6:15	0	190	0	0	109	0	0	0	0	69	23	0	0	0	0	1	392
6:30	0	227	4	1	92	2	0	0	0	58	49	0	0	0	0	3	436
6:45	0	174	0	1	90	0	0	0	0	85	32	7	0	0	0	3	392
TOTAL	0	724	4	2	392	4	0	0	0	259	114	8	0	0	0	7	1514
7:00	0	278	1	0	98	0	0	0	1	103	53	0	0	1	0	4	539
7:15	1	286	0	1	108	0	0	0	0	108	75	1	0	4	0	1	585
7:30	0	267	1	0	102	1	0	0	0	87	70	0	0	3	0	5	536
7:45	0	224	1	1	96	2	0	1	1	99	45	0	0	1	0	4	475
TOTAL	1	1055	3	2	404	3	0	1	2	397	243	1	0	9	0	14	2135
8:00	1	180	2	0	98	0	0	0	0	121	37	0	0	0	0	3	442
8:15	0	197	0	0	70	0	2	0	2	127	41	0	0	0	0	1	440
8:30	0	169	0	1	91	1	0	0	3	108	36	1	1	0	0	1	412
8:45	0	142	2	0	63	0	0	0	1	125	45	0	0	0	0	1	379
TOTAL	1	688	4	1	322	1	2	0	6	481	159	1	1	0	0	6	1673
11:00	0	122	0	2	45	1	1	0	1	133	42	0	1	1	0	1	350
11:15	2	140	3	0	51	1	1	0	1	148	39	0	2	1	0	1	390
11:30	0	126	0	1	59	0	0	0	1	150	48	0	0	1	0	1	387
11:45	1	116	1	0	40	2	1	0	1	139	51	0	2	0	0	0	354
TOTAL	3	504	4	3	195	4	3	0	4	570	180	0	5	3	0	3	1481
12:00	0	115	1	0	48	0	0	0	2	148	48	2	1	2	0	2	369
12:15	2	142	1	1	47	0	1	0	4	134	48	1	0	0	0	2	383
12:30	0	135	0	0	66	1	1	0	5	158	52	0	0	0	0	1	419
12:45	0	118	0	1	45	1	2	0	2	153	67	0	0	0	0	0	389
TOTAL	2	510	2	2	206	2	4	0	13	593	215	3	1	2	0	5	1560
15:00	0	108	1	1	61	0	0	0	4	158	74	1	1	0	0	0	409
15:15	0	142	0	0	56	1	1	0	2	223	98	0	0	1	1	2	527
15:30	1	133	3	0	59	0	0	0	4	193	84	0	1	0	0	1	479
15:45	0	123	1	3	65	1	2	0	1	210	85	0	0	0	0	1	492
TOTAL	1	506	5	4	241	2	3	0	11	784	341	1	2	1	1	4	1907
16:00	0	141	0	0	72	1	0	0	2	242	91	0	4	1	0	1	555
16:15	1	137	1	2	64	1	2	0	1	216	94	0	1	1	0	0	521
16:30	1	138	1	0	71	4	1	0	1	230	107	0	0	1	0	1	556
16:45	0	134	4	1	72	2	0	0	4	210	102	0	1	0	0	1	531
TOTAL	2	550	6	3	279	8	3	0	8	898	394	0	6	3	0	3	2163
17:00	2	138	1	0	58	4	1	0	2	251	131	0	1	2	0	1	592
17:15	0	123	0	0	71	3	1	0	9	223	120	0	0	0	0	3	553
17:30	1	139	3	0	62	0	0	0	2	229	128	0	0	3	0	0	567
17:45	0	135	1	0	54	1	0	0	3	229	71	0	1	0	1	2	498
TOTAL	3	535	5	0	245	8	2	0	16	932	450	0	2	5	1	6	2210

PEAK HOUR DATA 6:00 TO 9:00

PEAK HR START TIME 7:00

	US 29 Southbound				CR 95A Westbound				US 29 Northbound				Morris Ave Eastbound				
	Left	Thru	Right	RTOR	Left	Thru	Right	RTOR	Left	Thru	Right	RTOR	Left	Thru	Right	RTOR	TOTAL
PEAK HR TOTALS	1	1055	3	2	404	3	0	1	2	397	243	1	0	9	0	14	2135
% OF APPROACH	0.1%	99.4%	0.3%	0.2%	99.0%	0.7%	0.0%	0.2%	0.3%	61.7%	37.8%	0.2%	0.0%	39.1%	0.0%	60.9%	
PEAK HR FACTOR	0.921				0.944				0.874				0.719				

