

DEPARTMENT OF TRANSPORTATION
STATE OF GEORGIA
REVISED PROJECT CONCEPT REPORT

Project Number: STP00-0174-01(007)

County: Columbia

P.I. Number: 231440

Federal Route Number: None

State Route Number: 232

The project typical is being revised to 10-FT urban shoulders with curb and gutter and sidewalks.

Submitted for approval:

DATE 11-4-10

Douglas Allen Smith 11-4-10
District Design Engineer

DATE 11/4/10

Anthony J. Collins
District Engineer

DATE 11/4/2010

Foster C. Grimes
Project Manager

Recommendation for approval:

DATE 11/12/2010

GLENN BOWMAN*
State Environmental Administrator

DATE 02/12/2011

BEN RABUN*
State Bridge Design Engineer

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

DATE 11/15/2010

ANGELA T. ALEXANDER*
State Transportation Planning Administrator

* RECOMMENDATIONS ON FILE/ 

Need and Purpose: *See Attached,*

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 – 12-ft. travel lanes and 4-ft. bike lanes in each direction with a 14-ft. flush median. The proposed 16-ft. shoulders will consist of curb, gutter and sidewalk each side to accommodate ADA regulations. The existing bridge over Crawford Creek will be widened to 82-ft. to accommodate the new travel lanes and the additional width for the bicycle lanes 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: *Minor Urban Arterial*

Traffic (AADT) as shown in the approved concept:

Base Year: *11,750 (2009)*

Design Year: *19,000 (2029)*

Updated traffic data (AADT):

Base Year: *14,500 (2015)*

Design Year: *23,500 (2035)*

Approved/Programmed Schedule:

PE: *2001*

R/W: *2015*

Construction: *2018*

VE Study Required: Yes No

Benefit/Cost Ratio: *2.55*

Is the project located in an Ozone Non-Attainment area? Yes No

Is the project in a PM2.5 Non-Attainment area? Yes No

<p>Approved Features: 2 – 12-ft. travel lanes and 4-ft. bike lanes in each direction with a 14-ft. flush median. The proposed 16-ft. shoulders will consist of curb, gutter and sidewalk each side to accommodate ADA regulations.</p>	<p>Proposed Features: 2- 12-ft. travel lanes and 4-ft. bike lanes in each direction with a 14-ft. flush median. 10-ft. Urban shoulders will consist of curb and gutter and sidewalk on each side to accommodate ADA regulations.</p>
<p>Reason for Change: <i>The shoulder width is being reduced as a cost savings measure as per the VE Study.</i></p>	

Potential Environmental Impacts of Proposed Revision:
Environmental impacts have been reduced as a result of this revision.

Have Proposed Revisions Been Reviewed by Environmental Staff? Yes No

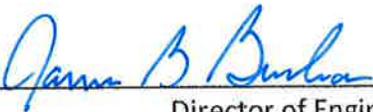
Environmental Responsibilities (Studies/Documents/Permits):
 Consultant GDOT Local Government

Updated Cost Estimate	
Base Construction Cost	\$6,992,990.38
Engineering and Inspection	\$349,649.52
Fuel & Asphalt Adjustment	\$1,272,915.64
Total Construction Cost	\$8,615,555.54
Right-Of-Way	\$2,090,000.00
Utilities (Reimbursable)	\$196,470.00
Utilities Contingencies	
Environmental Mitigation	

Recommendation: *This office recommends that this revision to the Project Concept Report be approved for implementation.*

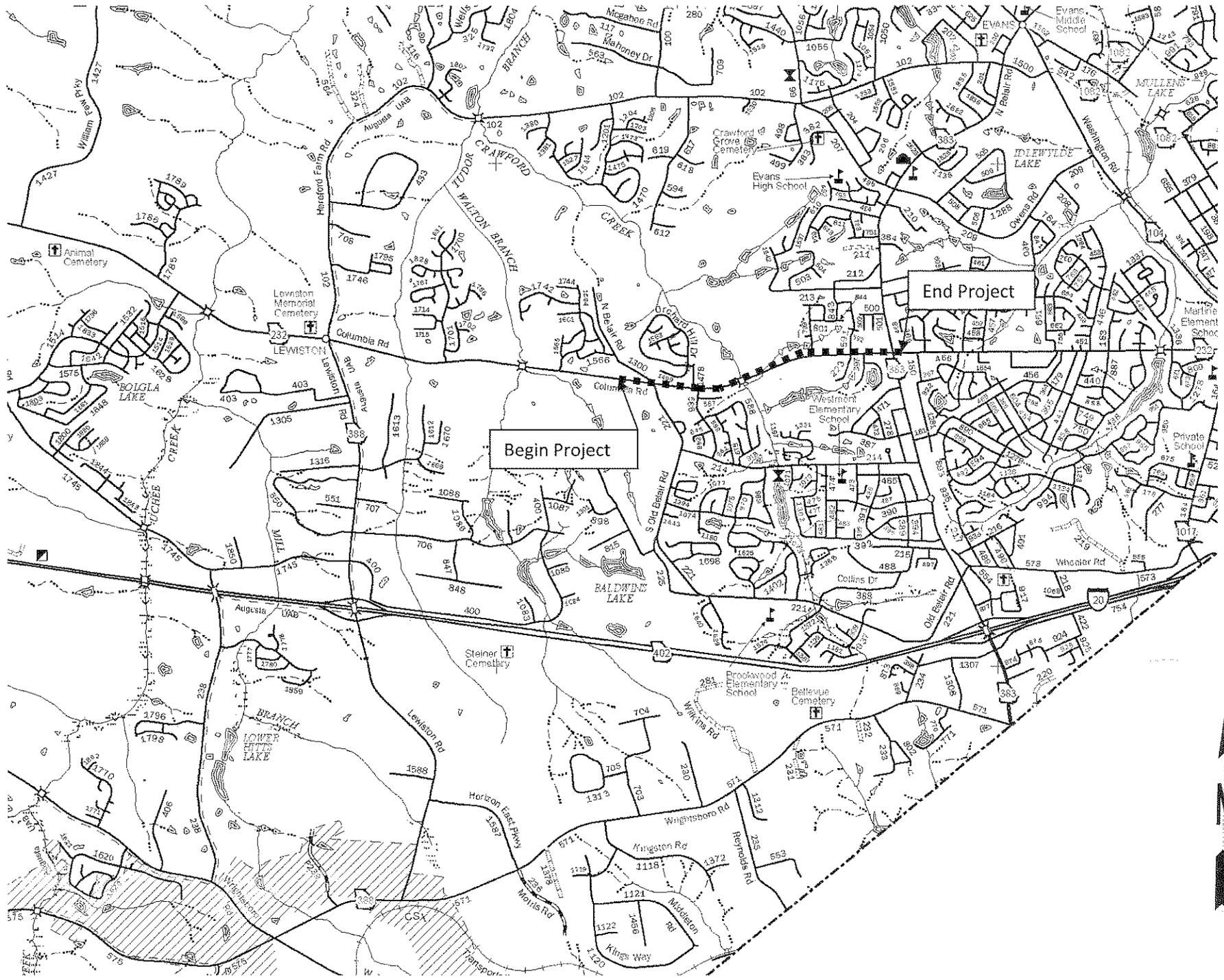
Attachments:

- Sketch Map
- Cost Estimates
- Typical Section
- Need and Purpose Statement
- Benefit Cost Analysis Work Sheet
- Traffic Counts
- Value Engineering Implementation Letter

Concur: 
Director of Engineering

Approve: 
Chief Engineer

Date: 03/16/2011



Begin Project

End Project



STATE HIGHWAY AGENCY
 DATE : 11/03/2010
 PAGE : 1

JOB DETAIL ESTIMATE

JOB NUMBER : 231440_JWH SPEC YEAR: 01
 DESCRIPTION: STATE ROUTE 232 WIDENING FROM CR 223/OLD BELAIR RD TO SR 383

ITEMS FOR JOB 231440_JWH

LINE	ITEM	ALT	UNITS	DESCRIPTION	QUANTITY	PRICE	AMOUNT
0005	150-1000		LS	TRAFFIC CONTROL - STP00-0174-01(007)	1.000	150000.00	150000.00
0010	153-1300		EA	FIELD ENGINEERS OFFICE TP 3	1.000	83410.45	83410.45
0015	207-0203		CY	FOUND BK FILL MATL, TP II	24.000	46.08	1106.08
0020	210-0100		LS	GRADING COMPLETE - STP00-0174-01(007)	1.000	750000.00	750000.00
0025	310-1101		TN	GR AGGR BASE CRS, INCL MATL	24285.000	18.58	451256.10
0030	318-3000		TN	AGGR SURF CRS	1100.000	17.57	19329.98
0035	402-1812		TN	RECYL AC LEVELING, INC BM&HL	1500.000	72.53	108804.24
0040	402-3113		TN	RECYL AC 12.5MM SP, GP1/2, BM&HL	7500.000	59.69	447706.20
0045	402-3121		TN	RECYL AC 25MM SP, GP1/2, BM&HL	12338.000	62.09	766139.21
0050	402-3190		TN	RECYL AC 19 MM SP, GP 1 OR 2 , INC BM&HL	10000.000	63.11	631106.90
0055	413-1000		GL	BITUM TACK COAT	5131.000	2.47	12705.07
0060	432-5010		SY	MILL ASPH CONC PVMT, VARB DEPTH	19000.000	2.41	45887.28
0065	433-1100		SY	REF CONC APPR SL/INCL CURB	602.000	145.89	87829.22
0070	441-0016		SY	DRIVEWAY CONCRETE, 6 IN TK	268.000	34.60	9273.55
0075	441-0018		SY	DRIVEWAY CONCRETE, 8 IN TK	479.000	39.19	18775.43
0080	441-0104		SY	CONC SIDEWALK, 4 IN	11234.000	28.28	317750.77
0085	441-0204		SY	PLAIN CONC DITCH PAVING, 4 IN	775.000	33.89	26270.04
0090	441-0740		SY	CONC MEDIAN, 4 IN	625.000	26.86	16790.91
0095	441-3999		LF	CONCRETE V GUTTER	125.000	20.63	2579.93
0100	441-4020		SY	CONC VALLEY GUTTER, 6 IN	610.000	31.74	19362.54
0105	441-4030		SY	CONC VALLEY GUTTER, 8 IN	147.000	46.88	6891.49
0110	441-6222		LF	CONC CURB & GUTTER/ 8"x30"TP2	22747.000	11.31	257451.68
0115	444-1000		LF	SAWED JTS IN EXIST PVMTS - PCC	24.000	5.41	130.00
0120	446-1100		LF	PVMT REF FAB STRIPS, TP2, 18 INCH WIDTH	19592.000	2.71	53192.48
0125	500-3101		CY	CLASS A CONCRETE	788.000	606.47	477905.56
0130	500-9999		CY	CL B CONC, BASE OR PVMT WIDEN	25.000	168.31	4207.80
0135	511-1000		LB	BAR REINF STEEL	5351.000	0.90	4840.41
0140	550-1180		LF	STM DR PIPE 18", H 1-10	9050.000	31.91	288810.57
0145	550-1240		LF	STM DR PIPE 24", H 1-10	1594.000	40.51	64579.94
0150	550-1300		LF	STM DR PIPE 30", H 1-10	354.000	58.49	20708.75
0155	550-2182		LF	SIDE DR PIPE 18", H 15-20	152.000	35.32	5368.78
0160	550-3618		EA	SAFETY END SECTION 18", SD, 6:1	8.000	578.28	4626.30
0165	550-4224		EA	FLARED END SECT 24 IN, ST DR	5.000	684.14	3420.74
0170	550-4230		EA	FLARED END SECT 30 IN, ST DR	4.000	889.12	3556.51
0175	573-2006		LF	UNDDR PIPE INCL DRAIN AGGR 6"	2000.000	11.95	23908.06
0180	576-1018		LF	SLOPE DRAIN PIPE, 18 IN	100.000	23.67	2367.70
0185	611-3000		EA	RECONSTR CATCH BASIN, GROUP 1	5.000	2196.86	10984.30
0190	611-3010		EA	RECONSTR DROP INLET, GROUP 1	4.000	1339.86	5359.47
0195	634-1200		EA	RIGHT OF WAY MARKERS	65.000	89.68	5829.28
0200	641-1200		LF	GUARDRAIL, TP W	3558.000	15.68	55798.41
0205	641-5001		EA	GUARDRAIL ANCHORAGE, TP 1	7.000	626.03	4382.23
0210	641-5012		EA	GUARDRAIL ANCHORAGE, TP 12	7.000	1777.28	12441.00
0215	643-1137		LF	CH LK FEN, ZC COAT, 5', 9 GA	2580.000	11.82	30505.89
0220	643-8010		EA	GATE, CHAIN LINK ZC COAT - 10 FT	4.000	1184.04	4736.16

□
 DATE : 11/03/2010
 PAGE : 2

JOB DETAIL ESTIMATE

0225	668-1100		EA	CATCH BASIN, GP 1	59.000	2317.00	136703.09
0230	668-2100		EA	DROP INLET, GP 1	37.000	2149.55	79533.44
0235	668-5000		EA	JUNCTION BOX	7.000	1608.18	11257.28
0240	603-2181		SY	STN DUMPED RIP RAP, TP 3, 18"	1243.000	33.56	41722.34

