

D.O.T. 66

DEPARTMENT OF TRANSPORTATION  
STATE OF GEORGIA

INTERDEPARTMENT CORRESPONDENCE

**FILE** P. I. No. 442955, Randolph County **OFFICE** Preconstruction  
 BRST-0510(11)  
 SR 216 over Carter Creek **DATE** April 19, 2005

**FROM** *Margaret B. Pirkle*  
 Margaret B. Pirkle, P.E., Assistant Director of Preconstruction

**TO** SEE DISTRIBUTION

**SUBJECT** REVISED PROJECT CONCEPT REPORT APPROVAL

Attached for your files is the approval for subject project.

MBP/cj

Attachment

DISTRIBUTION:

- David Mulling
- Harvey Keepler
- Ken Thompson
- Jamie Simpson
- Michael Henry
- Keith Golden
- Joe Palladi (file copy)
- Babs Abubakari
- Joe Sheffield
- BOARD MEMBER

DEPARTMENT OF TRANSPORTATION  
STATE OF GEORGIA

INTERDEPARTMENT CORRESPONDENCE

FILE **BRST-0510(11) Randolph County** OFFICE Atlanta  
SR 216 over Carter Creek 4.6 mi S of Cuthbert  
P.I. No. 442955-  
*M. B. Abubakari* (MAH)  
DATE March 15, 2005  
FROM Babs Abubakari, P.E. State Consultant Design Engineer  
TO Margaret B. Pirkle, P.E., Assistant Director of Preconstruction  
SUBJECT **REVISED PROJECT CONCEPT REPORT**

Attached is the original copy of the revised Concept Report for your further handling for approval in accordance with the Plan Development Process (PDP).

The Concept has been revised to lengthen the proposed bridge so as to span the nearby Georgia Southwestern Railroad which currently has an at-grade crossing with SR 216.

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

DATE 4/1/05

*Joseph P. Palladi*  
State Transportation Planning Administrator

If you have any questions or require further information please call David Norwood at (404)463-3829.

*Distribution:*

David Mulling, Project Review Engineer  
Harvey Keepler, State Environmental/Location Engineer  
Keith Golden, State Traffic Safety and Design Engineer  
Joe Palladi, State Transportation Planning Administrator  
Jamie Simpson, State Financial Management Administrator  
Joe Sheffield, District 4 Engineer – Tifton  
Paul Liles, State Bridge & Structural Engineer

MBA:MAH:DAN

cc: URS Corporation

# REVISED PROJECT CONCEPT REPORT

## **S.R. 216 over Carter Creek BRST-0510(11); RANDOLPH COUNTY P. I. No. 442955**

**Need and Purpose:** Project BRST-0510(11) will replace the structurally deficient bridge located on SR 216 over Carter Creek in Randolph County. The current bridge was completed in 1949 and is located almost 5 miles south of Cuthbert. The existing bridge has a sufficiency rating of 41.3. The Office of Bridge Design has determined that any structure with a sufficiency rating less than 50 should be replaced rather than improved.

The current bridge was designed for H-15 live loading. The Office of Bridge Maintenance has determined that existing bridges on the state route system, which were designed for H-15 live loading should be replaced. This project will replace the existing bridge with a structurally adequate bridge.

This section of SR 216 is functionally classified as a rural major collector and is not a designated truck route. The posted speed limit along this section of roadway is 55 mph. The Average Daily Traffic (ADT) along this section of highway was 800 in 2000 with 8 percent trucks. By 2026, the ADT is projected to reach 1600.

The total horizontal clearance for the current bridge is 26.0'. According to AASHTO, the geometric design standards for rural bridges with an ADT between 400 and 1999 state that the minimum bridge width clear distance should be no less than 38'.

This section of SR 216 is not currently a part of either the Statewide Bicycle and Pedestrian Plan or any locally adopted bicycle and pedestrian plan. In addition, this project has independent utility. Therefore work on the project can begin without the completion of any other project and the progress of no other project is dependent on the completion of this project.

Replacing this bridge will bring it up to current design standards and in doing so will improve the operation and safety of this roadway.

**Project location:** This project is located on S.R. 216 over Carter Creek and the Georgia Southwestern Railroad almost 5 miles south of Cuthbert in Randolph County.

**Description of the approved concept:** The proposed project would consist of replacing the existing bridge and approaches on SR 216 over Carter Creek. The existing 2-lane bridge is 120 feet long and 26 feet wide consisting of four spans. The proposed bridge will be 38 feet wide, consisting of two 12-foot lanes with two 7-foot shoulders. The proposed bridge is expected to be approximately 160 ft. in length and have 4 spans, each approximately 40 ft. long. The existing approach roadway has 2 lanes with rural shoulders on an existing right-of-way of 100 feet. The proposed approaches would consist of two 12-foot lanes with 10-foot shoulders, 2 feet of which will be paved. Additional right-of-way acquisition on both sides of the road is anticipated. The total

length of bridge and approaches is approximately 2700 feet (0.51 miles).

