

**DEPARTMENT OF TRANSPORTATION
STATE OF GEORGIA**

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

FILE P.I. # 0011688
Ware County
GDOT District 5 - Jesup
SR 158 @Satilla River
9 miles northwest of Waycross
Bridge Replacement

OFFICE Design Policy & Support

DATE 4/29/2015

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:

Glenn Bowman, Director of Engineering
Joe Carpenter, Director of P3/Program Delivery
Genetha Rice-Singleton, Assistant Director of P3/Program Delivery
Albert Shelby, State Program Delivery Engineer
Bobby Hilliard, Program Control Administrator
Cindy VanDyke, State Transportation Planning Administrator
Hiral Patel, State Environmental Administrator
Ben Rabun, State Bridge Engineer
Andrew Heath, State Traffic Engineer
Angela Robinson, Financial Management Administrator
Lisa Myers, State Project Review Engineer
Charles "Chuck" Hasty, State Materials Engineer
Mike Bolden, State Utilities Engineer
Paul Tanner, Asst. State Transportation Data Administrator
Attn: Systems & Classification Branch
Richard Cobb, Statewide Location Bureau Chief
Karon Ivery, District Engineer
Will Murphy, District Preconstruction Engineer
Dallory Rozier, District Utilities Engineer
Aghdas Ghazi, Project Manager
BOARD MEMBER - 1st Congressional District

**DEPARTMENT OF TRANSPORTATION
STATE OF GEORGIA
PROJECT CONCEPT REPORT**

Project Type:	<u>Bridge Replacement</u>	P.I. Number:	<u>0011688</u>
GDOT District:	<u>District 5</u>	County:	<u>Ware</u>
Federal Route Number:	<u>N/A</u>	State Route Number:	<u>SR 158</u>
	Project Number:		<u>N/A</u>

SR 158 at Satilla River Bridge, Satilla River Overflow, and Fullwood Creek Bridge Replacements

Submitted for approval:

<u><i>Jeffrey P. V. Wolfe</i></u>	<u>RS & H, Inc</u>	<u>02-26-2015</u>
Consultant Designer & Firm or GDOT Concept/Design Phase Office Head &		Date
<u>Albert Shelby</u>	<u>B/S</u>	<u>3/16/15</u>
State Program Delivery Engineer		Date
<u><i>Robert S. [unclear]</i></u>	<u>JMB</u>	<u>3/6/2015</u>
GDOT Project Manager		Date

Recommendation for approval:

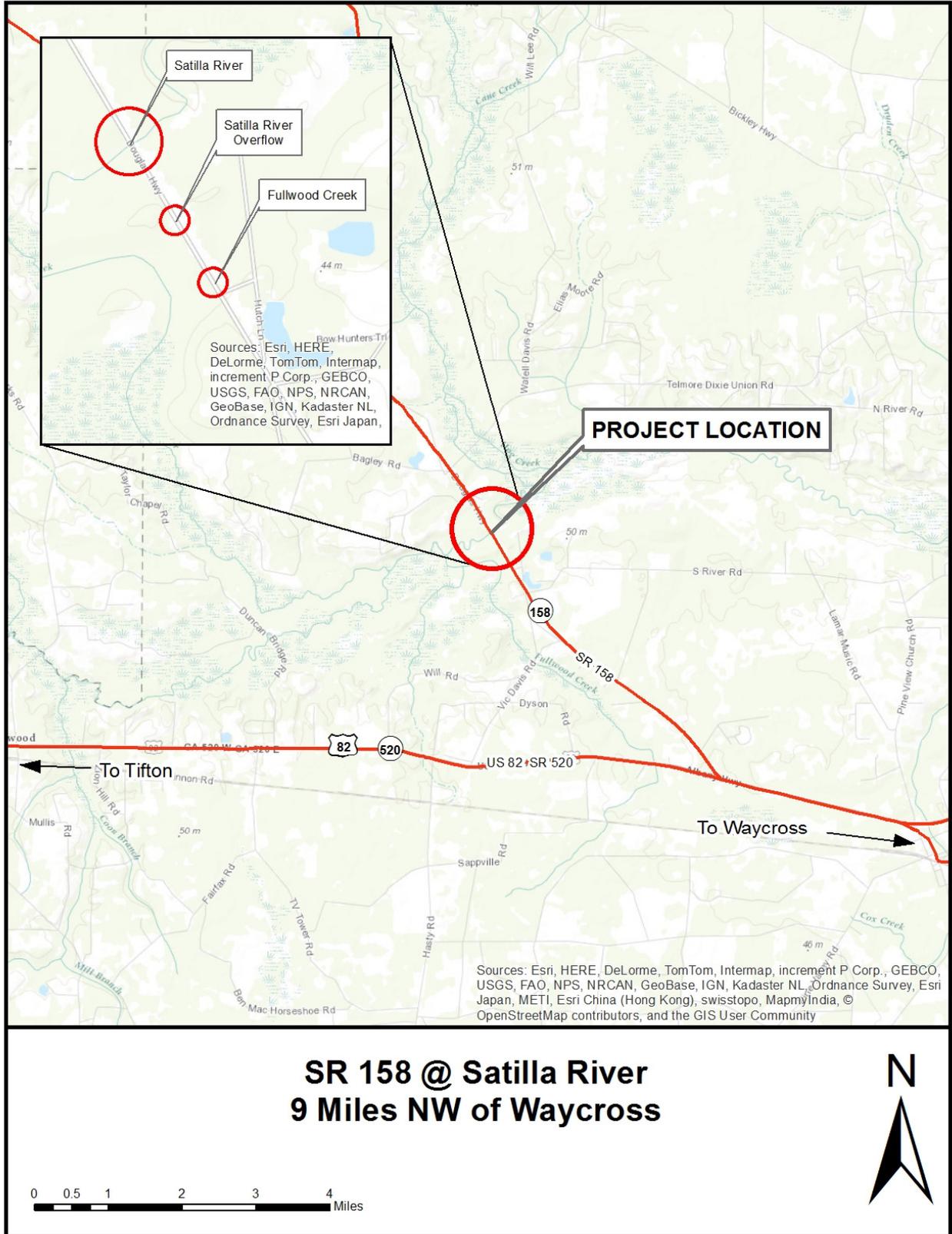
* <u><i>Hiral Patel/KLP</i></u>	<u>4-2-15</u>
State Environmental Administrator	Date
* <u><i>Andrew Heath/KLP</i></u>	<u>3-20-15</u>
State Traffic Engineer	Date
* <u><i>Lisa Myers/KLP</i></u>	<u>3-19-15</u>
Project Review Engineer	Date
* <u><i>Nicholas Fields/KLP</i></u>	<u>3-23-15</u>
State Utilities Engineer	Date
<u><i>Karon Ivery/KLP</i></u>	<u>4-7-15</u>
District Engineer	Date
* <u><i>Ben Rabun/KLP</i></u>	<u>4-6-15</u>
State Bridge Engineer	Date

- MPO Area: This project is consistent with the MPO adopted Regional Transportation Plan (RTP)/Long Range Transportation Plan (LRTP).
- Rural Area: This project is consistent with the goals outlined in the Statewide Transportation Plan (SWTP) and/or is included in the State Transportation Improvement Program (STIP).

<u><i>Cynthia J. Nungesser</i></u>	<u>3-24-15</u>
State Transportation Planning Administrator	Date

* Recommendation on file

PROJECT LOCATION MAP



PLANNING AND BACKGROUND

Project Justification Statement: The project consists of three bridges on SR 158 in Ware County constructed in 1950. All three structures were designed using a truck configuration that weighs less than the current state legal truck weights. The deck geometry of three structures is classified as functionally obsolete and all three structures have unknown foundations. The first and second structures are located on SR 158 over Fullwood Creek and Satilla River Overflow respectively (Structure ID's 299-0022-0 and 299-0023-0). Both bridges consist of five spans of steel beams on concrete caps and steel H-piles. The overall condition of each bridge would be classified as fair to good. The deck is in fair condition with heavy transverse cracking throughout all spans with some spans are exhibiting efflorescence. The superstructure is in good condition. The substructure is in good condition with minor concrete cracking. The last bridge is located at SR 158 over Satilla River (Structure ID 299-0024-0). The bridge consists of nineteen spans of steel beams on concrete caps with either steel H-piles or reinforced concrete columns for the substructure. One span consists of a pin and hanger assembly. The overall condition of this bridge would be classified as fair. The deck is in fair condition with concrete cracking, spalling and light efflorescence throughout. The superstructure is in fair condition with spalling of numerous diaphragms and some of the pins in the pin and hanger pins assembly exhibiting fretting corrosion. The substructure is in fair condition with concrete cracking and spalling.

Due to structural integrity of the bridge decks, the deck geometry of all three bridges as being classified as functionally obsolete, all three bridges having an unknown foundations and Structure ID 299-0024-0 which has signs of fretting corrosion occurring on some pins replacement of all three bridges is recommended.

Existing conditions: State Route (SR) 158/Douglas Hwy consist of 2-12' lanes with rural (grass) shoulder with 3 bridge structure: bridges over the Satilla River (Structure ID 299-0024-0), the Satilla River Overflow (Structure ID 299-0023-0), and Fullwood Creek (Structure ID 299-0022-0) were built in 1950. There are existing overhead and underground utility present.

Other projects in the area:

MPO: N/A - Project not in MPO

TIP #: N/A

TIA Regional Commission: Southern Georgia RC

RC Project ID: N/A

Congressional District(s): 1

Federal Oversight: PoDI Exempt State Funded Other

Projected Traffic: AADT 24 HR T: 25.3 %

Current Year (2014): 2,320 Open Year (2018): 2,380 Design Year (2038): 2,630

Traffic Projections Performed by: *Southeastern Engineering Inc.*

Functional Classification (Mainline): Rural Minor Arterial

Complete Streets - Bicycle, Pedestrian, and/or Transit Standard Warrants:

Warrants met: None Bicycle Pedestrian Transit

Is this a 3R (Resurfacing, Restoration, & Rehabilitation) Project? No Yes

Pavement Evaluation and Recommendations

Preliminary Pavement Evaluation Summary Report Required? No Yes

Preliminary Pavement Type Selection Report Required? No Yes

Feasible Pavement Alternatives: HMA PCC HMA & PCC

DESIGN AND STRUCTURAL

Description of the proposed project:

The proposed project would construct a replacement bridges for the existing structurally deficient bridges (Sufficiency Rating = 49.18, 71.52, 71.52) over the Satilla River, Satilla Overflow, and Fullwood Creek. The preferred alternative propose to detour traffic during construction and replace bridges in existing location. The project typical consists of two (2) – 12 foot lanes with a 10 foot shoulder. The approximate project length is 2 miles and is located in Ware County with a design speed of 55mph.

Major Structures:

Structure	Existing	Proposed
299-0024-0	This structure is a 0.12 miles (644 ft) long bridge with two (2) 12 foot lanes. This structure has a sufficiency rating of 49.18.	The proposed structure will be approximately 0.12 miles (650 ft) long. The proposed bridge width is 47.25 ft (2 – 12 ft lanes, with an 8 ft shoulder and a 1.625' barrier)
299-0023-0	This structure is a 0.03 miles (135 ft) long bridge with two (2) 12 foot lanes. This structure has a sufficiency rating of 71.52.	The proposed structure will be approximately 0.03 miles (140 ft) long. The proposed bridge width is 47.25 ft (2 – 12 ft lanes, with an 8 ft shoulder and a 1.625' barrier)
299-0022-0	This structure is a 0.03 miles (135 ft) long bridge with two (2) 12 foot lanes. This structure has a sufficiency rating of 71.52.	The proposed structure will be approximately 0.03 miles (140 ft) long. The proposed bridge width is 47.25 ft (2 – 12 ft lanes, with an 8 ft shoulder and a 1.625' barrier)

Mainline Design Features: *Roadway name/identification and Functional Classification*

Feature	Existing	Standard*	Proposed
Typical Section			
- Number of Lanes	2	2	2
- Lane Width(s)	Varies 11-ft to 12-ft	11-ft to 12-ft	12-ft
- Median Width & Type	N/A	N/A	N/A
- Outside Shoulder or Border Area Width	Varies 2-ft to 10-ft	10-ft	10-ft
- Outside Shoulder Slope	Varies 5% to 30%	6%	6%
- Inside Shoulder Width	N/A	N/A	N/A
- Sidewalks	N/A	N/A	N/A
- Auxiliary Lanes	N/A	N/A	N/A
- Bike Lanes	N/A	N/A	N/A
Posted Speed	55 mph		55 mph
Design Speed	55 mph	55 mph	55 mph
Min Horizontal Curve Radius	1060-ft	1060-ft	1060-ft
Maximum Superelevation Rate	6% - 8%	6%	6%
Maximum Grade	4% - 5%	4% - 5% max	4% - 5%
Access Control	Permit	Permit	Permit
Design Vehicle	Undetermined	WB-40 OR WB-62	WB-62
Pavement Type	HMA	HMA	HMA

*According to current GDOT design policy if applicable

Major Interchanges/Intersections: None

Lighting required: No Yes

Off-site Detours Anticipated: No Yes Undetermined

Note: The detour is anticipated to use State/US Route System. Local roads required significant improvements/ local coordination and were discarded at the Concept Team Meeting. Two possible detour routes are under consideration. See Potential Detour Map in Attachments/Supporting Data. The eastern detour route was shorter, but a final determination of the route will be made during the Public Involvement process.

Transportation Management Plan [TMP] Required: No Yes

If Yes: Project classified as: Non-Significant Significant

TMP Components Anticipated: TTC TO PI

Design Exceptions to FHWA/AASHTO controlling criteria anticipated:

FHWA/AASHTO Controlling Criteria	No	Undetermined	Yes	Appvl Date (if applicable)
1. Design Speed	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
2. Lane Width	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
3. Shoulder Width	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
4. Bridge Width	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
5. Horizontal Alignment	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
6. Superelevation	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
7. Vertical Alignment	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
8. Grade	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
9. Stopping Sight Distance	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
10. Cross Slope	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
11. Vertical Clearance	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
12. Lateral Offset to Obstruction	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
13. Bridge Structural Capacity	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	

Design Variances to GDOT Standard Criteria anticipated:

GDOT Standard Criteria	Reviewing Office	No	Undetermined	Yes	Appvl Date (if applicable)
1. Access Control/Median Openings	DP&S	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
2. Intersection Sight Distance	DP&S	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
3. Intersection Skew Angle	DP&S	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
4. Lateral Offset to Obstruction	DP&S	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
5. Rumble Strips	DP&S	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
6. Safety Edge	DP&S	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
7. Median Usage	DP&S	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
8. Roundabout Illumination Levels	DP&S	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
9. Complete Streets	DP&S	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
10. ADA & PROWAG	DP&S	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
11. GDOT Construction Standards	DP&S	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
12. GDOT Drainage Manual	DP&S	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
13. GDOT Bridge & Structural Manual	Bridges	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	

VE Study anticipated: No Yes Completed – Date:

UTILITY AND PROPERTY

Temporary State Route needed: No Yes Undetermined

Railroad Involvement: N/A

Utility Involvements: Satilla EMC, Bellsouth/AT&T, Alma Telephone, USGS

SUE Required: No Yes Undetermined

Public Interest Determination Policy and Procedure recommended? No Yes

Right-of-Way (ROW): Existing width: 100 ft. Proposed width: 110 ft.

