

**DEPARTMENT OF TRANSPORTATION  
STATE OF GEORGIA**

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

**FILE** P.I. # 0007042 **OFFICE** Design Policy & Support  
CSBRG-0007-00(042)  
Macon County  
GDOT District 3 - Thomaston **DATE** 5/28/2015  
Bridge Replacement: SR 128 at  
Whitewater Creek 4 Miles North of  
Oglethorpe - TIA

**FROM**  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  
Darryl VanMeter, State Innovative 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  
Lee Upkins, State Utilities Engineer  
Richard Cobb, Statewide Location Bureau Chief  
Michael Presley, District Engineer  
Dan Pass, District Preconstruction Engineer  
Kerry Gore, District Utilities Engineer  
Kelvin Mullins, Project Manager  
BOARD MEMBER - 2nd Congressional District

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

Project Type:	<u>Bridge Replacement</u>	P.I. Number:	<u>0007042</u>
GDOT District:	<u>3</u>	County:	<u>Macon</u>
Federal Route Number:	<u>N/A</u>	State Route Number:	<u>128</u>
	Project Number:	<u>CSBRG-0007-00(042)</u>	

S.R. 128 over Whitewater Creek Bridge Replacement - TIA

**Submitted for approval:**

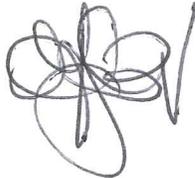
<u>Mark Wilkinson</u> Mark Wilkinson, P.E., American Engineers, Inc.	<u>3/27/2015</u> Date
<u>Kel H. Mullins</u> GDOT TIA Regional Coordinator	<u>03/30/2015</u> Date
<u>Michael D. Deane</u> State TIA Administrator	<u>4/1/2015</u> Date

**Recommendation for approval:**

* <u>HIRAL PATEL</u> State Environmental Administrator	<u>4/20/2015</u> Date
* <u>ANDREW HEATH</u> State Traffic Engineer	<u>4/6/2015</u> Date
* <u>LISA MYERS</u> Project Review Engineer	<u>4/3/2015</u> Date
* <u>YOLONDA PRIDE-FOSTER</u> State Utilities Engineer	<u>4/16/2015</u> Date
<i>for</i> * <u>THOMAS HOWELL</u> District Engineer	<u>4/3/2015</u> Date
* <u>BEN KABUN</u> State Bridge Engineer	<u>5/4/2015</u> Date

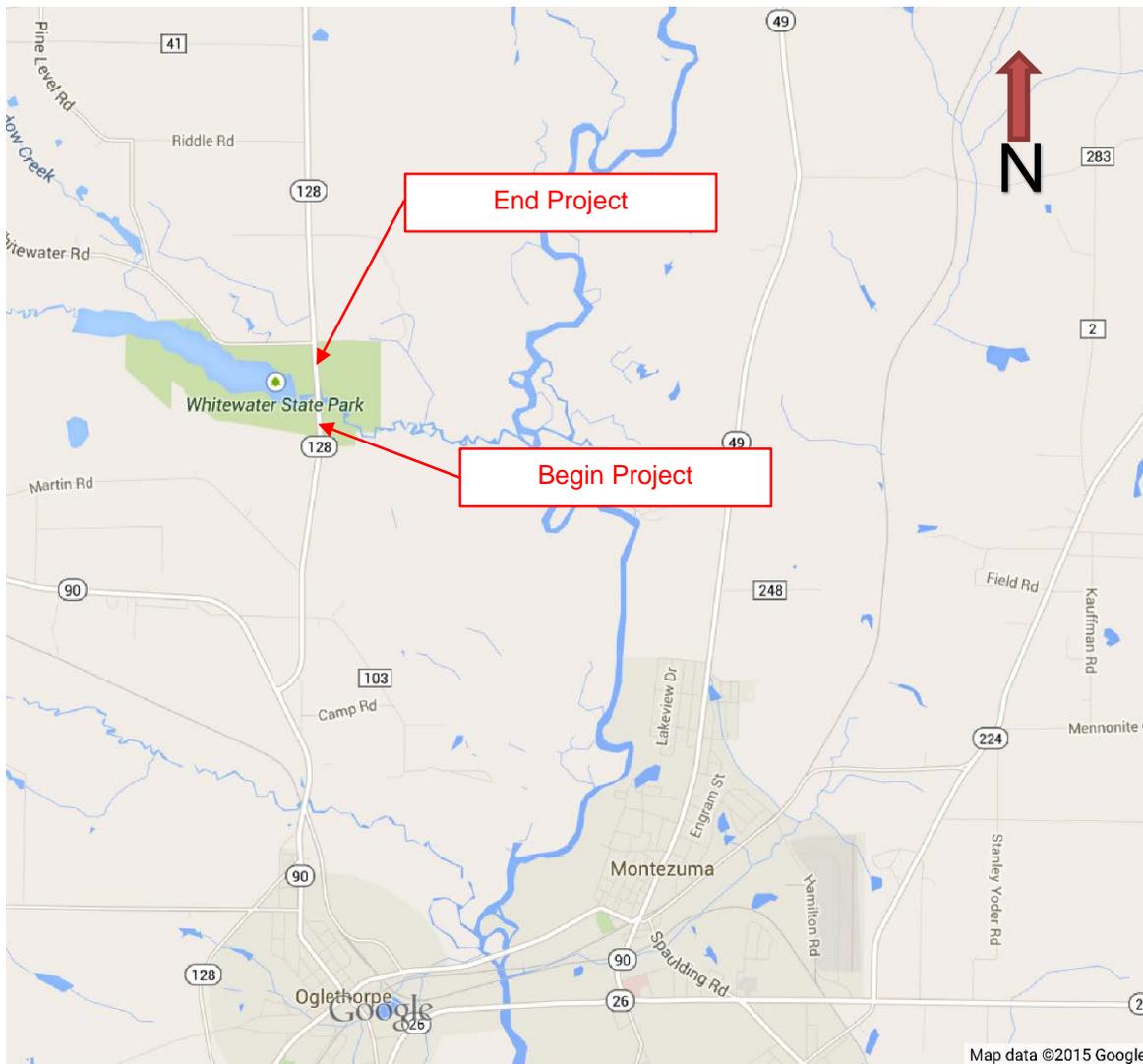
- MPO Area: This project is consistent with the MPO adopted Regional Transportation Plan (RTP)/Long Range Transportation Plan (LRTP).
- Rural Area: This project is consistent with the goals outlined in the Statewide Transportation Plan (SWTP) and/or is included in the State Transportation Improvement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

* <u>CYNTHIA L. VANDYKE</u> State Transportation Planning Administrator	<u>4/7/2015</u> Date
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\* RECOMMENDATIONS ON FILE - 

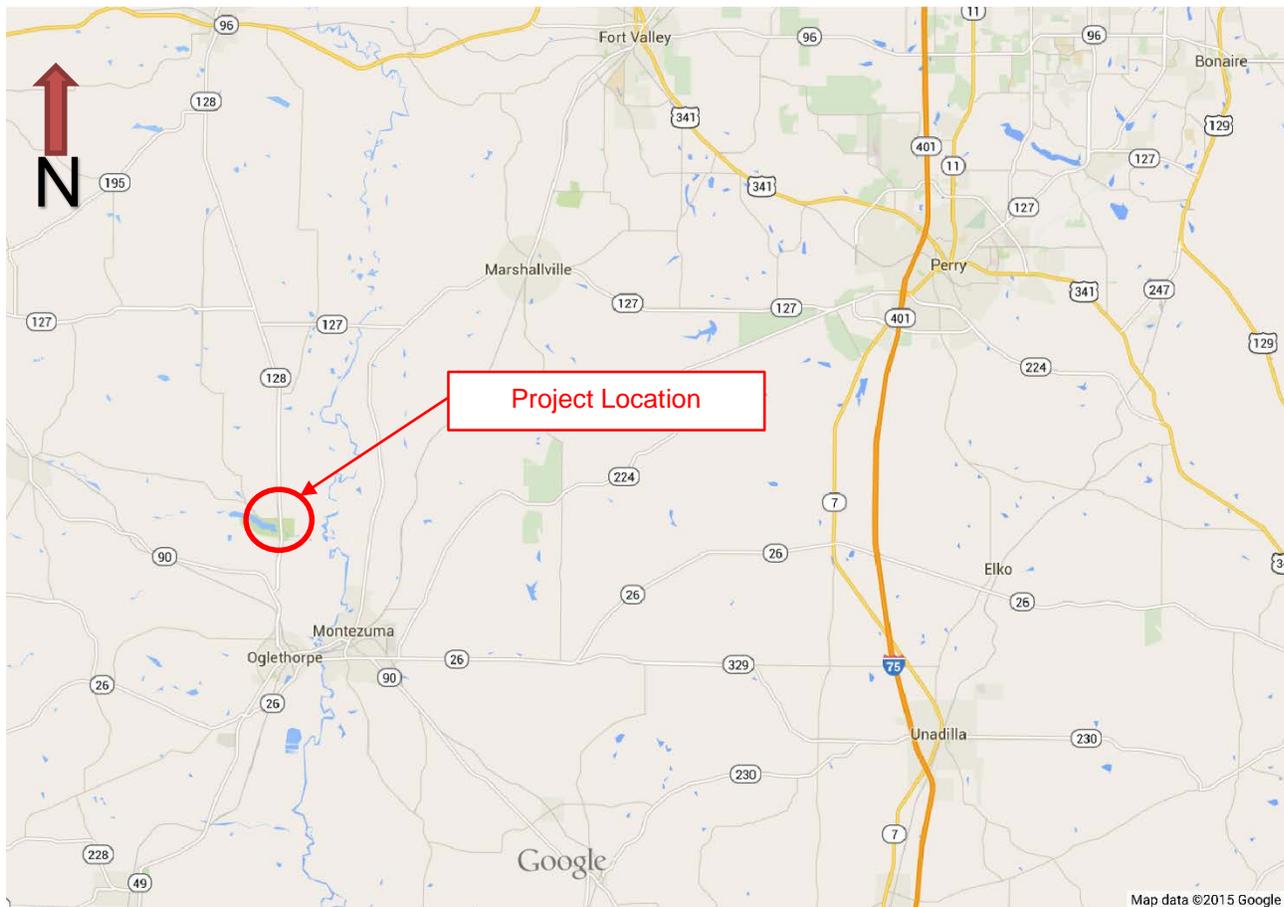
County: Macon

### PROJECT LOCATION MAP #1



County: Macon

### PROJECT LOCATION MAP #2



County: Macon

## PLANNING AND BACKGROUND

### Project Justification Statement:

The bridge on SR 128 over Whitewater Creek, Structure ID 193-0025-0, was constructed in 1937. The bridge consists of eight spans of reinforced concrete deck girders (RCDG) and three spans of steel beams on concrete caps on concrete columns. This bridge was designed using an H-15 vehicle, which is below the current design standards. The bridge is classified as structurally deficient and the overall condition of this bridge would be classified as fair to poor. The deck is in poor condition with significant cracking and spalling. Cracking in the deck extends through the slab with efflorescence noted. The RCDG's are in fair condition showing random cracking along the bottom and sides of the beams with some minor spalling noted on two beams. The substructure is in fair condition with moderate concrete deterioration consisting of cracking and spalling of the concrete caps. Due to the structural integrity of the bridge, replacement of the structure is recommended.