**PDP Classification:** Major project on new location  
Full Oversight ( ); Exempt ( X ); SF ( ); Other ( )

**Functional Classification:** Rural Major Collector

**U. S. Route Number(s): State Route Number(s):** S.R. 216

**Traffic (AADT) as shown in the approved concept:**

Current Year (2000): 800 Design Year (2026): 1,600

**Proposed features to be revised:** Approximately 400 feet north of the proposed bridge over Carter Creek as shown in the approved concept report lies the Georgia Southwestern Railroad at grade to SR 216. The approved concept made no provision for grade separating that crossing. Due to undesirable vertical geometry of the approved concept, the Georgia Department of Transportation (GDOT) investigated several alternatives. As a result of those investigations, GDOT has determined that grade separating the Georgia Southwestern Railroad will provide the most effective opportunity for establishing desirable vertical geometry. The grade separation will be achieved by constructing one bridge, 700 feet long by 38 feet wide, over both Carter Creek and the Georgia Southwestern Railroad crossing. The grade separation will require that additional right of way be taken on the east side. The project termini, proposed typical sections, and control of access as approved in the Concept Report will remain essentially unchanged. Impacts on both the human and natural environment will be generally the same as impacts associated with the approved concept.

**Describe the revised feature(s) to be approved:** The revised features associated with the revised concept are as described in the above paragraphs.

**Updated traffic data (AADT):**

Current Year (2006): 1,000 Design Year (2026): 1,600

**Programmed/Schedule:**

P.E. 2000 R/W: 2005 Construction: January 2006

**Revised cost estimates:**

1. Construction cost including inflation and E&C = \$3,749,295 (See Attachment)
2. Right-of-way = \$104,500
3. Utilities = \$12,500

**Is the project located in a Non-attainment area?** No

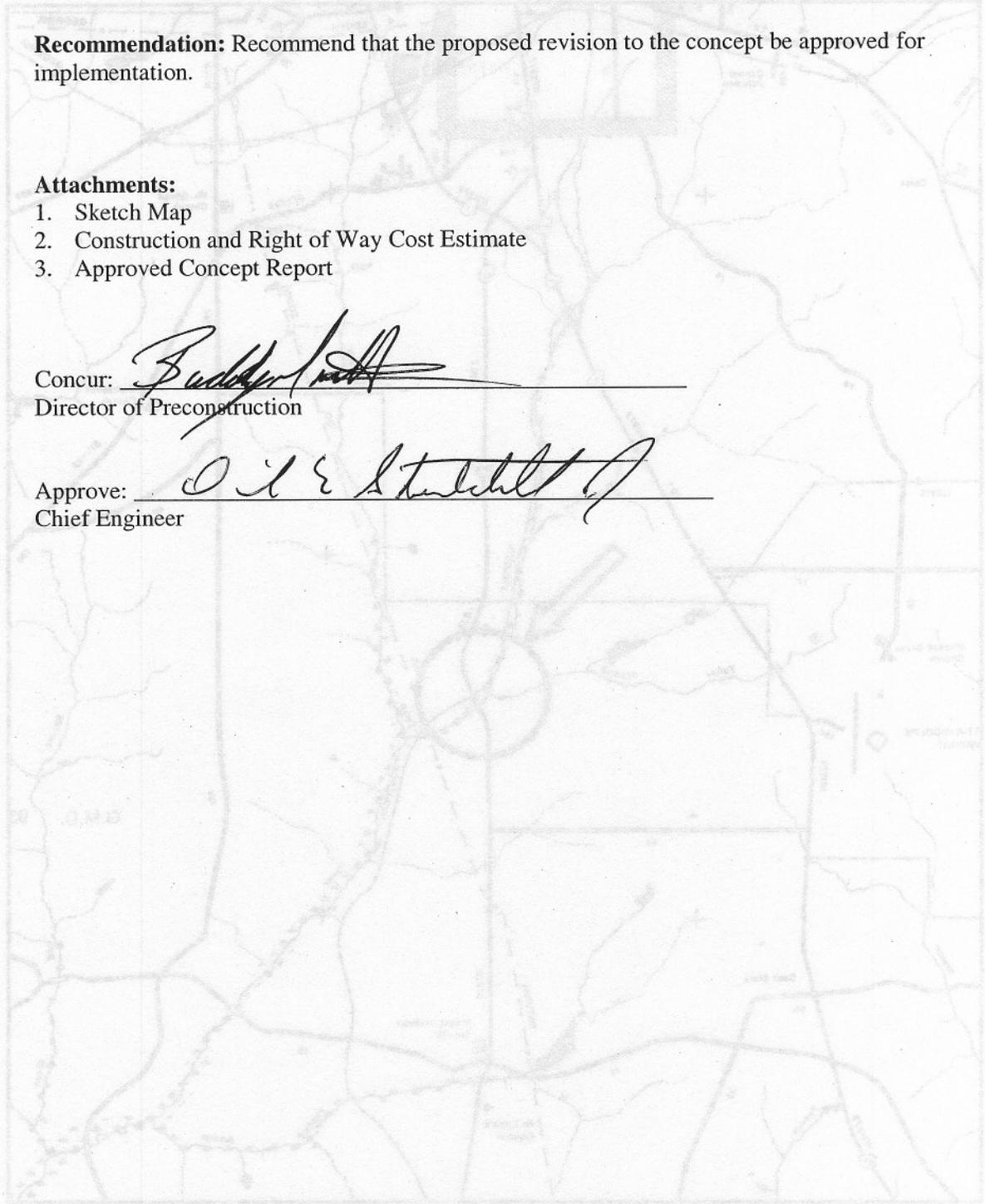
**Recommendation:** Recommend that the proposed revision to the concept be approved for implementation.