Required Right-of-Way anticipated: None Yes Undetermined

Easements anticipated: None Temporary Permanent Utility Other

Anticipated total number of impacted parcels: 1
 Displacements anticipated: Businesses: 0
 Residences: 0
 Other: 0
 Total Displacements: 0

Location and Design approval: Not Required Required

ENVIRONMENTAL & PERMITS

Anticipated Environmental Document:

GEPA: NEPA: CE EA/FONSI EIS

MS4 Permit Compliance – Is the project located in a MS4 area? No Yes

Environmental Permits/Variations/Commitments/Coordination anticipated:

Permit/ Variance/ Commitment/ Coordination Anticipated	No	Yes	Remarks
1. U.S. Coast Guard Permit	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
2. Forest Service/Corps Land	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
3. CWA Section 404 Permit	<input type="checkbox"/>	<input checked="" type="checkbox"/>	Anticipate Nationwide Permit 23 with exemption waiver for anadromous fish
4. Tennessee Valley Authority Permit	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
5. Buffer Variance	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
6. Coastal Zone Management Coordination	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
7. NPDES	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
8. FEMA	<input checked="" type="checkbox"/>	<input type="checkbox"/>	Satilla River is a Zone A area and do not anticipate FEMA Coordination
9. Cemetery Permit	<input checked="" type="checkbox"/>	<input type="checkbox"/>	No impacts are anticipated to the cemetery near the northwestern project terminus
10. Other Permits	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
11. Other Commitments	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
12. Other Coordination	<input checked="" type="checkbox"/>	<input type="checkbox"/>	

Is a PAR required? No Yes Completed – Date:

An Individual Permit/PAR exemption waiver for anadromous fish is anticipated.

Environmental Comments and Information:

NEPA/GEPA: CE in development. Potential public controversy for off-site detour is a concern. If an Individual USACE Section 404 Permit is needed, alternatives analysis in the PAR process may affect the alignment. Anticipate *de minimis* finding for historic resources at northwestern project terminus.

Ecology: Initial fieldwork completed. Gopher tortoise burrows are present near the southeastern project terminus. Gopher tortoise and indigo snake surveys will be required in January to March. Suitable habitat is present for striped newt and flatwoods salamander. Striped newt and flatwoods salamander surveys will be required in February to April. The Satilla River supports anadromous fish, and special provisions are anticipated that would prohibit work below the water surface from December 1 through April 30.

History: There is a potentially eligible historic farm located near the northwestern project terminus. A *de minimis* finding is anticipated for this resource. SHPO concurrence will be required.

Archeology: There is a cemetery located near the northwestern project terminus. No records of previously recorded archaeological sites within the project area were identified during the screening process. Archeology field surveys will be required.

Air Quality:

Is the project located in a PM 2.5 Non-attainment area? No Yes
Is the project located in an Ozone Non-attainment area? No Yes
Carbon Monoxide hotspot analysis: Required Not Required TBD

Noise Effects: Expect Type III assuming no significant horizontal or vertical alteration.

Public Involvement: A public information open house and detour meeting is anticipated. There is potential for public controversy for the length and duration of the detour. The detour length using state routes would be approximately 25 miles. Construction timing restrictions for protected species are anticipated to require the road closure to exceed 18 months.

Major stakeholders: Traveling public

CONSTRUCTION

Issues potentially affecting constructability/construction schedule: Seasonal construction and staging

Early Completion Incentives recommended for consideration: No Yes

COORDINATION, ACTIVITIES, RESPONSIBILITIES, AND COSTS

Initial Concept Meeting: 1-29-2015

Concept Meeting:

Other coordination to date:

Project Activity	Party Responsible for Performing Task(s)
Concept Development	GDOT/RS&H
Design	GDOT/RS&H
Right-of-Way Acquisition	GDOT
Utility Relocation	GDOT Utility Owners (AP)
Letting to Contract	GDOT
Construction Supervision	GDOT
Providing Material Pits	CONTRACTOR
Providing Detours	CONTRACTOR
Environmental Studies, Documents, & Permits	GDOT/RS&H
Environmental Mitigation	GDOT
Construction Inspection & Materials Testing	GDOT

Project Cost Estimate Summary and Funding Responsibilities:

	Breakdown of PE	ROW	Reimbursable Utility	CST*	Environmental Mitigation	Total Cost
Funded By	GDOT	GDOT	GDOT	GDOT	GDOT	
\$ Amount	\$2,009,841.78	\$163,000.00	N/A	\$10,634,766.43	\$78,537.00	\$12,886,145.21
Date of Estimate	7/19/2012	1/07/2015	1/12/2015	1/07/2015		

*CST Cost includes: Construction, Engineering and Inspection, Contingencies and Liquid AC Cost Adjustment.

ALTERNATIVES DISCUSSION

Alternative selection:

Preferred Alternative: The preferred alternative propose to detour traffic during construction and replacement bridges at existing location			
Estimated Property Impacts:	1	Estimated Total Cost:	\$12,886,145.21
Estimated ROW Cost:	\$163,000.00	Estimated CST Time:	24 Months
Rationale: <i>This alternative was selected because it meet the project justification with minimal cost & environmental impacts.</i>			

No-Build Alternative: This no-build alternative proposed no changes to the existing bridge structure			
Estimated Property Impacts:	0	Estimated Total Cost:	\$0
Estimated ROW Cost:	\$0	Estimated CST Time:	0
Rationale: <i>This alternative does not meet the project justification. It does not construct new structurally sufficient bridge over Satilla River, Satilla River Overflow, and Fullwood Creek.</i>			

Alternative 2: The alternative proposes realigning SR 158 @ Satilla River 50 feet to the west			
Estimated Property Impacts:	7	Estimated Total Cost:	\$14,462,740.75
Estimated ROW Cost:	\$257,000.00	Estimated CST Time:	24
Rationale: <i>The realignment of SR 158 to the east will have a larger impact to potential environmental resources. Therefore, it was not pursued for additional development.</i>			

Alternative 3: The alternative proposes realigning SR 158 @ Satilla River 50 feet to the east			
Estimated Property Impacts:	4	Estimated Total Cost:	\$14,490,491.99
Estimated ROW Cost:	\$274,000.00	Estimated CST Time:	24
Rationale: <i>The realignment of SR 158 to the west will have a larger impact to potential environmental resources. Therefore, it was not pursued for additional development.</i>			

Comments: None

LIST OF ATTACHMENTS/SUPPORTING DATA

1. Concept Layout
2. Typical sections
 - a. Roadway Typical
 - b. Bridge Typical
3. Detailed Cost Estimates:
 - a. Construction including Engineering and Inspection and Contingencies
 - b. Completed Liquid AC Cost Adjustment forms
 - c. Right-of-Way
 - d. Utilities
 - e. Mitigation
4. Traffic diagrams
5. Traffic Memo
6. S I & A Report(s) (*Bridge/Structural Inventory Reports*)
7. Conceptual Level Pavement Design
8. Environmental Assessment Phase 1 Report - Recommendation
9. Minutes of Concept Meeting
10. Potential Detour Routes

APPROVALS

Concur:



Director of Engineering

Approve:

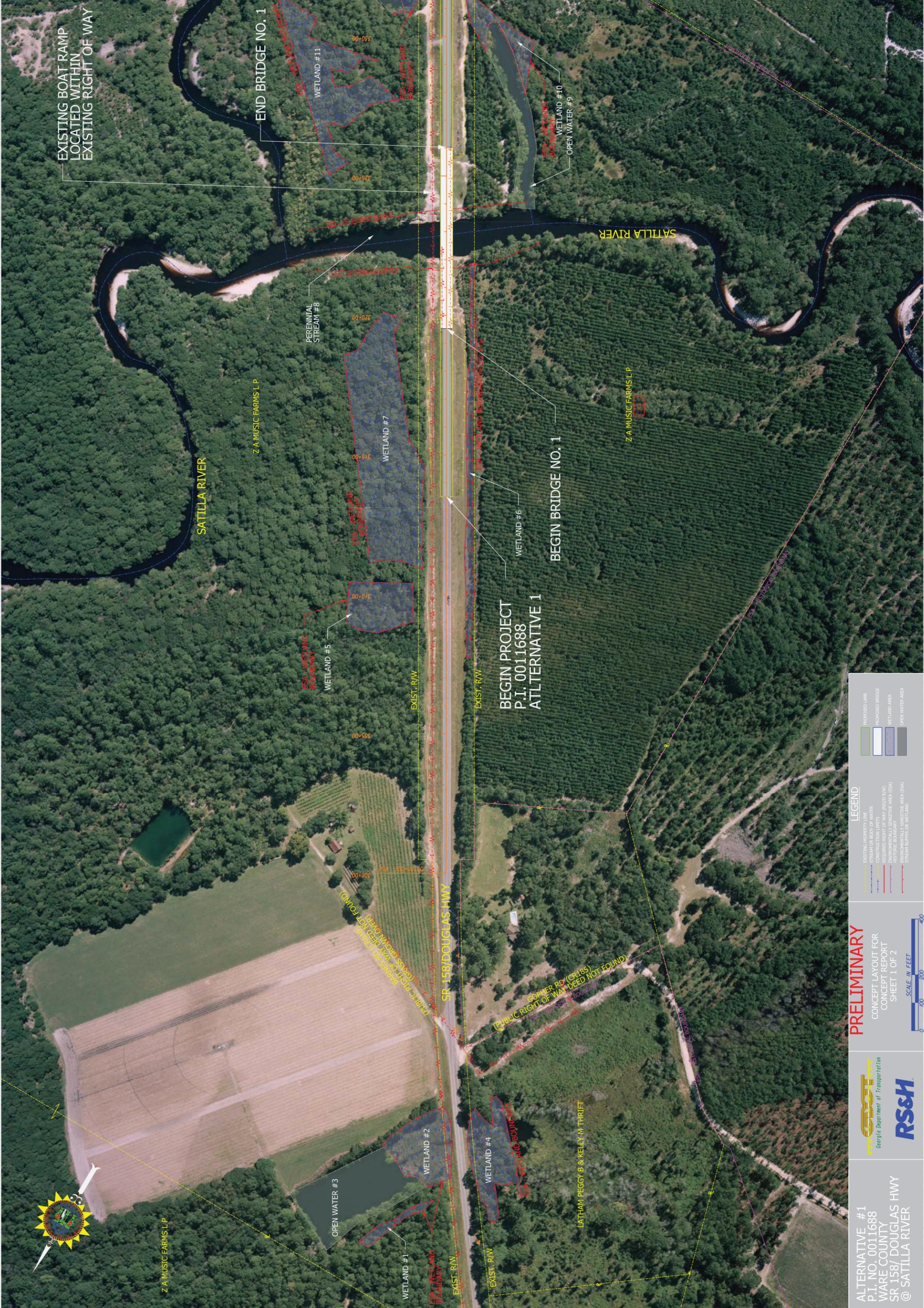


Chief Engineer

4-28-15

Date

ATTACHMENT #1 - CONCEPT LAYOUT



EXISTING BOAT RAMP
LOCATED WITHIN
EXISTING RIGHT OF WAY

END BRIDGE NO. 1

BEGIN PROJECT
P.I. 0011688
ALTERNATIVE 1

BEGIN BRIDGE NO. 1

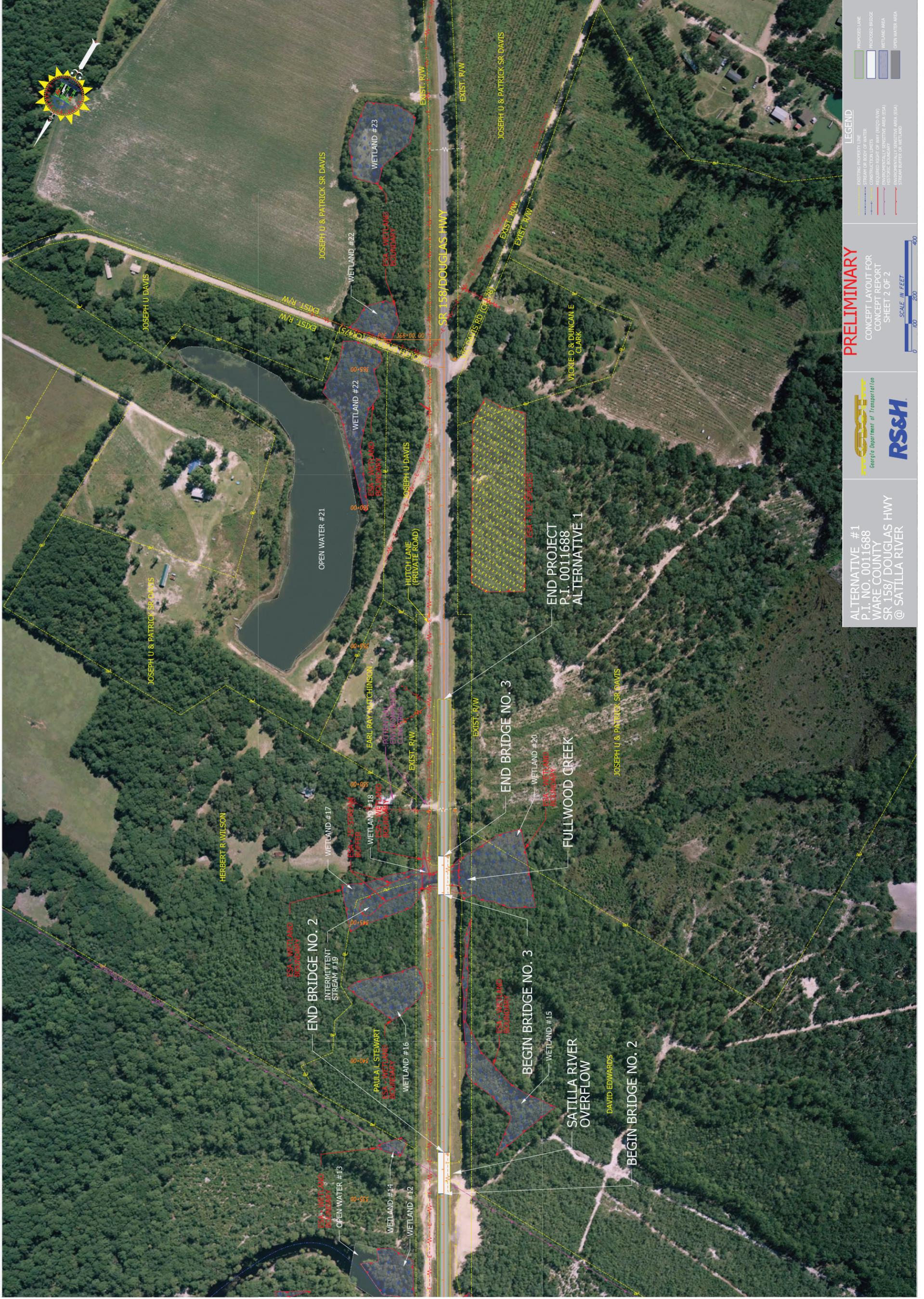
LEGEND

	EXISTING PROPERTY LINE
	STREAM OR BODY OF WATER
	PROPOSED BRIDGE
	CONSTRUCTION LIMITS
	REQUIRED RIGHT OF WAY (REQD RW)
	WETLAND AREA
	HISTORIC BOUNDARY
	ENVIRONMENTALLY SENSITIVE AREA (ESA)
	STREAM BUFFER OR WETLAND

PRELIMINARY
CONCEPT LAYOUT FOR
CONCEPT REPORT
SHEET 1 OF 2
SCALE: IN FEET
0 100 200 400



ALTERNATIVE #1
P.I. NO. 0011688
WARE COUNTY
SR 158/ DOUGLAS HWY
@ SATILLA RIVER



LEGEND

- EXISTING PROPERTY LINE
- STREAM OR BODY OF WATER
- PROPOSED BRIDGE
- CONSTRUCTION LIMITS
- REQUIRED RIGHT OF WAY (REQD. RW)
- WETLAND AREA
- HISTORIC BOUNDARY
- ENDORSEMENT SENSITIVE AREA (ESA)
- STREAM BUFFER OF WETLAND
- PROPOSED LINE
- PROPOSED BRIDGE
- WETLAND AREA
- OPEN WATER AREA

