

**DEPARTMENT OF TRANSPORTATION
STATE OF GEORGIA**

INTERDEPARTMENT CORRESPONDENCE

FILE: BR000-0001-00(366) Montgomery Wheeler **OFFICE:** Engineering Services
P.I. No.: 0001366
SR 30/US 280 @ Oconee River and Overflows **DATE:** October 14, 2010

FROM: Ronald E. Wishon, State Project Review Engineer *REW*

TO: Bradford W. Saxon, PE, District Preconstruction Engineer
Attn.: Travis Dent

SUBJECT: IMPLEMENTATION OF VALUE ENGINEERING STUDY ALTERNATIVES

The VE Study for the above project was held August 30 – September 2, 2010. Responses were received on October 13, 2010. Recommendations for implementation of Value Engineering Study Alternatives are indicated in the table below. The Project Manager shall incorporate the VE alternatives recommended for implementation to the extent reasonable in the design of the project.

ALT #	Description	Potential Savings/LCC	Implement	Comments
A-2	Shorten the project length by 1,150 ft by shifting the beginning point on the west end from Sta. 141+50 to Sta. 153+00 and shortening the roadway approach to the mainline bridge	\$273,000	Yes	This will be done.
A-5	Shorten the project length by ending construction at Sta. 200+00 in lieu of Sta. 230+00 and by deferring replacement of the overflow bridges to a future project	\$2,876,000	No	It is more cost effective to replace the overflow bridges as part of this project. Upon completion of this project, the existing overflow bridges will be almost 60 years old and would need extensive rehabilitation as part of this project to further extend their service life. The overhang of one bridge is beginning to fail and has been shored (see attached photo). Full replacement of the bridge decks would be required to adequately rehabilitate the bridges. Steel swaybracing and painting of the steel components would also be required. The rehabilitation costs for the bridge work would cost approximately \$1,100,000 and the bridges would still need to be replaced in the future project.

**BR000-0001-00(366) Montgomery Wheeler
Implementation of Value Engineering Study Alternatives**

P-2	Lower the profile on the west end by 1 to 2 ft to reduce borrow quantities	Proposed = \$187,000 Actual = \$112,000	Yes	This will be done. The savings have been adjusted to reflect the cost per cubic yard of borrow material at \$5.00.
S-1	Use a 4 ft wide paved shoulder section in lieu of 6.5 ft wide paved shoulder	\$91,000	Yes	This will be done.
S-3	Use 11 ½ ft wide travel lanes in lieu of 12 ft lanes	\$36,000	Yes	This will be done.
S-4	Use 11 ft wide lanes on the boat ramp and CR 179 in lieu of 12 ft lanes	\$6,000	Yes	This will be done.
S-5	Use 2:1 slopes in lieu of 4:1 slopes where feasible	\$11,000	Yes	This will be done.
B-3	Use longer spans on the east end of Bridge No. 1 (Main Span)	\$240,000	No	The bridge foundation investigation is available and the bridge plans are nearly complete. The current design utilizes 70 foot spans on pile bents. This recommendation would add approximately \$1,062,403 to the current design.
B-12	Abandon the old bridges in place and defer demolition until the future 4 lane expansion project (2028)	\$1,716,000	No	The abandoned bridge would be a liability and maintenance burden to the Department and should be removed. Delaying the removal will not provide any savings to the Department. If the future project is not built, the removal cost for a stand-alone project would be even greater.
B-12.1	Demolish only the portion of Bridge No. 1 (Main Span) which is located directly over the river (Sta. 166+00 to Sta. 173+00) and abandon the remainder in place until the future 4 lane expansion project (2028)	\$1,290,000	No	The abandoned bridge would be a liability and maintenance burden to the Department and should be removed. Delaying the removal will not provide any savings to the Department. If the future project is not built, the removal cost for a stand-alone project would be even greater.
B-13	Replace the concrete piers on the 70 ft spans with a pile bent substructure on Bridge No. 1 (Main Span)	\$143,000	Yes	The intermediate bents for the 70 ft spans will be constructed as pile bents.
CM-3	Revise the earthwork quantities for borrow material to reduce the risk during the bidding phase	\$282,000	Yes	This will be done.

The Office of Engineering Services concurs with the Project Manager's responses.