**Attachments:**

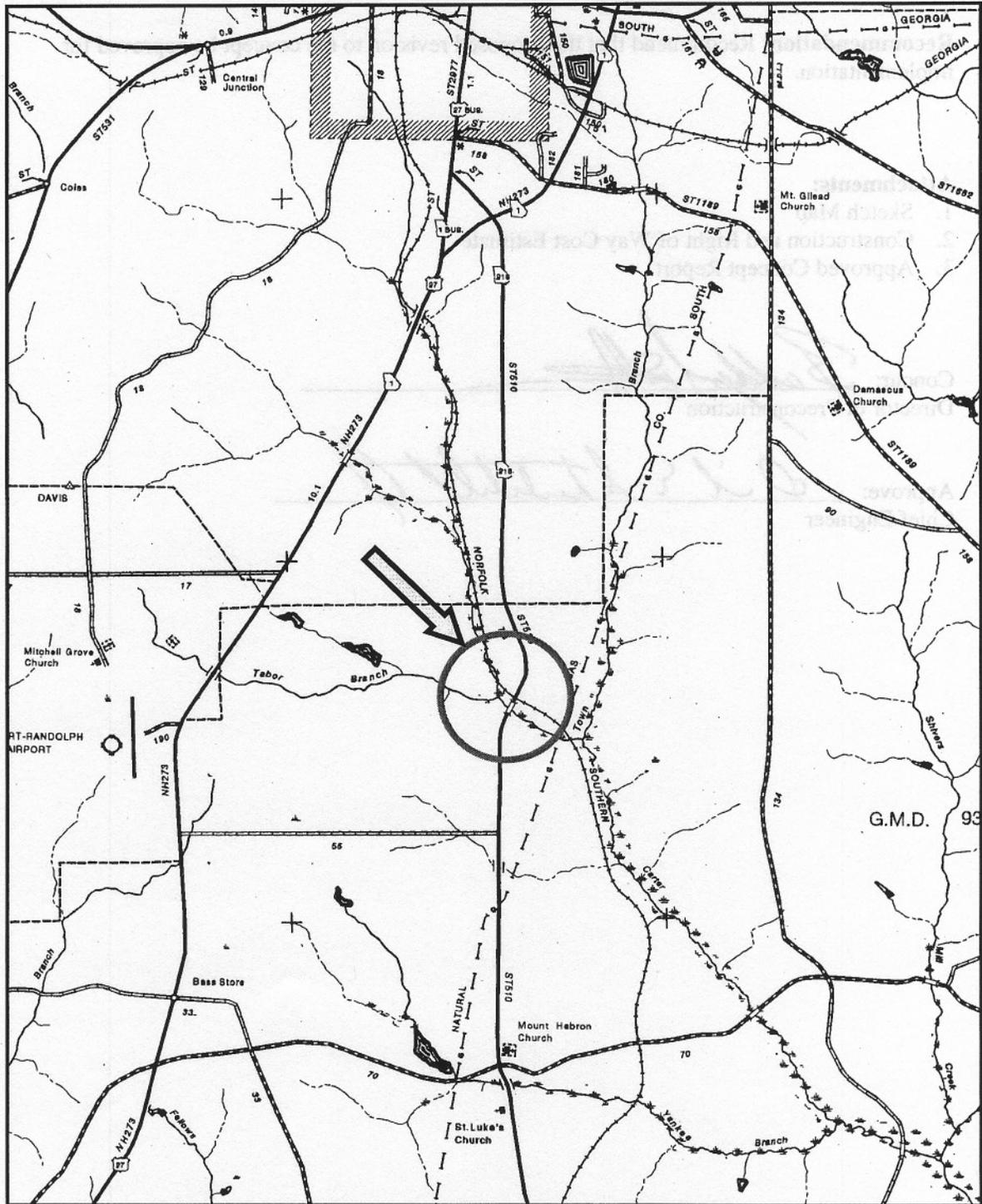
1. Sketch Map
2. Construction and Right of Way Cost Estimate
3. Approved Concept Report

