

ORIGINAL TO GENERAL FILES

**DEPARTMENT OF TRANSPORTATION
STATE OF GEORGIA**

**OFFICE OF DESIGN POLICY & SUPPORT
INTERDEPARTMENTAL CORRESPONDENCE**

FILE P.I. #0010117

OFFICE Design Policy & Support

GDOT District 4 - Tifton

Berrien County

DATE January 18, 2012

SR 11 @ SR 125; @ SR 168 & @ CS 798 – Signal

Upgrades

FROM  for Brent Story, State Design Policy Engineer

TO SEE DISTRIBUTION

SUBJECT APPROVED CONCEPT REPORT

Attached is the approved Concept Report for the above subject project.

Attachment

DISTRIBUTION:

Genetha Rice-Singleton, Program Control Administrator
Bobby Hilliard, State Program Delivery Engineer
Cindy VanDyke, State Transportation Planning Administrator
Angela Robinson, Financial Management Administrator
Glenn Bowman, State Environmental Administrator
Kathy Zahul, State Traffic Engineer
Georgene Geary, State Materials & Research Engineer
Ron Wishon, State Project Review Engineer
Jeff Baker, State Utilities Engineer
Ken Thompson, Statewide Location Bureau Chief
Michael Henry, Systems & Classification Branch Chief
Joe Sheffield, District Engineer
Brent Thomas, District Preconstruction Engineer
Timothy Warren, District Utilities Engineer
Charity Belford, Project Manager
BOARD MEMBER - 1st Congressional District

DEPARTMENT OF TRANSPORTATION
STATE OF GEORGIA

PROJECT CONCEPT REPORT

County: Berrien

P. I. Number: 0010117

Federal Route Number: 129

State Route Number: 11, 76, 125, 168

SR 11 @ SR 125, @ SR 168 & @ CS 798 - SIGNAL UPGRADES

Submitted for approval:

DATE 10/10/2011

DATE 11/1/2011

DATE 10/31/2011

[Signature]
Design Consultant (Travis Hurt, Stantec Consulting Services)

[Signature]
Office Head (Office of Program Delivery)

[Signature]
Project Manager

Recommendation for approval:

DATE _____

DATE 11/28/11

DATE 12/27/11

DATE _____

DATE 11/21/11

DATE _____

DATE _____

Program Control Administrator

GLENN BOWMAN * T.V.
State Environmental Administrator

KATHY ZAHUL * T.V.
State Traffic Engineer

Project Review Engineer

SAL PIRZAD * T.V.
State Utilities Engineer

District Engineer

State Transportation Financial Management Administrator

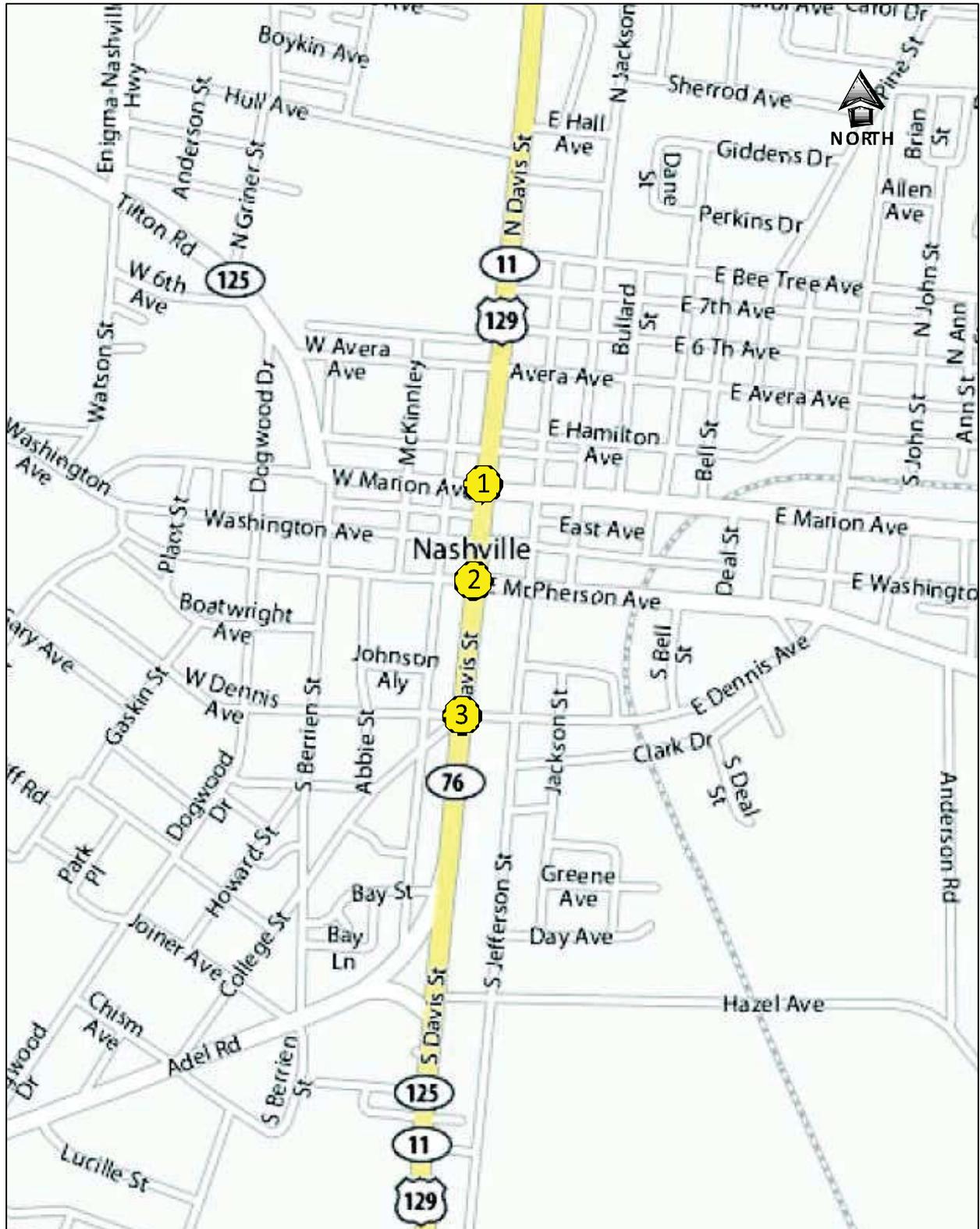
The concept as presented herein and submitted for approval is consistent with that which is included in the Regional Transportation Program (RTP) and/or the State Transportation Improvement Program (STIP).

DATE 11-28-11

[Signature]
State Transportation Planning Administrator

* RECOMMENDATION ON FILE

LOCATION MAP



Project Justification Statement: There are three (3) signalized intersections in Berrien County in need of improvements to address compliance with current GDOT standards, the Manual of Uniform Traffic Control Devices (MUTCD), and the requirements of the Americans with Disabilities Act (ADA). Specific improvements will bring the intersections into compliance with current design standards and will include: modernization of traffic signal equipment, increased communication capability, and improved pedestrian accommodations.

Description of the proposed project: The proposed project is located in Berrien County (100%) in the City of Nashville. The project will consist of traffic signalization upgrades, including LED vehicular signals, countdown pedestrian signals, ADA wheelchair ramps, and crosswalk striping at all 3 locations.

The project locations are:

1. SR 11 (Davis St) @ SR 125 (Marion Ave)
2. SR 11 (Davis St) @ SR 168 (E McPhearson St)
3. SR 11 (Davis St) @ CS 798 (Dennis St)

Is the project located in a PM 2.5 Non-attainment area? _____ Yes X No

Is this project located in an Ozone Non-attainment area? _____ Yes X No

PDP Classification: Major _____ Minor X

Federal Oversight: Full Oversight () Exempt (X) State Funded () or Other ()

Functional Classification:

- SR 11 (Davis St) – Rural Minor Arterial
- SR 125 (Marion Ave) – Rural Minor Arterial
- SR 168 (E McPhearson St) – Rural Major Collector
- CS 798 (Dennis St) – Rural Local Road

U. S. Route Number(s): 129 _____ State Route Number(s): 11, 76, 125, 168 _____

Traffic (AADT): This project will not add capacity.