PEAK HOUR DATA 11:00 TO 13:00

PEAK HR START TIME 12:00

	US 29 Southbound				CR 95A Westbound				US 29 Northbound				Morris Ave Eastbound				
	Left	Thru	Right	RTOR	Left	Thru	Right	RTOR	Left	Thru	Right	RTOR	Left	Thru	Right	RTOR	TOTAL
PEAK HR TOTALS	2	510	2	2	206	2	4	0	13	593	215	3	1	2	0	5	1560
% OF APPROACH	0.4%	98.8%	0.4%	0.4%	97.2%	0.9%	1.9%	0.0%	1.6%	72.0%	26.1%	0.4%	12.5%	25.0%	0.0%	62.5%	
PEAK HR FACTOR	0.884				0.779				0.928				0.400				

PEAK HOUR DATA 15:00 TO 18:00

PEAK HR START TIME 16:45

	US 29 Southbound				CR 95A Westbound				US 29 Northbound				Morris Ave Eastbound				
	Left	Thru	Right	RTOR	Left	Thru	Right	RTOR	Left	Thru	Right	RTOR	Left	Thru	Right	RTOR	TOTAL
PEAK HR TOTALS	3	534	8	1	263	9	2	0	17	913	481	0	2	5	0	5	2243
% OF APPROACH	0.5%	97.8%	1.5%	0.2%	96.0%	3.3%	0.7%	0.0%	1.2%	64.7%	34.1%	0.0%	16.7%	41.7%	0.0%	41.7%	
PEAK HR FACTOR	0.955				0.913				0.919				0.750				

HSA CONSULTING GROUP, INC.
1315 COUNTRY CLUB RD.
GULF BREEZE, FLA. 32563

TRUCKS ONLY

INTERSECTION OF US 29 & MORRIS AVE

COUNTED BY: DS COUNT DATE: 21-Jan-16 FILE NAME: US29 & morris tmc.xls

	US 29 Southbound				CR 95A Westbound				US 29 Northbound				Morris Ave Eastbound				
Time	Left	Thru	Right	RTOR	Left	Thru	Right	RTOR	Left	Thru	Right	RTOR	Left	Thru	Right	RTOR	TOTAL
6:00	0	8	0	0	2	0	0	0	0	6	1	0	0	0	0	0	17
6:15	0	12	0	0	4	0	0	0	0	7	0	0	0	0	0	0	23
6:30	0	13	1	0	3	0	0	0	0	10	5	0	0	0	0	0	32
6:45	0	7	0	0	4	0	0	0	0	13	2	1	0	0	0	0	27
TOTAL	0	40	1	0	13	0	0	0	0	36	8	1	0	0	0	0	99
7:00	0	15	0	0	6	0	0	0	0	16	5	0	0	0	0	0	42
7:15	0	10	0	0	9	0	0	0	0	13	6	0	0	1	0	0	39
7:30	0	13	0	0	5	0	0	0	0	13	4	0	0	0	0	0	35
7:45	0	10	1	0	2	0	0	0	0	14	4	0	0	0	0	0	31
TOTAL	0	48	1	0	22	0	0	0	0	56	19	0	0	1	0	0	147
8:00	0	12	0	0	11	0	0	0	0	18	6	0	0	0	0	0	47
8:15	0	14	0	0	7	0	0	0	1	19	2	0	0	0	0	0	43
8:30	0	19	0	0	7	0	0	0	0	16	6	0	0	0	0	0	48
8:45	0	13	1	0	6	0	0	0	0	19	4	0	0	0	0	0	43
TOTAL	0	58	1	0	31	0	0	0	1	72	18	0	0	0	0	0	181
11:00	0	13	0	0	2	0	0	0	0	17	7	0	0	0	0	0	39
11:15	0	12	0	0	8	0	0	0	0	23	5	0	0	0	0	0	48
11:30	0	9	0	0	2	0	0	0	0	20	6	0	0	0	0	0	37
11:45	0	11	1	0	8	0	0	0	0	15	4	0	0	0	0	0	39
TOTAL	0	45	1	0	20	0	0	0	0	75	22	0	0	0	0	0	163
12:00	0	11	1	0	5	0	0	0	0	11	4	0	0	0	0	0	32
12:15	1	15	0	0	2	0	0	0	0	13	4	0	0	0	0	0	35
12:30	0	12	0	0	7	1	0	0	0	14	2	0	0	0	0	0	36
12:45	0	7	0	0	5	0	1	0	0	12	5	0	0	0	0	0	30
TOTAL	1	45	1	0	19	1	1	0	0	50	15	0	0	0	0	0	133
15:00	0	10	0	0	5	0	0	0	0	12	4	0	0	0	0	0	31
15:15	0	11	0	0	2	1	0	0	0	15	12	0	0	0	0	0	41
15:30	0	16	0	0	5	0	0	0	0	9	2	0	0	0	0	0	32
15:45	0	11	0	0	6	0	0	0	0	14	5	0	0	0	0	0	36
TOTAL	0	48	0	0	18	1	0	0	0	50	23	0	0	0	0	0	140
16:00	0	8	0	0	2	0	0	0	0	11	4	0	1	0	0	0	26
16:15	0	8	0	0	1	0	0	0	0	16	5	0	0	0	0	0	30
16:30	0	10	0	0	6	0	0	0	0	17	0	0	0	0	0	0	33
16:45	0	10	0	0	6	0	0	0	0	11	3	0	0	0	0	0	30
TOTAL	0	36	0	0	15	0	0	0	0	55	12	0	1	0	0	0	119
17:00	0	10	0	0	3	0	0	0	0	13	3	0	0	0	0	0	29
17:15	0	8	0	0	2	0	0	0	0	6	2	0	0	0	0	0	18
17:30	1	7	0	0	0	0	0	0	0	7	4	0	0	0	0	0	19
17:45	0	5	0	0	1	0	0	0	0	10	2	0	0	0	0	0	18
TOTAL	1	30	0	0	6	0	0	0	0	36	11	0	0	0	0	0	84