Approved:  Date: 10/21/10
Gerald M. Ross, PE, Chief Engineer

REW/LLM

Attachments

c: Ben Buchan
Brad Saxon/Dennis Odom/Travis Dent/Teresa Scott
Paul Liles/Ben Rabun/Bill Duvall/Bill Ingalsbe
Mike Murdoch/Melanie Nable
Will Murphy/Ron Slater
Ken Werho
Lisa Myers
Matt Sanders

**DEPARTMENT OF TRANSPORTATION
STATE OF GEORGIA**

INTERDEPARTMENT CORRESPONDENCE

FILE: BR000-0001-00(366) **OFFICE:** Jesup/Design
P.I. No.: 0001366
SR30/US280 Oconee River & Overflows **DATE:** October 13, 2010

FROM: Bradford W. Saxon, P.E., District Preconstruction Engineer 

TO: Ronald E. Wishon, State Project Review Engineer
Attn.: Lisa Myers

SUBJECT: RESPONSE TO VALUE ENGINEERING STUDY ALTERNATIVES

Attached are the responses for the Value Engineering Study. This office concurs with the responses.

If you have any questions, please contact Dennis Odum, Project Manager at (912) 427-5716.

BWS:DO:td

c: Ben Buchan

INTERDEPARTMENT MEMO

1) Recommendation A-2: Shorten the project length by 1,150 ft. by shifting the beginning point on the west end from STA 141+50 to STA 153+00 and shortening the roadway approach to the mainline bridge. VE Team Savings: \$273,000.00

Yes, will implement

2) Recommendation A-5: Shorten the project length by ending construction at 200+00 in lieu of Sta. 230+00 and by deferring the replacement of Overflow Bridges #1 & #2 to a future project. VE Team Savings: \$2,876,000.00

No, will not implement. It is more cost effective to replace the overflow bridges as part of this project. Please see attached response from the Office of Bridge Design.

3) Recommendation P-2: Lower the profile on the west end by 1 to 2 feet to reduce borrow quantities. VE Team Savings: \$187,000.00

Yes, will implement; however, estimated savings is reduced because per District 5 Construction Office, the cost per cubic yard of borrow material is around \$5.00, therefore a savings of \$112,000.00. (21,400 CY X \$5.00= \$112,000.00.)

Revised savings: \$112,000.00

4) Recommendation S-1: Use a 4-ft.-wide paved shoulder section in lieu of 6.5-ft.-wide. VE Team Savings: \$91,000.00

Yes, will implement.

5) Recommendation S-3: Use 11.5-ft.-wide travel lanes in lieu of 12-ft.-wide. VE Team Savings: \$36,000.00

Yes, will implement.

6) Recommendation S-4: Use 11-ft.-wide lanes on the boat ramp and CR 179 in lieu of 12-ft.-wide. VE Team Savings: \$6,000.00

Yes, will implement.

7) Recommendation S-5: Use 2:1 slopes in lieu of 4:1 slopes where feasible. VE Team Savings: \$11,000.00

Yes, will implement.

8) Recommendation B-3: Use longer spans on the east end of Bridge No. 1 (Main Span) VE Team Savings: \$240,000.00

No, will not implement. This recommendation would cost approximately \$1,062,403 more than the current design. Please see attached response from the Office of Bridge Design.

9) Recommendation B-12: Abandon the old bridges in place and defer demolition. VE Team Savings: \$1,716,000.00

No, will not implement. The abandoned bridges would be a liability and maintenance burden to the Department. Please see attached response from the Office of Bridge Design.

10) Recommendation B-12.1: Demolish only a portion of Bridge No. 1 and abandon the remaining. VE Team Savings: \$1,290,000.00

No, will not implement. The abandoned bridges would be a liability and maintenance burden to the Department. Please see attached response from the Office of Bridge Design.

11) Recommendation B-13: Replace the concrete piers on the 70 ft. spans with a pile bent substructure on Bridge No.1. VE Team Savings: \$143,000.00

Yes, will implement. Please see attached response from the Office of Bridge Design.

12) Recommendation CM-3: Revise the earthwork quantities for the borrow material to reduce the risk during the bidding phase. VE Team Savings: \$282,000.00

Yes, will implement.

**DEPARTMENT OF TRANSPORTATION
STATE OF GEORGIA**

INTERDEPARTMENT CORRESPONDENCE

FILE BR000-0001-00(366) WHEELER-MONTGOMERY **DATE** September 29, 2010
P.I No. 0001366

FROM  Paul V. Liles, Jr., P.E., State Bridge Engineer

TO Glenn Durrence, District Engineer - Jesup
Attn: Dennis Odom

SUBJECT **BRIDGE DESIGN VALUE ENGINEERING RESPONSE**

The Value Engineering Study for the above referenced project dated September 14, 2010 contained five VE Alternatives requiring responses from the Bridge Office, VE Alternatives A-5, B-3, B-12, B-12.1 and B-13. Below are our recommendations for these alternatives.