Base Year: (20XX) _____ Design Year: (20YY) _____

Existing design features:

- Typical Section:
 - SR 7 Bus/US 41 Bus. (N. Ashley St.) –
 - 2 lanes with left turn lanes and a northbound right turn lane at Marion Ave.
 - 2 lanes with left turn lanes at McPhearson St. and Dennis St.
 - Marion Ave – 2 lanes with a westbound right turn lane
 - SR 168 (E McPhearson St) – 2 lanes
 - CS 798 (Dennis St) – 2 lanes

- Posted speed:
 - SR 11 (Davis St) @ SR 125 (Marion Ave) – 30 mph
 - SR 11 (Davis St) @ SR 168 (E McPhearson St) – 30 mph
 - SR 11 (Davis St) @ CS 798 (Dennis St) – 30 mph
- Minimum radius for curve: N/A
- Maximum super-elevation rate for curve: N/A
- Maximum grade: N/A
- Width of right-of-way: Varies (35 - 105 ft.)
- Major structures: N/A
- Major interchanges or intersections along the project. N/A
- Existing length of roadway segment:
 - SR 11 (Davis St) @ SR 125 (Marion Ave) - MP 11.97 to 11.99
 - SR 11 (Davis St) @ SR 168 (E McPhearson St) - MP 11.87 to 11.91
 - SR 11 (Davis St) @ CS 798 (Dennis St) - MP 11.72 to 11.78
- No ITS except signal communication.

Proposed Design Features:

- Proposed typical section(s): No changes from existing.
- Proposed Design Speed Mainline: N/A
- Proposed Maximum grade Mainline: N/A
- Maximum grade allowable: N/A
- Proposed Maximum grade Side Street: N/A
- Maximum grade allowable: N/A
- Proposed Maximum grade driveway: N/A
- Proposed Maximum degree of curve: N/A
- Maximum degree allowable: N/A
- Maximum super elevation rate: N/A
- Right-of-Way:
 - Width: Corner Miters only, as necessary
 - Easements: Temporary (N/A) Permanent (N/A) Utility (N/A) Other (N/A).
 - Type of access control: Full () Partial () By Permit (X) Other ().
 - Number of parcels: Est. 12 Number of displacements: 0
 - Business: 0
 - Residences: 0
 - Mobile homes: 0
 - Other: 0
- Structures:
 - Bridges (N/A)
 - Retaining walls (N/A)
- Major intersections, interchanges, median openings and signal locations.
 - SR 11 (Davis St) @ SR 125 (Marion Ave)
 - SR 11 (Davis St) @ SR 168 (E McPhearson St)
 - SR 11 (Davis St) @ CS 798 (Dennis St)

- ITS: None
- Transportation Management Plan Anticipated: Yes () No (X)
- Design Exceptions to controlling criteria anticipated:

	<u>YES</u>	<u>NO</u>	<u>UNDETERMINED</u>
HORIZONTAL ALIGNMENT:	()	(X)	()
LANE WIDTH:	()	(X)	()
SHOULDER WIDTH:	()	(X)	()
VERTICAL GRADES:	()	(X)	()
CROSS SLOPES:	()	(X)	()
STOPPING SIGHT DISTANCE:	()	(X)	()
SUPERELEVATION RATES:	()	(X)	()
VERTICAL ALIGNMENT:	()	(X)	()
SPEED DESIGN:	()	(X)	()
VERTICAL CLEARANCE:	()	(X)	()
BRIDGE WIDTH:	()	(X)	()
BRIDGE STRUCTURAL CAPACITY:	()	(X)	()
LATERAL OFFSET TO OBSTRUCTION:	()	(X)	()