**Existing conditions:** At the Bridge approaches, SR 128 is a two-lane rural highway with 10-foot travel lanes, approximately 8-foot outside shoulders (2-foot paved), and no median. The travel lanes widen to 11-foot each at the existing bridge with 1.5-foot shoulders.

**Other projects in the area:** The proposed project is not associated with any other construction project in the area.

MPO: N/A

TIP #:N/A

TIA Regional Commission: River Valley RC RC08-000035

Congressional District(s): 2

**Federal Oversight:**  PoDI  Exempt  State Funded  Other (TIA)

**Projected Traffic:** AADT 24 HR T: 21.25 %

Current Year (2015): 1550 Open Year (2020): 1750 Design Year (2040): 2200

Traffic Projections Performed by: GDOT Office of Planning

**Functional Classification (Mainline):** Rural Minor Arterial

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

Warrants met:  None  Bicycle  Pedestrian  Transit

**Pedestrian** – Though the project is in the vicinity of Whitewater Creek Park, this project utilizes a rural shoulder and there are no existing or planned pedestrian facilities to tie to.

**Bicycle** – Though this project is in the vicinity of Whitewater Creek Park, this project does not meet the standard for accommodation due the project being a bridge replacement and minimal work is being proposed along the roadway approaches. The shoulders along the proposed bridge would be able to accommodate bicycles.

**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 project is a TIA project with blended funding and is located approximately 4 miles north of Oglethorpe in Macon County. The project is approximately 0.2 miles in length and consist of replacing the structurally deficient bridge on SR 128 over Whitewater Creek including the approaches. It is

County: Macon

recommended to use 12-foot travel lanes on the approaches and the bridge due to the high volume of truck traffic. The project proposes closing the road at the existing bridge and providing an offsite detour around the construction.

**Major Structures:**

Structure	Existing	Proposed
Structure ID 193-0025-0 SR128 Bridge over Whitewater Creek	450' long, two 11' lanes and 1.5' shoulders, sufficiency rating of 40.57	Permanent Bridge – 610' long, two 12' lanes and 8' shoulders

**Mainline Design Features: SR 128, Rural Minor Arterial**

Feature	Existing	Standard*	Proposed
<b>Typical Section</b>			
- Number of Lanes	2	2	2
- Lane Width(s)	10-ft	11-12-ft	12-ft
- Median Width & Type	N/A	N/A	N/A
- Outside Shoulder or Border Area Width	8-ft (2-ft paved)	10-ft (4-ft paved)	10-ft (4-ft paved)
- Outside Shoulder Slope	6%	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	55 mph
Design Speed	55 mph	55 mph	55 mph
Min Horizontal Curve Radius	5700-ft	1060-ft	1060-ft
Maximum Superelevation Rate	2% (RC)	6-8%	6%
Maximum Grade	3.4%	4%	4%
Access Control	Permitted	Permitted	Permitted
Design Vehicle	N/A	WB-40	WB-40
Pavement Type	HMA	HMA	HMA

\*According to current GDOT design policy if applicable

**Major Interchanges/Intersections:** N/A

**Lighting required:**  No  Yes

**Off-site Detours Anticipated:**  No  Yes  Undetermined

**Transportation Management Plan [TMP] Required:**  No  Yes

If Yes: Project classified as:  Non-Significant  Significant  
 TMP Components Anticipated:  TTC  TO  PI

County: Macon

**Design Exceptions to FHWA/AASHTO controlling criteria anticipated:**

<b>FHWA/AASHTO Controlling Criteria</b>	<b>No</b>	<b>Undeter- mined</b>	<b>Yes</b>	<b>Appvl Date (if applicable)</b>
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:**

<b>GDOT Standard Criteria</b>	<b>Reviewing Office</b>	<b>No</b>	<b>Undeter- mined</b>	<b>Yes</b>	<b>Appvl Date (if applicable)</b>
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:** Flint River EMC, Windstream

**SUE Required:**       No       Yes       Undetermined

**Public Interest Determination Policy and Procedure recommended?**  No       Yes

**Right-of-Way (ROW):** Existing width: 200ft.      Proposed width: 200ft.  
 Required Right-of-Way anticipated:       None       Yes       Undetermined

County: Macon

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

**CONTEXT SENSITIVE SOLUTIONS**

**Issues of Concern:**

Minimizing Impacts to Perennial Stream 8 (PS 8) to less than 1000’ or project may require an Individual 404 Permit.

**Context Sensitive Solutions Proposed:**

N/A

**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"/>	A USACE Nationwide Permit No. 14 is expected
4. Tennessee Valley Authority Permit	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
5. Buffer Variance	<input type="checkbox"/>	<input checked="" type="checkbox"/>	A SBV will be required
6. Coastal Zone Management Coordination	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
7. NPDES	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
8. FEMA	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
9. Cemetery Permit	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
10. Other Permits	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
11. Other Commitments	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
12. Other Coordination	<input type="checkbox"/>	<input checked="" type="checkbox"/>	FAA coordination for Dr. C.P. Savage, Sr. Airport

Is a PAR required?  No  Yes  Completed – Date: N/A

**Environmental Comments and Information:**

**NEPA/GEPA:** The level of NEPA documentation is expected to be a Categorical Exclusion (CE).

**Ecology:** An ecology survey identified nine (9) jurisdictional waters of the US: six wetlands, two perennial streams, and one open water. Impacts are expected to, wetland (WL) 4, WL 6, and perennial stream (PS) 8. Impacts are expected to fall within the thresholds of a US Army Corps

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of Engineers Nationwide Permit 14. Impacts to buffered state waters will require a Stream Buffer Variance. No species were identified during protected species surveys.

**History:** The history survey revealed that the SR 128 bridge over Whitewater Creek is eligible for inclusion in the National Register. No other eligible historic resources are located within the project area.

**Archeology:** No archaeological sites were identified by the archaeology survey.

**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

Since SR 128 is not expected to carry more than 10,000 vehicles per day in the design year nor have any signalized intersections, no CO hotspot modeling is required.

**Noise Effects:** Since the project will not halve the distance to any noise sensitive receptor, nor significantly alter the horizontal or vertical alignment of SR 128, this project meets the definition of a Type III project and does not require a noise study or abatement of highway noise impacts. A Type III noise screening will be completed.

**Public Involvement:** This project will require a detour meeting.

**Major stakeholders:**

Traveling public, Macon County BOC (Whitewater Creek Park), Whitewater Baptist Church

## CONSTRUCTION

**Issues potentially affecting constructability/construction schedule:**

N/A

**Early Completion Incentives recommended for consideration:**  No  Yes

## COORDINATION, ACTIVITIES, RESPONSIBILITIES, AND COSTS

**Initial Concept Meeting:** N/A

**Concept Meeting:** 2/09/2015

**Other coordination to date:** Scoping meeting with TIA Office

Project Activity	Party Responsible for Performing Task(s)
Concept Development	American Engineers, Inc.
Roadway Design	American Engineers, Inc.
Bridge Design	GDOT
Right-of-Way Acquisition	GDOT
Utility Relocation (Construction)	Utility Owners
Utility Coordination (Pre-Let)	GDOT
Letting to Contract	GDOT
Construction Supervision	GDOT
Providing Material Pits	Contractor
Providing Detours	Contractor
Environmental Studies, Documents, & Permits	GT Hill Planners
Environmental Mitigation	GDOT
Construction Inspection & Materials Testing	GDOT

County: Macon

**Project Cost Estimate Summary and Funding Responsibilities for Preferred Alternate:**

	Breakdown of PE	ROW	Reimbursable Utility	CST*	Environmental Mitigation	Total Cost
Funded By Federal		\$ 118,799	\$ 178,728	\$ 2,040,682		
Funded By State		\$ 29,700	\$ 44,682	\$ 510,171		
Funded By TIA	\$ 500,000			\$ 2,000,000		
Total Funding	\$ 500,000	\$ 148,499	\$ 223,410	\$ 4,550,853		
Current Cost Estimate	\$ 500,000	\$66,000	\$150,000	\$ 3,391,565	\$30,505	\$4,138,070
Date of Estimate	3/26/15	3/26/15	4/22/15	2/27/15	3/02/15	

\*CST Cost includes: Construction, Engineering and Inspection, Contingencies

**ALTERNATIVES DISCUSSION****Alternative selection:**

<b>Alternate 1 (Preferred Alternative):</b> Off-site detour			
<b>Estimated Property Impacts:</b>	1 Parcel	<b>Estimated CST Cost:</b>	\$3,391,565
<b>Estimated ROW Cost:</b>	\$66,000	<b>Estimated CST Time:</b>	12 months
<b>Estimated Utility Cost:</b>	\$150,000		
<b>Environmental Mitigation Cost:</b>	\$30,505	<b>Estimated Total Cost:</b>	\$3,638,070
<b>Rationale:</b> This alternative was selected as it would minimize environmental and right-of-way impacts as well as right-of-way and environmental mitigation costs. This alternative would also eliminate the potential need for an Individual 404 Permit. Minimal utility relocation would be required. The detour route will add approximately 16 miles utilizing SR127, SR 90, and SR 49. A detour meeting and public outreach will be required. This alternative would also be the easiest to construct.			

<b>Alternative 2:</b> New location Bridge: Construct bridge in new location upstream of existing bridge			
<b>Estimated Property Impacts:</b>	8 Parcels	<b>Estimated CST Cost:</b>	\$4,430,258
<b>Estimated ROW Cost:</b>	\$319,000	<b>Estimated CST Time:</b>	12 months
<b>Estimated Utility Cost:</b>	\$150,000		
<b>Environmental Mitigation Cost:</b>	\$140,915	<b>Estimated Total Cost:</b>	\$5,040,173
<b>Rationale:</b> This alternative will have the greatest environmental and right-of-way impacts. An individual 404 permit would be required. Utilities along the west side of the corridor would need to be relocated. There would be large impacts to Macon County park property.			