PRELIMINARY
 CONCEPT LAYOUT FOR
 CONCEPT REPORT
 SHEET 2 OF 2



ALTERNATIVE #1
 P.I. NO. 0011688
 WARE COUNTY
 SR 158/ DOUGLAS HWY
 @ SATILLA RIVER

END PROJECT
 P.I. 0011688
 ALTERNATIVE 1

END BRIDGE NO. 3

BEGIN BRIDGE NO. 3

FULLWOOD CREEK

SATILLA RIVER
 OVERFLOW

BEGIN BRIDGE NO. 2

END BRIDGE NO. 2

BEGIN BRIDGE NO. 2

INTERMITTENT
 STREAM #19

PAULA L STEWART

OPEN WATER #13

WETLAND #17

WETLAND #18

WETLAND #16

WETLAND #14

WETLAND #12

WETLAND #23

WETLAND #22

WETLAND #20

WETLAND #21

WETLAND #22

WETLAND #23

WETLAND #20

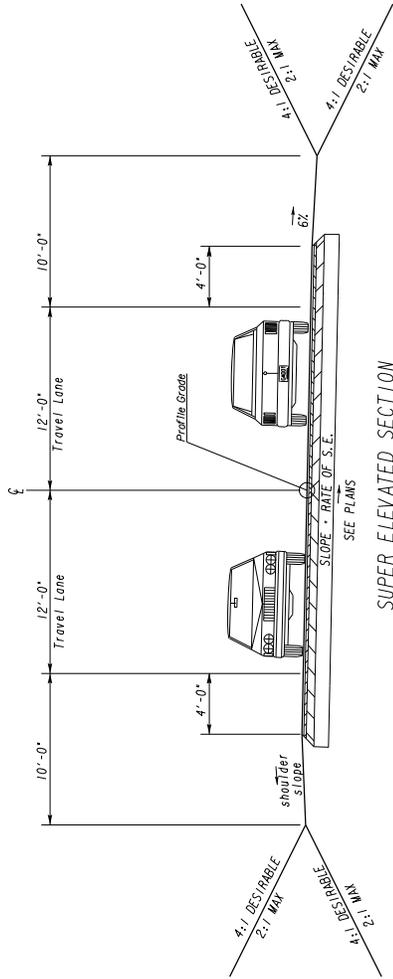
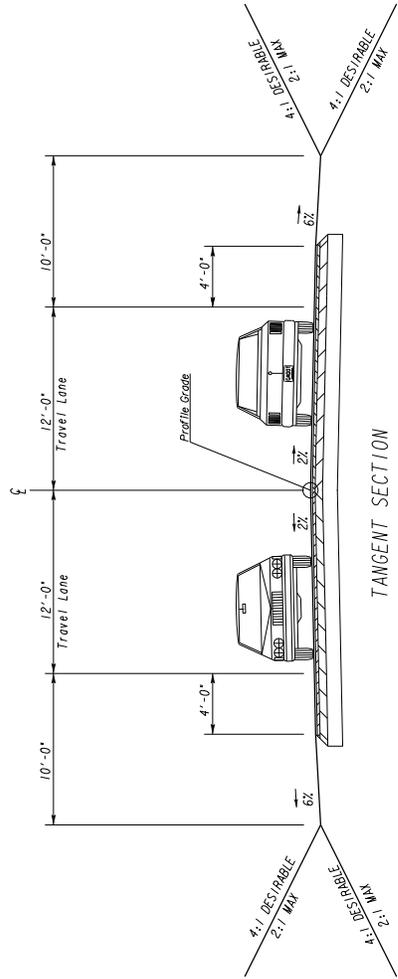
WETLAND #21

WETLAND #22

ATTACHMENT #2 – TYPICAL SECTIONS

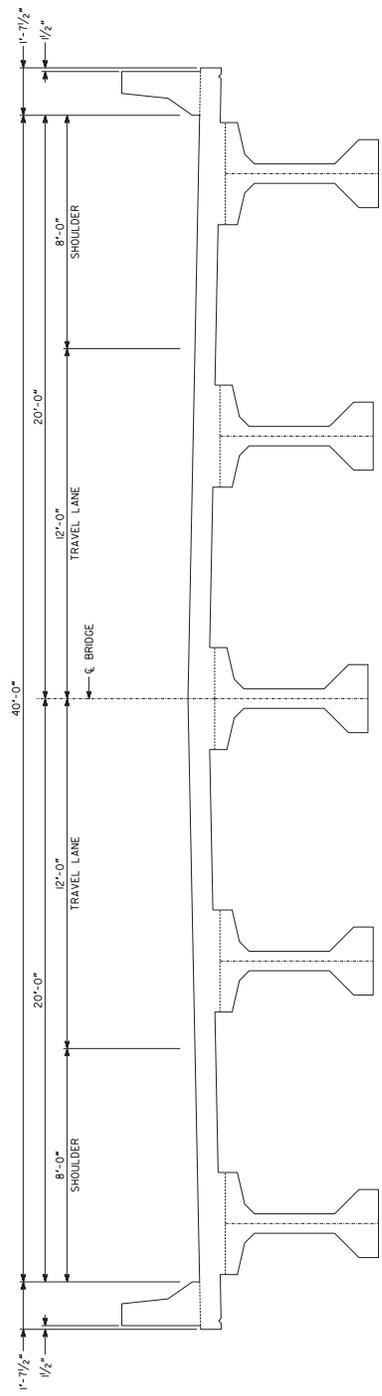
ROADWAY TYPICAL

BRIDGE TYPICAL



<p>PROPERTY AND EXISTING R/W LINE REQUIRED R/W LINE CONSTRUCTION LIMITS EASEMENT FOR CONSTR & MAINTENANCE OF SLOPES EASEMENT FOR CONSTR OF SLOPES EASEMENT FOR CONSTR OF DRAVES</p>	<p>BEGIN LIMIT OF ACCESS.....BLA END LIMIT OF ACCESS.....ELA LIMIT OF ACCESS RED'D R/W & LIMIT OF ACCESS</p>	<p>RS&H</p>	<p>N. T. S.</p>	<p>REVISION DATES</p>	<p>STATE OF GEORGIA DEPARTMENT OF TRANSPORTATION OFFICE OF PROGRAM DELIVERY</p>
				<p>DRAWING NO. 05-</p>	<p>TYPICAL SECTIONS</p>

STATE	PROJECT NUMBER	TOTAL SHEETS
GA.	001688	1



TYPICAL SECTION OVER SATILLA RIVER
TYPICAL SECTION OVER SATILLA RIVER OVERFLOW
TYPICAL SECTION OVER FULLWOOD CREEK

BRIDGE NOS. 1, 2, AND 3



730 PEACHTREE STREET
SUITE 1000
ATLANTA, GEORGIA 30308
PHONE: (678) 529-7200
FAX: (678) 529-2222
www.rsandh.com

DATE	REVISIONS	DRAWING NO. 35-001	SCALE: NO SCALE	JANUARY 2015
		BRIDGE SHEET 1 OF 1	DESIGNED: MML	REVIEWED: X
			DRAWN: MML	DESIGN GROUP: RS&H
				APPROVED:

GEORGIA
DEPARTMENT OF TRANSPORTATION
PRECONSTRUCTION DIVISION-OFFICE OF BRIDGE DESIGN

TYPICAL SECTIONS
S.R. 158 OVER SATILLA RIVER AND FULLWOOD CREEK
WARE COUNTY
GDOT P.I. NO. 001688

1" = 1/2" INCH WHEN PRINTED FULL SIZE

ATTACHMENT #3 – DETAILED COST ESTIMATES

2015-01-30 CES - Alternative1.txt

1000000.00	1000000.00			
0081	543-9000	1000000.00	LS	BRIDGE OVER OVERFLOW CONSTR OF BRIDGE COMPLETE - BR03 -
				1.000
0090	163-0232		AC	BRIDGE OVER FULLWOOD CREEK TEMPORARY GRASSING
572.02		1716.07		3.000
0091	163-0240		TN	MULCH
198.10		18225.49		92.000
0092	163-0300		EA	CONSTRUCTION EXIT
1503.67		9022.02		6.000
0093	163-0550		EA	CONS & REM INLET SEDIMENT TRAP
196.62		2556.18		13.000
0094	165-0030		LF	MAINT OF TEMP SILT FENCE, TP C
0.53		5450.88		10200.000
0095	165-0101		EA	MAINT OF CONST EXIT
616.23		3697.40		6.000
0096	165-0105		EA	MAINT OF INLET SEDIMENT TRAP
90.12		1171.66		13.000
0097	167-1000		EA	WATER QUALITY MONITORING AND SAMPLING
386.63		773.26		2.000

STATE HIGHWAY AGENCY

DATE : 01/30/2015
PAGE : 2

JOB ESTIMATE REPORT

0098	167-1500		MO	WATER QUALITY INSPECTIONS	48.000
695.84		33400.62			
0099	171-0030		LF	TEMPORARY SILT FENCE, TYPE C	20400.000
2.89		59154.70			
0100	643-8200		LF	BARRIER FENCE (ORANGE), 4 FT	5000.000
1.58		7905.00			
0101	700-6910		AC	PERMANENT GRASSING	6.000
1216.25		7297.52			
0102	700-7000		TN	AGRICULTURAL LIME	11.000
78.78		866.62			
0103	700-8000		TN	FERTILIZER MIXED GRADE	6.000
580.83		3485.02			
0104	700-8100		LB	FERTILIZER NITROGEN CONTENT	270.000
2.87		776.88			
0105	700-9300		SY	SOD	30938.000
4.70		145680.24			
0106	716-2000		SY	EROSION CONTROL MATS, SLOPES	24900.000
1.16		29074.98			
0150	653-1501		LF	THERMO SOLID TRAF ST 5 IN, WHI	7900.000
0.51		4044.88			
0160	653-1502		LF	THERMO SOLID TRAF ST, 5 IN YEL	3950.000
0.53		2128.14			
0170	150-5010		EA	TRAF CTRL, PORTABLE IMPACT ATTN	5.000
7321.22		36606.13			
0190	620-0100		LF	TEMP BARRIER, METHOD NO. 1	1450.000
34.68		50290.64			
0195	636-1033		SF	HWY SIGNS, TP1MAT, REFL SH TP 9	270.000
16.86		4554.40			
0200	636-2070		LF	GALV STEEL POSTS, TP 7	300.000
6.19		1858.05			

ITEM TOTAL 8739444.34
INFLATED ITEM TOTAL 8739444.35

TOTALS FOR JOB 11688

ESTIMATED COST: 8739444.35
CONTINGENCY PERCENT (0.0): 0.00
ESTIMATED TOTAL:

8739444.35

2015-01-30 CES - Alternative1.txt

CONTINGENCY SUMMARY

A. CONSTRUCTION COST ESTIMATE:	\$	8,739,444.35	Base Estimate From CES	
B. ENGINEERING AND INSPECTION (E & I):	\$	436,972.22	Base Estimate (A) x	5 %
C. CONTINGENCY:	\$	1,376,462.49	Base Estimate (A) + E & I (B) x	15 %
			See % Table in "Risk Based Cost Estimation" Memo	
D. TOTAL LIQUID AC ADJUSTMENT:	\$	81,887.38	Total From Liquid AC Spreadsheet	
E. CONSTRUCTION TOTAL:	\$	10,634,766.43	(A + B + C + D = E)	

REIMBURSABLE UTILITY COSTS

UTILITY OWNER	REIMBURSABLE COST
Satilla EMC	\$ -
Bellsouth/AT&T	\$ -
Alma Telephone	\$ -
USGS	\$ -
TOTAL	\$ -

ATTACHMENTS:

Detailed Cost Estimate Printout From TRAQS Liquid AC Adjustment Spreadsheet
--

**DEPARTMENT OF TRANSPORTATION
STATE OF GEORGIA**

INTERDEPARTMENT CORRESPONDENCE

FILE P.I. No. 11688

OFFICE Program Delivery

PROJECT DESCRIPTION

SR 158 at Satilla River, Satilla River Overflow, and Fullwood Creek - Alternative #1

DATE January 7, 2015

From: Albert V. Shelby III, State Program Delivery Engineer

To: Lisa L. Myers, State Project Review Engineer

Subject: **REVISIONS TO PROGRAMMED COSTS**

PROJECT MANAGER Aghdas S. Ghazi, P.E.

MGMT LET DATE 6/15/2018

MGMT ROW DATE 3/15/2017

PROGRAMMED COSTS (TPro W/OUT INFLATION)

LAST ESTIMATE UPDATE

CONSTRUCTION \$ 5,369,428.30

DATE 11/12/2014

RIGHT OF WAY \$ 162,364.82

DATE 7/19/2012

UTILITIES \$ 55,204.04

DATE 7/19/2012

REVISED COST ESTIMATES

CONSTRUCTION* \$ 10,634,766.43

RIGHT OF WAY \$ 163,000.00

UTILITIES \$ 0.00

*Cost Contains 15 % Contingency

REASONS FOR COST INCREASE AND CONTINGENCY JUSTIFICATION:

PROJ. NO. N/A
P.I. NO. 0011688
DATE

CALL NO. 9/29/2009

INDEX (TYPE)	DATE	INDEX
REG. UNLEADED	Dec-14	\$ 2.687
DIESEL		\$ 3.437
LIQUID AC		\$ 576.00

Link to Fuel and AC Index:
<http://www.dot.ga.gov/doingbusiness/Materials/Pages/asphaltcementindex.aspx>

LIQUID AC ADJUSTMENTS

PA=[((APM-APL)/APL)]xTMTxAPL

Asphalt

Price Adjustment (PA)				79660.8	\$	79,660.80
Monthly Asphalt Cement Price month placed (APM)	Max. Cap	60%	\$	921.60		
Monthly Asphalt Cement Price month project let (APL)			\$	576.00		
Total Monthly Tonnage of asphalt cement (TMT)				230.5		

ASPHALT	Tons	%AC	AC ton
Leveling		5.0%	0
12.5 OGFC		5.0%	0
12.5 mm	910	5.0%	45.5
9.5 mm SP		5.0%	0
25 mm SP	1900	5.0%	95
19 mm SP	1800	5.0%	90
	4610		230.5

BITUMINOUS TACK COAT

Price Adjustment (PA)				\$	2,226.58	\$	2,226.58
Monthly Asphalt Cement Price month placed (APM)	Max. Cap	60%	\$	921.60			
Monthly Asphalt Cement Price month project let (APL)			\$	576.00			
Total Monthly Tonnage of asphalt cement (TMT)				6.442651383			

Bitum Tack

Gals	gals/ton	tons
1500	232.8234	6.44265138

BITUMINOUS TACK COAT (surface treatment)

Price Adjustment (PA)					\$	0	\$	-
Monthly Asphalt Cement Price month placed (APM)	Max. Cap	60%	\$	921.60				
Monthly Asphalt Cement Price month project let (APL)			\$	576.00				
Total Monthly Tonnage of asphalt cement (TMT)				0				

Bitum Tack

	SY	Gals/SY	Gals	gals/ton	tons
Single Surf. Trmt.		0.20	0	232.8234	0
Double Surf.Trmt.		0.44	0	232.8234	0
Triple Surf. Trmt		0.71	0	232.8234	0

TOTAL LIQUID AC ADJUSTMENT \$ 81,887.38

**GEORGIA DEPARTMENT OF TRANSPORTATION
PRELIMINARY ROW COST ESTIMATE SUMMARY**

Date: 1/7/2015 Project: 0011688
 Revised: County: Ware
 PI: 0011688 Alt 1

Description: Alternative 1 Close and Detour SR 158 to replace 3 bridges in same location
 Project Termini: Alternative 1 Close and Detour SR 158 to replace 3 bridges in same location

Existing ROW: Varies
 Required ROW: Varies
 Parcels: **i**

Land and Improvements _____ \$63,750.00

Proximity Damage	\$0.00
Consequential Damage	\$0.00
Cost to Cures	\$0.00
Trade Fixtures	\$0.00
Improvements	\$25,000.00

Valuation Services _____ \$15,000.00

Legal Services _____ \$40,200.00

Relocation _____ \$8,000.00

Demolition _____ \$0.00

Administrative _____ \$35,500.00

TOTAL ESTIMATED COSTS _____ \$162,450.00

TOTAL ESTIMATED COSTS (ROUNDED) _____ \$163,000.00

Preparation Credits	Hours	Signature

Prepared By: Deshone Alexander CG#: 286999 01/07/2015 (DATE)

Approved By: Deshone Alexander CG#: 286999 01/07/2015 (DATE)

NOTE: No Market Appreciation is included in this Preliminary Cost Estimate

**DEPARTMENT OF TRANSPORTATION
STATE OF GEORGIA**

INTERDEPARTMENT CORRESPONDENCE

FILE OFFICE District 5, Jesup
P.I. # 0011688 **DATE** 01-12-2015

FROM Dallery Rozier, District Utilities Engineer

TO Aghdas Ghazi, Project Manager

SUBJECT PRELIMINARY UTILITY COST (ESTIMATE)

As requested by your office, we are furnishing you with a Preliminary Utility Cost Estimate of each utility with facilities potentially located within the above project limits.