- Design Variances: None.
- Environmental concerns
 - Historic resources and UST sites identified during preliminary scoping; No Section 404 permits, water quality issues, or T&E species/habitat concerns are anticipated; no archaeology concerns anticipated
- Anticipated Level of environmental analysis:
 - Are Time Savings Procedures appropriate? Yes (X) No ()
 - Categorical exclusion anticipated (X).
 - Environmental Assessment/Finding of No Significant Impact anticipated (FONSI)().
 - Environmental Impact Statement (EIS)().
- Utility involvements: Communication, Power
- VE Study Anticipated Yes () No (X)
- Benefit/Cost Ratio: N/A

Project Cost Estimate and Funding Responsibilities:

	PE	ROW	UTILITY	CST	MITIGATION
By Whom	GDOT	GDOT	GDOT	GDOT	N/A
\$ Amount	150,000	15,000	15,000	479,286*	N/A

*Cost includes 5% Engineering and Inspection

Project Activities Responsibilities:

- Design: Stantec Consulting Services, Inc.
- Right-of-Way Acquisition: GDOT
- Right-of-Way funding (real property): GDOT
- Relocation of Utilities: GDOT
- Letting to contract: GDOT
- Supervision of construction: ... GDOT
- Providing material pits: GDOT

- Providing detours: GDOT
- Environmental Studies/Documents/Permits: GDOT
- Environmental Mitigation: N/A

Coordination

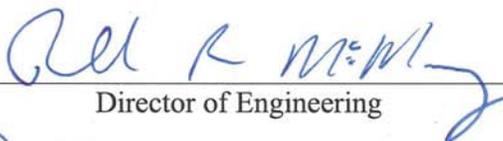
- Initial Concept Meeting date and brief summary. (3/28/2011, see attached minutes)
- Concept meeting date and brief summary. (N/A)
- P A R meetings, dates and results. (N/A)
- FEMA, USCG, and/or TVA. (N/A)
- Public involvement. (N/A)
- Local government comments. (N/A)
- Other projects in the area. (TE Project #0008984)
- Railroads. (N/A)
- Other coordination to date. (N/A)

Other alternates considered: None.

Comments: None.

Attachments: CES Construction Cost Estimate
Preliminary ROW Cost Estimate
Preliminary Utilities Cost Estimate
Kickoff Meeting Minutes

Exempt projects

Concur: 
Director of Engineering

Approve: 
Chief Engineer

Date: 1-11-12

DETAILED COST ESTIMATE



Job: 0010117-2

JOB NUMBER: 0010117-2

FED/STATE PROJECT NUMBER

SPEC YEAR: 01

DESCRIPTION: BERRIEN SIGNALS

ITEMS FOR JOB 0010117-2

0010 - ROADWAY

Line Number	ITEM	QUANTITY	UNITS	PRICE	DESCRIPTION	AMOUNT
0003	441-0104	300.000	SY	\$30.19	CONC SIDEWALK, 4 IN	\$9,057.94
0063	441-6222	600.000	LF	\$21.15	CONC CURB & GUTTER/ 8"X30"TP2	\$12,688.57
SUBTOTAL FOR ROADWAY:						\$21,746.51