				Untitled			
0245	603-7000	SY	PLASTIC FILTER FABRIC	1243.000	3.63	4513.84	
0250	700-6910	AC	PERMANENT GRASSING	35.000	916.73	32085.77	
0255	700-7000	TN	AGRICULTURAL LIME	70.000	37.46	2622.71	
0260	700-7010	GL	LIQUID LIME	88.000	19.61	1725.94	
0265	700-8000	TN	FERTILIZER MIXED GRADE	231.000	469.84	108533.14	
0270	700-8100	LB	FERTILIZER NITROGEN CONTENT	1750.000	2.06	3610.39	
0275	710-9000	SY	PERM SOIL REINFORCING MAT	300.000	4.26	1278.06	
0280	715-2200	SY	BITUM TRID ROVING, WATERWAYS	300.000	2.13	639.01	
0285	716-1000	SY	EROSION CONTROL MATS,WATERWAYS	1000.000	2.44	2443.41	
0290	716-2000	SY	EROSION CONTROL MATS, SLOPES	10783.000	1.09	11779.56	
0295	163-0232	AC	TEMPORARY GRASSING	105.000	480.39	50441.05	
0300	163-0240	TN	MULCH	315.000	170.37	53667.42	
0305	163-0300	EA	CONSTRUCTION EXIT	11.000	1822.96	20052.59	
0310	163-0530	LF	CONSTR AND REMOVE BALED STRW EROSION CHK	7500.000	3.17	23782.50	
0315	165-0010	LF	MAINT OF TEMP SILT FENCE, TP A	3750.000	0.57	2151.56	
0320	165-0030	LF	MAINT OF TEMP SILT FENCE, TP C	7313.000	0.72	5324.74	
0325	165-0070	LF	MAINT OF BALED STRAW EROSION CHECK	3750.000	0.84	3167.63	
0330	165-0101	EA	MAINT OF CONST EXIT	22.000	670.37	14748.15	
0335	167-1000	EA	WATER QUALITY MONITORING AND SAMPLING	2.000	636.60	1273.21	
0340	171-0010	LF	TEMPORARY SILT FENCE, TYPE A	7500.000	1.43	10773.00	
0345	171-0030	LF	TEMPORARY SILT FENCE, TYPE C	14626.000	3.01	44111.58	
0350	643-8200	LF	BARRIER FENCE (ORANGE), 4 FT	1585.000	2.11	3349.50	
0355	636-1020	SF	HWY SGN,TP1MAT,REFL SH TP3	225.000	15.24	3429.03	
0360	636-1033	SF	HWY SIGNS, TP1MAT,REFL SH TP 9	320.000	20.12	6438.79	
0365	636-1041	SF	HWY SIGNS,TP 2MAT,REFL SH TP 9	38.000	38.57	1465.84	
0370	636-2070	LF	GALV STEEL POSTS, TP 7	425.000	9.61	4087.95	
0375	636-2090	LF	GALV STEEL POSTS, TP 9	270.000	8.65	2336.07	
0380	639-5000	EA	PRESTRESSED CONC STR POLE, TP- 4	8.000	7316.93	58535.45	
0385	647-1000	LS	TRAF SIGNAL INSTALLATION NO - 1	1.000	65000.00	65000.00	
0390	647-1000	LS	TRAF SIGNAL INSTALLATION NO - 2	1.000	65000.00	65000.00	
0395	652-2501	LM	SOLID TRAF STRIPE, 5 IN, WHITE	3.000	365.44	1096.34	
0400	652-5301	LF	SOLID TRAF STRIPE, 6 IN, WHITE	13600.000	0.10	1484.17	
0405	653-0120	EA	THERM PVMT MARK, ARROW, TP 2	89.000	67.06	5968.95	
0410	653-1502	LF	THERMO SOLID TRAF ST, 5 IN YEL	25000.000	0.26	6623.00	
0415	653-1704	LF	THERM SOLID TRAF STRIPE,24",WH	400.000	3.44	1377.35	
0420	653-1804	LF	THERM SOLID TRAF STRIPE, 8",WH	1975.000	1.74	3452.28	
0425	653-3501	GLF	THERMO SKIP TRAF ST, 5 IN, WHI	25000.000	0.15	3920.25	
0430	653-3502	GLF	THERMO SKIP TRAF ST, 5 IN, YEL	23000.000	0.08	1968.57	
0435	653-6004	SY	THERM TRAF STRIPING, WHITE	385.000	3.02	1166.06	
0440	653-6006	SY	THERM TRAF STRIPING, YELLOW	1035.000	2.85	2955.94	
0445	654-1001	EA	RAISED PVMT MARKERS TP 1	570.000	3.39	1932.96	
0450	654-1003	EA	RAISED PVMT MARKERS TP 3	290.000	3.29	956.42	
0455	540-1202	LS	REM OF PARTS OF EX BR, BR NO - -	1.000	29644.00	29644.00	
0460	543-1100	LS	CONSTR BR-COMP-BOTTOM OF CAP	1.000	620000.00	620000.00	
0465	603-2024	SY	STN DUMPED RIP RAP, TP 1, 24"	2270.000	46.98	106652.43	
0470	603-7000	SY	PLASTIC FILTER FABRIC	2270.000	3.57	8120.22	

ITEM TOTAL

6992990.38

STATE HIGHWAY AGENCY

DATE : 11/03/2010
PAGE : 3

JOB DETAIL ESTIMATE

INFLATED ITEM TOTAL

6992990.38

TOTALS FOR JOB 231440_JWH

ESTIMATED COST:
CONTINGENCY PERCENT (0.0):
ESTIMATED TOTAL:

6992990.39
0.00
6992990.39

**Special Provision, Section 109-Measurement and Payment
FUEL PRICE ADJUSTMENT (ENGLISH 125% MAX)**

ENTER FPL DIESEL	2.933
ENTER FPM DIESEL	6.599

ENTER FPL UNLEADED	2.62
ENTER FPM UNLEADED	5.895

<http://www.dot.ga.gov/doingbusiness/Materials/Pages/asphaltcementindex.aspx>

INCREASE ADJUSTMENT
125.00%

INCREASE ADJUSTMENT
125.00%

ROADWAY ITEMS	QUANTITY	DIESEL FACTOR	GALLONS DIESEL	UNLEADED FACTOR	GALLONS UNLEADED	REMARKS
Excavations paid as specified by Sections 205 (CUBIC YARD)		0.29		0.15		
Excavations paid as specified by Sections 206 (CUBIC YARD)		0.29		0.15		
GAB paid as specified by the ton under Section 310 (TON)	24285.000	0.29	7042.65	0.24	5828.40	
Hot Mix Asphalt paid as specified by the ton under Sections 400 (TON)		2.90		0.71		
Hot Mix Asphalt paid as specified by the ton under Sections 402 (TON)	31338.000	2.90	90880.20	0.71	22249.98	
PCC Pavement paid as specified by the square yard under Section 430 (SY)		0.25		0.20		