Concur: *Buddy [Signature]*  
Director of Preconstruction

Approve: *D. E. Stuchell [Signature]*  
Chief Engineer



Location Map  
Project: BRST-0510(1) Randolph County PI No. 144255  
Description: SR 216 over Carter Creek 4.6 mi S of Culbert



### Location Map

**Project:** BRST-0510(11) Randolph County **PI No.:** 442955

**Description:** SR 216 over Carter Creek 4.6 mi S of Cuthbert

**PRELIMINARY COST ESTIMATE**

PROJECT NUMBER: BRST-0510(11) COUNTY: Randolph  
 DATE: 3/1/2005 ESTIMATED LETTING DATE:  
 PREPARED BY: Kimley-Horn and Associates PROJECT LENGTH: 0.80 miles

( ) PROGRAMMING PROCESS ( ) CONCEPT DEVELOPMENT (x) DURING PROJECT DEV.

PROJECT COST		
<b>A. RIGHT-OF-WAY:</b>		
1. PROPERTY (LAND & EASEMENT)	10.45ac @ \$10,000/ac'	\$104,500
2. DISPLACEMENTS; RES: 0, BUS; 0, M.H.: 0		
3. OTHER COST (ADM./COST, INFLATION)		
SUBTOTAL: A		\$104,500
<b>B: REIMBURSEABLE UTILITIES:</b>		
1. RAILROAD		
2. TRANSMISSION LINES		
3. SERVICES (Water, Sewer, Gas, Electric, Cable)		
SUBTOTAL: B		\$12,500
<b>C: CONSTRUCTION:</b>		
1. MAJOR STRUCTURES		
a. BRIDGE (700' x 38' = 26,600 ft <sup>2</sup> x \$55)		\$1,463,000
SUBTOTAL: C-1		\$1,463,000
2. GRADING AND DRAINAGE:		
a. EARTHWORK (incl. GRADING)		\$800,000
b. DRAINAGE:		
1) Cross Drain Pipe		\$27,900
2) Curb and Gutter		N/A
3) Longitudinal System (incl. catch basins)		N/A
SUBTOTAL: C-2		\$827,900
3. BASE AND PAVING:		
a. AGGREGATE BASE:	98672 sf @ \$19.90/sy	\$218,175
b. ASPH. PAVING: Surface	98672 sf @ \$52/tn (1.5")	\$47,000
Binder	98672 sf @ \$50 (2")	\$60,300
Base	98672 sf @ \$46 (4")	\$110,950
SUBTOTAL: C-3b		\$218,250
c. CONCRETE PAVING- Approach Slabs	2888 sf @ \$146/sy	\$46,850
SUBTOTAL: C-3c		\$46,850
d. OTHER		
SUBTOTAL: C-3		\$483,275
4. LUMP ITEMS:		
a. GRASSING		\$20,000
b. CLEARING AND GRUBBING		\$100,000
c. LANDSCAPING		\$0
d. EROSION CONTROL		\$100,000
e. TRAFFIC CONTROL		\$50,000
SUBTOTAL: C-4		\$270,000
5. MISCELLANEOUS:		
a. SIGNING & MARKING		\$10,000
b. GUARDRAIL		
Type T (\$35 x 82.5')		\$2,890
Type W (\$15.00 x 1900')		\$28,500
Type 12 Anchor (\$1500 x 4 EA)		\$6,000
SUBTOTAL: C-5		\$47,390
6. SPECIAL FEATURES		
SUBTOTAL: C-6		\$0
ESTIMATE SUMMARY		
A. RIGHT-OF-WAY		
		\$104,500
B. REIMBURSEABLE UTILITIES		
		\$12,500
C. CONSTRUCTION		
1. MAJOR STRUCTURES		\$1,463,000
2. GRADING AND DRAINAGE		\$827,900
3. BASE AND PAVING		\$483,275
4. LUMP ITEMS		\$270,000
5. MISCELLANEOUS		\$47,390
6. SPECIAL FEATURES		\$0
SUBTOTAL CONSTRUCTION COST		\$3,091,565
INFLATION (5% PER YEAR)		
NUMBER OF YEARS	2	\$316,885
E. & C. (10%):		\$340,845
TOTAL CONSTRUCTION COST		\$3,749,295
<b>GRAND TOTAL PROJECT COST</b>		<b>\$3,866,295</b>