County: Macon

<b>Alternative 3:</b> On-site detour: Construct temporary bridge upstream and replace existing bridge with permanent bridge.			
<b>Estimated Property Impacts:</b>	7 Parcels	<b>Estimated CST Cost:</b>	\$4,769,764
<b>Estimated ROW Cost:</b>	\$250,000	<b>Estimated CST Time:</b>	24 months
<b>Estimated Utility Cost:</b>	\$150,000		
<b>Environmental Mitigation Cost:</b>	\$132,300	<b>Estimated Total Cost:</b>	\$5,302,064
<b>Rationale:</b> This alternative would have slightly less environmental and right-of-way impacts compared to a permanent bridge in a new location due to the lower speed design of the onsite detour and temporary bridge. Impacts to environmental resources would have to be minimized to avoid an individual 404 permit. There would be large impacts to Macon County park property. Utilities along the west side of the corridor would need to be relocated.			

<b>No-Build Alternative:</b> <i>Retain existing bridge</i>			
<b>Estimated Property Impacts:</b>	N/A	<b>Estimated CST Cost:</b>	N/A
<b>Estimated ROW Cost:</b>	N/A	<b>Estimated CST Time:</b>	N/A
<b>Estimated Utility Cost:</b>	N/A	<b>Estimated Total Cost:</b>	N/A
<b>Rationale:</b> This alternative was not selected due to the current sufficiency rating and the bridge's fair to poor condition.			

**Comments:** No proposed bridges (permanent or temporary) downstream of the existing bridge were considered due to constructability issues and adverse environmental impacts to Whitewater Creek (PS 2).

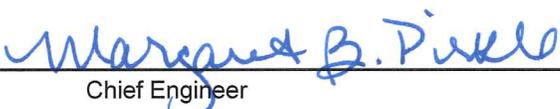
## LIST OF ATTACHMENTS/ SUPPORTING DATA

1. Typical Sections
2. Concept Layout
3. Concept Profile
4. Detour Map
5. Detailed Cost Estimates:
  - a. Construction including Engineering and Inspection and Contingencies
  - b. Right-of-Way Cost estimates
  - c. Concept Utility Report and Estimate
6. Traffic projections/forecasting summary sheet and Link Volume Traffic
7. Preliminary Pavement design
8. Concept Team Meeting Minutes
9. Comments and Response from Macon County Manager
10. Hydraulic Engineering Field Report
11. Bridge Inventory Data Report

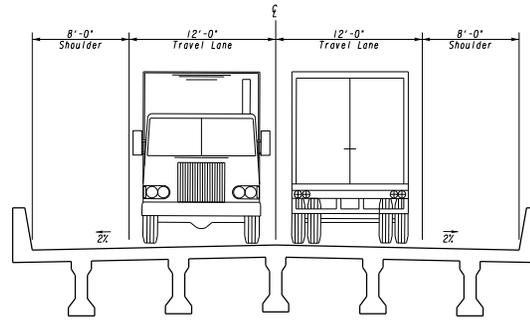
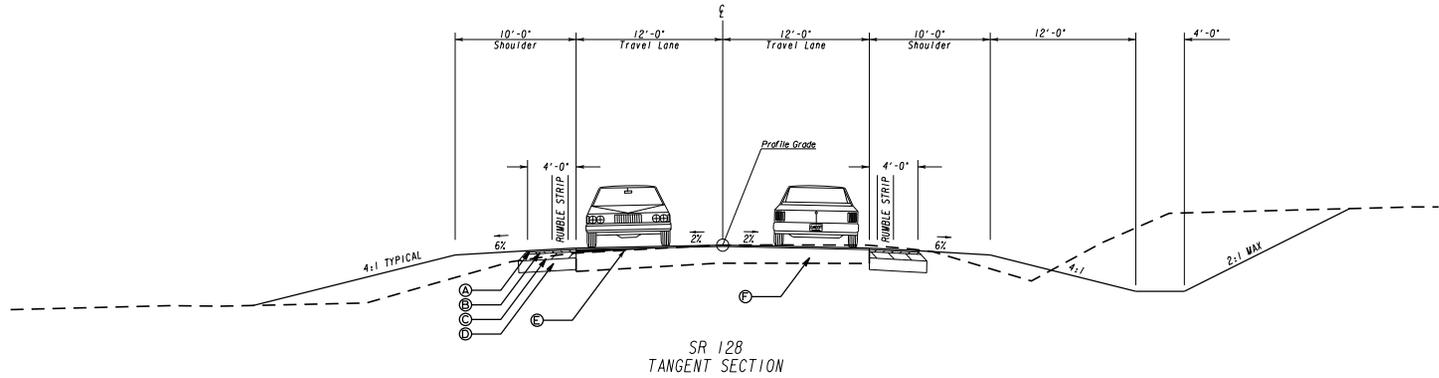
County: Macon

## APPROVALS

Concur:   
Director of Engineering

Approve:  5/18/15  
Chief Engineer Date

## **ATTACHMENTS**



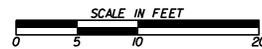
- Ⓐ RECYCLED ASPHL. CONC. 9.5 MM SUPERPAVE, TYPE 11, GP 2, INCL BITUM WATL & H LIME - (135 LB/ST)
- Ⓑ RECYCLED ASPHL. CONC. 19 MM SUPERPAVE, GP 1 OR GP 2, INCL BITUM WATL & H LIME - (220 LB/ST)
- Ⓒ RECYCLED ASPHL. CONC. 25 MM SUPERPAVE, GP 1 OR GP 2, INCL BITUM WATL & H LIME - (330 LB/ST)
- Ⓓ GRADED AGGREGATE BASE COURSE, 8 INCH, INCL WATL
- Ⓔ RECYCLED ASPHL. CONC., LEVELING, AS REQUIRED
- Ⓕ EXISTING PAVEMENT

PLANS PREPARED AND SUBMITTED BY:

**VI**

AMERICAN ENGINEERS, INC.

1000 W. BROADWAY  
SUITE 200  
DURHAM, NC 27601  
919.286.7000



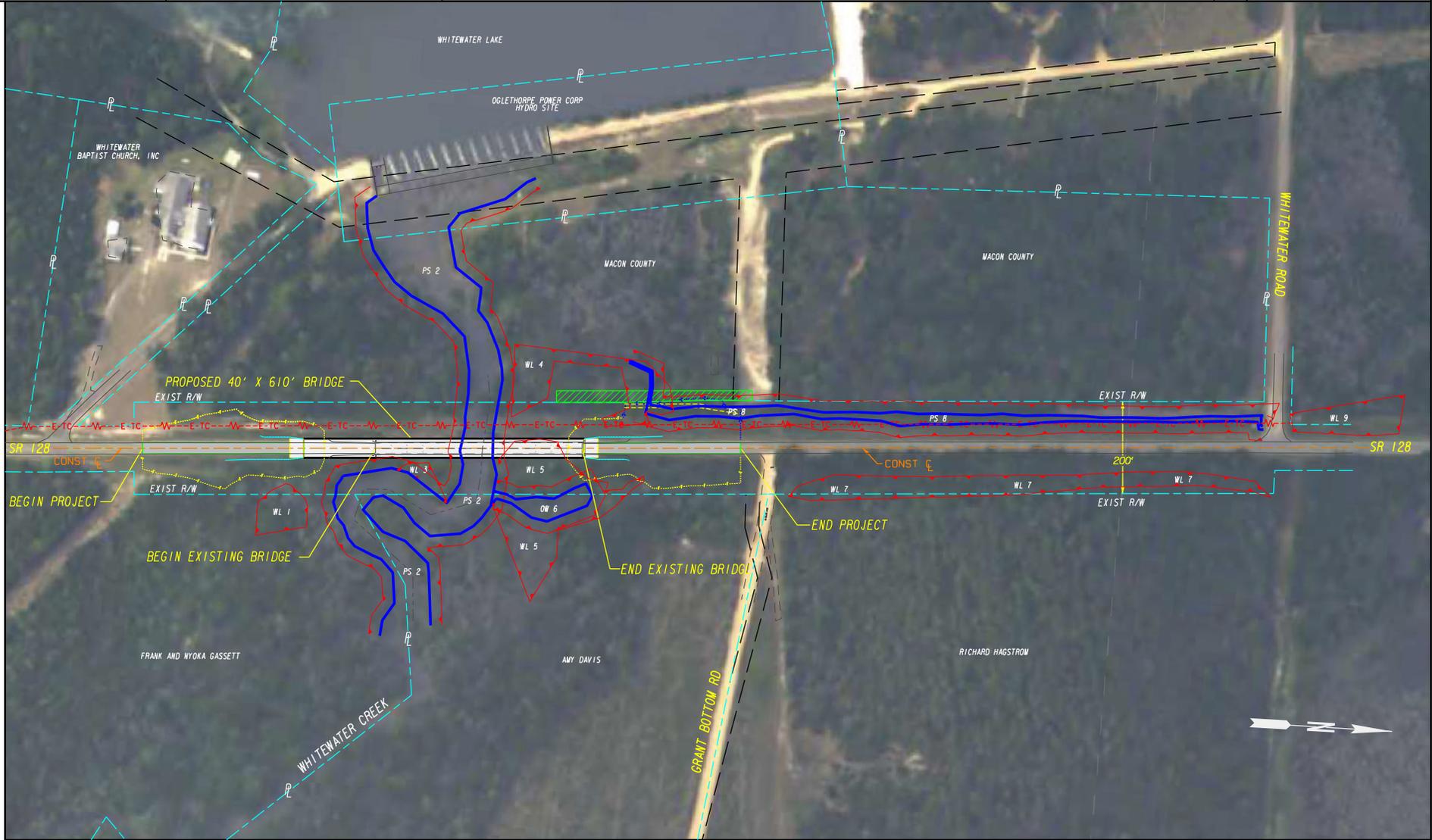
REVISION DATES	

STATE OF GEORGIA  
DEPARTMENT OF TRANSPORTATION  
OFFICE: TIA

**TYPICAL SECTIONS**

SR 128 OVER WHITEWATER CREEK  
BRIDGE REPLACEMENT

DRAWING No.  
**05-001**



	CONSTRUCTION CENTERLINE
	PROPOSED EDGE OF TRAVELWAY
	EXISTING EDGE OF PAVEMENT
	ENVIRONMENTALLY SENSITIVE AREA
	TOP OF STREAM BANK

	CONSTRUCTION LIMITS
	EXIST OVERHEAD POWER/ TC LINE
	PROPERTY AND EXISTING R/W LINE
	REQUIRED R/W LINE EASEMENT FOR CONSTR & MAINTENANCE OF SLOPES

PLANS PREPARED AND SUBMITTED BY:

**AEI** AMERICAN ENGINEERS, INC.

2500 Macomb Water Parkway  
Columbus, GA 31906

DESIGN CONSULTANT

# CONCEPT LAYOUT

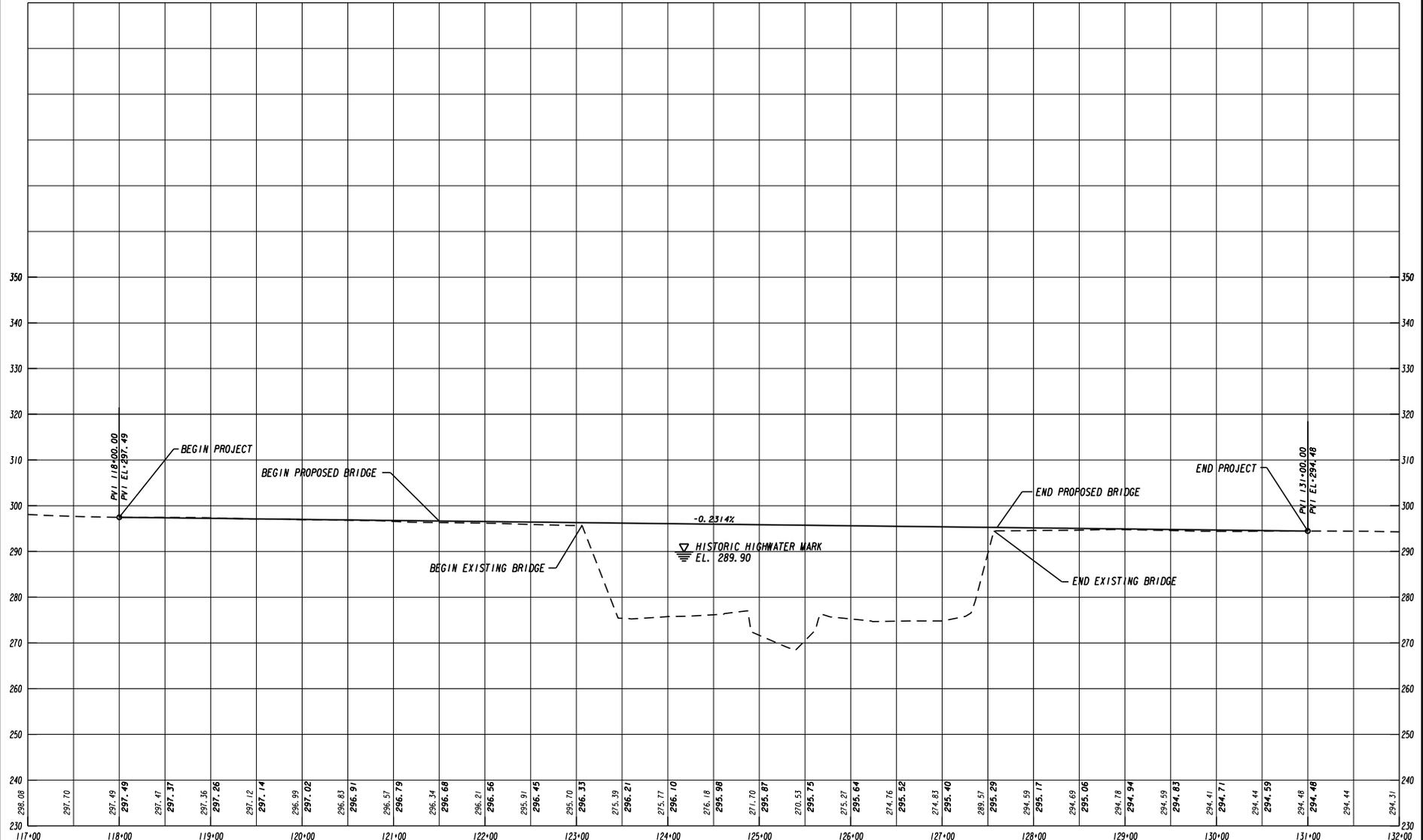
SCALE IN FEET

STATE OF GEORGIA  
DEPARTMENT OF TRANSPORTATION

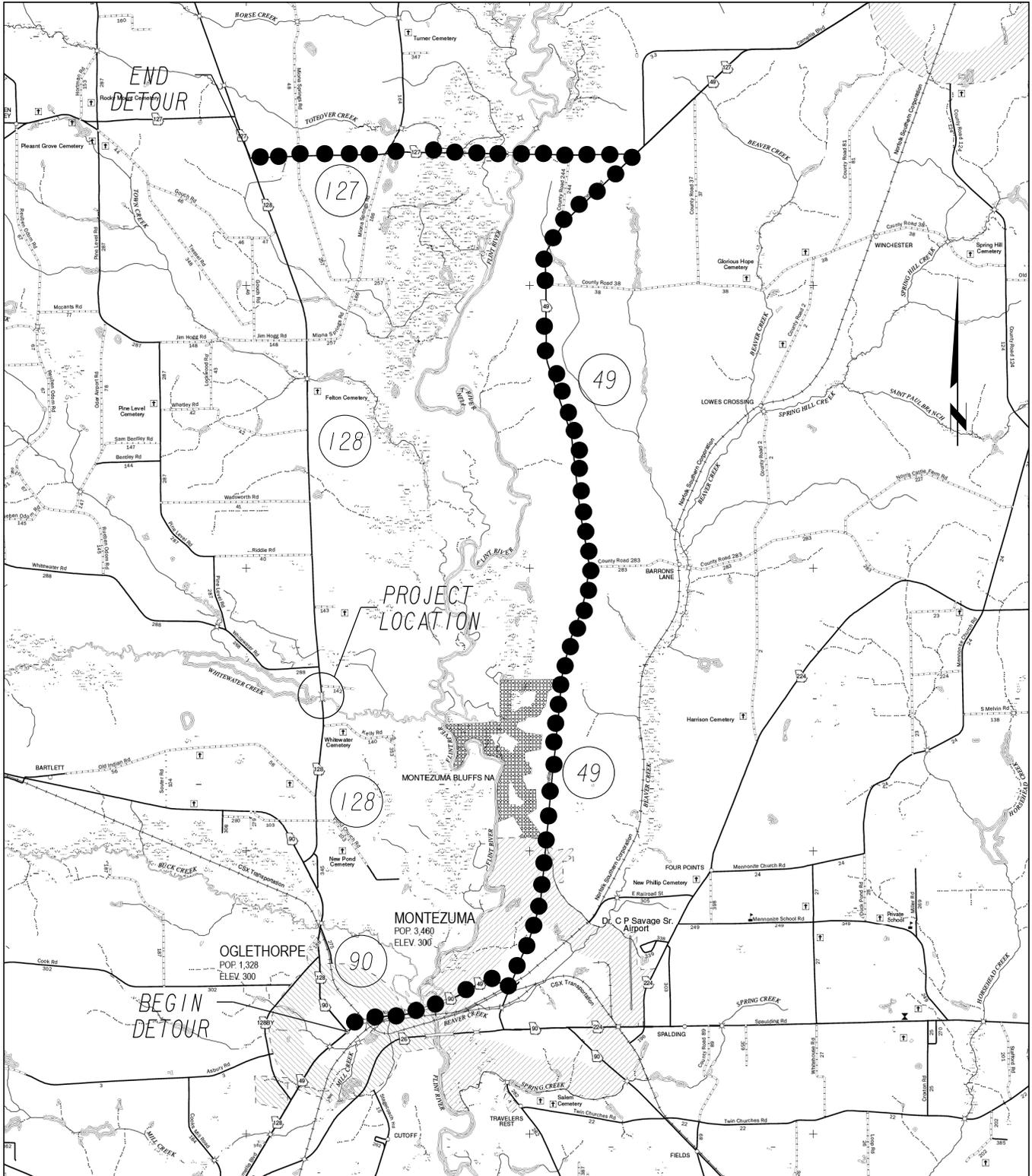
OFFICE: TIA

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SR128 OVER WHITESTAR CREEK BRIDGE REPLACEMENT  
MACON COUNTY, P. 1. NO. 0007042



<p>PLANS PREPARED AND SUBMITTED BY:</p> <p><b>AMERICAN ENGINEERS, INC.</b></p> <p>DESIGN PROFESSIONAL ENGINEERING</p> <p>1501 W. 42nd Street        Suite 100        Louisville, KY 40223        (502) 442-3833</p>	<p>STATE OF GEORGIA        DEPARTMENT OF TRANSPORTATION</p> <p>OFFICE: TIA</p> <p><b>MAINLINE PROFILE</b></p> <p>SR128 OVER WHITEWATER CREEK        BRIDGE REPLACEMENT</p>	<p>REVISION DATES</p> <table border="1" style="width:100%; border-collapse: collapse;"> <tr><td> </td><td> </td></tr> </table>																							<p>SCALE 1 INCH = 50 FEET HORZ.        SCALE 1 INCH = 10 FEET VERT.</p>



SCALE IN MILES

●●● - DETOUR ROUTE



LOCATION

DETOUR MAP  
 CSBRG-0007-00(042)  
 SR128 OVER WHITEWATER CREEK  
 BRIDGE REPLACEMENT  
 MACON COUNTY  
 P. I. # 0007042

PI 0007042 COST ESTIMATE - 2-27-15.txt  
STATE HIGHWAY AGENCY

DATE : 02/27/2015  
PAGE : 1

JOB ESTIMATE REPORT

JOB NUMBER : 0007042\_ALT1                   SPEC YEAR: 01  
DESCRIPTION: SR 128 OVER WHITEWATER CREEK BRIDGE REPLACEMENT

ITEMS FOR JOB 0007042\_Alt1 Preferred Alternative (Offsite Detour)