BRIDGE ITEMS	Quantity	Unit Price	QF/1000	Diesel Factor	Gallons Diesel	Unleaded Factor	Gallons Unleaded	REMARKS
Bridge Excavation (CY) Section 211				8.00		1.50		
Class __ Concrete (CY) Section 500				8.00		1.50		
Class __ Concrete (CY) Section 500				8.00		1.50		
Class __ Concrete (CY) Section 500				8.00		1.50		
Superstru Con Class__(CY) Section 500				8.00		1.50		
Superstru Con Class__(CY) Section 500				8.00		1.50		
Superstru Con Class__(CY) Section 500				8.00		1.50		
Concrete Handrail (LF) Section 500				8.00		1.50		
Concrete Barrier (LF) Section 500				8.00		1.50		

BRIDGE ITEMS	Quantity	Unit Price	QF/1000	Diesel Factor	Gallons Diesel	Unleaded Factor	Gallons Unleaded	REMARKS
Stru Steel <u>Plan Quantity</u> (LB) Section 501				8.00		1.50		
Stru Steel <u>Plan Quantity</u> (LB) Section 501				8.00		1.50		
PSC Beams _____ (LF) Section 507				8.00		1.50		
PSC Beams _____ (LF) Section 507				8.00		1.50		
PSC Beams _____ (LF) Section 507				8.00		1.50		
Stru Reinf <u>Plan Quantity</u> (LB) Section 511				8.00		1.50		
Stru Reinf <u>Plan Quantity</u> (LB) Section 511				8.00		1.50		
Bar Reinf Steel (LB) Section 511				8.00		1.50		
Piling ___ inch (LF) Section 520				8.00		1.50		
Piling ___ inch (LF) Section 520				8.00		1.50		
Piling ___ inch (LF) Section 520				8.00		1.50		
Piling ___ inch (LF) Section 520				8.00		1.50		
Piling ___ inch (LF) Section 520				8.00		1.50		
Piling ___ inch (LF) Section 520				8.00		1.50		
Drilled Caisson, ___ (LF) Section 524				8.00		1.50		
Drilled Caisson, ___ (LF) Section 524				8.00		1.50		
Drilled Caisson, ___ (LF) Section 524				8.00		1.50		
Pile Encasement, ___(LF) Section 547				8.00		1.50		
Pile Encasement, ___(LF) Section 547				8.00		1.50		
			SUM QF DIESEL=	97922.85	SUM QF UNLEADED=		28078.38	
			DIESEL PRICE ADJUSTMENT(\$)		\$330,288.88			
			UNLEADED PRICE ADJUSTMENT(\$)		\$84,600.16			

DEPARTMENT OF TRANSPORTATION STATE OF GEORGIA

INTERDEPARTMENT CORRESPONDENCE

FCB
FILE PROJECT No. , **OFFICE**
 DATE

P.I. No.

FROM

TO Ronald E. Wishon, Project Review Engineer

SUBJECT REVISIONS TO PROGRAMMED COSTS

MNGT LET DATE

PROJECT MANAGER

MNGT R/W DATE

PROGRAMMED COST (TPro W/OUT INFLATION)

LAST ESTIMATE UPDATE

CONSTRUCTION \$

DATE

RIGHT OF WAY \$

DATE

UTILITIES \$

DATE

REVISED COST ESTIMATES

CONSTRUCTION* \$

RIGHT OF WAY \$

UTILITIES \$

* Costs contain % Engineering and Inspection

REASON FOR COST INCREASE

CONTINGENCY SUMMARY

Construction Cost Estimate: \$ (Base Estimate)

Engineering and Inspection: \$ (Base Estimate x %)

Total Fuel Adjustment \$ (From attached worksheet)

Total Liquid AC Adjustment \$ (From attached worksheet)

Construction Total: \$

REIMBURSABLE UTILITY COST

Utility Owner

Reimbursable Cost

<input type="text"/>	<input type="text"/>

Attachments

DEPARTMENT OF TRANSPORTATION STATE OF GEORGIA

INTERDEPARTMENT CORRESPONDENCE

FILE Project No. STP00-0174-01(007) **OFFICE** Right of Way
P.I. No. 231440 County Columbia
SR 232 from CR 221/Old Belair Road to SR 383/Belair Road

DATE 03/07/2011

FROM  Howard P. Copeland, Right of Way Administrator

TO Foster Grimes, Project Manager

SUBJECT Cost Estimates **Mgmt LET Date:** 01/15/2012
Mgmt R/W Date: 01/22/2010

Attached is a current detailed cost estimate that we received that will be utilized for Right of Way authorization.

ROW Phase: 2011 \$1,910,000.00

Attached Cost Estimate \$2,090,000.00

Please let Floyd J. Williams know, for tracking purposes, once the cost estimate has been sent to Engineering Services. Right of Way funding cannot be requested until the cost estimate has been approved by the Chief Engineer.

Timely submission of the cost estimate and timely approval notification is critical to maintaining the Right of Way authorization schedule. If you have any questions please call Floyd J. Williams at 404-347-0191.

**GEORGIA DEPARTMENT OF TRANSPORTATION
DETAILED ROW COST ESTIMATE SUMMARY**

Date (MM/YYYY): March-11 Project: STP-174-1(7)
 Revised: County: Columbia
 PI: 231440
 Description: Widening and Reconstruction of SR 232
 Parcels: 60 R/W Plan Date: 6/27/2008

CONTRACT

Land and Improvements _____ \$792,196.43
 Valuation Services _____ \$147,500.00
 Legal Services _____ \$378,000.00
 Relocation _____ \$135,000.00
 Demolition _____ \$10,000.00
TOTAL CONTRACT _____ \$1,462,696.43

INHOUSE

TOTAL INHOUSE _____ \$618,750.00
TOTAL ESTIMATED COSTS _____ \$2,081,446.43

TOTAL ESTIMATED COSTS (ROUNDED) _____ \$2,090,000.00

Preparation Credits	Hours	Signature
Brenda J. Moment	80	<i>Brenda J. Moment</i>

Larry J. Murray CG#: 2400 3/1/11

 CG#:

Attachment(s): Project Location Map; Subject/Comp Location Map; Comparable Sales Data

**GEORGIA DEPARTMENT OF TRANSPORTATION
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Brenda J. Moment	80	

 CG#: (DATE)

 CG#: (DATE)

Attachment(s): Project Location Map; Subject/Comp Location Map; Comparable Sales Data

Georgia Department of Transportation Detailed ROW Cost Estimate Worksheet

Project/County/PI

STP-174-1(7)

Columbia

231440

		A	B	C	D
	Land and Improvements				
1	Fee Simple Estimate	\$242,637.52			
2	Perm Esmt Estimate	\$89,672.65			
3	Temp Esmt Estimate	\$371.25			
4	Potential Excess Estimate	\$0.00			
5	Damages	\$82,200.00			
6	Improvements	\$29,100.00			
7	Trade Fixtures	\$55,000.00			
8	Cost to Cures	\$0.00			
9	Minimum Award Adjustment	\$1,194.50			
10					
11					
12					
13					
14					
15					
16					
17					
18			SUB TOTAL PROPERTY TYPES		\$500,175.92
19			Counter Offers and Condemnation Increases (50%)		\$250,087.96
			Let Date (MM/YYYY)		January-12
20			Projected Market Appreciation (10%)		\$41,932.56
21			GRAND TOTAL LANDS AND IMPROVEMENTS		\$792,196.43

