

D.O.T. 66

DEPARTMENT OF TRANSPORTATION
STATE OF GEORGIA

INTERDEPARTMENT CORRESPONDENCE

FILE BRST-2938(3) Morgan County **OFFICE** Preconstruction
 P. I. No. 245401
 SR 83 over Big Sandy Creek **DATE** March 9, 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

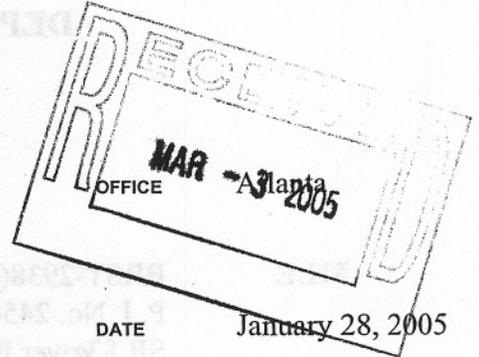
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[Faint routing stamp with checkboxes and illegible text]

DEPARTMENT OF TRANSPORTATION
STATE OF GEORGIA

INTERDEPARTMENT CORRESPONDENCE



FILE **BRST-2938(3) MORGAN COUNTY**
SR 83 over Big Sandy Creek
P.I. No. 245401

FROM *M. Babs Abubakari*
Mohammed (Babs) Abubakari, State Consultant Design Engineer

DATE January 28, 2005

TO Meg Pirkle, 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 original concept is changed from an off-site detour to a bridge at a permanent offset due to additional cost of improving the off-site detour roadway.

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

DATE 3/2/05

Joseph P. Pirkle
State Transportation Planning Administrator

Distribution:

- Project Review Engineer
- State Environmental/Location Engineer
- State Traffic Operations Engineer
- State Transportation Planning Administrator
- State Transportation Programming Engineer
- District 2 Engineer
- State Bridge Design Engineer
- Consultant Design Office

ROUTING	<input type="checkbox"/>	<i>JOE</i>
<input checked="" type="checkbox"/> <i>Chemical</i>	<input type="checkbox"/>	<i>Chemical</i>
<input type="checkbox"/> <i>Electric</i>	<input type="checkbox"/>	<i>Meg</i>
<input checked="" type="checkbox"/> <i>Design</i>	<input type="checkbox"/>	

DEPARTMENT OF TRANSPORTATION
STATE OF GEORGIA

REVISED PROJECT CONCEPT REPORT

Need & Purpose: Bridge project BRST-2938 (3) will replace the structurally deficient bridge located on State Route 83 over Big Sandy Creek. The bridge's sufficiency rating is 45.00. The Office of Bridge Maintenance has determined that any structure with a sufficiency rating less than 50 should be replaced rather than improved. This project will replace the existing bridge with a structurally adequate bridge.

State Route 83 is functionally classified as a rural major collector. The posted speed limit along SR 83 is 55 mph. The section where the proposed bridge project improvement would take place is a school bus route. SR 83 is not part of the Statewide Bicycle Plan. The bridge is located 3.0 miles south of Bostwick, Georgia and was constructed in 1949. Trucks represent 8% of the traffic of SR 83. The Average Daily Traffic (ADT) along this section of highway for 2002 is 2,900. The projected ADT for the year 2010 is 3,400 and the projected (2020) ADT for this section of highway is 5,000. Currently no roadway improvements are in the Construction Work Program for SR 83 around Big Sandy Creek.

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 consists of SR 83 over Big Sandy Creek, located in Morgan County three miles south of Bostwick, in G.M.D. 284.

Description of the approved concept: The approved concept is to build the proposed bridge in the same location as the existing bridge by closing the road and detouring traffic off-site during construction. The roadway typical section consists of two 12 feet travel lanes with 10 feet rural shoulders. The approved construction cost is \$1,041,506.54, which included no cost for the off-site detour.