HSA CONSULTING GROUP, INC.
1315 COUNTRY CLUB RD.
GULF BREEZE, FLA. 32563

ALL VEHICLES

INTERSECTION OF US 29 & MUSCOGEE ROAD

COUNTED BY: DB COUNT DATE: 26-Jan-16 FILE NAME: US29 & muscogee tmc.xls

	US 29 Southbound				Beck's Lake Rd Westbound				US 29 Northbound				Muscogee Rd Eastbound				
Time	Left	Thru	Right	RTOR	Left	Thru	Right	RTOR	Left	Thru	Right	RTOR	Left	Thru	Right	RTOR	TOTAL
6:00	1	174	35	14	4	0	0	2	21	73	7	1	21	6	25	7	391
6:15	1	238	42	14	7	1	0	2	33	64	9	0	27	4	19	26	487
6:30	0	234	60	9	5	3	2	2	30	70	1	0	47	3	12	14	492
6:45	1	224	43	7	5	2	0	0	24	109	1	0	44	5	12	18	495
TOTAL	3	870	180	44	21	6	2	6	108	316	18	1	139	18	68	65	1865
7:00	0	333	46	5	9	2	1	2	15	108	1	0	37	3	3	18	583
7:15	1	360	47	10	3	4	0	2	26	130	4	0	43	1	39	35	705
7:30	1	298	62	9	1	1	1	1	17	139	7	0	39	1	9	26	612
7:45	1	283	44	7	8	1	0	4	18	134	5	0	19	1	13	27	565
TOTAL	3	1274	199	31	21	8	2	9	76	511	17	0	138	6	64	106	2465
8:00	1	233	37	5	9	0	1	1	33	132	2	0	26	8	18	19	525
8:15	2	228	25	1	5	3	0	0	29	123	8	0	20	4	9	34	491
8:30	4	221	25	6	4	2	0	3	15	129	6	0	22	2	8	14	461
8:45	0	202	36	2	7	2	1	2	26	141	6	1	23	4	11	21	485
TOTAL	7	884	123	14	25	7	2	6	103	525	22	1	91	18	46	88	1962
11:00	1	161	21	10	17	4	5	0	31	156	6	0	21	8	12	23	476
11:15	1	142	14	2	10	1	1	1	26	138	11	0	32	3	13	18	413
11:30	3	154	17	10	6	3	3	1	34	174	6	2	23	0	3	17	456
11:45	2	149	16	4	4	2	0	2	43	139	7	0	22	2	12	26	430
TOTAL	7	606	68	26	37	10	9	4	134	607	30	2	98	13	40	84	1775
12:00	1	155	20	9	13	0	2	1	49	140	5	2	28	4	12	28	469
12:15	0	160	19	12	6	1	0	1	41	172	7	0	23	0	7	22	471
12:30	0	156	17	7	3	1	0	1	35	153	5	0	21	2	13	27	441
12:45	1	133	20	5	0	0	0	1	26	164	4	1	28	5	17	12	417
TOTAL	2	604	76	33	22	2	2	4	151	629	21	3	100	11	49	89	1798
15:00	1	149	23	3	7	2	1	1	34	230	12	1	32	6	10	19	531
15:15	0	156	23	18	12	2	0	1	48	284	5	1	40	3	6	14	613
15:30	0	155	17	15	3	3	1	2	35	214	4	1	62	3	16	25	556
15:45	2	149	28	7	4	3	2	2	44	279	13	0	35	1	11	22	602
TOTAL	3	609	91	43	26	10	4	6	161	1007	34	3	169	13	43	80	2302
16:00	2	199	24	4	3	5	1	0	48	282	2	0	44	1	10	20	645
16:15	1	163	20	11	6	1	3	0	50	248	4	0	60	6	11	22	606
16:30	3	169	29	15	20	5	1	2	47	264	6	0	90	8	8	21	688
16:45	0	153	25	11	7	5	3	2	57	243	2	0	67	2	16	32	625
TOTAL	6	684	98	41	36	16	8	4	202	1037	14	0	261	17	45	95	2564
17:00	1	155	35	3	3	5	0	1	38	315	6	0	49	5	12	18	646
17:15	3	160	17	11	1	3	0	1	48	315	2	0	43	5	7	27	643
17:30	1	158	36	6	4	3	2	2	40	284	4	0	53	5	14	20	632
17:45	1	157	26	3	0	3	0	2	28	250	5	0	53	2	7	19	556
TOTAL	6	630	114	23	8	14	2	6	154	1164	17	0	198	17	40	84	2477

