

D.O.T. 66

DEPARTMENT OF TRANSPORTATION
STATE OF GEORGIA

INTERDEPARTMENT CORRESPONDENCE

FILE P. I. No. 231440-, Columbia County **OFFICE** Preconstruction
STP-174-1(7)
SR 232 Widening and Reconstruction **DATE** January 19, 2006

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

TO SEE DISTRIBUTION

SUBJECT APPROVED REVISED PROJECT CONCEPT REPORT

Attached for your files is the approval for subject project.

MBP/cj

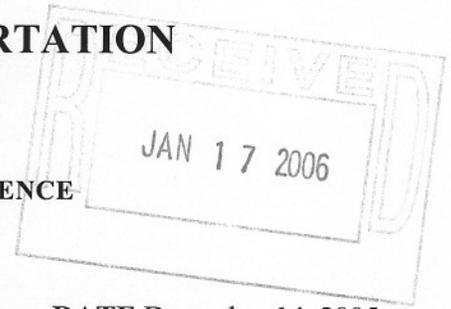
Attachment

DISTRIBUTION:

Brian Summers
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BOARD MEMBER

**DEPARTMENT OF TRANSPORTATION
STATE OF GEORGIA**

INTERDEPARTMENT CORRESPONDENCE



DATE December 14, 2005

FROM Alan Smith, District Design Engineer
TO Margaret B. Pirkle, P.E., Assistant Director of Preconstruction

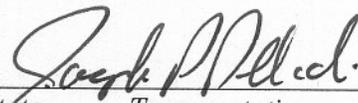
SUBJECT STP-174-1(7) Columbia County P.I. No. 231440
Revised Project Concept Report

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

The above mentioned project consists of the widening and reconstruction of State Route 232 from Old Belair Road to State Route 383.

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

DATE 1/3/06



State Transportation Planning

Administrator

Distribution:

Brian Summers
Harvey Keepler
Keith Golden
Joe Palladi
Jamie Simpson

REVISED PROJECT CONCEPT REPORT

Need and Purpose: *See attached sheets.*

Project Location: *This project is located on SR 232 from Old Belair Road (M.P. 8.40) to Belair Road (M.P. 10.23) in Columbia County.*

Description of the approved concept:

The approved concept consists of constructing 2 – 12ft. travel lanes in each direction with a 14ft. flush median. The proposed 16ft. shoulders will consist of curb, gutter and sidewalk each side to accommodate ADA regulations. The existing bridge over Crawford Creek will be widened to 74ft. to accommodate the newly constructed roadway and sidewalks. The project will tie into an existing 5-lane section of roadway on SR 232 just west of the intersection of SR 232 and SR 388 (Belair Road).

PDP Classification: Major Minor

Federal Oversight: Full Oversight Exempt State Funded Other

Functional Classification: *Urban Minor Arterial*

U.S. Route Number(s): *None* **State Route Number(s):** 232

Traffic (AADT) as shown in the approved concept:

Current Year: 1998 (11,450)

Design Year: 2018 (17,760)

Proposed features to be revised:

*Typical Section
Proposed Bridge Width*

Describe the revised feature(s) to be approved:

The concept is now revised to add 4' bicycle lanes each side throughout the project limits on State Route 232 to accommodate the Augusta-Richmond Bicycle Plan (ARTS). The concept is also being revised to widen the existing bridge to 82' to accommodate the new travel lanes and the additional width for the bicycle lanes.

Updated traffic data (AADT):

Current Year: 2009 (11,750)

Design Year: 2029 (19,000)

Programmed Schedule:

P.E. 2001

R/W: 2005

Construction: LR

Revised Cost Estimates:

1. Construction costs including inflation and E&C: \$4,866,540
2. Right of Way Cost: \$478,000

3. Utility Costs:

\$267,500

Is the project in a Non-Attainment area?

Yes

No

Recommendation:

The district recommends that the proposed revision to the concept be approved for implementation.

Attachments:

Sketch Map

Cost Estimate

Need and Purpose Statement

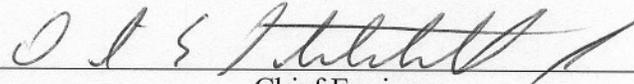
Typical Section

Concur:



Director of Preconstruction

Approved:



Chief Engineer

Estimate Report for file "STP-174-1(7) Columbia"