PDP Classification:

Full Oversight (), Exempt (X), SF (), Other ()

Functional Classification: Rural Major Collector Road

U. S. Route Number(s): N/A

State Route Number(s): 83

Traffic (AADT) as shown in the approved concept:

Current Year: (2010) - 3400

Design Year: (2020) - 5000

Proposed features to be revised:

The proposed revision is to delete the off-site detour and construct the approved bridge on a permanent offset, maintaining traffic on the existing alignment during construction. The reason for the revision is the substantial cost for off-site detour improvements identified during preliminary design. The revision would save \$460,797 in construction cost for this project and Project Number BRST-2938(4), which was to utilize the same deleted off-site detour route.

Updated Traffic Data (AADT): No change from approved concept

Programmed/Schedule:

P.E. 2002 R/W 2006 Construction After 2007

Revised cost estimates:

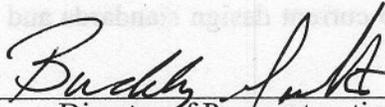
- | | | |
|----|--|----------------|
| 1. | Construction cost including inflation and E&C, | \$1,422,049.57 |
| 2. | Right-of-way, and | \$10,000 |
| 3. | Utilities | \$15,000 |

Is the project located in a non-attainment area? Yes X No

Recommendation: The Consultant Design Office recommends that the proposed revision to the concept be approved for implementation.

Attachments:

1. Cost Estimates,

Concur: 
Director of Preconstruction

Approve: 
Chief Engineer

Cost Estimate Breakdown

Original Concept:	
Cost for Construction of (2) Projects with Shared Off-Site Detour	
Approved Concept Costs for BRST-2938(4)	\$981,376.31
Right of Way Cost	\$10,000.00
Approved Concept Costs for BRST-2938(3)	\$1,041,506.54
Right of Way Cost	\$10,000.00
Cost Associated with bringing the County Roads up to GDOT Standards	\$1,349,867.56
Total OFF-SITE detour cost before any help from Morgan County	\$3,392,750.41
Total help from Morgan County	(\$300,000.00)
Final Cost of an OFF-SITE Detour Option	\$3,092,750.41

Revised Concept:	
Cost for Construction of (2) Projects with On-Site Maintenance of Traffic	
Revised Cost Estimates for BRST-2938(4)	\$989,903.81
Based on ON-SITE detour costs	
Right of Way Cost	\$200,000.00
Revised Cost Estimates for BRST-2938(3)	\$1,422,049.57
Based on ON-SITE detour costs	
Right of Way Cost	\$20,000.00
Final Cost of an ON-SITE Detour Option	\$2,631,953.38

Cost Savings by Using Revised Concept:	
Difference between an OFF-SITE Detour and ON-SITE Detour	\$460,797.03

NOTE: CONSTRUCTION COST DO NOT INCLUDED POSSIBLE ROAD IMPROVEMENT TO COUNTY ROADS

PROJECT COSTS

FROM APPROVED CONCEPT

20-Nov-02 ALTERNATE 4 - STAGED BRIDGE CULVERT CONSTRUCTION (ON-SITE DETOUR)
 DETAILED COST ESTIMATE FOR SR 83 OVER LITTLE SANDY CREEK
 PROJECT NO.: BRST-2938(4)
 P.I. NO.: 245400