LINE	ITEM	ALT	UNITS	DESCRIPTION	QUANTITY	PRICE	AMOUNT
0010	150-1000		LS	TRAFFIC CONTROL - LUMP SUM	1.000	90000.00	90000.00
0170	165-0030		LF	MAINT OF TEMP SILT FENCE, TP C	1950.000	0.66	1291.10
0185	163-0300		EA	CONSTRUCTION EXIT	2.000	958.41	1916.84
0190	165-0101		EA	MAINT OF CONST EXIT	2.000	416.74	833.48
0200	402-3103		TN	REC AC 9.5 MM SP,TPII,GP2, INCL BM & H L	153.000	82.16	12570.53
0205	402-3121		TN	RECYL AC 25MM SP,GP1/2,BM&HL	96.000	79.37	7620.08
0210	402-3190		TN	RECYL AC 19 MM SP,GP 1 OR 2 ,INC BM&HL	64.000	83.01	5312.69
0230	205-0001		CY	UNCLASS EXCAV	486.000	21.15	10282.16
0245	310-5080		SY	GR AGGR BS CRS 8IN INCL MATL	844.000	16.99	14343.33
0255	206-0002		CY	BORROW EXCAV, INCL MATL	23687.000	7.30	172974.55
0265	171-0030		LF	TEMPORARY SILT FENCE, TYPE C	3900.000	2.94	11504.92
0270	163-0528		LF	CONSTR AND REM FAB CK DAM -TP C SLT FN	520.000	3.71	1933.55
0275	402-1812		TN	RECYL AC LEVELING,INC BM&HL	5.000	87.94	439.71
0280	167-1000		EA	WATER QUALITY MONITORING AND SAMPLING	4.000	482.97	1931.91
0290	167-1500		MO	WATER QUALITY INSPECTIONS	12.000	517.62	6211.51
0295	413-1000		GL	BITUM TACK COAT	171.000	3.36	576.20
0300	432-5010		SY	MILL ASPH CONC PVMT,VARB DEPTH	1680.000	4.47	7517.80
0350	653-1501		LF	THERMO SOLID TRAF ST 5 IN, WHI	1260.000	0.51	650.01
0365	653-1502		LF	THERMO SOLID TRAF ST, 5 IN YEL	1260.000	0.54	689.46
0370	654-1001		EA	RAISED PVMT MARKERS TP 1	17.000	5.05	86.00
0375	716-2000		SY	EROSION CONTROL MATS, SLOPES	4024.000	1.07	4324.71
0380	700-6910		AC	PERMANENT GRASSING	5.500	580.30	3191.67
0385	700-7000		TN	AGRICULTURAL LIME	16.500	47.71	787.23
0390	700-8000		TN	FERTILIZER MIXED GRADE	4.000	463.47	1853.91
0395	700-8100		LB	FERTILIZER NITROGEN CONTENT	275.000	2.10	579.05
0400	163-0240		TN	MULCH	84.000	198.75	16695.54
0405	163-0232		AC	TEMPORARY GRASSING	2.250	472.63	1063.42
0420	657-1054		LF	PRF PL SD PVMT MKG,5",WH,TP PB	1340.000	4.10	5499.80
0425	657-6054		LF	PRF PL SD PVMT MKG,5",YW,TP PB	1340.000	4.11	5519.29
0450	540-1102		LS	REM OF EX BR, BR NO - 1	1.000	130500.00	130500.00
0460	543-9000		LS	CONSTR OF BRIDGE COMPLETE - 1	1.000	2491850.00	2491850.00
0465	433-1000		SY	REINF CONC APPROACH SLAB	267.000	137.80	36793.85
0475	641-1100		LF	GUARDRAIL, TP T	84.000	57.32	4815.38
0480	641-1200		LF	GUARDRAIL, TP W	350.000	18.23	6383.24

PI 0007042 COST ESTIMATE - 2-27-15.txt

0485	641-5001	EA	GUARDRAIL ANCHORAGE, TP 1	2.000	648.00	1296.02
0490	641-5012	EA	GUARDRAIL ANCHORAGE, TP 12	2.000	1834.19	3668.38
0495	429-1000	EA	RUMBLE STRIPS	32.000	616.66	19733.33
-----						
ITEM TOTAL						3083240.66
INFLATED ITEM TOTAL						3083240.66

STATE HIGHWAY AGENCY

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JOB ESTIMATE REPORT

TOTALS FOR JOB 0007042\_ALT1

ESTIMATED COST:	3083240.65
CONTINGENCY PERCENT ( 10.0 ):	308324.07
ESTIMATED TOTAL:	3391564.72

NOTE: The item totals include all alternate items. The estimated totals include only the low cost alternate items.

STATE HIGHWAY AGENCY

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JOB ESTIMATE REPORT

JOB NUMBER : 0007042\_ALT2                      SPEC YEAR: 01  
DESCRIPTION: SR 128 OVER WHITEWATER CREEK BRIDGE REPLACEMENT

ITEMS FOR JOB 0007042\_ALT2 (New Location Bridge - Upstream)

LINE	ITEM	ALT	UNITS	DESCRIPTION	QUANTITY	PRICE	AMOUNT
0010	150-1000		LS	TRAFFIC CONTROL - LUMP SUM	1.000	115000.00	115000.00
0170	165-0030		LF	MAINT OF TEMP SILT FENCE, TP C	6060.000	0.56	3427.23
0185	163-0300		EA	CONSTRUCTION EXIT	9.000	980.78	8827.08
0190	165-0101		EA	MAINT OF CONST EXIT	6.000	395.84	2375.05
0200	402-3103		TN	REC AC 9.5 MM SP,TPII,GP2, INCL BM & H L	1000.000	74.19	74195.29
0205	402-3121		TN	RECYL AC 25MM SP,GP1/2,BM&HL	1672.000	65.66	109789.29
0210	402-3190		TN	RECYL AC 19 MM SP,GP 1 OR 2 ,INC BM&HL	1115.000	68.37	76239.05
0230	205-0001		CY	UNCLASS EXCAV	15304.000	7.65	117120.44
0245	310-5080		SY	GR AGGR BS CRS 8IN INCL MATL	12158.000	12.47	151697.43
0255	206-0002		CY	BORROW EXCAV, INCL MATL	60159.000	5.94	357645.86
0265	171-0030		LF	TEMPORARY SILT FENCE, TYPE C	12120.000	2.79	33905.94
0270	163-0528		LF	CONSTR AND REM FAB CK DAM -TP C SLT FN	1000.000	3.52	3523.69

PI 0007042 COST ESTIMATE - 2-27-15.txt

0275	402-1812	TN	RECYL AC LEVELING,INC BM&HL	25.000	81.91	2047.96
0280	167-1000	EA	WATER QUALITY MONITORING AND SAMPLING	4.000	482.97	1931.91
0290	167-1500	MO	WATER QUALITY INSPECTIONS	12.000	517.62	6211.51
0295	413-1000	GL	BITUM TACK COAT	1368.000	2.75	3764.38
0300	432-5010	SY	MILL ASPH CONC PVMT,VARB DEPTH	2500.000	3.94	9861.43
0320	550-2180	LF	SIDE DR PIPE 18",H 1-10	250.000	25.13	6284.68
0350	653-1501	LF	THERMO SOLID TRAF ST 5 IN, WHI	7120.000	0.37	2702.82
0365	653-1502	LF	THERMO SOLID TRAF ST, 5 IN YEL	7120.000	0.40	2875.77
0370	654-1001	EA	RAISED PVMT MARKERS TP 1	51.000	4.38	223.55
0375	716-2000	SY	EROSION CONTROL MATS, SLOPES	12609.000	1.00	12715.67
0380	700-6910	AC	PERMANENT GRASSING	17.000	553.23	9405.05
0385	700-7000	TN	AGRICULTURAL LIME	51.000	45.06	2298.20
0390	700-8000	TN	FERTILIZER MIXED GRADE	12.000	435.42	5225.08
0395	700-8100	LB	FERTILIZER NITROGEN CONTENT	850.000	1.93	1641.58
0400	163-0240	TN	MULCH	280.000	172.88	48408.40
0405	163-0232	AC	TEMPORARY GRASSING	8.500	472.63	4017.36
0410	620-0100	LF	TEMP BARRIER, METHOD NO. 1	1000.000	27.42	27429.58
0420	657-1054	LF	PRF PL SD PVMT MKG,5",WH,TP PB	960.000	4.28	4113.46
0425	657-6054	LF	PRF PL SD PVMT MKG,5",YW,TP PB	9600.000	3.07	29525.47
0430	550-4218	EA	FLARED END SECT 18 IN, ST DR	8.000	442.27	3538.19
0435	550-4224	EA	FLARED END SECT 24 IN, ST DR	2.000	520.38	1040.77
0440	550-2240	LF	SIDE DR PIPE 24",H 1-10	80.000	27.38	2190.78
0450	540-1102	LS	REM OF EX BR, BR NO - 1	1.000	130500.00	130500.00
0460	543-9000	LS	CONSTR OF BRIDGE COMPLETE - 1	1.000	2491850.00	2491850.00
0465	433-1000	SY	REINF CONC APPROACH SLAB	267.000	137.80	36793.85
0475	641-1100	LF	GUARDRAIL, TP T	84.000	57.32	4815.38
0480	641-1200	LF	GUARDRAIL, TP W	350.000	18.23	6383.24
0485	641-5001	EA	GUARDRAIL ANCHORAGE, TP 1	2.000	648.00	1296.02
0490	641-5012	EA	GUARDRAIL ANCHORAGE, TP 12	2.000	1834.19	3668.38

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JOB ESTIMATE REPORT

0495	429-1000	EA	RUMBLE STRIPS	180.000	616.66	111000.00
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ITEM TOTAL	4027506.81
INFLATED ITEM TOTAL	4027506.82

TOTALS FOR JOB 0007042\_ALT2

ESTIMATED COST:	4027506.82
CONTINGENCY PERCENT ( 10.0 ):	402750.68
ESTIMATED TOTAL:	4430257.50

PI 0007042 COST ESTIMATE - 2-27-15.txt  
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JOB ESTIMATE REPORT

JOB NUMBER : 0007042\_ALT3      SPEC YEAR: 01  
DESCRIPTION: SR 128 OVER WHITEWATER CREEK BRIDGE REPLACEMENT

ITEMS FOR JOB 0007042\_ALT3 (Detour Bridge)

LINE	ITEM	ALT	UNITS	DESCRIPTION	QUANTITY	PRICE	AMOUNT
0010	150-1000		LS	TRAFFIC CONTROL - LUMP SUM	1.000	133000.00	133000.00
0170	165-0030		LF	MAINT OF TEMP SILT FENCE, TP C	10200.000	0.52	5365.81
0185	163-0300		EA	CONSTRUCTION EXIT	6.000	1025.54	6153.28
0190	165-0101		EA	MAINT OF CONST EXIT	6.000	395.84	2375.05
0200	402-3103		TN	REC AC 9.5 MM SP,TPII,GP2, INCL BM & H L	656.000	75.91	49799.57
0205	402-3121		TN	RECYL AC 25MM SP,GP1/2,BM&HL	400.000	72.20	28881.00
0210	402-3190		TN	RECYL AC 19 MM SP,GP 1 OR 2 ,INC BM&HL	1017.000	68.80	69973.76
0230	205-0001		CY	UNCLASS EXCAV	12111.000	8.19	99303.30
0245	310-5080		SY	GR AGGR BS CRS 8IN INCL MATL	9689.000	12.80	124112.02
0255	206-0002		CY	BORROW EXCAV, INCL MATL	28281.000	7.02	198600.21
0265	171-0030		LF	TEMPORARY SILT FENCE, TYPE C	20400.000	2.73	55695.47
0270	163-0528		LF	CONSTR AND REM FAB CK DAM -TP C SLT FN	1318.000	3.44	4539.97
0275	402-1812		TN	RECYL AC LEVELING,INC BM&HL	600.000	71.20	42725.89
0280	167-1000		EA	WATER QUALITY MONITORING AND SAMPLING	4.000	482.97	1931.91
0290	167-1500		MO	WATER QUALITY INSPECTIONS	36.000	459.72	16550.09
0295	413-1000		GL	BITUM TACK COAT	1574.000	2.71	4272.47
0300	432-5010		SY	MILL ASPH CONC PVMT,VARB DEPTH	3000.000	3.72	11168.46
0320	550-2180		LF	SIDE DR PIPE 18",H 1-10	180.000	25.76	4638.00
0350	653-1501		LF	THERMO SOLID TRAF ST 5 IN, WHI	11960.000	0.34	4141.63
0365	653-1502		LF	THERMO SOLID TRAF ST, 5 IN YEL	11960.000	0.36	4410.73
0370	654-1001		EA	RAISED PVMT MARKERS TP 1	85.000	4.10	348.55
0375	716-2000		SY	EROSION CONTROL MATS, SLOPES	11200.000	1.01	11369.57
0380	700-6910		AC	PERMANENT GRASSING	13.000	559.55	7274.23
0385	700-7000		TN	AGRICULTURAL LIME	39.000	45.67	1781.47
0390	700-8000		TN	FERTILIZER MIXED GRADE	10.000	439.95	4399.59
0395	700-8100		LB	FERTILIZER NITROGEN CONTENT	650.000	1.97	1281.39
0400	163-0240		TN	MULCH	189.000	180.93	34197.48
0405	163-0232		AC	TEMPORARY GRASSING	6.500	472.63	3072.10
0410	620-0100		LF	TEMP BARRIER, METHOD NO. 1	1000.000	27.42	27429.58
0415	402-3113		TN	RECYL AC 12.5MM SP,GP1/2,BM&HL	563.000	82.01	46173.48
0420	657-1054		LF	PRF PL SD PVMT MKG,5",WH,TP PB	2680.000	3.75	10058.31
0425	657-6054		LF	PRF PL SD PVMT MKG,5",YW,TP PB	2680.000	3.71	9960.01
0430	550-4218		EA	FLARED END SECT 18 IN, ST DR	6.000	444.79	2668.75
0435	550-4224		EA	FLARED END SECT 24 IN, ST DR	2.000	520.38	1040.77
0440	550-2240		LF	SIDE DR PIPE 24",H 1-10	60.000	27.84	1670.91