Georgia Department of Transportation Detailed ROW Cost Estimate Worksheet

Project/County/PI

STP-174-1(7)

Columbia

231440

	A	B	C	D
Valuation Services	Agriculture	Residential	Commercial	Industrial
1 Appraisals (# of Parcels)	0	40	20	0
2 Estimated Fees (per Parcel)	\$0.00	\$1,800.00	\$2,000.00	\$0.00
3 TOTAL APPRAISALS	\$0.00	\$72,000.00	\$40,000.00	\$0.00
4 Sign Estimates	0	0	4	
5 Estimated Fees	\$0.00	\$0.00	\$1,500.00	\$0.00
6 TOTAL SIGN ESTIMATES	\$0.00	\$0.00	\$6,000.00	\$0.00
7 Specialty Reports		0	0	
8 Estimated Fees	\$0.00	\$0.00	\$0.00	\$0.00
9 TOTAL SPECIALTY REPORTS	\$0.00	\$0.00	\$0.00	\$0.00
10 Septic/Well Reports	0	0	0	0
11 Estimated Fees	\$0.00	\$0.00	\$0.00	\$0.00
12 TOTAL SEPTIC/WELL REPORTS	\$0.00	\$0.00	\$0.00	\$0.00
13				
14				
15				
16 TOTAL VALUATION FEES	\$0.00	\$72,000.00	\$46,000.00	\$0.00
17	SUB TOTAL VALUATION SERVICES			\$118,000.00
18	Updates and Incidentals (Min \$2,500 or 25%)			\$29,500.00
19	GRAND TOTAL VALUATION SERVICES			\$147,500.00

Georgia Department of Transportation Detailed ROW Cost Estimate Worksheet

Project/County/PI

STP-174-1(7)

Columbia

231440

		A	B	C	D
	Legal Services	Parcels	Estimated Fees		TOTALS
1	Meeting with Attorney	60	\$125.00		\$7,500.00
2	Preliminary Titles	60	\$200.00		\$12,000.00
3	Closing and Final Title	60	\$300.00		\$18,000.00
4	Recording Fees	60	\$50.00		\$3,000.00
5	Condemnation Filing	9	\$5,000.00		\$45,000.00
6	Litigation Costs	9	\$25,000.00		\$225,000.00
7	Updates and Incidentals	9	\$7,500.00		\$67,500.00
8					
9					
10					
11					
12					
13					
14					
15					
16					
17			GRAND TOTAL LEGAL SERVICES		\$378,000.00

Georgia Department of Transportation Detailed ROW Cost Estimate Worksheet

Project/County/PI

STP-174-1(7)

Columbia

231440

		A	B	C	D
	Relocation	Displacements	Estimated Costs		TOTALS
1	Business Displacement	0	\$25,000.00		\$0.00
2	Residential Tenant	0	\$25,000.00		\$0.00
3	Residential Owner	0	\$45,000.00		\$0.00
4	Pro-Rata Taxes	60	\$1,000.00		\$60,000.00
5	Property Pin Replacement	60	\$1,250.00		\$75,000.00
6					
7					
8					
9					
10					
11					
12					
13					
14					
15					
16					
17			GRAND TOTAL RELOCATION		\$135,000.00

Georgia Department of Transportation Detailed ROW Cost Estimate Worksheet

Project/County/PI

STP-174-1(7)

Columbia

231440

		A	B	C	D
	Demolition	Items/Improvements	Estimated Costs		TOTALS
1	Residential Structures	0	\$17,500.00		\$0.00
2	Detached Garages/Outbuildings	0	\$8,000.00		\$0.00
3	Commercial Structures	0	\$25,000.00		\$0.00
4	Hotels/Apartments	0	\$65,000.00		\$0.00
5	UST's - Dispensers	0	\$50,000.00		\$0.00
6	Billboards	0	\$8,000.00		\$0.00
7	Signs - Light Standards	4	\$2,500.00		\$10,000.00
8	Water Vaults	0	\$15,000.00		\$0.00
9	Gas/Water Service Separation	0	\$2,500.00		\$0.00
10					
11					
12					
13					
14					
15					
16					
17			GRAND TOTAL DEMOLITION		\$10,000.00

Georgia Department of Transportation Detailed ROW Cost Estimate Worksheet

Project/County/PI

STP-174-1(7)

Columbia

231440

		A	B	C	D
	Inhouse	Parcels	Man hours per Parcel		TOTALS
1	Pre-Acquisition	60	50		\$150,000.00
2	Acquisition	60	125		\$375,000.00
3	Relocation	0	50		\$0.00
4	Administrative Appeals	15	50		\$37,500.00
5	Post-Acquisition	9	125		\$56,250.00
6					
7					
8					
9					
10					
11					
12					
13					
14					
15					
16					
17			GRAND TOTAL INHOUSE		\$618,750.00

**DEPARTMENT OF TRANSPORTATION
STATE OF GEORGIA**

INTERDEPARTMENT CORRESPONDENCE

FILE STP00-0174-01 (007) Columbia Co. **OFFICE** Tennille
P.I. No. 231440
SR 232 from CR 221/ Old Belair Rd. to **DATE** September 15, 2010
SR 383/ Belair Rd.

FROM Jack D. Cooper, Jr.
District Utilities Engineer

TO George Brewer, District Preconstruction Engineer
ATTN Foster Grimes

SUBJECT PRELIMINARY UTILITY COST (ESTIMATE)

As requested by your office, we are furnishing you with a Preliminary Utility Cost estimate for each utility with facilities potentially located within the project limits.

FACILITY OWNER	NON- REIMBURSABLE	REIMBURSABLE
Georgia Power Co. (D)		\$196,470.00
Georgia Power Co. (T)		
AT&T Georgia	\$33,000.00	
Comcast Cable		
AGL Resources	\$85,500.00	
Columbia County Water	\$84,425.00	
Columbia County Sewer	\$59,400.00	
Totals	\$262,325.00	\$196,470.00
Total Reimbursement Cost:		\$196,470.00