ITEM NO.	ITEM	UNIT	UNIT COST	QUANT	TOTAL
ROADWAY					
210-0100	GRADING COMPLETE -	LS	\$43,674.07	1	\$43,674.07
310-5080	GR AGGR BASE CRS, 8 INCH, INCL MATL	SY	\$8.47	8089	\$68,512.89
318-3000	AGGR SURF CRS	TN	\$19.18	10	\$191.80
402-3142	RECYCLED ASPH CONC 19 MM SUPERPAVE, GP 1 OR 2, INCL	TN	\$53.63	928	\$49,779.37
402-3121	RECYCLED ASPH CONC 25 MM SUPERPAVE, GP 1 OR 2, INCL BITUM	TN	\$34.80	1392	\$48,452.04
402-3140	RECYCLED ASPH CONC 9.5 MM SUPERPAVE, GP 1 OR 2, INCL	TN	\$35.66	670	\$23,896.66
402-1812	RECYCLED ASPH CONC LEVELING, INCL BITUM MATL & H LIME	TN	\$35.62	50	\$1,781.00
413-1000	BITUM TACK COAT	GL	\$0.89	849	\$755.91
550-1180	STORM DRAIN PIPE, 18 IN, H 1-10	LF	\$31.58	50	\$1,579.00
577-1100	METAL DRAIN INLET - COMPLETE ASSEMBLY	EA	\$956.06	4	\$3,824.24
641-1100	GUARDRAIL, TP T	LF	\$61.68	83	\$5,093.53
641-1200	GUARDRAIL, TP W	LF	\$9.87	388	\$3,824.63
641-5001	GUARDRAIL ANCHORAGE, TP 1	EA	\$483.87	2	\$967.74
641-5012	GUARDRAIL ANCHORAGE, TP 12	EA	\$1,331.30	2	\$2,662.60
				SUBTOTAL	\$254,995.47
EROSION CONTROL					
000-0000	EROSION CONTROL	LS	\$65,000.00	1	\$65,000.00
				SUBTOTAL	\$65,000.00
QUAD 10' X 10' BRIDGE CULVERT 120 FT LONG					
207-0203	FOUND BK FILL MATL, TP II	CY	\$34.94	800	\$27,952.00
500-3101	CLASS A CONCRETE	CY	\$359.76	673	\$242,118.48
511-1000	BAR REINF STEEL	LB	\$0.51	68889	\$35,133.39
540-1102	REMOVAL OF EXISTING BR, BR NO -	LS	\$30,000.00	1	\$30,000.00
603-2024	STN DUMPED RIP RAP, TP 1, 24 IN.	SY	\$45.29	100	\$4,529.00
				SUBTOTAL	\$311,780.87
TRAFFIC CONTROL - ON SITE DETOUR					
150-1000	TRAFFIC CONTROL -	LS	\$75,000.00	1	\$75,000.00
150-5000	TRAFFIC CONTROL, TEMPORARY SAND LOADED ATTENUATOR MODULE	EA	\$471.31	20	\$9,426.20
622-1033	PRECAST CONCRETE MEDIAN BARRIER, METHOD 3	LF	\$35.42	500	\$17,710.00
				SUBTOTAL	\$102,136.20
TEMPORARY DETOUR ROAD					
210-0100	GRADING COMPLETE -	LS	\$37,333.33	1	\$37,333.33
402-3140	RECYCLED ASPH CONC 9.5 MM SUPERPAVE, GP 1 OR 2, INCL	TN	\$35.66	172	\$6,137.98
402-3121	RECYCLED ASPH CONC 25 MM SUPERPAVE, GP 1 OR 2, INCL BITUM	TN	\$34.80	689	\$23,959.80
402-3142	RECYCLED ASPH CONC 19 MM SUPERPAVE, GP 1 OR 2, INCL	TN	\$53.63	275	\$14,769.70
				SUBTOTAL	\$82,200.81
				CONSTRUCTION COST	\$816,113.36
CONSTRUCTION:	\$816,113.36	RIGHT OF WAY:	\$10,000.00		
E & C (10%):	\$81,611.34	ACQUIRED BY:	DOT		
INFLATION:	\$83,651.62	UTILITIES:	\$15,000.00		
(2 yrs. @ 5% per yr)					
TOTAL CONS'T COSTS	\$981,376.31				

NOTE: CONSTRUCTION COST DO NOT INCLUDED POSSIBLE ROAD IMPROVEMENT TO COUNTY ROADS

FROM APPROVED CONCEPT

PROJECT COSTS

20-Nov-02 ALTERNATE 3 - OFF-SITE DETOUR ALTERNATE
 DETAILED COST ESTIMATE FOR SR 83 OVER BIG SANDY CREEK
 PROJECT NO.: BRST-2938(3)
 P.I. NO.: 245401

