

**DEPARTMENT OF TRANSPORTATION  
STATE OF GEORGIA**

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**INTERDEPARTMENT CORRESPONDENCE**

**FILE:** STP-164-1(29) Fayette/Clayton  
P. I. No.: 721440  
S.R. 54 Widening and Reconstruction

**OFFICE:** Engineering Services

**DATE:** June 17, 2008

**FROM:** Brian Summers, P.E., Project Review Engineer *REW*

**TO:** Babs Abubakari, P.E. State Consultant Design and Program Delivery Engineer

**SUBJECT: IMPLEMENTATION OF VALUE ENGINEERING STUDY ALTERNATIVES**

Recommendations for implementation of Value Engineering Study Alternatives are indicated in the table below. Incorporate alternatives recommended for implementation to the extent reasonable in the design of the project.

ALT No.	Description	Savings PW & LCC	Implement	Comments
<b>EARTHWORK (EW)</b>				
EW-1	Use "Bifurcated" profiles	\$198,860	No	There are 19 separate side road intersections, two school driveways, and three bridges. There is not a sufficient length between side road intersections to transition to a common grade point at these intersections. The Design Consultant's re-design costs would exceed \$150,000 which would minimize the cost savings. This would also delay the schedule from three to six months.
<b>RIGHT OF WAY (RW)</b>				
RW-1	Reduce the Right of Way width to conform more closely to the Construction Limits	\$2,185,126	Yes	This should be done.

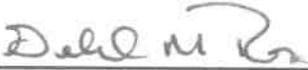
ALT No.	Description	Savings PW & LCC	Implement	Comments
<b>RIGHT OF WAY (RW) - continued</b>				
RW-5	Reduce shoulder width from 16' to 12'	\$1,000,166	No	Due to the presence of Utility Companies such as Atlanta Gas Light Resources, AT & T, Comcast, Colonial Pipeline, Coweta Fayette EMC, Fayette Co. Water, Clayton Co. Water and Sewer, GA Transmission Corporation, GA Power Distribution and Transmission, and Southern Natural Gas, the extra shoulder width will be needed to accommodate relocations.
RW-6	Use Multi-Use Trail in lieu of Bike Lanes on Roadway	\$1,346,147	No	This route is on a designated Statewide Bike Route System.
RW-8	Use Shared Bike Lanes	\$1,002,275	No	This route is on a designated Statewide Bike Route System.
<b>BASE AND PAVING (BP)</b>				
BP-2	Eliminate two foot "Buffer" pavement from median	\$525,001	Yes	This should be done.
BP-3	Use eleven foot wide lanes	\$1,184,073	No	The Design Year traffic on this corridor is 38,760 vpd and there are 4% trucks. This is also a route that is serviced by a transit system.
BP-4	Verify pavement quantities for utilization of existing pavement	Design Suggestion	Yes	This should be done.
BP-5	Review "Eyebrow" locations at intersections where U-turns are permitted	Design Suggestion	Yes	This should be done.
<b>CONCRETE (C)</b>				
C-1	Eliminate Concrete Slope Paving	Design Suggestion	Yes	This should be done.

ALT No.	Description	Savings PW & LCC	Implement	Comments
<b>CONCRETE (C) - continued</b>				
C-4	Put Sidewalk on one side of the roadway only	\$343,858	No	Pedestrian accommodations are needed since this is a route serviced by a Transit System and has numerous subdivisions located along the corridor.
<b>BRIDGES (BR)</b>				
BR-3	Use 8' Multi-Use Trail in lieu of 6' Sidewalks and 4' Bike Lanes on bridges	\$179,069	No	This route is on a designated Statewide Bike Route System.
BR-4	Use separate structures for Pedestrians and Bicyclists in lieu of 6' Sidewalks and 4' Bike Lanes on bridges	\$111,487	No	This route is on a designated Statewide Bike Route System.
BR-6	Use 5' Sidewalks in lieu of 6' Sidewalks and reduce the median to 14'	\$356,581	No	This would require the pavement be "flared" in and out to facility the use of a 14' median.