0020 - SIGNAL

Line Number	ITEM	QUANTITY	UNITS	PRICE	DESCRIPTION	AMOUNT
0203	150-1000	1.000	LS	\$25,838.00	TRAFFIC CONTROL - 6 PERCENT	\$25,838.00
0068	615-1200	720.000	LF	\$13.65	DIRECTIONAL BORE - ALL SIZES	\$9,824.59
0073	636-1041	90.000	SF	\$20.78	HWY SIGNS, TP 2MAT, REFL SH TP 9	\$1,870.11
0083	639-3004	4.000	EA	\$15,287.93	STEEL STRAIN POLE, TP IV 2-45 FOOT MASTARMS	\$61,151.73
0088	639-4004	3.000	EA	\$5,235.33	STRAIN POLE, TP IV	\$15,705.99
0002	647-1000	1.000	LS	\$75,000.00	TRAF SIGNAL INSTALLATION NO - 3	\$75,000.00
0008	647-1000	1.000	LS	\$75,000.00	TRAF SIGNAL INSTALLATION NO - 1	\$75,000.00
0013	647-1000	1.000	LS	\$75,000.00	TRAF SIGNAL INSTALLATION NO - 2	\$75,000.00
0123	653-0120	6.000	EA	\$81.89	THERM PVMT MARK, ARROW, TP 2	\$491.35
0128	653-1501	500.000	LF	\$0.56	THERMO SOLID TRAF ST 5 IN, WHI	\$281.96
0133	653-1502	500.000	LF	\$0.59	THERMO SOLID TRAF ST, 5 IN YEL	\$296.71
0138	653-1704	225.000	LF	\$3.25	THERM SOLID TRAF STRIPE, 24", WH	\$730.73
0143	653-1804	2400.000	LF	\$1.63	THERM SOLID TRAF STRIPE, 8", WH	\$3,904.32
0148	682-6233	1950.000	LF	\$3.46	CONDUIT, NONMETL, TP 3, 2 IN	\$6,754.06
0178	935-6562	3.000	EA	\$1,552.02	EXT TRNSCVR, DRP&RPT, 1310SM, (SIGNAL JOBS)	\$4,656.06
0168	938-1100	12.000	EA	\$5,681.13	INT VIDEO DET SYS ASMBLY, TP A	\$68,173.52
0173	938-1200	1.000	EA	\$358.42	PROGRAMMING MONITOR, TYPE A	\$358.42
SUBTOTAL FOR SIGNAL:						\$425,037.55

0030 - EROSION

Line Number	ITEM	QUANTITY	UNITS	PRICE	DESCRIPTION	AMOUNT
0093	163-0232	1.000	AC	\$341.72	TEMPORARY GRASSING	\$341.72
0098	163-0240	3.000	TN	\$272.83	MULCH	\$818.50
0103	163-0550	3.000	EA	\$181.70	CONS & REM INLET SEDIMENT TRAP	\$545.11
0108	165-0030	1800.000	LF	\$0.50	MAINT OF TEMP SILT FENCE, TP C	\$897.39
0113	165-0105	3.000	EA	\$34.67	MAINT OF INLET SEDIMENT TRAP	\$104.01
0118	171-0030	1800.000	LF	\$3.75	TEMPORARY SILT FENCE, TYPE C	\$6,741.74
0153	700-7000	1.000	TN	\$82.27	AGRICULTURAL LIME	\$82.27
0158	700-7010	2.500	GL	\$17.57	LIQUID LIME	\$43.93
0163	700-8000	0.200	TN	\$518.86	FERTILIZER MIXED GRADE	\$103.77
SUBTOTAL FOR EROSION:						\$9,678.44

TOTALS FOR JOB 0010117-2

ITEMS COST:	\$456,462.50
COST GROUP COST:	\$0.00
ESTIMATED COST:	\$456,462.50
CONTINGENCY PERCENT:	0.00
ENGINEERING AND INSPECTION:	0.00
ESTIMATED COST WITH CONTINGENCY AND E&I:	\$456,462.50

Preliminary Right of Way Cost Estimate



Phil Copeland
Right of Way Administrator
By: LaShone Alexander

Date: June 20, 2011
Project: Berrien County
Existing/Required R/W: Varies/Varies
Project Termini :
Project Description:

P.I. Number: 0010117
No. Parcels:

Land:		
Agricultural/Residential R/W: 4502 sf @ \$.20/sf		900
Improvements : misc. site improvements		5,000
Relocation: Commercial ()		
Residential ()		
Damage : Proximity		
Consequential		
Cost to Cure		<u>0</u>
	Net Cost	\$ 5,900
	Net Cost	\$
	Scheduling Contingency 55 %	3,245
	Adm/Court Cost 60 %	<u>5,487</u>
		\$ 14,632

Total Cost \$ 15,000

Note: The Market Appreciation (40%) is not included in the updated Preliminary Cost Estimate.

Berrien County Traffic Signal Upgrades - PI#0010117

Utility Cost Estimate

Assumption: Utility cost of \$15,000 per replaced or adjusted pole.