ITEM NO.	ITEM	UNIT	UNIT COST	QUANT	TOTAL
ROADWAY					
210-0100	GRADING COMPLETE -	LS	\$49,333.33	1	\$49,333.33
310-5080	GR AGGR BASE CRS, 8 INCH, INCL MATL	SY	\$8.47	3453	\$29,249.73
318-3000	AGGR SURF CRS	TN	\$19.18	10	\$191.80
402-3142	RECYCLED ASPH CONC 19 MM SUPERPAVE, GP 1 OR 2, INCL	TN	\$53.63	396	\$21,251.96
402-3121	RECYCLED ASPH CONC 25 MM SUPERPAVE, GP 1 OR 2, INCL BITUM	TN	\$34.80	594	\$20,685.29
402-3140	RECYCLED ASPH CONC 9.5 MM SUPERPAVE, GP 1 OR 2, INCL	TN	\$35.66	293	\$10,436.57
402-1812	RECYCLED ASPH CONC LEVELING, INCL BITUM MATL & H LIME	TN	\$35.62	50	\$1,781.00
413-1000	BITUM TACK COAT	GL	\$0.89	363	\$322.71
433-1000	REINF CONC APPROACH SLAB	SY	\$115.12	310	\$35,687.20
441-0301	CONC SPILLWAY, TP 1	EA	\$1,345.24	4	\$5,380.96
550-1180	STORM DRAIN PIPE, 18 IN, H 1-10	LF	\$31.58	50	\$1,579.00
576-1015	SLOPE DRAIN PIPE, 15 IN	LF	\$23.33	80	\$1,866.40
577-1100	METAL DRAIN INLET - COMPLETE ASSEMBLY	EA	\$956.06	4	\$3,824.24
641-1100	GUARDRAIL, TP T	LF	\$61.68	83	\$5,093.53
641-1200	GUARDRAIL, TP W	LF	\$9.87	388	\$3,824.63
641-5001	GUARDRAIL ANCHORAGE, TP 1	EA	\$483.87	2	\$967.74
641-5012	GUARDRAIL ANCHORAGE, TP 12	EA	\$1,331.30	2	\$2,662.60
SUBTOTAL					\$194,138.70
EROSION CONTROL					
000-0000	EROSION CONTROL	LS	\$60,000.00	1	\$60,000.00
SUBTOTAL					\$60,000.00
BRIDGE					
540-1102	REMOVAL OF EXISTING BR, BR NO -	LS	\$50,000.00	1	\$50,000.00
543-1001	CONSTRUCTION OF BRIDGE NO. (\$55/SF X 10450 SF)	LS	\$491,150.00	1	\$491,150.00
603-2024	STN DUMPED RIP RAP, TP 1, 24 IN	SY	\$45.29	200	\$9,058.00
SUBTOTAL					\$550,208.00
TRAFFIC CONTROL - OFF SITE DETOUR					
150-1000	TRAFFIC CONTROL -	LS	\$60,000.00	1	\$60,000.00
622-1033	PRECAST CONCRETE MEDIAN BARRIER, METHOD 3	LF	\$35.42	50	\$1,771.00
SUBTOTAL					\$61,771.00
CONSTRUCTION COST					\$866,117.70
CONSTRUCTION:			\$866,117.70	RIGHT OF WAY:	\$10,000.00
E & C (10%):			\$86,611.77	ACQUIRED BY:	DOT
INFLATION:			\$88,777.06	UTILITIES:	\$15,000.00
(2 yrs. @ 5% per yr)					
TOTAL CONST COSTS			\$1,041,506.54		

