

Rebuild Alabama Act Annual Grant Program

FY20 Project Application:

**Signalization Upgrades at Local Road
Intersections**

City of Foley

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Signalization Upgrades at Local Road Intersections

A. Sponsoring Local Agency

Sponsor Entity:	The City of Foley
Official:	John Koniar
Title:	Mayor
Address:	407 East Laurel Ave, Foley, AL 36535
Phone:	(251) 943-1545
Email:	jkoniara@cityoffoley.org
Project Manager:	Chad P. Christian, P.E.
Title:	City Engineer
Address:	200 North Alston Street, Foley, AL 36535
Phone:	(251) 970-1104
Email:	cchristian@cityoffoley.org

B. Project Description

The signal system along SR 59 and US 98 through the City of Foley is crucial to both Local and Regional traffic flow. Unfortunately, the equipment has become dated and communication between signals is non-existent. Based on the 2018 study of these roads performed by Kimley-Horn, a lack of interconnection between the traffic signals in Foley has led to disrupted signal timing that negatively impacts traffic progression and lowers the level of service throughout the system. This has a significant negative impact on both the local road network as well as regional traffic flow to and from the beaches. The purpose of the grant funds will be to purchase and install fiber-optic enabled infrastructure at 21 intersections along SR 59 and US 98 to both improve traffic progression and support integrated ITS control by ALDOT in tandem with the existing Gulf Shores signal system.

C. Preliminary Funding Plan

Based on the attached cost proposal from Uniti Fiber, the City Council has committed to funding the annual system maintenance cost of \$19,200 for 10 years. From the Kimley-Horn study, the estimated total construction cost for the fiber-optic leasing option with upgraded signal controllers is \$522,847. The City is requesting \$250,000 in RAA grant funds to be appropriated toward the purchase of signal controllers and associated infrastructure through State contracts to be installed by ALDOT forces. Acceptance of this grant award will be made contingent upon the City Council funding up to 20% of the remaining costs (\$54,569) necessary to complete the project. ALDOT has committed to funding the cost of the fiber buildout at \$260,000. The combination of local and state funding will result in a contingency budget surplus of approximately \$41,772 to cover inflation and miscellaneous costs.

D. Adverse Impacts to Project

No additional Right-of-Way or Utility relocation is required and there are no adverse impacts anticipated to environmental or cultural resources.

E. Project Life Expectancy

The expected useful life of the fiber-optic signalization improvements is 10 to 15 years.

F. Additional Comments

Enhanced connectivity between traffic signals along SR 59 will raise the level of service, decrease delay, and allow ALDOT operators to dynamically address traffic conditions for both Local and Regional traffic. Reductions in travel time through Foley will support the State economy by improving access to the Beaches and other tourist attractions. The purchase of equipment through existing State contracts will result in cost savings and will further boost the State economy.

G. Project Map and Index

ID No.	Intersection Location
1	AL-59 at Foley Beach Expressway
2	AL-59 at Underwood Road
3	AL-59 at Peachtree Avenue
4	AL-59 at Fern Avenue
5	AL-59 at Berry Avenue
6	AL-59 at AL-42
7	AL-59 at Myrtle Avenue
8	AL-59 at Azalea Avenue
9	AL-59 at Michigan Avenue
10	AL-59 at Pride Drive
11	AL-59 at Riviera Boulevard
12	AL-59 at Tanger Outlets
13	AL-59 at Miflin Road
14	AL-59 at Abbey Lane
15	AL-59 at CR 12
16	AL-59 at Keller Road
17	AL-59 at CR 10
18	AL-42 at Cedar Street
19	AL-42 at Pine Street
20	AL-42 at Alston Street
21	AL-42 at Juniper Street