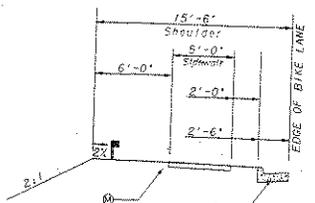
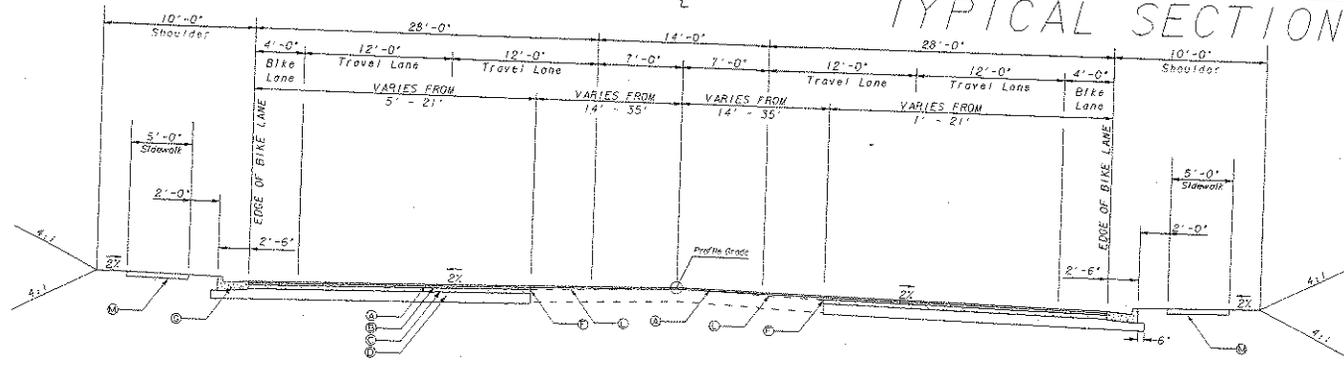
Total reimbursable cost for the above project is \$196,470.00.

If you have any questions, please contact Jamie Lindsey at 478-552-4637.

JDC/JLL

C: Jeff Baker, State Utilities Engineer;
Angela Whitworth, Office of Financial Management;
Mike Keene, Area Engineer

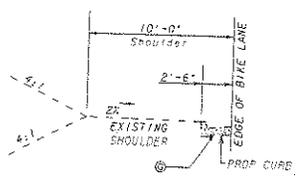
TYPICAL SECTION 1



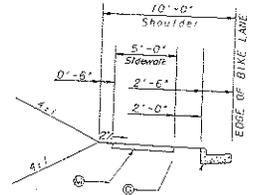
THIS SECTION APPLIES FROM STA 203+00 TO STA 205+14.68
 APPLIES FROM STA 234+53.46 TO STA 235+41

THIS SECTION APPLIES FROM STA 188+00.95 TO STA 205+14.68
 THIS SECTION APPLIES FROM STA 234+53.46 TO STA 239+19.64
 THIS SECTION APPLIES FROM STA 257+67.79 TO STA 276+56.76
 THIS SECTION APPLIES FROM STA 281+81.82 TO STA 285+97.26

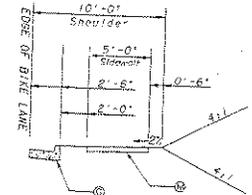
- REQUIRED PAVEMENT**
- (A) 165 LBS/YD² RECYCLED ASPH. CONC. 12.5 mm SUPERPAVE
 - (B) 220 LBS/YD² RECYCLED ASPH. CONC. 19 mm SUPERPAVE
 - (C) 660 LBS/YD² RECYCLED ASPH. CONC. 25 mm SUPERPAVE
 - (D) 12" GRADED AGGREGATE BASE
 - (F) PAVEMENT REINFORCEMENT FABRIC 18" WIDE, CENTERED ON JOINT
 - (G) CONC. CURB & GUTTER, 8 IN X 30 IN, TP 2
 - (L) ASPHALT CONC. LEVELING AS REGD
 - (M) CONC. SIDEWALK, 4 IN



THIS SECTION APPLIES FROM
 400+00 TO 401+98.08 (S.R. 383)



THIS SECTION APPLIES FROM
 420+00 TO 422+40.38 (S.R. 383)



THIS SECTION APPLIES FROM:
 STA 400+00 TO STA 401+98.08 (S.R. 383)
 STA 420+00 TO STA 422+40.38 (S.R. 383)

S.E. RATE	Shoulder Slope
2.0% OR 3.0%	4.0%
4.0% OR 5.0%	2.0%
6.0% OR 7.0%	1.0%
8.0% +	0.0%

GEORGIA
 DEPARTMENT
 OF
 TRANSPORTATION

NOT TO SCALE

REVISION DATES

STATE OF GEORGIA
 DEPARTMENT OF TRANSPORTATION
 OFFICE: DISTRICT 2 DESIGN - TENNILLE
 TYPICAL SECTIONS

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 14' flush 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~~ ^{flush} 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.

**Benefit Cost Analysis Work Sheet
CONGESTION Projects**

STP00-0174-01(007)

231440

Columbia County

Widening of SR 232 fm Belair Rd to Old Belair Rd

Congestion Benefit = Tb + Cmb + Fb

Person Time Savings Benefit (Tb)

*Db (hrs)	0.02
ADT	23,500.00
Tb (\$s)	\$16,156,250.00

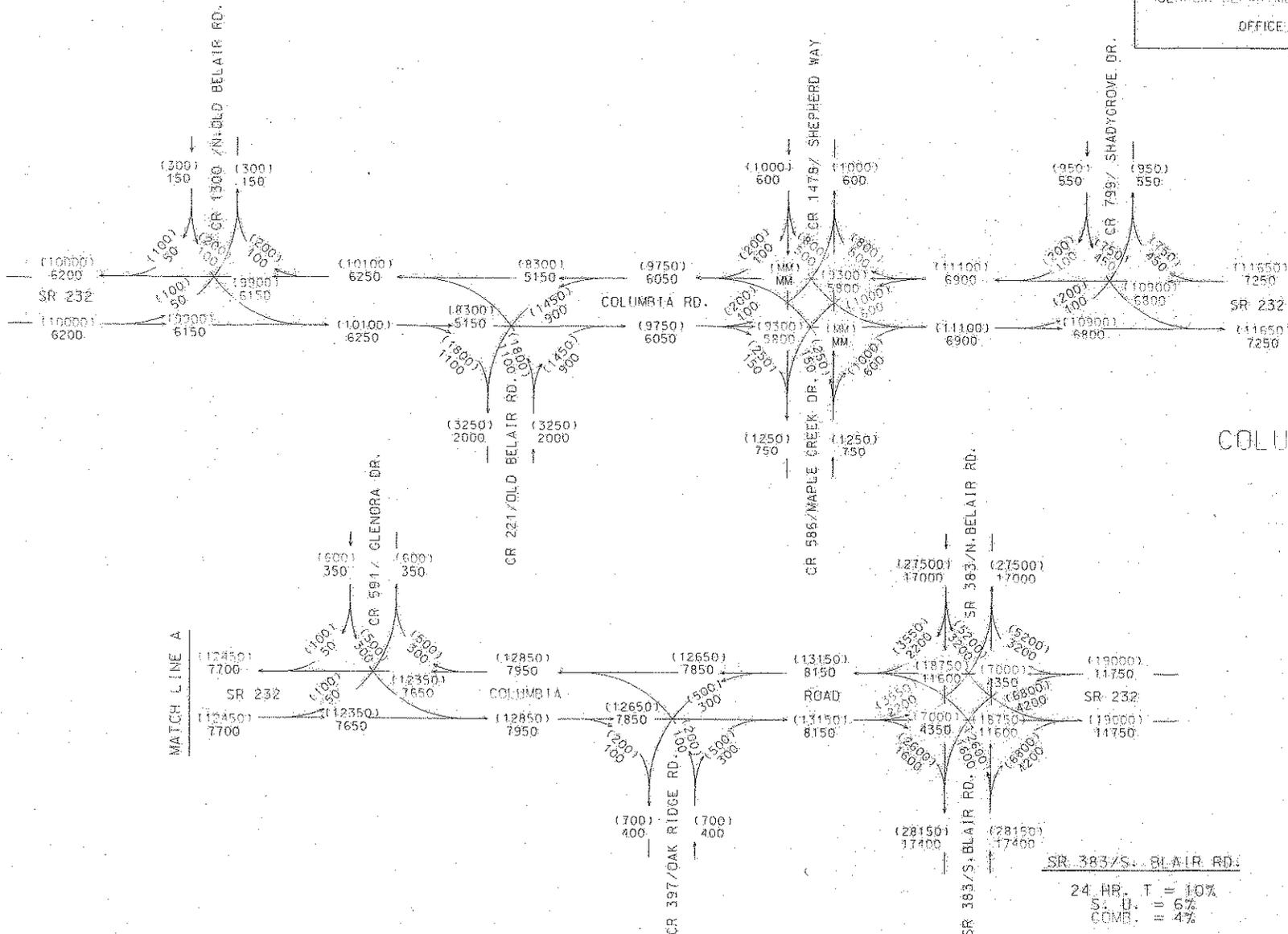
Commercial or Truck Time Savings Benefit (Cmb)