NOTE: CONSTRUCTION COST DO NOT INCLUDED POSSIBLE ROAD IMPROVEMENT TO COUNTY ROADS

PROJECT COSTS

28-May-03 SR 83/BOSTWICK HIGHWAY OVER BIG & LITTLE SANDY CREEK
 DETAILED COST ESTIMATE FOR COUNTY ROAD IMPROVEMENTS FOR OFF-SITE DETOUR
 PROJECT NO.: BRST-2938(4) & BRST-2938(3)
 P.I. NO.: 245400 & 245401

ITEM NO.	ITEM	UNIT	UNIT COST	QUANT	TOTAL
ROADWAY					
210-0200	GRADING PER MILE	LM	\$1,800.00	16	\$28,800.00
310-5080	GR AGGR BASE CRS, 8 INCH, INCL MATL	SY	\$8.47	18773	\$159,010.13
318-3000	AGGR SURF CRS	TN	\$19.18	30	\$575.40
402-3142	RECYCLED ASPH CONC 19 MM SUPERPAVE, GP 1 OR 2, INCL	TN	\$53.63	2154	\$115,531.89
402-3121	RECYCLED ASPH CONC 25 MM SUPERPAVE, GP 1 OR 2, INCL BITUM	TN	\$34.80	3231	\$112,451.33
402-3140	RECYCLED ASPH CONC 9.5 MM SUPERPAVE, GP 1 OR 2, INCL	TN	\$35.66	14546	\$518,724.62
402-1812	RECYCLED ASPH CONC LEVELING, INCL BITUM MATL & H LIME	TN	\$35.62	50	\$1,781.00
413-1000	BITUM TACK COAT	GL	\$0.89	30882	\$27,485.10
550-1180	STORM DRAIN PIPE, 18 IN, H 1-10	LF	\$31.58	120	\$3,789.60
641-1100	GUARDRAIL, TP T	LF	\$61.68	248	\$15,284.30
641-1200	GUARDRAIL, TP W	LF	\$9.87	1175	\$11,597.25
641-5001	GUARDRAIL ANCHORAGE, TP 1	EA	\$483.87	16	\$7,741.92
641-5012	GUARDRAIL ANCHORAGE, TP 12	EA	\$1,331.30	16	\$21,300.80
SUBTOTAL					\$1,024,073.35
EROSION CONTROL					
000-0000	EROSION CONTROL	LS	\$66,000.00	1	\$66,000.00
SUBTOTAL					\$66,000.00
SIGNING & MARKING					
636-1032	HIGHWAY SIGNS, TP 2 MATL, REFL SHEETING TP 6	SF	\$17.14	360	\$6,170.40
636-2070	GALV STEEL POSTS, TP 7	LF	\$13.35	40	\$534.00
622-1033	PRECAST CONCRETE MEDIAN BARRIER, METHOD 3	LF	\$35.42	50	\$1,771.00
654-1001	RAISED PVMT MARKERS TP 1	EA	\$3.79	1056	\$4,002.24
SUBTOTAL					\$12,477.64
TRAFFIC CONTROL					
000-0000	TRAFFIC CONTROL	LS	\$20,000.00	1	\$20,000.00
SUBTOTAL					\$20,000.00
CONSTRUCTION COST					\$1,122,550.99
CONSTRUCTION:			\$1,122,550.99	RIGHT OF WAY: \$0.00	
E & C (10%):			\$112,255.10	ACQUIRED BY: DOT	
INFLATION:			\$115,061.48	UTILITIES: \$0.00	
(2 yrs. @ 5% per yr)					
TOTAL CONST COSTS			\$1,349,867.56		

NOTE: CONSTRUCTION COST DO NOT INCLUDED POSSIBLE ROAD IMPROVEMENT TO COUNTY ROADS

PROJECT COSTS

10-Jan-05 PERMANENT OFFSET ALTERNATE
 DETAILED COST ESTIMATE FOR SR 83 OVER BIG SANDY CREEK
 PROJECT NO.: BRST-2938(3)
 P.I. NO.: 245401