A meeting was held on September 12, 2007 to discuss the above recommendations. Rick Reasons with Consultant Design, and Brian Summers, Ron Wishon and Lisa Myers with Engineering Services were in attendance. Additional information was provided on September 17 and 20, 2007.

A follow up meeting was held on February 6, 2008 to discuss the above recommendations. Mike Haithcock and Kimberly Nesbitt with Consultant Design, and Brian Summers, Ron Wishon and Lisa Myers with Engineering Services were in attendance.

Additional information was provided on May 14, 2008.

Approved:  Date: 6/29/08  
Gerald M. Ross, P. E., Chief Engineer

**STP-164-1(29) Fayette/Clayton**

**P. I. No.: 721440**

**VE Study Implementation**

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Attachments

c: Gus Shanine  
Todd Long  
Mickey McGee  
Lamar Pruitt  
Mike Haithcock  
Marc Mastronardi  
Paul Liles  
Bill Ingalsbe  
Bill Duvall  
Judy Meisner  
Olufunmilayo Adesesan  
Nabil Raad  
Lisa Myers



# Preconstruction Status Report By PI Number

Print Date: 06/17/2008

PROJ ID	COUNTY	DESCRIPTION	MGMT. ROW DATE	SCHED DATE	MGMT. LET DATE
721440-	Clayton, Fayette	SR 54 FM MCDONOUGH RD/FAYETTE NE TO SR 3/US 19/41/CLAYTON	Aug-08	Jun-11	Aug-10
STP00-0164-01(029) FIELD DIST: 3, 7					
TIP #: CL-041 TWIN: US:					
MPO: Atlanta TMA EST DATE: 5/2/2007					
MODEL YR: 2020					
PROJ MGR: Nesbitt, Kimberly PROJ LENGTH: 5.49					
PROG Reconstruction/Rehabili TYPE Widening					
TYPE: tation WORK:					
CONCEPT: ADD 4R(M20/44) LET RESP: DOT Congressional 3.13					

SCHED START	SCHED FINISH	ACTIVITY	ACTUAL START	ACT/EST FINISH	PCT	DISTRICT COMMENTS
6/20/2008	6/23/2008	Define Project Concept	7/31/1990		100	R.S., UST, SCHEDULE AFTER
		Concept Meeting	4/10/1991	4/10/1991	100	P.H. - D3 UTIL COORD
		Concept Submittal and Review	9/27/1991	9/27/1991	100	PROJECT; NEED ENV REEV;
		Receive Preconstruction Concept Approval	12/6/1991	12/6/1991	100	R/W PLAN APPROVAL ET AL;
		Management Concept Approval Complete	2/4/1992	2/18/1992	100	9/8/04; MUCH NEEDED
		Revise or Re-validate Approved Concept	4/1/2007	5/2/2007	100	PROJECT; CAN IT MOVE INTO
6/25/2008	7/1/2008	Value Engineering Study	2/26/2007		98	FY 2008??CST?? 9/14/04;NEED
		Public Information Open House Held	7/31/1997	7/31/1997	100	MAJOR REEV OF ENV [2-28-06]
		Environmental Approval	3/1/1997	9/18/1997	100	(6/7/06) ARACADIS SELECTED
		Public Hearing Held	7/31/1997	7/31/1997	100	AS CONSULTANT. A TASK
		Mapping	2/15/2005	3/1/2005	100	ORDER TO REVIEW DESIGN
6/20/2008	6/25/2008	Field Surveys/SDE	6/14/2007		99	ALT. DUE TO MUNDY HOUSE
6/19/2008	11/13/2008	Preliminary Plans	4/4/2007	2/2/2008	100	IS UNDER WAY. WILL
6/19/2008	10/30/2008	Preliminary Bridge Design	7/6/2006	7/12/2007	100	REQUIRE DESIGN CHANGE OF
6/19/2008	7/23/1976	Underground Storage Tanks	2/18/1992	8/20/2007	100	THE TYPICAL SECTION.
11/28/2008	12/1/2008	PFPR Inspection			0	
1/6/2009	3/30/2009	R/W Plans Preparation			0	
5/26/2009	5/29/2009	R/W Plans Final Approval			0	
1/6/2009	1/8/2009	L & D Report Development and Approval			0	
6/1/2009	4/11/2011	R/W Acquisition			0	
10/22/2009	11/4/2009	Stake R/W			0	
6/20/2008	6/26/2008	Soil Survey	7/18/2007		98	
1/6/2009	2/10/2009	Bridge Foundation Investigation			0	
1/9/2009	9/18/2009	Final Design			0	
3/11/2009	5/5/2009	Final Bridge Plans Preparation			0	
10/12/2009	10/13/2009	FFPR Inspection			0	
10/27/2009	11/9/2009	FFPR Response			0	