PEAK HOUR DATA 6:00 TO 9:00

PEAK HR START TIME 7:00

	US 29 Southbound				Beck's Lake Rd Westbound				US 29 Northbound				Muscogee Rd Eastbound				
	Left	Thru	Right	RTOR	Left	Thru	Right	RTOR	Left	Thru	Right	RTOR	Left	Thru	Right	RTOR	TOTAL
PEAK HR TOTALS	3	1274	199	31	21	8	2	9	76	511	17	0	138	6	64	106	2465
% OF APPROACH	0.2%	84.5%	13.2%	2.1%	52.5%	20.0%	5.0%	22.5%	12.6%	84.6%	2.8%	0.0%	43.9%	1.9%	20.4%	33.8%	
PEAK HR FACTOR	0.901				0.714				0.926				0.665				

PEAK HOUR DATA 11:00 TO 13:00

PEAK HR START TIME 11:30

	US 29 Southbound				Beck's Lake Rd Westbound				US 29 Northbound				Muscogee Rd Eastbound				
	Left	Thru	Right	RTOR	Left	Thru	Right	RTOR	Left	Thru	Right	RTOR	Left	Thru	Right	RTOR	TOTAL
PEAK HR TOTALS	6	618	72	35	29	6	5	5	167	625	25	4	96	6	34	93	1826
% OF APPROACH	0.8%	84.5%	9.8%	4.8%	64.4%	13.3%	11.1%	11.1%	20.3%	76.1%	3.0%	0.5%	41.9%	2.6%	14.8%	40.6%	
PEAK HR FACTOR	0.957				0.703				0.933				0.795				

PEAK HOUR DATA 15:00 TO 18:00

PEAK HR START TIME 16:30

	US 29 Southbound				Beck's Lake Rd Westbound				US 29 Northbound				Muscogee Rd Eastbound				
	Left	Thru	Right	RTOR	Left	Thru	Right	RTOR	Left	Thru	Right	RTOR	Left	Thru	Right	RTOR	TOTAL
PEAK HR TOTALS	7	637	106	40	31	18	4	6	190	1137	16	0	249	20	43	98	2602
% OF APPROACH	0.9%	80.6%	13.4%	5.1%	52.5%	30.5%	6.8%	10.2%	14.1%	84.7%	1.2%	0.0%	60.7%	4.9%	10.5%	23.9%	
PEAK HR FACTOR	0.914				0.527				0.920				0.807				