The following utility changes are anticipated at each intersection:

1. SR 11 (Davis St) @ SR 125 (Marion Ave) No adjustment anticipated	<u>Cumulative Cost:</u> \$0
2. SR 11 (Davis St) @ SR 168 (E McPhearson St) 1 new joint-use pole possible – 1 X 15,000 = 15,000	\$15,000
3. SR 11 (Davis St) @ CS 798 (Dennis St) No adjustment anticipated	\$15,000

**GEORGIA DEPARTMENT OF TRANSPORTATION
OFFICE OF PROGRAM DELIVERY**

Meeting Minutes

Subject: Initial Concept Meeting
Traffic Signal Upgrade Projects
PI No. 0010116 – Lowndes County, and PI No. 0010117 – Berrien County

Date of Meeting: 3/28/2011, 12:00 PM

Meeting Location: GDOT Valdosta Area Office

Attendees: Derrick Cameron – GDOT Program Delivery, Melvin Waldrop – GDOT Program Delivery, Geno Hasty – GDOT Traffic Operations, Brent Lupo – GDOT Traffic Operations, Charles Benefield – GDOT, Calvin Jack Taylor – GDOT, Russell Darren – GDOT, Robert Mullis – GDOT, J.R. Riggins – GDOT, Beau Marshall – HNTB, Tim Hatton – HNTB, Kevin Tolliver – City of Valdosta Traffic Division, Tim Warren – GDOT-Utilities, Bill Cooper – GDOT-Utilities, Nelson Davis – Iteris, Taylor Stukes – Iteris, Jerry Hughes – GDOT, Brandon Kennedy – Stantec, Travis Hurt – Stantec.

Date Prepared: April 5, 2011

Prepared By: Travis Hurt, PE, PTOE, Stantec

The following summarizes the office portion of the meeting which was a general discussion of the two projects.

The following intersections are to be included in the Berrien County project:

Int. No.	Primary Route	Intersecting Route/Street
1	SR 11 (Davis Street)	SR 125 (Marion Avenue)
2	SR 11 (Davis Street)	SR 168 (East McPhearson Avenue)
3	SR 11 (Davis Street)	CS 798 (Dennis Street)

The following intersections are to be included in the Lowndes County project:

Int. No.	Primary Route	Intersecting Route/Street
1	SR 7 Bus/US 41 (North Ashley Street)	East Gordon Street
2	SR 7 Bus/US 41 (North Ashley Street)	East Ann Street
3	SR 7 Bus/US 41 (North Ashley Street)	East College Street
4	SR 7 Bus/US 41 (North Ashley Street)	East Moore Street
5	SR 7 Bus/US 41 (North Ashley Street)	East Park Avenue
6	SR 7 Bus/US 41 (North Ashley Street)	Rosedale Road
7	SR 7 Bus/US 41 (North Ashley Street)	Cowart Avenue
8	SR 7 Bus/US 41 (North Ashley Street)	East Northside Drive
9*	SR 7 Alternate (North Patterson Street)	Smithbriar Drive*
10*	SR 7 Bus/US 41 (North Ashley Street)	Smithbriar Drive*
11	SR 7 Bus/US 41 (North Ashley Street)	Oak Street Extension
12	SR 7 Alternate (North Patterson Street)	Northside Drive

*These intersections were added to replace the intersections of SR 7 Bus/US 41 @ Connell Road, and SR 7 Alternate @ East and West Park Avenue.

1. The Prime Consultant on the project is Stantec. Iteris will prepare plans for PI# 0010117 – Berrien County, and Stantec will prepare the plans for PI#0010116 – Lowndes County.
2. Video detection will be used at all locations where mastarms are installed.
3. The TP 3 pull boxes will be used on each cabinet corner unless a TP 7 pull box is required for interconnect. TP 2 pull boxes will be used for all other locations.
4. The battery backup for each controller should be specified to be installed in an external cabinet.
5. On the General Notes, specify that all existing equipment to be returned to GDOT District office.
6. Existing fiber drops will be reused where possible.
7. Luminaires will be replaced if they are on poles being removed.
8. CCTV cameras will be relocated if they are on poles being removed.
9. A planned TE project was identified around the Nashville courthouse that may require coordination with this project.
10. No coordination with Rail Road is required for this project.