Facility Owner	Non-Reimbursable	Reimbursable	Comments
Satilla EMC	\$153,000		
Bellsouth/ AT&T	\$183,000		
Alma Telephone	\$91,500		
Unites States Geological Survey	\$15,000		
Totals	\$442,500		
Total Reimbursement		\$0.00	

CC: Jun Birnkammer, State Utilities Preconstruction Engineer
Nicholas Fields, Utilities Preconstruction Engineer
Yulanda Pride-Foster, Utilities Preconstruction Engineer
Vahid Munshi, Management Specialist
District Office File
Utilities Office File

VanDyke, Jeff

From: Jill Brown <jbrown@edwards-pitman.com>
Sent: Thursday, February 05, 2015 1:39 PM
To: Lee, Johnny
Cc: Lewis, Mike; VanDyke, Jeff; 'Rick Filer'; 'Morgan Niccoli'
Subject: RE: PI 0011688 - SR 158 at Satilla River - mitigation cost estimates - Work Bridges

Hi Johnny,

Here are the updated mitigation cost estimate totals. I think at the ICTM you'd mentioned you would check the wetland impacts since Alternative 2 had lower impacts than Alternative 1. If those wetland impact estimates change, we'll be glad to revise the mitigation cost estimates.

	Alternative 1		Alternative 2		Alternative 3	
Wetlands (\$1,090/credit)						
	10.23 credits	\$11,155	7.74 credits	\$8,437	14.02 credits	\$15,280
Streams (\$70/credit)						
Removal of Existing Bridges	310.4 credits	\$21,728	310.4 credits	\$21,728	310.4 credits	\$21,728
Construction of New Bridges	400.0 credits	\$28,000	400.0 credits	\$28,000	400.0 credits	\$28,000
Work Bridges	252.2 credits or 0* credits	\$17,654 or \$0*				
Total Stream Mitigation Costs		\$67,382 or \$49,728*		\$49,728		\$49,728
Total Mitigation Costs	\$78,537 or \$60,883*		\$58,165		\$65,008	

*If the temporary work bridges are constructed on driven piles without footings or coffer dams, then no mitigation would be required for the temporary work bridges.

Again, these cost estimates come with the same disclaimer as before, that they are just rough estimates that will change as the design is developed and as the ecology effects assessment advances.

Please let us know if you have any questions. Thanks!

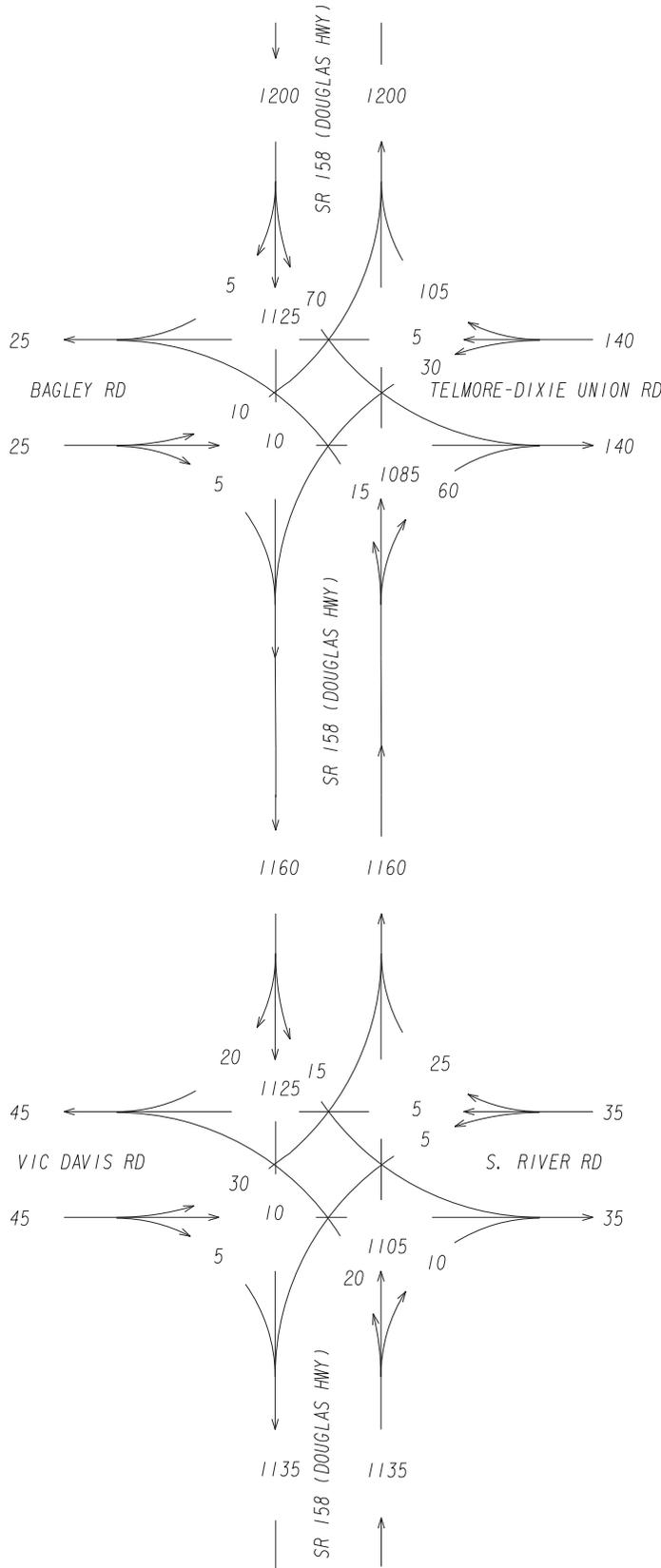
Jill Brown
Edwards-Pitman Environmental, Inc.
(770) 333-9484

From: Lee, Johnny [mailto:Johnny.Lee@rsandh.com]
Sent: Thursday, February 05, 2015 11:11 AM
To: Jill Brown
Cc: Lewis, Mike; VanDyke, Jeff
Subject: RE: PI 0011688 - SR 158 at Satilla River - mitigation cost estimates - Work Bridges

Jill,

ATTACHMENT #4 – TRAFFIC DIAGRAM

PI NO 11688
WARE COUNTY
SR 158



PI NO 11688
WARE COUNTY
SR 158

24 HR T = 25.3%
SU = 13.5%
COMB = 11.8%



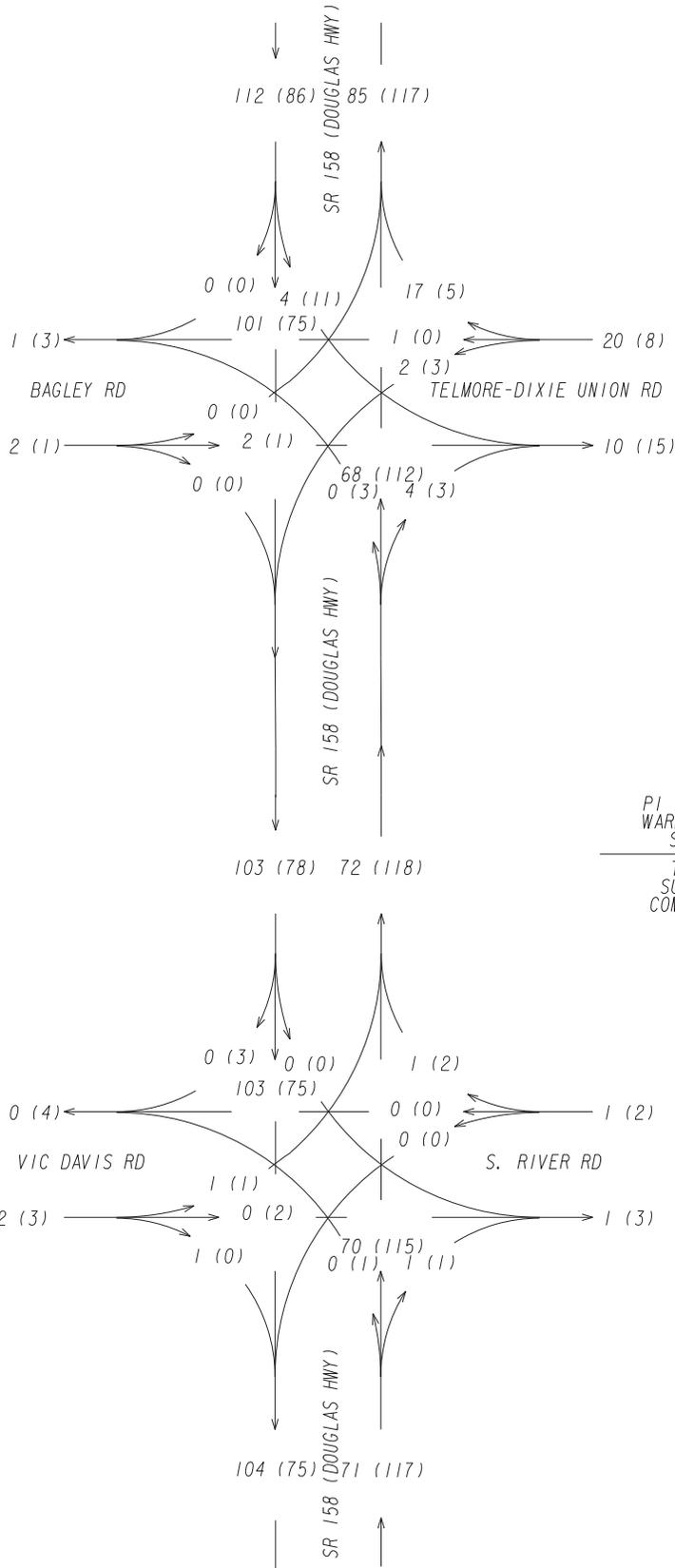
2014 AADT

REVISION DATES	

STATE OF GEORGIA
DEPARTMENT OF TRANSPORTATION
OFFICE: OFFICE OF PLANNING
TRAFFIC DIAGRAM
SR 158 (DOUGLAS HWY) @ SATILLA RIVER
EXISTING 2014 AADT

DRAWING NO. 10-001

PI NO 11688
WARE COUNTY
SR 158



PI NO 11688
WARE COUNTY
SR 158

T = 22.3%
SU = 15.4%
COMB = 6.9%

LEGEND

AM PEAK = 000
PM PEAK = (000)



2014 DHV

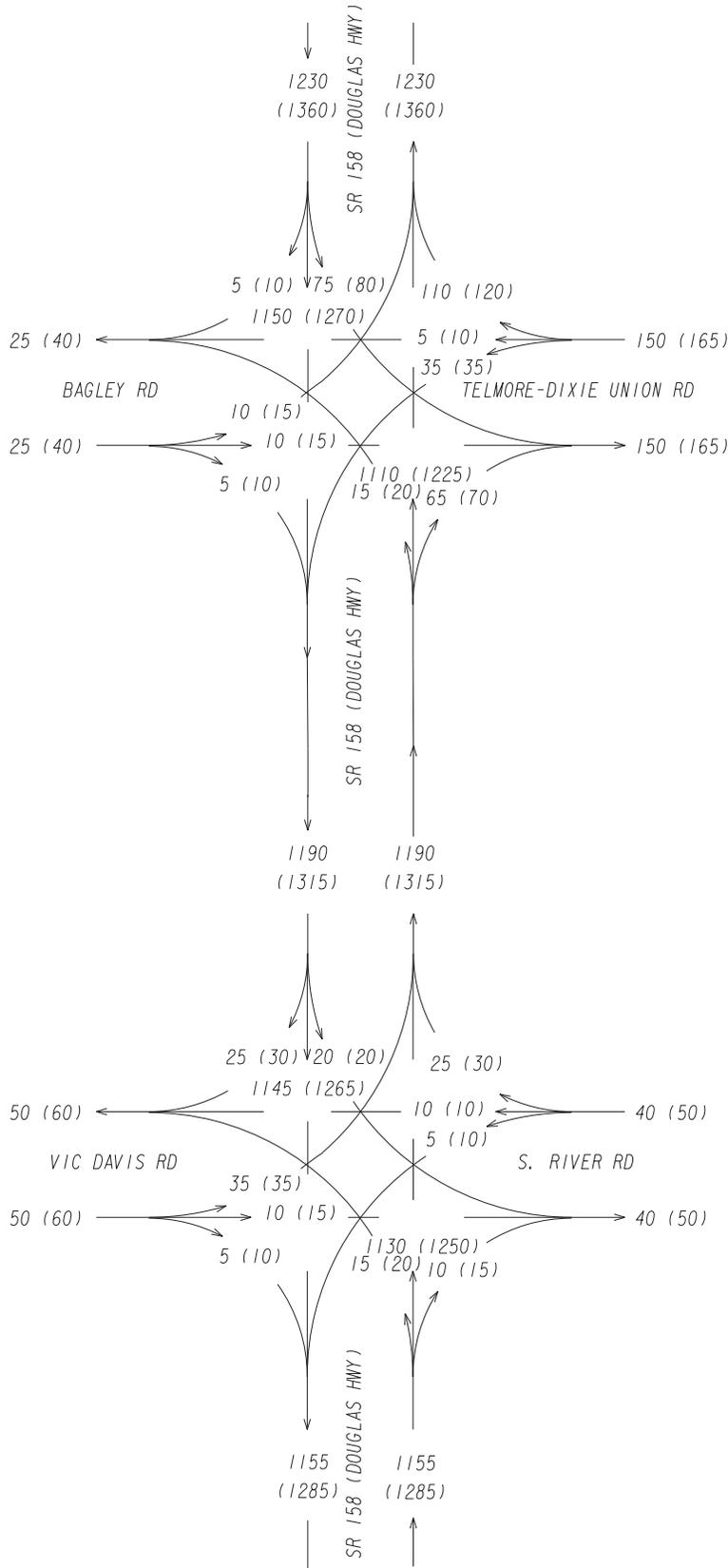
REVISION DATES

STATE OF GEORGIA
DEPARTMENT OF TRANSPORTATION
OFFICE: OFFICE OF PLANNING
TRAFFIC DIAGRAM

SR 158 (DOUGLAS HWY) @ SATILLA RIVER
EXISTING 2014 PEAK HOUR DHV

DRAWING No.
10-002

PI NO 11688
WARE COUNTY
SR 158



PI NO 11688
WARE COUNTY
SR 158

24 HR T = 25.3%
SU = 13.5%
COMB = 11.8%

LEGEND

2018 AADT = 000
2038 AADT = (000)



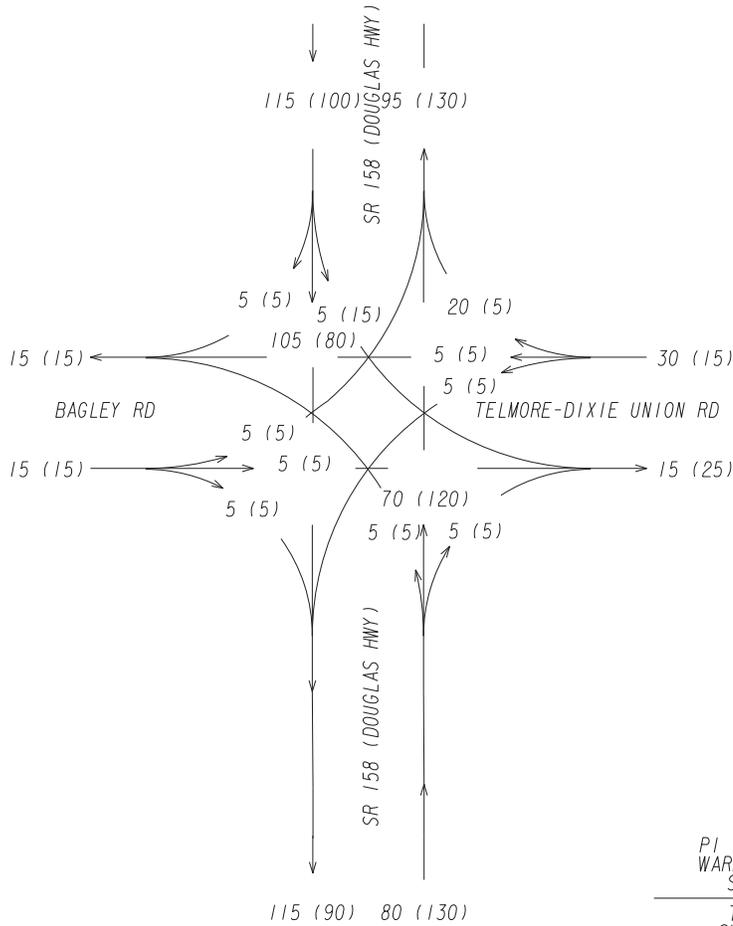
2018 AADT
(2038 AADT)