Note that all 21 Intersections are crossed by local roads

H. Letters of Support



**ALABAMA
DEPARTMENT OF TRANSPORTATION**

**SOUTHWEST REGION
OFFICE OF REGION ENGINEER
1701 I-65 WEST SERVICE ROAD NORTH
MOBILE, ALABAMA 36618-1109
TELEPHONE: (251) 470-8200
FAX (251) 473-3624**



Kay Ivey
GOVERNOR

John R. Cooper
TRANSPORTATION DIRECTOR

November 26, 2019

**To: Mr. D.E. (Ed) Phillips, Jr., P.E.
Local Transportation Bureau Chief
Alabama Department of Transportation
1409 Coliseum Blvd - Room 110
Montgomery, Alabama 36110**

**Re: Alabama Department of Transportation South West Region Support of the City of
Foley FY2020 RAA Annual Grant Application for Signalization Upgrades at Local
Road Intersections and Local Intersections.**

Dear Mr. Phillips:

The Alabama Department of Transportation's Southwest Region has been made aware of the City of Foley's desire to pursue a FY2020 RAA Annual Grant for the project noted above. AL-59 and US-98 directly affect the local citizens and their ability to cross from one side of the city to the other and the department has received a large number of growing complaints from the local users and government. The congestion and it's strangulating effect on the local population as well as to the users of AL-59 and US-90 can be observed on an almost daily basis during the tourist season. The proposed signal improvements would greatly increase the efficiency of these intersections and significantly help to alleviate frustrations as well as to add additional benefits in the future.

The Southwest Region supports the need for the proposed signal improvements and the City of Foley's FY2020 RAA Annual Grant Application. We feel that these improvements would increase the efficiency of the intersections and provide ancillary benefits to AL-59 and US-98.

Sincerely,

Matthew J. Ericksen, P.E., Region Engineer

MJE/jnb
Attachment

c: Mr. Matt Ericksen
Mr. Brian Aaron
Mr. Don Powell
Mr. Daniel Driskell



November 26, 2019

Mr. D.E. (Ed) Phillips, Jr., P.E.
Local Transportation Engineer
Alabama Department of Transportation
1409 Coliseum Boulevard
Room 110
Montgomery, AL 36110

RE: Rebuild Alabama Act (RAA) Annual Grant Program
City of Foley FY20 Application

Dear Sir:

Enclosed please find the Rebuild Alabama Act Grant Application and supporting documentation for Signalized Intersection Improvements at Local Road Intersections in the City of Foley. Thank you for your consideration of this project and feel free to contact me if additional information is required.