Db (hrs)	0.02
% Truck Traffic	0.07
ADT	23,500.00
Cmb	\$5,975,462.50

Fuel Savings Benefit (Fb)

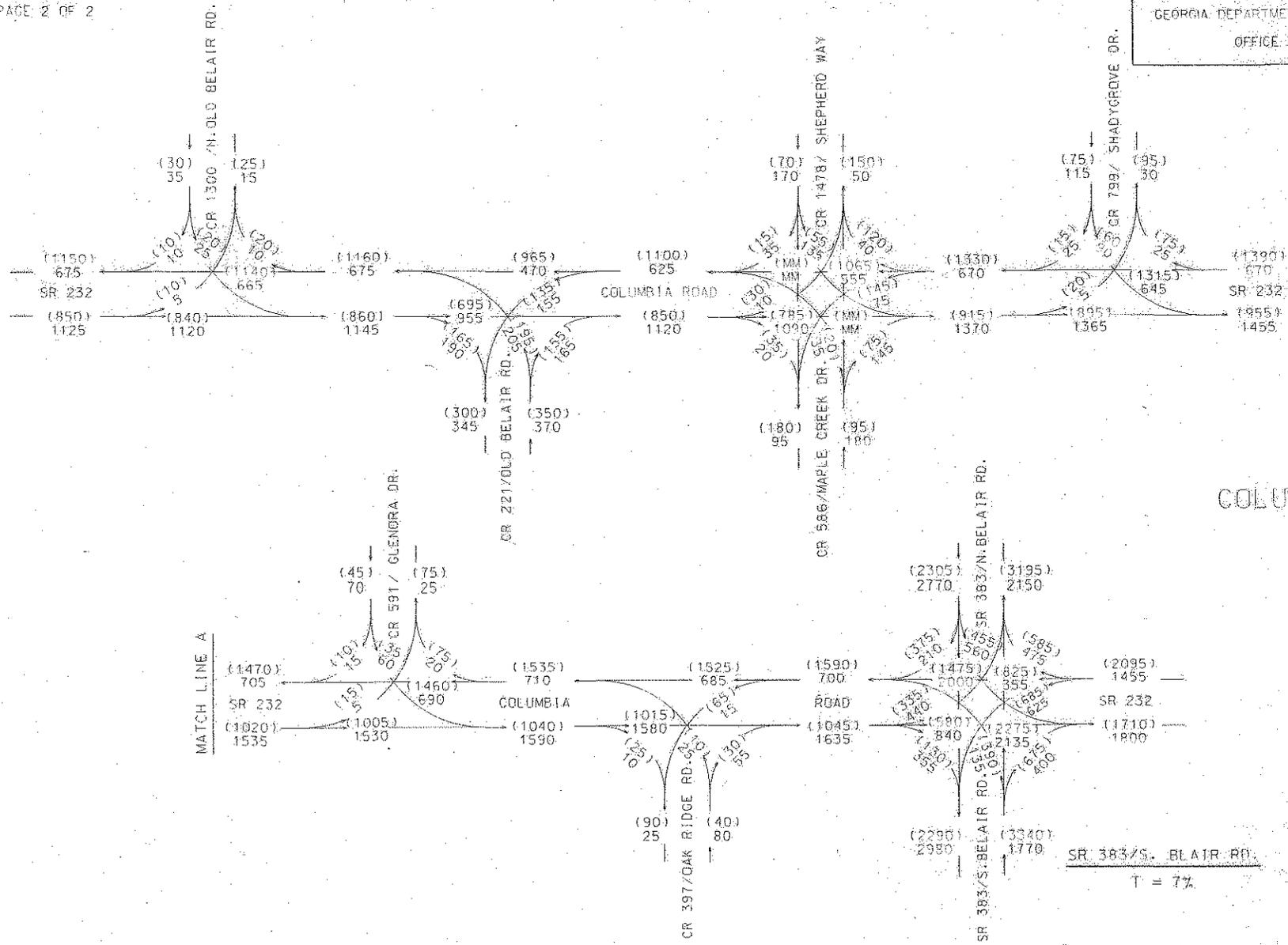
ADT	23,500.00
Fb (\$s)	\$5,630,208.33

Total Congestion Benefit	\$27,761,920.83
Total Project Cost	\$10,902,025.54
B/C Ratio	2.55



SR 383/S. BLAIR RD.
24 HR. T = 10%
S. U. = 6%
COMB. = 4%

STEP 00-0174-011007
P. 1. # 231440
COLUMBIA COUNTY
SR 232 FROM
CR 221 TO SR 383
2035 ADT = 1000
2015 ADT = 000
24 HR. T = 14%
S. U. = 10%
COMB. = 4%