Section 1. ROADWAY

Item Number	Quantity	Units	Unit Price	Item Description	Cost
150-1000	1	LUMP	150000.00	TRAFFIC CONTROL - STP-174-1(7)	150000.00
210-0100	1	LUMP	750000.00	GRADING COMPLETE - STP-174-1(7)	750000.00
310-1101	21075	TN	15.16	GR AGGR BASE CRS, INCL MATL	319497.00
318-3000	1100	SY	16.35	AGGR SURF CRS	17985.00
402-1812	1500	TN	40.69	RECYCLED ASPH CONC LEVELING, INCL BITUM MATL & H LIME	61035.00
402-3112	4250	TN	63.30	RECYCLED ASPH CONC 19 MM SUPERPAVE, GP 1 OR 2 INCL BITUM MATL & H LIME	269025.00
402-3113	6375	TN	46.84	RECYCLED ASPH CONC 12.5 MM SUPERPAVE, GP 1 OR 2 INCL BITUM MATL & H LIME	298605.00
402-3121	8715	TN	41.66	RECYCLED ASPH CONC 25 MM SUPERPAVE, GP 1 OR 2 INCL BITUM MATL & H LIME	363066.90
413-1000	4615	GL	1.01	BITUM TACK COAT	4661.15
432-5010	19000	SY	1.66	MILL ASPH CONC PVMT, VARIABLE DEPTH	31540.00
433-1100	586	SY	110.68	REINF CONC APPROACH SLAB, INCL CURB	64858.48
441-0016	60	SY	29.05	DRIVE CONCRETE, 6 IN TK	1743.00
441-4030	580	SY	40.20	CONC VALLEY GUTTER, 8 IN	23316.00
441-6222	12500	LF	12.52	CONC CURB & GUTTER, 8 IN X 30 IN, TP 2	156500.00
444-1000	24	LF	2.15	SAWED JOINTS IN EXIST PAVEMENTS - PCC	51.60
446-3000	7000	LF	3.81	PAVEMENT REINFORCING FABRIC, SELF ADHESIVE	26670.00
500-3101	42	CY	458.46	CLASS A CONCRETE	19255.32
500-9999	5	CY	169.11	CLASS B CONC, BASE OR PVMT WIDENING	845.55
511-1000	4100	LB	0.72	BAR REINF STEEL	2952.00
550-1180	5000	LF	31.29	STORM DRAIN PIPE, 18 IN, H 1-10	156450.00
550-1240	2500	LF	37.62	STORM DRAIN PIPE, 24 IN, H 1-10	94050.00
550-1300	1500	LF	48.94	STORM DRAIN PIPE, 30 IN, H 1-10	73410.00
550-1360	1500	LF	58.40	STORM DRAIN PIPE, 36 IN, H 1-10	87600.00
550-1480	1000	LF	94.85	STORM DRAIN PIPE, 48 IN, H 1-10	94850.00
550-2150	200	LF	21.99	SIDE DRAIN PIPE, 15 IN, H 1-10	4398.00
550-3518	10	EA	549.42	SAFETY END SECTION 18 IN, STORM DRAIN, 6:1 SLOPE	5494.20
550-4118	10	EA	250.76	FLARED END SECTION 18 IN, SIDE DRAIN	2507.60
550-4224	1	EA	518.41	FLARED END SECTION 24 IN (STORM DRAIN)	518.41
573-2006	2000	LF	12.16	UNDDR PIPE INCL DRAINAGE AGGR, 6 IN	24320.00
603-2180	100	SY	32.56	STN DUMPED RIP RAP, TP 3, 12 IN	3256.00
634-1200	65	EA	88.20	RIGHT OF WAY MARKERS	5733.00
641-1200	400	LF	13.56	GUARDRAIL, TP W	5424.00
641-5001	2	EA	473.05	GUARDRAIL ANCHORAGE, TP 1	946.10
641-5012	2	EA	1546.11	GUARDRAIL ANCHORAGE, TP 12	3092.22
643-1137	2580	LF	3.00	CH LK FENCE, ZC COAT, 5 FT, 11 GA	7740.00
643-8010	4	EA	475.26	GATE, CH LK ZC COAT - 10 FT. WIDE	1901.04
668-1100	40	EA	1781.11	CATCH BASIN, GP 1	71244.40
668-2100	40	EA	2695.00	DROP INLET, GP 1	107800.00
668-5000	7	EA	1554.65	JUNCTION BOX	10882.55
668-7015	10	EA	1768.00	DRAIN INLET, 15 IN	17680.00
668-8012	48	SF	44.22	SAFETY GRATE, TP 2	2122.56
Section Sub Total:					\$3,343,027.08