HSA CONSULTING GROUP, INC.
1315 COUNTRY CLUB RD.
GULF BREEZE, FLA. 32563

TRUCKS ONLY

INTERSECTION OF US 29 & MUSCOGEE ROAD

COUNTED BY: DB COUNT DATE: 26-Jan-16 FILE NAME: US29 & muscogee tmc.xls

	US 29 Southbound				Beck's Lake Rd Westbound				US 29 Northbound				Muscogee Rd Eastbound				
Time	Left	Thru	Right	RTOR	Left	Thru	Right	RTOR	Left	Thru	Right	RTOR	Left	Thru	Right	RTOR	TOTAL
6:00	0	5	0	0	0	0	0	2	1	12	2	0	2	0	8	2	34
6:15	0	19	2	1	1	0	0	2	4	7	3	0	3	1	5	2	50
6:30	0	17	2	1	0	1	2	0	4	10	0	0	7	2	1	2	49
6:45	0	18	1	0	1	0	0	0	2	18	0	0	7	1	0	2	50
TOTAL	0	59	5	2	2	1	2	4	11	47	5	0	19	4	14	8	183
7:00	0	16	8	0	3	2	0	1	1	18	0	0	11	1	1	8	70
7:15	1	33	5	2	0	2	0	2	3	12	1	0	4	0	2	3	70
7:30	1	28	3	0	0	0	1	0	6	17	1	0	2	0	1	2	62
7:45	0	20	2	0	1	0	0	2	4	20	0	0	5	0	3	5	62
TOTAL	2	97	18	2	4	4	1	5	14	67	2	0	22	1	7	18	264
8:00	0	20	4	1	1	0	0	0	10	25	0	0	4	2	3	4	74
8:15	1	31	4	0	3	0	0	0	5	23	0	0	4	1	2	4	78
8:30	2	22	2	0	1	0	0	2	6	27	2	0	1	0	3	3	71
8:45	0	22	8	0	4	1	0	2	9	24	1	0	6	1	3	4	85
TOTAL	3	95	18	1	9	1	0	4	30	99	3	0	15	4	11	15	308
11:00	1	22	5	2	4	2	2	0	7	19	1	0	3	0	4	5	77
11:15	0	19	3	0	3	1	0	0	7	20	1	0	6	3	4	6	73
11:30	0	17	2	1	0	1	0	0	4	31	1	1	2	0	0	2	62
11:45	0	16	1	0	2	0	0	1	3	16	2	0	2	1	0	1	45
TOTAL	1	74	11	3	9	4	2	1	21	86	5	1	13	4	8	14	257
12:00	1	19	4	2	8	0	0	0	11	15	3	2	2	1	1	7	76
12:15	0	19	3	0	4	0	0	0	6	19	3	0	4	0	2	2	62
12:30	0	24	4	2	2	1	0	1	2	19	0	0	4	0	5	3	67
12:45	0	21	0	2	0	0	0	0	3	24	2	0	3	1	2	4	62
TOTAL	1	83	11	6	14	1	0	1	22	77	8	2	13	2	10	16	267
15:00	0	17	1	0	2	0	0	0	6	16	0	0	4	0	3	2	51
15:15	0	12	2	1	0	0	0	0	8	29	1	1	6	0	2	3	65
15:30	0	19	3	0	0	1	0	0	4	13	0	0	1	1	1	0	43
15:45	0	19	3	0	0	1	0	1	7	23	3	0	4	0	1	4	66
TOTAL	0	67	9	1	2	2	0	1	25	81	4	1	15	1	7	9	225
16:00	1	12	0	0	0	1	1	0	7	16	0	0	2	0	1	3	44
16:15	0	15	0	0	0	0	0	0	6	16	0	0	11	0	3	1	52
16:30	0	13	3	3	0	0	0	0	7	22	2	0	6	0	0	3	59
16:45	0	13	3	2	1	1	0	0	4	14	0	0	3	0	3	4	48
TOTAL	1	53	6	5	1	2	1	0	24	68	2	0	22	0	7	11	203
17:00	0	15	5	0	0	0	0	0	4	16	1	0	2	1	2	0	46
17:15	0	11	1	0	1	0	0	0	0	11	0	0	0	0	4	3	31
17:30	0	9	0	0	0	1	0	1	2	14	1	0	1	0	1	2	32
17:45	0	7	2	0	0	0	0	0	1	14	0	0	1	0	0	2	27
TOTAL	0	42	8	0	1	1	0	1	7	55	2	0	4	1	7	7	136

PEDESTRIAN MOVEMENTS

Intersection of US 29 and Muscogee Road
Escambia County, FL
Tuesday, January 26, 2016