BIKE PROVISIONS INCLUDED?: Y MEASUREMENT SYSTEM: E CONSULTANT: C UT EST: S 0.00

**PDD:** 2001 CONSULT. 10/8/99. Fayette priority. 2/24/04.  
**Bridge:** BRIDGE REQUIRED  
**Design:** OCD - RR-Arcadis, NTP 12/07/05 NEED APPROVED ENVIR PFPR  
**EIS:** EA/FONSI\Apvd 9-18-97 [OnSchedRW]Updated 12-7-07] ADESESAN  
**LGPA:** CLAYTON SGN 4/95] FAYETTE SGN FOR UP TO \$0.075 MIL. 6/95]RESCISSION LETTER SENT TO CLAYTON & FAYETTE 3-3-05.  
**Planning:** Bridge requires bicycle facilities, US Title 23 Section 217(e). Amy Goodwin 404-657-6692  
**Programming:** COORD\W721040]PR2/P=11-12-96]#1 11-04]#2 12-05]#3 10-07]#4 12-07  
**Railroad:** NO  
**Traffic Op:** CO REQ MAST ARM, ETC(2-28-05)-WILL PAY DIFF\$+  
**UST:** S1-XT  
**Utility:** SUE compl 5/28/08 YPF Need Plans 08/07  
**EMG:** FLY 6575/07; (WIDEN);M=WO#55 WOLVERTON;S/D RFQ-484-RR102904

**R/W INFORMATION:**

PREL PARCEL CT: 120 TOTAL PARCEL CT: ACQUIRED BY: DOT ACQ MGR:  
 UNDER-REVIEW CT: RELEASED CT: OPT-PEND CT: DEEDS CT: COND-PEND CT: COND-FILED CT:  
 RW CERT DT: ACQUIRED CT: RELOCATION CT:

**DEPARTMENT OF TRANSPORTATION  
STATE OF GEORGIA**

**INTERDEPARTMENT CORRESPONDENCE**



**FILE** STP-164-1(29) Fayette / Clayton County  
SR 54 Widening & Reconstruction  
P.I. No. 721440

**OFFICE** Consultant Design

**DATE** May 14, 2008

**FROM** in Babs Abubakari, P.E., State Consultant Design Engineer

**TO** Brian Summers, P.E., State Design Review Engineer  
Attn: Lisa Myers

**SUBJECT** VE STUDY RESPONSES

The following are responses to the Value Engineering Study Report submitted to ARCADIS Inc. on July 31, 2007 for the Widening of SR 54 Bypass from McDonough Road to US 19/41/Tara Blvd. The intention of these responses are to provide rationale for accepting, rejecting, or modifying the Value Engineering proposals listed throughout the report. These responses reflect input from GDOT and ARCADIS.

**Alternative Number**

**Description/Responses**

**EW-1** *Use "Bifurcated" profiles (split).*

**No.** This project has nineteen separate side road intersections, two school driveways, and three bridges. To ensure an overlay also on the side roads and a smooth median opening, split grades would transition to a common profile grade point at these intersections. There is no sufficient length between side roads to accomplish a split grade and realize a significant earthwork savings. The redesign cost for a supplemental agreement due to scope change would exceed \$150,000, there for the benefit cost savings is only\$ 48,860.00. This would also cause three to six months delay in preliminary plans delaying right of way plans approval.