REVISION DATES	

STATE OF GEORGIA
DEPARTMENT OF TRANSPORTATION
OFFICE: OFFICE OF PLANNING
TRAFFIC DIAGRAM
SR 158 (DOUGLAS HWY) @ SATILLA RIVER
BASE 2018 & DESIGN 2038 AADT
BUILD & NO BUILD

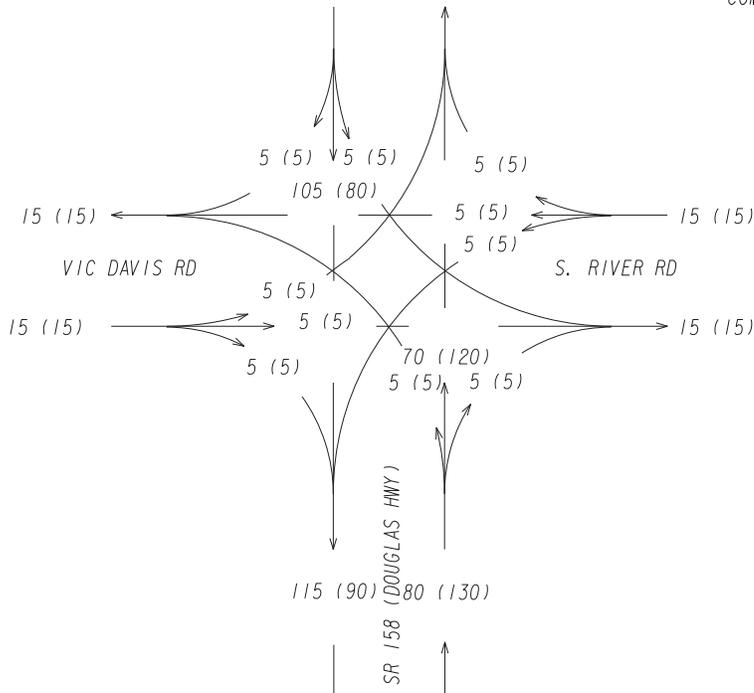
DRAWING NO.
10-003

PI NO 11688
WARE COUNTY
SR 158



PI NO 11688
WARE COUNTY
SR 158

T = 22.3%
SU = 15.4%
COMB = 6.9%



LEGEND

AM PEAK = 000
PM PEAK = (000)



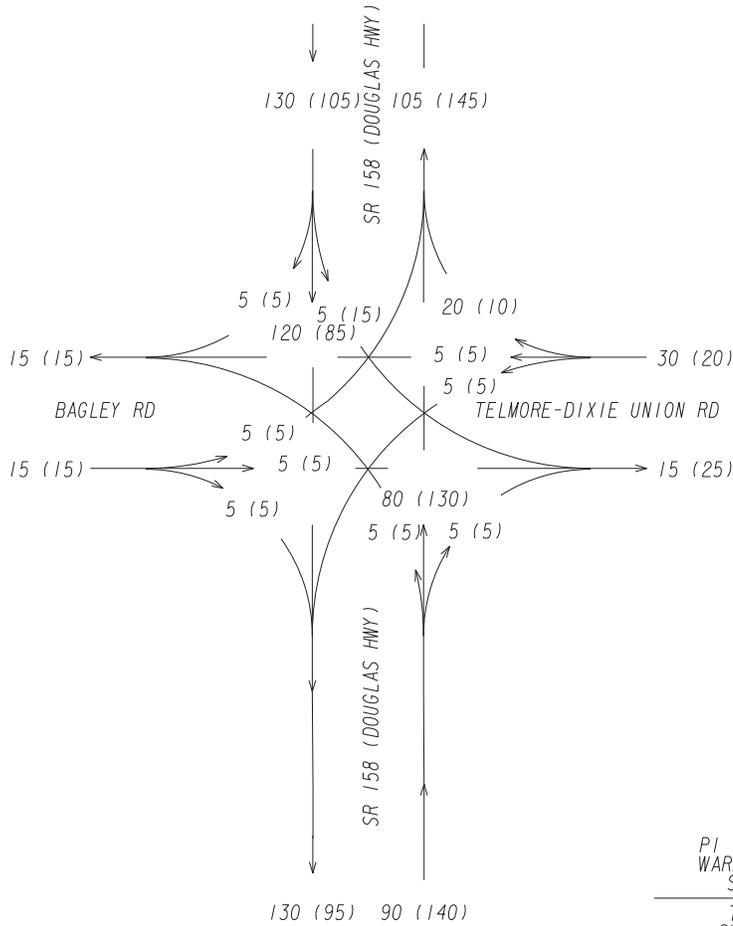
2018 DHV

REVISION DATES

STATE OF GEORGIA
DEPARTMENT OF TRANSPORTATION
OFFICE: OFFICE OF PLANNING
TRAFFIC DIAGRAM
SR 158 (DOUGLAS HWY) @ SATILLA RIVER
BASE 2018 PEAK HOUR DHV
BUILD & NO BUILD

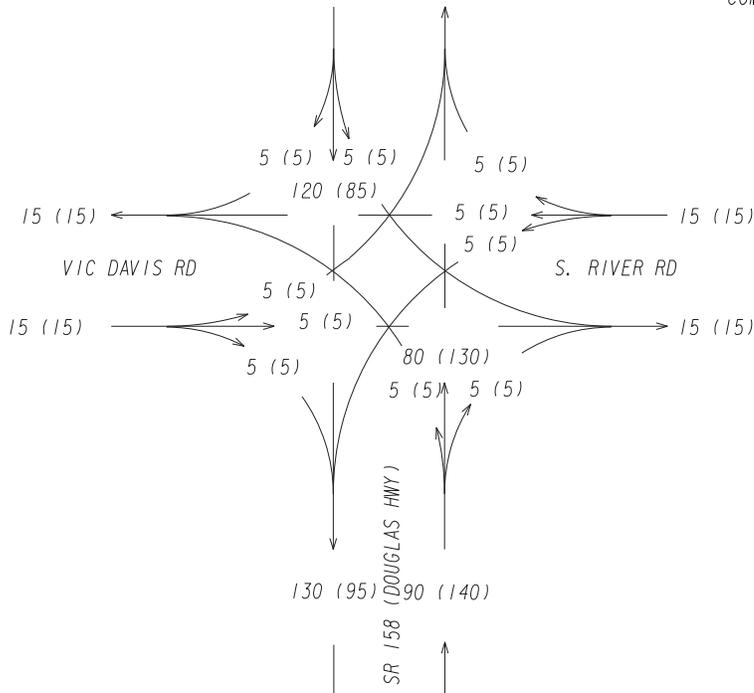
DRAWING No.
10-004

PI NO 11688
WARE COUNTY
SR 158



PI NO 11688
WARE COUNTY
SR 158

T = 22.3%
SU = 15.4%
COMB = 6.9%



LEGEND
AM PEAK = 000
PM PEAK = (000)



2038 DHV

REVISION DATES

STATE OF GEORGIA
DEPARTMENT OF TRANSPORTATION
OFFICE: OFFICE OF PLANNING
TRAFFIC DIAGRAM
SR 158 (DOUGLAS HWY) @ SATILLA RIVER
DESIGN 2038 PEAK HOUR DHV
BUILD & NO BUILD

DRAWING NO.
10-005

ATTACHMENT #5 – TRAFFIC MEMO



SOUTHEASTERN ENGINEERING, INC.

2470 Sandy Plains Road
Marietta, GA 30066
(Office) 770-321-3936
(Fax) 770-321-3935
ahofelich@seengineering.com

November 17, 2014

Traffic Analysis Section – Office Of Planning
Georgia Department of Transportation

**RE: PI#0011688 - Douglas Highway (SR 158) at Satilla River
Ware County, Georgia
Traffic Data and Assumptions**

Please consider this memorandum a confirmation of the existing data and our assumptions for PI#0011688 for Douglas Highway (SR 158) at Satilla River in Ware County, Georgia.

The proposed project would replace three bridges on SR 158. The three bridges would include the Satilla River Bridge, the Satilla River Overflow Bridge, and the Fullwood Creek Bridge. SR 158 connects the Cities of Douglas and Waycross in south Georgia. A project layout and area map have been attached to this memorandum for your convenience.

Existing Data:

We have reviewed and downloaded the GDOT counts available on the transmetrics/geocounts website for the surrounding area. Specifically:

- Count station 299-0121 on SR 158 north of Telmore-Dixie Union Road reports for 2012 an ADT of 2100. The most recent vehicle classification count was collected in 2009 and reported a truck percentage of 18.2%.
- Count station 299-0125 on SR 158 south of Telmore-Dixie Union Road reports for 2013 an ADT of 2300 and an estimated truck percentage of 20.0%.
 - The most recent vehicle classification count was collected in 2010 and reported an ADT of 2230 and a truck percentage of 19.75%
 - This classification count was collected in the summer, so we propose to consider this with the seasonal adjustment factors and to collect new data in order to validate the truck percentages.
- Count station 299-0165 on Telmore-Dixie Union Road north of SR 158 reports for 2011 an ADT of 300 and no reported truck percentage in the last decade.

We have reviewed the data available on the GEARS website. Approximately once a year the general area has experienced a single-vehicle crash, typically with an animal. The data is summarized in the table below.

Incident Number	Date	Location	At	Type of Crash
09-01-0033	1/26/2009	SR 158 (Douglas Hwy)	Telmore Dixie Union Road	Collision with object not fixed - animal
10-03-0101	3/17/2010	SR 158 (Douglas Hwy)	4928 Douglas Hwy	Collision with object not fixed - deer
11-02-0033	2/5/2011	SR 158 (Douglas Hwy)	Fogle Lane	Collision with fixed object - tree
13-10-0405	10/22/2013	SR 158 (Douglas Hwy)	Herndon Road	Collision with object not fixed - deer

We would like confirmation that the functional classification of SR 158 is a rural minor collector, and that the data retrieved from the transmetrics/geocounts database and the GEARS database are sufficient and complete.

Proposed Data Collection and Assumptions:

We are proposing to collect 24-hour volume data with directional distribution and vehicle classification, along with peak hour turn counts at the first significant intersection on either side of the bridges. These intersections are Douglas Hwy (SR 158) at Telmore-Dixie Union Road and Douglas Hwy (SR 158) at South River Road / Vic Davis Road. Based on the hourly distribution in the existing GDOT count data, we are proposing the morning peak be collected from 7 a.m. to 9 a.m. and the evening peak be collected from 3 p.m. to 6 p.m.

We are proposing a 0.5% growth rate for the project. Trends have generally been showing a negative growth rate, but GDOT historical counts show the ADT in the vicinity of 2,000 vpd. Due to the low volumes, a small number of vehicles can create a significant percentage swing. Rather than shrink the traffic volumes, we propose to grow them slowly. We intend to collect traffic data in 2014. The project is scheduled to be let in 2017 and construction should be completed in 2018, so we will set the Base (Build) Year as 2018 and the Design Year as 2038.

We propose utilizing the Rural Local/Collector standards of the 2013 Statewide Traffic Factors for seasonal, axle, and daily factors, which we have attached for your convenience.

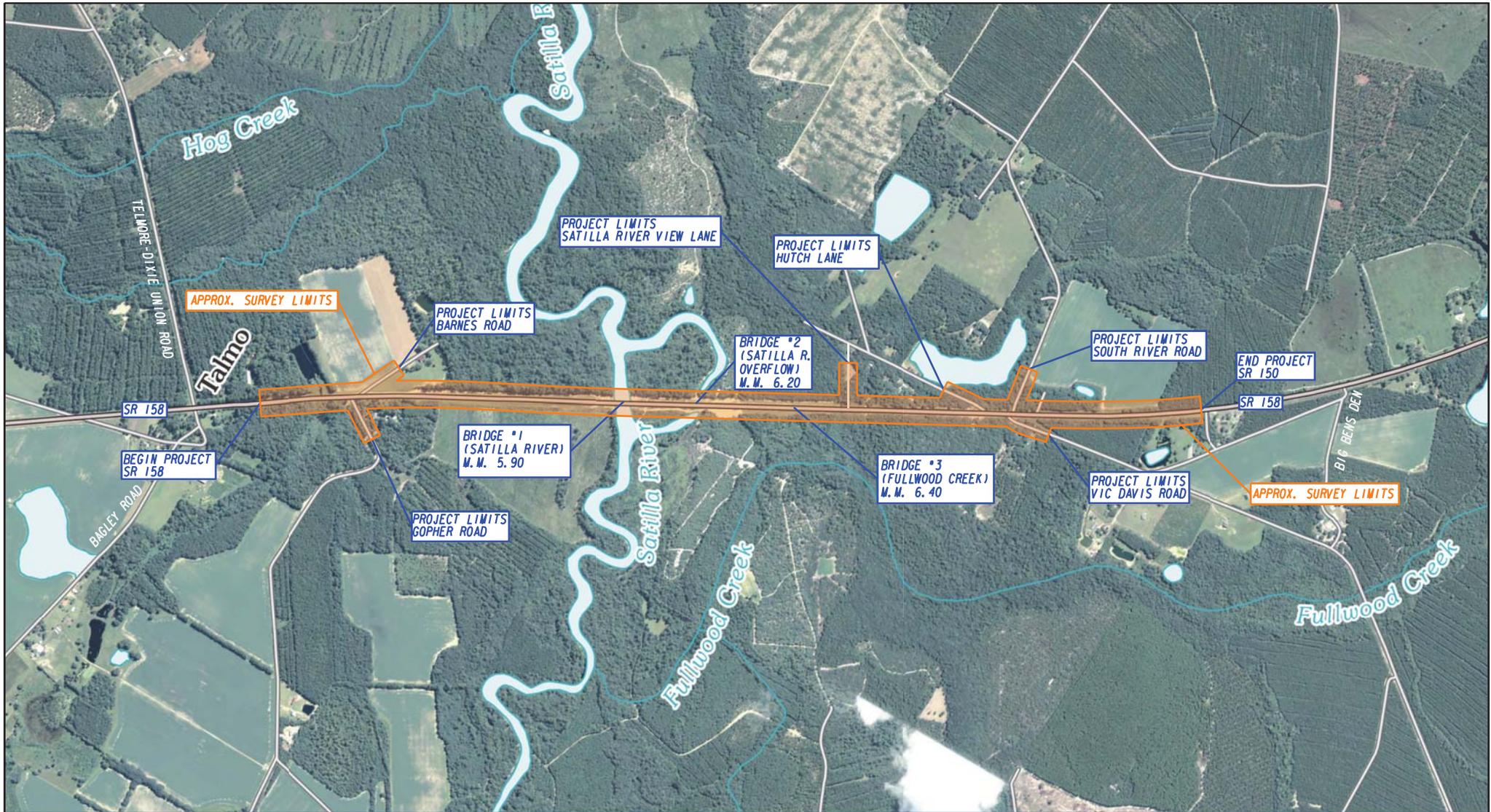
The K Factor at both stations 299-0121 and 299-0125 trends to 8. In order to determine a Directional Distribution (D) Factor, new data will need to be collected. We reviewed the two most recent downloadable counts at both stations 299-0121 and 299-0125 but no directional distribution was reported. Once new data is collected, we will utilize the new traffic counts to confirm the K and D Factors and coordinate the appropriate adjustments with the Office of Planning.