PEDS												
START TIME	6:00	6:15	6:30	6:45	7:00	7:15	7:30	7:45	8:00	8:15	8:30	8:45
PEDS												

EAST /WEST PEDESTRIAN TRAFFIC CROSSING US 29 NORTH OF MUSCOGEE

PEDS	START TIME	PEDS
	6:00	
	6:15	
	6:30	
	6:45	
	7:00	
	7:15	
	7:30	
	7:45	
	8:00	
	8:15	
	8:30	
	8:45	

NORTH/SOUTH PEDESTRIAN TRAFFIC CROSSING
MUSCOGEE WEST OF US 29

N

PEDS	START TIME	PEDS
	6:00	
	6:15	
	6:30	
	6:45	
	7:00	
	7:15	
	7:30	
	7:45	
	8:00	
	8:15	
	8:30	
	8:45	

NORTH/SOUTH PEDESTRIAN TRAFFIC CROSSING
BECK'S LAKE RD EAST OF US 29

PEDS												
START TIME	6:00	6:15	6:30	6:45	7:00	7:15	7:30	7:45	8:00	8:15	8:30	8:45
PEDS									**1**			

EAST /WEST PEDESTRIAN TRAFFIC CROSSING US 29 SOUTH OF MUSCOGEE

PEDESTRIAN MOVEMENTS

Intersection of US 29 and Muscogee Road
Escambia County, FL
Tuesday, January 26, 2016

PEDS								
START TIME	11:00	11:15	23:30	23:45	12:00	12:15	12:30	12:45
PEDS								

EAST /WEST PEDESTRIAN TRAFFIC US 29 NORTH OF MUSCOGEE

PEDS	START TIME	PEDS
	11:00	
	11:15	
	11:30	
	11:45	
	12:00	
	12:15	
	12:30	
	12:45	

NORTH/SOUTH PEDESTRIAN TRAFFIC CROSSING
MUSCOGEE WEST OF US 29

N

PEDS	START TIME	PEDS
	11:00	
	11:15	
	11:30	
	11:45	
	12:00	
	12:15	
	12:30	
	12:45	

NORTH/SOUTH PEDESTRIAN TRAFFIC CROSSING
BECK'S LAKE RD EAST OF US 29

PEDS								
START TIME	11:00	11:15	23:30	23:45	12:00	12:15	12:30	12:45
PEDS								

EAST /WEST PEDESTRIAN TRAFFIC CROSSING US 29 SOUTH OF MUSCOGEE

PEDESTRIAN MOVEMENTS

Intersection of US 29 and Muscogee Road
Escambia County, FL
Tuesday, January 26, 2016