ITEM NO.	ITEM	UNIT	UNIT COST	QUANT	TOTAL
ROADWAY					
210-0100	GRADING COMPLETE - (\$55/SF X 10450 SF)	LS	\$124,444.44	1	\$124,444.44
310-5080	GR AGGR BASE CRS, 8 INCH, INCL MATL	SY	\$8.47	6564	\$55,600.84
318-3000	AGGR SURF CRS	TN	\$19.18	10	\$191.80
402-3142	RECYCLED ASPH CONC 19 MM SUPERPAVE, GP 1 OR 2, INCL	TN	\$53.63	753	\$40,397.87
402-3121	RECYCLED ASPH CONC 25 MM SUPERPAVE, GP 1 OR 2, INCL BITUM	TN	\$34.80	1130	\$39,320.69
402-3140	RECYCLED ASPH CONC 9.5 MM SUPERPAVE, GP 1 OR 2, INCL	TN	\$35.66	516	\$18,393.21
402-1812	RECYCLED ASPH CONC LEVELING, INCL BITUM MATL & H LIME	TN	\$35.62	50	\$1,781.00
413-1000	BITUM TACK COAT	GL	\$0.89	689	\$613.45
433-1000	REINF CONC APPROACH SLAB	SY	\$115.12	310	\$35,687.20
441-0301	CONC SPILLWAY, TP 1	EA	\$1,345.24	4	\$5,380.96
550-1180	STORM DRAIN PIPE, 18 IN, H 1-10	LF	\$31.58	50	\$1,579.00
576-1015	SLOPE DRAIN PIPE, 15 IN	LF	\$23.33	80	\$1,866.40
577-1100	METAL DRAIN INLET - COMPLETE ASSEMBLY	EA	\$956.06	4	\$3,824.24
641-1100	GUARDRAIL, TP T	LF	\$61.68	83	\$5,119.44
641-1200	GUARDRAIL, TP W	LF	\$9.87	1000	\$9,870.00
641-5001	GUARDRAIL ANCHORAGE, TP 1	EA	\$483.87	2	\$967.74
641-5012	GUARDRAIL ANCHORAGE, TP 12	EA	\$1,331.30	2	\$2,662.60
SUBTOTAL					\$347,700.89
EROSION CONTROL					
000-0000	EROSION CONTROL	LS	\$100,000.00	1	\$100,000.00
SUBTOTAL					\$100,000.00
BRIDGE					
540-1102	REMOVAL OF EXISTING BR, BR NO -	LS	\$50,000.00	1	\$50,000.00
543-1001	CONSTRUCTION OF BRIDGE NO.	LS	\$491,150.00	1	\$491,150.00
603-2024	STN DUMPED RIP RAP, TP 1, 24 IN	SY	\$45.29	200	\$9,058.00
SUBTOTAL					\$550,208.00
CULVERT					
207-0203	FOUND BKFFILL MATL, TP II	CY	\$34.94	288	\$10,062.72
500-3101	CLASS A CONCRETE	CY	\$359.76	100.00	\$35,976.00
511-1000	BAR REINF STEEL	LB	\$0.51	50,000.00	\$25,500.00
SUBTOTAL					\$71,538.72
TRAFFIC CONTROL - PERMANENT OFF-SET					
150-1000	TRAFFIC CONTROL -	LS	\$60,000.00	1	\$60,000.00
622-1033	PRECAST CONCRETE MEDIAN BARRIER, METHOD 3	LF	\$35.42	1500	\$53,130.00
SUBTOTAL					\$113,130.00
CONSTRUCTION COST					\$1,182,577.61
CONSTRUCTION:		\$1,182,577.61	RIGHT OF WAY:		\$20,000.00
E & C (10%):		\$118,257.76	ACQUIRED BY:		DOT
INFLATION:		\$121,214.20	UTILITIES:		\$15,000.00
(2 yrs. @ 5% per yr)					
TOTAL CONST COSTS		\$1,422,049.57			