PI 0007042 COST ESTIMATE - 2-27-15.txt

0445	163-0232	AC	TEMPORARY GRASSING	8.000	200.93	1607.50
0450	540-1102	LS	REM OF EX BR, BR NO - 1	1.000	130500.00	130500.00
0455	541-0001	LS	DETOUR BRIDGE - 1	1.000	522000.00	522000.00
0460	543-9000	LS	CONSTR OF BRIDGE COMPLETE - 1	1.000	2491850.00	2491850.00
0465	433-1000	SY	REINF CONC APPROACH SLAB	431.000	135.87	58563.48
0475	641-1100	LF	GUARDRAIL, TP T	84.000	57.32	4815.38

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JOB ESTIMATE REPORT

0480	641-1200	LF	GUARDRAIL, TP W	350.000	18.23	6383.24
0485	641-5001	EA	GUARDRAIL ANCHORAGE, TP 1	2.000	648.00	1296.02
0490	641-5012	EA	GUARDRAIL ANCHORAGE, TP 12	2.000	1834.19	3668.38
0495	429-1000	EA	RUMBLE STRIPS	138.000	616.66	85100.00
ITEM TOTAL						4336148.76
INFLATED ITEM TOTAL						4336148.76
-----						
TOTALS FOR JOB 0007042_ALT3						
ESTIMATED COST:						4336148.81
CONTINGENCY PERCENT ( 10.0 ):						433614.88
ESTIMATED TOTAL:						4769763.69
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# Department of Transportation State of Georgia

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Interdepartmental Correspondence

**FILE** R/W Cost Estimate **OFFICE** Atlanta  
**DATE** March 26, 2015  
**FROM** Phil Copeland, Right of Way Administrator  
LaShone Alexander, Right of Way Cost Estimator  
**TO** Kevin H. Mullins, Project Manager

**SUBJECT** **Preliminary Right of Way Cost Estimate**  
**Project: CSBRG-0007-00(042)**  
**P.I. No.: 0007042 Alt 1, 2 & 3**  
**Description: SR 128 Over Whitewater Creek Bridge Replacement**

As per your request, attached is a copy of the approved Preliminary Right of Way Cost Estimates on the above referenced projects.

Please note if the area of Required R/W was furnished with your request. **Please include total Required R/W areas for the entire corridor in all future requests.**

If you have any questions, please contact LaShone Alexander at One Georgia Center 600 West Parkway Street, NW Atlanta, GA 30308, Right of Way Office at (478) 553-1569 or (478) 232-4045.

PC:LA  
Attachments  
c: File

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

Date: 3/26/2014 Project: CSBRG-0007-00(042)  
 Revised: County: Macon  
 PI: 0007042 Alt 1

Description: SR 128 over Whitewater Creek Bridge Replacement  
 Project Termini: SR 128 over Whitewater Creek Bridge Replacement

Existing ROW: Varies  
 Required ROW: Varies  
 Parcels: 1

Land and Improvements \_\_\_\_\_ \$7,500.00

Proximity Damage	\$0.00
Consequential Damage	\$0.00
Cost to Cures	\$0.00
Trade Fixtures	\$0.00
Improvements	\$5,000.00

Valuation Services \_\_\_\_\_ \$3,000.00

Legal Services \_\_\_\_\_ \$38,175.00

Relocation \_\_\_\_\_ \$2,000.00

Demolition \_\_\_\_\_ \$0.00

Administrative \_\_\_\_\_ \$14,500.00

TOTAL ESTIMATED COSTS \_\_\_\_\_ \$65,175.00

**TOTAL ESTIMATED COSTS (ROUNDED) \_\_\_\_\_ \$66,000.00**

Preparation Credits	Hours	Signature

Prepared By: Dashone Alexander CG#: 286999 03/26/2015 (DATE)  
 Approved By: Dashone Alexander CG#: 286999 03/26/2015 (DATE)

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



GEORGIA DEPARTMENT OF TRANSPORTATION  
PRELIMINARY ROW COST ESTIMATE SUMMARY

Date: 3/26/2014 Project: CSBRG-0007-00(042)  
 Revised: County: Macon  
 PI: 0007042 Alt 3

Description: SR 128 over Whitewater Creek Bridge Replacement  
 Project Termini: SR 128 over Whitewater Creek Bridge Replacement

Existing ROW: Varies  
 Required ROW: Varies  
 Parcels: 8

Land and Improvements \_\_\_\_\_ \$52,122.00

Proximity Damage	\$0.00
Consequential Damage	\$0.00
Cost to Cures	\$0.00
Trade Fixtures	\$0.00
Improvements	\$16,000.00

Valuation Services \_\_\_\_\_ \$30,000.00

Legal Services \_\_\_\_\_ \$80,400.00

Relocation \_\_\_\_\_ \$16,000.00

Demolition \_\_\_\_\_ \$0.00

Administrative \_\_\_\_\_ \$71,000.00

TOTAL ESTIMATED COSTS \_\_\_\_\_ \$249,522.00

**TOTAL ESTIMATED COSTS (ROUNDED) \_\_\_\_\_ \$250,000.00**

Preparation Credits	Hours	Signature

Prepared By: Dashone Alexander CG#:286999 03/26/2015 (DATE)  
 Approved By: Dashone Alexander CG#: 286999 03/26/2015 (DATE)

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



## Traffic Projections/Forecasting Summary Sheet

CSBRG-0007-00(042), P.I. # 0007042

Macon County

**Year the counts** were taken from 2012 coverage (TC # 187).

### Growth Factors

#### ***Growth for Build = No Build***

Existing Year to Base Year 1.5%

Base Year to Design Year 1.2%

K = 7%

D = 60%

### Assumptions

- Reviewed a 15-year historical trend.
- Trend is low in this county

## Flexible Pavement Design Analysis

<b>PI Number</b>	0007042	<b>County(s)</b>	Macon
<b>Project Number</b>	CSBRG-0007-00(042)	<b>Design Name</b>	SR 128 Full Depth Pvmnt Reconstruction
<b>Project Description</b>	SR 128 Over Whitewater Creek Bridge Replacement		

Traffic Data (AADTs are one-way)						Miscellaneous Data	
<b>Initial Design Year</b>	2020	<b>Initial AADT, VPD</b>	875	<b>24 Hour Truck %</b>	21.25	<b>Lanes in one direction</b>	1
<b>Final Design Year</b>	2040	<b>Final AADT, VPD</b>	1,100	<b>SU Truck %</b>	13.00	<b>Curb &amp; Gutter/Barrier</b>	No
		<b>Mean AADT, VPD</b>	988	<b>MU Truck %</b>	8.25		

Design Data					
<b>Lane Distribution Factor (%)</b>	100.00	<b>Soil Support Value</b>	3.50	<b>Single Unit ESAL</b>	0.40
<b>Terminal Serviceability Index</b>	2.50	<b>Regional Factor</b>	1.60	<b>Multiple Unit ESAL</b>	1.50
		<b>User Defined 18-KIP ESAL</b>	0.00	<b>Calculated 18-KIP ESAL</b>	0.83
<b>Non-Standard Value Comment</b>					

Design Loading (Calculated 18-KIP ESAL)					
Mean AADT, VPD	LDF (%)	Vehicle Type	Volume (%)	ESAL Factor	Daily ESAL
988	100.00	Single Unit Truck	13.00	0.40	52
		Multi Unit Truck	8.25	1.50	123
<b>Total Daily ESALs</b>					175
<b>Total Design Period ESALs</b>					1,277,500

Proposed Flexible Full Depth Pavement Structure				
Course	Material	Thickness (inches)	Structural Coefficient	Structural Value
Course 1	9.5 mm Type II Superpave	1.25	0.4400	0.55
Course 2	19 mm Superpave	2.00	0.4400	0.88
Course 3	25 mm Superpave	1.25	0.4400	0.55
		1.75	0.3000	0.53
Course 4	Graded Aggregate Base	8.00	0.1600	1.28
<b>Required SN</b>	4.14	<b>Proposed pavement is 8.49% Underdesigned</b>		<b>Proposed SN</b>
				3.79

<b>Design Remarks</b>	
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Prepared By Mark Wilkinson 1/20/2015 10:50 AM  
 Mark Wilkinson/Senior Project Manager Date

Recommended By \_\_\_\_\_  
 Consultant Design Phase Leader Date

Approved By \_\_\_\_\_  
 State Pavement Engineer Date

## Concept Utility Report

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Project Number: CSBRG-0007-00(042)

District: 3rd

County: Macon

Prepared by: Harland Smith

P.I. # 0007042

Date: 01/22/2015

Project Description: SR 128 over Whitewater Creek, bridge replacement.

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*The information provided herein has been gathered from Georgia811 and/or field visits and serves as an estimate. Nothing contained in this report is to be used as a substitute for 1<sup>st</sup> Submission or SUE.*

Are SUE services recommended? No Level:  A  B  C  D

Public Interest Determination (PID):  Automatic  Mandatory  Consideration  
 No Use  Exempt

Is a separate utility funding phase recommended? NO

### Existing Facilities:

Flint EMC \$150,000 reimbursable, estimated relocation cost

GPC Distribution No Conflict - beyond project limits.