PEDS												
START TIME	15:00	15:15	15:30	15:45	16:00	16:15	16:30	16:45	17:00	17:15	17:30	17:45
PEDS												

EAST /WEST PEDESTRIAN TRAFFIC CROSSING US 29 NORTH OF MUSCOGEE

PEDS	START TIME	PEDS
	15:00	
	15:15	
	15:30	
	15:45	
	16:00	
	16:15	
	16:30	
	16:45	
	17:00	
	17:15	
	17:30	
	17:45	

NORTH/SOUTH PEDESTRIAN TRAFFIC CROSSING
MUSCOGEE WEST OF US 29

N

PEDS	START TIME	PEDS
	15:00	
	15:15	
	15:30	
	15:45	
	16:00	
	16:15	
	16:30	
	16:45	
	17:00	
	17:15	
	17:30	
	17:45	

NORTH/SOUTH PEDESTRIAN TRAFFIC CROSSING
BECK'S LAKE RD EAST OF US 29

PEDS												
START TIME	15:00	15:15	15:30	15:45	16:00	16:15	16:30	16:45	17:00	17:15	17:30	17:45
PEDS												

EAST /WEST PEDESTRIAN TRAFFIC CROSSING US 29 SOUTH OF MUSCOGEE

HSA CONSULTING GROUP, INC.
1315 COUNTRY CLUB RD.
GULF BREEZE, FLA. 32563

ALL VEHICLES

INTERSECTION OF US 29 & TREE STREET

COUNTED BY: DB COUNT DATE: 20-Jan-16 FILE NAME: US29 & tree tmc.xls

	US 29 Southbound							US 29 Northbound				Tree St Eastbound				
Time		Thru	Right	RTOR					Left	Thru			Left		Right	RTOR	TOTAL
6:00		181	1	0					1	73			3		2	0	261
6:15		277	3	0					0	108			3		1	0	392
6:30		304	5	0					0	125			5		0	0	439
6:45		278	2	0					0	136			1		0	0	417
TOTAL		1040	11	0					1	442			12		3	0	1509
7:00		328	7	0					0	135			7		0	0	477
7:15		355	6	0					1	163			0		0	0	525
7:30		323	14	0					0	150			6		0	0	493
7:45		317	9	0					0	131			4		0	0	461
TOTAL		1323	36	0					1	579			17		0	0	1956
8:00		296	5	1					2	164			12		0	1	481
8:15		231	10	0					0	165			1		0	0	407
8:30		243	12	0					0	149			9		0	0	413
8:45		228	7	0					1	132			7		0	0	375
TOTAL		998	34	1					3	610			29		0	1	1676
11:00		184	10	0					0	167			9		0	0	370
11:15		204	14	0					2	160			9		0	0	389
11:30		185	7	0					0	183			9		0	0	384
11:45		159	6	0					0	192			8		0	0	365
TOTAL		732	37	0					2	702			35		0	0	1508
12:00		201	7	0					1	214			8		1	0	432
12:15		216	7	0					0	237			6		1	0	467
12:30		182	10	0					1	218			8		0	0	419
12:45		172	7	0					0	192			9		0	0	380
TOTAL		771	31	0					2	861			31		2	0	1698
15:00		202	7	5					1	310			8		1	0	534
15:15		187	5	0					1	282			7		0	0	482
15:30		193	7	2					1	279			10		0	0	492
15:45		188	14	1					0	321			14		1	0	539
TOTAL		770	33	8					3	1192			39		2	0	2047
16:00		207	11	0					0	298			8		0	0	524
16:15		240	8	1					0	281			7		0	0	537
16:30		237	3	1					0	327			6		0	0	574
16:45		217	12	0					0	336			9		1	0	575
TOTAL		901	34	2					0	1242			30		1	0	2210
17:00		217	7	0					0	343			3		2	0	572
17:15		201	3	1					0	376			9		0	0	590
17:30		205	5	0					3	316			3		0	0	532
17:45		223	5	0					0	276			10		0	0	514
TOTAL		846	20	1					3	1311			25		2	0	2208

PEAK HOUR DATA 6:00 TO 9:00

PEAK HR START TIME 7:15

	US 29 Southbound			US 29 Northbound		Tree St Eastbound			
	Thru	Right	RTOR	Left	Thru	Left	Right	RTOR	TOTAL
PEAK HR TOTALS	1291	34	1	3	608	22	0	1	1960
% OF APPROACH	97.4%	2.6%	0.1%	0.5%	99.5%	95.7%	0.0%	4.3%	
PEAK HR FACTOR	0.918			0.920		0.442			

PEAK HOUR DATA 11:00 TO 13:00

PEAK HR START TIME 12:00

	US 29 Southbound			US 29 Northbound		Tree St Eastbound			
	Thru	Right	RTOR	Left	Thru	Left	Right	RTOR	TOTAL
PEAK HR TOTALS	771	31	0	2	861	31	2	0	1698
% OF APPROACH	96.1%	3.9%	0.0%	0.2%	99.8%	93.9%	6.1%	0.0%	
PEAK HR FACTOR	0.899			0.910		0.917			

PEAK HOUR DATA 15:00 TO 18:00

PEAK HR START TIME 16:30

	US 29 Southbound			US 29 Northbound		Tree St Eastbound			
	Thru	Right	RTOR	Left	Thru	Left	Right	RTOR	TOTAL
PEAK HR TOTALS	872	25	2	0	1382	27	3	0	2311
% OF APPROACH	97.0%	2.8%	0.2%	0.0%	100.0%	90.0%	10.0%	0.0%	
PEAK HR FACTOR	0.933			0.919		0.750			