11. The environmental coordination will be provided by HNTB.

At the conclusion of the office discussion, the group met at each intersection to investigate the existing conditions and decide upon a conceptual improvement plan. On the following pages, the conceptual plans for each intersection are described.

CONCEPTUAL SIGNAL IMPROVEMENT PLANS – Berrien County (PI# 0010117)

INTERSECTION #1 – SR 11 (Davis St.) & SR 125 (Marion Ave.)

Poles and Signal Displays

Install tandem mast arm poles in the northeast and southwest corners.

Install luminaires on poles.

Replace/relocate wayfinding signs on the northeast and southwest corners to strain poles or mastarms.

Relocate wayfinding signs on the northwest corner to a tall pedestal pole.

Install LED displays with backplates and D-Spec signs.

Signal Control Equipment

Install new Model 332 cabinet with a 2070L controller on the southeast corner in a new sidewalk bulbout.

Provide video detection.

Pedestrian Accommodations

Install sidewalk bulbout on the southeast corner to accommodate signal equipment. Install new ADA ramps on the northwest, southwest, and southeast corners. ADA ramp on the northeast corner to remain.

Install crosswalks on all legs.

Install pedestrian signals and pushbuttons on the northwest and southeast quadrants.

Right of Way Acquisition Anticipated

None anticipated.

Other Items

Install a channelization island on the east side of SR 11, south of SR 125, to direct traffic to the intersection, and separate courthouse parking. Mill and restripe SR 11 accordingly.

Coordinate with TE project #0008984.

System Communication

Install wireless communication to the intersection of SR 11 & SR 168 (McPhearson Ave.).

INTERSECTION #2 – SR 11 (Davis St.) & SR 168 (East McPhearson Ave.)

Poles and Signal Displays

Install new poles on the northeast, southeast, and southwest corners.
Install new signal span.
Install LED displays with backplates and D-Spec signs.

Signal Control Equipment

Install new Model 332 cabinet with a 2070L controller.
Provide inductance loop vehicle detection.

Pedestrian Accommodations

Install a sidewalk island on the northeast corner to accommodate pedestrians.
Install a small retaining wall on the northwest corner to allow for ADA ramp.
Install a flat landing with a detectable warning strip on the southwest corner.
Install new ADA ramp on the southeast corner.
Install crosswalks on the north, east, and west legs. No crosswalk to be installed on the south leg due to driveway constraint.
Install pedestrian signals and pushbuttons.

Right of Way Acquisition Anticipated

Needed in southwest quadrant.
Likely needed in northwest and southeast quadrants.
May be needed in the northeast quadrant.

Other Items

Use Detail 9031-L for small retaining wall on northwest corner.
Ensure new signal equipment is not attached to the outside of the existing joint-use pole on the northwest corner.
Overlay rough concrete crosswalk on west side of intersection with asphalt.
Install curb and gutter on northwest corner from intersection to driveway on SR 11.

System Communication

Install wireless communication to the intersections of SR 11 & SR 125 (Marion Ave.) and SR 11 & CS 798 (Dennis Ave.)

INTERSECTION #3 – SR 11 (Davis St.) & CS 798 (Dennis Ave.)

Poles and Signal Displays

Install tandem mast arm poles in the northeast and southwest corners.
Install LED displays with backplates and D-Spec signs.

Signal Control Equipment

Install new Model 332 cabinet with a 2070L controller.

Pedestrian Accommodations

Install new ADA facilities on all corners.
Install a header curb for pedestrian protection on the southwest corner.
Install an island, avoiding drainage, on the northwest corner to accommodate pedestrians.
Install pedestrian signals and pushbuttons.

Right of Way Acquisition Anticipated

None anticipated.

Other Items

System Communication

Install wireless communication to the intersection of SR 11 & SR 168 (McPhearson Ave.).