Sincerely,

Chad P. Christian, P.E.
City Engineer

cc: Mayor Koniar
Michael Thompson

I. Appendix

Pay Item Estimate

Uniti Fiber Quote

Excerpt from Kimley-Horn Study

MATERIAL/LABOR DESCRIPTION	UNIT	EST. UNIT COST	Uniti Leased Fiber		ALDOT Fiber w/ Uniti Backhaul	
			QTY	EST COST	QTY	EST COST
OSP F/O CABLE, LOOSE TUBE, SM, 96 FIBER	LF	\$ 6.00	0	\$ -	59160	\$ 354,960.00
CONDUITS, NM, 2-2"	LF	\$ 1.50	0	\$ -	1420	\$ 2,130.00
DIRECT BORE, 2-2" CONDUIT	LF	\$ 15.00	0	\$ -	710	\$ 10,650.00
ONE WIRE	LF	\$ 0.60	0	\$ -	1420	\$ 852.00
INSTALL NEW MESSENGER CABLE, 0.25"	LF	\$ 3.00	0	\$ -	56570	\$ 169,710.00
SLACK RACK, AERIAL	EA	\$ 75.00	0	\$ -	65	\$ 4,875.00
SPLICE ENCLOSURE, AERIAL	EA	\$ 400.00	0	\$ -	21	\$ 8,400.00
FUSION SPLICE (>48 FIBER)	EA	\$ 1,200.00	0	\$ -	21	\$ 25,200.00
COMM BOX, F2	EA	\$ 2,000.00	0	\$ -	3	\$ 6,000.00
RISER W/ WEATHER HEAD	EA	\$ 450.00	0	\$ -	19	\$ 8,550.00
WIRELESS RADIO	EA	\$ 4,000.00	0	\$ -	0	\$ -
Cellular Router	EA	\$ 900.00	0	\$ -	0	\$ -
F/O CABLE, 12 SM DROP	LF	\$ 1.00	0	\$ -	10120	\$ 10,120.00
F/O FDC, 12 SM	EA	\$ 430.00	0	\$ -	21	\$ 9,030.00
PATCH CABLE, DUPLEX, ST-LC, SM, 1M	EA	\$ 12.00	0	\$ -	42	\$ 504.00
SFP, SHORT RANGE LX, SM	EA	\$ 50.00	0	\$ -	42	\$ 2,100.00
FURNISH 2070L CONTROLLER	EA	\$ 4,000.00	21	\$ 84,000.00	16	\$ 64,000.00
ETHERNET SWITCH	EA	\$ 1,500.00	21	\$ 31,500.00	21	\$ 31,500.00
UPS, ELECTRONICS	EA	\$ 4,000.00	21	\$ 84,000.00	21	\$ 84,000.00
PATCH CABLE, ETHERNET	EA	\$ 5.00	42	\$ 210.00	42	\$ 210.00
CCTV, MOUNTING HARDWARE INCLUDED	EA	\$ 5,000.00	14	\$ 70,000.00	14	\$ 70,000.00
ETHERNET CABLE, POE FOR CCTV	LF	\$ 1.10	4200	\$ 4,620.00	4200	\$ 4,620.00
REMOVE, REPLACE SIDEWALK	SF	\$ 25.00	0	\$ -	30	\$ 750.00
TRAFFIC CONTROL	HR	\$ 100.00	0	\$ -	210	\$ 21,000.00
SUB-TOTAL			\$ 274,330.00		\$ 889,161.00	
THIRD PARTY COSTS			\$ 260,050.00		\$ -	
TOTAL			\$ 534,380		TOTAL	\$ 889,161

*Contingency increased to 15% for ALDOT backhaul



Price Quote (valid for 90 days)

Offer Date:	7/19/2018	
Description:	Traffic Signals on Hwy 59 Baldwin County	
Opp. Number:	OPP-125298	
Requested By:	ALDOT Southwest Region Jeremy Borden	bordenj@dot.state.al.us (251) 331-1474
Offered By:	Uniti Fiber Scott McMahan	scott.mcmahan@uniti.com (251)445-1807

Selection	Service	Term	Annual Recurring Charge	Non-Recurring Charge
X	Dark Fiber Quantity 4 North and South on Hwy 59, and 2 Fiber East and West along Hwy 98	120 Months	\$0.00	\$260,000.00

Remarks
<p>1. Offer assumes the fiber is laid out in the following way:</p> <p>From the North....</p> <p>2 Fiber from Traffic Signals 1-2</p> <p>2 Fiber from 2-3</p> <p>..... all the way south to</p> <p>2 Fiber from Traffic Signals 16 to 17</p> <p>Then</p> <p>2 Fibers from Traffic Signals 17 to 1 bypassing all the Communications Cabinets in between. Collapsed ring complete.</p> <p>In addition</p> <p>For the cross-section West</p> <p>2 Fibers between Traffic Signals 18, 19, 20 and 6</p> <p>For the cross-section East</p> <p>2 fibers from Traffic Signals 6 to 21</p> <p>2. Offer assumes that the City of Foley will separately be responsible for the Annual Recurring Charge for Maintenance on the Fiber over the ten year term.</p>

Pricing is valid for 90 days; after that period, the Offer will need to be reviewed and pricing confirmed.