Section 2. EROSION CONTROL

Item Number	Quantity	Units	Unit Price	Item Description	Cost
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163-0240	279	TN	212.17	MULCH	59195.43
700-6910	31	AC	736.02	PERMANENT GRASSING	22816.62
700-7000	62	TN	53.88	AGRICULTURAL LIME	3340.56
700-7010	77	GL	17.58	LIQUID LIME	1362.45
700-8000	32	TN	236.35	FERTILIZER MIXED GRADE	7693.19
700-8100	1550	LB	1.38	FERTILIZER NITROGEN CONTENT	2139.00
710-9000	300	SY	4.40	PERMANENT SOIL REINFORCING MAT	1320.00
715-2200	300	SY	2.00	BITUMINOUS TREATED ROVING, WATERWAYS	600.00
Section Sub Total:					\$98,467.25

Section 3. TEMPORARY EROSION CONTROL

Item Number	Quantity	Units	Unit Price	Item Description	Cost
163-0232	93	AC	450.77	TEMPORARY GRASSING	41921.61
163-0240	279	TN	212.17	MULCH	59195.43
163-0300	2	EA	1228.63	CONSTRUCTION EXIT	2457.26
163-0530	7500	LF	2.57	CONSTR & REM BALED STRAW EROSION CHECK	19275.00
165-0010	3750	LF	1.06	MAINTNANCE OF TEMPORARY SILT FENCE, TYPE A	3975.00
165-0030	250	LF	1.15	MAINTNANCE OF TEMPORARY SILT FENCE, TYPE C	287.50
165-0070	3750	LF	1.41	MAINTENANCE OF BALED STRAW EROSION CHECK	5287.50
167-1000	2	EA	3895.44	WATER QUALITY MONITORING AND SAMPLING	7790.88
171-0010	7500	LF	1.83	TEMPORARY SILT FENCE, TYPE A	13725.00
171-0030	500	LF	3.18	TEMPORARY SILT FENCE, TYPE C	1590.00
700-8000	19	TN	236.35	FERTILIZER MIXED GRADE	4490.65
716-1000	1000	SY	0	EROSION CONTROL MATS, WATERWAYS	0.00
716-2000	500	SY	1.06	EROSION CONTROL MATS, SLOPES	530.00
Section Sub Total:					\$160,525.83

Section 5. WIDENING OF BRIDGE OVER CRAWFORD CREEK

Item Number	Quantity	Units	Unit Price	Item Description	Cost
543-1100	0	LS	409140.00	WIDENING OF BRIDGE - COMPLETE - STP-174-1(7)	0.00
Section Sub Total:					\$0.00

Section 4. SIGNING AND MARKING

Item Number	Quantity	Units	Unit Price	Item Description	Cost
636-1020	1655	SF	13.54	HIGHWAY SIGNS, TP 1 MATL, REFL SHEETING TP 3	22408.70
636-2070	200	LF	6.87	GALV STEEL POSTS, TP 7	1374.00
636-2080	100	LF	8.86	GALV STEEL POSTS, TP 8	886.00
636-2090	100	LF	6.72	GALV STEEL POSTS, TP 9	672.00
639-5000	4	EA	4287.00	PRESTRESSED CONC STRAIN POLE, TP - IV	17148.00
647-1000	1	LS	40000.00	TRAFFIC SIGNAL INSTALLATION NO - 2	40000.00
647-1000	1	LS	45000.00	TRAFFIC SIGNAL INSTALLATION NO - 1	45000.00
653-0120	12	EA	58.67	THERMOPLASTIC PVMT MARKING, ARROW, TP 2	704.04
653-0130	2	EA	73.81	THERMOPLASTIC PVMT MARKING, ARROW, TP 3	147.62
653-1501	15000	LF	0.27	THERMOPLASTIC SOLID TRAF STRIPE, 5 IN, WHITE	4050.00
653-1502	15000	LF	0.26	THERMOPLASTIC SOLID TRAF STRIPE, 5 IN, YELLOW	3900.00
653-1704	75	LF	3.34	THERMOPLASTIC SOLID TRAF STRIPE, 24 IN, WHITE	250.50
653-3501	15000	GLF	0.17	THERMOPLASTIC SKIP TRAF STRIPE, 5 IN, WHITE	2550.00
653-3502	15000	GLF	0.15	THERMOPLASTIC SKIP TRAF STRIPE, 5 IN, YELLOW	2250.00
653-6006	550	SY	2.67	THERMOPLASTIC TRAF STRIPING, YELLOW	1468.50
654-1001	315	EA	3.47	RAISED PVMT MARKERS TP 1	1093.05
654-1003	375	EA	3.77	RAISED PVMT MARKERS TP 3	1413.75

654-1010	20	EA	30.33	RAISED PVMT MARKERS TP 10	606.60
Section Sub Total:					\$145,922.76
Total Estimated Cost:					\$3,747,942.92
Subtotal Construction Cost			\$3,747,942.92		
E&C Rate 10.0 %			\$374,794.29		
Inflation Rate 5.0 % @ 2.0 Years			\$422,580.56		
Total Construction Cost			\$4,545,317.78		
Right Of Way			\$122,000.00		
ReImb. Utilities			\$267,500.00		
Grand Total Project Cost			\$4,934,817.78		