VE Alternative A-5 – “Defer Overflow Bridges #1 & 2 until future and modify alignment to shorten roadway length”

Recommendation: **Do not implement.** Upon completion of the construction project, the existing overflow bridges will be nearly 60 years old and would need extensive rehabilitation in this project to further extend their service life. The overhang of one bridge is beginning to fail and has been shored, see attached photo. There is a potential that the other remaining overhangs will begin to deteriorate as well. Both bridges are overlain with asphalt which would need to be removed. The existing deck slabs are 6 inches thick which is too thin to be hydro-blasted. Therefore, full replacement of the decks would be required to adequately rehabilitate the bridges. Other rehabilitation would be required including the addition of steel swaybracing and painting of the steel components. The rehabilitation costs for the bridge work alone would be approximately \$1,100,000 and the bridges would still need to be replaced in the future work. Therefore, it is more cost effective to replace the overflow bridges as part of this project.

VE Alternative B-3 – “Use longer spans on Bridge No. 1 (Main Span) structure”

Recommendation: **Do not implement.** The bridge foundation investigation is available and the bridge plans are nearly complete. The current design utilizes 70 foot spans on pile bents (see VE Alternative B-13). VE Alternative B-3 would cost approximately \$1,062,403 more than the current design.

VE Alternative B-12 – “Do not demo the old bridges, abandon in place and demo in the future 4-lane expansion project (2028)”

Recommendation: **Do not implement.** The abandoned bridge would be a liability and maintenance burden on the Department and needs to be removed. Delaying the removal will not provide any savings to the Department. If the future project is not built the removal cost for a stand-alone project would be even greater.

VE Alternative B-12.1 – “Demo only the portion of Bridge No. 1 (Main Span) which is located directly over the river (STA 166+00 to STA 173+00) and abandon the remaining portion in place; demo in the future (2028)”

Recommendation: **Do not implement.** The abandoned bridge would be a liability and maintenance burden on the Department and needs to be removed. Delaying the removal will not provide any savings to the Department. If the future project is not built the removal cost for a stand-alone project would be even greater.

VE Alternative B-13 – “Replace the concrete piers on the 70ft spans with a pile bent substructure on Bridge No. 1 (Main Span)”

Recommendation: **Implement.** The intermediate bents for the 70 ft spans will be constructed as pile bents.

If you have any questions and/or comments, please contact Bill DuVall of the Bridge Design Office at (404) 631-1883 or at email address bduvall@dot.ga.gov.

PVL/WMD

Enclosure

cc: Ron Wishon, Engineering Services
Bill DuVall, Bridge Office



Structure ID: 209-0005-0
Photo Date: 06/22/2000
Photo Type: Deficiency
Comments: Sidewalk support on right side.

Myers, Lisa

From: DuVall, Bill
Sent: Tuesday, October 12, 2010 3:44 PM
To: Dent, Travis
Cc: Myers, Lisa; Odom, Dennis
Subject: RE: Alt No. P-2 in VE study for PI#0001366

Travis,

This VE Alternative proposes a savings in the roadway embankment by lowering the grade. Lowering the grade will affect the detailing of the bridges but is possible. The grade will have to be set to meet the required clearance over the design floodstages. We can handle that once you are ready to adjust the grade. Therefore, this alternative can possibly be implemented but will depend on factors that you need to evaluate in adjusting the profile.

Thanks,
Bill+

Bill DuVall
Bridge Design
(404) 631-1883

From: Dent, Travis
Sent: Wednesday, October 06, 2010 8:47 AM
To: DuVall, Bill
Subject: Alt No. P-2 in VE study for PI#0001366

Bill,

I discussed the other day with you about Alt. No. P-2 in the VE study for the above mentioned project. You wanted me to figure if the cost were accurate that the team members figured. Per our construction office, the cost/unit for Borrow Material should be around \$4.00 to \$5.00 per CY instead of the \$8.00. And they said the \$5.00 was on the generous end. So the savings that we are coming up with is around \$93,300 to \$117,000.