**RW-1** *Reduce right of way to required width.*

**Yes.** Right of way will be reduce were design will allow.

**RW-5** *Reduce shoulder width.*

**No.** GDOT policy is now 16' shoulder to attain a constant sidewalk location satisfying ADA requirements. This project has long stretches with no driveways, so ADA requirements at driveway intersections

would not be an issue. The savings will be significantly less with only about 'length of roadway with driveways'. Clear zone is 20'-22', and intention is to eliminate as much guardrail as possible. 4' bike lane + 16' shoulder would provide 20'. If either is reduced, then 4:1 slopes would have to be used to realize eliminating guardrail. Another major concern is utility relocations, below is a list of utility located on this project:

Clayton County Water & Sewer  
Comcast  
Colonial Pipeline  
AGL Resources  
AT&T  
Cowetta Fayette EMC  
Fayette County Water  
Ga. Transmission Corp.  
Ga. Power Distribution and Ga. Power Transmission Southern Natural Gas

**RW-6** *Use multi-use trail in lieu of bike lanes on roadway.*

**No.** This project is located on the State Bike Route System. See attached references to AASHTO guidance, and Page 110 "Bicycles on Sidewalks" from GDOT's Pedestrian and Streetscape Guide. Multi-use trails do not provide a bike facility.

**RW-8** *Use shared bicycle lanes.*

**No.** See attachment as referenced in this Alternate, Christian Science Monitor 'Sharrows...' Use of 'Sharrows' was mostly used on an existing roadway with limited right of way available. 'Sharrows' should not be the initial choice to provide bike facilities, and definitely not on new roadway construction that does not have significant right of way constraints.

**BP-2** *Eliminate 2' buffer pavement from median.*

**Yes**

**BP-3** *Use 11' wide lanes.*

**No.** GDOT Design Manual and policy states 11' lanes can only be used in an "Urban Area Type A", otherwise a design variance will be required for widths less than 12'. ADT for this project is 38,760, well above AASHTO 'Green Book' minimum for 12' lanes. The cost saved in Value Engineering would be offset by preliminary engineering cost.

**BP-4** *Verify pavement quantities for utilization of existing pavement.*

**Yes.** Preliminary pavement design and initial assumptions are an overlay consisting of 1.5" 12.5 mm and 2" 19 mm asphalt.

**BP-5** *Review "eyebrow" locations at intersections where U-turns are permitted.*

**Yes.** As was stated in project introduction, "eyebrows" will be provided. Some were inadvertently left off.

**C-1** *Eliminate concrete slope paving.*

**Yes.** There is no need for concrete slope paving on this project. Bridge endrolls will be riprap.

**C-4** *Put sidewalk on one side of the roadway only.*

**No.** Pedestrian required access is equal on both sides. This is also a safety consideration in not forcing pedestrian crossings. There are subdivisions and individual residences almost equally on both sides.

**BR-3** *Use 8' multi-use trail in lieu of 6' sidewalks and 4' bike lanes on bridges.*

**No.** This project is located on the State Bike Route System. Preference is to keep pedestrians and bicyclists separated. Also, pedestrian sidewalk should be elevated above roadway.

**BR-4** *Use separate structures for pedestrians and bicyclists in lieu of 6' sidewalks and 4' bike lanes.*

**No.** This project is located on the State Bike Route System. Minimum outside shoulder on rural bridge is 10', as is GDOT policy. This alternate is only viable if a multi-use trail is used, otherwise design problems are introduced with transitioning the bike lane from roadway out to meet sidewalk. Is the pedestrian/bike bridge 10' wide? There will be additional wetland impacts and the bridges would have to be longer than assumed since the topo outside of the existing bridges is wetlands, at much lower elevation.

**BR-6** *Use 5' sidewalks in lieu of 6' sidewalks and reduce median to 14'.*

**No.** 6' sidewalk with 2' buffere/gutter is GDOT policy. GDOT policy is minimum 20' raised median, but 24' is preferred. One bridge will have a left turn bay, hence 8' median.