Price Quote (valid for 90 days)

Offer Date:	7/24/2018	
Description:	Dark Fiber Maintenance and Monitoring Circuit for Traffic Signals on Hwy 59 Baldwin County	
Opp. Number:	OPP-125298-B & OPP-141554	
Requested By:	City of Foley Chad Christian	cchristian@cityoffoley.org (251)
Offered By:	Uniti Fiber Scott McMahan	scott.mcmahan@uniti.com (251)445-1807

Selection	Service	Term	Recurring Charge	Non-Recurring Charge
A	Fiber Maintenance Dark Fiber related to to Traffic Signals	120 Months	Annual \$19,200.00	\$0.00
B-12	60 Mbps Ethernet Traffic Signal 6 and the ALDOT Tunnel Office	12 Months	Monthly \$590.00	\$1,000.00
B-60	60 Mbps Ethernet Traffic Signal 6 and the ALDOT Tunnel Office	60 Months	Monthly \$385.00	\$0.00

Remarks
1. In conjunction with the Dark Fiber, funded by ALDOT SW Region to connect the Traffic Signals inside the City of Foley, the above charges are related to the Maintenance charges on the over 44 fiber miles associated with this project, and will be invoiced directly to the City of Foley on an annual basis.
2. Offer assumes that space and power will be provided within the Communications Cabinet in order to deliver lit services.

Pricing is valid for 90 days; after that period, the Offer will need to be reviewed and pricing confirmed.

4 ITS PLAN

This project also considered various means of establishing communication to the traffic controllers and proposed ITS devices at project intersections. ALDOT wants the ability to remotely monitor the AL-59 corridor through Foley and establish dynamic signal operations either through the form of Traffic Responsive (TR) timings or manual plan changes from the ALDOT SW Region Traffic Management Center (TMC). To enable this operation, functional interconnect to all project intersections with a connection to the TMC is required. Additionally, new ITS equipment and existing equipment upgrades will be necessary throughout the project extents.

For this project, multiple ITS plan alternatives were evaluated. The descriptions below provide an overview of each of those alternatives as well and their design decisions. Detailed ITS plan sheets can be found in Appendix F along with a detailed cost estimate for each alternative in Appendix G.

4.1 Proposed AL-59 Interconnect

4.1.1 ITS Plan Alternative 1:

Leased Uniti Dark Fiber

The first alternative for proposed interconnect along AL-59 and AL-42 is to utilize existing private utilities in the area. Uniti Fiber has multiple fiber cables in the area with potential access points to all the signal cabinets along AL-59 and AL-42. Uniti Fiber already has a network connection with ALDOT and is able to provide “dark fiber” service in the area. Uniti Fiber has proposed a 10-year lease with an upfront cost of \$260,050.00 and an annual recurring maintenance charge of \$19,200.00. ALDOT and the City of Foley would still be responsible for purchasing, installing, and maintaining Ethernet switches at all 21 cabinets and CCTV cameras in desired locations. The cost estimate below reflects the initial Uniti Fiber up front cost and the cost of the ITS devices.

ITS Plan Alternative 1 Est. Initial Capital Cost: \$522,847

ITS Plan Alternative 1 Annual Uniti Fiber Lease Cost: \$19,200

4.1.2 ITS Plan Alternative 2:

Aerial and Underground Fiber w/ Uniti Backhaul

The second alternative for interconnect along AL-59 and AL-42 is a combination of aerial and underground fiber. As shown in Appendix F, this alternative would install 96 SMF cable on existing utility poles and bore new underground conduit length where existing utility poles aren’t available or feasible. To connect to the ALDOT TMC, Uniti Fiber’s “dark fiber” will be leased to connect the AL-59 corridor to the ALDOT trunk fiber that runs along I-10. Uniti Fiber has proposed a 10-year lease with an annual recurring maintenance charge of \$19,200.00.

ITS Plan Alternative 2 Est. Initial Capital Cost: \$996,027

ITS Plan Alternative 2 Annual Uniti Fiber Lease Cost: \$19,200