We propose establishing the build and no build conditions to have the same volumes. The bridges do not currently have weight restrictions, so we do not anticipate the manifestation of traffic reassignment or latent demand.

If you have any questions regarding the projected traffic for the project or any of the proposed assumptions, please contact Alex Hofelich, PE, PTOE, at 770-702-7021 or Ahofelich@seengineering.com

ATTACHMENTS

- AREA MAP
- PROJECT LAYOUT
- 2013 TRAFFIC FACTORS



RS&H
 IMPROVING YOUR WORLD
 730 PEACHTREE STREET, SUITE 430
 ATLANTA, GA 30308-1238
 678-528-7200 (TEL) 404-347-9522 (FAX)

SR158 AT SATILLA RIVER
 9 MILES NW OF WAYCROSS
 PI# 0011688
 WARE COUNTY

2013 Traffic Factors

Monthly Factors

Factor Group	Functional_Class	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
01	Rural_Local_Coll	1.1	1.06	1.02	0.98	0.96	1.01	0.99	0.97	0.97	0.93	1.01	1.04
02	Rural_Minor_Art	1.07	1.03	0.99	0.97	0.97	1.01	1.01	1	0.99	0.96	1	1.03
03	Rural_Major_Art	1.12	1.06	1.02	1	0.98	0.98	0.97	0.99	0.99	0.93	0.99	1.03
04	Rural_I-75	1.13	1.08	0.9	1.02	1.01	0.88	0.87	1.04	1.15	0.98	1.02	1.03
05	Rural_I-85	1.17	1.11	1.01	0.99	0.95	0.92	0.9	0.96	1.03	1	1.01	1
06	Rural_Int	1.17	1.11	0.98	0.97	0.95	0.9	0.89	0.97	1.05	1.01	1.03	1.03
07	Sm_Urb_Local_Coll	1.04	0.99	0.96	0.98	0.94	0.99	1.03	0.99	1.01	1.02	1.05	1.03
08	Sm_Urb_Art	1.06	1	0.97	0.99	0.96	1.02	1.02	1	1.02	0.99	0.99	1
09	Sm_Urb/Urb_Freeways_Int (Not ATL)	1.08	1.04	0.97	0.99	0.97	0.98	0.97	0.99	1.02	0.99	1	1.01
10	Urb_Local_Coll	1.06	1.02	0.99	0.98	0.96	1.04	1.03	0.98	0.97	0.96	1.01	1.03
11	Urb_Minor_Art (Not ATL)	1.04	1	0.98	0.98	0.97	1.03	1.03	1	0.98	0.98	1.01	1.03
12	Urb_Major_Art (Not ATL)	1.06	1.01	0.98	0.98	0.97	1	1	0.99	0.99	0.98	1.02	1.03
13	Urb_Minor_Art_ATL	1.05	1.01	0.98	0.96	0.97	1.02	1.02	1	0.99	0.97	1.01	1.05
14	Urb_Major_Art_ATL	1.07	1.02	0.99	0.99	0.96	0.99	1	0.99	1	0.98	1.01	1.03
15	Urb_Freeways_Int_ATL	1.07	1.03	0.98	0.99	0.97	0.99	0.97	0.99	1	0.98	1.01	1.02
16	Urb_I-285	1.07	1.03	1.00	0.98	0.97	0.97	0.97	0.99	1.01	0.99	1.01	1.02

Daily Factors

Factor Group	Functional_Class	Mon	Tue	Wed	Thu	Fri	Sat	Sun
01	Rural_Local_Coll	1	0.97	0.97	0.95	0.88	1.05	1.28
02	Rural_Minor_Art	0.99	0.97	0.96	0.93	0.87	1.08	1.3
03	Rural_Major_Art	1.01	1.01	0.99	0.95	0.86	1.03	1.23
04	Rural_I-75	1.08	1.16	1.1	0.99	0.85	0.93	0.96
05	Rural_I-85	1.07	1.12	1.08	1	0.83	0.98	0.97
06	Rural_Int	1.07	1.16	1.11	1	0.81	0.99	0.94
07	Sm_Urb_Local_Coll	0.99	0.97	0.95	0.93	0.87	1.06	1.33
08	Sm_Urb_Art	1	0.99	0.98	0.94	0.83	1.05	1.35
09	Sm_Urb/Urb_Freeways_Int (Not ATL)	1	1.01	0.98	0.94	0.86	1.06	1.22
10	Urb_Local_Coll	0.96	0.93	0.92	0.91	0.9	1.17	1.37
11	Urb_Minor_Art (Not ATL)	0.96	0.93	0.92	0.9	0.87	1.15	1.49
12	Urb_Major_Art (Not ATL)	0.98	0.95	0.93	0.91	0.87	1.1	1.43
13	Urb_Minor_Art_ATL	0.96	0.93	0.92	0.91	0.88	1.14	1.46
14	Urb_Major_Art_ATL	1	0.96	0.94	0.93	0.89	1.06	1.35
15	Urb_Freeways_Int_ATL	0.99	0.98	0.96	0.93	0.9	1.07	1.25
16	Urb_I-285	0.97	0.95	0.94	0.91	0.88	1.13	1.37

2013 Traffic Factors

Axle Factors

Factor Group	Functional_Class	Axle Factor
01	Rural_Local_Coll	0.95
02	Rural_Minor_Art	0.93
03	Rural_Major_Art	0.92
04	Rural_I-75	0.76
05	Rural_I-85	0.77
06	Rural_Int	0.77
07	Sm_Urb_Local_Coll	0.98
08	Sm_Urb_Art	0.93
09	Sm_Urb/Urb_Freeways_Int (Not ATL)	0.87
10	Urb_Local_Coll	0.99
11	Urb_Minor_Art (Not ATL)	0.98
12	Urb_Major_Art (Not ATL)	0.97
13	Urb_Minor_Art_ATL	0.98
14	Urb_Major_Art_ATL	0.99
15	Urb_Freeways_Int_ATL	0.94
16	Urb_I-285	0.87

Growth Factors

Factor Group	Functional_Class	Growth Factor
01	Rural_Local_Coll	0.99
02	Rural_Minor_Art	1
03	Rural_Major_Art	1
04	Rural_I-75	1.02
05	Rural_I-85	1.02
06	Rural_Int	1.01
07	Sm_Urb_Local_Coll	0.97
08	Sm_Urb_Art	1
09	Sm_Urb/Urb_Freeways_Int (Not ATL)	1.01
10	Urb_Local_Coll	1.02
11	Urb_Minor_Art (Not ATL)	0.99
12	Urb_Major_Art (Not ATL)	1
13	Urb_Minor_Art_ATL	1
14	Urb_Major_Art_ATL	1
15	Urb_Freeways_Int_ATL	1.01
16	Urb_I-285	1.01

**ATTACHMENT #6 – BRIDGE INVENTORY
REPORTS**



Bridge Inventory Data Listing

Parameters: Bridge Serial Num

Structure ID: 299-0022-0

Ware

SUFF. RATING: 71.52

Location & Geography

Structure ID:	299-0022-0	*104 Highway System:	0	Signs & Attachments	
200 Bridge Information:	06	*26 Functional Classification:	06	225 Expansion Joint Type:	02
*6A Feature Int:	FULLWOOD CREEK	*204 Federal Route Type:	F No: 01051	242 Deck Drains:	1
*6B Critical Bridge:	0	105 Federal Lands Highway:	0	243 Parapet Location:	0
*7A Route No Carried:	SR00158	*110 Truck Route:	0	Height:	0
*7B Facility Carried:	SR 158	2006 School Bus Route:	1	Width:	0
9 Location:	9 MI NW OF WAYCROSS	217 Benchmark Elevation:	0000.00	238 Curb Height:	1
2 Dot District:	5	218 Datum:	0	Curb Material:	1
207 Year Photo:	2011	*19 Bypass Length:	05	239 Handrail:	11
*91 Inspection Frequency:	24 Date: 12/20/2011	*20 Toll:	3	*240 Medium Barrier Rail:	0
92A Fract Crit Insp Freq:	0 Date: 02/01/1901	*21 Maintenance:	01	241 Bridge Median Height:	0
92B Underwater Insp Freq:	0 Date: 02/01/1901	*22 Owner:	01	* Bridge Median Width:	0
92C Other Spc. Insp Freq:	0 Date: 02/01/1901	*31 Design Load:	2	230 Guardrail Loc. Dir., Rear:	3
*4 Place Code:	00000	37 Historical Significance:	5	Fwd:	3
*5 Inventory Route(O/U):	1	205 Congressional District:	01	Oppo. Dir. Rear:	0
Type:	3	27 Year Constructed:	1950	Oppo. Fwd:	0
Designation:	1	106 Year Reconstructed:	0000	244 Approach Slab:	3
Number:	00158	33 Bridge Medium:	0	224 Retaining Wall:	0
Direction:	0	34 Skew:	00	233 Posted Speed Limit:	55
*16 Latitude:	31 17.8322 HMMS Prefix:SR	35 Structure Flared:	0	236 Warning Sign:	0.00
*17 Longitude:	82 -33.4393 HMMS Suffix:00 MP:6.40	38 Navigation Control:	0	234 Delineator:	1.00
98 Border Bridge:	000%Shared:00	213 Special Steel Design:	0	235 Hazzard Boards:	1
99 ID Number:	0000000000000000	267 Type of Paint:	2	237 Utilities Gas:	00
*100 STRAHNET:	0	*42 Type of Service On:	1	Water:	00
12 Base Highway Network:	1	Type of Service Under:	5	Electric:	00
13A LRS Inventory Route:	2991015800	214 Movable Bridge:	0	Telephone:	21
13B Sub Inventory Route:	0	203 Type Bridge:	E	Sewer:	00
101 parallel Structure:	N	259 Pile Encasement	3	247 Lighting Street:	0
*102 Direction of Traffic:	2	*43 Structure Type Main:	4 02	Navigation:	0
*264 Road Inventory Mile Post:	006.40	45 No.Spans Main:	005	Aerial:	0
*208 Inspection Area:	5 Initials: EFP	44 Structure Type Appr:	0 00	*248 County Continuity No.:	00
Engineer's Initials:	sgm	46 No Spans Appr:	0000		
* Location ID No:	299-00158D-006.40E	226 Bridge Curve Horz	0 Vert: 0		
		111 pier Protection	0		
		107 Deck Structure Type:	1		
		108 Wearing Structure Type:	1		
		Membrane Type:	8		
		Deck Protection:	8		



Bridge Inventory Data Listing

Processed Date: 7/14/2013

Parameters: Bridge Serial Num

Structure ID: 299-0022-0

Programming Data

201 Project No: S-0589 (2)
 202 Plans Available: 4
 249 Prop Proj No: 00000000000000000000000000000000
 250 Approval Status: 0000
 251 PI Number: 00000000
 252 Contract Date: 02/01/1901
 260 Seismic No: 00000
 75 Type Work: 34 1
 94 Bridge Imp. Cost: \$527
 95 Roadway Imp. Cost: 53
 96 Total Imp Cost: 791
 76 Imp Length: 000346
 97 Imp Year: 2013
 114 Future ADT: 003345 Year: 2030

Measurements:

*29 ADT 002230 Year: 2010
 109% Trucks: 20
 * 28 Lanes On: 02 Under: 00
 210 No. Tracks On: 00 Under: 00
 * 48 Max. Span Length: 0027
 * 49 Structure Length: 135
 51 Br. Rwdy. Width: 23.90
 52 Deck Width: 30.00
 * 47 Tot. Horiz. Cl: 24
 50 Curb / Sidewalk Width: 2.00 / 2.00
 32 Approach Rdwy. Width: 028
 *29 Shoulder Width: 3.00 Type: 2 Rt: 2.90
 Rear Lt: 2.70 Type: 2 Rt: 3.40
 Fwd. Lt:

Hydraulic Data

215 Waterway Data:
 High Water Elev: 0000.0 Year: 1900
 Flood Elev: 0000.0 Freq: 00
 Avg Streambed Elev: 0000.0
 Drainage Area: 00000
 Area of Opening: 000000
 113 Scour Critical U
 216 Water Depth: 2.5 Br. Height: 17.8
 222 Slope Protection: 6
 221 Slope Protection 0 Fwd: 0
 219 Fender System 0
 220 Dolphin: 0
 223 Current Cover: 000
 Type: 0
 No. Barrels: 0
 * Width: 0.00 Height: 0.00
 * Length: 0 Apron: 0
 265 U/W Insp. Area 0 Diver: ZZZ
 Location ID No: 299-00158D-006.40E

65 Inventory Rating Method: 1
 63 Operating Rating Method: 1
 66 Inventory Type: 2 Rating: 28
 64 Operating Type: 2 Rating: 28
 231 Calculated Loads:
 H-Modified: 21 0
 HS-Modified: 30 0
 Type 3: 22 0
 Type 3s2: 34 0
 Timber: 28 0
 Piggyback: 40 0
 261 H Inventory Rating: 16
 262 H Operating Rating: 28
 67 Structural Evaluation: 6
 58 Deck Condition: 7
 59 Superstructure Condition: 7
 * 227 Collision Damage: 0
 60A Substructure Condition: 7
 60B Scour Condition: 8
 60C Underwater Condition: N
 71 Waterway Adequacy: 8
 61 Channel Protection Cond.: 8
 68 Deck Geometry: 2
 69 UnderClr. Horiz/Vert: N
 72 Appr. Alignment: 8
 62 Culvert: N
Posting Data
 70 Bridge Posting Required: 5
 41 Struct Open, Posted, CL: A
 * 103 Temporary Structure: 0
 232 Posted Loads
 H-Modified: 00
 HS-Modified: 00
 Type 3: 00
 Type 3s2: 00
 Timber: 00
 Piggyback: 00
 253 Notification Date: 02/01/1901
 258 Fed Notify Date: 2/1/1901 12:00:00AM