Windstream \$60,000 non-reimbursable, estimated relocation cost

Potential Project (Schedule/Budget) Impacts: N/A

Capital Improvement Projects (Utilities) Anticipated in the Area: Unknown

Project Specific Recommendations for Avoidance/Mitigation: Unknown

Right of Way Coordination: N/A

Environmental Coordination: If the bridge width changes, utilities may be forced to relocate to the back of the R/W. This would have an impact on the ESA.

Additional Remarks: There is a good possibility that Flint EMC will claim prior rights. The existing pole line runs along the West of SR 128. The existing line is a 3 phase line with one utility under built (Windstream) at approx. 50' from the centerline of SR 128. There are no water facilities within the project limits. Water is supplied to residents, including Whitewater Park

**by private well. Majority of the impacts to utilities and ESA is a direct result of the detour bridge. The cost of utility relocations, construction time, and environmental impact could be reduced substantially by avoiding the detour bridge and close SR 128. I recommend closing SR 128 and detour traffic during construction.**

**DEPARTMENT OF TRANSPORTATION  
STATE OF GEORGIA**

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**INTERDEPARTMENT CORRESPONDENCE**

FILE        **CSBRG-0007-00(042), Macon County, P.I. #0007042**        OFFICE    Thomaston  
FROM       Kerry Gore, District Utilities Engineer        DATE      April 22, 2015  
TO          Kelvin Mullins, Project Manager  
SUBJECT    **PRELIMINARY UTILITY COST (ESTIMATE)**

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

<b>FACILITY OWNER</b>	<b>NON- REIMBURSABLE</b>	<b>REIMBURSABLE</b>
<b>Flint EMC</b>	<b>0</b>	<b>150,000</b>
<b>GPC Distribution</b>	<b>No Conflict</b>	<b>0</b>
<b>Windstream</b>	<b>60,000</b>	<b>No Conflict</b>
<hr/>		
<b>TOTALS</b>	<b>\$60,000</b>	<b>\$150,000</b>

Total Preliminary Utility Cost Estimate **\$150,000**.

If you have any questions, please contact **Kerry Gore** at **706-646-7603**.

KG/

cc:



## Meeting Minutes of Concept Team Meeting

TIA PROJECT NUMBER: RC08-000035  
PI NUMBER: 0007042  
COUNTY: Macon  
DESCRIPTION: SR 128 over Whitewater Creek  
DATE: February 9, 2015

### ATTENDEES:

Kelvin Mullins – GDOT TIA	Ben Rabun – GDOT Bridge
Shrujal Amin – GDOT TIA	Todd Hill – GT Hill Planners
Mark Wilkinson – American Engineers, Inc.	Harland Smith – GDOT District 3 Utilities
Andrew Farmer – American Engineers, Inc.	Patrick Weaver – GDOT District 3 Design
Troy Patterson – GDOT Eng. Services/Estimating	Thomas Howell – GDOT District 3
Robert Reid – GDOT Eng. Services/Estimating	Regina McDuffie – Macon County Manager
	Olin Credle – Macon Co. Parks & Recreation

### Project Description:

1. After introductions by Kelvin Mullins, Mark Wilkinson described the project as replacing the existing deficient bridge on SR 128 over Whitewater Creek in Macon County. The typical section proposed for the roadway has 12-ft lanes and 10-ft shoulders to accommodate the large percentage (21.25) of trucks. The new bridge would have 12-ft lanes and 8-ft shoulders.
2. Several alternatives were considered for the project:
  - a. Offsite Detour and construct permanent bridge in current location
  - b. Construct permanent bridge in new location upstream of the existing bridge
  - c. Construct temporary bridge upstream of the existing bridge and construct permanent bridge in the current location
  - d. Construct the temporary bridge to the downstream of the existing bridge and construct the permanent bridge in the current location
3. Macon County has expressed a desire to provide pedestrian/bike connectivity and access across Whitewater Creek. The existing bridge is too narrow for bike/ped use with the high amount of truck traffic. If a temporary bridge is used, it can not remain as a bike/ped bridge because it will not be designed to pass a 50-yr storm. The proposed bridge will be significantly wider than the existing bridge and bike/peds could use the 8-ft shoulder.



4. Utilities on the project were discussed. There are currently no utilities on the bridge. Utilities in the project vicinity include Georgia Power, Flint Power, and Windstream. Flint Power owns a line of power poles along the west side of the project. Windstream has a line on these same poles. It is anticipated that it would cost \$150,000 to relocate the power poles and \$60,000 to relocate Windstream's facilities. Windstream's line would not be reimbursable. Water in the area is provided by private wells.

#### Alternatives Discussion:

1. Offsite Detour and construct permanent bridge in current location
  - a. The total detour length from one side of the bridge to the other is 25.7 miles along current state routes (SR90 to SR49 to SR127) This results in 15.7 additional miles traveled along the N-S corridor.
  - b. No anticipated R/W impacts
  - c. No anticipated utility impacts
  - d. No anticipated 4f resource impacts
  - e. Minimal environmental resource impacts
  - f. No PAR required
  - g. Detour Meeting and Public Outreach required
  - h. Least expensive to construct (~450-ft bridge)
  - i. 12 month min. construction time
  - j. Macon County does not prefer
  - k. Easiest to construct
  - l. Would have to reach out to logging companys that use this route.
  - m. Would need to examine access to schools and emergency services.
2. Construct permanent bridge in new location to the upstream of the existing bridge
  - a. This alternative would result in the longest project limits.
  - b. Maintance of traffic and constructability would be moderately easy. Would need to ensure that there would be enough room to remove the existing bridge.
  - c. Greatest impacts to environmental resources
  - d. Greatest R/W impacts
  - e. Greatest 4f impacts
  - f. The Flint Power utility poles would need to be relocated
  - g. PAR would be required
  - h. Individual Permit would be required
  - i. 450-ft bridge would be required
  - j. 12 month min. construction time



3. Construct temporary bridge to the upstream of the existing bridge and replace the existing bridge with a permanent bridge.
  - a. There would need to be enough clearance under the temporary bridge to access the existing/permanent bridge location.
  - b. May be able to use a shorter length, lower elevation temporary bridge
  - c. The Flint Power utility poles would need to be relocated
  - d. 4f impacts would be anticipated
  - e. Environmental impacts would be anticipated
  - f. R/W impacts would be anticipated
  - g. Smaller project limits than permanent bridge to the upstream alternative due to lower speed design for temporary detour/bridge.
  - h. 18-24 month min. construction time
  - i. Most construction cost – Temporary bridge \$550,000
  - j. PAR may be required
  - k. Regional Permit would be required
  
4. Construct a temporary bridge to the downstream of the current bridge and construct the permanent bridge in the current bridge location
  - a. Results in the longest temporary bridge (>650-ft)
  - b. High environmental impacts anticipated
  - c. PAR required
  - d. Very expensive
  - e. Very difficult to construct
  - f. R/W impacts anticipated
  - g. No 4f impacts
  - h. No utility impacts
  - i. 18-24 mo. Construction time
  - j. This is the least desirable alternative

**From:** Mullins, Kelvin [<mailto:kemullins@dot.ga.gov>]

**Sent:** Thursday, March 26, 2015 1:53 PM

**To:** Regina McDuffie

**Cc:** Amin, Shrujal; Mark Wilkinson; 'psmeeton@gthillplanners.com'; Dover, Mike; Pugh, Samuel; Miles, Shana M

**Subject:** RE: Highway 128 Bridge Project

Ms. McDuffie,

Thank you for your email regarding the SR 128 Bridge Replacement project over Whitewater Creek in Macon County. We appreciate your input.

We will take this information into consideration while evaluating the three proposed alternatives for reconstructing the SR 128 bridge.

There are inconveniences to the Alternate which involves closing the road during construction and using an off-site detour, however there are also important benefits that need to be considered, which include:

- Significant cost savings of tax payer dollars for Design and Construction
- Significant reduction in environmental impacts
- Significant reduction in Design and Construction Schedules

We will continue to work closely with you during this project as we move forward with the decision making process for selecting a Construction Alternative.

Please let me know if you have any questions.

Thanks.

Kelvin H. Mullins  
TIA Regional Coordinator  
Office of TIA - 19th floor  
phone: 404-631-1675

**From:** Regina McDuffie [<mailto:rmmcduffie148@windstream.net>]

**Sent:** Monday, March 23, 2015 10:12 AM

**To:** Mullins, Kelvin; Amin, Shrujal

**Subject:** Highway 128 Bridge Project

Hi Kelvin/ Shrujah,

Hope all is going well for you all. I verbally polled members of the community regarding the option to detour traffic for the Highway 128 Bridge and found that the detour would significantly complicate the traffic in the area. The community is adamantly opposed to the option of detouring the traffic and would like for this option to be eliminated.

A primary adverse impact is the one that we have been trying to rectify regarding connectivity for Whitewater Park. If the bridge access is not available, camp access from the cabins behind the church would be detoured 19 miles (or more) to enjoy amenities at the park. As you know the county is investing more than ¾ of a million

dollars in improvements for the park and would be tremendously impacted if park access across the bridge is limited. This would adversely impact revenues and hurt future business for the park.

Another major adverse impact would be the re-routing of the school buses which would increase cost in hours of operation, fuel cost and time for students to be transported. The school system would have to reroute all bus traffic north of the bridge and the 19 mile detour would impact more than 20 percent of the students.

The access to Whitewater Baptist Church would be impacted as well. Members that live north of the church off of Hwy 128 would again also have to detour more than 19 miles to attend service.

I also spoke with the emergency medical services and fire and rescue. In regards to EMS, we are already transporting outside of the County with an average transport time of 35 - 55 minutes; the detour would add costly hours to the transport time. Fuel cost and supply cost increase with the length of transport and the additional time would significantly impact our response and transport times. For Fire / Rescue, access to areas above the bridge on 128 would be significantly hindered. Our volunteers have to come from their current location to access equipment located at the substation or come from other areas of the County. In regards to emergency services and response, the bridge detour would cause significant delays and may contribute to greater losses of life and property.

I spoke further with City officials in Ideal and they have great concern for traffic being re-routed through the City and the adverse impact on their roads. They do not have the road infrastructure for heavy truck traffic. The county roads would also be severely impacted.

In addition, local businesses have expressed concern that the added transport time would increase their expenses and result in costly delays.