HSA CONSULTING GROUP, INC.
1315 COUNTRY CLUB RD.
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TRUCKS ONLY

INTERSECTION OF US 29 & TREE STREET

COUNTED BY: DB COUNT DATE: 20-Jan-16 FILE NAME: US29 & tree tmc.xls

	US 29 Southbound							US 29 Northbound				Tree St Eastbound				
Time		Thru	Right	RTOR				Left	Thru			Left		Right	RTOR	TOTAL
6:00		14	1	0				1	3			3		1	0	23
6:15		14	3	0				0	17			3		1	0	38
6:30		19	5	0				0	13			5		0	0	42
6:45		23	2	0				0	11			1		0	0	37
TOTAL		70	11	0				1	44			12		2	0	140
7:00		19	6	0				0	11			7		0	0	43
7:15		25	5	0				1	15			0		0	0	46
7:30		20	13	0				0	18			6		0	0	57
7:45		21	9	0				0	14			4		0	0	48
TOTAL		85	33	0				1	58			17		0	0	194
8:00		20	5	1				2	27			11		0	1	67
8:15		17	10	0				0	25			1		0	0	53
8:30		16	12	0				0	20			9		0	0	57
8:45		24	7	0				1	25			7		0	0	64
TOTAL		77	34	1				3	97			28		0	1	241
11:00		21	10	0				0	23			9		0	0	63
11:15		19	14	0				1	24			9		0	0	67
11:30		11	7	0				0	18			9		0	0	45
11:45		11	6	0				0	15			8		0	0	40
TOTAL		62	37	0				1	80			35		0	0	215
12:00		17	6	0				1	21			8		1	0	54
12:15		15	7	0				0	31			5		1	0	59
12:30		13	9	0				0	28			7		0	0	57
12:45		15	6	0				0	16			8		0	0	45
TOTAL		60	28	0				1	96			28		2	0	215
15:00		12	7	5				1	30			8		0	0	63
15:15		15	5	0				1	20			7		0	0	48
15:30		17	7	2				1	18			10		0	0	55
15:45		8	13	1				0	23			14		1	0	60
TOTAL		52	32	8				3	91			39		1	0	226
16:00		12	11	0				0	18			7		0	0	48
16:15		20	8	1				0	14			7		0	0	50
16:30		9	3	1				0	12			6		0	0	31
16:45		13	11	0				0	20			9		0	0	53
TOTAL		54	33	2				0	64			29		0	0	182
17:00		10	6	0				0	14			3		2	0	35
17:15		10	3	1				0	10			9		0	0	33
17:30		7	4	0				2	12			3		0	0	28
17:45		9	5	0				0	8			9		0	0	31
TOTAL		36	18	1				2	44			24		2	0	127

APPENDIX B

SR 95 (US 29)
Signal Improvements for Tree Street, Muscogee Road & Morris Avenue
Schedule of Unit Prices

Pay Item No.	Description	Unit	Quantity	Unit Price	Cost
101-1	MOBILIZATION	LS	1		
102-1	MAINTENANCE OF TRAFFIC	LS	1		
630-2-11	CONDUIT (F&I) (OPEN TRENCH)	LF	45		
635-2-11	PULL & SPLICE BOX (F&I) (13" x 24" - COVER SIZE)	EA	5		
639-1-113	ELECTRICAL POWER SERVICE (F&I) (OVERHEAD) (NO METER)	AS	2		
639-1-610	ELECTRICAL POWER SERVICE (REMOVE) (OVERHEAD)	AS	2		
639-2-1	ELECTRICAL SERVICE WIRE (F&I)	LF	230		
639-2-6	ELECTRICAL SERVICE WIRE (REMOVE)	LF	257		
639-3-11	ELECTRICAL SERVICE DISCONNECT (F&I) (POLE MOUNT)	EA	2		
639-3-60	ELECTRICAL SERVICE DISCONNECT (REMOVE) (POLE TO REMAIN)	EA	2		
641-2-12	PRESTRESSED CONCRETE POLE (F&I) (TYPE P-11 SERVICE POLE)	EA	2		
660-4-11	VEHICLE DETECTION SYSTEM - VIDEO (F&I) (CABINET EQUIPMENT)	EA	3		
660-4-12	VEHICLE DETECTION SYSTEM - VIDEO (F&I) (ABOVE GROUND EQUIPMENT)	EA	3		
670-5-150	TRAFFIC CONTROLLER ASSEMBLY (F&I) (ATC) (NONE)	AS	1		
670-5-151	TRAFFIC CONTROLLER ASSEMBLY (F&I) (ATC) (ONE PREEMPTION)	AS	1		
670-5-400	TRAFFIC CONTROLLER ASSEMBLY (MODIFY)	AS	1		
670-5-600	TRAFFIC CONTROLLER ASSEMBLY (REMOVE CONTROLLER & CABINET)	AS	2		
671-2-14	TRAFFIC CONTROLLER WITHOUT CABINET (F&I) (2070)	EA	1		
684-1-1	MANAGED FIELD ETHERNET SWITCH (F&I)	EA	3		
684-6-12	WIRELESS COMMUNICATION DEVICE (F&I) (ETHERNET SUBSCRIBER UNIT)	EA	6		

Total Cost =