Bridge Inventory Data Listing

Parameters: Bridge Serial Num

Structure ID: 299-0023-0

Ware

SUFF. RATING: 71.52

Location & Geography

Structure ID:	299-0023-0	*104 Highway System:	0	Signs & Attachments	
200 Bridge Information:	06	*26 Functional Classification:	06	225 Expansion Joint Type:	02
*6A Feature Int:	SATILLA RIVER OVERFLOW	*204 Federal Route Type:	F No: 01051	242 Deck Drains:	1
*6B Critical Bridge:	0	105 Federal Lands Highway:	0	243 Parapet Location:	0
*7A Route No Carried:	SR00158	*110 Truck Route:	0	Height:	0
*7B Facility Carried:	SR 158	2006 School Bus Route:	1	Width:	0
9 Location:	9 MI NW OF WAYCROSS	217 Benchmark Elevation:	0000.00	238 Curb Height:	1
2 Dot District:	5	218 Datum:	0	Curb Material:	1
207 Year Photo:	2011	*19 Bypass Length:	05	239 Handrail:	11
*91 Inspection Frequency:	24 Date: 12/20/2011	*20 Toll:	3	*240 Medium Barrier Rail:	0
92A Fract Crit Insp Freq:	0 Date: 02/01/1901	*21 Maintenance:	01	241 Bridge Median Height:	0
92B Underwater Insp Freq:	0 Date: 02/01/1901	*22 Owner:	01	* Bridge Median Width:	0
92C Other Spc. Insp Freq:	0 Date: 02/01/1901	*31 Design Load:	2	230 Guardrail Loc. Dir. Rear:	3
*4 Place Code:	00000	37 Historical Significance:	5	Fwd:	3
*5 Inventory Route(O/U):	1	205 Congressional District:	01	Oppo. Dir. Rear:	0
Type:	3	27 Year Constructed:	1950	Oppo. Fwd:	0
Designation:	1	106 Year Reconstructed:	0000	244 Approach Slab:	3
Number:	00158	33 Bridge Medium:	0	224 Retaining Wall:	0
Direction:	0	34 Skew:	00	233 Posted Speed Limit:	55
*16 Latitude:	31 17.9842 HMMS Prefix:SR	35 Structure Flared:	0	236 Warning Sign:	0.00
*17 Longitude:	82 -33.5457 HMMS Suffix:00 MP:6.20	38 Navigation Control:	0	234 Delineator:	1.00
98 Border Bridge:	000%Shared:00	213 Special Steel Design:	0	235 Hazzard Boards:	1
99 ID Number:	0000000000000000	267 Type of Paint:	2	237 Utilities Gas:	00
*100 STRAHNET:	0	*42 Type of Service On:	1	Water:	00
12 Base Highway Network:	1	Type of Service Under:	9	Electric:	00
13A LRS Inventory Route:	2991015800	214 Movable Bridge:	0	Telephone:	21
13B Sub Inventory Route:	0	203 Type Bridge:	E	Sewer:	00
101 parallel Structure:	N	259 Pile Encasement:	2	247 Lighting Street:	0
*102 Direction of Traffic:	2	*43 Structure Type Main:	4 02	Navigation:	0
*264 Road Inventory Mile Post:	006.20	45 No.Spans Main:	005	Aerial:	0
*208 Inspection Area:	5 Initials: EFP	44 Structure Type Appr:	0 00	*248 County Continuity No.:	00
Engineer's Initials:	sgm	46 No Spans Appr:	0000		
* Location ID No:	299-00158D-006.20E	226 Bridge Curve Horz	0 Vert: 0		
		111 pier Protection	0		
		107 Deck Structure Type:	1		
		108 Wearing Structure Type:	1		
		Membrane Type:	8		
		Deck Protection:	8		



Bridge Inventory Data Listing

Processed Date: 7/14/2013

Parameters: Bridge Serial Num

Structure ID: 299-0023-0

Programming Data

201 Project No: S-0589 (2)
 202 Plans Available: 4
 249 Prop Proj No: 00000000000000000000000000000000
 250 Approval Status: 0000
 251 PI Number: 00000000
 252 Contract Date: 02/01/1901
 260 Seismic No: 00000
 75 Type Work: 34 1
 94 Bridge Imp. Cost: \$527
 95 Roadway Imp. Cost: 53
 96 Total Imp Cost: 791
 76 Imp Length: 000346
 97 Imp Year: 2013
 114 Future ADT: 003345 Year: 2030

Hydraulic Data

215 Waterway Data:
 High Water Elev: 0000.0 Year: 1900
 Flood Elev: 0000.0 Freq: 00
 Avg Streambed Elev: 0000.0
 Drainage Area: 00000
 Area of Opening: 000000
 113 Scour Critical U
 216 Water Depth: 0.1 Br. Height: 16.5
 222 Slope Protection: 6
 221 Slope Protection 0 Fwd: 0
 219 Fender System 0
 220 Dolphin: 0
 223 Current Cover: 000
 Type: 0
 No. Barrels: 0
 * Width: 0.00 Height: 0.00
 * Length: 0 Apron: 0
 265 U/W Insp. Area 0 Diver: ZZZ
 Location ID No: 299-00158D-006.20E

Measurements:

*29 ADT 002230 Year: 2010
 109% Trucks: 20
 * 28 Lanes On: 02 Under: 00
 210 No. Tracks On: 00 Under: 00
 * 48 Max. Span Length 0027
 * 49 Structure Length: 135
 51 Br. Rwdy. Width 23.90
 52 Deck Width: 30.00
 * 47 Tot. Horiz. Cl: 24
 50 Curb / Sidewalk Width 2.00 / 2.00
 32 Approach Rdwy. Width 028
 *29 Shoulder Width:
 Rear Lt: 3.00 Type: 2 Rt: 2.30
 Fwd. Lt: 3.30 Type: 2 Rt: 2.60

65 Inventory Rating Method: 1
 63 Operating Rating Method: 1
 66 Inventory Type: 2 Rating: 28
 64 Operating Type: 2 Rating: 28
 231 Calculated Loads:
 H-Modified: 21 0
 HS-Modified: 30 0
 Type 3: 22 0
 Type 3s2: 34 0
 Timber: 28 0
 Piggyback: 40 0
 261 H Inventory Rating: 16
 262 H Operating Rating 28
 67 Structural Evaluation: 6
 58 Deck Condition: 7
 59 Superstructure Condition: 7
 * 227 Collision Damage: 0
 60A Substructure Condition: 7
 60B Scour Condition: 8
 60C Underwater Condition N
 71 Waterway Adequacy: 8
 61 Channel Protection Cond.: 8
 68 Deck Geometry: 2
 69 UnderClr. HorzVert: N
 72 Appr. Alignment: 8
 62 Culvert: N
Posting Data
 70 Bridge Posting Required 5
 41 Struct Open, Posted, CL: A
 * 103 Temporary Structure: 0
 232 Posted Loads
 H-Modified: 00
 HS-Modified: 00
 Type 3: 00
 Type 3s2: 00
 Timber: 00
 Piggyback 00
 253 Notification Date: 02/01/1901
 258 Fed Notify Date: 2/1/1901 12:00:00AA



Bridge Inventory Data Listing

Parameters: Bridge Serial Num

Structure ID: 299-0024-0

Ware

SUFF. RATING: 49.18

Location & Geography

Structure ID:	299-0024-0	*104 Highway System:	0	Signs & Attachments	
200 Bridge Information:	06	*26 Functional Classification:	06	225 Expansion Joint Type:	03
*6A Feature Int:	SATILLA RIVER	*204 Federal Route Type:	F No: 01051	242 Deck Drains:	1
*6B Critical Bridge:	0	105 Federal Lands Highway:	0	243 Parapet Location:	0
*7A Route No Carried:	SR00158	*110 Truck Route:	0	Height:	0
*7B Facility Carried:	SR 158	2006 School Bus Route:	1	Width:	0
9 Location:	9 MI NW OF WAYCROSS	217 Benchmark Elevation:	0000.00	238 Curb Height:	1
2 Dot District:	5	218 Datum:	0	Curb Material:	1
207 Year Photo:	2013	*19 Bypass Length:	05	239 Handrail:	11
*91 Inspection Frequency:	24 Date: 11/15/2011	*20 Toll:	3	*240 Medium Barrier Rail:	0
92A Fract Crit Insp Freq:	1 Date: 03/19/2013	*21 Maintenance:	01	241 Bridge Median Height:	0
92B Underwater Insp Freq:	1 Date: 01/14/2013	*22 Owner:	01	* Bridge Median Width:	0
92C Other Spc. Insp Freq:	2 Date: 11/15/2011	*31 Design Load:	2	230 Guardrail Loc. Dir. Rear:	3
*4 Place Code:	00000	37 Historical Significance:	5	Fwd:	3
*5 Inventory Route(O/U):	1	205 Congressional District:	01	Oppo. Dir. Rear:	0
Type:	3	27 Year Constructed:	1950	Oppo. Fwd:	0
Designation:	1	106 Year Reconstructed:	0000	244 Approach Slab:	3
Number:	00158	33 Bridge Medium:	0	224 Retaining Wall:	0
Direction:	0	34 Skew:	00	233 Posted Speed Limit:	55
*16 Latitude:	31 18.17 HMMS Prefix:SR	35 Structure Flared:	0	236 Warning Sign:	0.00
*17 Longitude:	82 -33.6752 HMMS Suffix:00 MP:5.90	38 Navigation Control:	0	234 Delineator:	1.00
98 Border Bridge:	000%Shared:00	213 Special Steel Design:	6	235 Hazzard Boards:	1
99 ID Number:	0000000000000000	267 Type of Paint:	2	237 Utilities Gas:	00
*100 STRAHNET:	0	*42 Type of Service On:	1	Water:	00
12 Base Highway Network:	1	Type of Service Under:	5	Electric:	00
13A LRS Inventory Route:	2991015800	214 Movable Bridge:	0	Telephone:	32
13B Sub Inventory Route:	0	203 Type Bridge:	0	Sewer:	00
101 parallel Structure:	N	259 Pile Encasement:	3	247 Lighting Street:	0
*102 Direction of Traffic:	2	*43 Structure Type Main:	4 02	Navigation:	0
*264 Road Inventory Mile Post:	005.90	45 No.Spans Main:	019	Aerial:	0
*208 Inspection Area:	5 Initials: EFP	44 Structure Type Appr:	0 00	*248 County Continuity No.:	00
Engineer's Initials:	JTB	46 No Spans Appr:	0000		
* Location ID No:	299-00158D-005.90E	226 Bridge Curve Horz	0 Vert: 0		
		111 pier Protection	0		
		107 Deck Structure Type:	1		
		108 Wearing Structure Type:	1		
		Membrane Type:	8		
		Deck Protection:	8		



Bridge Inventory Data Listing

Processed Date: 7/14/2013

Parameters: Bridge Serial Num

Structure ID: 299-0024-0

Programming Data

201 Project No: S-0589 (2)
 202 Plans Available: 1
 249 Prop Proj No: 00000000000000000000000000000000
 250 Approval Status: 0000
 251 PI Number: 00000000
 252 Contract Date: 02/01/1901
 260 Seismic No: 00000
 75 Type Work: 31 1
 94 Bridge Imp. Cost: \$1,970
 95 Roadway Imp. Cost: 217
 96 Total Imp Cost: 2534
 76 Imp Length: 000855
 97 Imp Year: 1990
 114 Future ADT: 003480 Year: 2031

Hydraulic Data

215 Waterway Data:
 High Water Elev: 0000.0 Year: 1900
 Flood Elev: 0000.0 Freq: 00
 Avg Streambed Elev: 0000.0
 Drainage Area: 00000
 Area of Opening: 000000
 113 Scour Critical U
 216 Water Depth: 15.3 Br. Height: 19.5
 222 Slope Protection: 6
 221 Slope Protection 0 Fwd: 0
 219 Fender System 0
 220 Dolphin: 0
 223 Current Cover: 000
 Type: 0
 No. Barrels: 0
 * Width: 0.00 Height: 0.00
 * Length: 0 Apron: 0
 265 U/W Insp. Area 1 Diver: WSR
 Location ID No: 299-00158D-005.90E

Measurements:

*29 ADT 002320 Year: 2011
 109% Trucks: 0
 * 28 Lanes On: 02 Under: 00
 210 No. Tracks On: 00 Under: 00
 * 48 Max. Span Length 0080
 * 49 Structure Length: 644
 51 Br. Rwdy. Width 23.60
 52 Deck Width: 30.00
 * 47 Tot. Horiz. Cl: 24
 50 Curb / Sidewalk Width 2.00 / 2.00
 32 Approach Rdwy. Width 027
 *29 Shoulder Width:
 Rear Lt: 3.00 Type: 2 Rt: 2.50
 Fwd. Lt: 2.80 Type: 2 Rt: 2.30
 Permanent Width:
 Rear: 22.00 Type: 2
 22.00 Type: 2
 Intersection Rear: 0 Fwd: 0
 36 Safety Features Br. Rail: 2
 Transition: 2
 App. G. Rail: 1
 App. Rail End: 2
 53 Minimum Cl. Over: 99' 99"
 Under:
 *228 Minimum Vertical Cl
 Act. Odm Dir: 99' 99"
 Oppo. Dir: 99' 99"
 Posted Odm. Dir: 00' 00"
 Oppo. Dir: 00' 00"
 55 Lateral Undercl. Rt: N 0 0
 56 Lateral Undercl. Lt: 0 00
 *10 Max Min Vert Cl: 99' 99" Dir: 0
 39 Nav Vert Cl: 000 Horiz: 0000
 116 Nav Vert Cl Closed: 000
 245 Deck Thickness Main Deck Thick Approach: 8.00
 246 Overlay Thickness: 0.00
 212 Year Last Painted: Sup: 1999 Sub: 1999

65 Inventory Rating Method: 1
 63 Operating Rating Method: 1
 66 Inventory Type: 2 Rating: 20
 64 Operating Type: 2 Rating: 20
 231 Calculated Loads:
 H-Modified: 21 0
 HS-Modified: 27 0
 Type 3: 24 0
 Type 3s2: 30 0
 Timber: 29 0
 Piggyback: 32 0
 261 H Inventory Rating: 11
 262 H Operating Rating: 19
 67 Structural Evaluation: 5
 58 Deck Condition: 5
 59 Superstructure Condition: 5
 * 227 Collision Damage: 0
 60A Substructure Condition: 5
 60B Scour Condition: 7
 60C Underwater Condition: 6
 71 Waterway Adequacy: 8
 61 Channel Protection Cond.: 7
 68 Deck Geometry: 2
 69 UnderClr. Horz/Vert: N
 72 Appr. Alignment: 8
 62 Culvert: N
Posting Data
 70 Bridge Posting Required: 5
 41 Struct Open, Posted, CL: A
 * 103 Temporary Structure: 0
 232 Posted Loads
 H-Modified: 00
 HS-Modified: 00
 Type 3: 00
 Type 3s2: 00
 Timber: 00
 Piggyback: 00
 253 Notification Date: 02/01/1901
 258 Fed Notify Date: 2/1/1901 12:00:00AA

ATTACHMENT #7 – CONCEPTUAL LEVEL
PAVEMENT DESIGN

Flexible Pavement Design Analysis

PI Number	0011688	County(s)	Ware
Project Number		Design Name	SR 158 at Satilla River
Project Description	SR 158 at Satilla River, Satilla River Overflow, and Fullwood Creek		

Traffic Data (AADTs are one-way)					Miscellaneous Data		
Initial Design Year	2018	Initial AADT, VPD	2,380	24 Hour Truck %	25.30	Lanes in one direction	1
Final Design Year	2038	Final AADT, VPD	2,630	SU Truck %		Curb & Gutter/Barrier	No
		Mean AADT, VPD	2,505	MU Truck %			

Design Data					
Lane Distribution Factor (%)	100.00	Soil Support Value	4.00	Single Unit ESAL	0.40
Terminal Serviceability Index	2.50	Regional Factor	1.60	Multiple Unit ESAL	1.50
		User Defined 18-KIP ESAL	0.84	Calculated 18-KIP ESAL	0.00
Non-Standard Value Comment					

Design Loading (User Provided 18-KIP ESAL Factor)					
Mean AADT, VPD	LDF (%)	Vehicle Type	Volume (%)	ESAL Factor	Daily ESAL
2,505	100.00	24 Hour Truck	25.30	0.84	533
Total Design Period ESALs					3,890,900

Proposed Flexible Full Depth Pavement Structure				
Course	Material	Thickness (inches)	Structural Coefficient	Structural Value
Course 1	12.5 mm Superpave	1.50	0.4400	0.66
Course 2	19 mm Superpave	2.00	0.4400	0.88
Course 3	25 mm Superpave	1.00	0.4400	0.44
		3.00	0.3000	0.90
Course 4	Graded Aggregate Base	8.00	0.1600	1.28
Required SN	4.59	Proposed pavement is 9.37% Underdesigned		Proposed SN
				4.16

Design Remarks	Three bridge replacement projects
-----------------------	-----------------------------------

Prepared By _____ 1/6/2015 9:56 AM

RS&H Inc. Date

Recommended By _____

Consultant Design Phase Leader Date

Approved By _____

State Pavement Engineer Date

ATTACHMENT #8 – ENVIRONMENTAL
ASSESSMENT PHASE 1 REPORT –
RECOMMENDATION

9.0 CONCLUSIONS

We have performed a *Phase I Environmental Site Assessment* in conformance with the scope and limitations of ASTM Practice E 1527 for the SR 158 bridge replacement project beginning just southeast of the intersection with Telmore-Dixie Union Road and ending just northwest of the intersection with Elias Lane in Millwood, Ware County, Georgia. Any exceptions to, or deletions from, this practice are described in Section 10.0 of this report.