Travis J. Dent
Design Squad Leader
Jesup Road Design
GDOT
phone : 912-427-5718
fax : 912-427-5763

PRECONSTRUCTION STATUS REPORT FOR PI:0001366

PROJ ID : 0001366
COUNTY : Montgomery, Wheeler
LENGTH (MI) : 1.30
PROJ NO. : BR000-0001-00(366)
PROJ MGR : Odom, Dennis
AOHD Initials : 1TD/TD
OFFICE : District 5
CONSULTANT : No Consultant, GDOT In-House Design
SPONSOR : GDOT
DESIGN FIRM : GDOT D5 Design Office

SR 30/US 280 @ OCONEE RIVER & OVERFLOWS
MPO : Not Urban
TIP # :
MODEL YR : Bridges
TYPE WORK : BR REPL
CONCEPT : Replacement
PROG TYPE : N
Prov. for ITS :
BOND PROJ :

MGMT LET DATE : 01/15/2012
MGMT ROW DATE : 01/15/2011
BASELINE LET DATE : 01/10/2012
SCHED LET DATE : 2/23/2012
WHO LETS? : GDOT Let
LET WITH :

PRIORITY CODE :
DOT DIST : 5
CONG. DIST : 12.1
BIKE : N
MEASURE : E
NEEDS SCORE : 06
BRIDGE SUFF : 69.28, 69.28, 18.79

BASE START	BASE FINISH	LATE START	LATE FINISH	TASKS	ACTUAL START	ACTUAL FINISH	%	PROGRAMMED FUNDS				Date Auth			
								Activity	Approved	Proposed	Cost		Fund	Status	
5/20/2010	7/5/2010			Concept Development Concept Meeting PM Submit Concept Report Concept Report Review and Comments Management Concept Approval Complete Value Engineering Study Environmental Approval Field Surveys/SDE Preliminary Plans Preliminary Bridge Design 404 Permit Obtainment PPPR Inspection	8/23/2003	2/9/2005	100	PE	2002	2002	543,500.00	Q10	AUTHORIZED	1/8/2002	
3/17/2011	8/3/2011	5/13/2011	9/29/2011	R/W Plans Preparation	11/16/2004	12/20/2004	100	ROW	2011	2011	108,377.36	L1C0	PRECAST		
6/18/2010	8/18/2010	10/22/2010	12/22/2010	L & D Approval	1/20/2005	2/2/2005	100	UTL	LOCL	LOCL	195,260.00	LOC	PRECAST		
12/15/2010	1/11/2011	1/28/2011	2/24/2011	Stake R/W	2/7/2005	5/14/2010	83	CST	2012	2012	20,696,382.47	L1C0	PRECAST		
3/23/2011	4/5/2011			Bridge Foundation Investigation	5/14/2010	5/14/2010	100								
9/23/2010	3/23/2011	11/19/2010	5/19/2011	Final Design	4/9/2009	5/14/2010	100								
4/14/2011	4/14/2011	6/10/2011	6/10/2011	Final Bridge Plans Preparation	2/2/2005	2/9/2005	100	PE	\$543,500.00						
4/28/2011	5/11/2011	6/24/2011	7/7/2011	Submit FFR Responses (OES)	7/26/2010	8/6/2010	100	ROW	\$104,209.00		6/30/2010			Q10	
					9/28/2005	10/1/2005	100	UTL	\$195,260.00		6/30/2010				L1C0
					6/19/2009	1/13/2010	100	CST	\$19,134,969.00		6/30/2010				L1C0

Activity	Amount	Date	STIP AMOUNTS		
			Activity	Cost	Fund
PE	\$543,500.00	6/30/2010	PE	0.00	Q10
ROW	\$104,209.00	6/30/2010	ROW	108,377.36	L1C0
UTL	\$195,260.00	6/30/2010	UTL	0.00	LOC
CST	\$19,134,969.00	6/30/2010	CST	20,696,382.47	L1C0

PDD : OCT00 BD ADD; ASSIGNED DISTRICT 5. Needs work to meet 05 RW. 9/30/03.

Bridge : SWW 08/05/10

Design : TD/10-13-10/Sent VE response.

EIS : CE 7.14.09 | On Schedule for revised ROW date | Nable [6.23.10]

LGPA : REQ WHEELER.D0 UTIL 11-17-00|MONTGOMERY REFUSED UTIL 1-2-01|RESCISSON LETTER SENT TO MONTGOMERY & WHEELER 5-3-05.

Programming : #1 2-2010

Traffic Op : CYP: SND PLNS4REV&SEM when 50% comp/PPPRsent5/7/10KAV/NR

Utility : 6 of 6 1st sub. plans sent to design.

EMG : BRIDGE REPLACEMENT

Acquired by : DOT

Acquisition MGR :

R/W Cert Date :

DEEDS CT :

Cond. Filed :

Relocations Acquired :

Total Parcel in ROW System :

Options - Pending :

Condemnations- Pend :