MATCH LINE A

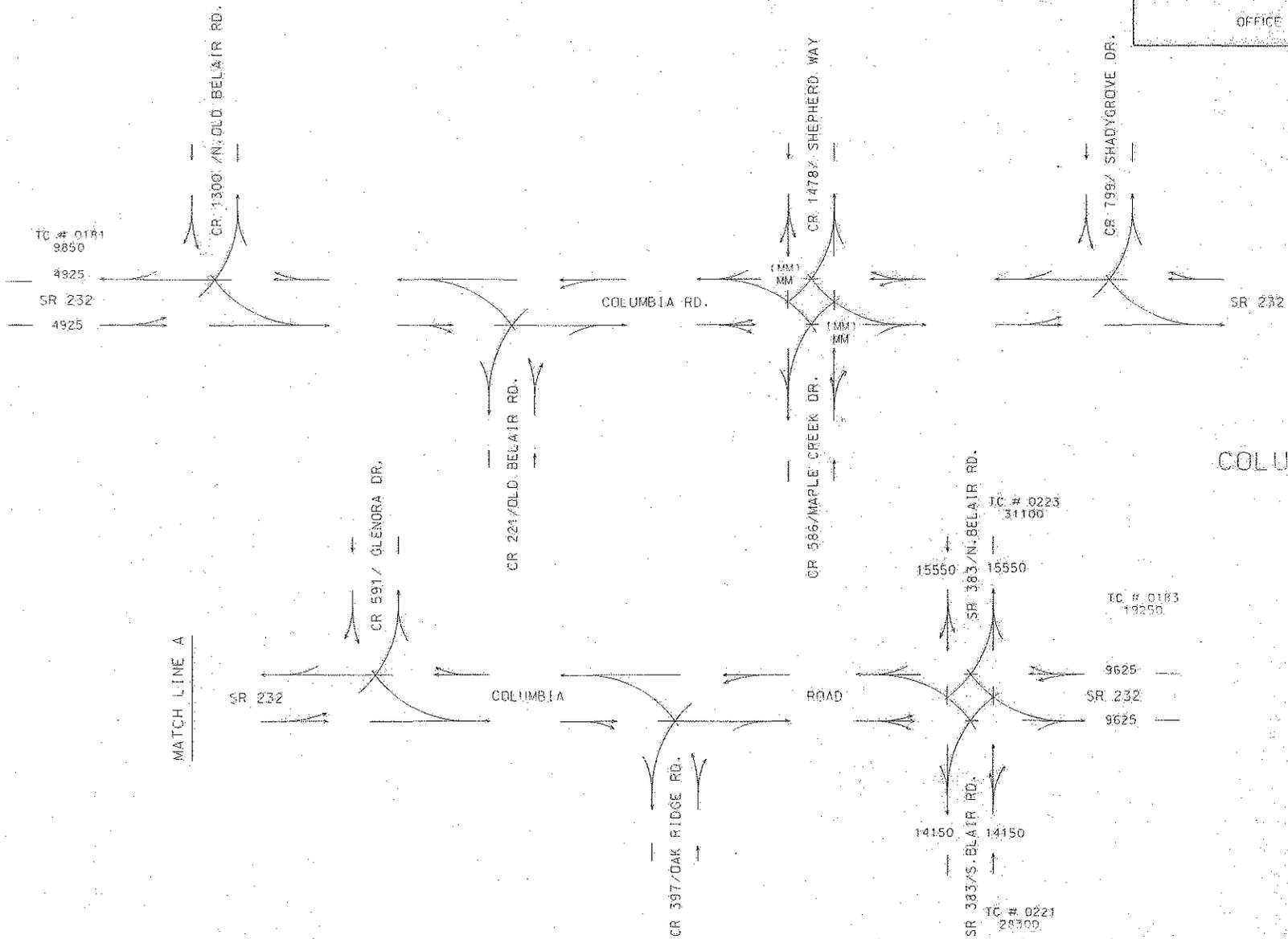
MATCH LINE A

COLUMBIA COUNTY



ATP00-0174-01(007)
P. I. # 231440
COLUMBIA COUNTY
SR 232 FROM
CR 221 TO SR 383
2075 PM DHV = 000
2075 AM DHV = 000
T = 127
AFE
11/75

SR 383/S. BLAIR RD.
T = 7%



MATCH LINE A

COLUMBIA COUNTY



STPO0-0174-011007
 P. I. # 231440
 COLUMBIA COUNTY
 SR 232 FROM
 CR 221 TO SR 383
 EXISTING 2007 ADT
 APR 11/10

**DEPARTMENT OF TRANSPORTATION
STATE OF GEORGIA**

INTERDEPARTMENT CORRESPONDENCE

FILE: STP00-0174-01(007) Columbia **OFFICE:** Engineering Services
P.I. No.: 231440
SR 232 Widening **DATE:** May 14, 2009

FROM: Ronald E. Wishon, Project Review Engineer *RLW*

TO: Foster Grimes, District 2, Design Squad Leader

SUBJECT: IMPLEMENTATION OF VALUE ENGINEERING STUDY ALTERNATIVES

The VE Study for the above project was held April 21-24, 2009. Responses were received on May 13, 2009. 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
RD-1	Use 11' travel lanes	\$343,760	No	The reduction in lane width could increase the potential for future accidents. Traffic: 23,500 (2015), 38,000 (2035).
RD-2	Use 10' shoulder throughout the project	\$430,023	Yes	This will be done.
RD-6	Eliminate bike lanes and sidewalks from Sta. 260+00 to the end of the project	\$182,102	No	This project is on the county's bike plan. There are several large residential neighborhoods in the area.
RD-7	Minimize the retaining walls	\$67,219	No	The District Design Office considered the suggested alternate during the preliminary design of the project. The proposed alternate would require the relocation of two Georgia Power Transmission poles at a total cost of \$200,000, negating the proposed savings.
RD-8	Don't realign Shepherd Road intersection; construct an eastbound acceleration lane for Maple Creek Drive	\$176,142	No	The realignment of Shepherd Road will help reduce the "angle-intersecting" accidents at SR 232, and will accommodate a future raised median on SR 232.

ALT #	Description	Potential Savings/LCC	Implement	Comments
RD-16	Reconfigure intersection at Old Belair Road	\$28,362	No	There is considerable residential development along North Old Belair Road and South Old Belair Road. The county anticipates signals at these locations in the future. Reconfiguring the intersection at Old Belair Road would make it difficult to add the signals.
RD-18	Use 12' center turn lane instead of a 14' turn lane	\$171,885	No	This project has high traffic volumes and 7% trucks. The 14' lane will provide better visibility for left turn movements.
WL-2	Use Modular Block Wall instead of poured in place GA Std. 9031-L gravity retaining wall	\$131,452	No	The cost savings did not account for the backfill material and bearing pad required for the modular wall. These additional costs would negate the proposed cost savings.

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

Approved: Gerald M. Ross Date: 5/15/09
 Gerald M. Ross, PE, Chief Engineer

REW/LLM
 Attachments

- c: Genetha Rice Singleton
 George Brewer/Alan Smith/Foster Grimes/Sean Bush/Jim Hooks – D2 Design
 Paul Liles/Bill Ingalsbe/Bill Duvall/Vince Wilson – Bridge Design
 Jim Kitchings – D2 Environmental
 Rusty Merritt – D2 Construction
 Jamie Lindesy – D2 Utilities
 Shonnell Gibbs – Traffic Safety and Design
 Lisa Myers