This assessment has revealed the following evidence of RECs in connection with the Site. Two RECs were identified during the site reconnaissance, review of regulatory databases, interviews and/or file reviews performed by Ranger personnel.

- Nina Harrison property located at 5171 Douglas Highway, operated as a gas station in the 1950s and is currently operating as a mechanic shop for engine service and transmission work. According to Mr. Harrison the underground storage tanks were removed prior to his acquisition of the property in 1976. This property is considered a REC.
- Herbert R. Wilson property located at 5990 Satilla Riverview Lane formerly functioned as a church. Currently the block building is utilized as a hobby shop and personal garage for his personal automobiles and farm equipment. The remaining property is utilized for farming. This property is considered a REC.

Ranger recommends conducting a Limited Subsurface Investigation including soil and groundwater sampling based on the identification of the above mentioned RECs. The potential for vapor encroachment exists; however, vapor encroachment is not anticipated to negatively impact the current or intended use of the Site. No further action is recommended at this time regarding vapor encroachment at the Site.

ATTACHMENT #9 – MINUTES OF
CONCEPT MEETING

Meeting Minutes	
Project:	SR 158 At Satilla River Bridge, Satilla River Overflow Bridge, and Fullwood Creek Bridge Replacements PI No. 011688 - Ware County
Meeting called by:	Albert Shelby / Aghdas Ghazi
Type of meeting:	Initial Team Concept Meeting
Attendees:	Aghdas Ghazi – GDOT Office of Program Delivery Matt Bennett – GDOT Office of Program Delivery Bryan Czech – GDOT District 5 Area Engineer Trevor Brown – GDOT District 5 Assistant Area Engineer John Royal – GDOT District 5 Utility Jeff VanDyke – RS&H, Inc. Johnny Lee – RS&H, Inc. Mike Lewis – RS&H, Inc. Jill Brown – Edwards-Pitman Environmental, Inc. Zach Adriaenssens – GDOT Bridge Design (via teleconference) Stan Resis – GDOT Planning (via teleconference)
Date:	January 29, 2015
Time:	1:00 p.m. to 3:30 p.m.
Site:	District 5 Area 2 Office 104 North Nichols Street Waycross, GA. 31051
Agenda	
See attached agenda.	

Meeting Minutes:

Purpose of Meeting

The meeting was requested as required by the Department's Plan Development Process to discuss the draft concept report and any issues pertaining to the development of the project design.

Welcome, Introductions, Project Identification, and Schedule

Aghdas Ghazi introduced herself and welcomed the attendees.

- The attendees (including those attending via teleconference) introduced themselves.
- The current project schedule is as follows:
 - Construction – June 2018

Project Description, Design Information, and Concept Review General Discussion

Jeff VanDyke led the group discussion of the project description, design information, and concept review.

- Planning and Background
 - Project Location & General Description – The project is located in Ware County on SR 158 and consists of replacing 3 bridges. Some original programming documents may only have one bridge, Satilla River, and the project length for one bridge.
 - Project Justification – The project justification was prepared by the Bridge Maintenance office and is included with the Concept Report. In general, the bridges are nearing their life expectancy and are scheduled for replacement.
 - Other Projects in the Area – There are no projects in the area in the vicinity of this project.
 - Traffic Volumes – The traffic Volumes are projected at 2380 AADT (2018) and projected to slowly increase to 2630 AADT (2038). 24 Hour Truck are just over 25%.
 - Accident History – A review of traffic crashes did not reveal areas of concern.
 - Functional Classification – Rural Minor Arterial
- Design and Structural
 - Alternatives Discussion – Several alternates were studied by the design team; detour the roadway and build the replacement bridges in their current location, build replacement bridges in clear to left of the current alignment, build replacement bridges in the clear to the right of the current alignment. The preferred alternate is to build the replacement bridges in their current location and utilize an off-site detour. This alternative is a good balance of environmental impacts, right of way cost, utility cost, and construction cost.
 - Satilla River Bridge – The group briefly discussed a single span over Satilla River instead of two span to reduce impacts. The option was not pursued due to the long span requiring more expensive steel beams. In addition, the road would have to be raised to accommodate the greater steel beam depth. Raising the road would likely increase environmental impacts.
 - Satilla River and Fullwood Creek – Preliminary Bridge Layout for Satilla River Overflow and Fullwood Creek
 - Proposed – 3 span of 50 feet
 - Existing – 5 spans of 27 feet
 - Off-Site Detour
 - The District noted that the preferred alternative would require early coordination with local officials and agencies due to the detour. A letter needs to send out to for the coordination with local Emergency Management Agencies, County Commissioners, and school officials to seek their input on the detour.
 - The Area Office noted that the off-site detour for the preferred alternative should consider forest fire evacuation around area of US 82/SR 520.
 - The off-detour would need to be in place 18 to 24 months minimum.

- A Public Information open house to discuss the detour will be required.
- The Design Team discussed the potential off-site detour options. The District noted that the detour should be measured from a person adjacent to the detour wanting to travel to the other side for the detour to give a worst case distance.
- Boat Ramp at Satilla River – The existing “boat” ramp into the river is not a DNR as boat ramp. The ramp appears to be homemade of asphalt millings on the right of way. It is not likely permitted. The ramp is popular with local fisherman.
- Property Access During Construction – ZA Music Farm owns timber property between the bridges. There are two existing access point for ZA Music Farm property on east and west side of SR 158.
 - The first access point is to the east between Satilla River and Satilla Overflow bridges and provides access into area land around an oxbow. This access is consist of sand and may not be a permitted driveway. The District requested the Design Team to contact the owner and inquire about access needs during construction.
 - The second access point is to the west of SR 158. It also consists of sand driveway that is not likely permitted. There are multiple access points off Vic Davis Road to this portion of the ZA Music Farm property. Access to this area from SR 158 during construction should not be an issue due to the access from Vic Davis Road.
- Design Exceptions – No design variances or exceptions are anticipated on the project
- Public Interest Determination – This project is not a likely to be eligible for public utility relocation costs. However, the District Utility Office needs to confirm based on the policy matrix.
- Utilities – Utility owners with facilities on the project are: Satilla EMC, Bellsouth/AT&T, Alma Telephone, and USGS
- Environmental Discussion – Jill Brown led the discussion of environmental features of the project:
 - Ecological surveys have begun. Additional surveys will need to be done in the spring due to seasonal limitations. History and archeological surveys have begun. Resources have been plotted on the Concept Layouts.
 - Anadromous fish are potentially present and coordination with National Marine Fisheries (NMF) will be required. The coordination process is lengthy.
 - The anticipated level of environmental analysis is Categorical Exclusion (CE).
 - Environmental impacts are in the range of a USACE Section 404 Nationwide or Regional permit. However, an Individual Permit (IP) is anticipated due to the presence of anadromous fish. The IP will require a Practical Alternatives Report (PAR). There is a potential for an IP and PAR waiver, but the process needs to be verified. ***See attached Concept Team Meeting Follow Up Conference Call Notes for further clarification on the issue.***
 - Work Bridges will be required to access all three bridge sites during construction. The bridges will be included will all environmental documentation.
 - The ZA Music Farm property does appear to be eligible for the Historic

- Register and a boundary has been added to the Concept layouts. The History Report has not been approved or received concurrence from the State Historic Preservation Office (SHPO).
- Gopher Tortoises burrows are presents near the southeastern project terminus. The preferred alternative does not impact this area.
 - The environmental process will include public outreach.
 - The RS&H team completed the Environmental Phase 1 (UST) study. There is one property near the preferred alternative project limit that is recommended for further Phase 2 testing. This property was used for automobiles and farm equipment shop. The preferred alternative does not appear to need right of way from the parcels. GDOT Office of Materials and Research has concurred with the recommendation for additional testing. It is not clear at this time what will happen if contaminants are encountered.
 - Need for Concept Team Meeting – The group discussed the need for an additional Concept Team Meeting due to the detail of the current Concept. GDOT staff that an additional meeting would likely be need to clear up the environmental uncertainty about the IP and PAR. ***See attached Concept Team Meeting Follow Up Conference Call Notes for further clarification. The waiver issue has been resolved and the project can progress into the Preliminary Plans Phase.***
 - Project Risk Discussion:
 - Utilities Office – There will be utility impacts including the utilities on the bridge.
 - Environmental
 - Public reaction to off-site detour.
 - Archeology work is not complete, but background research screening does not show any sites.
 - Soil contamination at garage site.
 - Construction / Area Office
 - Work bridges at all three sites
 - Working room for cranes with overhead utilities
 - Off Site detour during fire season
 - Office of Program Delivery
 - Impacts of work bridges to environmental documentation
 - Boat ramp
 - Design Team – Satilla River Bridge Span lengths over 250 feet.

Adjourn

The meeting was adjourned at approximately 3:30 p.m.

Attachment:

Agenda

Sign In Sheets

Concept Team Meeting Follow Up conference Call Notes

- d. Utility and Property
 - Utilities on Project
 - Public Interest Determination Policy
 - Right of Way Costs
 - Number of displacements
 - Business
 - Residential
 - e. Environmental & Permits
 - Anticipated Document
 - MS4 Permit Compliance
 - Permits required
 - PAR
 - Environmental Comments
 - NEPA
 - Ecology
 - History
 - Archeology
 - Air Quality
 - Noise Effects
 - Public Involvement
 - f. Construction
 - Staging
 - Work Bridge
 - g. Coordination Activities, Responsibilities, and Costs
 - Coordination to Date
 - Project Cost
 - h. Alternatives Discussion
 - i. Need for Concept Team Meeting
6. Comments/questions (from attendees in the following order) – Aghdas Ghazi, GDOT
- a. Local Government Officials
 - State
 - County
 - City
 - b. Urban Design (Office Head & Assistant)
 - c. FHWA (if FOS)
 - d. Planning
 - e. Programming/Financial Management
 - f. Engineering Services
 - g. Traffic Safety & Design
 - h. Environmental
 - i. District Preconstruction, Scheduling & Traffic Safety & Design
 - j. Right of Way
 - k. GDOT Utilities
 - l. Individual Utility Companies (in attendance)
 - m. Other attendees

GEORGIA DEPARTMENT OF TRANSPORTATION

MEETING/CONFERENCE RECORD OF ATTENDEES

PURPOSE: ICTM -PI# 0011688

LOCATION: Area Office, Waycross, GA 31501.

DATE: 1/29/2015 **TIME:** 1:00 PM

MODERATOR: Aghdas Ghazi _____

If you are a GDOT employee, and have a standard email address of the form:

firstname.lastname@dot.state.ga.us
please omit.

NAME	ORGANIZATION	PHONE NO.	E-MAIL ADDRESS
1. Aghdas Ghazi	OPD-GDOT	912-271-7027	aghazi@dot.ga.gov
2. Jeff VanDyke	RS&H	678-525-7234	jeff.vandyke@rsandh.com
3. Johnny Lee	RS&H	678-525-7200	Johnny.Lee@rsandh.com
4. Jill Brown	Edwards-Pitman	770-333-9484	jbrown@edwards-pitman.com
5. John Royal	GDOT DSUtil	912-530-4405	
6. Matt Bennett	OPD-GDOT	912-271-7404	MABENNETT@GDOT.GA.GOV
7. Michael Lewis	RS&H	678-528-7200	mike.lewis@rsandh.com
8. Zech Adrianssens	GDOT	By Phone	
9. Henry ^{Stan} Rosis	GDOT	By Phone	
10. Trevor Brown	GDOT	912-285-6009	trbrown@dot.ga.gov
11. BAYAN CZECH	GDOT	912-285-6009	bczech@dot.ga.gov
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VanDyke, Jeff

From: VanDyke, Jeff
Sent: Friday, February 06, 2015 11:08 AM
To: aghazi@dot.ga.gov; Bennett, Matt
Cc: Lee, Johnny; jbrown@edwards-pitman.com; VanDyke, Jeff
Subject: 0011688 SR 158 at the Satilla River - Concept Team Meeting Follow Up Conference Call Notes
Attachments: Anadromous Fish Waiver Coordination Protocol.doc

All

Here are my notes from this morning's conference call:

Attendees:

Matt Bennett – GDOT
Johnny Lee – RS&H
Jeff VanDyke – RS&H

Purpose

Discuss RS&H Team environmental coordination since the Concept Team meeting on January 29, 2015 and confirm direction for moving project forward.

Discussion:

- At the Concept Meeting, there was a discussion concerning that a Section 404 Individual Permit (IP) would be required for the project due to the potential for anadromous fish and National Marine Fisheries Services (NMFS) coordination. An IP will also require a Practical Alternative Report (Par). RS&H's environmental sub-consultant, Edwards-Pitman, has been coordinating with Office of Environment (OES) concerning the details of an exemption for the IP. Exemptions are given when certain conditions are met. See email below and attached Coordination Protocol Document.
- After checking the concept level environmental impacts for all alternatives, the SR 158 at Satilla River project is well below the threshold for a Nationwide 23 permit. Therefore, the project is a good candidate for an exemption and, as noted in the email below, we can assume the project will not require an IP or PAR.
- Two of the items required for the exemption request are Section 7 Concurrence and Draft plans:
 - Due to seasonal ecological survey requirements, the Section 7 Concurrence will not be completed until summer / fall. Note: After the conference call, NMFS review is still part of the Section 7 Concurrence.
 - Draft Plans will require more detail than concept level. The design team will develop the plans in the Preliminary Plans phase.
- The project should move forward with the preferred alternative.

Action Items

- RS&H
 - Complete Concept Meeting Minutes including notes about latest environmental information.
 - Complete Concept Report and submit to GDOT for review and approval. Includes notes about the anticipated exemption for the IP and PAR.
- GDOT
 - Issue NTP for Public Involvement Phase and Preliminary Plans Phase after Concept Report Submission.

Thank you and please let me know if you have any questions.

Jeff VanDyke, PE

Senior Project Manager

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Atlanta, GA 30308

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From: Jill Brown [mailto:jbrown@edwards-pitman.com]
Sent: Wednesday, February 04, 2015 2:44 PM
To: Lee, Johnny; VanDyke, Jeff
Cc: Susan Thomas; 'Rick Filer'
Subject: 0011688 IP Exemption Request

Hi Johnny and Jeff,

Zach Adriaenssens, the GDOT NEPA Specialist on the SR 158 project, checked in with their ecology manager about requesting the waiver for anadromous fish so that the USACE IP and PAR would not be required. Zach was able to provide some further guidance (attached) that indicates that the environmental and design processes need to be further along before the waiver can be requested – specifically, we'll need to attach draft plans and the Section 7 concurrence letter to the waiver request.

The conclusion for how to move forward was that, because GDOT has never been denied a waiver, we can assume that an IP and PAR will not be required (see below) as long as we can keep the waters impacts below the Nationwide Permit thresholds.

So you'll have the thresholds handy, here are the maximum limits for a Nationwide Permit 23.
Streams – 500 linear feet per crossing, maximum of 1,500 feet total for the project
Wetlands – 1.5 acres per crossing, maximum of 10 acres total for the project

Please let us know if you have any questions. Thanks!

Jill Brown
Edwards-Pitman Environmental, Inc.
(770) 333-9484

From: Adriaenssens, Zachary N [mailto:ZAdriaenssens@dot.ga.gov]
Sent: Wednesday, February 04, 2015 1:07 PM
To: Jill Brown
Subject: Doug's Final Word

Doug says that for the purposes of the Concept Report we can safely assume neither a PAR nor an IP is needed. He's said that this is a relatively common thing.

Thanks,

ATTACHMENT #10 – Potential Detour Routes

LEGEND

DETOUR OPTION 1



DETOUR OPTION 2



PI 0011688

CONCEPT DETOUR PLAN



1-29-2015