Please let me know when this matter can be further addressed and how the community can voice its opinion regarding the proposed options. Your attention and assistance is appreciated. RMM

**Regards,**

**Regina M. McDuffie,**  
County Manager



Macon County Board of Commissioners  
121 S. Sumter St.  
Oglethorpe, GA 31068

(478) 472-7021 phone  
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Georgia DOT has launched a new, more relevant, professional and user-friendly website. Take a look at [www.dot.ga.gov](http://www.dot.ga.gov). A brief video explaining the new site can be viewed at <https://youtu.be/e3Mu5jW9VKM>. Also, see our Fact Sheet at [www.dot.ga.gov/AboutGeorgia/Pages/TravelSmart.aspx](http://www.dot.ga.gov/AboutGeorgia/Pages/TravelSmart.aspx). If you have questions and feedback, drop us a line at [TravelSmart@dot.ga.gov](mailto:TravelSmart@dot.ga.gov)



## HYDRAULIC ENGINEERING FIELD REPORT

### I. HYDRAULIC AND HYDROLOGICAL DATA REQUIRED FOR ALL EXISTING OR PROPOSED BRIDGE STREAM CROSSING PROJECTS

#### A. Project Location

Project No.: RC08-000035 County: MACON District: 15  
 P.I. No.: 0007042 Stream Name: WHITEWATERCREEK Route: SR128  
 Surveyed By: ZACKARY WOLFE, RLS Date: OCTOBER 18, 2014

#### B. Site Information

##### Floodplain and Stream Channel description:

1. Flat, rolling, mountainous, etc.: FLAT
2. Wooded, heavily vegetated, pasture, swampy, etc.: WOODED, SWAMPY
3. Stream channel description: well-defined banks, meandering, debris, etc.  
WELL DEFINED BANKS, SOME DEBRIS, FALLEN TREES
4. Is there any fill in the upstream or downstream floodplain, which will affect the natural drainage or limit the floodplain width at this site?  
NO

#### C. Required Existing Bridge Information at Project Site

1. Bridge Identification No.: #0000000193000250, BRIDGE OVER WHITEWATERCREEK
2. Date Built: 1937
3. Skew angle of bridge bents: N/A
4. Height of curb, parapet or barrier: 12"

##### Substructure Information:

1. Column type (concrete, steel, etc): CONCRETE
2. Size of columns: 2' X 2'
3. Number of columns per bent: 2
4. Guide Bank (Spur Dike) length, elevation and location (if applicable):  
N/A
5. Note any scour problems at intermediate bents or abutments:  
N/A

Note: The above information is required for all bridges within the floodplain (main and overflow bridges) along the roadway. In addition, the location, size and number of barrels are required for all box culverts located within the floodplain.

**D. Normal Water Surface Data**

	<u>WS ELEV</u>
500 feet upstream of survey centerline:	<u>272.17</u>
At the survey centerline:	<u>272.97</u>
500 feet downstream of survey centerline:	<u>272.43</u>
Normal high tide:	<u>N/A</u>
Normal low tide:	<u>N/A</u>

**E. Historical Flood Data**

- Extreme high water elevation at site: 289.9 Date: JULY/1994
- Highest observed tide elevation: N/A Date: \_\_\_\_\_
- Location of extreme high water elevation (upstream/downstream face of bridge at the centerline or station and offset if not at bridge):  
N=852914.65 E=2328181.83 GA WEST NAD 83 (CORS 2006)
- Source of high water information: U.S. GEOLOGICAL SURVEY  
OPEN FILE REPORT 96-228
- Location and floor elevation of any houses/buildings/structures that have been flooded:  
WHITEWATER BAPTIST CHURCH  
FINISH FLOOR ELEVATION = 288.14
- Information about flood (number of times structure has been flooded, water surface elevations and date(s) of flood):  
IN JULY OF 1994 FLOOD OF RECORD  
BECAME 289.90 AFTER JULY FLOOD
- Location and floor elevation of any houses/buildings/structures that have floor elevations within 2 feet of the extreme high water elevation:  
ONLY AT THE WHITEWATER BAPTIST CHURCH

**F. Benchmark Information****Location 1:**

- Benchmark Name: Δ6 F242SD6 Elevation: 295.46
- Location (project stations/offset):  
Northing: 853428.895 Easting: 2328365.450
- Physical description: 3/4" REBAR W/PINK CAP

**Location 2:**

- Benchmark Name: Δ5 F242SD5 Elevation: 299.06
- Location (project stations/offset):  
Northing: 852857.374 Easting: 2328399.890
- Physical description: 3/4" REBAR W/PINK CAP

**Location 3:**

- Benchmark Name: Δ4 F242SD4 Elevation: 310.23
- Location (project stations/offset):  
Northing: 852480.211 Easting: 2328412.931
- Physical description: 3/4" REBAR W/CAP

G. Upstream and Downstream Structures

Structure 1

- 1. Structure Type (railroad/highway bridge, culvert): N/A
- 2. Route Number (if applicable): \_\_\_\_\_
- 3. Distance from proposed structure along stream centerline: \_\_\_\_\_
- 4. Length of bridge or culvert size: \_\_\_\_\_
- 5. Superstructure (slab thickness, beam depth): \_\_\_\_\_
- 6. Substructure information: \_\_\_\_\_
- 7. Column Type (concrete, steel, etc.): \_\_\_\_\_
- 8. Size of Column: \_\_\_\_\_
- 9. Number of Columns per bent: \_\_\_\_\_

Structure 2

- 1. Structure Type (railroad/highway bridge, culvert): N/A
- 2. Route Number (if applicable): \_\_\_\_\_
- 3. Distance from proposed structure along stream centerline: \_\_\_\_\_
- 4. Length of bridge or culvert size: \_\_\_\_\_
- 5. Superstructure (slab thickness, beam depth): \_\_\_\_\_
- 6. Substructure information: \_\_\_\_\_
- 7. Column Type (concrete, steel, etc.): \_\_\_\_\_
- 8. Size of Column: \_\_\_\_\_
- 9. Number of Columns per bent: \_\_\_\_\_

Structure 3

- 1. Structure Type (railroad/highway bridge, culvert): N/A
- 2. Route Number (if applicable): \_\_\_\_\_
- 3. Distance from proposed structure along stream centerline: \_\_\_\_\_
- 4. Length of bridge or culvert size: \_\_\_\_\_
- 5. Superstructure (slab thickness, beam depth): \_\_\_\_\_
- 6. Substructure information: \_\_\_\_\_
- 7. Column Type (concrete, steel, etc.): \_\_\_\_\_
- 8. Size of Column: \_\_\_\_\_
- 9. Number of Columns per bent: \_\_\_\_\_

NOTE: The above information is required for all bridges or culverts, which lie between 2000 feet and 1 mile upstream or downstream of the project bridge.

H. Miscellaneous Information

- 1. Are there water surfaces affected by other factors (high water from other streams, reservoirs, etc.):

WHITEWATER CREEK INTERSECTS FLINT RIVER  
APPROX. 9800' EAST ALONG STREAMLINE FROM BRIDGE @ SR128

- 2. Give location (horizontal distance to dam or spill way along stream centerline), length, width and elevation of dam and spillway, if applicable:

624' TO DAM FROM BRIDGE @ SR128 ALONG STREAM CENTERLINE  
DAM LENGTH = 390', DAM WIDTH = 80', TOP DAM = 289.00 ELEV., BOT DAM = 271.90

# Bridge Inventory Data Listing



Parameters: Bridge Serial Num

Structure ID:193-0025-0		Macon		SUFF. RATING: 40.57	
<b>Location &amp; Geography</b>			<b>Signs &amp; Attachments</b>		
<b>Structure ID:</b>	193-0025-0	*104 Highway System:	0	225 Expansion Joint Type:	04
200 Bridge Information:	06	*26 Functional Classification:	06	242 Deck Drains:	1
*6A Feature Int:	WHITEWATER CREEK	*204 Federal Route Type:	F No: 01541	243 Parapet Location:	0
*6B Critical Bridge:	0	105 Federal Lands Highway:	0	Height:	0.00
*7A Route No Carried:	SR00128	*110 Truck Route:	0	Width:	0.00
*7B Facility Carried:	SR 128	206 School Bus Route:	1	238 Curb Height:	1
9 Location:	4 MI N OF OGLETHORPE	217 Benchmark Elevation:	0000.00	Curb Material:	1
2 Dot District:	3	218 Datum:	0	239 Handrail	1 1
207 Year Photo:	2012	*19 Bypass Length:	19	*240 Median Barrier Rail:	0
*91 Inspection Frequency:	24 Date: 12/19/2012	*20 Toll:	3	241 Bridge Median Height:	0
92A Fract Crit Insp Freq:	0 Date: 02/01/1901	*21 Maintanance:	01	* Bridge Median Width:	0
92B Underwater Insp Freq:	1 Date: 08/10/2011	*22 Owner:	01	230 Guardrail Loc. Dir. Rear:	3
92C Other Spc. Insp Freq:	0 Date: 02/01/1901	*31 Design Load:	2	Fwr:	3
* 4 Place Code:	00000	37 Historical Significance:	5	Oppo. Dir. Rear:	0
*5 Inventory Route(O/U):	1	205 Congressional District:	02	Oppo. Fwr:	0
Type:	3	27 Year Constructed:	1937	244 Aproach Slab	0
Designation:	1	106 Year Reconstructed:	0000	224 Retaining Wall:	0
Number:	00128	33 Bridge Median	0	233Posted Speed Limit:	55
Direction:	0	34 Skew:	00	236 Warning Sign:	0.00
*16 Latitude:	32 - 20.8403 HMMS Prefix:SR	35 Structure Flared:	0	234 Delineator:	1.00
*17 Longitude:	84 - 03.8317 HMMS Suffix:00	38 Navigation Control:	0	235 Hazard Boards:	1
	MP: 5.90	213 Special Steel Design:	8	237 Utilities Gas:	00
98 Border Bridge:	000 % Shared:00	267 Type of Paint:	4	Water:	00
99 ID Number:	0000000000000000	*42 Type of Service On:	1	Electric:	00
*100 STRAHNET:	0	Type of Service Under:	5	Telephone:	00
12 Base Highway Network:	1	214 Movable Bridge:	0	Sewer:	00
13A LRS Inventory Route:	1931012800	203 Type Bridge:	A - O - N - O	247 Lighting Street:	0
13B Sub Inventory Route:	0	259 Pile Encasement	3	Navigation:	0
*101 Parallel Structure:	N	*43 Structure Type Main:	4 02	Aerial:	0
*102 Direction of Traffic:	2	45 No.Spans Main:	003	*248 County Continuity No.:	00
*264 Road Inventory Mile Post:	005.76	44 Structure Type Appr:	1 04		
*208 Inspection Area:	08 Initials: JKP	46 No Spans Appr:	0008		
Engineer's Initials:	res	226 Bridge Curve Horz	0 Vert: 0.00		
* Location ID No:	193-00128D-005.90N	111 Pier Protection	0		
		107 Deck Structure Type:	1		
		108 Wearing Structure Type:	1		
		Membrane Type:	0		
		Deck Protection:	8		