Need and Purpose Statement
SR 232 from Old Belair Road to Belair Road
Columbia County; PI 231440
Project No. STP-174-1(7)

Background

In 2000 the Augusta MPO adopted its Long Range Transportation Plan (LRTP). This adopted Long Range Plan is the direct result of a comprehensive, cooperative and continuous planning process conducted by the local governments and the Georgia Department of Transportation in cooperation with the Federal Highway and Federal Transit Administrations. The city of Augusta recommends in its Long Range Transportation Plan the widening of SR 232 from Old Belair Rd. (CR 221) to Belair Rd. (SR 383). The LRTP recommendation is to widen the road from two to four through lanes.

Design

State Route 232 from Old Belair Road to Belair Road currently consists of one 12' lane in each direction with 5' rural shoulders from west of Crawford Creek to County Road 799 (Shady Grove Drive), and 2-12' lanes in each direction separated by a 14' flush median with curb and gutter from County Road 799 to State Route 383. The proposed improvement will widen SR 232 to 2-12' lanes in each direction separated by a 20' raised concrete median with urban shoulders. There is a bridge crossing at Crawford Creek that is to be replaced under project BR-0001-00(809). (See Attachment A for Project limits).

Logical Termini

SR 383 is a logical terminus because SR 232 is an existing four-lane highway east of this point and the highway carries 17,300 AADT on this section (Traffic Count Station 183). (See Attachment A for TC Station Locations). Old Belair Road (CR 221) is a logical terminus due to the drop in traffic volumes that occur west of this point. TC Station 181 currently carries 6,800 AADT. Traffic volumes drop at Old Belair Rd. due to the heavy residential development east of Old Belair Rd. There is little development and thus less traffic west of Old Belair Rd.

Travel Demand and Operational Conditions

SR 232 is classified as an Urban Minor Arterial. Level-of-Service (LOS) is defined as a qualitative measure describing operational conditions within a traffic stream. There are six identified LOS at which a roadway can operate. A letter, "A" through "F", identifies each of the six. LOS "A" represents free flow traffic where drivers are virtually unaffected by the presence of other vehicles; whereas, level "F" represents operating conditions in which demand exceeds capacity.

According to historical traffic counts for the past ten years, the traffic volumes on the subject section are increasing at a 1.5% growth rate. The subject section of SR 232 is currently operating at a LOS of "E" at TC Station 183. With no improvements, this segment of SR 232 will be operating at a LOS of "F" in 2025. Widening and improving SR 232 from Old Belair Road to Belair Road would improve the existing and future operational conditions.

Community Issues

Data from the 2000 Census indicates that 15,713 people reside within the limits of this project. 85% of the residents are White and 10% are Black. The land use along this corridor of SR 232 is zoned primarily residential. However, there are several businesses located along the project corridor. The project as proposed will impact 50 parcels of land with no displacements. SR 232

serves as the primary route to and from the neighborhoods in this corridor. The proposed improvements will provide area residents with improved access between their jobs, schools and other community activities.

Safety

For the years 1995-1997 (the most recent years for which complete accident data is available) the accident rate on SR 232 has been higher, on average, than the statewide average for similar facilities. Injury rates, on average, are above the statewide average for this type of facility and no fatalities occurred on this section of SR 232. The following table summarizes the corridor’s accident statistics:

	1995		1996		1997	
	SR 232	State	SR 232	State	SR 232	State
Accidents	55		66		62	
Accident Rate	1,355	549	1,418	525	1,347	549
Injuries	17		20		13	
Injury Rate	419	162	430	152	282	155
Fatalities	0		0		0	
Fatality Rate	0	1.39	0	1.56	0	1.41

From 1995-1997, 33% of reported accidents for this subject section of SR 232 were as a result of one vehicle rear-ending another. 30% of all accidents were angle intersection related. The proposed turn lanes will allow motorists to exit the through lane before turning, thus reducing the opportunity for rear-end accidents. The raised median will help reduce the opportunity for angle intersection accidents by reducing the number of conflict points that are caused by driveways and side streets. While no fatalities have occurred from 1995-1997 on this portion of SR 232, accident rates and injury rates exceed statewide averages for similar facilities.

Other projects in the Area

The only other project located nearby is a bridge replacement (BR-0001-00(809)). PE is authorized, ROW is scheduled for 2002 and construction is scheduled for 2003.

Need and Purpose

This project is needed to satisfactorily accommodate existing and future traffic demands. The purpose of the proposed improvement is to provide a facility that will adequately and safely serve current and future travel demand.

